



User's Guide

NIBRS reporting, Clery Act reporting, UCR reporting, computer aided dispatch, records management, citations, warrants, arrests, name and vehicle contacts, racial profiling statistics, digital photography, networked, real-time officer status display, audible call alerts, dynamic call priorities, multiple dispatch stations, color-coded incident display, equipment and duty management, customizable, individual case report security, printed form designer, evidence tracking

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CLERK 2 User Guide

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1 Chapter

Introduction

Thank you for your interest in Terrier Technologies' CLERK product for law enforcement record keeping. This manual is designed both to get you started using CLERK quickly, and also to serve as a day-to-day reference as you use CLERK.

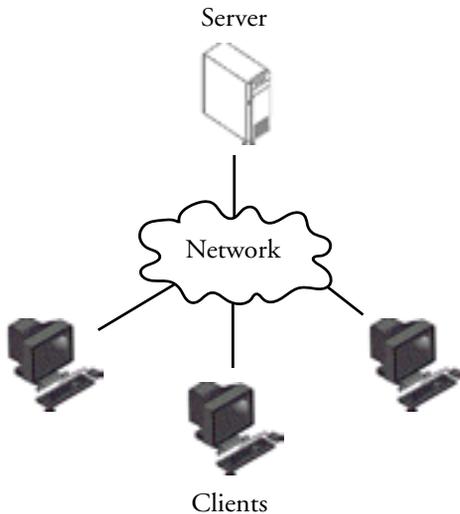
In this chapter, we'll briefly explain how CLERK works and the terminology you're going to encounter in this manual. After understanding the very basics, you'll be ready to move on to Getting Started (Chapter 2) or to perform a complete CLERK installation (Chapter 8).

How CLERK works

While you don't need to understand all the technical details of how CLERK works, it's good to have a basic grasp of the concept.

CLERK is called a "client-server" system, because all your records are stored on one central computer called the 'server'. Having all the records stored in one central location allows them to be organized, and for all users to have access to them. The computers used to access the records are called 'clients'.

Clients connect to the server using a computer network, as shown in the illustration below. Each time you type some data into CLERK, it is transmitted over the network to the server, and when someone subsequently requests to view that data, it is sent back over the network by the server.



The client-server approach of CLERK

Terminology

There are several words which you'll see repeatedly in this manual. Let's take a brief moment to understand them.

- **Server.** One central computer on which all your records are stored.
- **Client.** Any computer which is used to access the records on the server.
- **Network.** Connecting several computers together forms a network. Normally this is done with cables, but wireless networks are increasingly common.
- **Data.** The information you store in CLERK.
- **Field.** A single number, piece of text, or option. Normally a data entry screen consists of many fields.
- **Record.** All the fields combine to form a record. For example, one record corresponds to one citation, one warrant, one vehicle or one case report.
- **Report.** A case report describing an incident.
- **Form.** A page layout onto which information from the database is printed.
- **Module.** CLERK divides data into different categories, such as names, vehicles, citations, warrants. Each type of data is handled by a 'module' which allows you to enter or view that type of data.
- **Query.** Extracting a number of records from the database. For example, generating a statistical report, or searching for all data which matches

certain conditions.

- **Dialog.** A window which appears on the screen prompting you to enter information before continuing.

We assume you are already familiar with basic computing terms, such as ‘menu’ and ‘double-click’.

Conventions in this manual

Two symbols are used in this manual to attract your attention.



The stop symbol means that something is very important.

Observe these carefully to ensure that your CLERK system is set up securely and so that you don't have to spend much time changing the setup later on.



The information symbol will appear alongside ‘hints’ which, while not essential to your use of CLERK, may make certain tasks easier.

Menu choices are printed in bold. The name of the menu and the menu option are separated by the ‘pipe’ symbol. For example, **File | Exit** means go to the File menu then choose Exit. Text to be typed into one of the data entry fields will appear in a different font, e.g. TEXT TO BE ENTERED.

How to use this manual

This manual is intended for both beginning and advanced CLERK users. It can be broadly divided into five sections. Chapter 2 gives a brief overview of the CLERK installation process, and some quick

tutorials of basic CLERK concepts. These chapters are most useful for those who already have a computer network and wish to evaluate CLERK.

Chapters 3-6 are designed for end-users, such as officers, dispatchers and staff. They explain the various CLERK modules, how to enter data into CLERK, and how to retrieve it at a later time. This section is a useful reference to have sitting next to each client computer.

Chapter 7 deals with the advanced CLERK topic of designing your own printed forms.

Chapters 8-10 deal with CLERK system administration, including a detailed installation guide, maintenance tasks, and CLERK configuration instructions. Those who have purchased CLERK and are preparing to begin ‘live’ use should read this section first.

2 Chapter

Getting started

CLERK is a very complex software package, with many opportunities for you to customize it to your department's specific needs. In fact, to fully set up CLERK from scratch as described in Chapter 8 can be a time consuming exercise. We understand that sometimes you want to get CLERK up and running quickly, whether it is to evaluate the product, or to allow your department to get a 'feel' for the software before you transition to it.

In this chapter, we describe how a 'typical' CLERK setup would proceed. We assume that you have a standard TCP/IP network already installed. If this is not the case, or installation doesn't proceed as described, you can find additional instructions in Chapter 8. Following installation, we give a brief tutorial on entering names and citation information.

Installing the standalone demo

If you are evaluating CLERK, the ‘standalone demo’ is the simplest way to install the software for testing purposes. This process installs the CLERK client and server on a single computer running Windows NT, Windows 2000, or Windows XP.

i To install CLERK for ‘live’ use in your department, you should follow the instructions in the **Installing the server** and **Installing the client** sections of this chapter. While the demo installation is very simple, it omits some steps that may be important in a ‘real’ installation.

Insert the CLERK CD-ROM and click the “Install standalone CLERK 2 demo” button.



If the launcher window does not appear, you can start it manually by (a) double clicking the “My computer” icon, (b) double-clicking the CD-ROM icon, then (c) double-clicking the “Setup” icon.

You will see the InstallShield screen, which will be familiar to you if you’ve installed any other Windows software.



The installation settings can be left at their default values. Once installation is complete, a shortcut to CLERK will be placed on the desktop. Simply double-click the  shortcut icon to start CLERK. Now you should skip ahead to the **Logging on** section of this chapter.

Installing the server

Your department must have one machine designated as the ‘CLERK server’. It must be running Microsoft Windows NT, Windows 2000, or Windows XP. To install the server, log on as the Administrator user. Insert the CLERK CD-ROM and click the “Install CLERK 2 server” button.

If the launcher window does not appear, you can start it manually by (a) double clicking the “My computer” icon, (b) double-clicking the CD-ROM icon, then (c) double-clicking the “Setup” icon.



You will see the InstallShield screen, which will be familiar to you if you've installed any other Windows software.



Most settings can be left at their defaults, except for the database directory. Change this to a location where you want to store CLERK data, for example `C:\Data\CLERK`.

After completing the installation, you will be offered the opportunity to obtain a license key.



For the moment, you can decline. CLERK will continue to function with some limitations. You may have to restart the server computer after installation is done.

Installing the client

Unlike the server installation, which is only performed once, the client installation needs to be repeated for each machine in your department which will run CLERK. Fortunately, like the server installa-

tion, it is a simple process.

Insert the CLERK CD-ROM and click the “Install CLERK 2 client” button.



If the launcher window does not appear, you can start it manually by (a) double clicking the “My computer” icon, (b) double-clicking the CD-ROM icon, then (c) double-clicking the “Setup” icon.

Most settings can be left at their defaults. After installation is done, you may need to restart the computer.



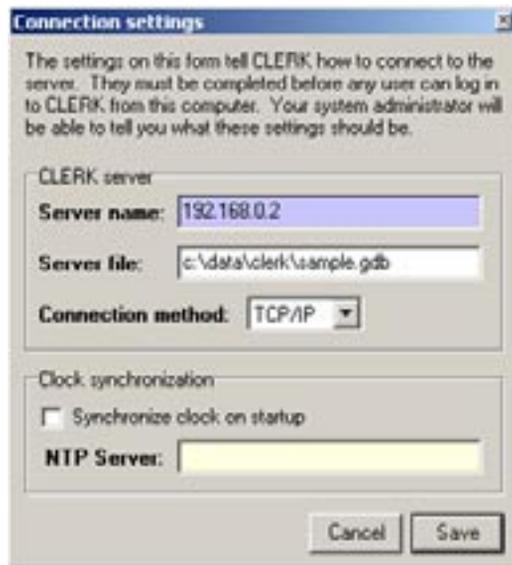
Starting CLERK for the first time

A shortcut to CLERK will be placed on the desktop of each CLERK client. Simply double-click the shortcut icon to start CLERK.



Shortcut to CLERK 2

The first time the CLERK client is started, you will be prompted for ‘connection settings’. Note that once you have entered valid settings, CLERK remembers them and this box doesn’t appear again.



First, specify the type of network used at your department in the **Connection method** box. The choices are TCP/IP or NetBEUI. If your department has a connection to the Internet, chances are you have TCP/IP.

The **Server name** identifies the computer which is acting as the CLERK server.

- For a NetBEUI (Windows) network, type the computer name of the server, e.g. `server`.
 - For a TCP/IP network, type either the machine name or IP address of the server, e.g. `server.policedata.com` or `192.168.0.1`.
- i** If you're just evaluating CLERK, install the server and client on the same computer. Choose TCP/IP for the **Connection method**, and `127.0.0.1` for the **Server name**.
- i** Don't know what to enter? See *Finding your server's name* in Chapter 8.

The **Server file** is the full path of the CLERK datafile on the server. Type the database directory you chose when installing the server, followed by `Sample.gdb`. For example, if the database directory is `C:\Data\CLERK`, you would type `C:\Data\CLERK\Sample.gdb` in this box.

⚠ Do not specify a network path. For example, `\\server\Data\CLERK\Sample.gdb` will not work.

Once the connection settings have been completed, click the **Save** button.

Logging on

The login screen appears automatically when CLERK is started. Only one user exists when CLERK is first installed. The user name is `SYSDBA` and the password is `masterkey`.

After entering the user name and password, click the **Login** button.



After successfully logging in, you will see `Connected as: SYSDBA` at the bottom of the screen, and the 'padlock' icon on the tool bar will change from unlocked to locked.

A notice will appear stating that you are running CLERK in demo mode. Certain features are unavailable until you enter a license key. See Chapter 8 for more information.

If an error message occurs while logging on, Chapter 8 gives troubleshooting advice.

CLERK settings

To make life easier, we've provided you with sample datafile (`Sample.gdb`) which already has some CLERK settings entered into it.

CLERK settings include locations, citation types, officer names and so forth.

Naturally, you will need to re-do these settings for your own department before entering real data into CLERK, but the sample file will at least help you learn CLERK quickly.

Tutorial: entering a citation

Bring up the **Citations** module by choosing it from the **Modules** menu (or press F6). The window below appears.

- ① Click the **New** button on the left of the screen.
Type the citation number, e.g. 012345678.
- ② The citation is created; the number you entered is displayed at the top of the window.
- ③ Type the date and time the citation was issued.
Note that CLERK accepts many date formats. You

can enter 0328, 3-28, 3/28 and all would be converted to 03 Mar 2002 when you press Tab. Rather than making you learn certain formats, CLERK works to understand how you enter data.

- ④ Click the **Officer** drop-down menu to select the officer who issued the citation. Or, you can type in the badge number or name. CLERK lets you enter data the way you prefer.
- ⑤ Click the **Citation type** drop-down menu to choose the violation. Multiple violations on one citation? No problem, just check all that apply.

The screenshot shows the 'Citations' software window. On the left is a 'Navigation shortcuts' panel with a 'New' button (callout 1) and a 'Find' field. The main window title is '<Untitled>' (callout 2). Below the title bar is the 'Citation information' section (callout 3), which includes fields for 'Date/time' (callout 3), 'Officer' (callout 4), 'Citation type' (callout 5), 'Location', 'Location detail', 'Direction', and 'Description'. There are also checkboxes for 'Criminal trespass issued', 'Warning only', 'Search conducted', and 'Consent to search', along with an 'Expires' field and a 'Video #' field. Below this is the 'Recipient information' section, which includes fields for 'Subject name', 'Home address', 'Home phone', 'Sex' (Male, Female, Unknown), 'DOB', 'SSN', 'Height', 'Weight', 'Driver license' (State, Number), 'Class', and 'Restriction'.

Citations: 012345678

Navigation shortcuts

- Citation information
- Recipient information
- Vehicle information
- Court/processing
- Photography

Citation 012345678

Citation information

Date/time: 28 Mar 2002 12:35 Officer: 204 STEVENS, Kate

Citation type: [Ran stop sign, No seatbelt]

Location: [Activities Center] **1**

Location detail: West exit

Direction: W Description: Ran exit stop sign

Warning only Search conducted Consent to search Video #:

Recipient information

Subject name: [BARNES, JAMES] **2**

Home address: 5000 MAIN ST. **3**

SOMEWHEREVILLE TX 75000

Home phone: 555-555-1234

Sex: Male Female Unknown

DOB: 12 Jun 1968 **4** SSN: 123-45-6789

Height: 6'02" Weight: 210

Driver license

State: TX Number: 12345670

Class: C Restriction:

Find:

Previous record: <None>

Next record: <None>

Created: 2002-03-30 22:45:53

Last updated:

- 1 Click the **Location** drop-down menu to choose the general area where the citation was issued. You could also type the location name or code. The **Location detail** and **Direction** fields let you specify more precisely where the violation occurred.
- 2 Type the citation recipient's name in the **Subject name** field. Use the format LASTNAME, FIRSTNAME (if you forget, CLERK will automatically correct you). Let's type BARNES, JAMES and press Tab.
- 3 Type the recipient's address information. Nor-

mally, you only need to type the home address and ZIP code - CLERK automatically completes the city and state. We'll show you how to turn on ZIP code lookups in Chapter 9.

- 4 The remaining fields are fairly self-explanatory. In keeping with the general theme of CLERK, you can enter heights in a variety of formats. For example, 6-2, 6' 2 and 62 are all converted to 6' 2" when you press Tab.
- 5 Notice that the **Edit** button is currently 'down', meaning you're in "edit mode". Click the button once to save your changes.

- ⑥ Once your changes have been saved, note that the sidebar to the left of the window will update to display a summary of the citation.



This summary collects all the important information about the citation into one place. Clicking once on the sidebar scrolls directly to that part of the citation.

- ⑦ Let's print the citation record. Click the **Print** button to see a preview. While CLERK's built-in design will be satisfactory for most departments, you can re-design the form if you wish.

Last but not least, you should know that CLERK tries to minimize the number of times data must be re-entered into the system.

Because BARNES, JAMES was a name unknown to CLERK, it created a new entry in the **Names database**. Double-click this name on the sidebar. The **Names database** will open and show information for BARNES, JAMES.

Note that the individual information fields are completed, and the citation you just entered shows as a previous contact. All other citations, warrants, arrests

etc. for this person will likewise be shown under **Previous contacts**.

Assume another citation is issued to BARNES, JAMES several months later. When his name is entered, CLERK will retrieve the personal information and automatically complete that section of the citation for you, avoiding the need for you to re-type data.

Concluding remarks

Having worked through this chapter, you'll have a taste of how CLERK operates, but we don't expect all your questions to have been answered. Please see the remaining chapters of the book for a more detailed guide.

3 Chapter

CLERK basics

This chapter is divided into three sections. We begin slowly, by describing how to perform basic tasks such as starting and logging on to CLERK, then we move to a guided tour of the CLERK screen. Finally, we explain how to enter data into the system, and describe a number of shortcuts that could make life easier for you.

We presume that, before tackling CLERK, you already have basic computing skills including the ability to use a mouse, select options from a menu, and double-click. If you've mastered these skills, you're ready for CLERK. CLERK is designed to be powerful, yet very intuitive and easy to learn.

Starting CLERK

When CLERK was installed, a shortcut was placed on the desktop. Unless your department has elected to remove it, starting CLERK involves simply double-



Shortcut to
CLERK 2

clicking the “Shortcut to CLERK 2” icon. Alternatively, CLERK can also be started from the **Start** menu: choose **Start | Programs | CLERK | CLERK 2**. A

startup screen will display for several seconds, before it automatically disappears and is replaced with a login screen.

Logging on

‘Logging on’ is the process of positively identifying yourself to the CLERK server. This is done by entering a user name and password.



Your system administrator will supply you with a CLERK user name and initial password. The user name will not necessarily be the same as the one you

use to access other systems at your institution. Enter your user name and password in the fields provided, and click the **Login** button.

i To protect your password, it never appears on the screen. As you enter your password, a # symbol appears on the screen for each key pressed.

After logging on for the first time, it would be a good idea to change your password (see Chapter 3).

When the login screen appears, the user name field will display the last user who successfully logged in. If the user name that appears is not yours, simply delete that user name and replace it with your own.

Troubleshooting

There are essentially only two reasons why logging in to CLERK fails - either there is an error connecting to the server, or the user name/password are invalid.

- **If you get a connection error message which mentions a host, server, or network problem, such as “cannot find host x”...**

Check that the server is switched on. Check that the network cable is plugged in to both server and client computers. Check the connection settings.

- **If you get an error message regarding a file-name, such as “cannot locate file x”...**

Check the connection settings.

- **If you get a user name/password incorrect message...**

Verify that your system administrator has assigned

you an account. Check that you are spelling your user name and password correctly.

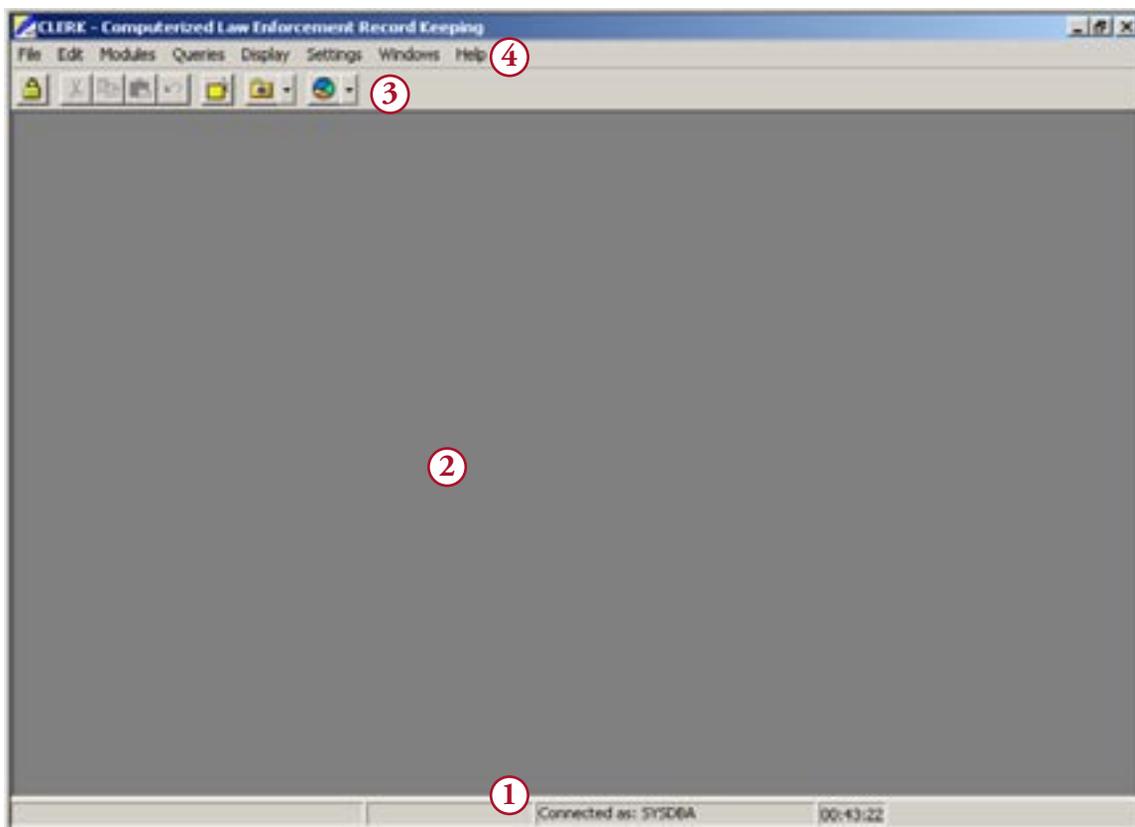
- ⊛ Passwords are case-sensitive. Make sure 'caps lock' is turned off while logging on.

Also see the troubleshooting tips in Chapter 8.

The CLERK screen

When CLERK starts, you will initially see a blank screen. There are four parts to it.

- ① The **Status bar** always displays the connection status (whether logged on, and if so the user name), along with the current time. The two left-most panels are used to describe the operation currently being performed, and a progress bar for that operation.
- ② The **Window space**. When you open CLERK modules (or other screens), they will appear in this area.
- ③ The **Toolbar** contains many shortcuts, and is discussed at length in the next section.



- ④ The **Menus** give you access to all CLERK's features and options. They too are discussed later.

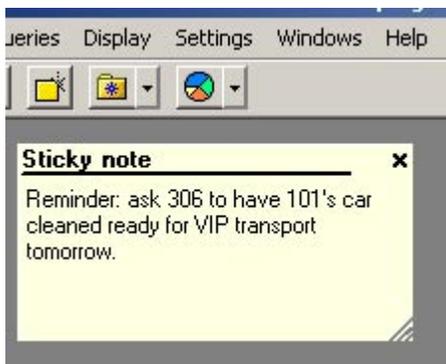
The CLERK toolbar

The CLERK toolbar is always at the top of the screen just under the menus. Certain options may be disabled (grayed out) if you are not currently logged in.

 The **Login/logout button** shows whether you are currently logged in (padlock closed) or not (padlock open). If currently logged in, clicking this button will disconnect you. If currently disconnected, clicking this button brings up the **Login window**.

 **Cut, Copy, Paste and Undo** have the same meaning in CLERK as in other Windows applications. They will only be available when entering text; they are not available when working with a drop-down list, for example. The standard shortcuts (Ctrl-X, Ctrl-C, Ctrl-V, and Ctrl-Z respectively) apply.

 **Sticky notes** creates a resizable panel on your screen which acts as a "blotter". Use them to



type informal notes that shouldn't be attached to an official record. Sticky notes may be moved around the screen by clicking and dragging in the title, and may be removed by clicking their **Close box**.

The content of the sticky note is not saved in the CLERK database at any time, and is not retained after the note is closed. Sticky notes are not visible on other computers. When you log out of CLERK, any visible sticky notes are saved to the local hard disk, and restored the next time a user logs on.



CLERK bookmarks are designed to help you bring up commonly used records quickly, and without you needing to remember numbers.

For example, CID personnel may wish to bookmark case reports which are currently being investigated. Dispatchers may wish to bookmark vehicles or names which are on a 'watch list' for unpaid fines or active warrants. We'll discuss bookmarks in more detail in Chapter 4.



Queries are simple statistical reports which you've developed for your personal use. For example, records staff may wish to run a daily citation log; dispatch supervisors may run a daily CAD log; and administrators may periodically

generate a “crime by location” summary in order to direct resources towards a certain location.

After a query has been designed, it can be saved to this ‘query list’ and re-run with a simple click. Queries are discussed in Chapter 6.

The CLERK menus

Most of CLERK’S features and options are accessed via the menus. This section summarizes *what* the menu options mean; *how* to use each option will be described later on.



The **File** menu allows you to log in or out of CLERK, to change your password, or to exit CLERK entirely. Exiting CLERK will log you out.

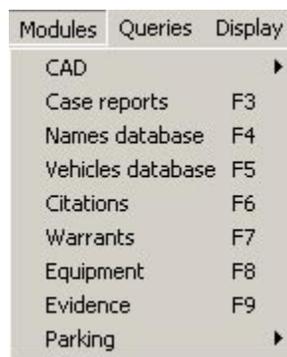


The **Edit** menu gives you access to the standard editing functions: cut, copy, paste, and undo. Select all will highlight (select) all the text in the active text field.

Note that some menu options have shortcut keys next to them. Pressing the shortcut key (or keys) is equivalent to selecting the corresponding menu option. For example, pressing `Ctrl-C` is the same as choosing **Edit | Copy**. Once you become familiar with CLERK, you may find that using shortcut keys is

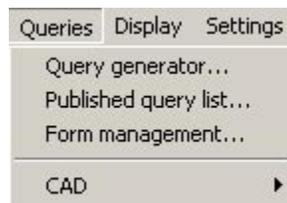
faster than the mouse.

When more than one key is listed, the shortcut is used by holding down the first key and pressing then releasing the second key. For example, to type `Ctrl-C`, you should hold down the `Ctrl` key, and while it is down, press and release the `C` key. Then release the `Ctrl` key.



CLERK is divided into a number of modules which can be opened via the **Modules** menu. Modules are used to enter and view data, and learning to use the modules is really the key to learning CLERK.

Several of the following chapters discuss CLERK modules. Note that you may see more or fewer modules on this menu than illustrated in this manual, and that some of the names may be grayed out (disabled), preventing the module from being opened.



Queries display lists of records, or statistics generated from data which has been previously entered into CLERK.

The **Queries** menu allows you to generate such reports, and subsequently produce statistics using previously generated templates. The Query generator

option is also useful when searching for records that match a certain criteria (e.g. all suspects over 6'2" with and less than 25 years old with green eyes).

Generating statistics is the topic of Chapter 6.



The **Display** menu gives access to miscellaneous windows and standard reports.

In the **Settings** menu, most options will be grayed out (disabled) since they are generally only accessible by your system administrator. So we'll discuss the **Settings** menu along with system administration in Chapter 9.



The **Windows** menu serves two purposes. Using the top five menu options, you can arrange how windows are arranged in your CLERK work space.

The names of windows you currently have open will be displayed at the bottom of the menu. One window - the one which is currently active - will have a check mark next to it. You can navigate to other windows by choosing them from the menu.



Finally, the **Help** menu gives you access to CLERK'S online help system.

Data entry

We've already stated that modules allow you to enter data, and view data which has been previously entered. Modules consist of 'fields', with each field allowing you to view or edit one piece of data.

For example, a field may contain a person's sex or race, a vehicle license tag, or whether a criminal trespass has been issued. The four types of fields you will encounter in CLERK are radio buttons, checkboxes, drop-downs, and text fields.

i Data entry in the computer aided dispatch (CAD) module is slightly different. To learn about data entry in the CAD, you should also read Chapter 5.

Moving between fields

Since there are many fields in each module, how can you be sure the data you enter will appear in the right one? The answer is that only one field is 'active' at any time. Whatever data is entered will appear in that active field.

You can choose the active field by clicking on it using the mouse. Or, if you find the keyboard easier, pressing the **Tab** key moves from one field to the next (i.e. the field next to the currently active one becomes active). If you see the phrase "Tab to the X field" it means "press the **Tab** key until the X field becomes

active”. Pressing `Shift-Tab` causes the previous field to become active.

Radio buttons

When used: Radio buttons allow you to select one option from a small number of alternatives.

Appearance: Radio buttons appear as small white circles with text to the right of them. The circle next to the selected option will be colored black. Radio buttons always appear in groups.

- Male
- Female
- Unknown

Example: The sex of an individual. In this example, ‘unknown’ is the currently selected option.

Usage: Click the radio button you wish to select. Only one option from the group can be selected at a time; selecting one option automatically de-selects the others in that group.

Shortcuts: Use the arrow keys to make a selection. If the text labels are underlined and the radio group is active, you can also press the underlined letter to make a selection. In our example above, pressing the `M` key will select the ‘Male’ option.

Checkboxes

When used: Checkboxes are used when the possible settings for the field are Yes/No or On/Off.

Appearance: Checkboxes appear as small white squares with text to the right of them. If the value

is ‘yes’ (or ‘on’), the square will have a check mark inside it.

Officer safety caution

Example: Officer safety flag. In this example, the value is ‘yes’, an officer safety caution does exist.

Usage: Clicking the checkbox “toggles” the field, i.e. a checked field becomes unchecked, or an unchecked field becomes checked.

Shortcuts: If a checkbox is active, pressing `Space` will toggle the field.

i Sometimes a checkbox will appear shaded (grayed). This means no-one has specified whether the field should be ‘yes’ or ‘no’; it is ‘unspecified’.

Drop-downs

When used: Drop-downs are used when the user must select a choice from a list of available options.

Appearance: Drop-downs look like ordinary text fields, i.e. a rectangular box, but have a down-facing arrow at the right end.



Example: The race of an individual. In this example, ‘white’ is the currently selected option.

Usage: Click the down-facing arrow to bring up a list

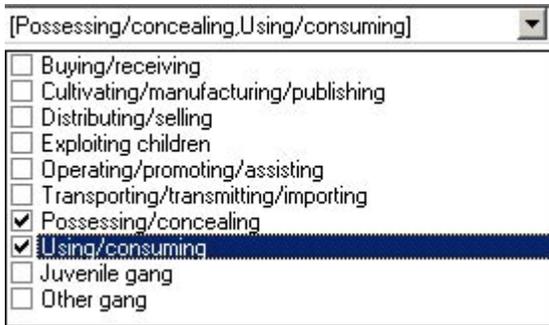
of available options, as shown in the example. Move the mouse over the option you wish to select, and click once.

Shortcuts: When the drop-down is active, use the up or down arrow keys to scroll through the list. Pressing a letter/number key sets the selection to the first (or next) value which starts with that letter/number. In our example, pressing B would set the field to 'Black'.

Drop-downs storing multiple values

When used: One or more values are to be selected from a fixed list of options.

Appearance: Very similar to ordinary drop-downs. When 'dropped', multiple value drop-downs show a check box next to each option.



Example: IBR activity types. In the below example, two options are selected - 'Possessing/concealing' and 'Using/consuming'.

Usage: Click the down-facing arrow to display the list of options. Click the check boxes to select or de-select the applicable options. Click the down-facing arrow again (or click another field) to complete your

selection.

Text fields

When used: The value of the field contains text or numbers, and is not restricted to a limited number of options.

Appearance: A rectangle containing the value.



Example: A disposition.

Usage: Type text into the rectangle just as you would type it into a word processor. The cut, copy and paste functions are available to you while entering text.

i If you make a text field active by Tabbing to it, the entire text will be 'selected'. Selected text appears inverted (e.g. white text on a blue background). The next key you press will replace the selected text; you don't need to press Backspace or Delete first.

Text fields are the most common type of field in CLERK. They are used to store everything from dates to fine amounts. Some text fields which occur repeatedly are worthy of special mention.

Dates

For consistency, all dates in CLERK are formatted the same. When you leave a date field (by pressing Tab or by clicking on another field), CLERK will attempt to convert whatever is in the field into the standard date format.

- The separator does not matter: 12-25-02 or 12/25/02 would be interpreted as December 25th, 2002.
- It generally does not matter if the separator is missing: 122502 would be interpreted as December 25th, 2002.
- When two digit years are used, anything less than 40 is assumed to be in the 21st century (e.g. 05 becomes 2005) and anything 40 or greater is assumed to be in the 20th century (e.g. 60 becomes 1960). If these assumptions are incorrect, enter the full four-digit year, e.g. 12251932 for the year 1932.
- If the date is in the current month or year, they may be omitted. For example, if today's date is December 25th, 2002, then 1224 and 24 would both be interpreted as December 24th, 2002.

CLERK will beep and not allow you to leave a date field if it cannot understand the date you entered. You will need to either erase the text or re-format it.

Times

For consistency, all times in CLERK appear as the two-digit hour (from zero to 23) and the two-digit minute (from zero to 59) separated by a colon. As with dates, when you leave a time field, CLERK attempts to convert the text into the standard format.

- The colon does not need to be typed. For example, 1245 would become 12:45.
- The leading zero for the hour can be omitted, e.g. 945 becomes 09:45.
- If you type only two digits, they are assumed to be the minute of the current hour. For example, if the current time is 2:26 am, typing 45 would be interpreted as 02:45.
- Always use 24-hour times. AM/PM are not understood.
- When entering an hour, you should include the leading zero of the minute. For example, say you want to enter the time 12:05. If you type 125, it will be interpreted as 01:25; enter 1205 instead.

Heights

Heights in CLERK are either written in centimeters (metric) or feet and inches (Imperial). When feet and inches are used, CLERK automatically converts the text you enter into a uniform format.

- You may use other separators when entering feet and inches. For example, 6-3 or 6/3 would both be converted to 6'03".
- You can omit the separator altogether and CLERK will try to put it in a sensible place. For example, 63 would become 6'03" and 510 would become 5'10".

States and other 'memorized' fields

For some fields, we can create a list of possible values which the text will *usually* belong to, but we don't want to *force* the text to be on the list.

Appearance: These 'memorized' fields look very similar to a drop-down.



Example 1: Vehicle makes and models. Although we could compile a lengthy list of all vehicle makes and models, you *also* need to be able to enter values which do *not* appear on the list, such as newly introduced models. What about ‘specialized’ vehicles such as farm equipment or semi-trailers? What about bicycles? It is clear that there will always be unique cases where you need to enter something which is *not* on the list.

Example 2: States. Although the majority of vehicle tags you encounter will be from your home state or province, there will always be exceptions. What about foreign plates? Native American nations? Again, it would not be sensible to limit the state to the U.S. states and Canadian provinces.

Usage: You can simply type the text as you would in an ordinary text field. Or, click the down-arrow to the right of the field, and choose a value from the list, in exactly the same way as you’d use a drop-down.

The list will contain values which have recently been entered into the CLERK. The list will be small (or empty) when your department starts using CLERK, but the list will grow to contain more values as time progresses.

Shortcuts: When you start typing text into the field, CLERK checks to see whether anything on the list starts with what you’ve entered. If so, CLERK “auto-completes” the field. If CLERK’s ‘guess’ is incorrect, simply keep typing. If CLERK has guessed correctly, press **Tab** or click on another field.

For example, say the vehicle model list contains Escalade, Escort, Excursion, and Expedition.

You press...	The field now shows...
e	Escalade
x	Excursion
p	Expedition
e	Expedition

Note that we were able to enter **Expedition** by only typing the first three letters, **exp** instead of spelling out the whole word. Auto-completion is not case sensitive.

Codes: locations, offenses, CAD activities

Statistics can only be extracted from CLERK if data is entered in a uniform way. For example, if one user enters ‘Parking Area H’ as ‘Lot H’ and another user enters it as ‘PA H’, how can administrators possibly generate an incident list for that area?

The key is to enter data in a uniform way. We’ve already seen that CLERK has a standard format for dates, times, and heights. CLERK also has a uniform way of describing locations, offenses/incidents, and CAD activities. In this section, we’ll use locations as an example, but offenses/incidents and CAD activities work in exactly the same way.

Your system administrator will enter a list of locations which have been customized for your department. They will also select an abbreviation (up to 8 letters or numbers) called the **Location code** for each location.

For example, ‘Holford Visitors Center’ may have the

location code 'HOL' or even just 'H'. When CLERK asks for a location, there are three ways of entering it:

- Click the down-facing arrow to the right of the location field. This will display a list of all locations and their codes.



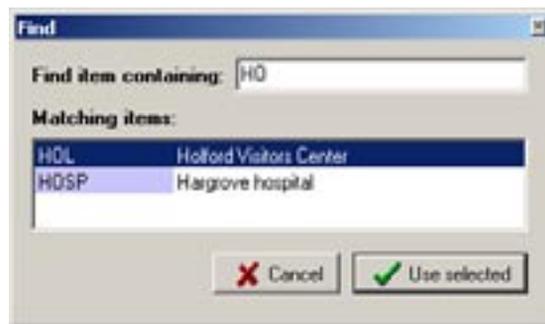
- Type the location code, HOL, into the field (these fields are case-insensitive). When you exit the field, it is converted to the full location title.
- Type the location title into the field. CLERK will auto-complete, as described in the previous section on 'memorized' fields.

As you see, CLERK allows you to enter the location in whichever way *you* prefer - beginners may prefer the menus, but more experienced users may prefer to type the location code.

- i** The location field indicates the 'zone' or 'area' where an incident occurred, not the precise street address. A **Location detail** field is provided for that purpose.

For some departments, these lists may become large, and even having a drop-down menu is still a cumbersome way of finding a code. The offense/incident list in particular may contain several hundred entries.

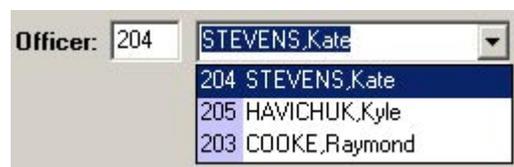
To easily find a code, type **Ctrl-F** in the field. The **Find** dialog appears. Type some text to search for, and the list will be narrowed down to show only those which contain the search text.



Automatically enter text into the field by double-clicking on it (or by clicking once and pressing the **Use selected** button).

You must either enter a valid location or leave a location field blank. You cannot simply 'make up' your own locations as with the 'memorized' fields described in the previous section.

Officers



Officer fields are similar to locations. You can:

- Type the badge number, e.g. 204.
- Type the name, e.g. STEVENS, Kate. The field is case-insensitive and will auto-complete, so simply typing S in the above example would cause STEVENS, Kate to appear.

- Click the down-facing arrow next to the field, and select an officer from the list.

A badge number field always appears to the left of the officer name field. It is largely for viewing purposes, and will be completed automatically after you enter the officer’s name.

Vehicle tags

Two fields are used to describe vehicle license tags: one for the state, and another for the tag number.



To enter a tag, either:

- Type the state in the first field, and the tag number in the second field.
- Type the state and tag in the second field separated by a space, e.g. TX ABC123.

i You can omit the state if the vehicle is from the state/province where your department is located. For example, if the tag is Texas ABC123 and your department is in Texas, simply type ABC123 and TX will be added automatically.

When you leave the tag number field, CLERK checks its vehicles database to see if the vehicle is known to it. If so, it will load the vehicle details (color, make, model, VIN) into the appropriate fields. If the vehicle is unknown, a new entry will be created in the vehicles database automatically.

Clicking the drop-down button to the right of the tag number field will display a list of vehicles you’ve

recently entered. This “history list” can make life easier if you need to enter information about one vehicle in several different places.

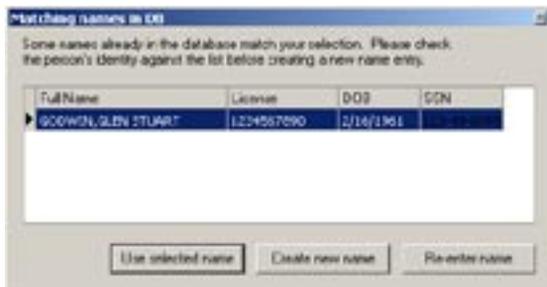
Names

CLERK expects all names to be in the format LASTNAME, FIRSTNAME. If you enter a space after the comma, CLERK will automatically remove it. The table below shows how CLERK will convert what you type into its standard format.

You type...	CLERK converts it to...
SMITH, JAMES A	SMITH, JAMES A
SMITH, JAMES A	SMITH, JAMES A
SMITH JAMES A	A, JAMES SMITH
JAMES A SMITH	SMITH, JAMES A
SMITH, JAMES JR.	SMITH, JAMES JR.
JAMES SMITH JR.	JR., JAMES SMITH

Note that when a name is typed FIRSTNAME LASTNAME, in most cases CLERK is able to correct it. But in some examples (highlighted in red), CLERK guessed wrongly. Therefore, you should try to use the LASTNAME, FIRSTNAME format when entering names rather than relying upon CLERK to correct you.

When you leave the name field, CLERK checks its names database to see if any individuals with similar names already exist. If not, the name is automatically added to the names database. But if a match is found, you will see the following message:



- If the individual is listed, double-click their name (or select it and click **Use selected name**). The spelling of the name in the list will take precedence if it is different from what you typed.
- If the individual is not listed, click **Create new name**. This will add a new entry to the names database.
- Click **Re-enter name** to cancel the process and re-edit the name you typed.

If the individual was already in the database, their personal information (address, date of birth, description) will be automatically loaded into any appropriate fields.

Clicking the drop-down button to the right of the name will display a list of individuals you've recently entered. This "history list" can make life easier if you need to enter information about one individual in several different places.

Addresses

Four fields are used to store addresses in CLERK: street address, city, state and ZIP or postal code. When the **Address** field is active, pressing **Tab** moves directly to the **ZIP code** field.

If your system administrator has configured CLERK to perform ZIP code lookups, you can just type the five-digit ZIP code and the **City** and **State** fields will be completed automatically. You can always click on the **City** or **State** fields to edit them manually.

Please report any errors in the ZIP code database via email to support@policedata.com.

Logging out and exiting CLERK

When you've finished using CLERK, you should either log out or exit the program. This prevents other people from viewing data or making changes using your name.

To log out, either choose **File | Logout**, or click the left-most toolbar button (the one with a padlock on it). When you log out, CLERK

- Asks you whether you want to save changes, if you're currently editing data.
- Stores which windows you have open and their location, so that they can be restored next time someone logs in to CLERK.
- Closes all windows.

These steps also occur when you exit the CLERK application by choosing **File | Exit**.

Changing your password

Each user has the ability to change his/her own CLERK password. To do so, first start CLERK and log on. Then choose **File | Change password**.

A dialog will appear requesting both your current

password and a new password. Because your password does not show on the screen (each character is replaced with a # symbol), you must type the new password twice to help avoid typos. Click **OK** when done.



- Passwords are case sensitive. If you usually type with Caps Lock turned on, you may wish to enter a password that is all-caps.
- Your CLERK password does not have to be the same as your other computer passwords (e.g. for email).
- It is a good idea to choose a password containing at least one number of punctuation symbol.
- Make your password at least 5 characters long.
- Don't choose obvious passwords such as your badge number or spouse's name.

 Don't forget your password. Only the system administrator can reset it for you. And if you forget the system administrator's password, *you cannot recover it without losing data.*

Miscellaneous

Elsewhere in this chapter, we've said that you can have several windows open at once, and we've explained how to move from one window to another.

CLERK needs a screen display of 800x600 pixels to function. This generally means a 17" monitor or better. However, at 800x600 some windows will barely fit on the screen, so you may choose to either resize them or maximize them (by clicking the maximize button in the top-right corner). CLERK performs best with a 1024x768 display (or better).

Finally, it is worth noting that if you have an older computer, CLERK will start to slow down when you open lots of windows. This is simply a performance limitation of your computer. The solution is to not have so many windows open at once, or to improve your computer by adding extra memory (RAM).

4 Chapter

Modules

Modules are screens in CLERK where data can be entered or viewed. Although different modules store different types of data, they all look and behave in much the same way. This chapter gives you a guided tour of a typical module, then describes in detail how to use most of CLERK's modules.

Types of modules

Modules are screens in CLERK that are used to enter and view data. CLERK has eight ‘core modules’,

- **Computer Aided Dispatch (CAD).** Used to enter calls for service and track other time- and unit-based events.
- **Case Reports.** Your department may call them incident reports or offense reports. In CLERK, they are all entered in the Case Report module.
- **Names.** Stores information about individuals.
- **Vehicles.** Stores information about vehicles, possibly including bicycles.
- **Citations.** Stores information about citations issued by officers and/or staff. Examples include moving violations and minor in possession (MIPs). Generally, parking tickets are entered in a separate ‘add-on’ module.
- **Warrants.** Both active and cleared warrants of interest to your department. Usually this means warrants arising from your department’s case reports.
- **Equipment.** Track equipment assigned to staff, either on a short-term basis (e.g. keys assigned for duration of a shift) or long-term basis (e.g. vests, uniforms, weapons).
- **Evidence.** Stores information about how evidence has been handled, including laboratory results and a chain of custody record.

All of these modules can be accessed via the **Modules** menu, or by pressing the function keys F2-F9 at the

Modules	Queries	Display
CAD		▶
Case reports	F3	
Names database	F4	
Vehicles database	F5	
Citations	F6	
Warrants	F7	
Equipment	F8	
Evidence	F9	
Parking		▶

top of your keyboard. If a module’s name is disabled (grayed out), the system administrator has not given you permission to open the module.

We call these eight modules ‘core modules’ because they are

an integral part of CLERK and are included in every CLERK installation.

CLERK can also be expanded by adding other modules to the system. These modules are also accessed via the **Modules** menu. We call them ‘add-on modules’ or ‘plugins’. They are described in separate manuals.

A guided tour

Although the core modules store different information, they all look and work in much the same way. This helps you to learn CLERK quickly. Exceptions are the Computer Aided Dispatch (CAD) and Equipment modules. We’ll describe them in Chapter 5.

We’ll use the Names module for our guided tour. A screenshot of the module appears on the facing page. From module to module, the left part of the screen is the most similar. It is called the **sidebar**, and its width may be changed by moving the mouse over the dividing line indicated by ①, and clicking & dragging.

Names database: GODWIN, GLEN STUART

Navigation shortcuts

- Individual information
- Address: 6800 HOLFORD VALE ROAD
- Previous contacts: Case report 02-000001
- Field interviews
- Photography: Godwin, profile; Godwin, front
- Related vehicles: TXABC123
- Related individuals

Find: (4)

Previous record: GODWIN, GLEN (1)

Next record: <None> (3)

Navigation buttons: (2)

Created: 2002-01-12 16:05:50
Last updated: 2002-01-12 22:42:44

GODWIN, GLEN STUART (Change spelling) (Merge name)

Individual information

Alias 1: CARMEN, MICHAEL Alias 2:

Sex: Male Female Unknown DOB: 16 Feb 1961 Age: 41

Race: White Height: 6'00" Weight: 165

Ethnicity: Non-Hispanic Hair: BRO Eyes: BRO

Scars/Marks/Tattoos:

Driver license

State: FL Number: 1234567890

Class: Restriction:

ID state/number:

Citizenship: FL

SSN: 123-45-6789

Classification: Non-affiliated

Misc. ID:

Comment:

Officer safety caution

Navigation buttons

Each module shows only one ‘record’ at any given time. For the Names module, a ‘record’ means information about one person. For the Citations module, a ‘record’ means information about one citation, and so on.

You can move between records using the navigation buttons (**First**, **Previous**, **Next** and **Last**) at the bottom of the sidebar, marked by (2). Generally, records are sorted alphabetically or numerically, so that clicking **First** in the Names module will take you to the name that comes first in alphabetical order.

The records that will appear if you clicked the **Previous** or **Next** buttons are shown above the navigation buttons, (3).

The Find/Go-to box

Moving between records using the navigation buttons is fine when there are only a few records stored in CLERK. But, once the number of records becomes large, finding a particular record (e.g. a specific name) using the navigation buttons will be very tedious.

A better way is to use the “find” or “go-to” box, (4). Simply type the record you’d like to go to into this

field, and press the **Tab** key. In the Names module, you'd type the individual's name. In the citations module, you'd type the citation number, and so on.

In general, CLERK will search for records which either start or end with what you typed, and move to the first one it finds. For example, if you type 1234 in the Citations module, CLERK would find citation 0001234. If you type GODWIN, G in the Names module, CLERK would find GODWIN, GLEN STUART.

Additionally, clicking the down-facing arrow to the right of the field will show a drop-down menu listing the most recently requested items. Choosing an item from the drop-down menu has the same effect as typing it into the field.

Modifying data

Navigating to a record is done for one of two reasons: either you wish to view the data previously entered into CLERK (called *browsing*), or you wish to update the record with new information (called *editing*).

You can switch between *browse mode* and *edit mode* by clicking on the **Edit** button, ⑤. A normal appearance indicates that you are in browse mode, and a shaded ('down') appearance indicates that you are in edit mode.

i You *cannot* edit data while in browse mode. You *must* click the **Edit** button to enter edit mode before you can start changing a record.

Sometimes, the **Edit** button will be grayed out, or disabled, meaning that you cannot enter edit mode. This is usually because the system administrator has

not given you permission to edit that information (talk to your system administrator if you believe this is incorrect).



Browse mode



Edit mode



Disabled

Editing the data involves making the necessary changes in the right part of the module window. Some information about entering data has already appeared in Chapter 3, and we'll talk about the specifics of each CLERK module later in this chapter.

When you're done editing a record, the normal routine is to click the **Edit** button. This will save the changes to the CLERK server and return you to browse mode.

⚠ Once a record has been saved to the CLERK server, there is no way of 'undoing' any changes you made.

If you accidentally change a record but are still in edit mode, you can click the **Cancel** button, located next to the **Edit** button. The record will be re-fetched from the server and any changes you made while in edit mode will be lost.

Navigating to another record while in edit mode results in a message being displayed on the screen asking whether you wish to save any changes before proceeding. Clicking **Yes** will save the record to the server (same effect as clicking the **Edit** button), and clicking **No** will abandon any unsaved changes (same as clicking the **Cancel** button). Navigation will

then proceed. The same message appears when you attempt to close a module while in edit mode.

 Changes are not ‘saved’ on the server until you leave edit mode. If your computer crashes, any changes you made since entering edit mode will be lost.

Creating new records

The previous section described how to edit data that had already been entered into CLERK. Much of the time, you will be entering new records (e.g. new citations) that don’t yet exist in CLERK.

To create a new record, simply click the **New** button, . A box appears on the screen asking you to name or number the new record. For example, in the Names module, you enter the name of the individual. In the Citations module, you enter the citation number. Once you click **OK**, the new record is created. The module then goes into edit mode, and the record is edited as described in the previous section.

If the **New** button is grayed out (disabled), the system administrator has not given you permission to create new records in that module.

 New records cannot be created while in edit mode. You must first save (or cancel) changes to the current record before creating a new one.

Erasing records

Sometimes it is appropriate to purge a record from CLERK. To erase a record, navigate to it (using the **Previous** and **Next** buttons, or the **Find** box), then

click the **Erase** button, .

If the **Erase** button is grayed out (disabled), the system administrator has not given you permission to erase records in that module.

Note that removing a record from the system may have an undesirable affect on statistics generated by CLERK. For example, erasing crimes committed by juveniles once they become adults would mean those crimes do not show up in *any* statistical reports (including Clery Act or UCR). Instead of removing the crime, it may be more appropriate to modify identifying information (e.g. changing the name to JUVENILE). This topic is discussed in Chapter 9.

 Erased records cannot be recovered. There is no ‘undo’ option for erasing!

 A record cannot be erased while in edit mode. Leave edit mode before trying to erase a record.

Printing

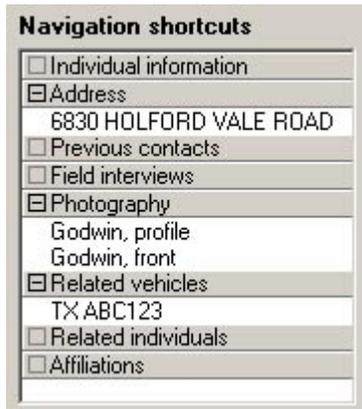
To print a record, click the **Print** button, . This will display a print preview that can be sent to a printer.

It’s possible for your system administrator to create custom printed forms to replace the CLERK defaults. This is an advanced topic discussed in Chapter 7.

Navigation within a record

CLERK stores an extensive amount of information in each record, and in most cases, the entire record will not fit on the screen at one time.

To assist you, CLERK has a feature called Navigation Shortcuts, which serve two specific purposes: (a) a summary of the record is displayed in a single place and in an easy-to-read format, and (b) it is easy to jump to any part of the module.



Note the following features of the sidebar:

- There are a number of lines with gray backgrounds. These are **categories** and they differ from one module to another. Clicking a category will scroll the right part of the screen so that category is at the top of the window. For example, clicking **Addresses** in the Names module will scroll so that the address fields come into view.
- The remaining lines (with white backgrounds) summarize the important information from each category. For example, in the Names module's **Related vehicles** category, the license tag will be displayed.
- Clicking the squares to the left of the category lines will expand or contract the section, i.e. show or hide the information lines from that section.

This can make the shortcuts easier to read if there are many lines.

- Clicking an information line once has the same effect as clicking the category line. For example, clicking the vehicle tag once scrolls so that the vehicle information is visible.
- Double-clicking an information line may open another module, depending upon the type of information. For example, double-clicking on a vehicle tag opens the Vehicles module and displays that vehicle record.

Using the navigation sidebar does not edit any information, and it works the same whether a module is in edit or browse mode. You should feel safe using the sidebar to help you quickly move around, so try exploring!

CLERK modules in detail

The sidebar that appears to the left of the window looks much the same no matter which module you are using. The remainder of the window is used to store data specific to each module.

In the following sections, each of the CLERK modules will be discussed in turn. Note that it is not compulsory to enter information into every field; your department may institute its own policies specifying which fields should be completed. Also, while this manual provides examples of the sort of information each field is designed for, you're not restricted to following our examples; your department may "re-interpret" each field to mean whatever you choose. Therefore, the following sections should be read in

Names database: GODWIN, GLEN STUART

Navigation shortcuts

- Individual information
- Address
 - 6830 HOLFORD VALE ROAD
- Previous contacts
- Field interviews
- Photography
 - Godwin, profile
 - Godwin, front
- Related vehicles
 - TX ABC123
- Related individuals
- Affiliations

GODWIN, GLEN STUART (Change spelling) (Merge name)

Individual information

Alias 1: CARMEN, MICHAEL Alias 2: _____

Sex: Male Female Unknown DOB: 16 Feb 1961 Age: 41

Race: White Height: 500" Weight: 185

Ethnicity: Non-Hispanic Hair: BRO Eyes: BRO

Scars/Marks/Tattoos: _____

Driver license

State: FL Number: 1234567890

Class: _____ Restriction: _____

ID state/number: _____

Officer safety caution

Citizenship: FL

SSN: 123-45-6789

Classification: Non-affiliated

Misc. ID: _____

Comment:

Created: 2002-01-12 16:05:50
Last updated: 2002-01-12 22:42:44

Addresses

conjunction with your departmental policies.

Names module

The Names module is designed to hold all relevant information about individuals with whom your staff come into contact. This includes a physical description, identifiers (e.g. SSN and/or driver's license) and address data.

In this sense, 'contact' means 'interaction with'. A contact could take the form of a traffic stop, a citation being issued, or the person being involved in an offense (as suspect, victim, witness, etc.).

Additionally, you may list position titles in your Names module. For example, if the resident advisor on duty calls for police assistance in one of the dorms on a university campus, you may list the title (e.g. RES. ADVISOR) rather than the name of the individual.

A screenshot of the Names module appears above, and the fields are described below.

Individual information

Alias 1 and 2. Enter aliases (AKA's) for the individual. Use the LASTNAME, FIRSTNAME format. You

can search for aliases manually, but when CLERK does automatic history checks on an individual, it searches only the main name (not the aliases).

Sex. Can be Male, Female, or Unknown.

DOB. The individual's date of birth; blank if unknown.

Age. The age field is calculated automatically based upon the DOB and today's date. It shows the age *today*, not the age at the time the record was created.

Race/Ethnicity. The list of races and ethnicities used by CLERK is mandated by the FBI in NIBRS reporting.

Height. The height can be entered in feet and inches, or in centimeters depending on your locality.

Weight. This is a numeric field and should contain the weight in either lbs or kg depending upon your locality.

Hair/Eyes. Use three-letter abbreviations for hair and eye color. The drop-down list shows abbreviations which have been used previously, but you are not limited to entering something on this list. Thus you should exercise care not to use two different abbreviations for the same color, e.g. WHT and WHI for white.

Scars/Marks/Tattoos. Type any description you want into this field.

Driver's license (DL). There are several shortcuts for entering a driver's license. You can either

- Click on the state field and enter the state, then click on the number field and enter the license number, or,
- Leave the state field blank and type only the number. The "default state" will be automatically placed into the state field. Or,
- You may type both state and license number in the number field, separating them by a space.

DL class and restriction. Standard meanings.

ID state/number. If the individual has a state-issued ID card instead of a driver's license, enter it in these fields. For shortcuts, see the **driver's license** description.

Citizenship. If the individual is a not a citizen of your country, enter their citizenship here. Although the drop-down list shows other citizenships you have previously encountered, you're not limited to choosing an option from the list.

Social Security Number (SSN). If outside the US, you may re-interpret this field to mean another form of federal identification.

Classification. Mostly for use by schools or universities, this specifies the relationship of the individual to the institution - student, faculty, staff, or non-affiliated.

Misc(ellaneous) ID. If the individual presents a form of identification other than a state-issued ID, the number can be entered here. For example, a military or school-issued ID number.

Officer safety caution. Check this box if an individual may pose a threat to officer safety. For example, you may check this box for individuals who resist arrest. At the top of the Names module, the names of such dangerous individuals are colored red. Also, when these individuals are encountered in the CAD, a special warning may appear (see Chapter 5).

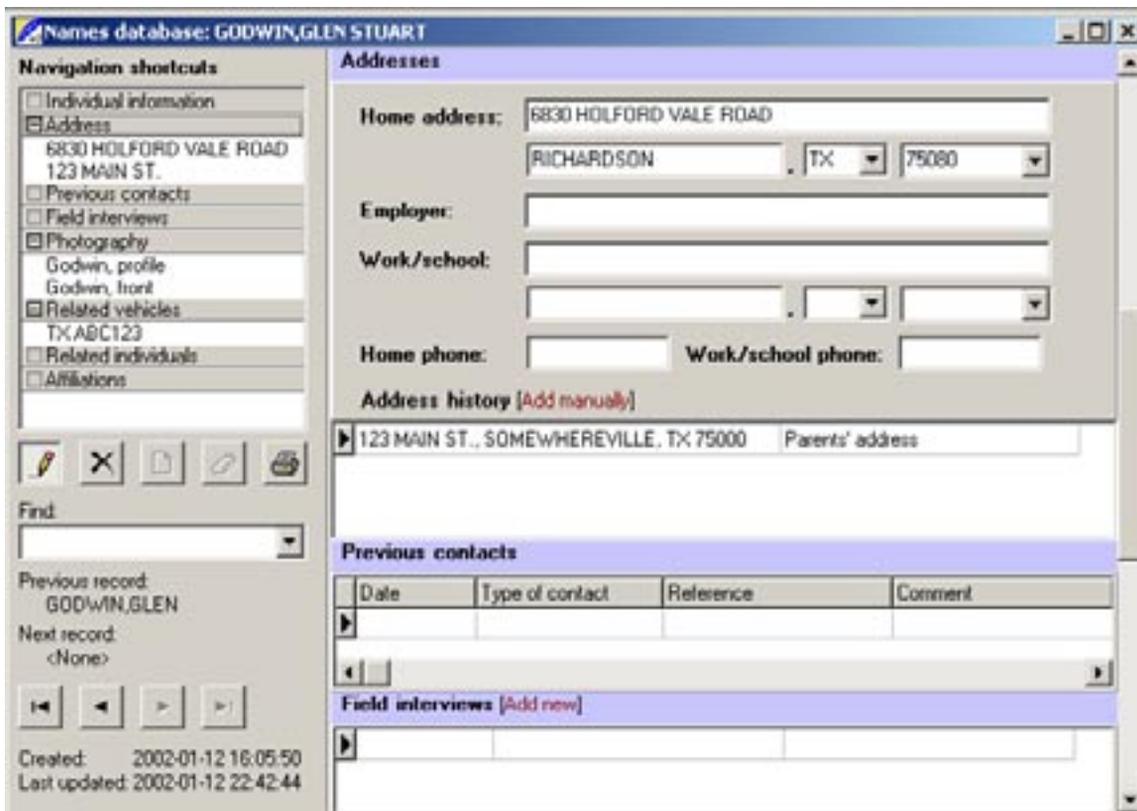


Comment. Use this field for any miscellaneous information about the individual. For example, you may note *why* an officer safety caution was issued.

Addresses

Home address. Store the individual's current home residence in these fields. The first field is for the street address, and the others are for city, state/province, and ZIP code respectively. See Chapter 3 for more information about entering addresses.

Employer. Normally this will contain the name



of the individual's employer. However, you could choose to re-interpret this field. For example, a school district may use this field to list a student's homeroom teacher.

Work/school address. This can be used to store an “alternate address” for the individual, e.g. the address of their employer.

Home/work phone: Telephone numbers corresponding to the addresses.

Address history. Displays a list of other addresses that have been associated with this individual. Normally, the address history is maintained automatically by CLERK. When you enter records (e.g. a citation), CLERK checks the address. If it is different from the currently saved address, CLERK moves the saved address into the history list, and replaces the current address with the one just entered.

While in edit mode, it is possible to add addresses to the history display by clicking the **Add manually** link, which brings up the following window.

Use the comment field to include any pertinent information. The address history display has two columns, the first listing addresses and the second listing any corresponding comments.

i To edit or erase a line from the address history, double-click it and press the **Erase** button. You must be in edit mode to do this.

Previous contacts

At the start of this section, we defined the term ‘contact’ and said that it included traffic stops, citations issued, etc. The **previous contacts** section summarizes all such contacts for an individual. You cannot manually add contacts; the list is generated based upon data entered into other modules. The columns have these meanings:

Date. When the contact occurred.

Type of contact. Essentially this means which module the contact came from, e.g. citation, CAD contact, or case report.

Reference. Citation number, CAD reference number, or Case Report number.

Comment. For a citation, this will specify whether a warning or criminal trespass were issued. For a case report, the letters S, V and W are used to indicate whether the person was a suspect, victim, or witness respectively. An asterisk (*) appears if the person was arrested.

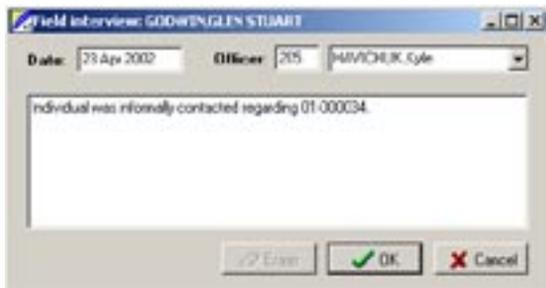
Field interviews

Field interviews are notes/observations regarding the individual which are stamped with a date and the name of the officer making the comment.

Your department may interpret field interviews as meaning “intelligence reports” or it may simply view

field interviews as an extended comments section.

To add a field interview, be sure you're in edit mode and click the **Add new** link.



Type the date, officer name, and comment then click **OK**. The module window will be updated to reflect the new interview.

The Names module shows the date, officer, and first line of the comment. You can double-click the interview for an opportunity to edit or erase the interview.

⚠ If a user can edit names (and most can), they will be able to edit or delete field interviews. Do not use field interviews for investigations. Case report supplements are more appropriate for that purpose.



Photography

Digital photographs can be attached to an individual's record along with a short caption. Small versions of the photograph (called 'thumbnails') appear in the Names module. To show the full-size version, double-click the photograph. You can also double-click the caption in the sidebar.

To attach a new photograph, be sure you're in edit mode and click the **Add new** link. For more details about digital photographs, see the *Digital photographs* section towards the end of this chapter.

Related vehicles

Generally, related vehicles are those owned by the individual, but it may also include vehicles known to be driven (but not necessarily owned) by the individual.

When you add a vehicle, the current individual is also added to the 'related individuals' list for that vehicle.

The vehicle tag and a brief description of the vehicle are displayed. To add a new vehicle, be sure you're in edit mode and click the **Add new** link.

Instructions are provided on the screen. Clicking the **Zoom button** will open the Vehicles module and move to the related vehicle.

Double-clicking a vehicle in the Names module will bring up the related vehicle window (below). You can then edit the comment or erase the relationship.



Related individuals

It's often useful to cross-reference individuals, such as known accomplices or relatives. The related individual is displayed along with a comment (usually stating the nature of the relationship). To add a new relationship, be sure you're in edit mode and click the **Add new** link. The **Zoom button** will open the Names module and move to the related name.

Double-clicking a name in the related individuals list will bring up the relationship dialog (below). You



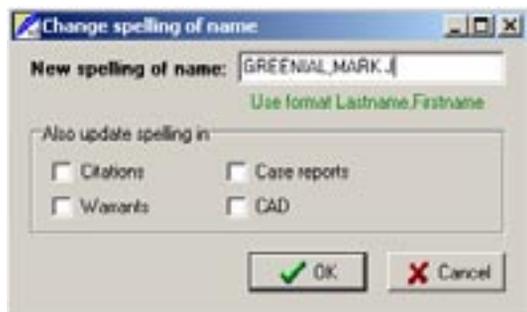
can then edit the comment or erase the cross-reference altogether.

Changing spelling

You may find that an individual's name needs to be modified, either because of a typo or because the name has legally changed (e.g. through marriage).

This can be done without losing all previous contact information by clicking on the **Change spelling** link, found at the top of the window, while in edit mode.

A dialog box appears (below). Enter the new spelling and also check whether you'd like the same spelling change to happen for citations, warrants, case reports, and CAD contacts.



Generally, if the spelling change is due to a typo, you will update the spelling in other modules. If it is due to a legitimate name change, you generally will not update the other modules, since they should show the individual's name as it was when an event occurred (e.g. a citation record should show their correct name at the time the citation was issued).

Merging names

Occasionally, you will find that a single individual has two name records. In such cases, don't just delete one of the records, because all contact history for the individual will be lost. Instead, you should 'merge' the two records. Proceed as follows:

- Choose one of the name records to keep. Generally this will be the most accurate one (correct spelling, most contact history, etc.).
- Navigate to that record in the Names module.
- While in edit mode, click the **Merge name** link at the top of the window.
- Navigate to the second record for the individual.
- While in edit mode on the second record, click the **Merge name** link. Following confirmation, the two name records will be merged.

Vehicles module

The Vehicles module is designed to hold all relevant information about vehicles with whom your staff come into contact. This includes a physical description and ownership data.

In this sense, 'contact' means 'interaction with'. A contact could take the form of a traffic stop, a citation being issued, or the vehicle being involved in an offense (e.g. damaged or stolen).

A screenshot of the Vehicles module appears on the following page, and the fields are described below.

Vehicles database: TX ABC123

Navigation shortcuts

- Vehicle information
- Related individuals: GODWIN, GLEN STUART
- Previous contacts
- Photography

TX ABC123

Vehicle information

Year: 1994 Type: 4DR Color: GOLD

Make: CHRYSLER Model: SEBRING

Decal: VIN:

Related individuals

Owner name: GODWIN, GLEN STUART

Address: 6830 HOLFORD VALE ROAD
RICHARDSON, TX 75080

Phone:

Other related individuals *(Add manually)*

Previous contacts

Find:

Previous record: MI 444444

Next record: <None>

Created:

Last updated: 2002-04-25 0:13:13

Vehicle information

Year. The year of vehicle manufacture.

Type. Specifies whether the vehicle is a car, truck, SUV, bus, motorbike, etc. The list shows the last ten vehicle types you entered, but you can enter other types not on the list. It is the responsibility of your department to define a policy stating which vehicle types are to be used and how vehicles are classified.

Color. The list shows the last ten colors entered, but you can enter other colors not on the list.

Make, Model. When you change the vehicle make,

the model list updates to show all known vehicle models from that manufacturer. Although these fields try to help you by auto-completing make and model information, you can always enter makes and models which do not appear on the drop-down list.

Decal. Use this field to record a permit number or other identifying information for the vehicle.

VIN. The Vehicle Identification Number uniquely identifies a vehicle.

Related individuals

Use this section to store information about the vehicle owner and other associated individuals.

When you add an individual, the current vehicle is also added to the 'related vehicles' list for that individual.

Owner name. Type the owner name. If there is no record of the individual, a new name record will be created. If the name does already exist, the address information will be loaded automatically.

Click the **Zoom button** to open the Names module and view extended details about the owner.

Other related individuals. The related individual is displayed along with a comment (usually stating the nature of the relationship). To add a new relationship, while in edit mode click the **Add new** link.

Double-clicking a name in the related individuals list will bring up the relationship dialog (below).

Add related individual

Enter the name of the associated individual. If the individual is not currently in the names database, the name will be added. You can then use the names module to edit other information (such as description, address).

Name: GODWIN, GLEN STUART

Address: 6830 HOLFORD VALE ROAD
RICHARDSON, TX 75080

Phone:

Comment:

Last updated: 1/12/2002 5:35:35 PM

Erase OK Cancel

You can then edit the comment or erase the cross-reference. The **Zoom button** will open the Names module and move to the related name.

Previous contacts

At the start of this section, we defined the term 'contact' and said that it included traffic stops, citations issued, etc. The **previous contacts** section summarizes all such contacts for a vehicle. You cannot manually add contacts; the list is generated based upon data entered into other modules. The columns have these meanings:

Date. When the contact occurred.

Type of contact. Essentially this means which module the contact came from, e.g. citation, CAD contact, or case report.

Reference. Citation number, CAD reference number, or Case Report number.

Comment. For a citation, this will specify whether a warning or criminal trespass were issued. For a case report, this will specify the 'loss type', i.e. whether the vehicle was stolen, recovered, seized, damaged, etc.

Photography

Digital photographs can be attached to a vehicle record along with a short caption. Small versions of the photograph (called 'thumbnails') appear in the Vehicles module. To show the full-size version, double-click the photograph. You can also double-click the caption in the sidebar.

To attach a new photograph, be sure you're in edit

The screenshot shows a web-based interface for the Citations module. The window title is "Citations: 012345678". On the left is a navigation sidebar with a tree view containing "Citation information", "Recipient information", "Vehicle information", "Court/processing", and "Photography". The main area is divided into two sections: "Citation information" and "Recipient information".

Citation information section:

- Date/time: 28 Mar 2002 12:35
- Officer: 204 STEVENS, Kate
- Citation type: [Ran stop sign, No seatbelt]
- Location: Activities Center
- Location detail: West exit
- Direction: W
- Description: Ran exit stop sign
- Warning only: Search conducted: Consent to search: Video #: []
- Criminal trespass issued: Expires: []

Recipient information section:

- Subject name: BARNES, JAMES
- Home address: 5000 MAIN ST., SOMEWHEREVILLE, TX 75000
- Home phone: 555-555-1234
- Sex: Male Female Unknown
- DOB: 12 Jun 1960 SSN: 123-45-6789
- Height: 6'00" Weight: 210
- Driver license: State: TX Number: 12345678
- Class: C Restriction: []

At the bottom left, there are navigation buttons for "Previous record" (None) and "Next record" (0987654321), along with "Created" (2002-03-30 22:45:53) and "Last updated" (2002-03-30 23:47:10) timestamps.

mode and click the **Add new** link. For more details about digital photographs, see the *Digital photographs* section towards the end of this chapter.

Citations module

The Citations module is designed to hold information about citations and formal warnings issued by your department.

Parking violations should not be stored in the Citations module. It is intended for moving violations, alcohol citations, etc. CLERK has a separate parking

module designed for tracking parking permits, fines, and violations.

A screenshot of the Citations module appears above, and the fields are described below.

Citation information

Date, Time. The date and time the citation was issued. This is not intended to store the time the citation was entered into CLERK.

Officer. The officer (or other staff member) who

wrote/issued the citation.

Citation type. What the citation was issued for. Click the down-facing arrow at the right of the field to see a list of citation types. Check the boxes corresponding to the violations. Click a different field, or press `ESC` when you've finished. The list of citation types can be configured by your system administrator.

i Keyboard shortcuts: When the citation type field is active, use the up or down arrows to scroll through the list of violations. Press `Space` to check or uncheck a box. Type a key to jump to violations starting with that letter.

Location. The general area where the violation occurred. Completing this field allows administrators to monitor crime trends and design directed patrols.

Location detail. A specific description of where the violation occurred. For example, while the location field might specify a building, the location detail may also state the floor and room number.

Direction. Mostly used for moving violations. When the location detail is a street, the direction can specify which direction the vehicle was travelling in.

Description. A brief summary describing the violations.

Criminal trespass issued. Check this box if the citation recipient was issued with a criminal trespass order.

Expires. Expiration date of the criminal trespass.

Warning only. Your department may wish to track formal or written warnings. For example, on a traffic stop, the dispatcher can be alerted to previous contact with an individual. They can then pass on the officer in the field the fact that this individual has had previous warnings.

Search conducted, Consent to search. These fields are included largely to comply with Texas' racial profiling laws.

Video #. Many departments use in-car videos. If the violation resulting in this citation, or the issuing of the citation itself have been recorded on video, identify the tape or location of the recording in this field.

Recipient information

This section stores the name, description, and contact information of the person who committed the violations that led to the citation being issued (the 'recipient').

These fields are the same as their counterparts in the Names module, so we won't describe them again here.

i When you save a citation, the recipient's name record is updated to reflect the information on the citation. If the address on the citation is different from the address on file, the address on file is moved into the address history, and their current address is set to the address on the citation.

When the name record for the recipient is viewed, the citation will be listed as a ‘previous contact’

Vehicle information

If the citation is related to a vehicle, enter the vehicle details here. These fields are the same as their counterparts in the Vehicles module, so we won’t describe them again here.

When this vehicle’s information is viewed using the Vehicles module, this citation will be listed as a ‘previous contact’.

Court/processing

This section tracks followup relating to a specific citation.

Court date. If the staff member issuing the citation must appear in court, list the court date here.

Court. Specify the court which will be responsible for hearing matters related to this citation. For example, your citations may be heard in more than one city court if you are a non-municipal agency straddling two cities.

Judge. Name of the judge presiding over the court appeal of a citation.

Fine, Paid/cleared. The fine associated with this citation, and a flag indicating whether the citation has been paid.

Comment. Any text you choose. It should provide further details about court dates or processing related to a citation.

Photography

Digital photographs can be attached to a citation along with a short caption. Small versions of the photograph (called ‘thumbnails’) appear in the Citations module. To show the full-size version, double-click the photograph. You can also double-click the caption in the sidebar.

To attach a new photograph, be sure you’re in edit mode and click the **Add new** link. For more details about digital photographs, see the *Digital photographs* section towards the end of this chapter.

Warrants module

The Warrants module is designed to hold all relevant information about warrants of interest to your department. This generally includes warrants originating from your department, but may also include warrants issued by other agencies for people known to be present in your jurisdiction.

A screenshot of the Warrants module appears on the following page, along with a description of the fields.

Warrant information

Subject. Enter the name of the warrant’s subject (the person being sought). CLERK expects a name record for the individual to exist already, because warrants normally arise due to previously entered citations or reports. If the name record is found, the individual’s details are loaded. If no record is found, a new one is created. In either case, you may edit the individual’s details in the Names module by clicking the **Zoom button** to the right of their name.

Status. One of Active, Served, On hold, or Cleared. Rather than deleting inactive warrants from your system, your department may choose to simply update their status.

Issue date, Issued for. Enter the date the warrant was issued, and type a brief description of why it was issued.

Related case report. If the warrant stems from a case report, you can enter the case report number here (otherwise just leave this field blank). Clicking the **Zoom button** will open the Case Report module and move to the specified case report.

Related citation. If the warrant stems from a citation, you can enter the citation number here (otherwise just leave this field blank). Clicking the **Zoom button** will open the Citations module and move to the specified citation.

Bond amount, Fine amount. Enter money amounts for the bond or fine amounts.

X-ref. A miscellaneous cross-reference field. Your

department should create its own policy for how to use this field (if at all). For example, it may contain a case number from another department.

Court, Judge. Will usually contain the name of the judge who issued the warrant, and the name of their court. However, your department may wish to assign different meanings.

Individual information, Known addresses

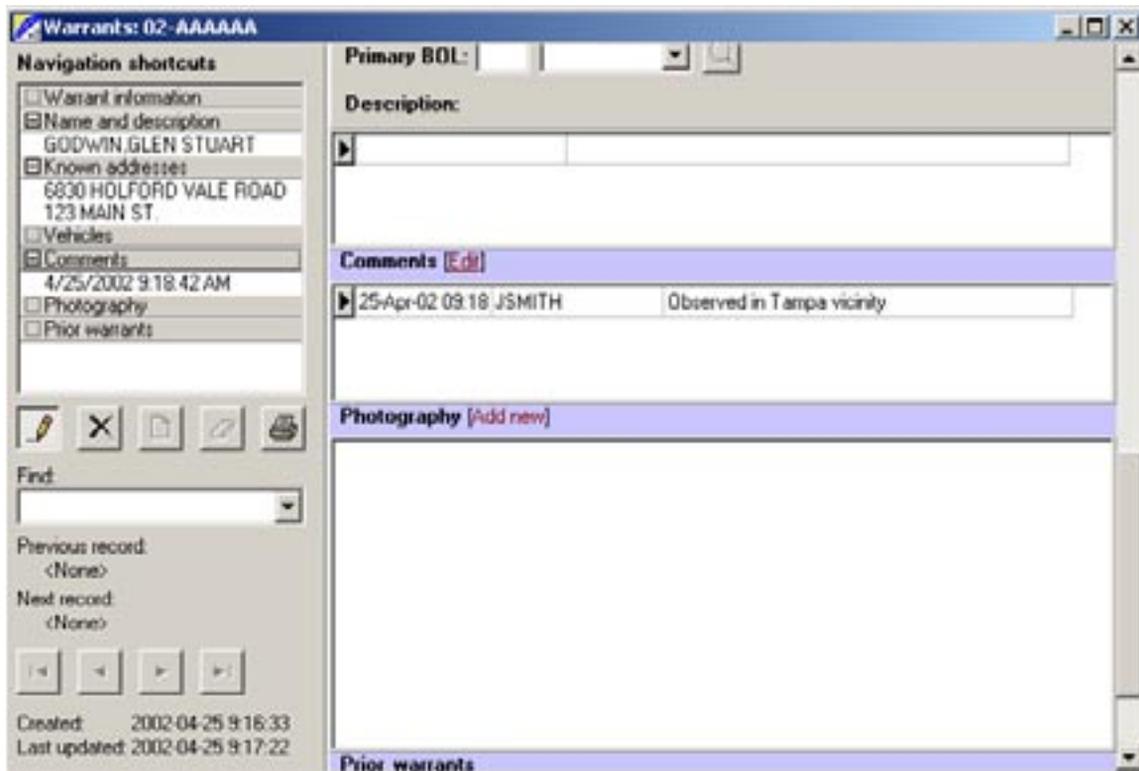
A description of the individual, and their known addresses, will be displayed if that information has

already been entered into CLERK.

These fields are read-only. If you wish to update the information from an individual, use the Names module.

Related vehicles

You may specify one vehicle as the “Primary BOL”, i.e. the vehicle the warrant subject is known to be (or most likely to be) driving. If the vehicle is already listed in the vehicles database, its description will appear automatically. You may open the Vehicles



module and view/edit the vehicle record by clicking the **Zoom** button.

The list of other related vehicles is for information only and cannot be edited. Use the Names or Vehicles modules to specify which vehicles are related to an individual. Double-click an entry to open the Vehicles module and display the vehicle details.

Comments

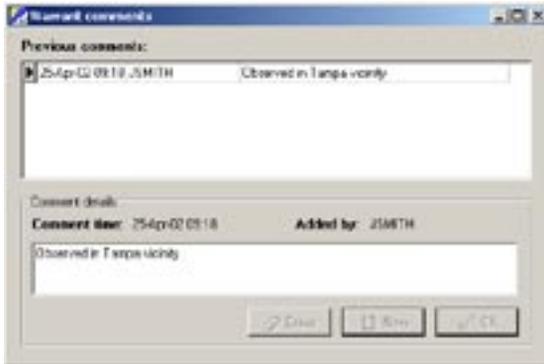
The comments section may be used to add notes to a warrant record. What information should be added

to the comments is an issue for your department.

Two columns appear: one for the time a comment was added, and another listing the comment itself. If the comment is too long to fit in on one line, it will be truncated. To view the full text, double-click the comment.

Or, to add new comments, be sure you are in edit mode and click the **Edit** link.

Both these actions will bring up the **Warrant comments** window.



To create a new comment, click the **New** button and type the comment.

To erase an existing comment, click once on the comment in the grid (top half of the window) then click the **Erase** button.

To edit a comment, click once on the comment in the grid (top half of the window) then modify the comment as necessary. When finished, click the **OK** button.



If a user can edit warrants, they will be able to edit or delete all comments, not only those they made. Do not use comments for information in lieu of creating case reports supplements.

Photography

Digital photographs can be attached to a warrant record along with a short caption. Small versions of the photograph (called 'thumbnails') appear in the Warrants module. To show the full-size version, double-click the photograph. You can also double-click the caption in the sidebar.

To attach a new photograph, be sure you're in edit mode and click the **Add new** link. For more details about digital photographs, see the *Digital photographs* section towards the end of this chapter.

Prior warrants

If other warrants have been issued for an individual, they will be listed here. The display shows the warrant number date of issue, what the warrant was issued for, and the current status.

This is a read-only display; to edit information for another warrant, you should navigate to that warrant. You can do so by double-clicking on the prior warrant information.

Case Reports

CLERK's Case Reports module is used to track criminal offenses that occur in your jurisdiction. It can also track other events for which a police case number is needed, or for which a narrative is required. The Case Report module is the primary source of crime reporting statistics (e.g. UCR reports, NIBRS).

Although the Case Report module looks and functions similarly to other modules, it stores much more data and is much more complex. This section describes the Case Report module in detail.

With other modules, scrolling the right part of the window allows you to see all of a record. Clicking the navigation shortcuts is simply a fast way of scrolling. Because a case report can contain such large amounts of information, scrolling would become

very messy. Instead, a case report is divided into “pages”:



- **Cover sheet.** This contains general information about the case report.
- **Incidents.** This page contains information about the offenses which were committed or the incidents which prompted the case report.
- **Involved parties.** This lists all the individuals and other entities (businesses, organizations) which are involved in the case report as suspects, victims, witnesses etc.
- **Property.** This page contains information about all the property associated with the case report, whether it was stolen, damaged, seized, etc.
- **Narrative.** A page where the case report narrative may be typed.
- **Supplements and Related reports.** This page lists all the supplements to the current case report,

and the numbers of related case reports. Also use this page to create a new supplement or cross-reference.

- **Photography and Attachments.** Digital photographs and other files may be attached to the report.
- **Other.** CLERK case reports can be extended to store additional data, such as state-based accident report forms. If your department has these ‘plugins’, they will be described in a separate manual.

Navigate to one of these pages by clicking on navigation sidebar. For example, clicking on the gray **Property** line will take you to the property page. From there, you may create new **property segments** for the case report.

Understanding ‘segments’

In the preceding section, we described how the case report module is divided into ‘pages’ which are designed to store different types of information.

Each page may need to store information several times over. For example, you may have *more than one* incident, *more than one* involved party, or *more than one* piece of property for a single case report.

We call each incident, involved party, or property item a ‘segment’. For example, you may have several “property segments” in one report, each one corresponding to one item of property. The figure on the left shows a case report with one incident segment and one involved party segment.

So, in summary: Each case report consists of several ‘pages’, and each page may have zero or more ‘segments’.

If more than one segment exists for any page, clicking on the white information line in the navigation sidebar will take you directly to that segment. For example, if two names are listed under **Involved parties**, click directly on one of the name, and the involved party segment for that individual will be displayed.

Cover sheet

The cover sheet contains basic information about the report as a whole. Fields have the following meanings:

The screenshot shows a software interface for a case report cover sheet. The form includes several input fields and sections:

- Case report ID:** 02-000001 (Callout 1)
- Officer:** 201 LUDR, Payton (Callout 2)
- Date/Time:** 12 Jan 2002
- CAD Reference:** (Callout 3)
- Other Reference:** (Callout 4)
- Status:** Active (Callout 4)
- City of Halifax ID:** (Callout 6)
- TX Code Number:** (Callout 6)
- Page date:** (Callout 6)
- Copies to:** A list of checkboxes for 'Asst Chief', 'Chief', 'Clt', 'CMA', and 'PB' (Callout 5)
- Synopsis:** A text area for a brief overview of the incident (Callout 7)
- Report Handling (Assignee):** A table with columns for Date, Assigned to, and Comment (Callout 8)
- Avail trail:** A table with columns for Date and Comment, showing a history of report modifications (Callout 9)

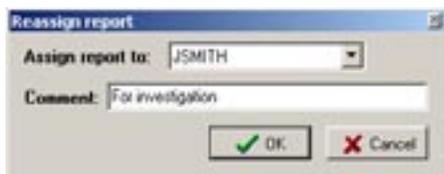
- ① **Officer.** Name and badge number of the officer signing the report.
- ② **Date/Time.** Date and time the report was written.
- ③ **CAD Reference.** Departments using CLERK’s dispatch facility will often have their first record of an incident in the CAD. This field stores the CAD number of the call which prompted the report. For case reports generated within the CAD, this field is completed automatically. Click the **Zoom button** to open the CAD module and bring up the call.

Other reference. A miscellaneous reference number. Your department can create its own policy for how to use this field. For example, if you are a university or college which co-reports incidents with a city department, you may enter the city case number here.

- ④ **Status.** Whether the report is active, inactive, cleared, unfounded etc. This field is mostly used for NIBRS reporting. For UCR, each incident segment has its own status boxes. On the right of the status field you can enter the clear date.
- ⑤ **Copies to.** Check the boxes indicating who has received a copy of this case report. Your department can configure the ‘copies to list’ (see Chapter 9).
- ⑥ **Custom fields.** The cover page may contain up to ten custom fields with captions and meanings determined by your department. Custom fields are shown to the left of the copies to list. Each custom field may contain up to 64 characters.

- ⑦ **Synopsis.** A brief (often “sanitized”) version of the events surrounding this case report. Often the synopsis forms part of the media release. The synopsis has spell checking, and misspelled words will be underlined in red as you type. Right-click on an underlined word for suggestions; see the *Narrative* section for details about spell checking.
- ⑧ **Report handling.** In many departments, a report requiring investigation will be assigned to the CID. The investigator responsible for the case may also change over time. This section tracks who a case report has been assigned to (or ‘handled by’). The date of assignment, user it was assigned to, and a comment appear in the display.

To assign the report, be sure you’re in edit mode and click the **Reassign** link.



In the **Assign report to** field, choose the user name of the person to whom the report will be assigned. In the **Comment** field, type any comments you have regarding the assignment. Then click **OK**. The time of assignment is automatically entered by CLERK and cannot be modified.

- ⑨ **Audit trail.** This section displays who created the case report, who has modified it, and when its owner changed. These events are tracked automatically by CLERK - no action is required on the user’s part. The time each event occurs is timestamped by CLERK.

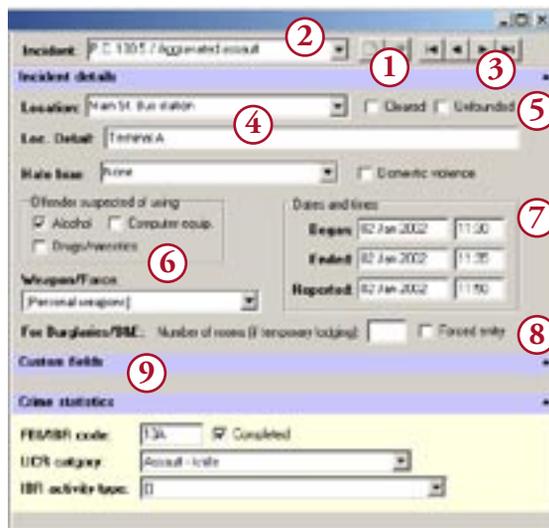
Incidents

The term “incident” has come to mean different things to different people. In CLERK, a case report describes an event or a sequence of consecutive, related events. Each of these events is an “incident”. Commonly each incident is an offense, but this isn’t necessarily so (e.g. an accidentally damaged vehicle).

For example, if an individual holds up a convenience store, steals a getaway car, takes a hostage, and assaults officers upon his arrest, this would be one continuous sequence of events and thus only one case report. However, the case report would contain several **incident segments**, each describing one of the offenses committed.

The screenshot below shows an incident segment.

- ① The “toolbar” across the top of the window allows you to control the incidents in the case report.



Click the **New** button to add a new incident, or the **Erase** button to remove an existing incident.

- ② **Incident.** Set or change the incident type in this field. You may either type the incident code, or click the down-facing arrow to the right of the field and choose the incident code from the list. Incident codes are configured by your system administrator (see Chapter 9). The description for each incident in the case report will appear in the navigation sidebar.
- ③ If there is more than one incident in a case report, navigate between them using the arrow buttons. You may also jump directly to an incident by clicking it once in the navigation sidebar.
- ④ **Location.** The general area where the incident occurred. Completing this field allows administrators to monitor crime trends and design directed patrols.

Location detail. A specific description of where the incident occurred. For example, while the location field might specify a building, the location detail may also state the floor and room number.
- ⑤ **Cleared, Unfounded.** These boxes are used in UCR reporting. If an offense is marked as cleared, CLERK looks at the clear date on the cover sheet when generating the UCR report. This allows CLERK to carry forward cleared reports which were originally reported in a different month.
- ⑥ **Offender suspected of using.** These fields are used for NIBRS reporting. If the officer sus-

pected that the suspect committed this crime under the influence of drugs or alcohol, or if computer equipment was used in commission of the crime, check the appropriate boxes.

Weapon/Force. For crimes against a person, specify the type of force or weapons used, if any.

- ⑦ **Dates and times.** Enter times the incident began, ended, and was reported. Sometimes the precise begin and end dates are not available, and must be estimated.
- ⑧ For burglaries/break-and-enters, specify whether force was used for entry or not. Also, for locations subject to the “hotel rule” (i.e. temporary accommodation, public storage facilities) specify the number of rooms affected.
- ⑨ Each incident may contain up to ten custom fields with captions and meanings determined by your department. Each custom field may contain up to 64 characters.

At the bottom of the incident segment are some crime statistics fields. These are used for UCR/NIBRS reporting. Often, these fields will be completed by records staff and not by the officer writing the report (hence the distinctive color background).

- ① You can make life much easier by specifying default crime statistics for each incident (see Chapter 9). When you enter the incident code, CLERK will automatically complete these fields with the default values. In many cases, no further action is required.

FBI/IBR code. Enter the three-digit FBI code for

the incident. You can find a table of three-digit UCR codes in Chapter 9.

i The three-digit code is used in NIBRS reporting. If you are generating not generating NIBRS reports, you may safely leave this field blank. Also, if you generate NIBRS reports but this incident is not reportable, you may leave this field blank.

⬮ If you are reporting using NIBRS, be sure to use the FBI three-digit code, and not some state code. Using other codes may cause CLERK to omit some information from the NIBRS report.

Completed. Check if an offense was completed; leave unchecked if it was attempted but not completed. This field is only used in NIBRS reporting.

UCR category. Specify which category an offense falls under for UCR purposes. This field is only used in UCR reporting.

IBR activity type. Specify the type of activities which occurred in connection with an offense. This field is only used in NIBRS reporting.

Involved parties

The screenshot to the right shows an involved party segment.

1 The “toolbar” across the top of the window allows you to control the involved parties in the case report. Click the **New** button to add a new party, or the **Erase** button to remove an existing party.

- 2 Name.** Set or change the name of the involved party in this field. If there is not an existing name record, one will be created. You may open the Names module and view further details by clicking on the **Zoom button** to the right of the field. If an existing name record is found, the information will be loaded into the case report automatically.
- 3** If there is more than one involved party in a case report, navigate between them using the arrow buttons. You may also jump directly to a party by clicking it once in the navigation sidebar.
- 4** The next section lists some general information about the party, and why they are appearing in this case report.

Type of party. In the majority of cases, the involved party will be a person (an individual). However, the involved party may also be a business, religious organization, etc.

Classification. If you are an educational institution, individuals may be classified as students, faculty, staff, or non-affiliated.

Subject is. Check the appropriate boxes to indicate why this party is being included in the case report, i.e. what is their relationship to the events being described.

Date passed to D.A. office. For your records, you may wish to record this date.

Suspect suffix. Some D.A. offices want each suspect to be referenced via a different case number, e.g. if your case report has two suspects, they want two case reports with different numbers. However, this contradicts the NIBRS model (that CLERK uses), which expects you to generate one case report for each event or sequence of events, no matter how many people or offenses were involved.

We overcome this problem by allowing each suspect to be given a “suspect suffix”. When you print, you may nominate a “primary suspect”, and the suffix corresponding to that suspect will be appended to the case number. For example, if the suspect SMITH, JOHN has a suffix of AA and the suspect SMITH, JANE has a suffix of AB, and the case number is 02-000001, then printing with SMITH, JOHN as the primary suspect would show the report number as 02-000001/AA and printing with SMITH, JANE

as the primary suspect would show the report number as 02-000001/AB. Exactly how the case report number appears is controlled using the case report number syntax (see Chapter 9).

⑤ **Description.** These fields describe a person. These fields have the same meaning as corresponding ones in the Names module, so we won't describe them in detail here.

One exception is the **Age** section. In a case report, a suspect's date of birth may not be known precisely; a victim may only be able to estimate an age range, for example. CLERK allows you to specify either a date of birth, an age range in years, or a precise age in years.

⑥ **Address.** These fields list the involved party's address and contact information. The **Resident** field specifies whether they are a resident in your jurisdiction (this field is used for NIBRS reporting; refer to NIBRS reporting guidelines regarding the resident status).

⑦ **Victim information.** This section is only visible if the involved party was marked as a victim; see the comments in ④.

Victim of offenses. This box shows a list of all incidents in the case report. Check the incidents which this involved party was a victim of.

Physical injury. If the victim sustained a physical injury, specify it here. The list of injuries is a NIBRS list; if the person sustained more than one injury, choose the most serious one.

Assault/Homicide information. If the offenses which this person was a victim of include aggravated

The screenshot shows a software window titled 'Name: GEDWIN, GLEN STUART'. It has several sections:

- Victim information:**
 - Victims of offenses:** A list box containing 'F.C. 10B.5 / Aggravated assault' (circled 7).
 - Physical injury:** A dropdown menu set to 'None'.
 - Arrest/Offense information:** A dropdown menu.
- Relationships to offenders:**
 - Offender:** 'GEDWIN, GLEN STUART'.
 - Relationship:** 'Victim's offender'.
- Arrest details:**
 - Arrest date:** '02 Jan 2002'.
 - Officer:** 'JG'.
 - Officer name:** 'COOPER, Raymond' (circled 8).
 - Location:** 'Van St. Bus station'.
 - Type:** 'Dr. non arrest'.
 - Arrested with:** A list of checkboxes: 'Unarmed' (checked), 'Unprojected firearm', 'Handgun', 'Handgun, automatic', and 'Fire'.
 - Booking number:** An empty text field.
 - Arrested status:** 'No a/larrest'.
 - Disposition:** An empty text field.
- Charges arrested on:** A table with columns 'Charge', 'Originating report', and 'Arrested'. One row is visible: 'F.C. 10B.5 / Aggravated assault', '02-00001', and 'Arrested'.
- Charges filed by D.A.:** A table with columns 'Charge', 'Originating report', and 'Disposition'. One row is visible: 'F.C. 10B.5 / Aggravated assault', '02-00001', and 'Arrested'.
- Custom fields:** A section at the bottom (circled 9).

assault, manslaughter, or homicide, some additional fields will appear. These fields are used in NIBRS reporting, to describe in more detail the circumstances surrounding the offense.

Relationships to offenders. The names of each offender in the case report appears in this grid. For each offender, click the right column to specify the victim's relationship.

8 Arrest details. This section is only visible if the person was marked as a suspect; see the comments

in **4**.

Arrest date. Date on which the arrest was effected.

Officer. The arresting officer.

Location. The general area where the arrest took place. This indirectly tells CLERK whether the arrest was effected in a public place, on a campus, etc.

Type. The type of arrest.

Booking number. Generally the booking number is issued by the jail after prisoner arrival.

Juvenile status. Whether or not the individual was a considered a juvenile at the time of their arrest, and if so, what was the outcome of the arrest.

Armed with. Specify any weapons in possession of the suspect at the time of their arrest. Although you may specify more than two weapons, only two will be reported to NIBRS.

Disposition. Disposition of the arrest, or other comments.

Charges arrested on. Each line in the grid corresponds to one charge laid against the suspect following their arrest. Click the **Add new** link to add lines (charges) to this grid.

If the case report is in edit mode, click an item on the grid to edit it. The **Charge** column lists the offenses the suspect is charged with. The **Originating report** column specifies which case report describes the offense this charge stems from.

Normally, the originating report is simply the current case report. But not always.

Example scenario: A store reports a counterfeit ID document; the case is assigned number 02-000003. The suspect is tracked down. A search warrant is obtained for their residence. During a search of the residence, stolen property is recovered. The property theft was previously described in case report 02-000001. How do we enter this information?

Example solution: There was only one actual arrest, and it was due to case 02-000003. Therefore, we enter the arrest details in case 02-000003 and not in case 02-000001. There will be two charges, one of counterfeiting which originated from case report 02-000003, and one of theft which originated from case report 02-000001.

Charges filed by D.A. Sometimes, the charges filed at the time of arrest are not the charges the D.A. later prosecutes. Store the charges filed by the D.A. here, if your department wishes to track that information. The grid operates in the same way as the one above, except you also have a disposition column to record the outcome of the case.

- ⑨ **Custom fields.** Each involved party segment may contain up to ten custom fields with captions and meanings determined by your department. Each custom field may contain up to 64 characters.

Property

All property associated with a case report is tracked on the property page. This includes seized items (evidence) as well as stolen or damaged property.

The screenshot shows a software window titled "Description" with a toolbar at the top containing buttons for "New" (1), "Erase" (2), and navigation arrows (3). Below the toolbar are several input fields: "Description" (4), "Base on price report" (5), "Vehicle" (6), and "Stolen/lost" (7). The "Description" section includes "Item type" (8), "Serial number", "Recovery date", "Status" (Official/Personal), "NDC", "NDC number", and "Emp date". Below this is a "Quantity" section with "Lost" and "Recovered" fields. The "Vehicle information" section (9) includes "Owner details" with "Owner" (SCOWEN,OLEN STUART), "Phone", "Owner address" (NORFOLK VALL ROAD, FARMINGTON, TN, 37500), and "Custom fields". The "Evidence tracking" section has a table with columns "Date out", "Released to", "Date in", and "Comment". A note below the table states: "Evidence tracking is included here for information only. To modify evidence information, or to record custody of this property, use the Evidence module." The "Clear statistics" section includes "SDFI values" (Not reported) and "SDFI category" (Other).

The screenshot above shows the property page.

- ① The “toolbar” across the top of the window allows you to control the property in the case report. Click the **New** button to add a new property item, or the **Erase** button to remove an existing property item.
- ② **Description.** Set or change the property description.
- ③ If there is more than one property segment in a case report, navigate between them using the arrow buttons. You may also jump directly to a

property segment by clicking it once in the navigation sidebar.

④ The next section describes the property.

Item on prior report. If this is a supplement report, property items from the original case report will be listed in this drop-down field.

Example scenario: Some property is reported as stolen, and then later recovered. How should this be tracked?

Example solution: Create one case report for the theft. Add a property segment describing the stolen property. Then, when it is recovered, create a supplement to the original report. Add a property segment, and set the “item on prior report” to the property segment on the original case report. Then, in the supplement, enter new information for the property.

Vehicle. Check if this property is a vehicle. For vehicles, CLERK will set the property description to the vehicle license tag, and not allow you to edit it.

Illegal drug. Check if this property is an illegal drug. Do not check the box if the drugs are legal (e.g. theft from a pharmacy).

Loss type. Why is the property included in the case report? i.e. was it damaged, destroyed, stolen, vandalized, etc.

Serial number. Any serial number which may be used to identify this property.

NCIC. If applicable, supply the NCIC number and entry date.

Recovery date. If the property has been recovered, enter the recovery date here.

Nature. Specify whether the loss should be considered personal or official. Your department may define what is meant by these terms. For example, if you are a state institution, personal property of employees would be “personal”. Items owned by the state would be considered “official”.

Quantity. Enter the quantity of items lost and recovered (if not recovered, leave blank). When there are many items of the same property, this avoids having to enter each one individually.

Value. Enter the total value of property described in this segment, both stolen and recovered (if not recovered, leave blank).

If the **Illegal drug** box was checked, instead of quantity and value, fields will be displayed requesting information about the drugs.

The image shows a screenshot of a software interface. It features two input fields. The first field is labeled 'Susp. drug type:' and contains the text 'Heroin'. The second field is labeled 'Estimated amount:' and contains the number '5' followed by a dropdown menu showing 'gram'.

Suspected drug type. Select the drug type. Officers should not wait for lab results, but should choose the category that best matches their estimate.

Estimated amount. Specify the amount and units of measurement. Again, the accuracy of a formal lab measurement is not required on the initial report.

⑤ **Vehicle information.** If the **Vehicle** box was checked (see ④) this section will be visible. The fields are the same as those described in the Vehicles module, so we shall not describe them

again here. However, there are three new fields:

Comment. Any relevant information about this vehicle, particularly about its inclusion in the case report.

Vehicle theft. If the vehicle was stolen, enter the location of the theft.

Vehicle recovery. If the vehicle has been recovered, enter the location where it was recovered.

- ⑥ **Owner details.** Use this field to record the owner of the property, and their contact information. If there is already a name record for the owner, the contact information will be loaded automatically.
- ⑦ **Custom fields.** Each property segment may contain up to ten custom fields with captions and meanings determined by your department. Each custom field may contain up to 64 characters.
- ⑧ **Evidence tracking.** Property that has been stored as evidence or sent for analysis may have an evidence record. This would be done using the Evidence module, and the process is described later in this chapter.

The property page checks whether each property segment has an evidence record. If so, the evidence tracking number is shown as a link. Click the link

to open the Evidence module and view more details. If no record is found, the text “no evidence number assigned” will appear instead.

Custody information appears in a grid. This allows you to see who has handled the evidence and when. However, for security reasons, you must use the Evidence module to alter this information.

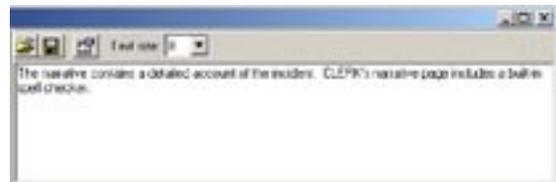
- ⑨ **Crime statistics.** These fields are used for UCR/NIBRS reporting. Often, these fields will be completed by records staff and not by the officer writing the report (hence the distinctive color background). If the property is reportable for UCR/NIBRS purposes, select the property category here.

Narrative

Each case report contains a narrative page. Type your narrative in here. The standard editing features (**Cut**, **Copy**, **Paste**, **Undo**) are available from the **Edit** menu or using the keyboard shortcuts, Ctrl-X, Ctrl-C, Ctrl-V and Ctrl-Z respectively.

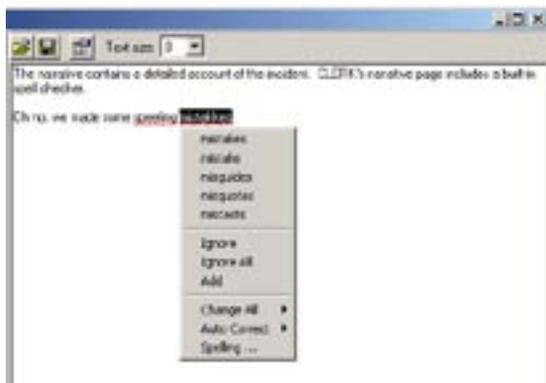
You may change the font size using the drop-down box at the top of the screen. Note that this only changes the *display*, and the narrative is still saved in the standard size.

The **Open button** may be used to load a narrative



which you have previously typed in another software program, such as Microsoft Word (note that you can also copy and paste narratives from other software). CLERK can open files which are in text (.txt) or rich text format (.rtf). Microsoft Word will save in RTF format.

The **Save button** allows you to save a CLERK narrative as a file on disk, so that you may distribute it to others or load it into other applications such as Microsoft Word. CLERK will either save as either text (.txt) or as rich text format (.rtf).



CLERK's narrative page has a built-in spell checker. As you type, CLERK continually checks your spelling. Any unrecognized words are underlined in a curvy red line, as shown above. You may right-click on an unrecognized word to see a list of suggested alternatives; choose an alternative and the word will be replaced.

The menu also lists several other options:

Ignore. Tells CLERK that the word is spelled correctly. The underline is removed but the word is not

changed.

Ignore All. Not only does CLERK consider this word to be spelled correctly, but all other occurrences of the word in this narrative are also considered correct and have the underlining removed.

Add. If the word is not only correct, but one you are likely to encounter frequently in other narratives, you may wish to choose this option and add it to the dictionary.

Change All. If you select one of the suggested alternatives from the submenu, all occurrences of the misspelled word will be changed, not just the one you right-clicked on.

Auto Correct. If the misspelled word is simply a typo that you make frequently, you can use auto-correct so that CLERK automatically corrects the word each time it is misspelled in the future. For example, 'the' is often misspelled as 'teh'. You might choose to have CLERK change 'teh' to 'the' each time you type it.

Spelling. Has the same effect as clicking the **Spelling button** on the toolbar. This scans the whole narrative for spelling mistakes. A window similar to the one below will appear. Clicking an action button will move to the next misspelled word. Also, from



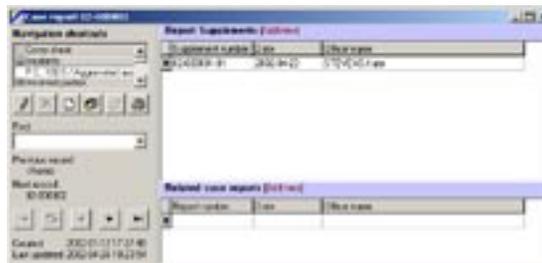
this window clicking the Options button will display the spelling options (below).



The meaning for most of these options is intuitive. At the bottom of the window, you may create new dictionaries and incorporate them into CLERK. For example, if there are locations in your jurisdiction, or law enforcement terms which do not exist in the default dictionary, you may create a new dictionary containing these terms (click the **Dictionaries** button then click **New**). When you choose to add a misspelled word to the dictionary, it is added to the custom dictionary shown in the drop-down field.

Supplements

A supplement is a special case report which follows on from an existing case report. Supplements have a different numbering scheme in CLERK. By default, a two-digit suffix is added to the original case number. For example, the first supplement to case 02-000001 will be 02-000001-01 and the second supplement



will be 02-000001-02. Your system administrator may have changed the numbering system.

The supplements for a case report are listed in the navigation sidebar. Double-click a supplement number in the sidebar to view it.

By going to the supplement page (shown below) you can view basic information about the supplement: who created it, and the date it was created. You can also view a supplement by double-clicking here.

To add a new supplement, you must first be in edit mode, then click the **Add new** link. You will be asked whether you wish to save changes to the original case report (click **Yes**). The supplement will then be opened in edit mode. You may see the screen flicker for a few seconds as CLERK performs these tasks.

Since supplements look and act the same as a regular case report, we don't need to describe the fields a second time.

i You cannot have a “supplement of a supplement”. All supplements should be created from the original case report.

Related reports

CLERK provides you with a method of cross-referencing case reports. It is called the “related reports” section and appears below the list of supplements.

To create a new relationship, click the Add new link above the list of related reports.

To remove an existing relationship (not the report itself, just the reference to it), click once on the reference and press the Del key.

To view a related report, double-click it either in the related reports grid, or in the navigation sidebar.

Photographs

Digital photographs can be attached to a case report along with a short caption. Small versions of the photograph (called ‘thumbnails’) appear on the Photography page in the Case Report module. To show the full-size version, double-click the photograph. You can also double-click the caption in the sidebar.

To attach a new photograph, be sure you’re in edit mode and click the **Add new** link above the photograph thumbnails. For more details about digital photographs, see the *Digital photographs* section towards the end of this chapter.

Photographs may be added of a crime scene, victim injuries, suspect mug shots, seized property, or anything else. It is up to you to describe the photograph in the caption.

Attachments

Just as you can attach digital photographs to a case report, you can also attach other files. Examples of the types of files you may wish to attach include: audio clips of phone calls, e.g. E911 recordings; spreadsheets; Word documents or PDF files; video clips from in-car video; or diagrams. Basically any type of file which is stored on your computer may be attached to a case report.



To add an attachment, be sure you are in edit mode and click the **Add new** link, and select the file you wish to attach. Then provide a caption for the attachment. The caption appears both in the navigation sidebar, and beneath the attachment icon as shown above.



Some types of attachments, particularly video and audio files, can be very large. Attaching large files will consume disk space on your server at a rapid rate. Large attachments do not slow down the system, but they can take a long time to transfer over the network making CLERK seem less responsive.

To view an attachment, double-click either its icon

(see screenshot above), or the navigation sidebar.

i To view an attachment, you must have the viewing software installed on your computer. For example, if a Microsoft Word document is attached to the case report, you must have Microsoft Word installed to view the attachment.

Erase attachments by clicking the **Erase** link. Select all the attachments to be erased and click **OK**.



Case report approvals/security

The integrity of what is stored in CLERK is important. One user should not be able to change another's case report without express permission to do so, otherwise the officer making the report may be misrepresented. Additionally, who may modify a report could change over time, e.g. once a case report is approved by a supervisor, even the officer making the report may not be allowed to alter it.

CLERK uses a system of “security levels” to achieve case report security. At any given time, a case report will have a security level of zero through nine (although most departments will not use more than

two or three levels). The higher the security level, the fewer users will have permission to view/edit it.

For those with military backgrounds, you could think of these numbers as representing “security clearances”. Zero is void, one is “confidential”, two is “secret”, three is “top secret” and so on.

Your system administrator will issue you with security clearances that determine which reports you will be able to view, edit, or approve.

Approving a report means increasing the security level to restrict who may edit it. To change the security level, click the **Permissions** button on the sidebar. The approval and security window appears:



i The system will generally be configured so that the *only* action required from a supervisor in order to approve a case report is clicking the **Approve report** button.

There are two settings in this window. The Owner field specifies who is the current owner of the case report; this affects the “Find my last report” function.

Secondly, some users will be able to modify the security level. In effect, increasing the security level

approves a report, and reducing the security level kicks it back to an officer for further revision. At the bottom of the window, three lists show which users will be allowed to view, edit, and approve the report *after/when* the proposed security change takes effect. For it to take effect, click the **Approve report** button.

Printing

Printing case reports is unlike most other records, because the hard copy is often available to non-law enforcement. A single case report may be printed in a variety of different formats depending on the intended audience. For example, you may have a “full copy” for the department’s files or for the D.A., and a second “sanitized copy” for distribution to the public.

CLERK allows you to create report ‘templates’ that are used to specify how a printed case report should appear. Once you click the print button, a dialog will appear:



Report template. You may create different case report templates using the custom form designer. See Chapter 7 for details.

Primary suspect. This suspect is printed first.

Primary incident. This incident is printed first.

Nominal identifier. For the default template, this has no effect. In some custom templates, this field will allow you to specify the case number that should be printed on the report. Normally this will be the number of the case report. If your D.A. so requires, you might create a custom report template which need a different case number (e.g. a suffix for the offense), in which case the template will use the value in this field. Unless your department is subject to such requirements from the D.A., you don’t need to worry about this field.

Click the **Print button** to view a print preview of the report.

Evidence module

The Evidence module is designed to track a piece of evidence after it is in the custody of your department.

Although the Case Report module has a property page, it is designed for describing the property, and how it relates to the case report, not how the property is handled after it is in your department’s possession.

A screenshot of the Evidence module appears on the following page, and the fields are described below.

Property information

Item. Give the item some title.

Item code. Your evidence technicians may use codes to refer to different types of evidence.

Evidence: 02-000001A

Navigation shortcuts

- Property information
 - 12 inch knife
 - 12 inch knife, folding, black car.
 - Report 02-000001
- Case report information
 - P.C. 100.5 / Aggravated assault
- Lab analysis
 - DPS Somewhere
 - 0245023241
- Custody history
 - MAYVIEW,Simon (4/25/2002 1:

Evidence 02-000001A

Property information

Item: 12 inch knife Item code: KNIFE

Description: 12 inch knife, folding, black carved handle

Case report linkage

Case number: 02-000001 Report item: 12 inch knife

Is an illegal drug Serial:

Case report information

Report date: 1/2/2002 Reporting ofc: COOKE, Raymond

Offense: P.C. 100.5 / Aggravated assault

Suspect: GODWIN, GLEN STUART

Owner: GODWIN, GLEN STUART

Owner address: 6830 HOLFORD VALE ROAD, RICHARDSON, TX 75080

Owner phone:

Receiving ET: HOPKINS

Lab analysis

Lab name: DPS Somewhere To lab: 25 Apr 2002

Lab number: 0245023241 Lab tech: MUSBAUGER

Received letter: Received item:

Results: Blood on knife matches victim Fee: 50

Custody history (Release item)

Current location: Locker A

Disposed

How: Date:

Date out	Released to	Date in	Comment
25 Apr 02 13:00	MAYVIEW, Simon		For transport to DPS

Description. A more detailed description of the property, e.g. its physical characteristics.

Case number. Enter the case report number which resulted in seizure of this property. After the evidence record is saved, you'll be able to use the **Zoom button** to go directly to this case report from the evidence module.

Report item. After you enter the case report number, a list of property items will be loaded from that report. Choose the item which corresponds to this piece of evidence. This also allows the evidence tracking information to show up in the Case Report module.

Illegal drug, Serial. These fields are read-only and will be loaded from the property segment of the case report.

Case report information

Most of the fields in this section are read-only and will simply be loaded from the case report.

Offense. A list of the case report's incidents will be available. Choose the one that this item of evidence relates to.

Suspect. A list of the case report's suspects will be available. Choose the one that this item of evidence relates to.

Receiving ET. Name of the evidence technician who "checked in" the property.

Lab analysis

Lab name. Which laboratory this evidence was sent to for testing, if any.

To lab. Date the evidence was sent to the laboratory.

Lab number. Item number assigned by the laboratory.

Lab tech. Laboratory technician who analyzed the evidence.

Received letter. Date a letter describing the analysis results was received from the laboratory.

Received item. Date the evidence itself was returned from the laboratory.

Results. A summary of the laboratory results.

Fee. If a fee was paid to the laboratory for performing the analysis, enter the amount here.

Custody history

Current location. Specify where the property can be found at this time. For example, a shelf number or locker number.

Disposed. Check this box if the evidence has been disposed of, i.e. is no longer in your department's custody.

How. How the evidence was disposed of.

Date. When the evidence was disposed of.

At the bottom of the module is a grid displaying the custody history. CLERK tracks when an item

was released, who it was released to, when it was returned, and a comment.

To release an item, click the **Release item** link. This will bring up the dialog below.

Type the release information and click **OK**. Later, to edit a line (e.g. to mark the evidence as having been returned), simply double-clicking the grid will return to this dialog. Click **Erase** to get rid of a line from the grid entirely.

Digital photographs

Several of CLERK's modules allow you to attach digital photographs. This section describes in more detail how to use CLERK's digital photography feature.

What can be stored

Any image in the JPEG format may be attached as a digital photograph. Thus scanned drawings or documents may be attached as well as photographs.

How to store

First, the image/photograph you wish to store must be visible to CLERK as a JPEG file. For digital cameras, this may be achievable by:

- Inserting a floppy disk into the camera, taking the photograph, then inserting the floppy disk into your computer running CLERK.
- Attaching a serial or USB cable between the camera and your computer.
- Inserting the digital film from the camera into a "flash card reader" (if you have one) which is attached to your computer.
- Using a "CompactFlash adapter" to directly insert the digital film into your laptop running CLERK.

Note that all these methods are simply ways of transferring the photograph from the camera to your computer. Your camera manual should describe the exact process in more detail. No conversion of the image is required, since nearly 100% of digital cameras currently on the market store photographs in the JPEG format.

Appearance

No matter how large the original photograph, a small version of it is created and displayed in the CLERK module. This small version is called a "thumbnail". To view the full-size photograph, either double-click it, or double-click the caption in the navigation sidebar.

Viewing photographs

Photographs are viewed at full-size using CLERK's built-in image viewer (shown on following page). Note that the photograph caption is shown in the title bar.

- ① The drop-down field allows you to set the zoom



level for the image.

- ② To zoom in on a particular region of the image, click the **Zoom in** button, then click and drag to select a region of the image you wish to enlarge.
- ③ Click the **Zoom out** button to reduce the zoom level.
- ④ Click the **Save button** to save the image as a JPEG file on disk.
- ⑤ Click the **Erase button** to remove the image from the database. You must be in edit mode to erase the image.
- ⑥ Click **Change caption** to alter the image caption, i.e. the text that will appear underneath the thumbnail. You must be in edit mode to change the caption.

Jumping to other modules

It is possible to open more than one window for most modules. Follow the same procedure you would when no windows are open.

A list of currently open modules is displayed under the **Windows** menu. To move from one module to another, either choose the new module from the **Windows** menu, or click on the module window once.

i Having many windows open can slow down your computer, especially if it has limited memory (RAM). Try to keep the number of open windows small by closing modules which no longer need to be open.

Some fields, notably those for names or vehicle license tags, will have a **Zoom button** to the right of them. Clicking this button will open the appropriate module and move to the record described in the field. When these fields are blank, the **Zoom button** will generally be disabled (grayed out).

Transactions

We say that CLERK is “transaction-based”. What does that mean to the average user? The answer is three things:

- It prevents two users from modifying the same record at once. Otherwise, each user could change part of the record without the other knowing it.
- All the changes made to a record are “saved up”

and then performed at once. This is what happens when you click the **Edit button** to switch from edit mode to browse mode. So if your computer were to crash, any changes you had made since entering edit mode would need to be repeated.

- If one change fails, all the changes in the transaction fail. This helps prevent data from becoming corrupted or ‘out of sync’.

i If you have more than one module open, each will be using a different ‘transaction’. Changes in one module may not show up in another module unless you reload the record.

Bookmarks

Often you will need to refer back to a record you’ve been working on, for example a case report under investigation.

While it is easy for people to remember names, it tends to be less easy to remember numbers (such as citation or case report numbers). CLERK helps you easily return to records of interest by using ‘bookmarks’.

Creating bookmarks

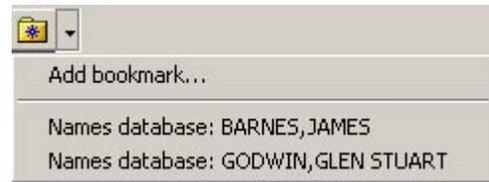
Bookmarks are accessed via the **bookmarks drop-down** on the toolbar of the main CLERK window.

After you have opened a module and moved to the record you wish to bookmark (e.g. the particular citation, case report, or warrant), go to the bookmarks drop-down and choose the **Add bookmark** option.

That’s it! The record you are currently viewing has been added to the bookmark list.

Using bookmarks

If you look again at the **bookmarks drop-down**, you’ll notice the menu has been updated, and your bookmark information is now appended to the end of it.



To return to a bookmarked record, simply choose it from the drop-down.

Editing bookmarks

Records become less important over time. For example, investigation of one case report will finish, and you might want to remove that case report from your bookmark list.

Click the **Bookmarks button**, which is attached to the **bookmarks drop-down** menu. A bookmarks window will appear (see following page).

From this window, you may open bookmarks by clicking on the **Open** link. This has the same effect as choosing the bookmark from the drop-down menu.

You may also delete bookmarks by checking them and clicking the **Delete selected** button.



5 Chapter

Dispatch (CAD)

In many ways, CLERK is a very typical database package, allowing you to type information into fields, save the information, then view it again later, or generate summaries and statistics. The Computer Aided Dispatch (CAD) module is a unique part of CLERK; its functionality and behavior is so different, that it is worthy of its own chapter.

Why is it unique? For the most part, other modules are not “time critical”. The person entering data often does so after an event has concluded, e.g. at the end of a shift, or even the following day. However, in the CAD module, users are often under time pressure and need many time-critical features. In this chapter, we describe how the CAD works, and how to use it. We also look at the Equipment module. Equipment is often tracked in conjunction with the CAD, so it makes sense to consider both in the one chapter.

Introduction to CAD

Chapter 4 discussed how most CLERK modules can either be in *browse mode* or in *edit mode*, and how data can only be modified while in edit mode. Unlike other modules, the CAD is considered to always be in edit mode. There is no need to click any buttons before modifying data.

Furthermore, changes are sent to the CLERK server as soon as you leave a field. CLERK does not ‘accumulate’ changes and send them to the server when you press a save button, as it does with other modules.

CLERK’s CAD module is designed to work in a multiple dispatch station environment, i.e. where more than one CLERK client can have a dispatch module open. For example, your department may have one “call taker” and another “call dispatcher”. In the CAD, more than one person can work with a given call simultaneously. Whenever one dispatch station modifies a call, the change is immediately transmitted to all other dispatch stations.

CAD organization

The CAD module consists of several different screens, accessed via the **Modules | CAD** menu. Three of the windows are likely to be used by all departments operating the CAD:

- **Main CAD window.** This window shows all information for one call. You may assign new calls, move back or forward between calls, and print call records.
- **Active calls** window. This window displays all calls with uncleared units. The basic details of an active call may be modified, new calls may be created, and officers assigned. Also, text dispatching (QuickCAD) is done from this window.
- **Available units** window. This window can display either all units currently in-service, or all units in-service but not assigned to a call. Using this window, units can be placed in or out of service, equipment may be checked in or out, and their current location updated.
- **Active contacts** window. This lists all name and vehicle contacts from active calls. It allows you to add new contacts, and shows which unit called in each contact.
- **Premise log.** The premise log displays information about a location. For example, it may include locations of fire panels, exits, a hazardous material inventory, or a list of proctors/contacts.
- **Procedure guidance.** The procedure guidance window displays instructions to the dispatcher based upon the CAD activity. For example, it may specify the procedure to be followed when a hazardous materials spillage is reported (something that doesn’t happen every day, but where strict procedures must be adhered to).

Three other windows are available. Your department may or may not choose to use these windows.

Once the CAD windows have been opened and arranged on the screen to your liking, the layout may be saved by choosing the **Modules | CAD | Save CAD workspace** menu option. To restore the CAD layout, simply press the F2 key, or choose **Modules |**

CAD | **Restore workspace** menu option.

i Unlike the other modules, you may only have one of each type of CAD window open at a time. When a window is already open, choosing it again from the Modules menu (or pressing the keyboard shortcut) will activate the window that is already open, i.e. bring it to the front.

i The screen layout is currently saved “per computer” and not “per user”. Thus if another person uses your computer and saves their own layout, yours will be lost. This is planned to change in CLERK 2.1.

CAD calls and numbering

CLERK’s CAD assigns a number to each “call for service” or “call”. Exactly what your department defines as a call and when a CAD number should be assigned is a matter of department policy. Some departments create CAD calls for every building lock/unlock; some track when officers go on lunch break; others track neither of these.

The number assigned to a call is known as the “CAD reference number”, or the “CAD number”. It is always of the format YY-MM-DD-NNNNNN, where YY is the two-digit year it was assigned, MM is the two digit month it was assigned, DD is the two digit date it was assigned, and NNNNNN is a sequence number that is reset to zero at the start of each calendar year.

CAD numbers are assigned automatically by the CLERK server. Dispatchers may not override the

CAD number.

Timestamping and integrity

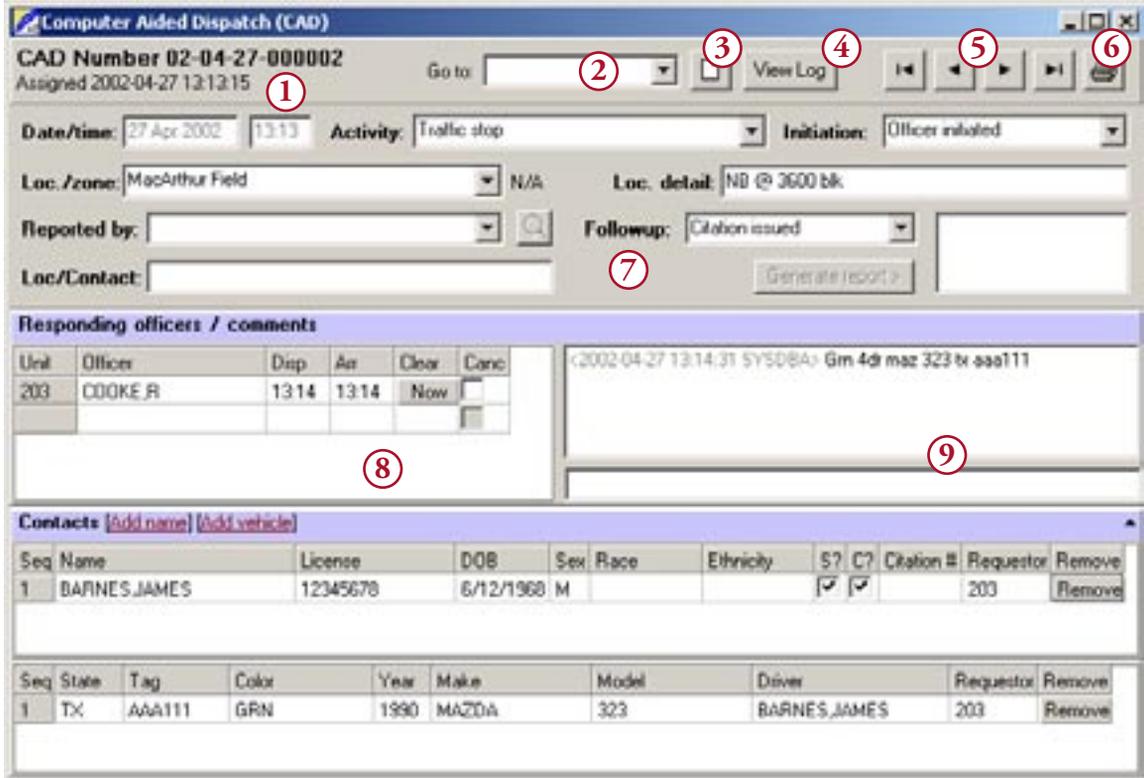
Because information is expected to be entered into the CAD as it is received, analyzing CAD data, particularly in conjunction with other information such as voice logs, can help establish a timeline of events and possibly be of benefit in court.

Although your system administrators may allow you to override the dispatch or arrival times that are displayed, CLERK maintains a separate log of the actual time modifications occurred.

By timestamping each action itself without the possibility of user override, any question of human manipulation is removed, which enhances the integrity of your CAD data.

i It is a good idea to synchronize the clock of the dispatch computer with that of the CLERK server. CLERK can do this for you automatically each time you log on. See the section *Configuring the client* section of Chapter 8.

 All CAD timestamping is done using the clock on your CLERK server computer. Thus your timestamping is only as accurate as the server clock. To ensure that your server’s clock maintains accuracy, Terrier Technologies suggests that you synchronize it using some type of NTP software.



Main CAD window

The main CAD window shows all information for one call. When you open the main CAD window, it automatically scrolls to the most recent call. A screenshot of this window appears above. It is divided into four sections:

- A title and navigation bar.
- Basic call detail.
- Responding officers and dispatcher comments.
- Contacts.

These sections are divided by horizontal lines. By positioning the mouse over the lines, then clicking & dragging, you may resize each of these four sections. For example, you might find you need extra space for dispatcher comments and less for contact information.

Let's start by considering the features in the top half of the window.

- ① **Number and creation time.** The CAD number of the call currently displayed in the window appears here, along with the time it was assigned.

This time is provided by the CLERK server and may not be overridden.

- ② **Go to.** Jump directly to a call by typing the CAD number into this field and pressing Tab. CLERK looks for the first call ending with what you typed. This means you don't have to type the full CAD number, e.g. typing 0002 would find call 02-04-27-000002. A list of recent calls you jumped to can be seen by clicking the down-facing arrow to the right of the field.
- ③ **New button.** Create a new call by clicking this button. You should not 'pre-assign' calls. Only click this button when an event (call) commences, otherwise the timestamp information will be meaningless.
- ④ **View log.** Click this button to pull up a window showing the CLERK timestamps for each important action taken by dispatchers for the call.

Time	User	Comment
4/27/2002 1:13:15 PM	SYDEBA	Created CAD record
4/27/2002 1:13:26 PM	SYDEBA	Set assign time to 2002-04-27 13:13:00.000
4/27/2002 1:13:26 PM	SYDEBA	Set assign time to 2002-04-27 13:13:15.000
4/27/2002 1:14:00 PM	SYDEBA	Assigned unit to call #203

Important actions include assigning the call, changing dates or times, and dispatching or changing the status of an officer. Less important actions such as changing the call initiation type are not logged (otherwise the log files would

become very large and the system could slow down).

- ⑤ **Navigation buttons.** Press one of the navigation buttons to move to the first, previous, next, or last call.
- ⑥ **Print.** This button prints a copy of the CAD record.

Basic call detail

Basic call detail (⑦) contains some basic information about the CAD record. We'll describe each field in this section.

Date/time. Enter a date and time the call began. Most departments will define the "beginning" of a call as the first instant the dispatcher is aware of it. Initially, these fields will be set to the date/time the call was created in CLERK. Some departments will configure CLERK so that this time cannot be changed.

Activity. When CLERK was installed, your department will have configured a list of "CAD activities", or activities which are to be tracked in the CAD system. Enter the CAD activity for a call in this field. You may either type an 'activity code' or choose the activity from a menu by clicking the down-facing arrow to the right of the field. See the section *Codes: locations, offenses and CAD activities* in Chapter 3 for more information.

Initiation. How the call was initiated, i.e. how did the dispatcher learn of the call? The options for initiation types may be configured by your system administrator. Generally they will include telephone, officer initiated, and walk-in. They may also include

transfers from other departments, email, etc.

Loc./zone. Enter the general location of the call, such as a geographic region. See the section *Codes: locations, offenses and CAD activities* in Chapter 3 for more information on how to use this field. If your department divides locations into ‘patrol zones’ or ‘beats’, the patrol zone corresponding to this location will appear to the right of the field. For larger jurisdictions, this can assist dispatchers in selecting who to dispatch to a call.



A call cannot be “closed” until a value has been entered in the location field.

Loc. detail. Use this field to store the exact location of a call. For example, while the location field might specify a building, the location detail may also state the floor and room number.

Reported by. If a call was initiated by phone or walk-in, enter the name of the individual here. If a name record for the individual cannot be found, a new one will be created. You may click the **Zoom button** to the right of the field to open the Names module and view more information about the individual.



If the call is officer initiated, do not enter the officer’s name. This serves little purpose and results in a name record being created for the officer. Instead, just leave this field blank.

Loc/Contact. If applicable, enter a callback number or location of the individual reporting an incident. For example, this may include a location where the

dispatched officer is to meet the person.

Followup. What happened as a result of this call? Possibilities include: no followup, citation issued, verbal warning, and case report follows. When a report follows, you may click the **Generate report>** button to assign a case number. Each time the button is clicked, a case report number will be generated.



Case report numbers cannot be deleted from within the CAD. Do not click the button more than once just because the system does not respond immediately. There could be a temporary network interruption and you will end up with many case numbers.

Departments can configure the CLERK so that case numbers may not be generated from within the CAD.

Custom fields. Departments can have up to two custom fields in the main CAD window. Each can contain up to 64 characters.

Responding officers

Use the responding officers section (8) to assign officers to a call, change their on-scene status, or cancel/clear them from a call.

The responding officers display is a ‘grid’. Each rectangle in the grid is called a ‘cell’. Officer information is updated by directly modifying these cells.

Move to a cell either by clicking on it using the mouse, by using the arrow keys, or by using the

Tab key. The current cell has a thicker outline than other cells. In the example below, the current cell is the officer column on the second line (it is currently empty).

Responding officers / comments					
Unit	Officer	Disp	Arr	Clear	Conc
203	COOKE,R	13:14	13:14	Now	<input type="checkbox"/>
					<input type="checkbox"/>

Edit the current cell by either typing in the new value, or by clicking it once with the mouse.

Tutorial: We'll assign a new officer to the call using the mouse. We click once on the current cell to edit it, then click on the down-facing arrow to see a list of available units. We choose 205/HAVICHUK,K from the list, as shown below.

Responding officers / comments					
Unit	Officer	Disp	Arr	Clear	Conc
203	COOKE,R	13:14	13:14	Now	<input type="checkbox"/>
					<input type="checkbox"/>

Tutorial: We'll add an unassigned officer to the call using the keyboard. First, we move to the blank officer cell using the Tab and arrow keys. Then we simply type a hyphen (-) as shown below, and press Tab.

Responding officers / comments					
Unit	Officer	Disp	Arr	Clear	Conc
203	COOKE,R	13:14	13:14	Now	<input type="checkbox"/>
205	HAVICHUK,K	15:22	Now		<input type="checkbox"/>
					<input type="checkbox"/>

To assign an officer using the keyboard, we can either type their unit number or name. CLERK will auto-complete the field, so often you only need to type the first few letters.

i “Unassigned” units are mostly useful when you have more than one dispatch station, and the first station requests a unit but does not know which unit will eventually be dispatched. If there is only one dispatch station, simply assign the officer directly.

After these two actions, the responding officer list is as follows:

Responding officers / comments					
Unit	Officer	Disp	Arr	Clear	Conc
203	COOKE,R	13:14	13:14	Now	<input type="checkbox"/>
205	HAVICHUK,K	15:22	Now		<input type="checkbox"/>
-	* UNASSIGNED *	15:24	Now		<input type="checkbox"/>

The procedure for marking officers as arrived (on-scene) or cleared from a call depends on how your CAD system is configured.

- Some departments will only allow CLERK to assign these times. In such cases, you may either click the **Now** button, or move to the cell using the keyboard and press **Esc**.
- If you are allowed to enter your own arrival and clear times, you won't see a **Now** button, just a blank cell. You can either type in a time or press **Esc** to enter the current time. As with all time fields, if you only enter the minutes, CLERK will prepend the current hour.

An officer cannot be cleared from a call until they have been marked arrived (on-scene).

To cancel an assigned unit from a call, simply click the box in the **Canc** (cancel) column. To use the keyboard, move to the cancel column and press Space.

To cancel an unassigned unit, simply move to the officer cell and make it blank.

Tutorial: In our example, let's mark unit 203 as clear, and cancel the other two units. First, we click on the Now button in 203's row. They are marked as clear at the current time (15:34). Next, we cancel 205 by either clicking the cancel box or moving to it and pressing Space. Finally, we remove the unassigned officer by moving to the **Officer** column of the third row. We can clear the cell using the keyboard by pressing Enter (to edit), Del (to clear), Tab (to move off). The responding officers display now looks like this:

Responding officers / comments					
Unit	Officer	Disp	Arr	Clear	Canc
203	COOKE,R	13:14	13:14	15:34	<input type="checkbox"/>
205	HAVICHUK,K	15:22			<input checked="" type="checkbox"/>
					<input type="checkbox"/>

i Once a unit is assigned to the call, the officer name cannot be changed. If you accidentally assign the wrong officer, cancel the incorrect unit from the call and assign the correct one. Similarly, once a unit has been cancelled they cannot be “uncanceled”. You must assign the unit a second time.

Shortcuts

After you become familiar with CLERK's CAD module, you may find that working with the responding officers grid is slow. CLERK has a number of shortcuts for performing common dispatching tasks in the main CAD window. You may see a list of shortcuts by right-clicking.



Selected unit. Allows you to mark a unit as arrived (on-scene), cleared, or cancelled. Rather than using the menu, you can type **Ctrl-T** to ‘advance’ the current unit, e.g. a dispatched unit is marked arrived, or an arrived unit is marked clear. The “selected unit” is the determined by the row with the current (high-lighted) cell.

Add to call. Lets you add a new unit to the current call (see example above). All currently available units are displayed.

Mark on-scene. Allows you to mark any of the units as on-scene. To mark all dispatched units as on-scene without using the menus, type **Alt-Ctrl-T**.

Mark clear. Allows you to mark any of the units as clear. To mark all units as clear without using the menus, type **Shift-Ctrl-T**.

Cancel. Allows you to mark any or all of the units as cancelled. This will not remove unassigned units.

Dispatcher comments

Use the dispatcher comments section (9) to add any notes or comments about the call. In a multi-station setting, this also allows dispatchers to communicate. We sometimes call this feature “CADTalk”.

Using it is simple: in the lower field, type your comment and press **Tab** (to send your comment and move to the next field), or press **Enter** (to send your comment but not move to the next field).

Once your comment has been sent it cannot be recalled or edited. Your comment appears in the top (larger) dispatcher comment box. This box shows all previous comments in chronological order. They are stamped with the time they were entered and the user names of the people who entered them.

The CLERK server also broadcasts your comments to all CAD stations, and they appear in the **Active calls** window.

If you make a mistake, simply type another comment correcting your mistake.

Contacts

The contacts section (shown below) is at the bottom of the main CAD window. Use it to enter information about individuals or vehicles encountered during the response to this call.

i You may ‘collapse’ the contacts section by clicking the small black triangle at the right of the pale blue title bar. This may be useful if you are using the active contacts window.

To add a new name contact, click the **Add name** link; to add a new vehicle contact, click the **Add vehicle** link.

Both name and vehicle contacts are displayed in grids consisting of ‘cells’. We already described how to move around within a grid and edit cell contents in the *Responding officers* section, so that information is not repeated here. Instead, we will describe the meaning of each column in the grid.

Seq. This is a sequence number for the name or vehicle. You can’t edit this cell, but double-clicking it will open the Names or Vehicles module and give you the opportunity to view or edit more detailed information.

Contacts Add name Add vehicle											
Seq	Name	License	DOB	Sex	Race	Ethnicity	S?	C?	Citation #	Requestor	Remove
1	BARNES, JAMES	12345678	6/12/1968	M			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		203	Remove
Seq	State	Tag	Color	Year	Make	Model	Diver		Requestor	Remove	
1	TX	AAA111	GRN	1990	MAZDA	323	BARNES, JAMES		203	Remove	

Name. The name of an individual with whom you have come into contact. If the individual is already known, other details such as driver's license and DOB will be automatically loaded.

License. The individual's driver license number is displayed in this column. To enter a DL from a different state, separate the state and number with a space. Omitting the state will cause CLERK to use the default state.

DOB. Date of birth.

Sex. M, F, or U corresponding to male, female, or unknown.

Race, Ethnicity. Race and ethnicity of the individual.

S?, C?. Check the **S?** box if the individual was searched. Check the **C?** box if they consented to the search. These boxes are included largely to comply with Texas' racial profiling laws, and many other states may ignore them.

Citation #. If a citation was issued, you may enter the number here. Note: this does not create a citation record.

Requestor. Lists the unit that called in the contact.

Remove. Click the **Remove** button to erase a contact from the CAD record.

State. State or province of a contact vehicle's registration.

Tag. License tag number.

Color, Make, Model. Vehicle color, make, and model.

Driver. If there is more than one name contact, you may specify which one of the individuals is the driver of the vehicle. This allows you to distinguish drivers from passengers, for example.

i You may resize the columns in each grid. To do this, move the mouse over the dividing line in the column headings, then click and drag.

The **Active contacts** window also allows you to enter name and vehicle contacts using an interface more similar to the other CLERK modules. See the *Active contacts* section later in this chapter.

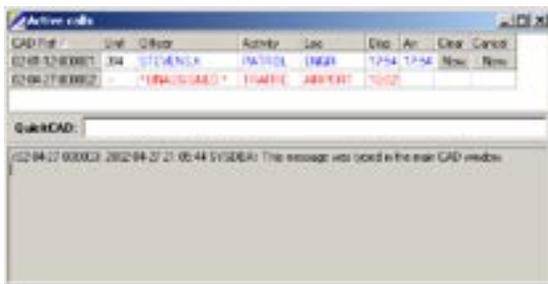
Active calls

This window displays a list of all units that are currently on a call. A unit that is 'currently on a call' is one which has been dispatched (including an unassigned unit) and has not yet been cleared or cancelled.

A screenshot of the active calls window appears on the following page. Your system administrator has the ability to customize the appearance of this window, so it may contain more or fewer columns than those in the example.

If your department allows text-based dispatching, a **QuickCAD** field will appear below the active calls grid. QuickCAD is discussed separately later in this chapter.

At the bottom of the window is a gray box. This is a



status box where CAD messages are displayed. It is read-only; you cannot change any of the text in this area. Whenever a dispatcher comment is entered for any call, a copy will appear here. For example, in the screenshot above, the user SYSDBA has added a comment to call 02-04-27-000003. If you viewed call 02-04-27-000003 in the main CAD window, you would see a copy of the comment there as well.

Columns

The following columns may appear in the active calls window. As previously noted, your system administrator may choose not to show all of them.

- **CAD reference number.** This column is always displayed, and lists the CAD number of the call a unit is currently involved with. The CAD number is a read-only column.
- **Unit identifier.** This column is always displayed. Once a unit has been assigned, it becomes read-only and you cannot modify it. Unassigned units may be changed.
- **Dispatch time.** This column is always displayed. Generally the dispatch time is set when the unit is assigned to the call, and it is displayed for your information.
- **Arrival time.** This column is always displayed.
- **Activity code/Activity description.** Code or description for the CAD activity the unit is currently involved with. Note that both these two columns will convey the same information, the Activity code just does it in a more compact form by displaying a code of up to eight letters. Changing one of these columns would also change the other, therefore only one of them is usually displayed.
- **Location code/Location description.** Shows the general area where an event is taking place. Note that both these two columns will convey the same information, the Location code just does it in a more compact form by displaying a code of up to eight letters. Changing one of these columns would also change the other, therefore only one of them is usually displayed.
- **Address detail.** A more detailed description of where the event is taking place. This information is the same as the Loc. detail field from the main CAD window.
- **Current priority.** Each call can be assigned a priority from 1-9 (your department may choose to use fewer priority levels). One is the highest priority and nine is the lowest. A lot of departments color code by call priority, so this column does not need to be displayed.
- **Patrol region.** Indicates the patrol region a unit is assigned to.
- **Clear/Cancel buttons.** Allows you to clear or

cancel a unit from a call by clicking a button in the active calls window. Once you clear or cancel a call, it is generally removed from the active calls grid.



Even when a unit has been cleared or cancelled from a call, it will still show up in the active calls grid if a valid location has not been supplied. In this case, the priority column would show **L** (for location missing). Assigning a location will remove the call from the grid.

Remember that the information in the active calls grid is nothing more than a different way of displaying data from the CAD database. In other words, instead of changing information in the active calls grid, you could achieve exactly the same result by changing it in the main CAD window (although it may be less efficient). Therefore, you should refer to the *Main CAD window* section of this chapter for information about the meaning of fields, and also for instructions on how to navigate within and edit a grid.

Locations

There are two distinct locations that the CAD tracks. First, it records the location of calls, or where an event is taking place. Secondly, it tracks the location of units. When a unit is dispatched to a call and arrives on-scene, the call location and the unit location will be the same.

However, what happens if a unit remains involved with a call but is no longer at the original scene?

Example scenario: A unit is dispatched to a fight at

location **NIGHTCLUB**. After arriving, one person is arrested and transported to jail. In this case, we want the location of the call (**NIGHTCLUB**, where the incident took place) to remain unchanged, but we want the location of the unit to change to **JAIL**, reflecting the fact they are now at the jail.

In this section, we explain how **CLERK** handles such location updates in the active calls window.

The **Location** column in the active calls grid tracks the current unit location. When a unit is assigned to a call, **CLERK** follows this procedure:

- The current location of the unit is set to the call location. If the call location is unspecified (still blank), the location of the unit also becomes blank.
- When the location of the unit is updated in the active calls window, i.e. the **Location** column is changed, **CLERK** checks the call location to see whether it is blank.
- If the call location is blank, **CLERK** sets it to the unit location. Otherwise, **CLERK** leaves the call location unchanged.

Example solution: A new call is created and unit 206 is dispatched. No location for the call has been specified, so the location of both the call and the unit are blank. Next, the dispatcher updates the location of 206 to **NIGHTCLUB**. The call location was blank, so it is also updated to **NIGHTCLUB** (you could verify this by viewing the call in the main CAD window). When the officer performs the prisoner transport, the dispatcher updates the location of 206

to JAIL. Because the call location is not blank (it is NIGHTCLUB), it is not modified.

Resizing

You may resize the columns in the active calls grid. To do this, move the mouse over the dividing line in the column headings, then click and drag.

Sorting

You may sort the calls in the active calls grid. To do so, click once on the column heading you wish to sort by. Click a second time to reverse the sort order. A shaded arrow appears in the column which is currently sorted; whether the arrow is facing up or down indicates the direction of the sort (ascending or descending).

Note that when the display is updated, it may become “unsorted”. Click the column heading again to re-sort it manually.

Re-ordering

Most of the columns in the active calls grid can be re-positioned or re-ordered. The exception is that the CAD number column must always be the left-most one.

To re-order the columns, click a column heading and drag it to the new location. When you release the mouse button, the columns will be re-ordered.

Color coding and priority

Lines in the CAD may be color coded according to one of four systems. This is configurable by your

system administrator.

- **No color coding.** All calls appear as black text on a white background.
- **By priority.** The call will have a white background but the color of the text depends upon the current priority of the call. See below for more details.
- **By activity code.** It is possible to assign each CAD activity a color, and color code according to the nature of a call. Generally, this involves a lot of configuration effort and is very complicated.
- **By patrol region.** CLERK checks the location of each call to see which patrol zone (or ‘beat’) it is part of. It then displays the call in the color your department has chosen for that zone.

Calls can have a priority from 1-9, one being highest and nine being lowest. Your department will choose how many priority levels it cares to use, and assign each one a color.

When a CAD activity is first provided for the call, CLERK sets the call priority to the default priority of that activity. For example, all traffic stops may commence with a priority of one. Dispatchers may change the priority of a call over time.

Alerts

CLERK can be configured to “alert” you when either of two events occur.

The first event is the addition of an unassigned unit to a call. This will mostly be used by multi-dispatch station departments.

Secondly, CLERK can also alert you when a unit has been on a call for an unusually long period of time. This is referred to as an “over-length call”. The purpose of such an alert is to remind the dispatcher to check on the officer and make sure they are not in difficulty.

Alerts may be either audible or visual. An audible alert plays a sound through your computer’s speakers. The sound is configured by the system administrator, and can play either once or periodically every few seconds.

A visual alert involves flashing the colors of a call. For example, a call with a white background and red text may become red with white text, then back again. This flashing can continue for a configured number of seconds, or until the dispatcher acknowledges the alert. Acknowledgement is achieved by clicking once on the call in the active calls grid.

Shortcuts

Double-clicking on a CAD number in the active calls grid will display the record in the main CAD window.



Right-clicking on the active calls grid will display a menu of actions (above).

Some of these actions apply to the *selected call*. If you look on the active calls grid, one cell will have a darker outline. That cell is the *selected cell*, and the CAD reference number on that row is the *selected call*.

- **New call with unit.** Creates a new call (assigns a new CAD number) and dispatches the specified unit to it. Press `Ctrl-N` to create a new call with an unassigned unit.
- **Add unit.** Dispatches the unit you choose to the selected call.
- **Mark as.** Marks the selected unit as on-scene, cleared, or cancelled. Pressing `Ctrl-T` advances the selected unit; for example, a dispatched unit is marked on-scene, and an on-scene unit is marked as clear.
- **Mark all on call as.** Same as above, except the change applies to all units on the selected call.
- **Priority.** Change the priority of the selected call. Pressing `Ctrl-Ins` increases the call priority by one level, and `Ctrl-Del` decreases the priority by one level. Pressing `Ctrl` plus the priority sets the new priority level directly, for example `Ctrl-2` sets the call to priority two.
- **Activity.** Allows you to set the CAD activity for the selected call.
- **Location.** Allows you to set the current location for the selected unit. This option will not be visible if you have more than 75 locations, because

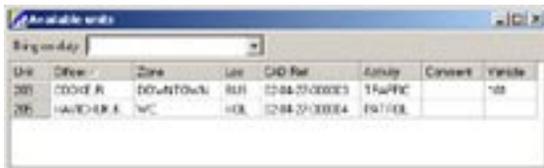
large numbers of locations can be very slow to display.

- **Bring on duty.** The submenu shows a list of off-duty officers. Select an officer to bring them on duty. See the section *Shift changes* later in this chapter for more details.

Available units

The available units window can display either all units currently in-service, or all units in-service but not assigned to a call. Which it does is configured by your system administrator, but for uniformity we'll call it the “available units window” no matter what.

A screenshot of the available units window appears below. Your system administrator has the ability to customize the appearance of this window, so it may contain more or fewer columns than those in the example.



Bring on duty

The **Bring on duty** field appears at the top of the available units window. From this field, you can either type the name of an off-duty officer and press Tab, or click the down-facing arrow to the right of the field and select them from the menu. Either way, a dialog box appears, letting you bring the nominated officer on duty. We discuss the process of marking a unit as on or off duty later in this chapter.

Columns

The following columns may appear in the available units grid. As previously noted, your system administrator may choose not to show all of them.

- **Unit.** This column is always displayed, and lists the unit identifier.
- **Officer.** Name of the officer corresponding to the unit.
- **Zone.** Patrol zone the unit has been assigned to.
- **Activity code/Activity description.** Code or description for the CAD activity the unit is currently involved with. Note that both these two columns will convey the same information, the Activity code just does it in a more compact form by displaying a code of up to eight letters. This column will be blank if only available units are displayed.
- **Location code/Location description.** Shows current location of the unit. Note that both these two columns will convey the same information, the Location code just does it in a more compact form by displaying a code of up to eight letters. Changing one of these columns would also change the other, therefore only one of them is usually displayed.
- **Comment.** Any comment you care to type for the unit.
- **CAD reference.** CAD number for the call a unit is currently assigned to. This column will be blank if only available units are displayed.
- **Equipment, duties.** There may be various col-

umns displaying equipment or duty information. These columns are configured by your system administrator. In the screenshot, “Vehicle” is an equipment column which has been added. We talk more about equipment and duties later in this chapter.

Most of these columns act as “status displays” and cannot be edited. Only the zone, location, comment and equipment may be changed directly by the dispatcher.

Resizing

You may resize the columns in the available units grid. To do this, move the mouse over the dividing line in the column headings, then click and drag.

Sorting

You may sort the units in the available units grid. To do so, click once on the column heading you wish to sort by. Click a second time to reverse the sort order. A shaded arrow appears in the column which is currently sorted; whether the arrow is facing up or down indicates the direction of the sort (ascending or descending).

Note that when the display is updated, it may become “unsorted”. Click the column heading again to re-sort it manually.

Re-ordering

Most of the columns in the available units grid can be re-positioned or re-ordered. The exception is that the Unit column must always be the left-most one.

To re-order the columns, click a column heading and drag it to the new location. When you release the mouse button, the columns will be re-ordered.

Color coding and priority

Lines in the CAD may be color coded according to one of five systems. This is configurable by your system administrator.

- **No color coding.** All units appear as black text on a white background.
- **By current location or patrol zone.** CLERK looks to see which region the unit is either (a) assigned to, or (b) currently located in. It looks up the color code for the region, and displays the unit in those colors.
- **By activity code.** It is possible to assign each CAD activity a color, and color code according to the nature of the call a unit is assigned to. Generally, this involves a lot of configuration effort and is very complicated.
- **By duty.** Each duty can have a color code assigned to it. If you color code by duty, CLERK will scan the list of duties this unit has been assigned, and color code according to the first non-black and white one. A more detailed discussion regarding duties follows later in this chapter.
- **By equipment.** Each equipment item can have a color code assigned to it. If you color code by equipment, CLERK will scan the list of equipment this unit has been assigned, and color code according to the first non-black and white one.

A more detailed discussion regarding equipment follows later in this chapter.

Shortcuts

Double-clicking on a CAD number (or any other read-only field) when a unit is on a call will display the call record in the main CAD window.

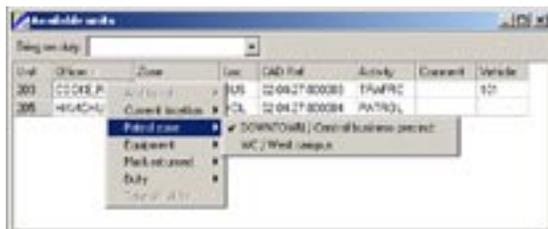
Moving the mouse over a unit and leaving it still for about 0.5 seconds will display a list of equipment checked out to the officer, e.g.



Note that your system administrator can turn this feature on or off.

Right-clicking on the available units grid will display a menu of actions.

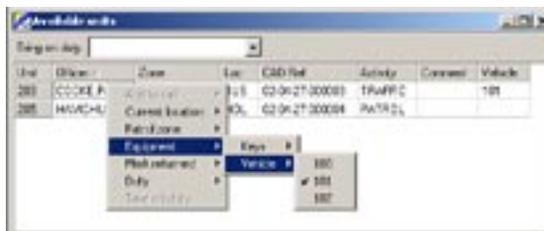
Some of these actions apply to the *selected unit*. If you look on the available units grid, one cell will have a darker outline. That cell is the *selected cell*, and the unit number on that row is the *selected unit*.



- **Add to call.** If the selected unit is currently on a

call, the unit you specify may be added to the call via this option.

- **Current location.** Allows you to set the current location for the selected unit. This option will not be visible if you have more than 75 locations, because large numbers of locations can be very slow to display.
- **Patrol zone.** Sets the patrol zone to which the unit is assigned.
- **Equipment.** Displays a list of available equipment items. The list of equipment categories and items is configured by your system administrator.



In the example, there are two equipment categories (Keys and Vehicles). Equipment with a check mark next to it (e.g. Vehicle 101) is currently checked out to the selected unit. Choose an equipment item to mark it as checked out to the selected unit (if no check mark next to it), or mark it as returned (if it has a check mark next to it).

- **Mark returned.** This works in much the same way as the **Equipment** submenu. However, only equipment currently checked out by the selected unit is shown.
- **Duty.** This works in the same way as the **Equipment** submenu, except for duties. And, although

a unit may have two items of equipment from the one category checked out, a unit can only be undertaking one duty from a given category. We explain more about duties and equipment later in this chapter.

- **Take off duty.** The selected unit may be taken off duty if it is not currently assigned to a call.

Shift changes

In CLERK, shift changes are controlled within the CAD. It is possible to bring an officer on-duty either from the active calls window, or from the available units window. Either way, the dialog below will appear:

Category	Item
<input type="checkbox"/> Body Mic	
<input type="checkbox"/> Flashlight	
<input type="checkbox"/> Keys	
<input type="checkbox"/> Radio	
<input type="checkbox"/> Vehicle	

In the **Officers and staff settings**, your system administrator may have configured some default values for the officer. If so, the settings would be reflected in this window. For example, in the above

screenshot, the unit number and patrol region were filled in automatically by CLERK, although you have the opportunity to override them. Default equipment settings could also appear.

The start time will be rounded to the nearest 15 minute interval. You may override the start time.

To check out equipment, put a check mark in the column next to the equipment category. Then choose the item from the right column. For some categories of equipment, the item must be on a fixed list, and for others the list serves as only a suggestion. The exact behavior depends upon CLERK’s equipment settings.

When you’ve finished, click **OK** to bring the officer on duty, or **Cancel** otherwise.

Note that you cannot bring an officer on-duty if:

- They are not currently employed.
- They are already on-duty
- They are not marked as “Track in CAD” in the **Officer and staff settings**.
- No “CAD name” has been supplied.

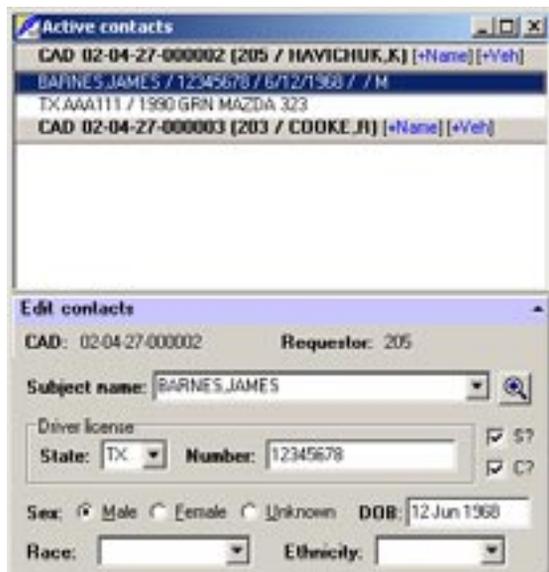
Taking a unit off duty can be done by selecting the unit in the available units window, then right-clicking and choosing **Take off duty**. You can only take a unit off duty if it is not currently involved with a call. When you choose this menu option, the dialog below appears. You may specify the “nominal” end of shift time. CLERK suggests a time rounded to the nearest quarter hour. It is called a ‘nominal’ time because CLERK will also timestamp the shift data with



the actual time you marked the unit off duty.

Active contacts

The active contacts window lists all officers currently assigned to calls, and any name or vehicle contacts they have called in. The screenshot below shows an example of the active contacts window.



The information in the active contacts window can also be entered or viewed in the main CAD window. In that sense, the active contacts window just provides an alternative way of viewing the data. It also makes it easy to match returns from a state computer

system with officers/calls. Finally, the active contacts window also gives you a more familiar way of entering contact information, along with the feature of color-coded name alerts.

i You may hide the **Edit contacts** section of the window by clicking the small black triangle in the pale blue title bar. This may be useful if you're using text-based dispatching, or prefer to edit contacts using the main CAD window.

Adding a contact

Look for the officer who called in the name or vehicle. This unit is the “requestor”. Next, click the +Name or +Veh link next to the officer name.

A blank contact will be added. You may then edit it as described below.

Editing a contact

To edit a contact, first select it by clicking it once in the display. The **Edit contacts** section at the bottom of the window will display the contact information. The appearance differs according to whether the contact is a vehicle or a person.

Because the fields have exactly the same meanings as columns in the main CAD window's **Contacts** section, we won't describe them again here.

Jumping to a CAD record

Double-clicking on a CAD reference number will display that call in the main CAD window.

Alerts

When a name is entered as a contact, CLERK scans the database to see whether that name can be found, and if so, a message is displayed. This message warns the dispatcher that the individual has previously been in contact with the department for some reason.

Additionally, it is possible for CLERK to generate alerts indicating the type of contact. Alerts can be either audible (a sound is played) or visual (the name is displayed in a certain color). Alerts can be issued when there is an officer safety caution, an outstanding warrant, an active criminal trespass, or a previous citation has been issued to the individual. If more than one alert is merited, CLERK chooses the most serious one.

Premise log

The premise log displays information about a location. For example, it may include locations of fire panels, exits, a hazardous material inventory, or a list of proctors/contacts.

The premise log is extremely simple. A location code or description is entered in the single field, and any



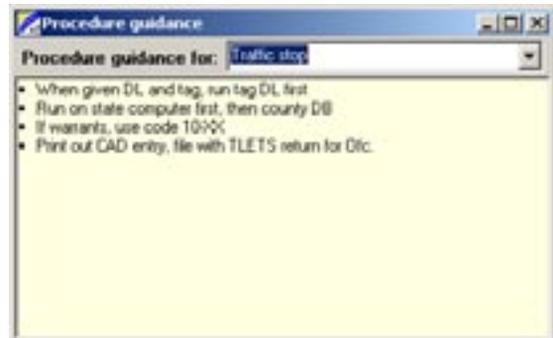
information about the location is shown.

It is possible for your system administrator to have the premise log appear automatically whenever you enter a location in the main CAD module.

Procedure guidance

The procedure guidance window displays instructions to the dispatcher based upon the CAD activity. For example, it may specify the procedure to be followed when a hazardous materials spillage is reported (something that doesn't happen every day, but where strict procedures must be adhered to).

The procedure guidance window is extremely simple. A CAD activity code or description is entered in the single field, and any information about the procedure appears below.



It is possible for your system administrator to have procedure guidance appear automatically whenever you enter a CAD activity in the main CAD module.

“Duties”

CLERK’s CAD system allows you to assign each unit to “duties” selected from various categories. The term “duty” is deliberately vague because your department can define it to mean almost anything you want to track on a per-shift basis for each unit. Configuration of duties is discussed in Chapter 9. Your system administrator should teach you what duties have been configured for your system, and how to use them.



An officer can only be assigned to one call at a time. If you create a “call” for a shift-long activity such as a special event, you will need to clear the officer from that call before they take any other call. Duties are a better way to specify a shift-long activity (e.g. special event, patrol, training).

Equipment in the CAD

Each department may configure the equipment categories and items tracked. Each equipment category is either “tracked in CAD” or not.

Permissions

All dispatchers also have the permission to check in or out equipment from categories that are “tracked in CAD”. Other equipment must be checked in or out using the Equipment module, which is discussed later in the chapter.

Examples

Generally, equipment tracked in the CAD is issued on a short-term basis, e.g. for the duration of a shift. Keys, vehicles, body mics and radios might be examples of equipment issued on a short-term basis.

Equipment issued to officers on a longer-term basis is generally not tracked in the CAD. Guns, vests, and uniforms might be examples of equipment issued on a longer-term basis.

Displayed equipment

In the CAD, equipment is tracked using the available units window. Your system administrator can choose which equipment categories should show up as columns in the available units grid. Not all categories tracked in the CAD will necessarily appear.

Each equipment category can specify a list of items, and whether or not a user is allowed to enter an item that is not on the list. For example, say the list of items in the `Body mic` category is A, B, C and D. If you were only allowed to choose items from the list, whenever you assign a `Body mic`, it would have to be one of A, B, C or D, otherwise CLERK will give an error beep. Let’s call this a “fixed equipment category”. However, if the equipment category does not restrict you to choosing an item from the list, you could also enter E without getting an error. Let’s call this a “non-fixed equipment category”.

There are some differences between the two:

- With a fixed list, although you may only check in/out the pre-configured equipment items, you

may check out more than one item for the category.

- With non-fixed equipment categories, you may only check out one item from each category.
- With non-fixed equipment categories, you cannot check out equipment through menu shortcuts.

Checking equipment out

Go to the available units window. Look for the column whose heading matches the equipment category you need to check out. If it exists, type the equipment item directly into the cell.

If the column does not exist but the equipment is a “fixed equipment category”, you can right-click and use the **Equipment** menu. Choose the category, then the item you wish to check out.

If the column does not exist and the equipment is a “non-fixed equipment category”, you cannot check it out using the CAD.

Returning equipment

Go to the available units window. Look for the column whose heading matches the equipment category you need to check in. If it exists, remove the equipment item from the cell.

If the column does not exist, right-click and go to the **Mark returned** menu, choose the equipment category, and then the item.

Text-based dispatching (QuickCAD)

CLERK’s CAD module is designed to be both powerful and easy to use. The layout is intuitive, and most dispatchers can pick up the concepts quickly.

However, some dispatchers already have extensive CAD experience with larger cities or counties, and are used to more complex systems than CLERK.

For such users, CLERK’s easy to use interface may seem slow and awkward. To cater for such users, Terrier Technologies also provides a text-based dispatching facility called QuickCAD.

QuickCAD is not for everyone, and in particular is not for beginning users.

Your system administrator must enable QuickCAD before you can access it. To use QuickCAD, you type commands into the **QuickCAD** field on the active calls window. CLERK interprets (or ‘parses’) the commands, and takes the appropriate actions. CLERK displays any errors, or confirmations of what actions it is taking, in the gray box below the **QuickCAD** field.

 Particularly while you are learning QuickCAD, it is important that you read CLERK’s confirmation messages to be sure it is taking the actions you expect. Otherwise, you may think you are entering data correctly, but CLERK is not storing it how you expect.

With practise, you will find that most actions in the CAD can be completed using QuickCAD. There will only be a few, less common situations where

you must use the procedures described earlier in this chapter.

QuickCAD command syntax

A QuickCAD command is broken into several 'fields', each divided by a 'separator character'. Your department may customize the separator, generally it will be either forward-slash (/) or a comma. In this manual, we'll use / in our examples.

For example, a command might look like S/108/ACTCTR. CLERK divides up the command into "fields" using the separators and interprets it as follows:

- S - means mark a unit on-scene.
- 108 - the unit to mark on-scene.
- ACTCTR - the location.

Often a command has many fields, but only the first few are mandatory. In these cases, you may terminate the command after the last non-blank field. For example, if you did not wish to specify a location, you could enter S/108 for the above command.

However, if a field you wish to leave blank is followed by other non-blank fields, you must include the separators. For example, if you wanted to omit the unit number from the above command, you would have to type S//ACTCTR, not S/ACTCTR since the latter would interpret ACTCTR as the unit.

QuickCAD commands

A table of QuickCAD commands is shown on the following page. We use the following conventions:

- Bold type - indicates you should type the field exactly as it appears.
- Normal type - indicates you replace the field by the data you wish to enter.
- Curly braces - the field may be omitted.

Examples

Example #1

Phone call is received reporting a fight. Unit 108 is dispatched: A//FIGHT/ACTCTR/Outside activities center/108//Fight currently in progress

Officer calls on-scene at activities center: S/108/ACTCTR

Officer calls in name of one of the people involved: N/108/SMITH/FRED

Officer subsequently arrests person and transports to jail: E/108/JAIL/Transporting Fred Smith to jail - start miles 10101

Officer completes jail run and clears from call: C/108//End miles 10122

Example #2

Officer calls in traffic stop on TX ABC123: T/208/COLAVE//ABC123

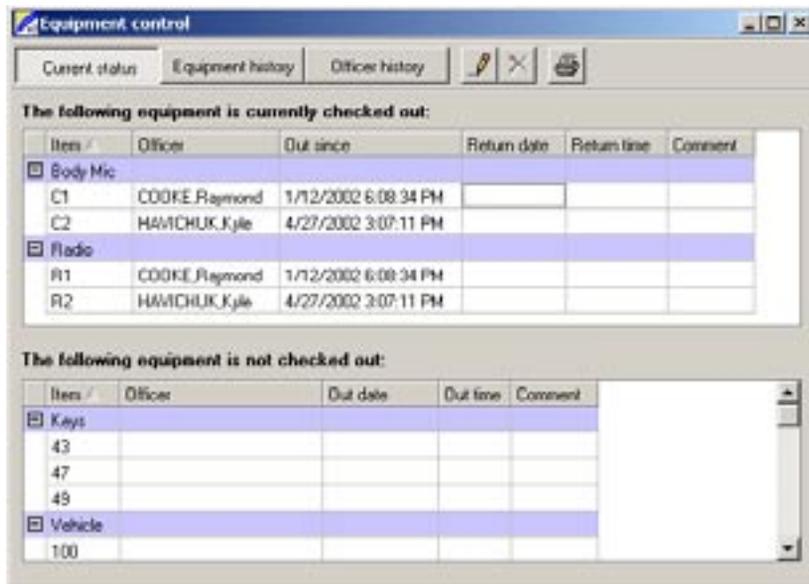
Officer requests backup: D/102/COLAVE

Officer calls in driver's license number: N/108///17112345

Both officers clear from call: C//COLAVE

Call initiation	
Command	Description
A /Initiation type/Activity code/Location code/ {Location detail}/{Unit dispatched}/{Priority}/ {Comment}	Create a new call and optionally assign a unit and priority code. If the initiation type or priority are missing, they are set to the default for that activity. Omitting the unit means the call is initially “unassigned”.
OA //Activity code/Location code/{Location detail}/Unit number/{Priority}/{Comment}	Same as above, except call is marked as officer initiated. This would mark the unit as both dispatched and on-scene.
T /Unit #/{Location}/{Loc. detail}/Tag/{State}/ {Make}/{Model}/{Year}/{Color}/{Comment}	Traffic stop. State is default if left empty. Specified unit is dispatched to call and marked arrived. Vehicle is added as a contact.
X //Location code/{Comment}	Cancel a call which is still unassigned
P /Priority/{Location code}/{CAD ref}	Change the priority for the given call
Officer dispatch/arrival	
Command	Description
D {Unit number}/{Location code}/{CAD ref}/ {Comment}	Dispatch unit to a call. If no CAD ref is supplied, CLERK tries to match the location to a call. User will receive error notice if there is more than one call in a location. Leave unit number blank for “unassigned”.
X /Unit number//{Comment}	Cancel dispatch
S {Unit number}/{Location code}/{CAD ref}/ {Comment}	Mark unit as on-scene (arrived). See above for notes about missing CAD refs. If no unit number supplied, all units for that call marked on-scene. If unit was not previously dispatched to call, they are marked on-scene with the current time used as both dispatch and arrival time.
On-scene activities	
Command	Description
T /Unit #/{Location}/{Loc. detail}/Tag/{State}/ {Make}/{Model}/{Year}/{Color}/{Comment}	Vehicle contact. State is default if left empty. Specified unit is the “requestor”.

N /Unit number/{LastName}/{FirstName}/{Driver license}/{DL state}/{Race}/{Ethnicity}/{Sex}/{DOB}/{SC}/{Comment}	Individual (name) contact. DL state will be default state if left blank. Race, ethnicity, sex will try for a substrng match (e.g. typing “W” for race will expand to “White”). “SC” stands for searched/consented, for example put ‘YN’ to indicate searched without consent.
G /Unit number/{Number of reports}	Generate case report numbers for specified officer
E /Unit number/Location code/{Comment}	Mark unit as enroute to another location in relation to call (e.g. jail)
C /{Unit number}/{Location code}/{Comment}	This clears the unit from the call, or all units on the call if only location field is provided.
Officer status	
Command	Description
M /{Unit number}/{Officer}	Mark officer as on-duty. If officer name is omitted, the default unit number is used. This brings up an equipment box depending on your site configuration.
O /Unit number/{Time}/{Comment}	Mark unit as off duty (out of service). “Time” is the nominal end of shift time (date is current date); if blank, the current time is used.
L /Unit number/{Location code}/{Comment}	Update current unit status and location. Examples: Mark unit as being “available” at a certain location or add comment denoting temporarily busy/unavailable. If location is left blank, it is unchanged. If currently on call, unit is cleared.
Miscellaneous	
Command	Description
Q /{Unit number}/{Location}/{CAD ref}/{Comment}	Adds a comment to an open CAD record, identified by either the unit, location or CAD ref.
R /{Location code}/{CAD ref}/LastName/FirstName, {Callback,location}/{Comment}	Reporting party. The person who made the call etc. Supply either location code or CAD reference.
Y /{Unit number}/{Location code}/{CAD ref}/ Location detail	Set location detail for the specified call.

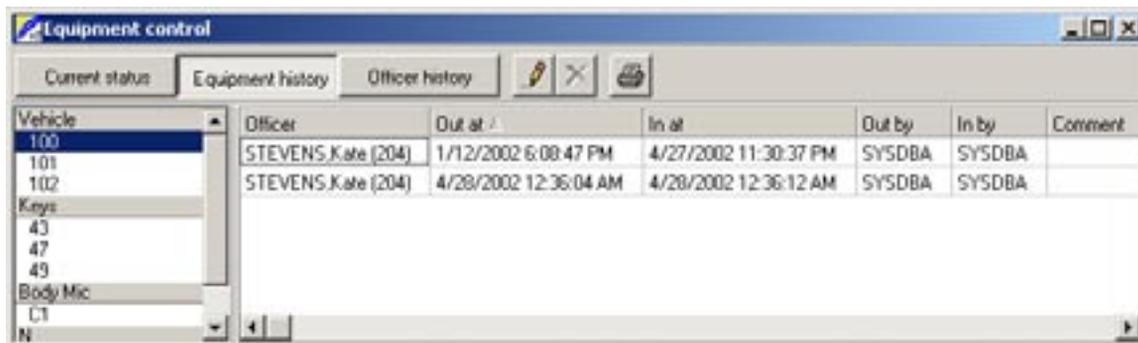


Equipment module

The Equipment module is designed to hold all information about equipment sign-outs and sign-ins. It is divided into three sections.

First is the **Current status** screen. This shows which equipment is currently checked out, and which

equipment is not. A screenshot is shown above. To sign-out equipment, or mark it as returned, click the **Edit** button, then enter the relevant details into the cells. When finished, click the Edit button a second time. If you make a mistake and wish to abort the edit, click the **Cancel** button.



Category	Iter	Out since	Returned at	Out by	In by	Comment
Vehicle	100	1/12/2002 6:09:47 PM	4/27/2002 11:30:37 PM	SYSDBA	SYSDBA	
Vehicle	100	4/28/2002 12:36:04 AM	4/28/2002 12:36:12 AM	SYSDBA	SYSDBA	
Vehicle	102	4/28/2002 12:36:04 AM	4/28/2002 12:36:12 AM	SYSDBA	SYSDBA	

The **Print** button displays a print preview of the equipment data.

The **Equipment history** screen shows a list of equipment categories and items down the left side. Clicking an item traces who an item has been checked out to, and if/when they returned it. A screenshot is shown on the previous page.

The **Officer history** screen allows you to view the equipment history for a particular officer. Click once on the officer's name from the list at the left of the screen to display the equipment data. A screenshot is shown above.

6 Chapter

Queries

Chapters to date have discussed how to enter data into CLERK. Sooner or later, you will also want to extract data out of CLERK in the form of crime statistics or other statistical reports. The process of extracting data is called “querying the database”, or we will sometimes talk about “running a query”.

This chapter teaches you how to generate statistical reports, including standard reports (Clery Act, UCR) as well as custom reports you design yourself. Once you’ve mastered queries, you may wish to consider designing your own printed forms using CLERK. That’s the topic of Chapter 7.

Uses for queries

Queries are primarily used to generate tabulated statistics. For example, a complete listing of citations, warrants, or incidents from a given day or month, or a summary of the offenses broken down by location.

A second use for queries is to search for data meeting particular criteria. For example, if a crime victim provides you with the description of a suspect, you may search (query) previous case reports to find a suspect with matching physical characteristics.

Finally, queries are used to generate “standard” or “mandatory” statistical reports for submission to other agencies, such as UCR, NIBRS and Clery Act.

Limitations of queries

CLERK’s query system presents data tabulated in a “grid”, i.e. with an appearance like a spreadsheet. Each matching record is displayed on one line of the grid.

In a few cases, it could be difficult to display data in a tabular form. If you start to encounter such cases, you’re ready to move on to “custom form design”, described in Chapter 7. However, we think you’ll find that most of your statistics can be generated using the process described in the following sections.

CLERK’s query philosophy

Experience has shown that when software companies provide law enforcement agencies with “off the shelf” statistical reports (queries), one of three things will be true:

- The built-in queries provided with the software are unable generate the information required by administrators.
- By providing vast numbers of built-in queries, *most* statistics required by administrators can be generated, but most of the queries will never be used and make locating the correct query difficult.
- Generating queries is a very complex process.

To avoid these pitfalls, Terrier Technologies has adopted two basic principles for queries:

- Rather than us integrating many different ‘fixed’ queries into CLERK, we make it very easy for you to design your own. This way, you end up with exactly what you do need, and none of what you don’t.
- We make it easy to share queries. For example, queries are downloadable from the Terrier Technologies Web site. It is also possible for departments using CLERK to exchange queries via email.

As with all other aspects of CLERK, please let us know if you have any comments or feedback regarding the queries!

Generating a query

Start the CLERK query generator by choosing the **Queries | Query generator** menu option. A welcome screen will appear providing some basic instructions. If you click the **Don’t show this message again** box, the welcome screen will not appear in the future when you run the query generator. Click the **Next>** button to move on.



i Your system administrator must give you the permission to use the query generator, otherwise the menu option will be disabled (gray).

The search table

CLERK data is divided into ‘tables’, or ‘types’ of data. On the second query screen (below), you choose



the table you wish to search, or generate statistics from. The most common tables (CAD records, case reports, incidents, individuals, citations, etc.) are displayed in bold at the top of the list. Other than being used frequently in queries, there is nothing particularly significant about these tables compared to the others on the list.

Once you have selected the table containing the data you’re interested in, click **Next>**.

i If the data you wish to work with covers more than one table, you might need to do two queries and merge them. This is discussed later in the chapter. For now, let’s assume that all the data is in a single table.

Filtering

While it is possible for you to include every record in a table in your results, there is usually some “condition” on the data.

For example, instead of listing *every* citation in the database, you might only want the citations issued within a certain time period, or the citations issued by a certain officer, or in a certain location.

By specifying conditions, you effectively *filter* the query results.

To add a filter, choose the field you wish to place a condition upon from the pull-down menu. For example, to restrict names to a certain age (year of birth), choose the **Date of Birth** field from the pull-down menu.



Once you select the field to filter, CLERK will display a space for you to enter the condition.

- For dates, you can choose a date relative to when the query is run, such as ‘yesterday’ or ‘today’. If you choose ‘today’ and the query is run on 12/31/02, ‘today’ means 12/31/02. If the same query is run on 1/1/03, ‘today’ would change to mean 1/1/03.
- For dates, you may also enter a custom date range (from/to). Leaving one of the custom range fields blank means it is not part of the condition, e.g. specifying a start date but no end date means “dates on or after...”.
- For numbers, you can specify a range. As with dates, if you leave the upper or lower limit blank, there will be no upper or lower condition, e.g. specifying a minimum value but no maximum value means “numbers equal to or greater than...”.
- For text, you can search for text beginning with,

ending with, containing, matching, etc.

- Some conditions will show a list, e.g. a list of locations. If the field is to be restricted to certain values from the list, click the **Must be one of** radio button, then check the allowed values in the list. Conversely, if the results should exclude certain values, click the **Must not be** radio button, and check the values to be excluded.

Once the condition has been set, click the **Next>** button.

If you wish to provide more than one condition or ‘filter’, repeat the above process as often as necessary. CLERK displays the number of conditions you have entered in the top-right corner of the window, and you may use the **<Back** button to go back and review or edit previously-entered conditions.

The default condition is **[Finished]**. Once all the conditions have been supplied, choose this option and click the **Next>** button.

Choosing result columns

Each record in CLERK contains many fields. For example, sex, height, weight, hair color, eye color, driver license number, and address are only some of the fields associated with each individual in the names database.

When you run a query in CLERK, it is unlikely that you will want to display every possible field in your results. The next query screen (shown on the following page) allows you to specify which fields will be displayed in the results.



The screen displays a list of all possible result fields. This list will vary according to the ‘search table’ you selected. Move through the list and check all the fields to be displayed.

Each field will be a column in the grid, so the terms ‘field’ and ‘column’ are interchangeable. In our example, if you choose ‘Hair’, there will be a column in the results with the heading ‘Hair’, and the hair color for each individual matching the search criteria will be listed.

Once you’ve finished, click the **Next>** button.

- i** If you wish to merge queries, the field to merge over must be selected. We’ll explain about merging later in this chapter.
- i** One field in the list may be red. This is the ‘key field’ that uniquely identifies a record. Often, it will be a sequence number that has no other apparent meaning. If you wish to

be able to double-click on a row in the query results and launch a CLERK module, you must include the key field in your search results. For example, including the sequence number in the results of a names query will allow you to double-click on a name and open the names module.

Collation

The final query screen lets you choose how to arrange, or ‘collate’ the query results. There are six different collation options, as shown in the below screenshot:

- **Full listing** is the default setting. Each record matching the criteria you entered will be displayed on one line of the results.

The other five options are designed to provide statistical information about “groups” of records. Records that match your search criteria and have the same



values in each of the return fields (columns) belong to the same “group”.

For example: If you select only vehicle make in the return fields, one group will contain all the Fords, another group will contain all the Chryslers, and so on. On the other hand, if you select the vehicle make *and* model in the return fields, one group will contain all the Ford Tauruses, another group will contain all the Ford F150s, another group will contain all the Chrysler Sebrings and so on.

Generally, selecting more return fields (columns) means that each group will be smaller.

i Normally, you will only “group” or “collate” records using fields that are short, or where the user can only select an option from a set list. For example, location codes, race, ethnicity, and offenses are good fields to group by. If you choose “free text” fields such as dispositions that may not be the same for any two records, then each record may end up being in its own group!

- **Count of items.** This option simply tallies the number of records in each group. Example: select the CAD responding officers table, enter a timeframe, choose ‘officer name’ in the return field, and choose **Count of items** for the collation setting. This will show how many calls each officer responded to during the specified timeframe. The results will contain two columns - the officer name and the number of calls they responded to.

The remaining four options perform mathemati-

cal operations on the groups of records. You must nominate one numeric field, the “calculation field”, to be used in calculations, as shown in the below screenshot.

 Mathematical calculations cannot be performed on non-numeric fields. Although CLERK does not prevent you from selecting a non-numeric field, if you do so an error message will appear when you run the query.

- **Average.** The average value in the “calculation field” for each group of records. Example: select the warrants table, in the return fields select ‘issued for’, choose **Average** for the collation setting, and choose ‘fine amount’ for the calculation field. The results will contain two columns - the first listing the things warrants have been ‘issued for’, and the second showing the average fine amount for each of those things.
- **Sum.** The total of all values in the “calculation



field” for each group of records. Example: select the case report property table, in the return fields select ‘UCR category’, choose **Sum** for the collation setting, and choose ‘value lost’ for the calculation field. The results will contain two columns - the first listing the UCR property categories, and the second listing the total value of all items stolen that correspond to each category.

- **Minimum** and **Maximum** are very similar. They select the minimum (or maximum) value from each group of records. Example: select the warrants table, in the return fields select ‘issued for’, choose **Maximum** for the collation setting, and choose ‘fine amount’ for the calculation field. The results will contain two columns - the first listing the things warrants have been ‘issued for’, and the second showing the maximum fine levied for each of those things.

Once you’ve made a choice for the collation setting, click the **Finish** button to display the query results.

- i** If your query is very complex, or if there is a lot of data stored in your CLERK system, a query may take some time to complete. You cannot cancel a query after clicking **Finish**.

Arranging the results

The results of your query are displayed in a results window similar to the one at the top of the following column. Each results window has:

- A date and time **①**, telling you when the query results were generated.
- A grid containing the results, **②**.



- A toolbar, **③**. We’ll explain the meaning of the toolbar buttons shortly.

You may reorder the columns by clicking in the gray column heading, and dragging the column to the new position.

You may resize each column by clicking the vertical line to the right of its heading, and dragging to the desired size.

To sort results by a particular column, click the column heading once. To reverse the sort order, click the column heading a second time.

For statistical results, it is also possible to generate a ‘graph’ or ‘chart’ of the results, **④**. Turn the graph on or off by clicking the **Chart** button on the toolbar, **⑤**. Double-clicking the chart toggles between a bar chart and a pie chart.

i The chart uses values from the right-most column. If the right-most column does not contain numeric values, the chart will not make sense.

Saving the results

After generating the query, you may wish to save or print the results.



Clicking the **Save** button, ①, brings up the standard Windows save box. You may choose a destination and filename for the query results. You may also choose a file format. For example, you may choose HTML so that the results can be published on the Internet, or XLS so that the results can be viewed (or edited) in Microsoft Excel.

Although you have already seen that CLERK has the capability of collating and sorting data, and generating charts, it is not designed to duplicate the functionality of advanced spreadsheet applications. If you need more control over a chart's appearance, you may wish to export the data into, for example, Microsoft Excel and design your own chart.

Clicking the **Print** button, ②, brings up a print preview window. From there, you may print the query results to the selected printer.

Re-running queries

Query results are “static”, i.e. the results window does not update automatically when new data is entered

into CLERK.

For example, if you generate a list of outstanding warrants, and then someone enters a new warrant into the system, the query results window does not automatically add the new warrant to the list of results.

Instead, you need to execute the query again, or ‘re-run’ it. There will be some queries you need to run repeatedly, for example daily activity logs or monthly statistics. But going through the process of generating essentially the same query on a daily basis will be very repetitive, and for queries involving several filter criteria, may also be time consuming.

To make life easier, CLERK allows you to store the query itself, and run it again at a later time.

Saving the query

It is important to understand the difference between saving the query *results*, and saving the query itself.

Since the data in CLERK changes over time, the results you get from running a query one day may differ from the results you get from running the same query on the next day. When you save the query results, you are taking a “freeze-frame” of the data in CLERK at that instant, and no matter when you view the results, they will always be the same.

By contrast, saving the query itself stores the *instructions* CLERK needs to repeat the query at a later time. Each time you open (or ‘run’) the saved query, the results will be re-calculated using the data currently stored in CLERK. So the results of a saved query may

differ each time you run it.



To save a query, go through the normal query generator process described earlier in this chapter. Then, click the **Save query** button on the query results toolbar. You will be asked to give the query a name. A name usually describes the type of results the query will produce, for example “Monthly citation log” or “Officer activity summary”.

That’s it! Your query has been saved.

Queries saved in this manner are your ‘personal queries’. They are stored on your hard disk, and other users do not see them.

Managing your personal queries

Having saved a query, the next step is learning how to ‘run’ it again at a later time.



To see a list of queries you’ve saved, look on the toolbar of the main CLERK window. You will see a ‘chart’ icon with a down-facing arrow next to it. Click the down-facing arrow, and a list of saved queries will appear. Choose a query from the menu, and it will run automatically, giving you a query results window.

If you wish to delete a saved query, click once on the ‘chart’ icon and a query manager will appear, as shown at the top of the following column.

Check the boxes next to queries you wish to remove, then click the **Delete selected** button.



Clicking the **Execute** link next to a query is simply an alternative to choosing it from the drop-down list.

i Queries are saved as .qry files in the **Saved queries** folder on your hard disk. Terrier Technologies may make query files for common tasks available on the Internet. You can download these files, and copy them to your **Saved queries** directory. Then, next time you log on to CLERK, the query will be available. Similarly, you can send your .qry files to other CLERK users (e.g. via email) for them to install on their computer.

i If a query is grayed out, the system administrator has not given you the permission to run it.

Publishing the query

In some cases, you might want to make a query available to several (or all) CLERK users. For example, a query listing all active warrants might be something you want each officer to be able to run whenever they choose.

The process of making a query available to other users is called ‘publishing’ the query. It is very similar to saving, except the query is stored on the CLERK server and not on your hard disk.

i Only the system administrator, or other users authorized by the system administrator, may publish queries.

 To publish a query, go through the normal query generator process described earlier in this chapter. Then, click the **Publish query** button on the query results toolbar.

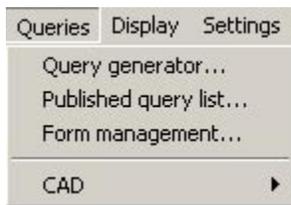
You will be asked to give the query a name. A name usually describes the type of results the query will produce, for example “Monthly citation log” or “Officer activity summary”.

You will also be asked to give a category for the query. The category simply helps you to organize your published queries in a structured way. A list of categories used previously appears in the drop-down menu, but you may type a new category if you wish.

Click the **OK** button to publish your query. It will become visible to other users the next time they log in.

Running a published query

Once a query has been published, it will appear under the appropriate category on the **Queries** menu. Simply choose the query to run it.



For example, say you publish a query in the ‘CAD’ category with name ‘Daily CAD log’. The **Queries** menu would look

like the screenshot above, and you would choose the

Queries | CAD | Daily CAD log menu option to run the query.

i If a query does not appear for you, but does for other users, the system administrator has not given you permission to run it.

Managing published queries

System administrators may delete or “unpublish” published queries. To do so, choose the **Queries | Published query list** menu option.



Click the **Delete** link of the published query you wish to remove. Click **Done** when finished.

The **Execute** link is merely an alternative to running a query by choosing it from the **Queries** menu.

Permissions

System administrators control which groups of users are permitted to use the query generator, and whether or not saved queries (either personal or published) may be run for certain tables.

To configure these permissions, choose the **Settings | Security privileges** menu option, select the user group you want to work with, and then set the options under the **Queries** section.

By default, a user group is not allowed to generate queries. For more general information about security

permissions, refer to Chapter 9.

Complex queries: merging

Our examples so far assumed that all the data you searched was in a single database “table”. This is not always the case - often, you want to combine more than one table.

For example, information that appears in the CAD module is spread over several “tables”. Information about responding officers, including name and time information, is stored in one table. The nature of the call (‘CAD activity’) is stored in a different table. To generate a listing of activities for each officer, you will need to combine data from the two tables.

This section describes the process for creating a “merged” query. First, each of the queries to be merged needs to be generated independently.

In our example, we will first generate a query from

the CAD responding officers table showing which calls each officer responded to. We’ll choose “CAD - responding officers” as the table, We’ll choose “CAD reference number” and “Officer name” as the result fields, then run the query.

The results of the first query will look something like the left window below.

Secondly, we will also generate a query showing the location and nature of each call. We’ll choose the “CAD records” table, and “CAD reference number”, “CAD activity”, and “Location” as result fields. Then we’ll run the query.

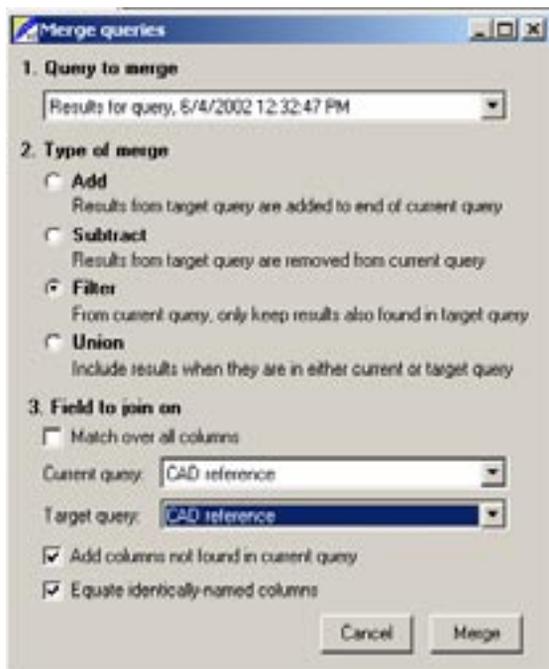
The results of the second query will look something like the right window below.



Merging two queries is then achieved by clicking the merge button on the query results toolbar. In this case, it does not really matter which

	CAD reference	Officer name
1	02-01-12-000001	STEVENS,K
2	02-04-27-000002	COOKE,R
3	02-04-27-000002	COOKE,R
4	02-04-27-000002	HAVICHUK,K
5	02-04-27-000002	HAVICHUK,K
6	02-04-27-000003	COOKE,R
7	02-04-27-000004	HAVICHUK,K

	CAD reference	CAD activity	Location of event
1	02-01-12-000001	PATROL	DNCR
2	02-04-27-000002	TRAFFIC	AIRPORT
3	02-04-27-000003	TRAFFIC	BUS
4	02-04-27-000004	PATROL	HCL



of the two results windows you click. But for some queries, it makes a difference, as we shall explain later. Once you click the merge button, a window similar to the one above will appear.

An explanation of the merge options follows.

- **Query to merge.** You will see a list of other query result windows that are currently open. If you only have two query results windows open, the menu will only contain one option.

There are four types of merges. Most of the time, you will be interested in a Filter merge. But, for the sake of completeness, we'll describe the others too:

- **Add.** This simply takes the results of the second

query and adds them to the end of the first query.

For example, to build one report showing all the individuals and vehicles that were contacted through traffic stops, you would create one query containing the individual contacts, a second query containing the vehicle contacts, and then merge the two using an 'add'. Adds are mostly used for display purposes, i.e. putting two sets of results on one page.

The number of rows in the result is the number of rows in the first query plus the number of rows in the second query.

- **Subtract.** The result will contain all rows that appear in the first query, but *not* in the second query.

For example, you may wish to generate a list of CAD contacts who were pedestrians or passengers (i.e. not drivers). You could create one query listing all the name contacts, then a second query listing all the drivers of vehicle contacts. By subtracting the names in the second list from the names in the first list, you end up with a list of the passenger/pedestrian names.

This option will never increase the number of lines in the first query; the data from the merge result will be a 'subset' of the data in the first query.

- **Filter.** The result will contain all rows that appear in the first query *and* in the second query. For example, you might like to generate a list of property each officer has seized. You would generate one query listing all the case reports and

corresponding officers. You would generate a second query listing all the property items that were seized. Then, you would do a ‘filter’ merge by case report number. The results would show the name of the officer next to each seized item.

Like the subtract option, this will never increase the number of rows in the first query.

- **Union.** The result will contain all rows that appear in *either* the first query or the second query. This is different from the add option, because a row that appears in both queries will only appear once in the result.

Unions are often used where either one field *or* another must meet a condition.

For example, you might want to list all offenses that were either hate crimes or domestic violence related. If you did an ‘add’, any case report containing both a domestic violence crime and a hate crime would be counted twice. Instead, generate one query listing hate crimes, and another listing domestic violence crimes, and then merge them with a ‘union’. The result would list all case reports involving either one.

This option will always contain at least the number of rows in the first query; all the original rows will be there, plus any that were brought in from the second query.

The below table gives an example of how each merge type would work. Assume that you have a first query containing A, B, and C, and a second query containing A, C, and D.

Merge type	Merged results
Add	A, B, C, A, C, D
Subtract	B
Filter	A, C
Union	A, B, C, D

When CLERK compares a row in the first and second queries, how does it determine whether they are the same? This is controlled in the third group of settings.

- **Match over all columns** means that in order for a row to be the “same”, the values in all columns of the first query must be the same as the values in all columns for the second query. In other words, the rows must be *identical* for them to match.
- If the **Match over all columns** box is unchecked, you may specify which column in the first query and which column in the second query should be equal in order for the row to “match”.

This setting is not applicable to **Add** merges, since no check for matching rows is performed.

In our example of generating an officer activity list, we will choose a **Filter** merge, and specify that the CAD reference number in each of the first and second queries should match. In plain English, we are saying “for each CAD reference number in the first query, find the matching CAD reference number in the second query”.

Finally, we can control the appearance of columns (not applicable to the **Subtract** merge).

- **Add columns not found in current query.** If checked, then columns in the second query that didn't already exist in the first query are added.
- **Equate identically named columns.** If a column in the first query and a column in the second query have the same title, blank values in that column will always be replaced by non-blank values.

Once the settings are complete, click the **Merge** button.

Again returning to our officer activity log, we will specify that we want to **add columns not found in current query**. This means we want to add the activity and location columns to the first query. So in plain English, our merge request is: “for each CAD reference number in the first query, find the matching CAD reference number in the second query, and add the activity & location next to the officer name”.

The results of our example merge are shown below.

Merged queries act just like any other query; you may save them or publish them so that they can easily be



	CAD reference	Officer name	CAD activity	Location of event
1	02-04-27-000002	COOKE,R	TRAFFIC	AIRPORT
2	02-04-27-000002	COOKE,R	TRAFFIC	AIRPORT
3	02-04-27-000003	COOKE,R	TRAFFIC	BUS
4	02-04-27-000004	HAYCHUK,E	PATROL	HOL
5	02-04-27-000002	HAYCHUK,E	TRAFFIC	AIRPORT
6	02-04-27-000002	HAYCHUK,E	TRAFFIC	AIRPORT
7	02-01-12-000001	STEVENS,K	PATROL	ENGR

re-run later. You may merge more than two queries, so long as the second query in each merge operation is not the product of a merge itself.

Merged queries give you the flexibility to generate most types of statistical reports. On some occasions, you may find that you want to present the data in a different way (not in a grid), or you may find that even a merged query cannot do what you're looking for. You may want to consider learning the forms designer, described in Chapter 7.

i Each part of a merged query is run independently and the results are transferred over the network. If either part generates a large amount of information, the query may appear 'slow'. You can sometimes improve the speed by using the forms designer.

Uniform Crime Reports (UCR)

Most U.S. states require law enforcement agencies to submit Uniform Crime Report (UCR) statistics to a state authority, which in turn supplies those statistics to the FBI.

The general process for generating a UCR report is to choose the **Display | UCR report** menu option, enter a date range and some other miscellaneous settings, and click **OK**.

Each state is permitted to design their own printed form for UCR returns (within certain guidelines). Therefore, to use UCRs within CLERK, you first need to download a state-specific “forms pack” from the Terrier Technologies web site,

<http://www.policedata.com>. More specific instructions may be included with the forms pack. In general:

- You should ensure that the user running a UCR report is able to view each reportable offense. If a user cannot view a case report, it will not be included in the statistics.
- UCR statistics are only generated from the case reports. Other data (CAD, citations, warrants etc.) are ignored.
- For offenses (Return A), CLERK uses the **UCR category** field in the incident segment to determine which category (if any) an incident should be reported under.
- If a case report contains more than one incident segment, only one segment, specifically the one with the ‘most important’ UCR category will be reported.
- When generating a report for a specific time period, CLERK uses the ‘began’ date and time from the incident segment to determine which incidents occurred during the given timeframe.
- If a report is marked as cleared, CLERK checks the clear date on the report cover page to determine whether a correction to a previous UCR report is necessary.
- For property, the **UCR category** field on the property segment determines which category (if any) the property should be reported under.
- All property segments from a case report which are marked as reportable are included in the

statistics.

- The date on the case report cover sheet determines whether or not a property segment applies to a particular timeframe.
- If a property item is marked as corresponding to an “item on a prior report”, CLERK will either disregard the previous item (if both apply to the same month), or will include a correction (if only the later item applies to the current month).

Your state may require extra statistics beyond the “standard” monthly UCR reports. Your forms pack will describe whether CLERK is capable of producing such statistics. Generally, it will be possible if there are fields to record that information in a CLERK case report.

NIBRS

Although most states currently use UCR reporting, a transition to a National Incident Based Reporting System (NIBRS) is currently underway, and a substantial number of states already generate NIBRS data or have plans to do so.

Generating a NIBRS report involves choosing the **Display | NIBRS report** menu option, completing some self-explanatory settings, and clicking **OK**.

Although CLERK generates a printed version of the report, NIBRS will generally be submitted electronically, so the version saved to disk will be the one you’ll most likely need to submit.

CLERK is designed to store all the data required in the FBI’s NIBRS reporting guidelines. So long as your

state collects at least the required data, it may also compel you to report other information as part of the state’s IBR (incident-based reporting) program.

Before state-specific reports can be generated by CLERK, a provision must be made to store the extra data in each case report. Terrier Technologies may provide plugins for this purpose on the Internet, at <http://www.policedata.com>. We plan to eventually have plugins for all states that store more than the standard NIBRS data, although in many cases we must be certified by the state before releasing the plugin.

Clery Act reports

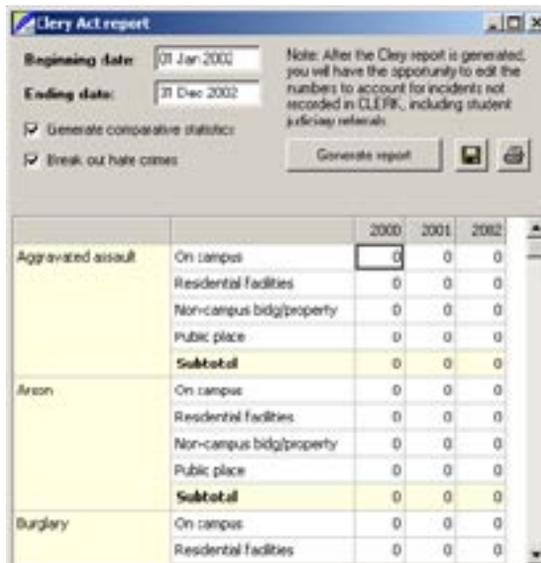
Higher education institutions in the U.S., such as colleges and universities, are required to report crime statistics for their campus to the federal Department of Education under the Clery Act (formerly the Campus Security Act).

Most municipal agencies do not need to generate Clery Act statistics. Those who do generally have jurisdiction over a campus, or neighbor a campus.

Generating an annual Clery Act report requires you to have already configured the Clery Act settings, as described in Chapter 9.

To generate the report, choose the **Display | Clery Act statistics** menu option. A window similar to following screenshot will appear.

Choose the starting and ending date range for the report. **Generate comparative statistics** asks CLERK to also generate statistics for each of the previous two



years, in addition to the specified year. If you do not have any data in your system from the previous two years, you should uncheck this option, as it does take longer to generate these statistics.

Break out hate crimes asks CLERK to scan the list of offenses included in this Clery Act report for “hate bias”. CLERK categorizes the bias, e.g. racially motivated, religiously motivated, etc. and lists a tally on the Clery Act report. Hate crimes can only be processed for those Clery Act categories that are recorded in case reports.

Once your settings have been entered, click the **Generate report** button. The process may take some time, depending on how many records are currently stored in your system.

Once the report has been generated, you can do three

things with it:

- **Edit the data.** You may click on a white 'cell' and edit the number it contains. If some incidents are not tracked in CLERK, e.g. they are reported to non-police 'designated persons on campus', you will adjust your numbers to account for those incidents. When you change a number, CLERK automatically updates the subtotals accordingly.
- **Save or export the data.** Click the **Save** button to store the Clery Act report to a file. You may save it in a variety of formats, including HTML (to publish on the Web), PDF (to email), XLS (to edit in Microsoft Excel) and so on. If you want to change the layout of the report, or add titles to the report, you should export the data and do so using another software package.
- **Print the report.** You may also print the annual report directly from within CLERK.

Note that users must be given permission to run a Clery Act report by the system administrator. Refer to Chapter 9 for more information about security settings.

7 Chapter

Forms designer

So far, this manual has described how to enter data into CLERK, and how to extract statistics in a tabular (i.e. grid) form. For most departments, understanding how to build, save, and publish queries is all that they require. But other departments may desire greater control over the type of statistics CLERK produces, and how they are presented on a printed page.

For such situations, a graphical “forms designer” has been incorporated into CLERK, and gives you the flexibility to design nearly any printed layout. This comes at the price of complexity - the forms designer is the most difficult part of CLERK to learn; it requires some technical know-how and is only suitable for advanced users.

You may have heard of products such as Crystal Reports and ReportBuilder. CLERK uses an equivalent product for designing reports, called *FastReport*.

Form design: an overview

Designing a custom form is challenging the first time you do it, but like all things, gets easier with practise. A certain amount of satisfaction also accrues when you design professional custom forms.

Before designing your own forms, familiarize yourself with the process of generating regular queries and merged queries (Chapter 6), and read this chapter thoroughly. Ideally, you should sit down and follow the tutorials to get some practical experience.

Creation of a custom form involves five distinct phases:

- Telling the database which data should be printed on the form. This includes specifying “filter” criteria that determine which records will be printed, and selecting which fields should appear.
- Designing the printed form, i.e. specifying what

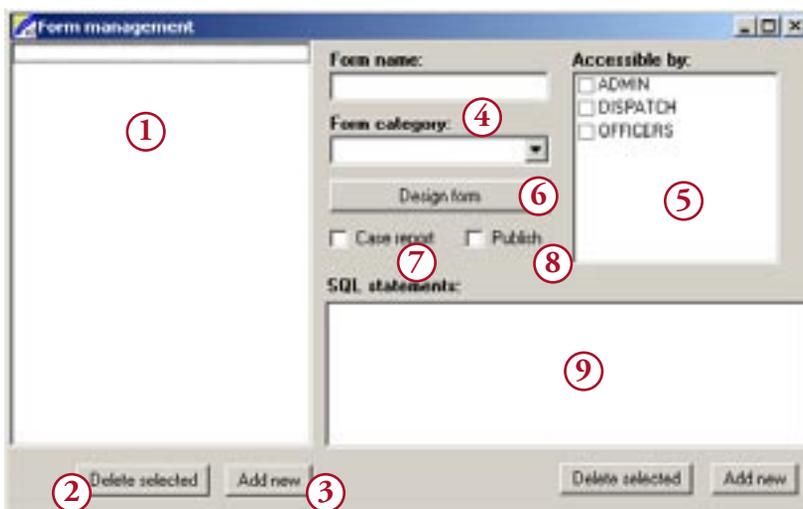
the printed page should look like.

- Connecting data fields to objects on the printed form.
- Designing dialog boxes to ask users for input (optional).
- Testing. You can test your printed form within the forms designer; this is an important step!

Most of the remainder of this chapter is devoted to describing how these steps are accomplished.

To manage your custom forms, choose the **Queries | Form management** menu option. A window similar to the one below will appear:

- ① List of the custom forms currently stored in the system.
- ② Click the **Delete selected** button to erase the form in the list that is currently selected.
- ③ Click the **Add new** button to create a new custom



form.

- ④ With a form selected, set the name and category for the form using these two fields. The category simply specifies which submenu the custom form will appear under. Naming custom forms is just the same as naming regular queries (see Chapter 6).
- ⑤ A list of user groups is displayed. Check the boxes to indicate which user groups should be allowed to access the custom form.
- ⑥ Click the **Design form** button to launch the graphical form designer. We'll explain this in a lot more detail later on.
- ⑦ Check the **Case report** box if the custom form is a case report template. When users print a case report, they will see a list of available case report templates to choose from.
- ⑧ Check the **Published** box if the custom form should be added to the **Queries** menu. Normally, this box should be checked, and should only be unchecked if (a) the form is temporarily disabled, or (b) it is a template to replace the default form for one of the CLERK modules.
- ⑨ We can add or delete SQL statements from the custom form. This is the topic of the next section.

Using SQL builder

CLERK stores data in an 'SQL database'. SQL stands for Structured Query Language. Normally, the CLERK client takes a user's actions and converts them into SQL commands. So the average CLERK user

does not need to know anything about SQL at all.

Even when designing forms, CLERK tries to "shield" you from the complexities of SQL, but if you're thinking of creating a custom form, it's in your interest to at least understand what SQL looks like.

Introduction to SQL

By sending 'SQL commands' to the CLERK server, it is possible to add, remove, update, or retrieve data in the database. Custom forms always involve retrieving data already stored in the database - adding, removing, or changing data is done via the CLERK modules.

The command for retrieving data is called a 'SELECT statement'. It will look something like this:

```
SELECT cad_number, location, create_date FROM cad WHERE create_date='2002-01-01' ORDER BY cad_number
```

It can be broken into four parts:

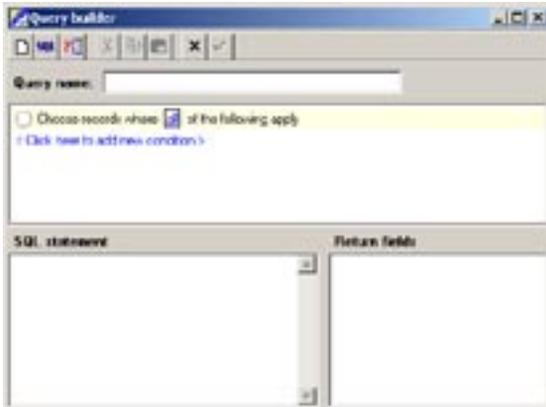
- The result fields come first. In this example, the result fields are `cad_number`, `location`, and `create_date`. Notice that they are separated by commas.
- Next, we list the table containing these fields. You don't need to learn about tables; for now, just accept that the table name comes after the word `FROM`.
- The `WHERE` clause stipulates conditions that a record must meet in order to be included in the set of results. In this example, only CAD records

that were created on 1/1/2002 will be returned. If there is no `WHERE` clause, all records in the table will be returned.

- The `ORDER BY` clause allows the results to be sorted according to one (or more) of the result fields. In this example, the results are to be sorted by the CAD reference number.

For the purposes of creating a custom form, you don't need to understand how to write a `SELECT` statement; `CLERK` aims to do that for you. However, there will be some cases (notably when your custom forms require user input) that you need to manually change a `SELECT` statement that `CLERK` generated. That's why it is important for you to at least understand what one looks like.

A question that may have occurred to you is “how does `CLERK` generate a `SELECT` statement?” The answer: it uses a ‘visual query builder’. To see it in action, create a new custom form and then click the **Add new** button at the bottom right of the window to add a SQL statement. A window similar to the one below will appear.



Setting search conditions

Generally, you want to select records that meet certain criteria, i.e. you want to ‘filter’ the results. You should have some experience setting filters for normal queries, as described in Chapter 6.

The query builder also lets you set conditions, except with a bit more flexibility.

To set a search condition, click the **Click here to add new condition** link, or click the empty gray circle.

Initially, the search condition will say “Last modified is equal to ___”. Click on the words “Last modified” and a menu will appear. Choose the field you wish to place a condition on. Whereas the query generator only listed the most commonly used fields, you’ll see all of them here!

Next, click the words “is equal to” and a menu will appear. Choose the type of condition to be applied. For example, you might want a date field to be before (less than) or after (greater than) a search date.

Some types of conditions require a third parameter. Click on the “___”, and you will either see a date field, or a text entry field in which you may type the condition.

Example: To search for all people in the Names database with the last name Smith,

- Click “Last modified”, choose **Names database | Name**.
- Click “is equal to”, choose **is starting with**.
- Click “___” and type `SMITH`.

Continue adding as many search conditions as necessary. The first line controls whether all your search conditions must be met, or just any one of them. Click on “all” to change the setting.

 If a field should contain a number and you type text, you will eventually see an error. For example, if you specify that a person’s weight must be less than 240LB, you will get an error.

To remove a condition, click the circle to the left of it (it should contain a line number). Choose the **Delete current row** option.

Clicking the circle containing the row number also allows you to add “brackets” to your search conditions. Brackets allow you to create groups of search criteria, any or all of which must be matched for a record to be returned.

Example: To search for all people in the names database with the last name of either Smith or Jones, and who were born after 1/1/1980,

- Add a new condition.
- Click “Last modified”, choose **Names database | Date of birth**.
- Click “is equal to”, choose “is greater than”.
- Click “___” and type 1/1/1980.
- Click the circle containing the number 1, choose **Add Bracket**.
- Click the word “all” next to line 2, and choose **any**.
- Click “Last modified”, choose **Names database |**

Name.

- Click “is equal to”, choose **is starting with**.
- Click “___” and type SMITH.
- Add a new condition.
- Click “Last modified”, choose **Names database | Name**.
- Click “is equal to”, choose **is starting with**.
- Click “___” and type JONES.

Your query should now look like this:



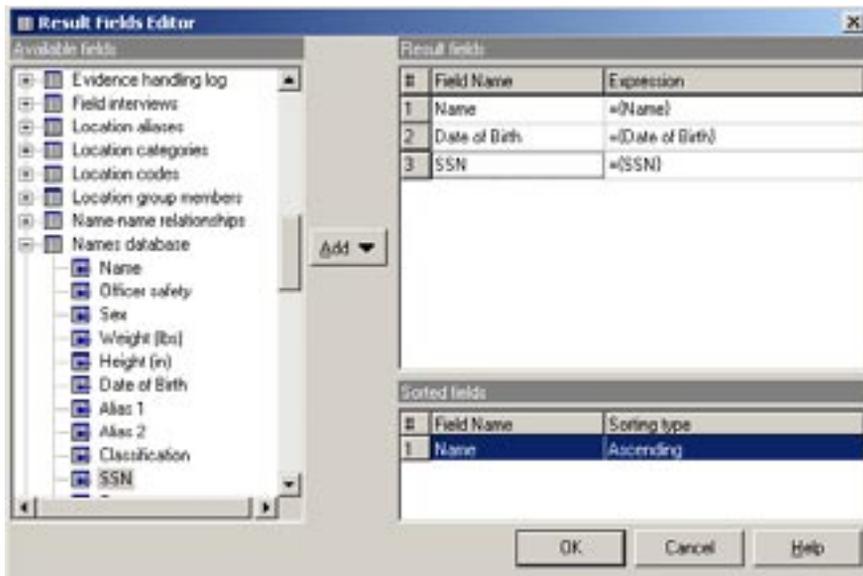
Notice that if you read the query, it resembles an English sentence. In fact, it bears some resemblance to the sentence we used at the start of this example to describe what we wanted to do.

Selecting result fields

Besides setting search conditions, you also need to choose which values will appear on your custom form. To do so, click the red question mark icon on the toolbar (third button from left).

A result field window will appear, as shown on the following page.

From the **Available fields** list, double-click on each field you want to display on the custom form. Each field you double-click on appears in the **Result fields** list.



i Remember, if a field does not appear in this list, you cannot place it on your custom form.

In our screenshot, three result fields are selected from the names database: Name, Date of Birth, and SSN.

Normally all matching records will be returned in an arbitrary order, i.e. unsorted. To sort the results, right click the field in **Result fields** you wish to sort by. Choose the **Sort result field** option, and the selected name will be added to the **Sorted fields** list.

You can also:

- Change the sort order from ascending to descending by right-clicking in the **Sorted fields** list.
- Remove a result field by right-clicking in the **Result fields** list and choosing **Delete result field**.

- Perform mathematical operations over the whole set of results (for instance, finding the average, total, maximum or minimum value of a field), or mathematically combining two fields in the same record (for instance, finding the difference between two fields). To do this, instead of double-clicking the field in **Available fields**, click it once then use the **Add** menu to specify which mathematical operation is to be applied.

Once you've set up the result fields, click the **OK** button and you'll return to the query builder window.

Building the SELECT statement

So far, you've done everything graphically, by clicking and choosing menu options. Now it's time for CLERK to convert your input to a SQL SELECT statement.

CLERK also generates a SELECT statement when you enter search settings in the query generator of Chapter 6, but it just didn't show you the result, or give you an opportunity to edit it.

To build the SELECT statement, click the **SQL** button on the toolbar. That's it!

If you understand SQL sufficiently, you could edit the text of the SELECT statement. However, unless you want your custom form to ask users for input, most of the time you won't need to.

Other query builder options

After building the SELECT statement, all that remains is to give it a name by entering something in the **Query name** field. The purpose of the name is merely to help you distinguish between multiple SELECT statements while you're designing your custom form. Those who use the form don't see this name. By convention, the name should not include spaces.

The **New** toolbar button allows you to clear the current SELECT statement and start over. Other toolbar buttons allow you to cut, copy and paste text.

To cancel, click the cross toolbar button. To confirm, click the toolbar button containing a tick mark.

The form designer environment

The second phase of designing a custom form is to create the layout, i.e. specifying the appearance of the printed form. To start CLERK's graphical form designer, click the **Design form** button in the form

management window. A screenshot of the graphical form designer appears on the following page.

The 'dotted' area represents the physical page. Designing the form involves placing 'objects' on the page, much as you would with a drawing application.

Objects

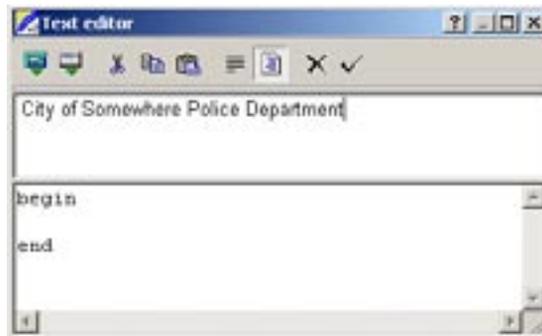
Down the left side of the form designer window, you'll see a "toolbar". Each icon on the toolbar represents a type of object you can place on the page. The general process is: click once on the toolbar button, then click once on the page where you'd like to 'drop' the object. Or, instead of clicking, you may click and drag to create the object with a size different to the default.

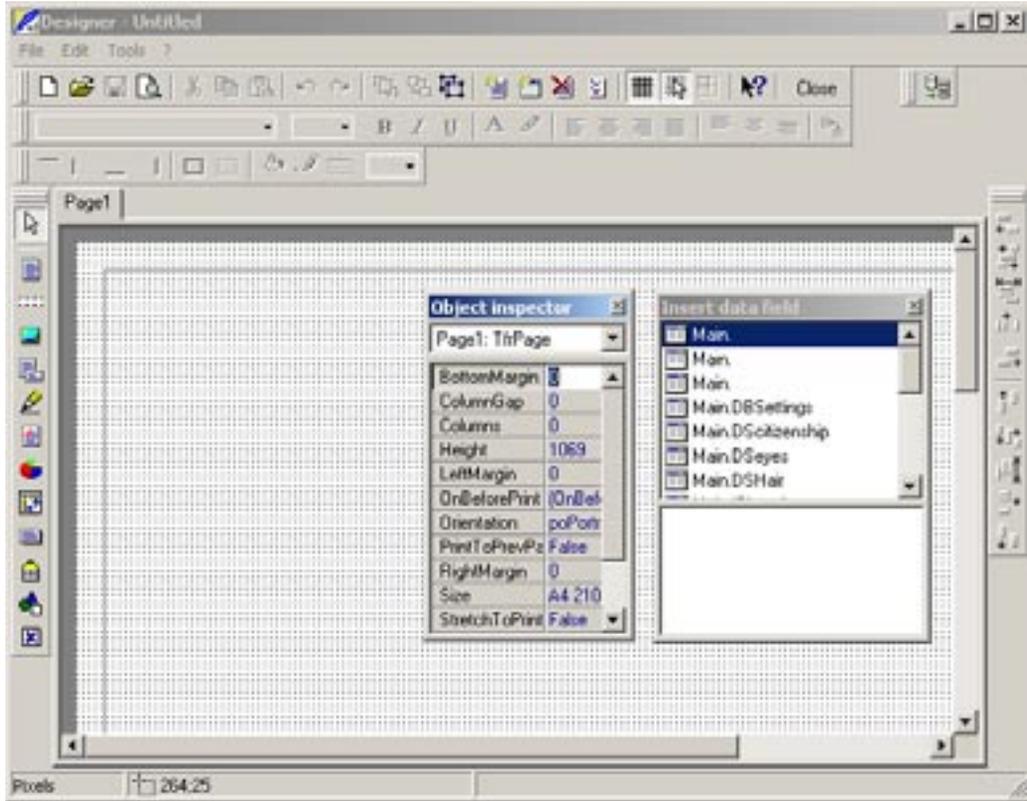


Select the cursor if you wish to edit an existing object, rather than add a new one to the page.



Rectangle. This is the object you will use most. A rectangle (with or without borders) is drawn on the page. After placing the rectangle at the desired location, a text editor appears (below).





In the top part of the text editor, you may type text that always appears in the box (this is called ‘static’ text) such as a heading or label. Or, you can choose to insert text that is fetched from the database when the form is displayed (this is ‘dynamic’ text, because it changes according to the contents of your database). We’ll explain how to display dynamic text a bit later in this chapter. The bottom half of the text editor is used for scripting, also discussed later.

 **Band.** Like the form designer of almost every other product, CLERK’s form designer is called

a ‘banded’ designer. This is because the results from each data record are displayed in one horizontal “band” on the page. That band is followed by a band containing data from the next record, and so on.

We’ll explain more about how bands work and the different types of bands shortly.



Picture. After placing a picture object on the form, a dialog will appear allowing you to load a file from disk. The best file format to use is Windows bitmap (BMP). You can use this object

to place a departmental logo at the top of a form, for example.



Subreport. It is possible to ‘nest’ one custom form inside another custom form. You’re unlikely to need this option (out of all the default forms in CLERK, only one uses subreports).



Line. Click and drag on the form to draw a line. For example, draw a horizontal rule underneath a page header.



Rich Text is similar to the rectangle object, but it is designed to hold larger amounts of text, possibly spanning more than one page. For example, the case report narrative is a rich text object.



Chart. Place a chart on the page to summarize your results in a graph. CLERK allows you to choose from six types of charts, including pie charts, line and bar graphs, and scatter plots. The X and Y values for the chart come from rectangle objects inside bands on your page. For each record in the data, CLERK looks at the number inside the nominated rectangle objects, and those values form one X,Y point on the chart.



Cross-tab allows you to create a grid with one set of data in the rows and another set of data in the columns. The grid values will be numbers resulting from some mathematical operation.

Example: We could add a list of CAD activities across the top of the page (the columns), and a list of locations down the left of the page (the rows). Then, the contents of the grid would be the number of each

type of CAD call to each location. In other words, to see the number of alarm calls at location DORMS, you would locate the alarm calls column, then move down to the DORMS row, and read off the number. Instead of counting the number of calls, you could also measure an average or the maximum or minimum number of calls (e.g. in any given day).



Round rectangle is much the same as the ordinary rectangle object, except the corners are rounded.



Barcode. Place this object on a form to create a barcode based on one of the fields in the database. Barcodes can be later scanned using a barcode reader, to avoid the need for typing the number.



Shape adds an object created in another Windows application. Generally, this is not used in CLERK.



Checkbox. The printed equivalent of checkboxes on the CLERK module screens. A checkbox will either be empty or have a mark in it, depending upon data fetched from the database. You may specify what mark is to be used (e.g. a tick mark or a cross).

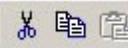
Toolbars

An extensive set of toolbars appears at the top of the form designer window. Your window might not look exactly the same as the screenshot; each user can control the toolbar appearance using the **Tools | Toolbars** menu option.

 The **New** button clears the existing report so that you can start over. Contents of the existing form will be deleted; if you want to add another custom form to CLERK, you should close the form designer and use the **Add new** button in the form management window.

 The **Open** and **Save** buttons allow you to retrieve a form design from, or save the current form design to, your hard disk. This is mostly useful for sharing reports via the Internet with other CLERK sites.

 **Preview report** allows you to “test” your form, i.e. to see what it would look like if a user opened it by choosing an option from the **Queries** menu.

 The **Cut**, **Copy**, and **Paste** buttons have their usual meanings.

 The **Undo** and **Redo** buttons have their usual meanings.

 You have complete control over the location of objects on the printed page, and can even choose to have one object overlapping another. In such cases, CLERK needs to know which object should be drawn ‘on top’. You control this by selecting one of the objects and using the **Bring to front** or **Send to back** buttons. The third button in the group, **Select all**, has the standard meaning; it selects every object on the current page.

 The **Add page** button allows you to add a second or third

page to your custom form. The **Add dialog** button allows your custom form to have user input; we’ll talk more about that in a separate section. The **Remove page** button removes the current page (or dialog) from the design. Finally, **Page options** allows you to control page orientation, margins, columns, and so on.

 Click the **Grid** button to toggle whether or not a ‘grid’ of dots is displayed on your page while designing. These dots do not appear on the printed page, they are mostly intended to help you align objects. **Grid align** automatically “snaps” the cursor to the nearest grid point when you move or resize an object. **Fit to grid** does a similar job to **Grid align**; it snaps all objects on the page so that their top-left corner is located at the nearest grid point.

 Click the **Close** button when you have finished designing your custom form.



Use the toolbar shown above to specify the font, size, and style of text in a rectangle object.

 The **Font color** button allows you to specify the color of text in an object.

The **Conditional highlighting** button allows you to specify an alternate color, or ‘highlight’ for the text, along with the rules that determine when that highlight should be used. For example, on a names record, you may wish to print the words ‘officer safety caution’ in red when a caution exists, and black at other times.



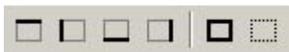
The text alignment buttons specify how text should be horizontally aligned within an object; they have the usual meanings of left, center, right, and fully justified.



The vertical alignment buttons allow text to appear at the top, center, or bottom of an object.



The rotate button allows text to be rotated by 90° within the object.



Some objects, notably rectangles, may have borders. Use these buttons to add a top, left, bottom or right border to the object. The other two buttons are shortcuts that add or remove all four borders at once.



Use the toolbar shown to the left to control various appearance properties for the selected object(s). You may change the object's background color, border color, border style (e.g. solid or dashed line), and border thickness respectively.

Alignment

An alignment toolbar will appear on the right side of the graphical form designer. Buttons on the toolbar can be used to align the edges or centers of multiple objects, or to space objects evenly (for example, to make sure the spacing between rows of text is equal).

Using the alignment palette is simple: select *all* the objects you wish to align, either by clicking and dragging on the page, or by holding the `Ctrl` key as

you click each object. Then click the button on the toolbar representing the type of alignment desired. Buttons in the top half of the toolbar will perform horizontal alignment (aligning the left, right, or horizontal centers) and buttons in the bottom half of the toolbar will perform vertical alignment (aligning the top, bottom, or vertical centers).

Bands

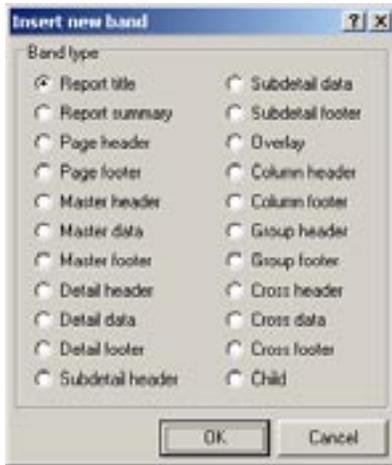
Earlier in this chapter, we described CLERK's custom form designer as a 'banded' designer because records are displayed in horizontal 'bands' one after the other.

Put simply, a 'band' is a region of the page. Note the following characteristics of a band:

- It contains other objects, i.e. an object can 'belong' to a certain band.
- It has a 'height', such as 2, 3, or 4 inches. The height could be fixed (always the same) or it could vary according to the size of its contents, e.g. the band containing a case report narrative might be 'stretched' to fit the size of the narrative.
- Although the band will appear at a certain position on the page in the designer, i.e. a certain distance from the top of the page, it will not necessarily appear there on the printed page. Bands are 'stacked' one above the other, so the starting position of one band depends only on where the previous band ended.
- Some types of band are attached to a 'dataset' containing the results of a `SELECT` statement. When this is the case, the band is repeated so that it occurs once for each record in the dataset.

It's a good idea to get into the habit of placing a band on the page first, and then putting all the objects for the band inside it.

After placing a band on the page, a window appears asking you what type of band it should be:



The band types described below will appear on most custom forms.

- A custom form may have one **report title** and **report summary** band. These will appear at the very beginning and very end of the form.
- Each page may have one **page header** and one **page footer**. These are repeated at the top/bottom of each page when the form is displayed.
- If your page includes a **master header** band, it will be printed once before the first master data band.
- The **maser data** band is perhaps the most important band you place on the page. Generally, no page should be without a master data band. Place

objects that will contain data retrieved from the CLERK database inside this band. As mentioned above, the band is linked to a dataset. It will be repeated once for each record in the dataset. For each repetition, CLERK fetches the values from the current record and inserts them into the designated objects. After the band is placed on the page, you'll be asked which dataset it should be linked to. Don't make any selection for now; we'll describe more about how to link datasets in the next section.

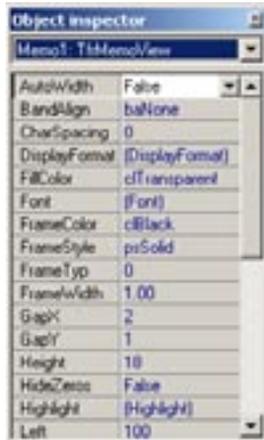
- The **master footer** band will be printed below the last master data band.

The **detail** and **subdetail** bands look and act very similarly to the master bands. Later in the chapter, we will explain when and why you might need them, but let's concentrate on simple forms before tackling more advanced topics.

Object inspector

Objects that are placed on pages of the custom form have 'properties' or 'attributes' that you are able to control. Some properties, such as size and location, are controlled by clicking and dragging with the mouse. Other properties, such as borders and text size, are set using the toolbars. Still other properties can be accessed by right-clicking on the object.

Additionally, *all* the properties of an object may be viewed and/or changed in the **Object inspector** window. Click once on the object, and its properties will be displayed, as shown at the top of the following page.



You may find that the object inspector gives you more precise control over an object (e.g. you are able to type the width and height of an object, rather than needing to click and drag), or you may find it complicated to use. Importantly, you have a choice: either use the object inspector, or one of the ‘short-cut’ methods we’ve previously mentioned.

Some of the properties you might need to know are:

- **AutoSize.** Whether or not an object should increase size horizontally to accommodate contents.
- **DisplayFormat.** How numbers should appear, e.g. date, number of decimal places, leading dollar signs, etc.
- **GapX, GapY.** How close the text contents of an object should be to the edge of the object.
- **HideZeros.** Whether the object should be blank if the value it contains is zero.
- **Name.** A name for the object. By convention, it

should not contain spaces.

- **Stretched.** Whether or not an object should stretch vertically to accommodate contents. This will normally apply to (a) fields that could contain large amounts of text, and (b) to bands.
- **WordWrap.** Should text inside the object be word-wrapped? Or should a new line only begin when specified in the data?

To edit a property in the object inspector, locate the property name in the left column. Then, either type text/numbers in the right column, or double-click the right column to bring up a ‘property editor’.

Although there are other properties besides those listed here, you’re unlikely to use the others. Should you need more information, consult the FastReport documentation.

Connecting data to the form

We’ve tackled custom forms from two different perspectives so far: choosing which data should be included on the custom form by designing a SQL SELECT statement, and specifying a layout (or physical appearance) of the custom form. In this section, we describe how the two are connected.

First, the data band of your custom form is linked to the results of a particular SQL SELECT statement. The results of an SQL SELECT statement form a **dataset**.

To link a band object to a particular dataset, double-click the band in the graphical form designer. A window similar to the following one will appear.



You will see the words **[None]**, **Virtual Dataset**, and also the names of any SQL SELECT statements that you previously created. In our example, we had created an SQL SELECT statement and called it **Names**. Click the name of the SQL SELECT statement and then **OK**.

Simply doing this will cause your data band to repeat once for each record in returned by the SQL SELECT statement (i.e. each record in the dataset).

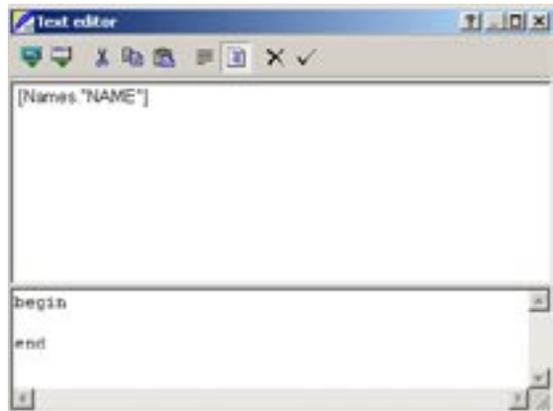
Next, we'd like to be able to print fields from the dataset inside the objects of the data band.

Double-click on the object that should contain a value from the database. Normally it will be a rectangle object, so a text editor will appear. Click the **Insert data field** button in the toolbar (circled on the following screenshot). A list of datasets will appear, along with the available fields. These are the fields you chose to return when designing your SQL SELECT statement.

The dataset will generally be the same dataset you linked to the band in the previous step (above). Click that dataset, choose the field to insert, and click



the **OK** button. The field will be inserted into the text editor like so:



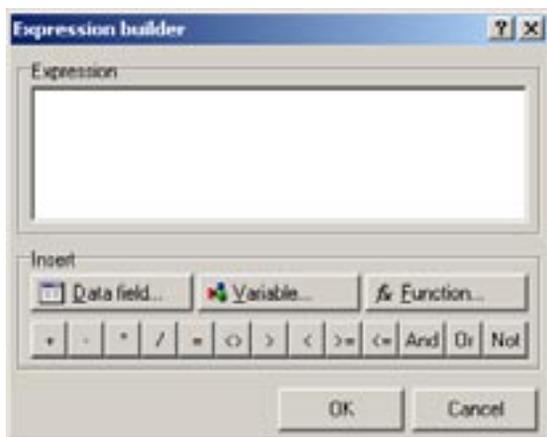
Notice that the field name is inserted surrounded by square brackets. Each time the band is repeated, CLERK replaces what is between the square brackets by the value of that field in the current record.

After inserting, you can still edit the text. For example, you can add static text (maybe the letters 'lb' after a weight field), or you can even insert another field (for example, you might want to display a date

field and a time field separated by a space inside one rectangle object).

The left-most button on the toolbar is the **Insert expression** button. Click the button; the **Expression builder** will appear, and you will be able to:

- Insert system variables, such as the date, time, or page number of the custom form.
- Modify fields in the dataset, for example making them upper or lower case, extracting the year out of a date, and so on. To do this, use the **Function** button. It works in much the same way as spreadsheet functions in Microsoft Excel. If you haven't used functions in other applications before, you should read the FastReport documentation.
- Perform mathematical operations on fields in the dataset, such as multiplying or dividing numerical values, or comparison operations (e.g. only print a field if it meets certain criteria).



When you've finished with the text editor, click the toolbar button containing a 'tick' mark.

Tutorial: Officer safety caution list

The chapter so far has explained everything you need to know to create a simple custom form. With custom forms, it is often best to learn by working through an example.

In this tutorial, we shall build a custom form that lists everyone in the Names database with an officer safety caution. We'll also show their date of birth and social security number (SSN).

The tutorial assumes you've read the chapter so far, and are at least familiar with the terminology we've introduced.

Initial steps

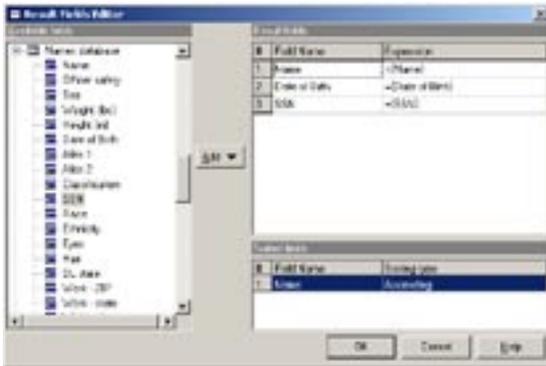
- Choose the **Queries | Form management** menu option.
- Click the **Add new** button.
- For the **Form name**, type `Officer safety list`.
- For the **Form category**, type `Names`.
- Check all the boxes in the permissions list.

Building the SQL SELECT statement

- Click the **Add new** button below the SQL statements.
- For the **Query name**, type `OfcSafetyNames`.
- Click the **Click here to add new condition** link.

- Click the **Last modified** link and choose **Names database | Officer safety** from the popup menu.
- Click the underlined link, _____, and choose **Yes** from the popup menu. The condition now reads “Officer safety is Yes”.
- Click the **Result fields** button on the Query builder toolbar.
- In the **Available fields** list, scroll to the **Names database** section, then double click on **Name**, **Date of Birth**, and **SSN**.
- In the **Result fields** list, right-click on **Name** and choose **Sort result field**. This indicates that we want the list sorted alphabetically by the person’s name.

The Result fields editor should look like the screenshot below. Click the **OK** button.



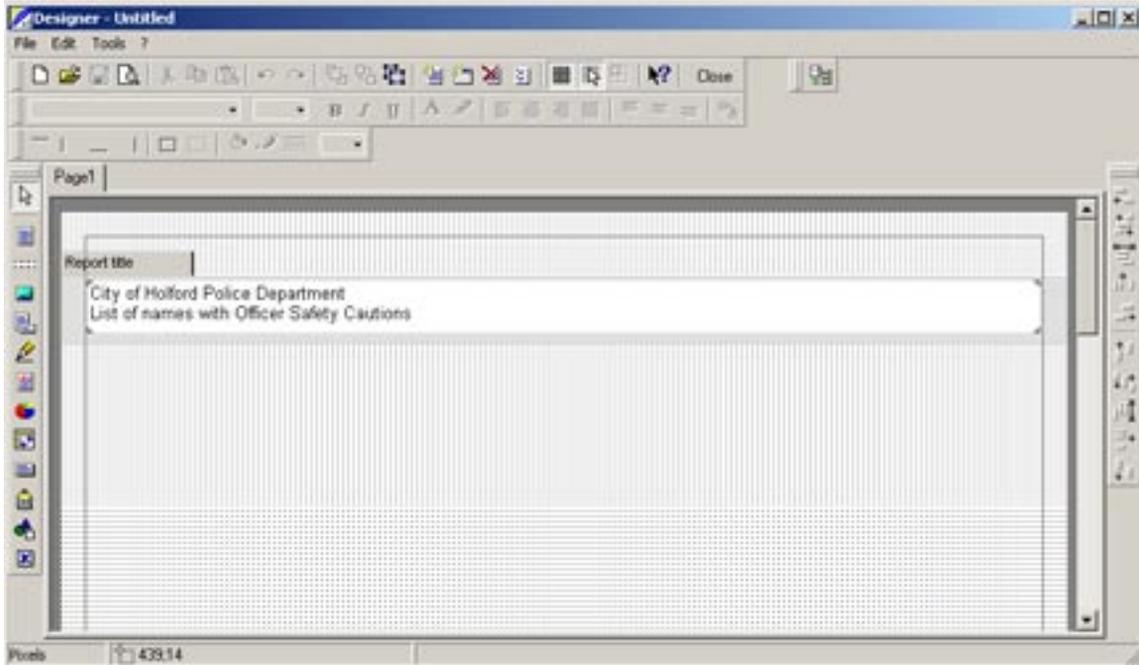
- Click the **SQL** button in the Query builder.

The Query builder window should look like the following screenshot. Click the toolbar button with the ‘tick’ mark to close the Query builder.



Placing header bands on the form

- Click the **Design form** button, and the graphical form designer will appear.
- Click the **Band** object on the left-side toolbar. Move the cursor over the page, towards the top, and click the mouse button.
- You will be asked what type of band you want to insert. Click **Report title** then **OK**.
- Click the **Rectangle** object on the left-side toolbar. Move the cursor over the band you just inserted, and click the mouse button.
- In the text editor, type a title for the report, such as:
City of Holford Police Department
List of names with Officer Safety
Cautions
- Move/resize the rectangle object so that both lines of text are visible, and it covers the entire width of the page. You may also need to increase the height of the band so that the rectangle object fits entirely within it. See the following screenshot.



- With the rectangle object selected, use the alignment buttons on the toolbar to center the text, and make it bold.
- Place another band on the page, just below the report title. The type of this band should be **Master header** (follow the same process as when you added the report title band).
- Place three rectangle objects inside the master header band. The first one should contain the text **Name**, the second should contain the text **SSN**, and the third should contain the text **Date of Birth**. These will be column headings. If you'd like, make the column headings bold.
- Use the **Line** tool from the left-side toolbar to draw a line underneath the column headings.

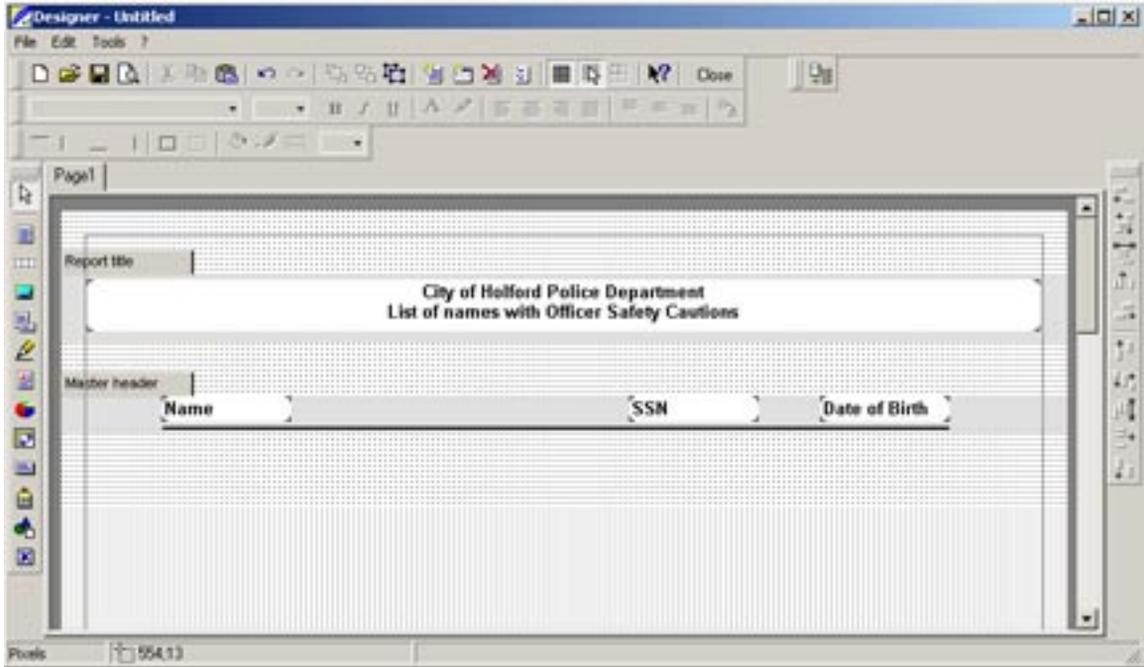
Note that the line also goes inside the master header band.

At this stage, your screen should look like the screenshot at the top of the following page.

Placing the data band on the form

Lastly, we need to place a data band on the form and link it to the SELECT statement we created earlier.

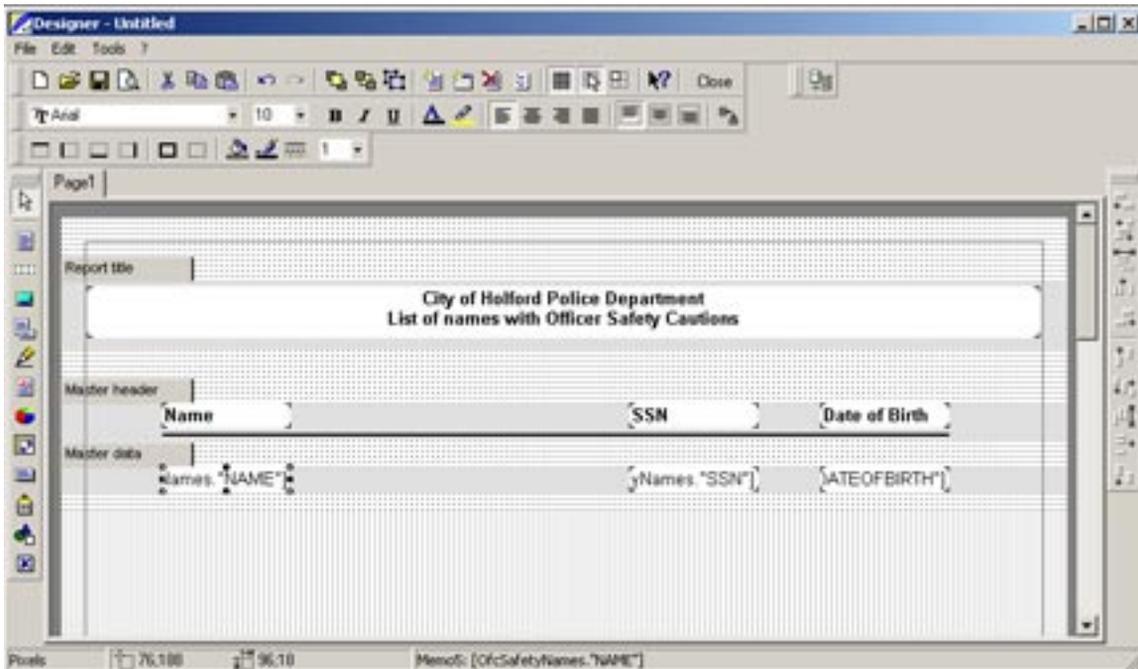
- Place another band on the page, just below the master header. The type of this band should be **Master data**.
- After inserting the band, you will be asked for the band data source. Choose **OfcSafetyNames** from the list, and click **OK**.



- Place a rectangle object inside the master data band. It should be lined up with the first column in the master header band.
- In the text editor, click the **Insert field** button. From the **OfcSafetyNames** dataset, choose the **Name** field. Click **OK**.
- Place a second rectangle object inside the master data band. It should be lined up with the second column in the master header band.
- In the text editor, click the **Insert field** button. From the **OfcSafetyNames** dataset, choose the **SSN** field. Click **OK**.
- Place a third rectangle object inside the master data band. It should be lined up with the third column in the master header band.
- In the text editor, click the **Insert field** button. From the **OfcSafetyNames** dataset, choose the **DateOfBirth** field. Click **OK**.
- Right-click on the left column, which will contain the names of people that currently have officer safety cautions. Make sure the **Auto size** option is checked and the **Word wrap** option is unchecked. We want to allow the horizontal size of the object to increase if the name doesn't fit inside it.

Testing your form

Your form should now look like the screenshot at the top of the following page.



Although you have finished designing the custom form, you should still test it to make sure the results are as you expect. Click the **Preview** button on the toolbar.

The preview fetches the results of your SELECT statement from the CLERK database, shows you exactly what the form would look like if a user ran it. The top section of our tutorial form appears in the screenshot below. Of course, your form may have no lines or many lines, depending on how many names

in your CLERK database actually have officer safety cautions.

Your custom form is complete. **Close** the graphical designer and the form manager. Next time users log into CLERK, they will see the tutorial report under **Queries | Names | Officer safety list**.

Challenge: Try using the same procedure to design a form showing all active warrants, or another form showing all people with current criminal trespasses.

The screenshot shows the previewed report. The title is "City of Hollford Police Department List of names with Officer Safety Cautions". The report has three columns: "Name", "SSN", and "Date of Birth". The data row shows "BARNES, JAMES", "123-45-6789", and "6/12/1968".

Name	SSN	Date of Birth
BARNES, JAMES	123-45-6789	6/12/1968

User input

Our first tutorial showed how to generate a custom form that did not require user input, i.e. where a user simply chooses the form from a menu, and the results appear. A lot of forms work this way.

But for other forms, it would be nice if the user could supply certain input parameters each time the form is run. For example, when running a daily CAD log, it would be nice if the user could specify the date rather than assuming they always want a log for the current day.

This section describes how to add user input to your custom forms.

Adding a dialog to your form

Users enter data for a custom form through *dialogs*. You design dialogs in the graphical form designer, in much the same way that pages are laid out.

In the graphical form designer, click the **Add dialog form** button in the toolbar. It doesn't matter whether the dialog is labelled as 'Page 1' or 'Page 2', it will always be displayed to the user first.

In the object inspector, there is a **Caption** property for the dialog. Set this to whatever you'd like to appear in at the top of the dialog when it is shown to the user.

When designing a dialog, the object toolbar on the left of the screen will change. The new objects are described below.

 The **Label** object puts some text on the dialog that the user cannot edit. For example, you would use this object to provide instructions to the user.

 The **Edit** object shows the user a field that they can type text into.

 The **Memo** object is similar to the Edit object, but lets users type more than one line of text.

 The **Button** object puts a button on the dialog. For example, an OK button or a Cancel button. Set the button text using the **Caption** property, and button's type (e.g. OK, Cancel) using the **ModalResult** property.

 The **CheckBox** object puts a checkbox on the dialog. Set the **Checked** property to `true` if the box should be checked by default, or set it to `false` if it should be unchecked. Set the text that appears to the right of the box in the **Caption** property.

 The **Radio Button** object displays a radio button on the dialog. Like checkboxes, a radio button has a **Checked** property. But, unlike checkboxes, only one radio button on the dialog can be checked at a time. Again, you set the text associated with the object in the **Caption** property.

 The **Listbox** object displays a list of options from which the user can choose one. Set the list of choices by double-clicking on the **Items** property in the object inspector.

 The **Combobox** object works just the same

as the Listbox, except instead of all choices being shown, only the current choice appears until the user activates the drop-down menu. The **Style** property controls whether the user's entry must be one of the listed choices (`csDropDownList`) or whether they are allowed to add their own values (`csDropDown`).



The **DateEdit** object allows the user to enter a date.



Via the **Items** property, the **Combobox** object allows you to control the choices presented to users in the drop-down menu. What happens if that list could change over time? For example, what if it is a list of locations or offenses? The **DBComboBox** object works just the same as a **Combobox**, but the list of choices is pulled from a dataset. You should (a) create a dataset containing the items to be displayed in the drop-down menu, as described in the next section, (b) set the **ListSource** property to the dataset, (c) set the **ListField** to the field from the dataset that should be displayed in the drop-down. If you require further information, consult the *FastReport* documentation.



The **Query** object is used to store the results of an SQL **SELECT** statement, to be discussed in the following section.

Adjusting your **SELECT** statement

When using dialogs for user input, you need a way to incorporate that input into your **SELECT** statement.

Instead of creating a **SELECT** statement in the form management window, you should instead place one **Query** object on the dialog for each **SELECT** state-

ment.

For each query, use the object inspector to set its **Name**, and then double-click the **SQL** property to bring up the query builder. You still build the **SELECT** statement as before, you must just do it from within the graphical form designer instead of the form management window.

When setting your conditions, enter some test value where the user input should go, e.g. if the user should specify a date, just use today's date for now.

After clicking the **SQL** toolbar button to generate the SQL **SELECT** statement, you need to edit the text to tell **CLERK** which conditions will be set via user input.

For example, let's say your **SELECT** statement was

```
SELECT cad_ref, activity, location
FROM cad WHERE assign_date='2002-01-01'
```

and you want the date to be specified by the user instead of being 1/1/2002 all the time. Change the condition in the **SELECT** statement to a colon followed by a variable name (no spaces) of your choosing. For example, the above **SELECT** statement might be changed to use the variable **MYDATE**:

```
SELECT cad_ref, activity, location
FROM cad WHERE assign_date=:MYDATE
```

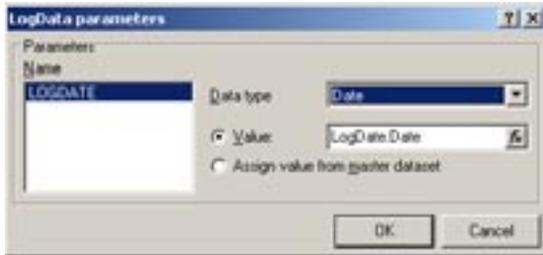


You need to make this change just before closing the query builder. If you click the **SQL** button to re-build the **SELECT** statement, you'll need to make the change again manually.

When you've finished building the SELECT statement and making the necessary modifications, go back to the object inspector.

In the **Database** property, choose `Main.CLERKdb`. Double-click the **Fields** property, click the **Add fields** button to add all available fields, then click **OK**.

Finally, assuming you've already placed the user input objects on the form, double-click the **Params** property. You will see a dialog similar to the following one:



For each parameter, choose a **Data type**, i.e. whether the parameter should contain text, a number, a date, a time, etc. Specify that the parameter is a **Value**, and in the field type the name of the dialog object containing the user input, followed by a dot (period) followed by the word `Text` (or the word `Date` if a `DateEdit` object is used). See the next tutorial for an example.

Finally, click **OK**. You're done with the user input dialog. One step remains!

The data dictionary

When you enter your SELECT statement in the form management window, CLERK automatically adds it to a 'data dictionary' so that it is visible when

you design the layout of your custom form. When you create new Query objects, you need to add them to the data dictionary yourself.

To do this, choose the **File | Data dictionary** menu option. Click the **Band datasources** tab, then click the **>>** button to make all your SELECT statements available.



Remember, although entering SELECT statements in the form management window is simpler, you cannot have user input unless you design the SELECT statement using a Query object on a dialog.

Tutorial: Daily CAD log

In this tutorial, we shall build a custom form that lists all the CAD calls for one calendar day. The user will be allowed to specify which day's log they wish to view.

This tutorial assumes you've worked through the first tutorial, and understand how to place bands and objects on a page.

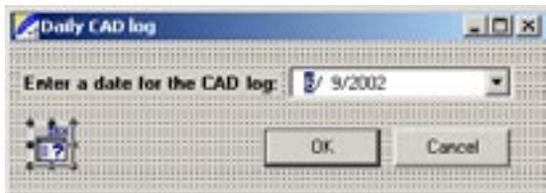
Initial steps

- Choose the **Queries | Form management** menu option.
- Click the **Add new** button.
- For the **Form name**, type `Daily CAD log`.
- For the **Form category**, type `CAD`.
- Check all the boxes in the permissions list.
- Click the **Design form** button.

Creating the user input dialog

- Click the **Add dialog form** button on the toolbar.
- Using the object inspector, change the **Caption** of the dialog form to `Daily CAD log`.
- Place a Label object on the dialog. Change the **Caption** to: `Enter a date for the CAD log`.
- Place a DateEdit object on the dialog to the right of the Label object. Using the object inspector, change the **Name** of the DateEdit object to `LogDate`.
- Place two Button objects on the dialog. Set the **Caption** for one to `OK` and the other to `Cancel`. Set the **ModalResult** for the first one to `mrOk` and the other to `mrCancel`.
- Place a Query object on the dialog. Change its **Name** to `LogData`, and change the **Database** to `Main.CLERKdb`.

At this stage, your dialog window should look similar to the screenshot below.

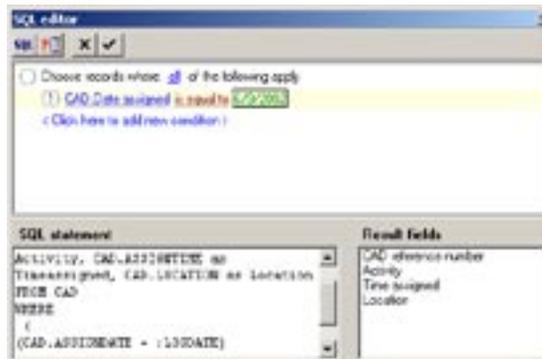


Next, we'll build a SELECT statement for our custom form.

- In the object inspector for the Query, double-click the **SQL** property.
- Click the **Click here to add new condition** link.

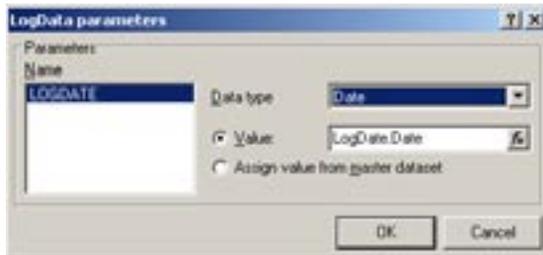
- Click the **Last modified** link and choose **CAD | Assign date** from the popup menu.
- Click the underlined link, _____. It will show today's date. Just leave that as-is for now.
- Click the **Result fields** button.
- In the **Available fields** list, scroll to the **CAD** section, then double click on **CAD reference number**, **Activity**, **Time assigned**, and **Location**.
- In the **Result fields** list, right-click on **Time assigned** and choose **Sort result field**. This indicates that we want the list sorted by the time assigned.
- Click the **OK** button to return to the Query builder window. Click the **SQL** button.
- In the SELECT statement text, change today's date to `:LOGDATE`.

Your Query builder window should look very similar to the following screenshot.



- Click the toolbar button with the 'tick' mark to close the Query builder.
- In the object inspector for the Query, double-click the **Fields** property.

- Click the **Add fields** button. A list of the return fields will appear. With all of them selected, click **OK**.
- Click **OK** a second time to exit the fields editor.
- Double-click the **Params** property.
- Click the **LOGDATE** parameter. Set the **Data type** to Date. Click **Value** and set the value to LogDate.Date.



- Click the **OK** button.

You've finished designing the user input form. Now let's add the SELECT statement to the data dictionary.

Adding to the data dictionary

- Choose the **File | Data dictionary** menu option.
- Click the **Band datasources** tab, then click >>.

The data dictionary window will look similar to the screenshot at the top of the following page.

- Click the **OK** button.

Placing header bands on the form

Click the **Page 1** tab in the graphical designer. Refer to the previous tutorial for instructions about creating a report title and master header band. Follow

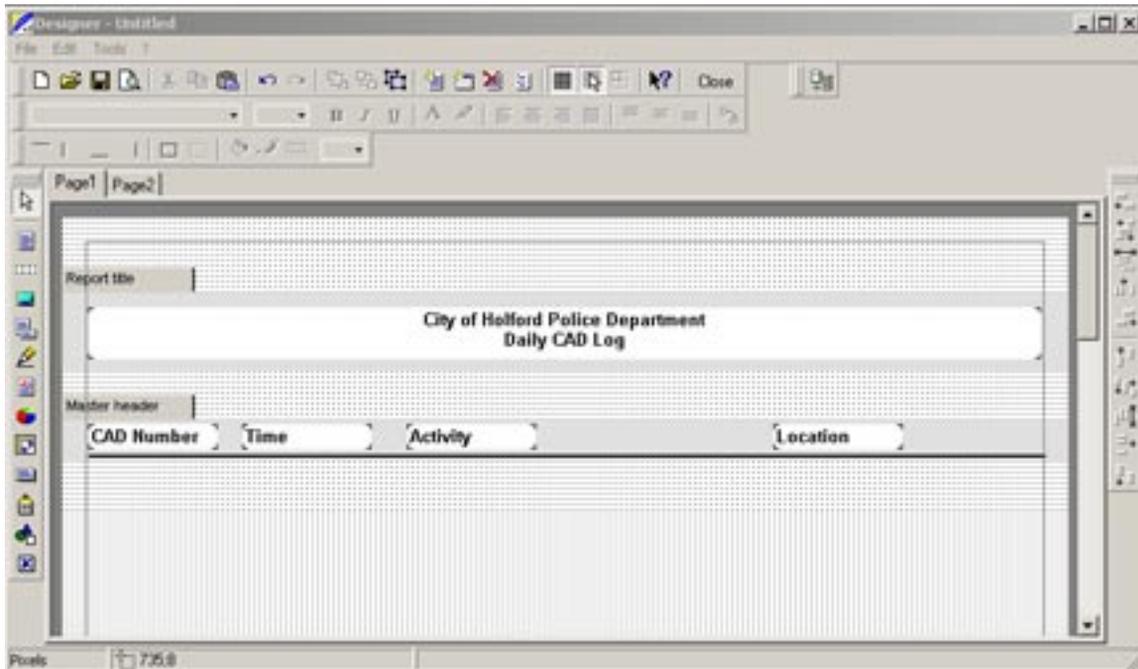


exactly the same steps, except create four column headings instead of three. The titles should be **CAD Number, Activity, Location and Time assigned**.

When done, your screen should resemble the screenshot on the following page.

Placing the data band on the form

- Place another band on the page, just below the master header. The type of this band should be **Master data**.
- After inserting the band, you will be asked for the band data source. Choose **Dialog-Form._LogData** from the list, and click **OK**.
- Place a rectangle object inside the master data band. It should be lined up with the first column in the master header band.
- In the text editor, click the **Insert field** button. From the **DialogForm.LogData** dataset, choose the **CadReferenceNumber** field. Click **OK**.

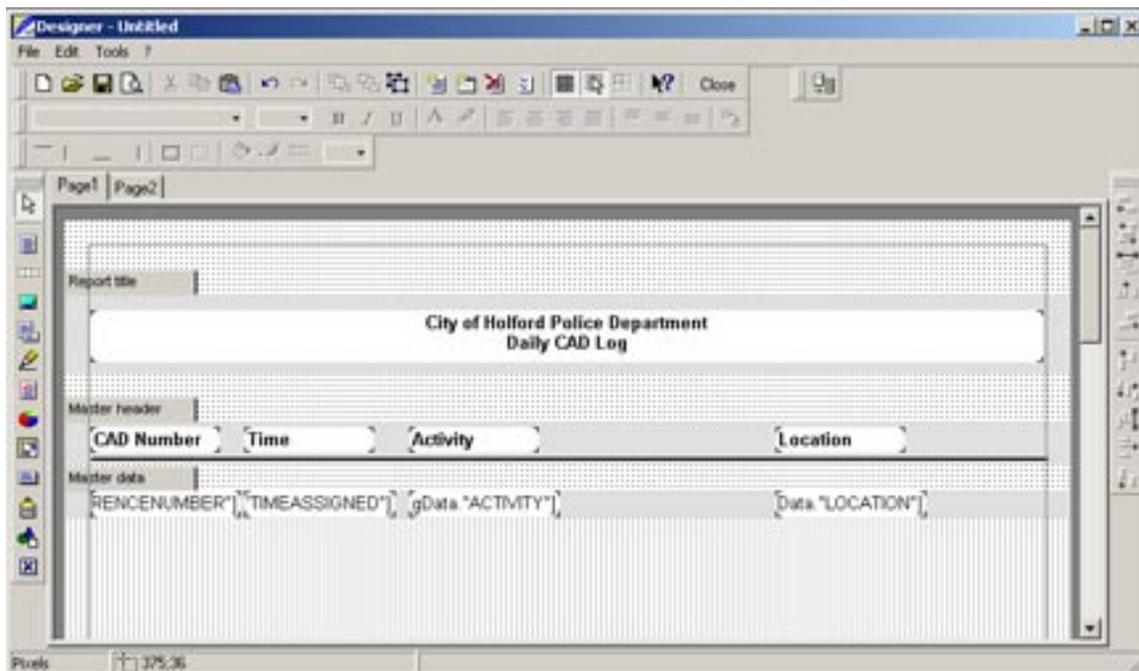


- Add a second rectangle object using the same process. The field inserted into this one should be **TimeAssigned**.
- Add a third rectangle object using the same process. The field inserted into this one should be **Activity**.
- Add a fourth rectangle object using the same process. The field inserted into this one should be **Location**.
- Right-click on each of the four rectangle objects. Make sure the **Auto size** option is checked and the **Word wrap** option is unchecked. We want to allow the horizontal size of the object to increase if the text doesn't fit inside it.
- Right-click on the time object, and choose **Variable format**. You can choose how the time should be displayed, e.g. with or without seconds.

Testing your form

Your form should now look like the screenshot at the top of the following page. Test it by clicking the **Preview** button on the toolbar.

Your custom form is complete. **Close** the graphical designer and the form manager. Next time users log into CLERK, they will see the tutorial report under **Queries | CAD | Daily CAD log**. When they choose the menu option, they will first be asked a date for the CAD log, then the results will appear when they click the **OK** button.



Multi-level forms

What you've learned so far allows you to design a simple custom form using the results from one SELECT statement. By adding additional pages to the custom form, and putting a master data band on each one, you can include the results from additional SELECT statements.

Such a system allows you to generate rather complex reports and will meet your needs a lot of the time. Already, you have *much* more flexibility than the standard CLERK query generator gives you.

The main limitation comes when each record from one SELECT statement (or dataset) should be fol-

lowed by information from a different dataset. For example, you might want to generate a list of CAD calls and then list the responding officers for each call. In this case, the SELECT statement that lists the responding officers would need to be different for each CAD call, and the results should be displayed *in between* the CAD call records.

Such a form is called a "master-detail" form, because there is a "master" dataset (the list of CAD calls) and there is a "detail" dataset (the list of responding officers for each call).

The examples to date have been single-level forms that use only a "master" dataset. Let's learn how to create a multi-level custom form.

Creating the datasets

Whether or not your custom form needs user input, you should create a dialog page and place all your datasets (i.e. SELECT statements) on it. If you don't want user input, just be sure not to put a button object on your dialog, and CLERK won't display it to the user.

You will need at least two datasets. In the first dataset, you should enter the SELECT statement that returns data for the master band, e.g. the 'categories'. In our example, the SELECT statement would return a list of CAD calls for a given date or date range.

In the second dataset, enter the SELECT statement that returns the details for one record of the master dataset. Continuing the example, our second SELECT statement would return a list of responding officers for a particular CAD call. Note that there must be some restriction in the second SELECT statement that ties the results to one particular record of the first dataset. Otherwise, the same detail results will be displayed for each master record.

As was the case for user input, just choose some example values (e.g. choose a CAD reference number) for now. Then, after building the SELECT statement, edit the example values and change them to variable names. The tutorial will illustrate the process in more detail.

After creating both datasets, remember to add the fields by double-clicking the **Fields** property, and then add them to the data dictionary.

Then, double-click the **Params** property for the

second dataset. Click the parameter that will be linked to the master dataset. Choose **Value**, and click the **Function** (fx) button. The expression builder window will appear.

Click the **Data field** button, then choose the master dataset and field that will be linked to the second (detail) dataset. Choose **OK**.

Adding a 'detail' band

The header and master bands are created in the same way as described previously. In addition, a **detail data** band needs to be placed on the page below the master bands. Link the detail data band to the second dataset you created.

Now, you can place objects inside the detail data band and connect them to fields from the second dataset. When your custom form is printed, CLERK will generate results for the first dataset. It will print one master data band for the first record. Then, it will open the second dataset with the appropriate parameters. It will print the detail data band once for each record in the second dataset. Then it moves to the next record in the master dataset and repeats the process.

So, when it is actually printed, your custom form might contain bands something like:

```

Master
  Detail
Master
  Detail
  Detail
  Detail
  
```

```
Master
Master
  Detail
  Detail
```

As with other custom form concepts, this is probably best seen through a tutorial.

Tutorial: Officer activity log

In this tutorial, we shall build a custom form that lists the CAD calls each officer has responded to. We call this an ‘officer activity log’ since it shows how many traffic stops, how many complaints, etc. the officer has responded to.

The tutorial assumes you’ve already worked through the previous two tutorials. We’ll skim over tasks that are identical to ones performed in the first two tutorials.

Initial steps

- Choose the **Queries | Form management** menu option.
- Click the **Add new** button.
- For the **Form name**, type `Officer activity log`.
- For the **Form category**, type `CAD`.
- Click the **Design form** button, and the graphical form designer will appear.

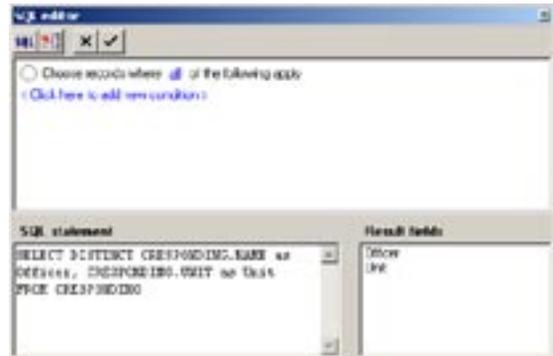
Adding the datasets

- Place a Query object on the dialog. Using the object inspector, change its **Name** property to

`OfficerList`, and change the **Database** to `Main.CLERKdb`.

- Now we’ll create the **SELECT** statement for this first dataset. Double-click the **SQL** property.
- Click the **Result fields** button.
- In the **Available fields** list, scroll to the **Responding officer list** section, then double click on **Unit** and **Name**.
- Click the **OK** button to return to the Query builder window. Click the **SQL** button to build the **SELECT** statement.

Your Query builder window should look very similar to the following screenshot.



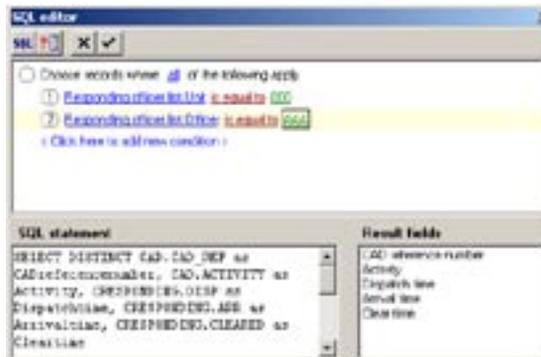
- Click the toolbar button with the ‘tick’ mark to close the Query builder.
- In the object inspector for the Query, double-click the **Fields** property.
- Click the **Add fields** button. A list of the return fields will appear. With all of them selected, click **OK**.
- Click **OK** a second time to exit the fields editor.

Now we'll create a second dataset. Imagine the master dataset tells you the name and unit number of the officer. The task here is to generate a list of activities and response times for that officer.

- Place a second Query object on the dialog. Using the object inspector, change its **Name** property to `ActivityList`, and change the **Database** to `Main.CLERKdb`.
- In the object inspector for the second Query, double-click the **SQL** property.
- Click the **Click here to add new condition** link.
- Click the **Last modified** link and choose **Responding officer list | Unit** from the popup menu.
- Click the underlined link, . Enter something like `000` for the unit number.
- Click the **Click here to add new condition** link.
- Click the **Last modified** link and choose **Responding officer list | Name** from the popup menu.
- Click the underlined link, . Enter something like `AAA` for the officer name.
- Click the **Result fields** button.
- In the **Available fields** list, scroll to the **CAD** section, then double click on **CAD reference number** and **Activity**.
- In the **Available fields** list, scroll to the **Responding officers list** section, then double click on **Dispatch time**, **Arrival time**, and **Clear time**.
- Click the **OK** button to return to the Query

builder window. Click the **SQL** button.

Your Query builder window should look very similar to the following screenshot.



- In the SELECT statement text, change the unit number `'000'` to `:UNIT`. Also change the officer name `'AAA'` to `:NAME`.

Your Query builder window should look very similar to the following screenshot.



- Click the toolbar button with the 'tick' mark to close the Query builder.
- In the object inspector for the Query, double-click the **Fields** property.
- Click the **Add fields** button. A list of the return

fields will appear. With all of them selected, click **OK**.

- Click **OK** a second time to exit the fields editor.
- Now add both datasets to the data dictionary using the **File | Data dictionary** menu option. This step was described in the second tutorial.
- In the object inspector for the second Query object, double-click the **Params** property.
- Click the **UNIT** parameter. Set the **Data type** to *String*. Click **Value**, then click **Fx**. The expression builder appears.
- Click **Data field**. Choose the **OfficerList** dataset, and the **UNIT** field. Click **OK** twice to return to the parameter editor.
- Click the **NAME** parameter. Set the **Data type** to *String*. Click **Value**, then click **Fx**. The expression builder appears.
- Click **Data field**. Choose the **OfficerList** dataset, and the **OFFICER** field. Click **OK** twice to return to the parameter editor.

Your parameter editor window should look like the following. Click **OK**.



Placing header bands on the form

Use the same procedure as the previous tutorials to place a report title band on the form. For this tutorial, you won't need a master header band.

Placing a master data band on the form

- From the toolbar at the left of the window, click the **Band** object. Place the band on the page, just below the report title. The type of this band should be **Master data**.
- After inserting the band, you will be asked for the band data source. Choose **OfficerList** from the list, and click **OK**.
- Place a rectangle object inside the master data band. In the text editor, click the **Insert field** button. From the **OfficerList** dataset, choose the **Unit** field. Click **Insert field** again. From the **OfficerList** dataset, choose the **Officer** field. Type a slash (/) symbol between the two fields. Your text editor should contain:

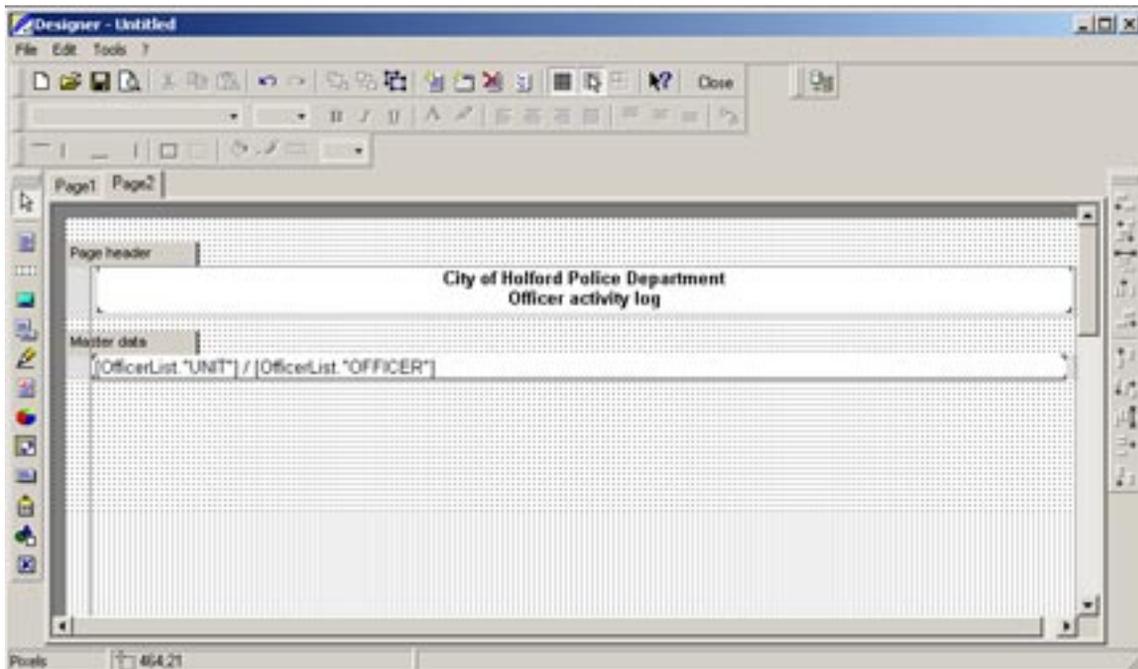
```
[OfficerList."UNIT"]/[OfficerList."OFFICER"]
```

- Draw a line the width of the page underneath the rectangle object.

Your form should now look like the screenshot at the top of the following page.

Placing a detail data band on the form

- From the toolbar at the left of the window, click the **Band** object. Place the band on the page, just below the master data band. The type of this band should be **Detail data**.
- After inserting the band, you will be asked for the



band data source. Choose **CallList** from the list, and click **OK**.

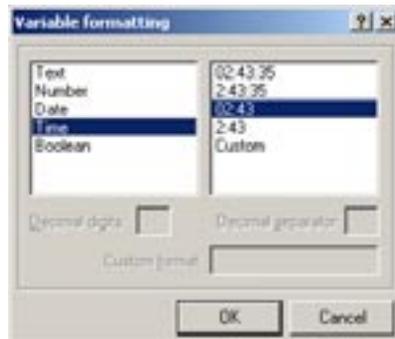
- Place five rectangle objects inside the detail data band. When the text editor appears, for each rectangle click the **Insert field** button. From the **CallList** dataset, choose the **CADReference-Number** field for the first rectangle, the **Activity** field for the second rectangle, the **DispatchTime** field for the third rectangle, the **ArrivalTime** field for the fourth rectangle, and the **ClearTime** field for the fifth rectangle.

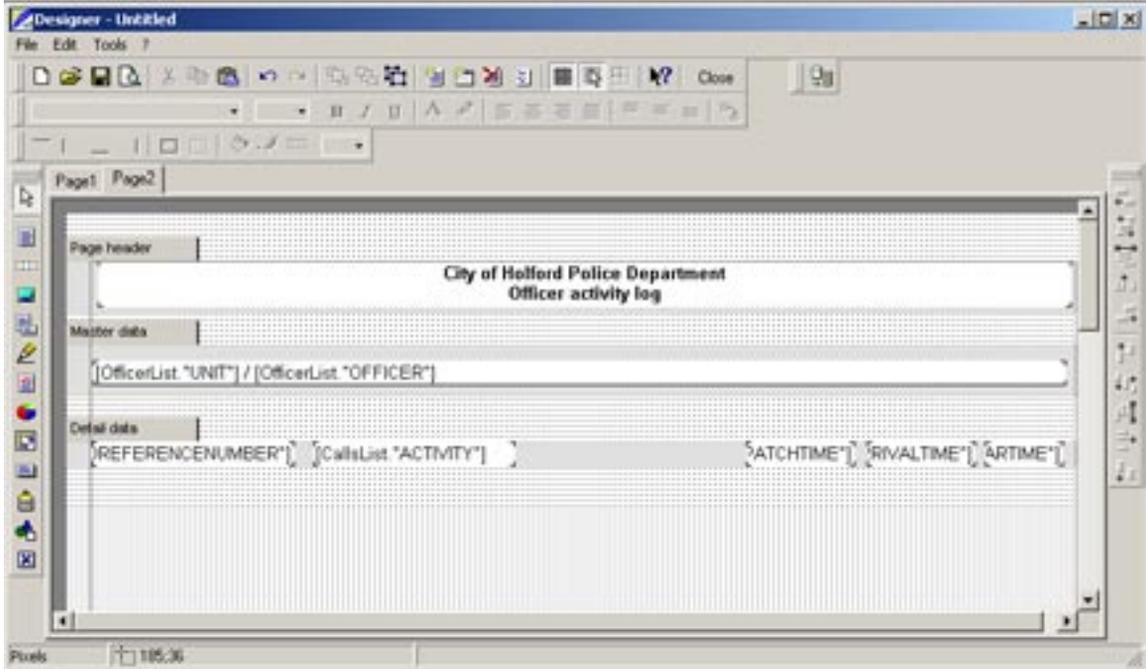
Your form should now look like the screenshot at the top of the following page.

- Holding down the **Shift** key, click on each of

the three time fields so that all three of them are selected. Right-click on one of them and choose **Variable format**. We're going to format the rectangle so that a 24-hour clock is used.

- In the variable format window, click **Time** then click **02:43** (i.e. an example of 24-hour time).





Click the **OK** button to accept the time format. Design of your custom form is complete.

Testing your form

Test your form by clicking the **Preview** button on the toolbar. The results will look something like the

ones below, although the names and activities will be different.

Challenge: Extend the tutorial so that it only prints the activity log for one day, and allow users to specify the day through a dialog.

City of Holford Police Department Officer activity log				
203 / COOKE,R				
02-04-27-000002	TRAFFIC	13:14	13:14	15:34
02-04-27-000002	TRAFFIC	15:55	00:00	00:00
02-04-27-000003	TRAFFIC	22:10	00:00	00:00
205 / HAVICHUK,K				
02-04-27-000002	TRAFFIC	13:14	13:14	15:34
02-04-27-000002	TRAFFIC	14:42	00:00	00:00

Integrating existing printed forms

Some departments using pre-printed paper forms might like CLERK printouts to be similar, or even identical, to those printed forms. This is possible using CLERK's custom forms feature.

The process is essentially: scan the paper document, create a custom form, place the scanned version as a background, and place the bands on top of it.



If your pre-printed forms contain fields that are not present in CLERK, then you should plan on those fields being left blank. The only alternative is to prompt the user when the form is printed. Although this allows the complete form to be printed, the user input will not be stored on the CLERK server, so the user will need to re-enter the data if the form is printed a second time.

Scanning the form

You need to scan any existing paper forms and save them to your computer hard disk. This requires you to have a scanner and image capture software. Consult the scanner manual for instructions on how to scan.

Generally, you should scan forms at 200 dpi resolution. Anything less will be poor quality when printed, and anything above 200-300 dpi will be slow to load from the server (the image must be downloaded from the server each time the custom form is run).

Scanning in grayscale will lead to smaller images, and

is preferable unless you plan to print in color. Save your image in Windows Bitmap (BMP) or Windows Metafile (WMF) format.

Placing the digital form as a background

Open the graphical form designer, and place a picture object on the page. Click the **Load** button and locate the scanned form.

Next, place rectangle objects over the fields on the scanned form. Connect them to datasets as usual. When your custom form is printed, the values loaded from the CLERK database will be printed inside the fields of the scanned form.

Scripting

Even with the flexibility CLERK's custom form designer offers, some departments may still want more control over their printouts. CLERK gives you that control by providing a 'scripting language', similar to the computer programming language Pascal. To use scripting, you should have a basic understanding of Pascal (or Delphi) programming. The FastReport documentation provides more information about scripting.

Permissions

Access to custom forms is controlled in three ways.

First, the system administrator must give a group of users the **Forms designer access** permission in **Settings | Security privileges** before they are allowed to design custom forms.

Secondly, when a form is designed, only the user groups specified in the form management window are allowed to use the custom form. For other users, it does not even appear on their **Queries** menu.

Finally, even if a user is allowed to run a custom form, for it to work, they must also be allowed to access the underlying data. For example, if a user has permission to run a custom form that shows a list of citations, but they do not have permission to browse the citations module, then running the custom form will give an error.

Replacing CLERK's default forms

CLERK comes with default printed forms that are used when you click the **Print** button in a module. You can replace these forms with templates you design yourself in the custom form designer.

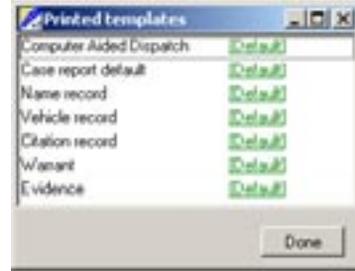
Modules other than case report

Create a template by designing a custom form in the normal way, except you should uncheck the **Publish** box in the form management window (this stops your template from showing up in the **Queries** menu).

Next, choose the **Settings | Printed templates** menu option. To begin with, all the modules will show **[Default]**, as in the following screenshot.

Choose the module your new template applies to. Click the green link and choose the name of your template from the pop-up menu.

Then click the **Done** button.



Case report templates

Create a template by designing a custom form in the normal way, except you should check the **Case Report** box, and uncheck the **Publish** box in the form management window (this stops your template from showing up in the **Queries** menu).

Now, when a user goes to print a case report, your custom form will appear on the list of templates.

SELECT statement considerations

When the report is run, CLERK will replace any occurrence of -9999 in your SELECT statement with the key field value for the record to be printed.

For example, if you are designing a printed citation template, design your SELECT statement to print the citation with sequence number -9999. When CLERK runs your custom form, it will replace -9999 with the citation sequence number that should actually be printed.

In case report templates, CLERK will replace -9998 with the primary suspect (the suspect to be printed first), -9997 with the offense to be printed first, and `UserCaseNumber` with the case number to be

printed on the case report form.

Downloading and sharing forms

A great feature of CLERK's custom form designer is the ability to share form designs via email or the Internet.

Terrier Technologies also provides a 'custom forms library' of designs you can download using the Internet at <http://www.policedata.com>.

Saving a form you designed

To save a custom form design, open the graphical form designer and choose **File | Save as**. This will let you save the design to disk. Form layouts have the `.frf` extension.

i Only the layout is saved. The form name, permissions, and any SELECT statements in the form management window are not saved.

Now, if you email the `.frf` file to another CLERK user, it can be installed on their system using the following procedure.

Loading a form someone else designed

If you download a `.frf` file from the Internet, or receive one via email, first check that it is free of viruses. Then use the following procedure to install it.

- Choose the **Queries | Form management** menu option.
- Click **Add new** to create a new form.
- Type a name and category for the form, in the

Form Name and **Category** fields respectively.

- Choose who should be allowed to access the custom form.
- Make sure the **Publish** box is checked.
- Click the **Design form** button.
- Choose **File | Open** in the graphical form designer. Locate the `.frf` file you downloaded or received.
- Click the **Close** button, then close the form manager. The form will be available to users next time they log on.

More information

CLERK uses software called FastReport from FR-Software for graphical form design. FastReport is equivalent to products such as Crystal Reports and ReportBuilder. If you would like to learn more about FastReport, or read additional documentation for FastReport, visit the Internet site of FR-Software at <http://www.fastreport.ru>.

The custom form designer allows you a tremendous amount of freedom in creating printed forms for your CLERK system. For example, you have complete control over the SELECT statements that your datasets use.

With flexibility comes the possibility of errors. CLERK does not 'hold your hand' through the design process. If something is not done correctly, you will receive an error message and will need to debug your form.

When an error occurs, the most likely culprits are:

- An error in the SELECT statement. Check it carefully. Try running it using IBConsole (see Chapter 10).
- You didn't add the datasets to the data dictionary.
- You didn't set the Fields property of any datasets you created.
- One or more rectangle objects refer to fields or datasets that don't exist, e.g. have been deleted.

If you would like technical support for custom form design, you should save the design as a `.frf` file and email it to `support@policedata.com`. Providing technical support for custom forms via telephone when we can't see your design is very difficult.

Although Terrier Technologies can help you understand how to use the forms designer, and help resolve specific bugs in forms you design, creation of custom forms for individual departments is not technical support. We are happy to create custom forms for a fee. Certain restrictions apply, feel free to contact us via email at `sales@policedata.com`.

8 Chapter

Installing CLERK

Terrier Technologies has deliberately made CLERK easy to install, despite the fact that it is extremely powerful software. Your institution's IT department will be able to install CLERK for you, giving you the option of avoiding the expenses associated with an on-site visit by our consultants. In fact, in most cases an average user is able to install CLERK; the procedure is almost identical to installing any other Windows software.

Although installation of CLERK is simple, it is prudent to plan carefully before you begin. Otherwise, poor decisions could require you to repeat the process at a later date. This chapter helps you plan your installation, as well as carry it out.

Installing the CLERK server

There is a good chance that you will only ever need to install a CLERK server once, but *where* and *how* it is installed can have a large impact upon the performance and security of your database. In this section, we discuss selection of a server machine, and how to get the best performance from CLERK, along with network and security issues.

System requirements and recommendations

In order to install CLERK 2 on a server, the minimum system requirements are:

- Windows NT4 Workstation/Server SP6/6a, or Windows 2000 Professional/Server SP2
- Pentium II 266 MHz processor or equivalent
- 64 MB RAM
- 100 MB available hard disk space

However, the performance of a system which barely meets the minimum requirements will only be acceptable to the most forgiving users. To achieve a satisfactory performance, we recommend at least an 800 MHz processor, 256 MB RAM and 20 GB available hard disk space.

Many factors contribute to how “fast” a user perceives a database to be. Certainly the processor speed of the server, the speed of the client computers, and how many users are logged on concurrently are three important factors, but unless you are purchasing new equipment specifically for CLERK, at least the first two of these may be outside of your control. So what can you do to make CLERK run fast?

Our general advice for getting the best performance out of CLERK is: start with 256 MB RAM but be prepared to add more later on; use RAID for your hard disks if possible; attach your server to an uninterruptable power supply (UPS); and above all, make backups regularly.

- i** Memory is easily added later. Smaller departments should not feel that they need 1 GB of RAM from day one.
- i** Don't bother buying huge hard drives. 30 GB will be more than adequate for a number of years in most situations.

Next we discuss some more technical issues which could help system administrators make informed choices regarding their CLERK server. It is not essential to understand these issues in order to install CLERK, so feel free to skip straight to the *Network requirements* section of this chapter.

Hard disks. Generally the hard disk arrangement does not significantly impact performance until the number of records becomes quite large. However, changing the hard disk arrangement later on can be annoying, so it's worthwhile thinking ahead.

- Most departments should look for hard disks with around 40 GB capacity, although your own department's needs may differ depending upon how many incidents you report annually.
- The rotational speed of a hard disk (rpm) is one measure of how fast data can be read from it. For optimal performance, use 7,200 rpm hard disks or faster.

- By using a system called RAID it is possible to improve the system's performance and also assist in recovery when a hard disk crashes. RAID involves "striping" your CLERK data across more than one hard disk. It generally costs a few hundred dollars to add this capability to a server.
- SCSI hard disks tend to offer somewhat better performance and reliability than EIDE hard disks, although they are slightly more expensive. The difference becomes most noticeable when SCSI disks are used along with RAID.

Partitioning. Often, performance is better when the operating system (Windows) is on a separate partition, or even a separate hard disk, from the data being accessed. This can also make it easier to upgrade the hard disk should it ever become full.

Network requirements

CLERK will operate over either a TCP/IP or a Windows (NetBEUI) network. Almost all departments with an existing computer network satisfy one of these requirements already. You will need to choose one of these types of connections to use for CLERK.

- If your department's computers have access to the Internet or your institution has a domain name (like `policedata.com` or `university.edu`), you probably want to use TCP/IP. In this case, you need to know the machine name (e.g. `server.university.edu`) or IP address (e.g. `192.168.0.1`) of the server.
- If your department's computers do not have access to the Internet, your institution does not

have a domain name, or you wish to use CLERK on a stand-alone machine (i.e. accessible from one machine only), you probably want to use NetBEUI. In this case, you need to know the computer name (e.g. `CLERKSERV`) of your server.

Checking the TCP/IP address:

- **Windows 98.** Choose **Start | Settings | Control Panel**. Double-click **Network**. Double-click the TCP/IP service and the IP address should be displayed.
- **Windows NT.** Choose **Start | Settings | Control Panel**. Double-click **Network**. Click the **Protocols** tab. Double-click the TCP/IP service and the IP address should be displayed.
- **Windows 2000.** Choose **Start | Settings | Network and Dial-up Connections**. Double-click **Local Area Connection**. Click **Properties**. Double-click Internet Protocol (TCP/IP) and the IP address should be displayed.

Checking the computer name (NetBEUI):

- **Windows 98.** Choose **Start | Settings | Control Panel**. Double-click **Network**. Click the Identification tab. The **Computer name** will appear.
- **Windows NT.** Choose **Start | Settings | Control Panel**. Double-click **Network**. The **Computer name** will appear.
- **Windows 2000.** Choose **Start | Settings | Control Panel**. Double-click **System**. Click the **Network Identification** tab. The **Full computer name** will appear.

If neither TCP/IP nor NetBEUI are installed, you

can add them using the following process:

- **Windows 98.** Choose **Start | Settings | Control Panel**. Double-click **Network**. Click **Add**. Click **Protocol**. Click **Add**. Click **Microsoft**. Choose TCP/IP or NetBEUI, and click **OK**.
- **Windows NT.** Choose **Start | Settings | Control Panel**. Double-click **Network**. Click the **Protocols** tab. Click **Add**. Choose TCP/IP or NetBEUI and click **OK**.
- **Windows 2000.** Choose **Start | Settings | Network and Dial-up Connections**. Double-click **Local Area Connection**. Click **Properties**. Click **Install**. Click **Protocol**. Click **Add**. Choose TCP/IP or NetBEUI and click **OK**.

 If neither TCP/IP nor NetBEUI are installed, you only need to install one of them.

Security considerations

Most law enforcement records contain highly confidential and sensitive material. Preventing records from being viewed or modified by unauthorized persons is a high priority.

CLERK primarily limits access to the database by requiring all users to supply a user name and password when they connect. Additionally, within CLERK “permissions” specify what actions a user can and cannot take. Chapter 9 explains how to configure those settings; this section focuses on how to stop malicious exploitation of your system.

Physical security. Physical access to your system to unauthorized users brings unnecessary security

risks. Locate your server where physical access can be controlled.

Network security. Hackers may attempt to access your server over a computer network, or to monitor sensitive data as it is transmitted over the network. Take steps to prevent this by

- Ensuring that your department is on a separate subnet from less-secure computers at your institution.
- Disconnect your department’s computers from other networks (e.g. the Internet) wherever this is possible without loss of productivity.
- Install a firewall device which can filter any traffic to or from your subnet. Although many institutions already use firewalls to protect against attacks coming via the Internet, these generally do not prevent attacks from within the institution (e.g. by students in dorms).



If installing a subnet firewall is not possible, at very least install firewall software on the server. Unrestricted access to a server is a tempting target.

Windows security. There are many security holes in each version of Microsoft Windows, most of which have already been discovered. As solutions are found, Microsoft releases “patches” for these holes, which are available from the Microsoft WWW site, <http://www.microsoft.com>. You should check for security updates on a regular basis.

 Use Microsoft’s “Critical Update Notification” tool to be automatically notified of new secu-

rity updates.

Windows permissions. CLERK stores your data in a “CLERK datafile”. If an individual can access this datafile through Windows, they can make a copy of it and view all your records on their own computer.

- ⚠ You should be particularly careful that the directory containing the CLERK datafile is not shared *at all* in Windows NT/2000.
- ⚠ Staff with login accounts on the CLERK server, or on the NT domain, should not have read access for the directory containing the CLERK datafile. Otherwise, they can physically access the server, log on, copy the datafile (e.g. onto a Zip disk) and view the records.

If your CLERK server is part of an NT domain, be aware that your institution’s IT staff may have access to the records in their capacity as “domain admins”.

Installing

To install the CLERK server, first be sure you are logged on to the server computer as the Administrator user. Insert the CLERK CD-ROM into your drive and choose **Start | Run**. Type `F:\Setup.EXE`, where you replace `F` by the drive letter of your CD-ROM drive.

- i On some computers, a CLERK ‘welcome screen’ will appear automatically. In this case, you do not need to type anything.
- i You can also use Windows Explorer to start the installation by double-clicking on **My Com-**

puter, double-clicking on the CD-ROM icon, then double-clicking on **Setup.EXE**.

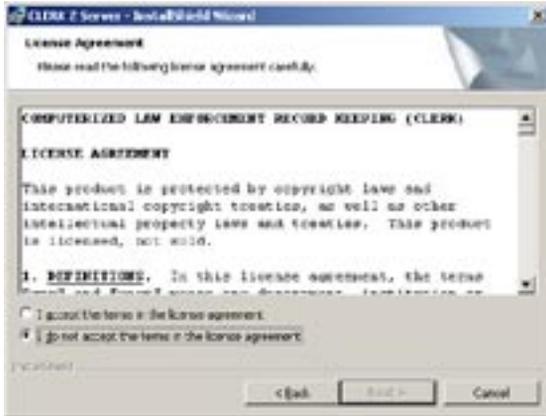
A welcome screen will be displayed.



Click the **Install CLERK 2 server** button. A welcome screen for the server installation appears.



Click the **Next>** button. The CLERK license agreement will be displayed. You must agree to the terms of the license before you will be allowed to install the server software.



After clicking **I accept the license agreement**, click the **Next>** button and enter your name and department name. Click **Next>** again. You will be asked what type of installation is needed.

In most cases, you will want a **Typical** installation.



You only need to choose a **Custom** installation if you do not wish to use ZIP code lookups, or if you don't want to install the parking database. Click **Next>** once you have chosen the type of installation.



You will be asked which directory the CLERK data should be stored in (the “database directory”). This defaults to C:\Program Files\Terrier Technologies, Ltd\Clerk\Database. However, by clicking the **Change...** button, you can set this to another directory of your choosing. If you have more than one hard drive, it is often a good idea to store the database on a different drive than Windows.

 Make sure no users except the Administrator have read permission for the database directory. Read the *Security considerations* section above for further information.

Finally, you will be given the opportunity to review your choices. Click **Install** to begin the installation process. A progress screen is displayed, and you will be notified when installation is complete.

At this stage, you have the opportunity to request a CLERK license key for your server. If you are evaluating CLERK and do not wish to purchase a license at this time, or if you purchased CLERK but are install-

Write down the install code. In the screenshot above, the install code is AAAA-BBBB-CCCC-DDDD; yours will be something different.

Requesting a license key

Before issuing a license key, Terrier Technologies will need your install code and your department title. You can either call us with this information during business hours, or send an email to support@policedata.com.



The department title you supply will appear at the top of all printed case reports. Be sure to provide us with the correct spelling and capitalization.



By default, case report headings will consist of two lines, a department title and subtitle. If you want the top two lines of your case reports to read “University of Somewhere” and “Department of Public Safety”, then your department title will be “University of Somewhere” and the subtitle will be “Department of Public Safety”. When obtaining a license key, you need only supply the first of these.

Installing the license key

The license key you receive will contain 20 characters, and is entered into the same licensing program you used to generate the install code. After entering the license key, click the **Finish** button. You will see a message that the key has been successfully installed on the server.



Both the install code and license key use the

numbers 0-9 and letters A-F. Thus there are no letter O's, only zeros.

After installing the license key, you also need to enter your department name using the CLERK client. If you have not yet installed a CLERK client, you should stop and do that next before returning here.

Using the CLERK client, connect as the administrative user, SYSDBA. The first time you connect, you will still get the message that CLERK is unlicensed; this is because your department name has not yet been configured.

Under the **Settings** menu, choose **System settings**. In the **Department title** field, type the same title which you supplied to Terrier Technologies at the time you requested a license key. Click the close box, and confirm that the new system settings should be saved. Next time you log in to CLERK, the message saying CLERK is unlicensed should not appear.

How license keys work

Your department title and install code are combined together and then encrypted to yield a license key. The install code is based upon a number of hardware and software settings in your server computer, thus the install code for each computer will be different. A similar system is used by Microsoft for their Windows XP product.

One consequence of this system is that your license key can stop working if

- You change the department title.

- You install the server on a different computer than the one used to generate the install code.
- You significantly modify the server computer's configuration. Significantly modifying the computer could mean installing a different operating system, for example. Adding memory or installing a new video card are not significant modifications.

If your license key stops working, obtain a new one from Terrier Technologies by repeating the process described above.

Licensing policies

Terrier Technologies will supply license keys only to those departments which have purchased CLERK. License keys are not issued for trial purposes. Because CLERK is licensed to a specific institution, the department title supplied in the license key request must bear some similarity to the name of the purchasing institution.

When asking for a replacement license key, either the department title or the install code must match the information supplied in the previous request. In other words, you're only allowed to change one piece of information (department title or install code) in each new license key.

To prevent abuse, Terrier Technologies will limit the number of times a replacement key to each purchaser. You should request a license key only for the server on which you ultimately plan to run CLERK - for example, if you are using a temporary "test server", do not request a license key for that machine.

Troubleshooting

In the majority of cases, installation is a very straightforward process. When an error is encountered, more often than not it is due to some missing Windows components.

- **I get a message that CLERK cannot be installed on my operating system.**

The CLERK server can only be installed on Windows NT or 2000. Be sure that you are using one of these operating systems.

- **The installer does not run at all.**

Install a new version of the Microsoft Installer (MSI) on your computer. MSI is available from the Microsoft Download Center at <http://www.microsoft.com/downloads>.

- **I get registry errors while installing.**

Make sure you are logged on as the Administrator while installing the CLERK server and license key.

- **I'm told that InterBase is already installed or running.**

CLERK cannot be installed on a computer when an InterBase server is already installed as part of another application. You must either uninstall InterBase, or choose a different server.

- **I get errors saying that CryptoAPI is not installed when trying to generate an install code.**

Make sure your server has SP6 (for Windows NT) or SP2 (for Windows 2000) installed. You also need to have Internet Explorer 4.01 or

later installed, with high-encryption. High-encryption comes standard on Internet Explorer 5.5 or later. For earlier versions of Internet Explorer, you can download the high-encryption packs from <http://www.microsoft.com/Windows/ie/downloads/recommended/128bit/default.asp>.

- **I get errors referencing ODBC.**

ODBC is a data access component of Windows used by databases, and it is missing. This message will mostly affect Windows NT machines with old service packs. Either

- (a) Install the latest service pack
- (b) Download and install Microsoft Data Access Components (MDAC) directly from <http://www.microsoft.com/data>.
- (c) Install Internet Explorer 6, which includes this component.

Installing the CLERK client

System requirements

In order to install the CLERK 2 client, the minimum system requirements are:

- Windows 95 OSR2 or later (Windows 98/Me/NT4/2000/XP)
- Pentium 90 MHz processor or equivalent
- 32 MB RAM
- 40 MB available hard disk space
- Display resolution 800x600

However, the performance of a system which only meets the minimum requirements is unlikely to be acceptable. To achieve a satisfactory performance, Terrier Technologies recommends at least Windows 98, a 300 MHz processor, 64 MB RAM and a display resolution of 1024x768.



Since November 2001, Microsoft has officially considered Windows 95 to be an unsupported product. Although CLERK has been tested and found to work with Windows 95 OSR2, Terrier Technologies cannot guarantee this will remain the case. Our policy is for CLERK to be compatible with all desktop versions of Windows which are also supported by Microsoft.

Installing

To install the CLERK client, insert the CLERK CD-ROM into your drive and choose **Start | Run**. Type `F:\Setup.EXE`, where you replace F by the drive letter of your CD-ROM drive.



On some computers, a CLERK 'welcome screen' will appear automatically. In this case, you do not need to type anything.



You can also use Windows Explorer to start the installation by double-clicking on **My Computer**, double-clicking on the CD-ROM icon, then double-clicking on **Setup.EXE**.

A welcome screen will be displayed.



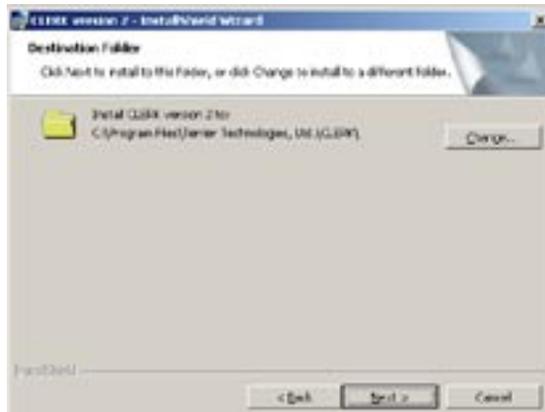
Click the **Install CLERK 2 client** button. A welcome screen for the client installation appears.



Click the **Next>** button. The CLERK license agreement will be displayed. You must agree to the terms of the license before you will be allowed to install the client software.



After clicking **I accept the license agreement**, click the **Next>** button and enter your name and department name. Click **Next>** again. You will be for the directory where the CLERK application should be stored.

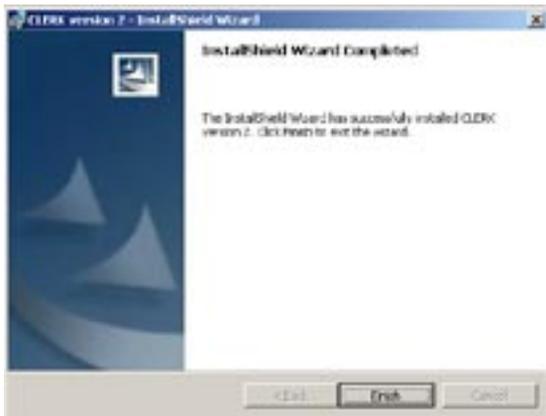


This defaults to `C:\Program Files\Terrier Technologies, Ltd\Clerk`. However, by clicking the **Change...** button, you can set this to another directory of your choosing. Click **Next>** and you will be asked what type of installation is needed.



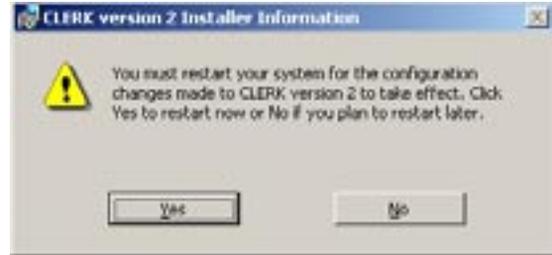
In most cases, you will want a **Typical** installation. You only need to choose a **Custom** installation if you do not wish to use the parking plugin. Click **Next>** once you have chosen the type of installation.

Finally, you will be given the opportunity to review your choices. Click **Install** to begin the installation process. A progress screen is displayed, and you will be notified when installation is complete.



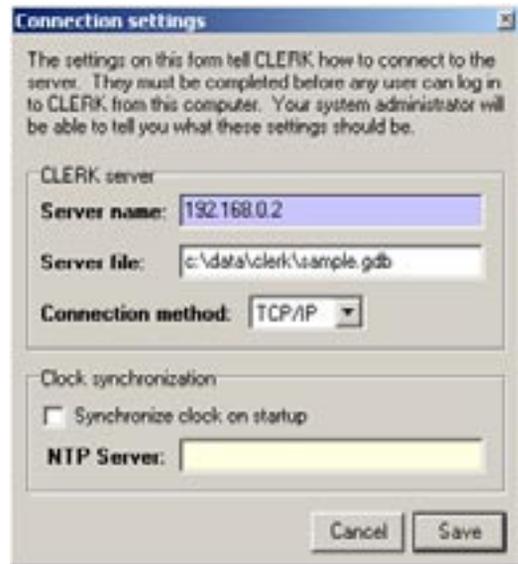
In most cases, you will need to restart your computer to complete the installation process. A shortcut to

CLERK will be added to your desktop so that you can start CLERK quickly.



Configuring the client

Before it can establish a connection, each client needs to be told how to connect to the CLERK server. When you start CLERK for the first time on each client computer, a **Connection settings** box will be displayed automatically. In the future, you can change these settings by choosing **Settings | Connection**.



First, you should choose the **Connection method**. Generally, it will be either TCP/IP or NetBEUI.

Although it is possible to use an IPX connection, Terrier Technologies does not provide technical support for network problems when IPX is used. In most cases, if your institution uses IPX it will also support TCP/IP.

Next, supply the **Server name**. In the case of TCP/IP, this will either be a machine name such as `Clerkserv.university.edu`, an IP address such as `192.168.0.1`. In the case of NetBEUI, this is the Windows name for the computer, such as `ClerkSERV`. A procedure for finding the server's computer name was described in the *Network requirements* section of this chapter.

i If using TCP/IP, try and have your IT department give your CLERK server an alias name in addition to its regular name. For example, `machine10240.university.edu` could also have the alias `Clerkserv.university.edu`. This will allow you to move the CLERK server to a different machine in the future without modifying the settings on every client.

Finally, the **Server file** is the location of the CLERK datafile on the server. You supply the location as a local path, not a network (share) path. To clarify the difference, the local path will include the drive letter on the server, whereas the network path would start with `\\`. The default location is `C:\Program Files\Terrier Technologies, Ltd\Clerk\Database\Clerk2.GDB`. If you changed the datafile location while installing the server, use your selected location instead of the default.

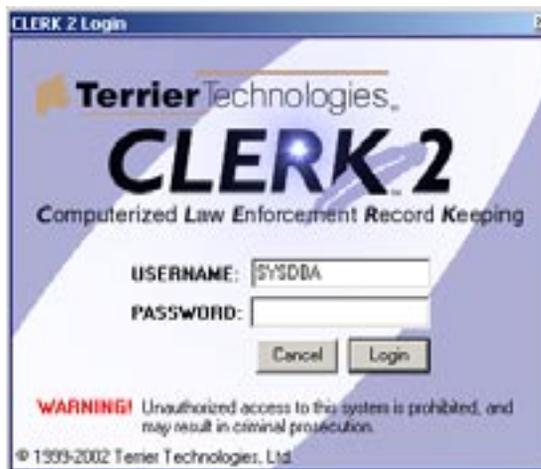
The first time you install a client, we suggest leaving NTP turned off. Let's get a connection established and then turn on the advanced features later.

NTP stands for Network Time Protocol, and is a way of synchronizing the CLERK client's clock with the clock of another machine such as the CLERK server each time CLERK is started. This can be particularly useful in the Computer Aided Dispatch (CAD) module, where many fields are auto-completed with the current time. To enable it, simply click the box and supply the machine name of an NTP server. Most Unix computers and some Windows machines can act as NTP servers.

Click the **Save** button when you've finished entering the settings.

Testing the connection

Having entered the connection settings, a login window will appear. The default user name is `SYSDBA` and the password is `masterkey`. Com-



plete the user name and password fields, then click **Login**.

Assuming your login is successful, the login icon on the toolbar will change from unlocked to locked. If CLERK appears to freeze or nothing happens, it could indicate a network problem. Leave the computer for several minutes and an error message should appear, then consult the *Troubleshooting* section below.

At this point, both your CLERK server and client are installed. The following chapter describes how to configure CLERK.

Troubleshooting

- **The installer does not run at all.**

Install a new version of the Microsoft Installer (MSI) on your computer. MSI is available from the Microsoft Download Center at <http://www.microsoft.com/downloads>.

- **I get registry errors while installing.**

Generally these are caused by installing CLERK on a Windows NT/2000 machine while logged on as a normal user instead of Administrator. Try logging on as Administrator. In most cases, installation still works despite these messages.

- **I'm told that InterBase is already installed or running.**

CLERK cannot be installed on a computer when an InterBase client is already installed as part of another application. You must uninstall InterBase.

- **I get errors referencing ODBC.**

ODBC is a data access component of Windows used by databases, and it is missing. This message will mostly affect Windows NT machines with old service packs. Either

- Install the latest service pack
 - Download and install Microsoft Data Access Components (MDAC) directly from <http://www.microsoft.com/data>.
 - Install Internet Explorer 6, which includes this component.
- **When CLERK starts, I get errors saying that a file XXX.BPL was not found.**

CLERK installs some files in the Windows or WinNT directory as part of the installation process. If you tried to install CLERK by copying the CLERK.EXE file, you will get this error. Run the installation program as described earlier.

- **After clicking Login, I get a message saying that the file is not found.**

Go to **Settings | Connection** and check that the datafile matches the local path of the CLERK datafile. You may have specified an incomplete path or a network path.

- **After clicking Login, the CLERK client freezes and then I get a message saying the server was not found.**

There is a problem with your network settings.

- If using NetBEUI, check the spelling of the server's name in **Settings | Connection** and make sure you did not add a \\ prefix, or a domain suffix like *university.edu*. The

server's name is generally about eight letters like ClerkSERV. If it still doesn't work, try switching to TCP/IP.

- If using TCP/IP, try going to the **Start** menu on the client, choosing **Run** and typing `ping Clerkserv.university.edu` where you replace `Clerkserv.university.edu` with the name of the server as it appears in the connection settings. If the server cannot be reached using this method, then there is a generic (non-CLERK) network problem. Consult the section below, *Installing TCP/IP without a domain name*, or contact your IT department.
- Try installing the IBConsole tool on the client computer as described in *Administrative tasks*. See if you can open the datafile using this method. If yes, then there is likely some problem with your connection settings.
- If IBConsole cannot connect, try installing the CLERK client and IBConsole on the server machine itself. If this does not work either, the InterBase server is not running. Try checking the InterBase Manager in the server's control panel.
- If the client works on the server machine but not on other machines, check the network or TCP/IP settings on the other machines.
- **I get errors saying that CryptoAPI is not installed.**

Make sure your server has SP6 (for Windows NT) or SP2 (for Windows 2000) installed. You

also need to have Internet Explorer 4.01 or later installed, with high-encryption. High-encryption comes standard on Internet Explorer 5.5 or later. For earlier versions of Internet Explorer, you can download the high-encryption packs from <http://www.microsoft.com/windows/ie/downloads/recommended/128bit/default.asp>.

- **I get a message saying that CLERK is unlicensed even though I entered my license key.**

Choose **Settings | License key**. This will give you a reason why license key validation failed. On this screen, you should also check that

- The department title supplied to Terrier Technologies is the same as what appears on the screen (it is case sensitive).
- The license key has been entered correctly, for example that it includes zeros and not letter O's.
- The install code, if displayed, matches the install code that you supplied to us.

If the problem reason says "Cannot decrypt license key", refer to the above question regarding CryptoAPI. Then try quitting CLERK and restarting. If the problem still exists, contact Terrier Technologies technical support.

Installing TCP/IP without a domain name

In this section, we describe some particular challenges and problems you may face if you try to use TCP/IP when you don't have a domain name (e.g.

policedata.com or university.edu) or don't have a connection to the Internet. You should realize that these issues are not specific to CLERK, but would apply to any software that uses TCP/IP, such as a departmental Web server.

Normally, when Windows encounters a TCP/IP machine name, it will use a DNS (Domain Name Service) server to convert the machine name into an IP address. If your department is not connected to the Internet, you may not have a DNS server available.

To set up TCP/IP when you do not have an Internet connection, choose **Start | Settings | Control panel**, double-click on **Network**, (on Windows 2000, choose **Start | Settings | Network and Dial-up Connections** and double-click **Local Area Connection**), click TCP/IP and then **Properties**. Choose to specify an IP address manually. Give each computer in your department (including the CLERK server) an IP address starting with 192.168.0. For example, the first computer should have the IP address 192.168.0.1, the second computer should have the IP address 192.168.0.2 and so on. Use a subnet mask of 255.255.255.0 on every computer.

Next choose a "make believe" domain name for yourself. Let's say it is `cityofsomewhere.com`, and you decide to name your CLERK server `Clerkserver.cityofsomewhere.com`.

For each client computer, you will need to edit a `hosts` file. Look for the `hosts` file in `C:\Windows` (for Windows 95/98) or `C:\WinNT\System32\`

`Drivers\Etc` (for Windows NT/2000). It does not have an extension. In the event that `hosts` does not exist, make a copy of the sample file `hosts.sam` and rename it to `hosts`. Then open the file using a text editor such as Notepad. At the end of the file, add the line

```
192.168.0.1 Clerkserver.cityofsomewhere.com
```

where 192.168.0.1 is the IP address you used for the server computer, and `Clerkserver.cityofsomewhere.com` is the machine name you chose for the server. Save the file. Now, in CLERK's connection settings, you can choose a TCP/IP connection and specify `Clerkserver.cityofsomewhere.com` as the server name.

Installing silently

If the CLERK client needs to be installed (or updated) on many computers, you may wish to automate the process. This is called a "silent installation" because you don't see all the normal 'prompt' screens during installation.

To run a silent install, choose **Start | Run** and type

```
F:\Client\Setup.exe /s /v/qn
```

where `F` is replaced by the letter of your CD-ROM drive. You could also copy the `Client` directory from the CD-ROM onto a network drive and add the installation command to a login script.

To install the software to a different directory, use the command

```
F:\Client\Setup.exe /s /v"INSTALLDIR=C: /qn"
```

This would install CLERK in the C:\ directory. If the installation directory contains a space, the directory must be surrounded by \", e.g.

```
F:\Client\Setup.exe /s /v"INSTALLDIR=\"C:\Program files\" /qn"
```


9 Chapter

Configuring CLERK

Although CLERK is designed to be very easy to use, it remains very flexible because there are many ‘settings’ that can be tailored to the needs of your department. These settings make CLERK more complex to configure, but your users will reap the benefits on a day-to-day basis.

After installing CLERK, we suggest that you at least browse through this chapter and acquaint yourself with the settings that are available. You can easily add some settings later on, after you start playing with CLERK, but others must be done immediately after installation and are difficult to change at a later date.

CLERK settings

Broadly speaking, there are three different types of CLERK settings:

- **Preferences**, which affect CLERK’s behavior. For example, which columns should be displayed in the Active Calls window? What case numbering syntax do you wish to use?
- **Codes and lists** tailored to your department, e.g. a list of locations in your jurisdiction, or of citation types your department issues.
- **Privileges**, or security settings stating which users are allowed to do what within CLERK.

All CLERK settings may be viewed and changed via the **Settings** menu. The SYSDBA user always has



access to these menu options. For other users, the options will be disabled unless access has been explicitly granted by the system administrator. A screenshot of the **Settings** menu is shown on the left. If you’re just starting out with CLERK, it is a good idea to configure the settings in the order they’re listed.

The **Connection** settings option tells CLERK how to locate the server. It

has already been discussed in Chapter 8, so we won’t repeat the discussion here.

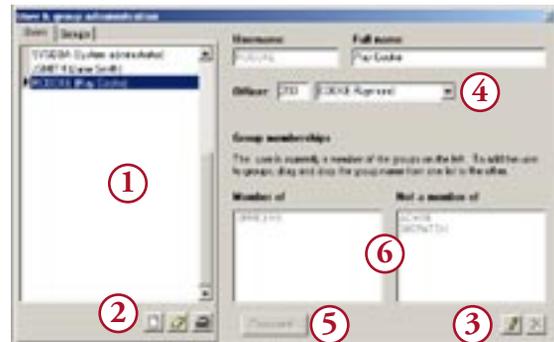
Users and groups

Control who can access the CLERK system through the **Users and groups** settings. A *username* is created for each person who needs to access the system. When a user logs on to CLERK, their username and corresponding password are checked against the list; they are connected only if the username and password are valid.

i The CLERK username and password are separate from any Windows username and password the individual might have. A Windows login does not allow access to CLERK, and vice versa.

A screenshot of the **Users and groups settings** is shown below.

- 1 All the users who currently have access to the system are shown to the left of the window. To view details about a user, click once on their username.
- 2 The buttons below the user list allow you to add



a new user, delete an existing user (so that they no longer have access to the system), or print a list of users.

When adding a new user, you'll be asked for a username and an initial password, as shown on the facing page. Users are able to change their own passwords at a later date.

When erasing a user, some “housekeeping” records will also be removed, such as records of their login times. Generally, references to a particular user will be set to `SYSDBA` if the user is deleted. For example, the ‘owner’ of a case report becomes `SYSDBA` if the previous case report owner is deleted.

- i** You cannot delete the `SYSDBA` user. You must be able to log on as `SYSDBA` to perform certain administrative tasks. However, because `SYSDBA` has access to the entire `CLERK` database, the password should be secure.
- 3** The **Edit** and **Cancel** buttons allow you to change details for an existing user. Click **Edit** once to start making changes. Click it again when finished to save the changes, or click **Cancel** to ignore the changes and go back to how things were.

- 4** While in edit mode, you may change the full name of the user, and the officer this user is associated with. If you're just starting to set up `CLERK`, you may not have any officers entered yet. That's all right; we'll revisit this topic later.

- i** You do not *have* to supply an officer for the each username.
- 5** The system administrator may change the password for any user. Use this option to reset an account if a user has forgotten their `CLERK` password.
- i** `CLERK` does not impose rules on the password. But, you should encourage your users to be sensible with passwords, such as not choosing obvious words (spouse's or pet's name, phone number, DOB, and so on).
- 6** The groups dialogs show which user groups a person belongs to. We'll explain user groups in more detail in a minute. To add a user to a group, click and drag the group name from the list on the right to the list on the left. To remove a user from a group, click and drag the group name from the left list to the right list.

User groups

`CLERK` allows you to divide users into groups. Security settings in `CLERK` are done on a “per-group” basis, i.e. all users in one group have the same security settings, and a change to the group's settings automatically affects all users in that group.

This allows you to set permissions for many users at once, and avoids you having to enter any settings

when a new staff member is hired - a definite convenience feature.

For example, if you have a group called `Officers` and a new officer is hired, simply add them to the `Officers` group. You don't need to go through and set all their security permissions individually.

The screenshot below shows group information. To switch between viewing users and viewing groups, use the tabs at the top-left of the window, ①.

- ② A list of groups appears at the left of the window. Click a group to view the details.
- ③ Use the **New** and **Erase** buttons to create or delete groups, respectively.

User groups should be given a short abbreviation and a more detailed description. Do not choose long user group names, because they may not fit on the screen in some cases.

- ④ Use the **Edit** and **Cancel** buttons to start/stop editing group information, or to cancel editing of group information, respectively.
- ⑤ While in edit mode, you may alter the description

of a group.

- ⑥ There are two lists. The one on the left contains all the usernames which are members of the selected group. The one on the right contains all the usernames which are not members of the selected group. While in edit mode, you can add or remove users from a group by clicking and dragging between the lists.

i A user may belong to more than one group at a time.

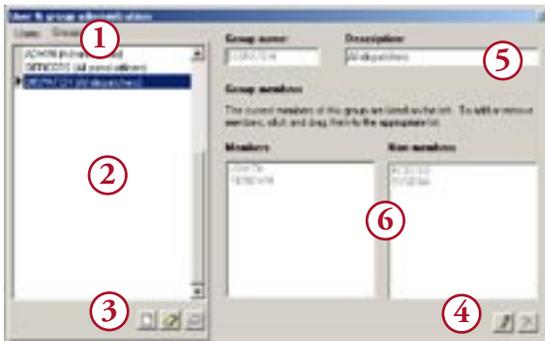
Backups, copying and training data

It is possible to have more than one CLERK datafile on your server. However, usernames and passwords are not stored in the datafile; instead they apply to the whole server. So when you delete a user, you deny them access to *all* datafiles on the server.

Practically, this has two implications.

- Copying the CLERK datafile does not backup usernames and passwords. To do this, you must backup the server as described in Chapter 10.
- Adding or removing a user in one datafile, then attempting to add or remove the same user in a different datafile may cause unexpected results. This will apply if you plan to create training datafiles.

To avoid such problems, Terrier Technologies recommends that you enter the usernames and passwords of all users *first*, before performing any other configuration tasks. Then make a copy of the datafile. Use this copy as a “template” for other datafiles you might create, e.g. for training or ‘test’ data.



Officers and staff

The **Officers and staff** settings should contain a list of all people whose activities you wish to track in CLERK. This means all people tracked through the CAD, all people who write reports, and all who issue citations.

Don't include the names of other employees who might use CLERK but whose activities are not tracked. For example, records or clerical staff do not need to be listed.

A screenshot of the **Officers and staff** settings window appears below.

- ① A list of all officers and staff appears at the left of the window. Click an officer name to view the details associated with it.
- ② Use the **New** and **Erase** buttons to add or remove officers, respectively.

When you click the **New** button, an officer with the name `Firstname Lastname` is created and the window is put into edit mode (described below).

Take great care when deleting officers from the system. This can make it difficult to generate statistics for that officer. It is generally much better to mark the officer as “no longer employed” rather than deleting them from the system entirely.

Officers and staff

Officers and staff

CLERK ID: 1

Name: Raymond Cooke Currently employed

User: RCOOKE Badge #: 203

Comment: Empl. ID: 111-22-3456

Contact details:

Address: 402 Lockabay Dr., Harwood, TX 75000

Home ph: 901-123-4567 Eng. contact: Jan Cooke

Pager: Eng. ph: 901-123-4568

Cell ph: Email: rcooke@policedata.com

CAD/equipment tracking

Track in CAD Unit number: 203 CAD Name: COOKE, R

Patrol region: DOWNTOWN

Equipment and Duty default values

Service: Police

Body Mic: C1

Flashlight:

Keys:

- ③ Use the **Edit** and **Cancel** buttons to start/stop editing officer information, or to cancel editing of officer information, respectively.
- ④ The top section contains basic information about an officer or staffmember.
 - The **Clerk ID** is a number for internal use by CLERK. This is generated automatically and cannot be changed.
 - **Name.** Put first name first, and last name last.
 - **Currently employed.** Uncheck this box when an officer leaves the department and they should not longer appear on the list of employed officers.
 - **User.** You can associate a username with the officer (although you don't have to). This can also be done through the Users and groups settings.
 - **Badge number.** Enter the officer's badge number. This will appear on the bottom of printed case reports next to their name.
 - **Comment, employee ID.** These fields can mean whatever your department decides. They are not used in any CLERK modules.
 - **Photograph.** Click the **open image** button if you wish to attach a photograph of the officer or staffmember.
- ⑤ The contact fields allow you to collect contact information about each officer into one place. These fields are not used in any of the CLERK modules.
- ⑥ The CAD and equipment tracking section is only necessary if your department is using the Computer Aided Dispatch (CAD) facility.
 - **Track in CAD.** This checkbox indicates whether a particular officer is to be tracked in the CAD system or not. If not, the remaining fields have no meaning.
 - **Unit number.** Another term for this is the "call number" or "call sign". This is the number or abbreviation an officer will use for radio traffic. In some departments, this will be the same as the badge number; in others, it will be something different. The unit number specified here is a default, meaning that a dispatcher can specify a different unit number each time an officer comes on duty.
 - **CAD Name.** Fields in the CAD usually aren't large enough to display the officer's full name. Often, last name and initial is sufficient. Use this field to specify what name should appear in the CAD for this officer.
 - **Patrol region.** If you divide your jurisdictions into patrol regions/zones/beats, specify the default region for this officer. Each time an officer comes on duty, the dispatcher has the opportunity to override this default region.
 - **Equipment and duty defaults.** Each time an officer comes on duty, the dispatcher will have the opportunity to check out equipment and assign duties to the officer. In some cases, the equipment an officer users is random (e.g. whichever radio they happen to pick up), but in other cases, they may routinely use the same equipment from one shift to the next. For example, a supervisor may always drive the same vehicle. You can specify default values for equipment items here.

When an officer is brought on duty, CLERK will auto-complete the equipment fields with these settings, but the dispatcher always has permission to override the defaults.

- i** If you're just starting out with CLERK, the equipment and duty list will probably be empty. You should read the following section on *Equipment and duty tracking* then come back here.

Equipment and duty tracking

CLERK allows you to customize lists of equipment and duties you wish to track.

Equipment is physical equipment that is issued to a particular officer, either short-term (for the duration

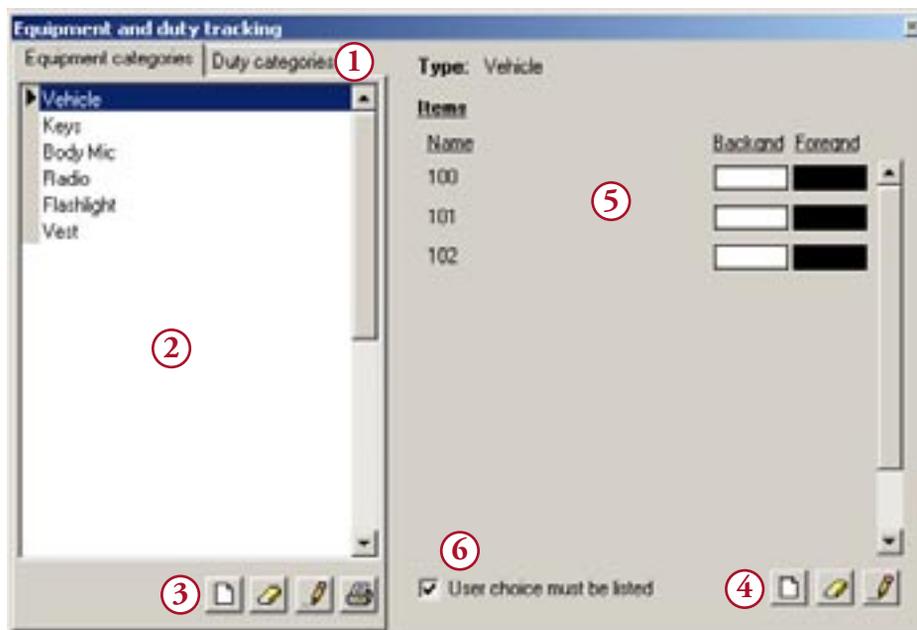
of a shift) or longer term (while employed at the department).

Duties are tasks or roles assigned to a unit for the duration of a shift. Anything your department wishes to track per unit/shift can be called a 'duty'.

For both equipment and duties, you create categories and then add equipment or duty items to those categories.

Example #1: You wish to track which set of keys an officer has been issued with. Create an equipment category called 'Keys' and containing items 001, 002, 003 and so on.

Example #2: Your department is responsible for dispatching several types of units, e.g. police, fire, EMS.



You could create a duty category called ‘Service type’ containing Police, Fire, and EMS.

Example #3: As part of time management, your department may wish to track activities on a broader level. You may create a duty category called ‘Assignment’ containing Patrol, Training, Crime Prevention, Dispatch, Special Event, and so on.

A screenshot of the **Equipment and duty tracking** settings appears on the previous page.

- ① Use the tabs at the top-left of the window to switch between equipment and duty categories.
- ② Equipment or duty categories appear in a list at the left of the window. Click on a category to view the items belonging to it.
- ③ Use the **New** and **Erase** buttons to create or remove equipment and duty categories. Create an equipment category for each *type* of equipment you wish to track. Don’t create a category for each *item* of equipment; that comes later. The ‘new category’ dialog is shown below.



In addition to naming the category, you are also able to specify whether the user’s choice ‘must be listed’. If this box is unchecked, any equipment items listed under this category are only ‘suggestions’ and users may check out other equipment items from this

category which have not been explicitly listed. If checked, users cannot check out equipment items other than those listed for the category.

Generally, when the inventory for a particular category is stable (the items don’t change often), you will force the user to select an item from the list. Vehicles are one example of an equipment category that has low turnover.

On the other hand, other types of equipment may be replaced regularly. For example, if your department purchases a new flashlight every month, simply keeping them all entered in the settings could become an administrative burden. In such cases, it may be best just to create the ‘Flashlight’ equipment category with no items, and allow users to specify the item number at the time the equipment is checked out.

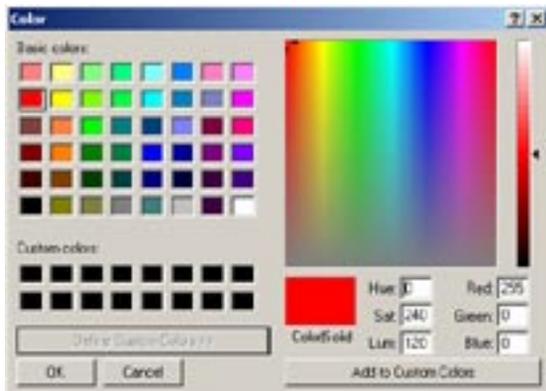
i If you wish to check out two or more items of equipment from a single category to an officer, the ‘choice must be listed’ box must be checked.

The **Edit** button allows you to change the name, or ‘listed’ status of an existing equipment or duty category, and the **Print** button allows you to print a list of equipment categories.

- ④ A second set of **New**, **Erase** and **Edit** buttons appears at the bottom-right of the window. Once you’ve created equipment or duty categories, these buttons allow you to work with items in those categories. For example, click on a category you’ve already created, then click the **New** button. The following dialog appears.



Here, you choose a name for the item, and have the opportunity to specify a color coding scheme. Click the **Edit** button next to a color to change it. You may choose from a list of ‘standard’ colors, or create your own color.



The **sample appearance** field gives you a preview of how text will appear in the CAD using the color coding scheme you select.

- i** The colors are only used if you choose to color code units by equipment or duty in the CAD. Otherwise, the color settings are meaningless and should be left at black and white.

- Ⓢ** Do not use commas in equipment item names. They will cause an error in the CAD.

- ⑤** A list of items within the selected category appears here. To edit or erase an equipment item, first click once to select it, then use the buttons described in **④**.
- ⑥** This box shows whether an equipment item for the current category must be listed. To change this setting, use the **Edit** button described in **③**.

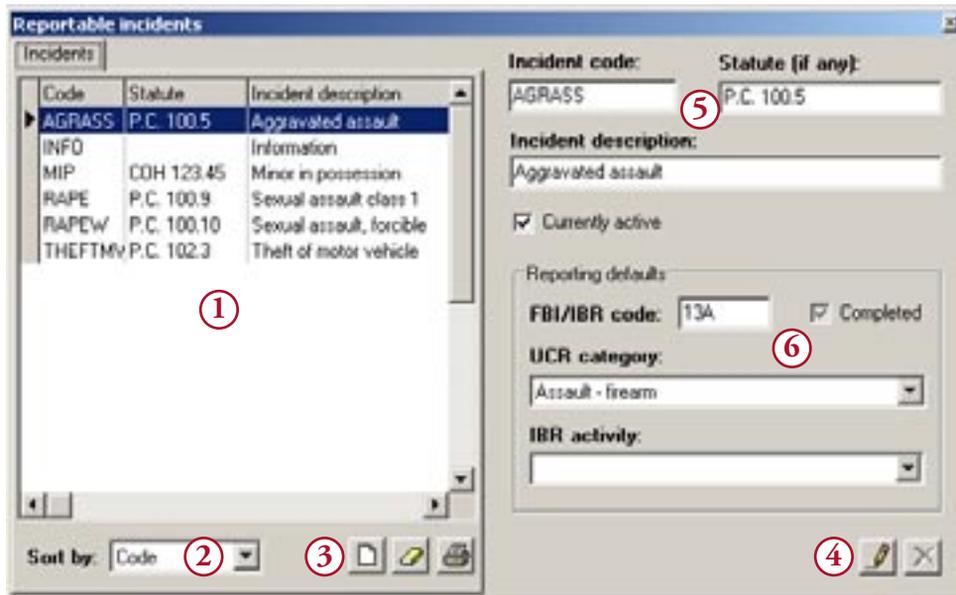
Reportable incidents

A case report in CLERK is written whenever an ‘incident’ or certain type of event occurs. Usually an incident corresponds to a violation of local, state, or federal law, but you might also create case reports for other reasons, e.g. serious medical or hazardous situations, or even to record general information.

The list of incidents you wish to track is configured in the **Reportable incidents** settings; a screenshot appears on the following page.

You should configure the list of incidents before entering case reports into CLERK. Because the incidents generally correspond to state or federal statutes, the incident settings of CLERK departments within a state tend to be similar. If there are other CLERK departments in your state, you may be able to use their incident codes as a starting point.

- ①** The left half of the window shows a list of all incident types. We’ll explain the meaning of each column in **④**.
- ②** Most departments will have over one hundred



incidents in their settings. To make viewing easier, you may sort the list by code, statute, or FBI/IBR code. The meanings of these terms will be discussed below.

- ③ Use the **New** and **Erase** buttons to create a new incident type or delete an incident type, respectively. The **Print** button prints a listing of all incident types.
- ④ Once an incident has been entered into the system, it may be edited by clicking the **Edit** button. When you've finished editing, click the **Edit** button a second time to confirm your changes, or click the **Cancel** button to stop editing without saving the changes. You must finish editing one incident before moving to another.
- ⑤ Basic information about the incident appears here.

- **Incident code.** Most departments will have too many incidents to display in a menu. And, typing the name of an incident each time is slow and prone to error. To help overcome these problems, you specify an incident code for each type of incident. The code is generally an abbreviation (up to eight characters) of the incident description. Because 'incidents' generally means 'offenses', this code is sometimes called an 'offense code'.
- **Statute.** Use the statute field to specify which local, state, or federal statute is being violated. For incidents that are not offenses, this field may be left blank.
- **Incident description.** A short description, or 'title' for the incident.
- **Currently active.** Whether new case reports

should be allowed to contain this incident or not.

-  It is unwise to delete incidents that have been used in case reports. This may result in incorrect crime statistics and difficulties in generating statistical reports. Instead, mark an incident as *not* currently active.

An incident may become inactive if the government repeals a statute, or if a law is re-drafted so that a statute is replaced with a different one.

-  When a user adds a case report offense segment, CLERK automatically completes the statistical reporting fields with the values specified here. Because these are only defaults, users may override them. Note that the UCR category is only relevant if your department produces UCR reports, and the other fields are only relevant if your department produces NIBRS reports. Terrier Technologies cannot tell you exactly how each incident should be reported for UCR/NIBRS; your records staff should receive training on reporting crime statistics from a competent authority.
- FBI/IBR code.** A three-digit code describing the offense category. This list is published by the FBI, and is reproduced on the following page.
- Completed.** Whether or not an offense should be considered attempted or completed.
- UCR category.** If this incident is reportable for UCR, choose the category it falls under.
- IBR activity.** Default ‘activity types’ for NIBRS reporting.

Locations

Knowing where an event occurred can be almost as important as knowing what occurred. By analyzing where crimes are taking place, administrators may be able to plan for department growth, or allocate financial or human resources to that area. For example, if crimes are increasing in a particular area, your department may decide to increase patrols in that area or even create a substation.

For CLERK to produce such statistics, your department must create a list of *locations*. Locations describe a geographic area, such as a building, a section of the city, or a region of the county. They are not intended to describe precisely where an event took place.

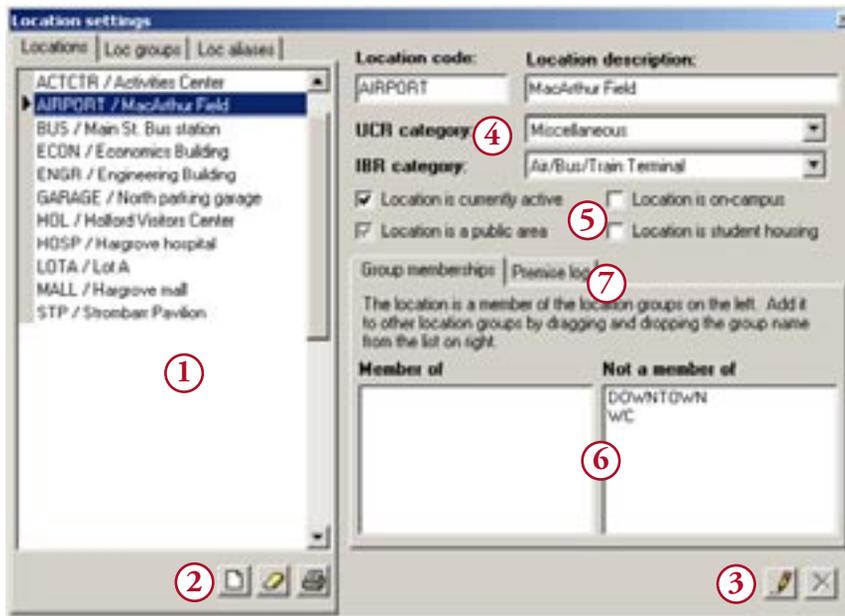
How detailed the locations list should be is a matter for your department to decide. If you use a very small number of locations, your statistics could be of limited use. On the other hand, using too many locations can make it tremendously difficult for the staff in your department to enter locations in a timely way.

-  Invest a little time to carefully decide what locations should be created for your jurisdiction. While you may change the location settings at any time, deleting a location or “rearranging” location codes can make it more difficult to generate crime statistics.

To configure locations in CLERK, choose the **Settings | Locations** menu option.

UCR Offense	NCIC Code(s)	Three-digit UCR code
NIBRS Group A		
Arson	2001-2009; 2099	200
Assault - Aggravated	1301-1312; 1314-1315	13A
Assault - Simple	1313	13B
Assault - Intimidation	1316; 5215-5216	13C
Bribery	5101-5133; 5199	510
Burglary/Breaking & Entering	2201-2205; 2207; 2299	220
Counterfeiting/Forgery	2501-2507; 2509-2510; 2589; 2599	250
Destruction/Damage/Vandalism of Property	2901-2906; 2999	290
Drug/Narcotic Violations	3501-3505; 3510-3513; 3520-3523; 3530-3533; 3540-3543; 3560-3564; 3570-3573; 3580-3583; 3599	35A
Drug Equipment Violations	3550	35B
Embezzlement	2701-2705; 2799	270
Extortion/Blackmail	2101-2105; 2199	210
Fraud - False Pretenses/Swindle/Confidence Game	2601-2603; 2607; 2699	26A
Fraud - Credit Card/ATM	2605	26B
Fraud - Impersonation	2604	26C
Fraud - Welfare Fraud	N/A	26D
Fraud - Wire Fraud	2608	26E
Gambling - Betting/Wagering	N/A	39A
Gambling - Operating/Promoting/Assisting Gambling	3901-3902; 3904-3905; 3907; 3915-3916; 3918; 3920-3921	39B
Gambling - Gambling Equipment Violations	3908-3914	39C
Gambling - Sports Tampering	3919	39D
Homicide - Murder/Nonnegligent Manslaughter	0901-0908; 0911-0912	09A
Homicide - Negligent Manslaughter	0910	09B
Homicide - Justifiable Homicide	N/A	09C
Kidnapping/Abduction	1001-1009; 1099	100
Larceny/Theft - Pick-pocket	2301	23A

Larceny/Theft - Purse snatching	2302	23B
Larceny/Theft - Shoplifting	2303	23C
Larceny/Theft - From Building	2308; 2311	23D
Larceny/Theft - From Coin-operated Machine	2307	23E
Larceny/Theft - From Motor Vehicle	2305	23F
Larceny/Theft - Motor Vehicle Parts/Accessories	2304; 2407	23G
Larceny/Theft - All other	2306; 2309-2310; 2312-2316; 2410	23H
Motor Vehicle Theft	2401-2405; 2408; 2411; 2499	240
Pornography/Obscene Material	3700-3706; 3799	370
Prostitution - Prostitution	4003-4004	40A
Prostitution - Assisting or Promoting	4001-4002; 4006; 4099	40B
Robbery	1201-1211; 1299	120
Sex Offense, Forcible - Forcible Rape	1101-1103	11A
Sex Offense, Forcible - Forcible Sodomy	1104-1115	11B
Sex Offense, Forcible - Sexual Assault with an Object	N/A	11C
Sex Offense, Forcible - Forcible Fondling	3601 (Child)	11D
Sex Offense, Nonforcible - Incest	3604; 3607	36A
Sex Offense, Nonforcible - Statutory Rape	1116	36B
Stolen Property	2801-2805; 2899	280
Weapon Law Violations	5201-5214; 5299	520
NIBRS Group B		
Bad Checks	2606	90A
Curfew/Loitering/Vagrancy Violations	N/A	90B
Disorderly Conduct	5310-5311; 5399	90C
Driving Under the Influence	5403-5404	90D
Drunkenness	N/A	90E
Family Offenses, Nonviolent	3801-3803; 3806-3808; 3899	90F
Liquor Law Violations	4101-4104; 4199	90G
Peeping Tom	3611	90H
Runaway	N/A	90I
Trespass of Real Property	5707	90J
All Other Offenses	Various	90Z



A screenshot of the location settings is shown above.

Location settings

- ① A list of the locations currently stored in the system is shown at the left of the window. Click on a location to view its details.
- ② Use the **New** and **Erase** buttons to add and delete locations from the system, respectively. Use the **Print** button to print a list of locations.

When creating a new location, you will be asked for a location code, description, and whether you wish to create a location group. These terms are explained below.

- ③ Once a location has been entered into the system, it may be edited by clicking the **Edit** button. When you've finished editing, click the **Edit**

button a second time to confirm your changes, or click the **Cancel** button to stop editing without saving the changes. You must finish editing one location before moving to another.

- ④ Basic information about the location appears here.
 - **Location code.** Create an abbreviation for the location, containing up to eight characters. Once users become familiar with CLERK, typing the location code tends to be easier than choosing the location from a menu.
 - **Location description.** A short title for the location.
 - **UCR category.** Choose the UCR category applicable to this location, if your department generates UCR reports.

- **IBR category.** Choose the IBR category applicable to this location, if your department generates NIBRS reports.
- ① If a CLERK location contains more than one location ‘category’, consider splitting it, or rearranging the locations so that all the physical locations in one CLERK location have the same UCR/NIBRS category.
- ⑤ Specify whether the location is currently active, i.e. whether it should be available to users as an option when they are entering a location into a new record.
- ⑧ It is unwise to delete locations that have been used in case reports or citations. This may result in incorrect crime statistics and difficulties in generating statistical reports. Instead, mark a location as *not* currently active.

Also provide some basic information about this location: whether it is a public area, whether it is on a college or university campus, and whether it is student housing. These settings are used in generating Clery Act statistics.

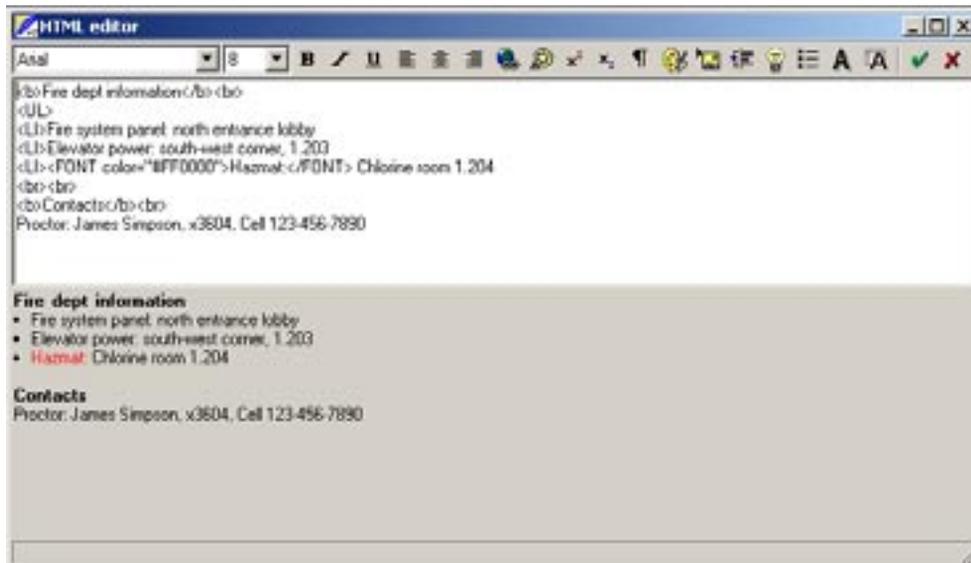
- ⑥ For convenience, a location may belong to one or more ‘location groups’. We’ll explain about groups in the *Location groups* section below. When you are in edit mode, a location may be added to a group by clicking and dragging the group from the right list to the left list. It may be removed from a group by clicking and dragging the group from the left list to the right list.
- ⑦ Click the **Premise log** tab to view or edit a prem-

ise log for the current location. A premise log contains information about the location, which can be made available to dispatchers or other staff. For example, a premise log might contain a list of fire panel locations, hazardous materials information, or building contacts/proctors. To modify the premise log, be sure you’re in edit mode, then right-click on the premise log and choose **Edit premise log**.



The premise log editor is shown on the following page. Simply type text into the white area, and click the green ‘tick’ symbol to accept it.

Premise logs are written using HTML. Toolbar buttons at the top of the editor allow you to change colors, fonts, sizes, add bold/italic effects, create bullet lists and so forth. HTML is the same language used for the Web, so it’s also possible to copy and paste text created for a Web page using products such as Netscape Composer or Microsoft Front-Page. When you use HTML, the gray section at the bottom of the editor shows how the premise log will be displayed for users.



i The CLERK HTML editor does not understand all HTML commands. For example, you cannot include images or tables in a premise log at this time.

Location groups

If your department uses a large number of location codes, it could be helpful to form the locations into groups, for two reasons.

First, it can be easier to generate statistics.

Example: say you have a location code for each parking garage in your jurisdiction. To generate statistics for all parking garages, each of the locations corresponding to a parking garage would need to be selected. An easier way would be to create a location group called “parking garages” and add all the garage locations to the group. Then, to generate statistics,

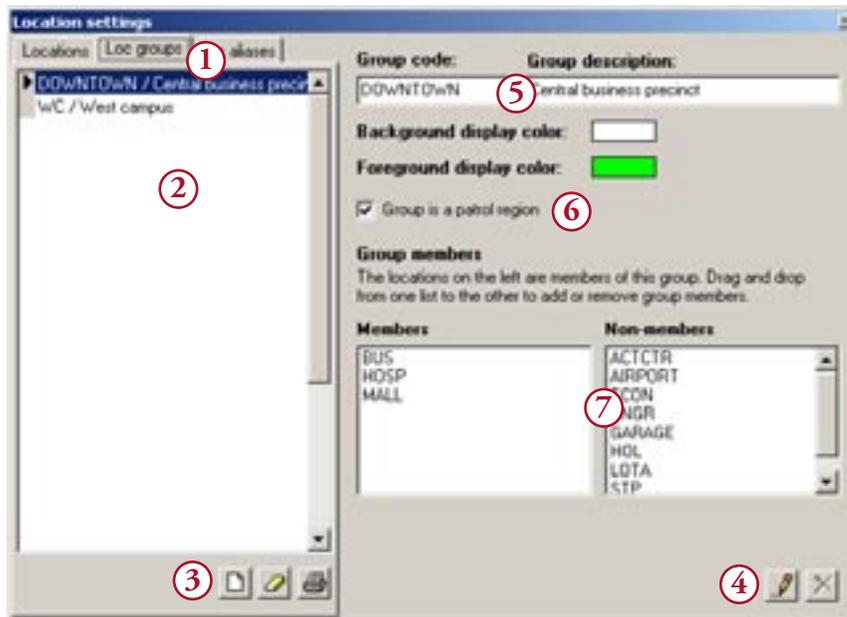
simply choose the ‘parking garages’ group rather than the individual locations.

Secondly, we designate some location groups as ‘patrol zones’. In the computer aided dispatch (CAD) module, we can assign a unit to a particular patrol zone, and the location of a call also be mapped to a patrol zone, thereby helping your staff dispatch the most appropriate unit to the call.

To access the location groups settings, click the **Loc groups** tab at the top of the location settings window, ①. A screenshot appears on the facing page.

② A list of the location codes currently stored in the system is shown at the left of the window. Click on a location code to view its details.

③ Use the **New** and **Erase** buttons to add and delete



location codes from the system, respectively. Use the **Print** button to print a list of location codes.

- ④ Once a location code has been entered into the system, it may be edited by clicking the **Edit** button. When you've finished editing, click the **Edit** button a second time to confirm your changes, or click the **Cancel** button to stop editing without saving the changes. You must finish editing one location code before moving to another.
- ⑤ Basic information about the location group appears here.
 - **Group code.** Create an abbreviation for the location group, containing up to eight characters.
 - **Group description.** A short title for the location

group.

- **Background/foreground display color.** When you choose to color code CAD calls by patrol region, these boxes specify the colors to be used. When in edit mode, click a color box to change it. If you choose not to color code CAD calls by patrol region, these settings have no effect.
- ⑥ Check the **Group is a patrol region** checkbox if this location group forms a patrol zone, region, or beat within your jurisdiction. Patrol regions have a special meaning in the CAD; it is possible to assign units to a patrol region, and identify which region new calls apply to.
- ⑦ When you are in edit mode, locations may be added to the location group by clicking and dragging the group from the right list to the left list.

A location may be removed from the group by clicking and dragging the it from the left list to the right list.

- i** A location should not belong to more than one patrol region. If it does, when CLERK resolves which patrol region the location belongs to, it will use the first one in the list.

Location aliases

Location aliases let you refer to one location using two different codes. For example, if one location changes its name, removing the old code from the system entirely may cause frustration to users. If you wish, you may create an alias for the old name and “reference” the new name.

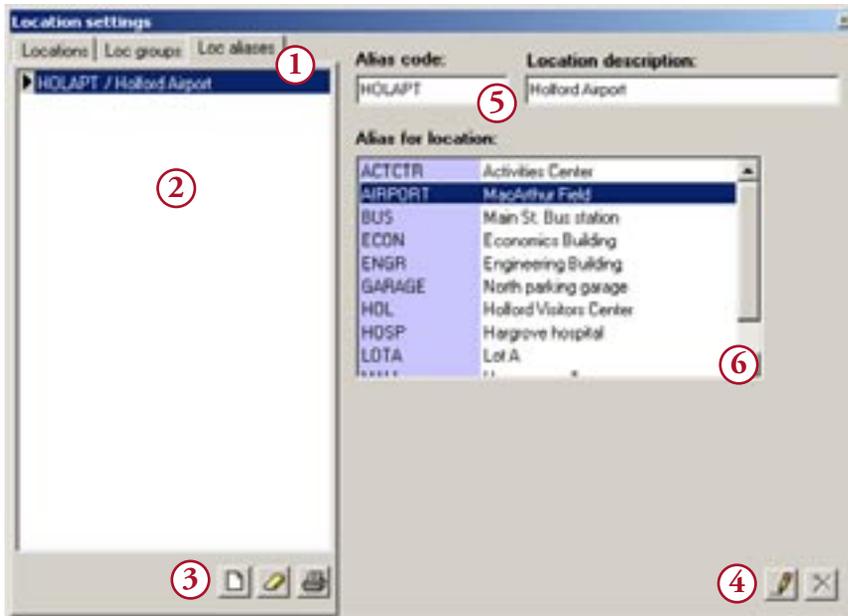
To access the location alias settings, click the **Loc**

aliases tab at the top of the location settings window,

1. A screenshot appears below.
- 2 A list of the location aliases currently stored in the system is shown at the left of the window. Click on a location alias to view its details.
- 3 Use the **New** and **Erase** buttons to add and delete location aliases from the system, respectively. Use the **Print** button to print a list of location aliases.

When creating a new alias, you’ll be asked for an alias code (described below) and also the code of an existing location that the alias should “reference”, or ‘point to’.

- 4 Once a location alias has been entered into the system, it may be edited by clicking the **Edit** button. When you’ve finished editing, click



the **Edit** button a second time to confirm your changes, or click the **Cancel** button to stop editing without saving the changes. You must finish editing one location alias before moving to another.

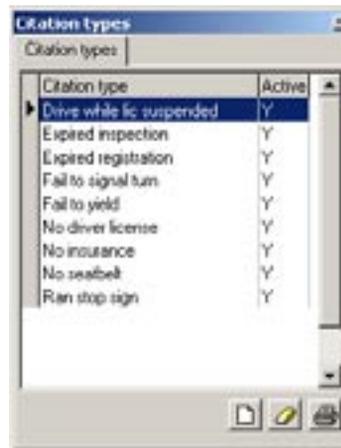
- ⑤ Basic information about the location alias appears here.
 - **Alias code.** Create an abbreviation for the location alias, containing up to eight characters.
 - **Location description.** A short title for the location alias.
- ⑥ Choose which location this alias should “reference”. When a user types the alias code or chooses the alias from a menu, CLERK will replace it with the location selected here.

Citation types

Citations may be issued for a variety of reasons, and not all departments issue the same types of citations. CLERK allows you to customize the list of citation types. To do so, choose the **Settings | Citation types** menu option.

A screenshot appears at the top of this page. Usage is very simple - click the **New** button to add a citation type, or select a citation type then click **Erase** to remove it. Clicking **Print** will send a list of citation types to the printer.

When a citation type is no longer required, you may elect to disable it rather than remove it from the system. To disable the currently selected citation type, right-click and choose **Toggle active/inactive**. The citation type can be made active again by

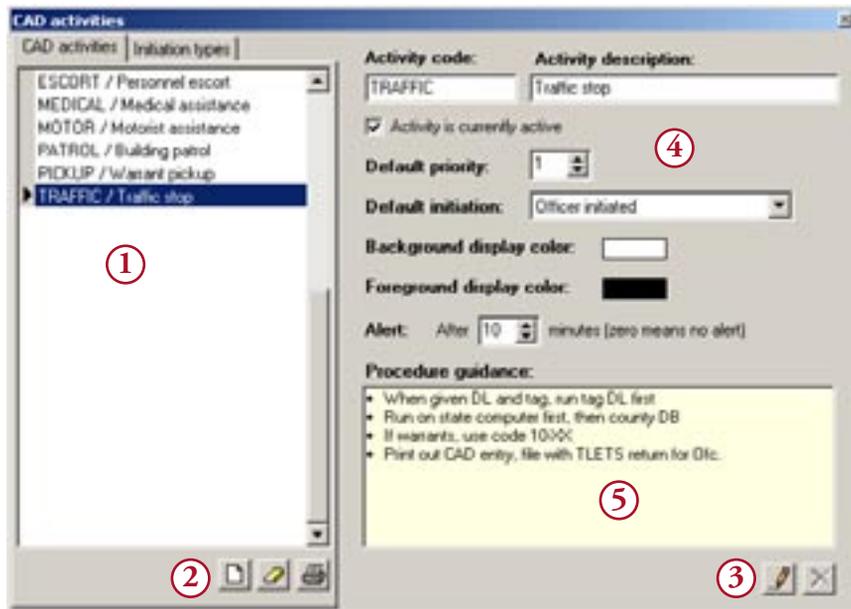


repeating the process. The **Active** column shows Y or N indicating that the citation type is enabled or disabled.

CAD activities

The list of ‘events’ that are tracked in CLERK’s dispatch (CAD) system may be completely customized to suit your department’s needs. Each ‘event’ to be tracked is called a ‘CAD activity’. To enter a list of CAD activities, select the **Settings | CAD activities** menu option. A screenshot appears on the following page.

- ① A list of the CAD activities currently stored in the system is shown at the left of the window. Click on an activity to view its details.
- ② Use the **New** and **Erase** buttons to add and delete CAD activities from the system, respectively. Use the **Print** button to print a list of CAD activities.
- ③ Once an activity has been entered into the system,



it may be edited by clicking the **Edit** button. When you've finished editing, click the **Edit** button a second time to confirm your changes, or click the **Cancel** button to stop editing without saving the changes. You must finish editing one CAD activity before moving to another.

④ Basic information about the CAD activity appears here.

- **Activity code.** Create an abbreviation for the activity, containing up to eight characters. Dispatchers may use this instead of choosing an activity from a pull-down menu.
- **Activity description.** A short title for the activity.
- **Activity is currently active.** Uncheck this box if the activity should not be used in future calls.

This is preferable to deleting the CAD activity outright. If an activity is erased, it may be difficult to generate statistics for that type of call.

- **Default priority.** Each call in the CAD is assigned a priority. You may choose to show the priority of active calls, or to color code calls by priority. In the CAD, when a new call is created with this CAD activity, it will be assigned the priority supplied here. Dispatchers can then raise or lower the priority as the call progresses. You should read the section on *CAD display settings* later in this chapter before assigning default priorities.
- **Default initiation.** When a new call is created with this CAD activity, the initiation type will be set to the value listed here. For example, traffic

stops are almost always officer initiated, so setting that as a default avoids the dispatcher having to type it into the CAD for each call. See the following section on *Initiation types*.

- **Background/foreground display colors.** If you choose to color code calls by CAD activity, the colors listed here dictate how a call with this CAD activity will appear. If you do not color code by CAD activity, these settings are ignored.
 - **Alert.** Each time a unit is assigned to a call, the CAD starts a timer. CLERK checks the CAD activity for the call, and looks up the alert time shown here. When the unit's time on call exceeds the alert time, CLERK's CAD module will alert the dispatcher. Alerts may be audible or visual (see the *CAD display settings* section of this chapter). Setting this value to zero means no alert will be generated no matter how long the unit has been assigned to the call.
- ⑤ Procedure guidance can give dispatchers precise instructions for dealing with each type of CAD activity. Guidance can either be shown on demand, or can be made to “pop up” automatically when a CAD activity is typed. To set the procedure guidance, make sure you're in edit mode then right-click on the yellow area. Choose **Edit procedure guidance**. The steps for editing are the same as those found in the *Locations* section earlier in this chapter.

Initiation types

CLERK's CAD system records how each call was initiated. We call the list of possible initiation methods

the ‘initiation types’. All departments will have Phone and Officer initiated as initiation types, and most likely several others.

To set the initiation types, click the **Initiation types** tab at the top of the CAD activity settings window. A screenshot appears below. Usage is very simple - click the **New** button to add an initiation type, or select an initiation type then click **Erase** to remove it.



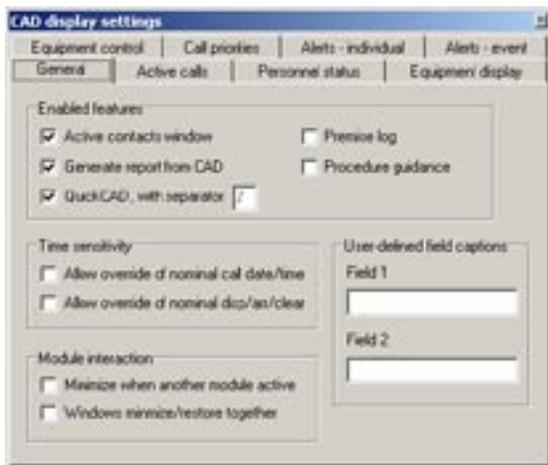
When an initiation type is no longer required, you may elect to disable it rather than remove it from the system. To disable the currently selected initiation type, right-click and choose **Toggle active/inactive**. The initiation type can be made active again by repeating the process. The **Active** column shows Y or N indicating that the initiation type is enabled or disabled.

CAD display

Choose **Settings | CAD display** to configure how CLERK's CAD system behaves.

 CAD settings are only read once, when the CLERK client starts. If you change the CAD settings, CLERK clients should be restarted for them to take effect.

General



Enabled features specifies whether or not certain CLERK features are active in the CAD.

- **Active contacts window.** If checked, dispatchers have the choice of entering contact details in a separate contacts window or via the main CAD window. If unchecked, all contacts must be entered in the main CAD window.
- **Generate report from CAD.** If checked, dispatchers may generate case report numbers from

within the CAD.

 Dispatchers must also have permission to create new case reports (see *Security settings* later in this chapter). Checking this option simply enables the reports to be created from within the CAD; it does not override the security settings.

- **QuickCAD.** If checked, text-based dispatching is enabled. See Chapter 5 for a discussion about QuickCAD. The character listed here is used as a separator between QuickCAD fields.
- **Premise log.** If checked, whenever a dispatcher types a location code in the main CAD window, the premise log entry for that location will be displayed. Even if this is unchecked, the dispatcher may still manually access the premise log information via the **Modules | CAD** menu.
- **Procedure guidance.** If checked, whenever a dispatcher types a CAD activity code in the main CAD window, the procedure guidance entry for that activity will be displayed. Even if this is unchecked, the dispatcher may still manually access the procedure guidance information via the **Modules | CAD** menu.

Time sensitivity specifies how much flexibility dispatchers have in overriding times generated by CLERK.

- **Allow override of nominal call date/time.** When a call is created, CLERK always completes the date/time of the call with the current date/time. If this box is checked, users may edit the date/time generated by CLERK. The date/time

are referred to as 'nominal' because no matter what the user enters for the date/time, CLERK still makes a note (that cannot be modified) of the actual time the call was created.

- **Allow override of nominal disp/arr/clear.** If this box is checked, users may type any time for the unit dispatch, arrival and clear time. When unchecked, users can only click a **Now** button or press **ESC**, and CLERK fills in the current time automatically.

Module interaction describes how the CAD module interacts with other module windows.

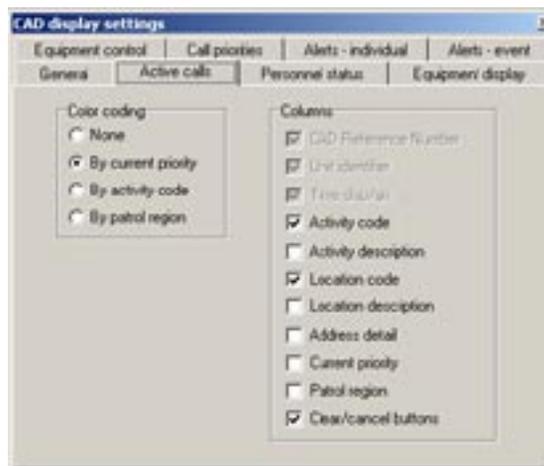
- **Minimize when another module active** means that all CAD windows are minimized (shrunk) when another module window is made active.
- **Windows minimize/restore together.** There are several different CAD windows. Checking this box means that when one CAD window is minimized, any other open CAD windows are also minimized. Similarly, if a CAD window is restored (un-minimized), any other open CAD windows would also be restored.

User-defined field captions are labels shown next to custom fields in the main CAD window. You may define up to two custom fields. If the custom field captions are blank, the custom field will not be visible.

Active calls

Color coding specifies how calls in the Active Calls window are to be color coded.

- **None:** all calls appear as black text on a white



background.

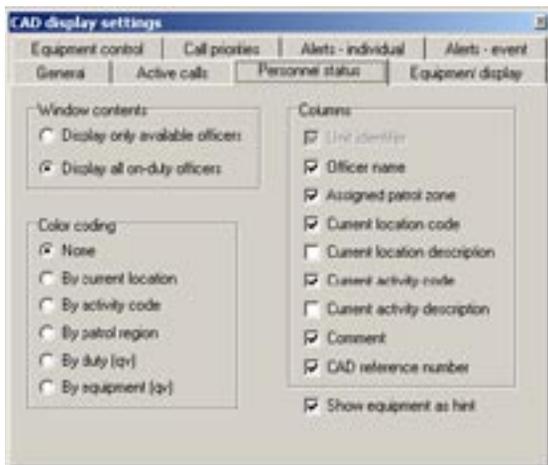
- **By current priority:** The colors specified on the **Call priorities** tab are used to color code each call.
- **By activity code:** Colors specified in the CAD activity settings are used to color code each call based upon the CAD activity.
- **By patrol region:** Colors specified in the Location settings are used to color code each call based upon the patrol region the unit is assigned to.

Columns specifies which columns should appear in the Active Calls grid. The meanings are self-explanatory.

Personnel status

Window contents specifies whether the Available Units grid shows all on-duty units, or only those available to be assigned to a call.

Color coding specifies how calls in the Available



Units window are to be color coded.

- **None:** all calls appear as black text on a white background.
- **By current location:** CLERK determines which patrol region corresponds to the current unit location, and color codes accordingly. The colors for the patrol region are set in the Location settings.
- **By activity code:** Colors specified in the CAD activity settings are used to color code each call based upon the CAD activity. Units not assigned to a call are colored black and white. This option is only applicable if the 'Display all on-duty officers' option is selected.
- **By patrol region:** Colors specified in the Location settings are used to color code each call based upon the patrol region the unit is assigned to.
- **By duty:** CLERK searches the color codes of the duties each unit is assigned to, and color codes according to the first one that isn't black and

white.

- **By equipment:** CLERK searches the color codes of the equipment that has been checked out to each unit, and color codes according to the first one that isn't black and white.

i Practically, this means you should decide how you're going to color code, and then only assign colors where necessary. Leave the colors black and white for an entry if you're not color coding by it.

Columns specifies which columns should appear in the Available Units grid. Most of the meanings are self-explanatory, although we can note:

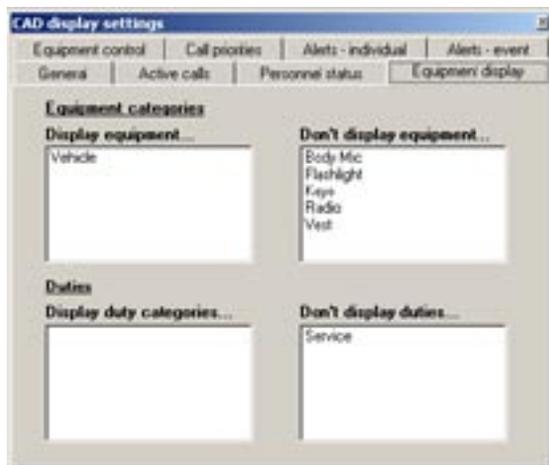
- **Comment.** CLERK allows you to type a comment for each unit. For example, if they are briefly out of service you could describe the reason. Comments are not logged and typing a new comment overwrites the previous one.
- **Show equipment as hint.** If you check out several items of equipment to each officer, there may not be enough space to display a column for each in the Available Units grid. An alternative is to check this option. When checked, if you move the mouse over a unit in the Available Units grid and leave it still for about half a second, a box will appear showing the equipment status of the unit



(see screenshot on previous page). The box goes away when you move the mouse.

In addition to the columns selected here, equipment and duty columns can also be displayed, as specified on the **Equipment display** tab.

Equipment display

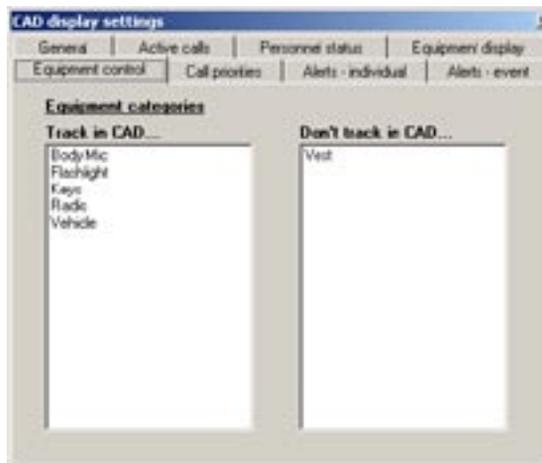


CLERK can display equipment and duty columns in the Available Units window. To display an equipment category or duty as a column, click and drag it from the right list to the left list. To remove a column, click and drag it from the left list to the right list.

Equipment control

In CLERK, equipment is issued for either the short term or the long term. We define 'short term' as being for the duration of a shift or less. Anything more is considered 'long term'.

Regardless of their security privileges (see the *Security*



settings section of this chapter), each dispatcher is able to check out and mark returned any equipment that is considered 'short term'. This might include vehicles, keys, body microphones, etc.

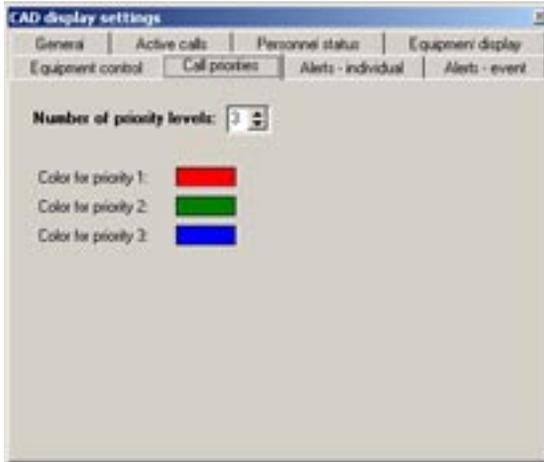
Dispatchers can only check out or mark 'long term' equipment as returned if they have the security permission to do so, and it must be done in the **Equipment** module.

Therefore we say that 'short term' equipment is tracked in the CAD. To designate an equipment category as 'tracked in the CAD', go to the **Equipment control** tab. Drag all the equipment categories to be tracked from the right list to the left list.

- i** When an officer is marked off duty, all short term equipment currently issued to them will be marked as returned.
- i** Equipment may only be checked out to one officer at a time. If dispatchers check out equipment to one officer when it is currently

checked out to another, CLERK first marks it as returned from the current officer before checking it out.

Call priorities



Each call in the CAD is given a numeric priority. One is the highest priority possible, and nine is the lowest.

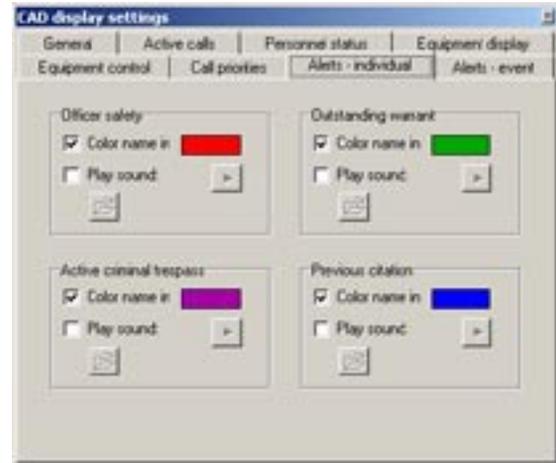
Most departments will not need nine priority levels. Choose the number of levels you wish to use under the **Call priorities** tab.

You can also set a color for each priority level. If you choose to color code calls by priority in the Active Calls window, the colors listed here will be used for the text (the background is always white when color coding by priority).

To change a color, click once on the colored box. You may choose from a list of 'standard' colors, or create custom colors.

Dispatchers may raise or lower the priority of a call in real time. The initial priority of a call is determined by the CAD activity for the call (see the *CAD activity settings* section of this chapter).

Alerts - individual



Each time a name is entered into the CAD system, CLERK scans the names database to see if a matching name already exists. If so, CLERK displays a confirmation box on the screen. The mere fact that a confirmation box appears indicates some type of previous contact with the individual.

However, it is often useful to know something more about the individual. CLERK can generate audible or visual alerts when

- The 'officer safety caution' for an individual is set.
- There is an active warrant in the CLERK system.
- There is a current criminal trespass.
- A citation has previously been issued to the indi-

vidual.

i Individual alerts are not triggered in the main CAD window. Names must be entered in the Active Contacts window, or using QuickCAD.

⬮ If an alert could be triggered for more than one reason, CLERK selects the ‘most serious’ reason. The above list is ordered from most to least serious.

Following an alert, the dispatcher can view the individual’s information in other modules (**Names**, **Warrants**, **Citations**) to find more details.

To create a visual alert, check the **Color name in** box, then click the color bar to the right of it and select a color. When an alert is triggered, the individual’s name will be displayed in the selected color.

To create an audible alert, check the **Play sound** box. Then click the **Open file** button below it. Locate a sound file on your computer’s hard disk. When you choose the file, it will be uploaded to the CLERK server. You may test the sound by clicking the **Play** button. Each time an alert is triggered, the sound you specified will be played.

i The sound file is stored on the CLERK server. It does not need to be copied to each dispatch computer.

i Sound files must be stored in the WAV format. You can record sounds and save them as WAV files using built-in features of Microsoft Windows.

Alerts - event



CLERK can display audible or visual alerts when either of two events occur:

- A new call is created with an unassigned unit. This event is mostly applicable in a multi-station dispatch environment, where one dispatch station may need to be alerted about the actions of another dispatcher.
- A call time limit has been exceeded. In the *CAD activity settings* section of this chapter, we described how it is possible to set an ‘alert time’ for each type of CAD activity. When a unit has been assigned to a call for an unusually long time, an alert is triggered in CLERK warning the dispatcher of this fact.

The method of adding alerts for either of these two events is identical.

To add a visual alert, check the **Blink active call line** box. This will invert the colors used to display

the call in the Active Calls window. For example, if a call is normally displayed as blue text on a white background, it becomes white text on a blue background, and back again. The colors reverse about every second.

After enabling the visual alert, you may choose the duration of the alert. **Until acknowledged** means that the call will blink until the dispatcher clicks once on the call in the Active Calls window. **For x seconds** will stop the alert automatically after the nominated time.

To enable audible alerts, check the **Play sound** box. Then click the **Open file** button below it. Locate a sound file on your computer's hard disk. When you choose the file, it will be uploaded to the CLERK server. You may test the sound by clicking the **Play** button. Each time an alert is triggered, the sound you specified will be played.

-  The sound file is stored on the CLERK server. It does not need to be copied to each dispatch computer.
-  Sound files must be stored in the WAV format. You can record sounds and save them as WAV files using built-in features of Microsoft Windows.

You may specify how often a sound is played. **Once** plays the sound once no matter how long the alert condition persists. **Every x seconds** will repeat the alert sound at the specified interval until the reason for the alert goes away.

Case report handling

Case report appearance and security are controlled in the **Case report handling** settings.

Editing/approval

CLERK uses a system of “security levels” to achieve case report security. At any given time, a case report will have a security level of zero through nine (although most departments will not use more than two or three levels). For those with military backgrounds, you could think of these numbers as representing “security clearances”. Zero is void, one is “confidential”, two is “secret”, three is “top secret” and so on.

This system is more complex than CLERK 1, where a report was either ‘approved’ or ‘not approved’. However, it also provides your department with much more flexibility concerning “who can do what” to a case report.

You may set four “security clearances” for each CLERK user under the Editing/Approval tab. A screenshot appears on the opposite page.

- **Reports created have security level...**
If the user has permission to create new case reports, they will start out with this security level. In most cases, you'll set this to one.
 Set this number to at least one. Otherwise the report is considered “void”.
- **User may view reports with security level...**
The selected user may only view case reports with



a current security level of this number or less. Otherwise (i.e. the case report currently has a security level greater than this number), the case report is completely invisible to the user.

When a report is invisible to a user, they cannot see it in the **Case Reports** module. It also does not show up in statistical reports (e.g. get counted for UCR). For users who generate important crime statistics, make sure their security clearance allows them to view all relevant case reports.

A user's "view clearance" should be at least equal to the level their reports are created at. Otherwise, they cannot view reports they created!

- **User may edit reports with security level...**
The selected user may modify a case report if

either of two conditions is satisfied: (a) the current security level of the case report is less than this "edit clearance", or (b) the selected user is the "owner" of the case report and the report's current security level equals the "edit clearance".

- **User may approve reports with security level...**
The selected user may change the security level of a case report if its current security level is this number or less. Changing the security level of a report alters who is able to view/edit the report, which is the same as "approving" the report.

If the supervisor requires changes to a report after it has been 'approved' they are able to decrease the security level of the report so that an officer regains the ability to edit it. The ability to *increase* the security level also means the ability to *decrease* security level of a case report.

If a user other than the officer who wrote the report needs to make changes (e.g. a records clerk), there are two approaches: (a) that user could be given a higher “edit clearance” allowing them to modify reports marked as ‘approved’ by supervisors; or (b) give that user the same “edit clearance” as an officer; when changes to an approved report are required, the supervisor would decrease the security level and change the ‘owner’ of the report to the records clerk. This way, the report must be ‘re-approved’ after modification.

i A user may not increase the security level of a case report beyond their “approve clearance”.

Remember, the report handling arrangements appear complex, but applying them is simple. Let’s consider a case study of a typical small department. Most departments using CLERK will be very similar to the case study.

Case study. Consider a small department with three officers, one sergeant (supervisor), one chief, and a records clerk. They want the case report security to work as follows:

- Any officer can create a case report, and view any case report in the system.
- The supervisor should be allowed to approve case reports written by the officers. Once approved, the officers should not be able to modify the report.
- For reports pending approval, only the officer who wrote the report should be able to modify it (not other officers).
- The records clerk should be allowed to modify all case reports, whether they are approved or not.

Solution. This example department will use three security levels.

- All officers create reports at level one.
- All users can view reports that are level three or less, i.e. all reports in the system.
- The “edit clearance” of the officers should be set to one, i.e. edit reports at level one or less.
- The “edit clearance” of the records clerk should be set to three (setting it to two would only allow them to edit approved reports they “owned”).
- The supervisor should be allowed to approve reports at level two or less.

Copies to

For each case report, it is possible to specify who received a copy of the report. The list of possible recipients is called the “copies to” list. It may be customized under the **Copies to** tab of the **Settings | Case report handling** window.

A screenshot appears on the following page. Usage is very simple - click the **New** button to add a recipient, or select a recipient then click **Erase** to remove them from the list.

When a recipient is no longer required, you may elect to disable their entry rather than remove them from the system. To disable the currently selected recipient, right-click and choose **Toggle active/inactive**. The recipient can be made active again by repeating



the process. The **Active** column shows Y or N indicating that the recipient is enabled or disabled.

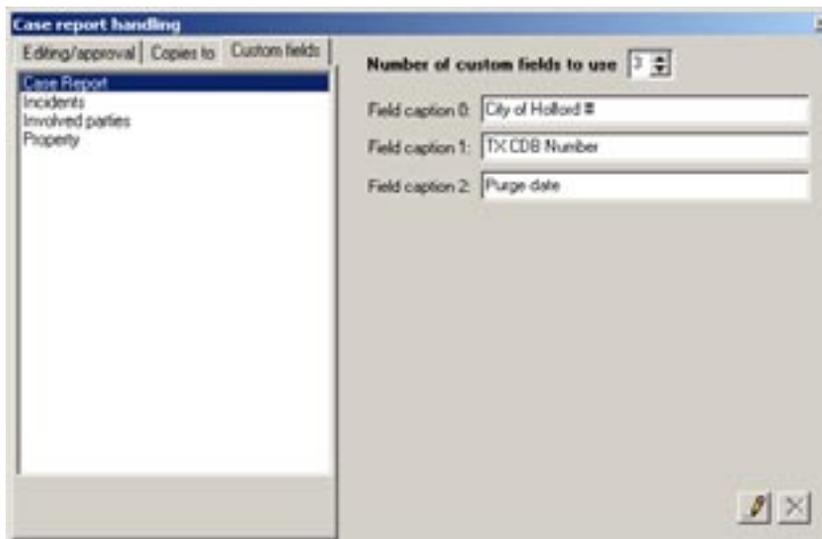
Custom fields

Although you cannot remove or change the existing case report fields, it is possible to add your own “custom fields”. Each custom field allows you to store up to 64 characters of text. Custom fields can be used to store any information your department wishes to track that cannot be stored in one of the existing fields.

You may add up to ten custom fields to the case report itself (i.e. on the cover page). You may also add ten custom fields for each incident, involved party, and property segment.

To configure the custom fields, use the **Custom fields** tab of the **Settings | Case report handling** window. A screenshot appears below.

The list on the left shows the case report “pages”.



Click a page to see a list of custom fields for that page. To begin with, the number of custom fields will be zero. Click the **Edit** button in the bottom right of the window to change the number of custom fields on the selected page.

When you've selected the number of fields, enter their captions. The caption is a label which the user sees to the left of the field. Avoid making it too long, because the size of the field in the **Case Report** module will shrink to compensate.

After you've finished editing, click the **Edit** button to save your changes. To stop editing without saving your changes, click the **Cancel** button.

Clery Act reporting

The Clery Act (formerly the Campus Security Act) requires colleges and universities to report crime statistics to the federal Department of Education, and also make those statistics available to the public.

i Municipal agencies generally do not need to submit Clery Act reports, and may disregard these settings.

Reportable statistics include not only offenses handled by the police department, but also some student disciplinary actions which may be handled by the Dean of Students or reported to any other designated school official. Also, the Clery Act requires some crimes to be reported even when they do not occur on property owned by the school.

Complying with the Clery Act's reporting requirements is made simple with CLERK. Once the Clery

Act settings have been completed, Clery Act reports can be generated with the click of a button.

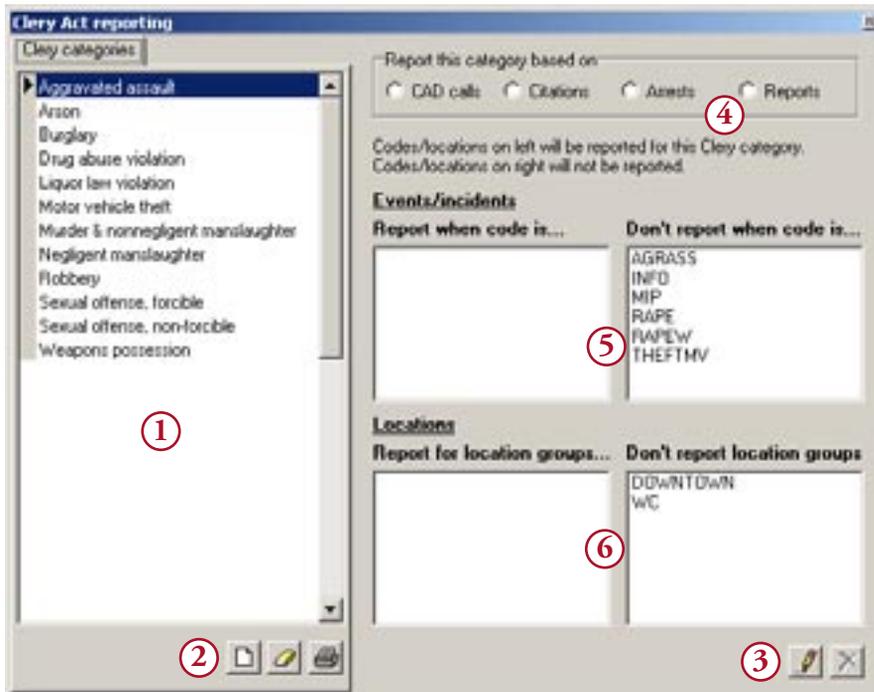
To set up Clery Act reporting, choose the **Settings | Clery Act** reporting menu option. The window that appears will be similar to the one in the screenshot on the facing page.

- ① A list of Clery Act categories is shown at the left of the window. Click on a category to view the settings for it.
- ② Use the **New** and **Erase** buttons to add and delete Clery Act categories. Use the **Print** button to print a list of categories.

In most cases, Clery Act categories only need to be added when legislation is revised. The ability to add categories means that you don't need to get a new version of CLERK each time the categories change. For instance, addition of fire alarm pulls as a category is being considered for 2003. If this change is approved, simply click the **New** button and add a fire alarm pull category.

- ③ Once a category has been entered into the system, it may be edited by clicking the **Edit** button. When you've finished editing, click the **Edit** button a second time to confirm your changes, or click the **Cancel** button to stop editing without saving the changes. You must finish editing one Clery Act category before moving to another.
- ④ CLERK allows you to generate Clery Act statistics for a given category from CAD calls, citations, arrests, or reports.

CLERK only checks the type of data you select. For



example, if you choose to report liquor law violations using arrest data, the following will not be included:

- Any CAD calls, including those related to parties, DUI, etc.
- Any citations, including MIP.
- Any case reports where the individual was not arrested, or not charged with a liquor law violation, even if the incident segment of the case report indicates a liquor law violation.

In short, choosing to report using arrests data means that liquor law violations recorded elsewhere in CLERK are ignored. This restriction is necessary to avoid counting statistics twice (e.g. an individual is

issued a liquor law citation and then arrested).

- 5 A list of codes will appear in the box at the middle-right of the window. The codes will depend on the selection in 4. For CAD, a list of CAD activity codes will appear; for citations, a list of citation types will appear; for arrests or case reports, a list of incident codes will appear. Choose which of these codes are “reportable incidents” as far as the Clery Act is concerned. Click and drag the reportable incidents from the right list to the left list.

- i Depending on the selection in 4, “one incident” means either (a) a CAD call with a

matching activity, (b) a case report incident segment with a matching incident, (c) a citation where the “issued for” field contains a matching citation type, or (d) an arrest charge with a matching incident code. Thus a case report with two “assault” incident segments would count twice on the Clery Act report.

- ⑥ Not all the locations stored in your CLERK system may be reportable for the Clery Act. Click and drag locations from the right list to the left list if they are reportable.

System settings

Various miscellaneous system settings may be accessed via the **Settings | System settings** menu option.

General

- **Department title.** The department title appears at the top of most CLERK printouts, including case reports.
-  Your license key is linked to the department title. If you alter the department title, your license key may become invalid and you will need to contact Terrier Technologies for a new one (see Chapter 8).
- **Department subtitle.** The subtitle generally appears on a second line below the department title on printouts. For example, if your department title is “City of Somewhere”, the department subtitle may be “Police Department”.
- **Users must change password.** If checked, users

will be forced to change their password periodically as a security measure.

- **Disable connection settings.** Prevents users from choosing the **Settings | Connection settings** menu option. This prevents them from “accidentally” changing the location of the CLERK server so that they are unable to log on.

Data entry

- **Height units.** Specify whether heights are stored in feet and inches, or in centimeters.
- **Weight units.** Specify whether weights are stored in pounds or kilograms.
- **Date format.** Specify the format for date entry. CLERK uses the standard Windows syntax for specifying the date format. Basically: *dd* indicates a two-digit date, *mm* indicates a two-digit month, *mmm* indicates a three-letter abbreviation for the month, *yy* indicates a two-digit year, and *yyyy* indicates a four digit year.

 We advise you not to change the date format without good reason. If you change the format, you may need to enter the full date, because CLERK could have difficulty “auto-completing” dates in a different format than the default.

 This format is used for date *entry fields*. Some date displays in CLERK (such as timestamps) use specific date formats based upon Control Panel settings on the server, that cannot be modified within CLERK.

- **Use ZIP code lookup.** Check this box to

have CLERK look up a city and state when a ZIP code is entered. If checked, specify the name of the ZIP code datafile on the CLERK server. By default, this will be `C:\Program Files\Terrier Technologies, Ltd\CLERK\Database\Zip.gdb`.

- **Default state/province.** If a “state” field is omitted when entering a vehicle tag or driver’s license, it will be set to this value.

Case reports

- **Case number format.** CLERK allows you to choose how case report numbers should be formatted. You specify the case number format using a special syntax. When CLERK generates a case report number, it looks at the case number format and replaces certain letters, as described in the table on the following page.

The letter *e* is used to separate the syntax into three parts. The first part (i.e. to the left of the first *e*) must not contain any references to the supplement number (*ss*) or suspect suffix (*aa/AA*). This bit is generated for *all* case report numbers.

The remaining two parts are separated by a letter *e*. One bit will contain *s*’s and tells CLERK how to add a supplement number. The other bit tells CLERK how to print a case report number when you tag a suspect as primary (if your D.A. requires this).

Let’s consider several examples.

Example #1. For syntax `yy-nnnnnne-sse`, example case report numbers are: 01-000001, 01-000002, 01-000003. When you generate

supplements for the first case, they will be numbered 01-000001-01, 01-000001-02 and so on.

Example #2. For syntax `yyyy-nnnne-sseAA`, example case report numbers are: 2001-0001, 2001-0002, 2001-0003. When you generate supplements for the first case, they will be numbered 2001-0001-01, 2001-0001-02 and so on. When you assign a suffix to suspects, the choices will be AA, AB, AC and so on. When a case report is printed with one suspect tagged primary, the case number will look like 2001-0001AA for the first suspect, 2001-0001AB for the second suspect and so on.

Example #3. Syntax `UPD-yy:ww-nnnne-sse/A` demonstrates how other letters can be included in the syntax. Example case report numbers are: `UPD-01:01-0001`, `UPD-01:01-0002` and `UPD-01:01-0003`. Supplements for the first report would be numbered `UPD-01:01-0001-01` and so on. When printing a case report with the first suspect tagged primary, the number would look like `UPD-01:01-0001/A`.



Decide upon a case numbering syntax and stick to it. If you change the numbering syntax, reports that have already been generated are not renumbered.



Case reports are sorted alphabetically or numerically. Locating a report will be extremely difficult if you put the date before the year or month.

- **Next sequence number.** Allows you to override the next sequence number CLERK will use when it

CLERK case report numbering syntax	
Letters in case number format	CLERK replaces with...
YY	The two-digit year, e.g. 01, 02, 03.
YYYY	The four-digit year, e.g. 2001, 2002, 2003.
mm	The two-digit month, e.g. 01, 02, 03.
mmm	A three-letter month abbreviation, e.g. Jan, Feb, Mar, Apr.
MMM	Same as mmm but in uppercase, e.g. JAN, FEB, MAR, APR.
dd	The two-digit day of the month, e.g. 01, 02, 03.
ww	The two-digit week of the year, e.g. 01, 02, 03. A week starts on a Sunday and week number one is the week containing 1/1.
nnnnnn	A sequence number. CLERK will automatically reset the sequence number to one when the year changes; you cannot change the reset period (e.g. to monthly). The number of n's indicates the number of digits in the sequence number. For example, nnnnnn will generate a six-digit sequence number, 000001, 000002, and so on.
ss	A supplement sequence number. The first supplement for each case report will be 01. The number of s's indicates the number of digits in the supplement number.
aa	A suspect suffix. The number of a's indicates the number of digits in the suffix. If there are four suspects in a particular case report, the suffixes will be 01, 02, 03 and 04.
AA	Same as aa but using letters instead of numbers. The number of A's indicates the number of characters in the suffix. If there are four suspects in a particular case report, the suffixes will be AA, AB, AC and AD.
e	A separator.
Other characters	Repeated verbatim in any case report number CLERK generates.

generates a case report number.

- **Agency ORI.** Can be printed on case report forms.

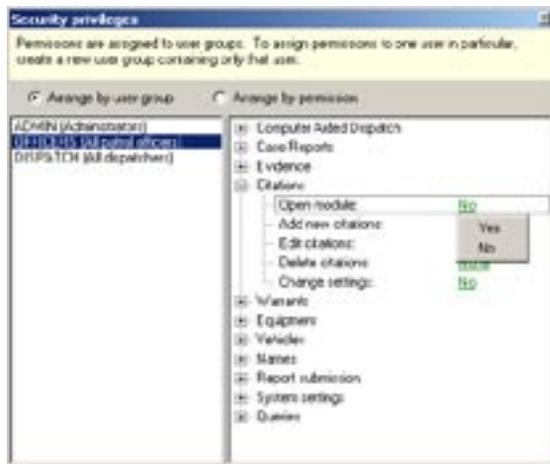
CAD and UCR

- **Agency and preparer names.** Are printed on UCR forms.
- **Next CAD sequence number.** Allows you to

override the next sequence number CLERK will use when it generates a CAD number.

Security privileges

CLERK gives you precise control over what each user can and cannot do while logged on. These security



privileges are granted using the **Settings | Security privileges** menu option. A screenshot appears below.

To assign a privilege, first choose a user group from the list at the left of the window. Any privileges granted to a group are granted to all users who are members of that group, allowing you to easily assign privileges to many users at once.

Next, click the 'plus' symbol next to the module or topic you wish to assign privileges for. This causes the privilege options for that module to be displayed. In our screenshot, the **Citations** privileges are being displayed.

To change a setting, click once on the privilege; an

outline will appear around it. Then, click on the underlined green text. A menu will appear and you may select the new privilege. In our screenshot, we selected the **Open module** privilege which is currently set to **No**, meaning the officers group may not open the **Citations** module. By choosing **Yes** from the menu, we would grant members of the officers group access to the **Citations** module.

The meaning of each security privilege is self-explanatory.

Instead of viewing all the privileges for a user group, we can click the **Arrange by permission** button to view all the groups that have a particular permission. The options and method of operation are just the same; it is simply a different way of presenting the information.

- i** A user is granted a permission if any of the groups they belong to have the permission. Example: Say a user belongs to more than one user group, and the first group has been granted a certain permission, but the second group has not. In such situations, the user *would* be granted the permission.
- i** Users who are connected when their privileges are changed should log off and on again. Some privileges are only checked when users log on.
- i** Saving permissions can take several seconds. The more users there are, the longer it will take.



Plugins

Your CLERK system may be expanded by installing *plugins*. Plugins can add new modules, state-specific forms, and so on. CLERK is supplied with a parking plugin (described in a separate manual). Other plugins may be available for download from the Terrier Technologies Web site, <http://www.policedata.com>. We also offer a plugin design service.

Before any plugin can be used in CLERK, it must be registered. Registering “authorizes” use of a specific plugin. This prevents people inside or outside your department from creating malicious plugins designed to harm the CLERK system.

To register a plugin, use the **Settings | Plugins** menu option. A screenshot appears above. Click the **New** button and locate the plugin file. That’s it! The plugin has been registered.

If the plugin uses a datafile, you may click the **Edit** button and enter the name. Documentation for the specific plugin will describe in more detail what to enter.

To unregister a plugin, select it from the list at the

left of the window, and click the **Erase** button.

- i** When plugins are loaded, CLERK checks certain characteristics to make sure they do not contain viruses. This means that if you obtain a new version of a plugin, you must unregister and then register it again.
- i** Remember that this manual only teaches you how to register a plugin, not how to use it. Separate documentation will accompany each plugin.
- i** Plugins are files on the client’s hard disk. The files are not stored on the CLERK server. Thus, a plugin should be copied onto each client computer from which it is to be used.

10 Chapter

Maintenance

Just as you maintain your car to keep it in running condition, proper maintenance of your CLERK server will help ensure problem-free operation. We suggest that CLERK administrators familiarize themselves with this chapter before storing large amounts of critical data.

Data integrity

If your department already stores essential records electronically, you understand that loss of your data would be a catastrophe. Integrity means ensuring that once information is entered, it can be reliably retrieved at a later date.

Apart from deliberate damage to your server by malicious hackers (discussed under *Security considerations* in Chapter 8), there are three major causes of data loss: human error, environmental influences, and routine hardware failure.

The best prevention for human errors is to ensure that users only have the security privileges necessary for them to perform their work. For example, in most cases, granting users the ability to delete records is not appropriate. Providing adequate training to users will help minimize the number of human errors, and backing up your data regularly will help ensure that you are able to recover from human errors when they do occur.

Environmental influences means power surges/failures, lightning strikes, floods and other such events. Generally, such contingencies are already planned for in department-wide policies and CLERK does not need special consideration. Terrier Technologies does recommend that you connect your server to an uninterruptable power supply (UPS). A UPS box will allow your server to remain operational through power outages, and will protect it from surges due to lightning. Even if your department has an emergency generator, a UPS often still prevents

hardware damage or down-time.

Your CLERK server will be running 24 hours a day, and eventually hardware components will fail. Components most likely to fail are those which have moving parts, such as the hard disk or the cooling fan. Often, such hardware failures can result in loss of data, and little can be done to prevent it. We recommend that:

- You back up the CLERK server regularly. Tape drives and writable CD's/DVD's are legitimate methods for backing up your data.
- You periodically run a utility such as ScanDisk to verify that the hard disk is not accumulating errors.
- You investigate using redundant hard disks in a RAID array (discussed in Chapter 8). This increases the cost of your server. We feel that, while this will be good for some departments, the cost-benefit for some smaller departments does not make RAID worthwhile, so discuss this issue with your IT department.

Performance and upgrading

As time goes by, you may become concerned that your server is getting “slow”. The primary reason for this is an increase in the volume of data which is stored in the server. As more data accumulates, previously simple tasks (like sorting names into alphabetical order) become more difficult for the server, and consequently it takes longer to respond. You can overcome such problems by

- Adding memory to the server

- Ensuring that the hard disk is not fragmented
- Archiving some data
- Upgrading the server

Memory. To begin with, 256 MB of RAM will provide a more than adequate performance. Once a large amount of data has been entered into the system, more and more of the RAM will be utilized by the server, eventually slowing down the server. Fortunately, this problem is easy to solve as RAM can be added to the server cheaply and incrementally as needed; costs fluctuate but generally run about \$0.15 per MB. We recommend using name-brand memory with the highest speed supported by your server (e.g. 133 MHz).

Fragmentation. After some time, a hard disk can become fragmented, meaning that data is no longer stored in an “ordered” way and appears to be randomly scattered across the disk surface. While all the data is safe, this phenomenon can decrease the performance of your server. Every several months, it is advisable to defragment your hard disk(s) using Windows’ hard disk tools. Note that this can take some time, and server performance will suffer while defragmentation is underway, so there is little benefit to doing this on a weekly basis.

Archiving data. With time, some data will become less important. For example, the average number of building unlocks that were performed per day five years ago might no longer be a critical statistic for your department. Often, some data can be backed up and then removed from the system. This process is called archival, and the fact that it reduces the

amount of data in the system will cause the server to respond faster. Archiving data is discussed in more detail below.

Upgrading the server. Adding memory and archiving records can only do so much to improve the speed of your server. Remember that it is fundamentally limited by the processor speed, hard disk speed, and so on. Eventually, a server which seemed blazingly fast will seem to be a tortoise when compared to newer technology. While a server should last for a number of years, you should definitely expect (and budget for) it to need replacing at some point.

Using IBConsole

IBConsole (short for InterBase Console) is a tool for performing administrative tasks on the CLERK server. Most notably, it allows you to perform backups of your server, and to modify large batches of data. For example, purging vehicle records with expired decals is easily done in IBConsole, or you could update the phone number in every name record to reflect a new telephone area code. When you request technical support from Terrier Technologies, we may ask you to “start IBConsole” and perform certain tasks.

Installing

By default, IBConsole is installed on the CLERK server along with the other server files. You may start it by going to the **Start** menu, choosing **InterBase** and then **IBConsole**.

To install IBConsole on another machine, insert the CLERK CD-ROM, and begin the server installation process (see Chapter 8). When asked the type of installation, choose **Custom**.



Deselect all options except **IBConsole**, and then proceed.

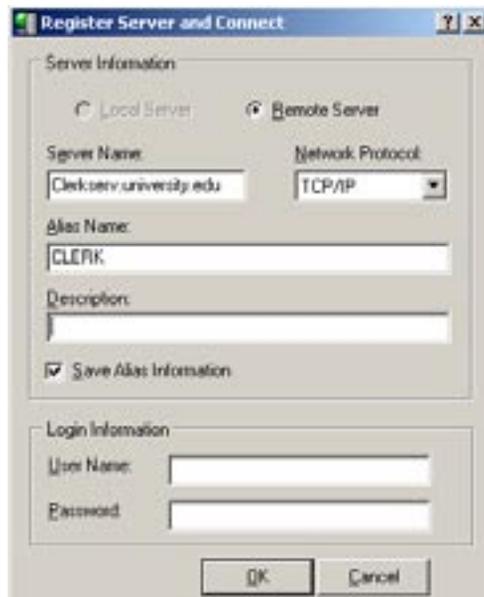


Registering

When IBConsole is started for the first time, you need to tell it where to find the CLERK datafile. This is known as “registering”, and it only needs to be

done once.

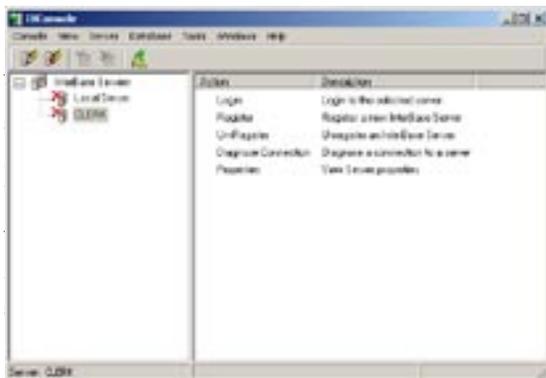
Choose **Server | Register** and the Register Server dialog will appear. Ensure that the Remote Server radio button is clicked.



- **Server Name.** If connecting using TCP/IP, this will either be the machine name (e.g. `clerk.serv.university.edu`) or IP address (e.g. `192.168.0.1`) of the CLERK server. If running a Windows network, this will be the server’s name (e.g. `CLERKSERV`).
- **Network Protocol.** One of TCP/IP or NetBEUI (Windows network).
- **Alias Name.** A nickname you give the server. For example, you might simply choose the nickname “CLERK”.

You can leave the remaining fields blank and click

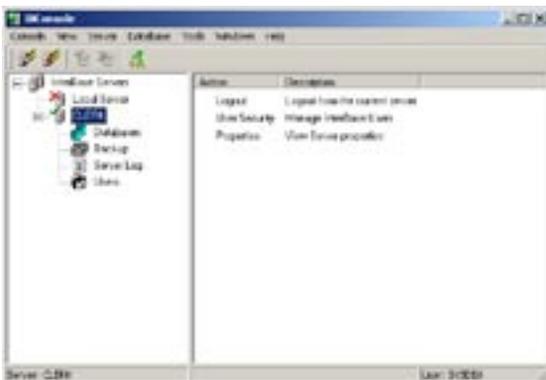
the **OK** button. The server alias will be added to the IBConsole window.



Remember that you only have to register the server once. Then, each time you start IBConsole, a window similar to the one above will appear.

The red cross next to the CLERK icon means that you're not currently connected. Double-click it to connect. You'll be asked for a user name and password. This is the same user name and password you'd enter in the CLERK client.

After successfully connecting, the red cross changes to a green tick mark.

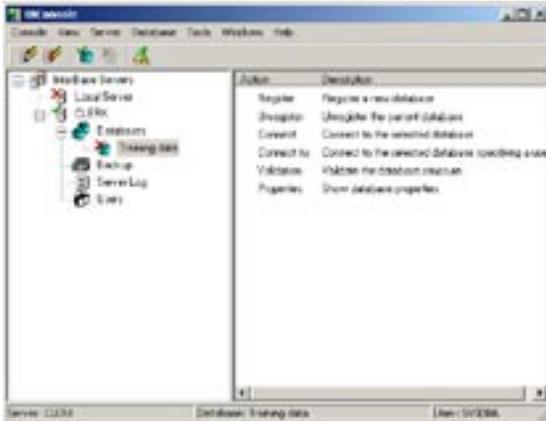


The **Databases** list shows all the CLERK datafiles which you've registered with IBConsole. You could have several datafiles on the server, e.g. for backups and training/sample data. To register a datafile, choose **Database | Register**. The Register Database dialog appears.



- **File** is the local path and filename of the datafile on the CLERK server. By default, this is C:\Program Files\Terrier Technologies, Ltd\CLERK\Database\CLERK2.GDB, but you may have chosen to override this when installing the server. You enter this same path and filename in the CLERK client's connection settings (see Chapter 8).
- **Alias Name** is a nickname for the datafile. For example, you might call the current datafile "Live-Data" and a training file "TrainingData".

You can leave the remaining fields blank and click the **OK** button. The datafile alias will be added to the IBConsole window under the server alias.



When you start IBConsole and connect to the server, the datafile will have a red cross next to it indicating that you have not connected to it. In order to perform tasks on a specific datafile, you must connect to it by double-clicking. The red cross changes to a green tick mark.



You're now ready to perform administrative tasks using IBConsole.

Backing up

As mentioned at the beginning of this chapter, your data is important, and a good backup strategy is vital to ensure that it is not lost in the event of catastrophes such as a hard disk failure. In this section, we help you design a backup strategy, and then teach you how to implement it.

Backup strategies

Good backup strategies balance the amount of effort spent backing up against the time and effort involved in replacing lost data. For example, it is hardly worth spending one hour backing up every day if all the day's data could be re-entered in 30 minutes.

Some of the key elements of your backup strategy should be:

- Have more than one piece of “backup media” and rotate between them. Using one tape or one DVD-RW for backup repeatedly means that if the media fails, your backup is no good.
- Store at least one backup in a different physical location. If the building is physically damaged (fire, water damage), any backup media stored on-site could suffer the same fate as the server.
- Perform backups regularly, we suggest no less than weekly.
- Perform a full backup of the entire server periodically, no less than every few months.

Let's take a second to consider the types of media you could use to backup your server.

- Network drives - copying from one computer to another across your network.
- LS-120 SuperDisks or ZIP disks - cheap and convenient, these will store the CLERK data for smaller departments for some time.
- CD-R/RW and DVD-R/RW - Can hold more data, but can also be slow.
- Tape drives - slow, but hold a large amount of data and can be re-used easily.

The option you select will depend upon your department's size and budget.

Let's also look at the types of backups you could perform.

- Copying the datafile. The simplest method of making a backup involves copying your CLERK 2 datafile (the file ending in .gdb) to another location. This can cause some records to be "half-updated" if users are making changes to the datafile while you copy it. Therefore, it is a good idea to make such copies during off-peak hours. Copying the datafile does not copy your user names and passwords.
- Backing up using IBConsole. We describe this in the next section. IBConsole will help you make a backup, and avoid the problems which occur when users try to modify the datafile during the backup. This method will save your user names and passwords, but not some of the IBConsole settings or operating system files.
- Full backup of the server. This involves copying the entire server hard disk. It is a good job for a

tape drive, and allows you to backup the Windows operating system as well as the CLERK data.

In a nutshell: We recommend doing a full server backup once every several months, backing up using IBConsole between weekly and monthly, and copying the datafile no less than weekly.

Performing a backup

In this section, you're taught how to perform a backup using IBConsole. For instructions on how to perform a full backup of the server's hard disk, you should consult the manual for your backup software.

First, connect to the server you wish to backup using IBConsole. A green tick mark will appear next to it. Next, right-click on the **Backup** icon and choose the **Backup...** option.



A backup window appears. Make the following selections.

- **Database alias.** Choose the alias for the datafile you wish to make a backup of.

- **Backup file server.** Leave this as your CLERK server (the default).
- **Alias.** Type a name for the backup, e.g. Training data backup, or to replace an existing backup, choose it from the list.
- **Filename.** The first time an alias is used, you also need to specify where it will be stored on the server's hard disk. Type the full pathname and a name for the datafile, e.g. D:\Data\CLERK\CLERKBU.GDB.



The options on the right can be left at their default values. These tell IBConsole what to do with data which a user modifies when the backup is in process.

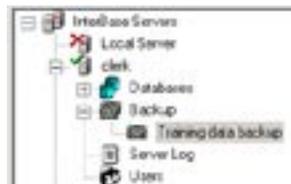
Finally, click **OK**. Backing up can take some time, depending on how much data is in the datafile.

Restoring a backup

In this section, you'll learn how to restore a backup made using IBConsole. To restore a backup of the entire server hard disk, consult the manual for your backup software.

First, connect to the server where the backup file is

located. Click the 'plus' symbol next to the **Backup** icon. This will show all the backups which have been generated using IBConsole as described in the previous section.



Double-click on the backup you wish to restore and a restore window appears.



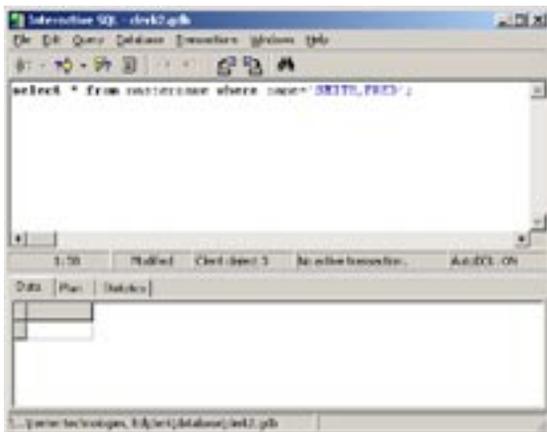
All the fields will be filled in automatically, so normally you only need to click the **OK** button. You only need to change the Database information in the bottom-left of the window if you don't want the backup to overwrite any information currently in the datafile (i.e. you wish to restore the data to a different location than the original).

Executing SQL commands

CLERK is a SQL database. This means database commands can be given to CLERK in Structured Query Language, or SQL.

If you call Terrier Technologies' technical support, you may be asked to type things into the "SQL editor". This section explains how to do it.

First, start IBConsole and connect to the CLERK datafile. A green tick mark appears next to the  datafile alias. Next click the **SQL** button on the IBConsole toolbar. This opens the **Interactive SQL** window.



Using the SQL editor involves typing a command in the top part of the window, and clicking the **Execute** (lightning bolt) button on the toolbar.

SQL commands can either (a) modify data, including adding or deleting; or (b) extract existing data from the database. In the latter case, the results will be shown in the bottom part of the window.

SQL scripts

Commands can become lengthy, and a convenient way to enter lengthy commands is to run a 'script'. Sometimes, Terrier Technologies will make SQL scripts available to you (e.g. via our Web site) for pur-

poses such as updating or improving the performance of your server.

How do you use an SQL script you've obtained?

First, open the SQL editor. Click the **Load SQL script** button.  Choose the script file, and the script will be loaded just as if you'd typed it. Now you can click the **Execute** (lightning bolt) button to proceed.

A word about SQL

SQL is an ANSI standard used in many database products. The fact that it is a standard means that someone knows how to use other SQL databases (e.g. Oracle or Microsoft SQL server) can also use InterBase/CLERK's SQL interface, and vice versa.

Thus, although it is not for the average user, learning SQL could prove a valuable skill. This manual doesn't seek to teach you SQL; there are plenty of other books already on the market for that purpose.

Since SQL is not for the average user, CLERK tries to shield you from the need to know *anything* about SQL. Knowing SQL is not essential to using CLERK, but it can give you the ability to generate more complex statistics and reports.

Archiving data

Earlier in this chapter, we stated that your CLERK server will become slower as the amount of data stored increases. An alternative to upgrading the server is to archive some data. Archiving means making a backup of less-important data, then removing that data from CLERK. For example, you

are unlikely to ever need the details of building locks/unlocks which occurred several years ago. By archiving the records to (say) a CD-R, they will not take up space in CLERK, but it will be possible to restore them if they are ever needed.

The easiest way to archive CLERK data is to copy the datafile, then delete all the unwanted records from the current datafile. At a later date, to access the archived records, simply connect to the archived datafile.

Because every department has different archiving needs, there is no single 'archive' command in CLERK. However, archive scripts and examples are available from the Terrier Technologies Web site.

Clearing the CLERK database

Once CLERK is up and running at your department, it is unlikely that you'll ever need to 'start fresh' with an empty datafile.

However, during the early stages, after you have finished 'experimenting' with CLERK, you may wish to clear out the database and start over. You may do this by copying the `clerk2.gdb` from the CLERK CD-ROM onto your server. Or, follow the procedure for installing the CLERK server, choose a **Custom** installation, and select only the CLERK datafile.

The process of transitioning from 'test' to 'real' data is discussed in the following section.

Creating training data

While training staff at your department, you may wish to use a 'training datafile' to avoid entering test records into your 'live' CLERK database. This is best accomplished by making a copy of the 'live' CLERK datafile after your department's preferences and settings have been entered (see Chapter 9). Doing so avoids any re-typing of location or incident codes.

Remember this general principle: once you copy a datafile, any further changes which must apply to both datafiles (original and copy) must be entered twice.

Copying connection settings

When installing the CLERK client on many computers, it can be inconvenient to start each copy and enter connection settings. Instead of entering the settings manually, you can follow this procedure:

- Enter the settings on one client in the usual way.
- Look in the Windows directory, e.g. `C:\Windows` for Windows 95/98 or `C:\WinNT` for Windows NT/2000. Locate the `CLERK.ini` file.
- Copy this file to the Windows directory on every other CLERK client computer.

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