

MasterMinder

Emergency Lighting Monitoring and Testing System

MLC User Manual



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Table of Contents

OVERVIEW OF MASTERMINDER MLC SYSTEM	3
SCU OPERATION	4
INSTALLING THE MASTERMINDER PC SOFTWARE	5
USER REQUIREMENTS	5
PC REQUIREMENTS.....	5
INSTALLATION	5
OPERATING THE PC SOFTWARE.....	6
INTRODUCTION	6
<i>Use without a mouse.....</i>	6
LOGGING ON.....	6
MASTER SCREEN	6
MASTER SCREEN - SITE DATA	7
MASTER SCREEN - MENUBAR	8
<i>File Menu.....</i>	8
<i>Disconnect/Connect.....</i>	8
<i>Edit Menu</i>	9
<i>Test Menu</i>	9
<i>Search Menu.....</i>	12
<i>Clock Menu.....</i>	12
<i>Setup Menu</i>	13
<i>Utilities Menu</i>	14
<i>Hold:.....</i>	16
<i>Dial Menu.....</i>	21
MASTER SCREEN - TOOLBAR	23
CONDUCTING A TEST.....	24
WHEN AND HOW TO TEST.....	24
INTERPRETING TEST RESULTS.....	24
LOGGING DATA.....	26
SITE INFORMATION.....	27

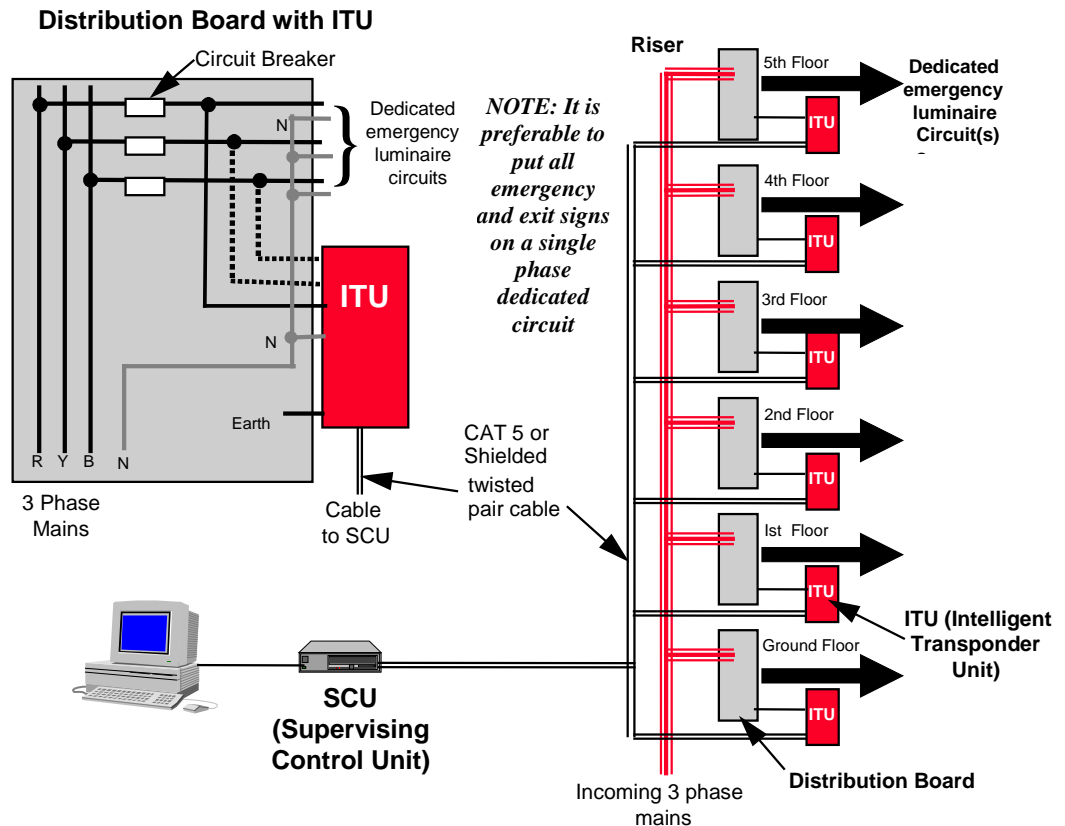
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Overview of MasterMinder MLC System

The MLC system utilises a 132kHz communications signal injected onto the mains cabling to communicate with the attached emergency luminaires.

Simple installations communicate between an SCU (Supervising Control Unit) directly to the emergency luminaires.

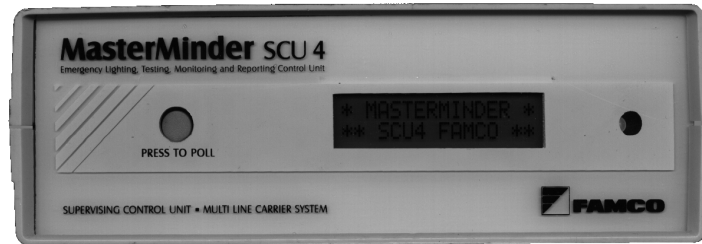


In normal installations ITUs (Intelligent Transponder Units) are added to facilitate communication. The SCU communicates with each ITU via a dedicated cable (see figure below). The ITUs utilise the signal injected onto the existing mains cabling to communicate with emergency luminaires. These fittings, each of which is uniquely numbered during commissioning, can be addressed individually, in groups or as a total system. Each fitting, after being addressed, sends data back to the SCU via the mains cable and appropriate ITU.

The MasterMinder software supplied with the system allows the user of an IBM compatible computer (PC) running Windows to install, test, and store data on the installed luminaires.

The PC can be connected directly to the SCU by the computer's serial port, network (using a device server) or via a modem and telephone line.

SCU operation



The SCU4 (pictured above) and MODEM equipped SCU5 function in a similar manner.

The SCU must be initialised using a computer and the supplied software. The number of installed fittings, time and date, and the ITU path for each installed luminaire are stored in the SCU.

Pressing the POLL button causes the SCU to check all fittings installed to locate fittings with faulty mains lamps or fittings not communicating. It will display the nature of the fault (not found or faulty lamp) for the first faulty fitting found. Pressing the POLL button again will enable the SCU to continue polling the remaining fittings.

The SCU4 will also display when a test is running and the test duration. At the completion of a test the following message will be displayed: TEST FINISHED RETRIEVE RESULTS. The SCU5 will additionally display REMOTE LINK IN PROGRESS when it is being accessed by a remote computer via modem.

Installing the MasterMinder PC Software

User Requirements

This user manual is written with the assumption that users are familiar with the Windows operating environment. The manual does not include instructions on the use of screens that are similar to standard Windows screens - such as file open, file save, print.

PC Requirements

PC running Windows 95, Windows 98, Windows 2000, Windows XP, NT, Vista or Windows 7.

Installation

The software is supplied on a CD Rom.



Ensure that there are no applications running (including MS Office).

Insert CD into the CD Rom drive.

Click on **START** and select **RUN**.

Type **D:\FAMCO 32BIT\SETUP** (replace **D** with the CD Rom drive letter) and follow the on screen instructions.

Note: *On some systems you may be required to re-start the Setup programme if the Setup programme re-boots the computer during installation.*

Operating the PC Software

Introduction

This manual is applicable to MasterMinder MLC systems with and without a MODEM interface. Information relating to MODEM (remote access) operation is only relevant to MODEM equipped SCUs. Options relating to remote access operations will not be displayed for systems without this facility.

The MasterMinder SCU operating software allows for connection of the computer directly to the SCU or connection via a suitable modem and telephone line.

The software allows the operator to commission a site and to conduct routine testing of the emergency luminaires on the site. Unless suitably trained, operators should only utilise commands relating to routine testing.

Use without a mouse

In some situations (one serial port without built in mouse/trackball or bus mouse) the software may have to operated without a mouse. The menu items can be selected by pressing ALT with the underlined letter in the menu name ie. ALT F will select the FILE menu. When a pull down menu has been selected and is displayed each item can be selected by using the arrow keys or by typing the underlined letter for the option that you want to select (*without* pressing the ALT key). For example, when the FILE menu is displayed pressing V will select View File.

Some frequently used commands in the TEST menu can be invoked by using function keys ie. F2 - MANUAL, F3 - COLLECT, F4 - ABORT.

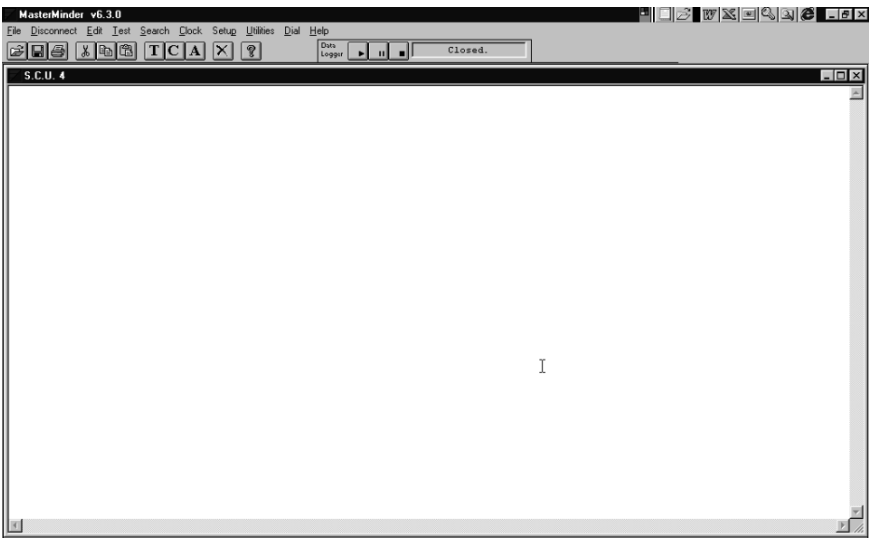
Logging On

After selecting and running the MasterMinder software a logon screen appears. Enter the password. The default password is 'FAMCO'. After logging on the system for the first time change the password using the *Password* option in the *Setup* menu (see Page 13).

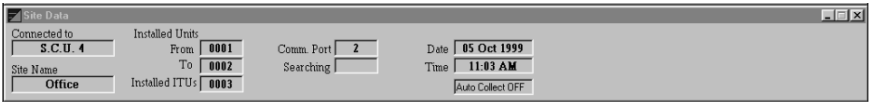
If this is the first time that the software has been used another screen will appear asking for the site location. Type this information in.

Master Screen

The following screen is displayed after logging into the system. Several items in the SITE DATA section will remain blank until the computer is connected to an SCU, either directly or via a modem. Several menu items will not appear or appear dimmed until connection with the SCU is made.



Master Screen - Site Data



The Site Data section of the Master Screen provides information about the site that is stored in the SCU.

- | | |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Connected to</i> | The SCU type that is connected, or a modem if connected. |
| <i>Site Name</i> | The site name that is stored in the SCU. (See <i>Utilities</i> menu) |
| <i>Installed Units</i> | The start number of the first (<i>From</i>) and last (<i>To</i>) luminaires installed. This can be some or all of the luminaires physically installed on the site. Physical luminaires with numbers outside the range displayed here will be ignored by the SCU. The installed units can be changed using the <i>Units</i> option in the <i>Setup</i> Menu. |
| <i>Installed ITUs</i> | The number of ITUs installed. This can be some or all of the ITUs physically installed. For example, if there are 4 physical ITUs installed on a site and only 3 displayed here then the SCU will ignore ITU number 4. The number of installed ITUs can be changed using the <i>ITUs</i> option in the <i>Setup</i> Menu. |
| <i>Comm. Port</i> | The identity of the serial communications port that the SCU or modem is connected to. Usually 1 or 2. |
| <i>Searching</i> | Displays the current searched fitting. |
| <i>Time and Date</i> | Displays the time and date from the computer (not the SCU). |

Master Screen - Menubar

File
New
View
Save
Print
Close
Open Log
Close Log
Exit Ctrl+X

File Menu

New: Opens a simple text editor. Text can be typed in or copied from another file. Files can be up to 32 kbytes.



View: An existing data file can be opened. MasterMinder data files normally have a '.dat' extension and log files '.log'. Open files can be viewed and edited.

Save: Saves the result of the previously completed command into a file (????????.dat). Typically used after using the collect data command to save the resulting information that has been displayed on the screen.

Print: Prints the currently open file.

Close: Closes the file opened by the VIEW command.

Open Log: Opens a file (.log) to which data will be logged. Refer to the section on logging data for further information.

Close Log: Closes the data logging file.

Exit: Closes the MasterMinder software and returns to Windows.

Disconnect/Connect

Selecting **Connect** will connect the computer to the attached serial device, either an SCU or a modem. When connected, selecting **Disconnect** will disconnect the computer from the attached serial device.



When changing from one SCU to another as occurs when there are multiple SCUs attached by a switchbox it is critical that the DISCONNECT/CONNECT commands be used when changing SCUs.

Ensure that the correct serial communications port is selected - this can be changed using the *Setup* option in the *Setup* menu (see below).

Direct Connection

Ensure that the serial cable connects the PC to the serial port on the SCU and that the SCU is on.

Click on *Connect* in the Menu Bar. The Menu Bar will change *Connect* to *Disconnect*.

The *Site Data* section will be displayed at the bottom of the screen. This is described below.

Connection via Modem

Ensure that the serial cable connects the PC to the modem and that the modem is on.

Ensure that the correct serial communications options for the modem are selected - this can be changed using the *Setup* option in the *Setup* menu (see page 13).

Click on *Connect* in the Menu Bar. The Menu Bar will change *Connect* to *Disconnect*.

The *Site Data* section will be displayed at the bottom of the screen. This is described on page 7.

Select the *Dial* menu (see page 21) from the Menu Bar to connect to the remote SCU.



Disconnect to hang up when using a MODEM before dialling up another location.

Edit
Cut
Copy
Paste
Delete

Edit Menu

- Cut:* Cuts the selected text.
- Copy:* Copies the selected text.
- Paste:* Pastes the selected text.
- Delete:* Deletes the selected text.

Test
Auto Test
Manual F2
Collect F3
Auto Collect
Cluster Utility
Abort F4

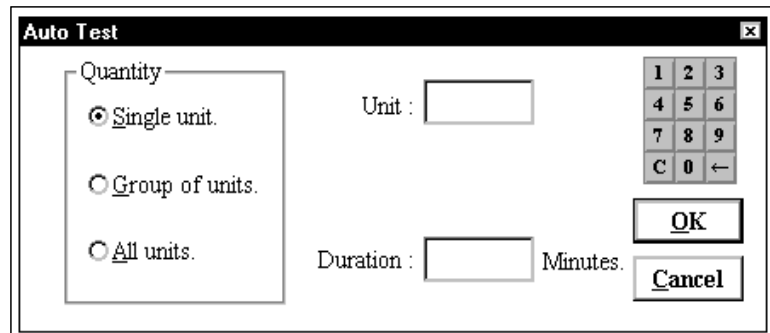
Test Menu

The Manual, Collect and Abort commands can be accessed by the F2, F3 and F4 keys respectively and from the Toolbar.

- Auto Test:* Allows a test to be programmed for a user specified time and date. The length of the test must be entered. The user can select one or more luminaires to be tested. The following menu is displayed.

Set Auto Test
Read Auto Test
Cancel Auto Test

Set Auto Test: The following screen is displayed.



Using the mouse on the screen keypad can be used as an alternative to typing in numbers.

Select **Single Unit** if you want to test one luminaire only.

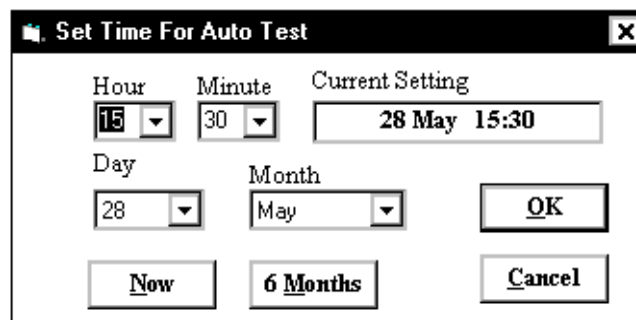
Select **Group of Units** if you want to test a group of luminaires, for example luminaires 5 to 10. The screen changes to allow for the entry of the first and last fitting to be tested.

Select **All units** if you want to test all installed emergency luminaires.

Enter the unit to be tested or, as previously mentioned, another box appears when testing a group of fittings so that you can enter the first and last fitting to be tested.

Enter the duration of the test (in minutes).

Press **OK** and the following screen will be displayed.



The time and date for the planned test, displayed in **Current Setting**, can now be entered. Selecting **Now** will select the current date and time from the computer. Selecting **6 Months** will place a date and time 6 months from the current date and time into the current setting. Alternatively any date and time can be set by changing the setting in each of the boxes for time and date. Select **OK** and the Auto Test will be displayed on the screen.

Read Auto Test: Will display the time and date stored in the SCU for a programmed test.

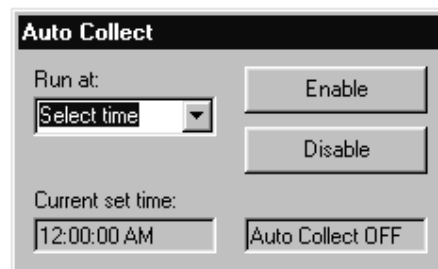
Cancel Auto Test: Cancels a programmed test.

Manual: Allows for the immediate testing of one or more luminaires for a user determined time. Similar to **Set Auto** except testing is commenced immediately.

Collect: Allows for the collection of test results from one or more luminaires. If a luminaire is currently being tested a **BUSY** status will be displayed.

Auto Collect: Allows for the automatic collection of information from the fittings at a user selectable time of day. When the selected time is reached the software automatically does a COLLECT on all units, followed by a **Search** for FAULTY UNITS, FAULTY LAMPS and FAILED TESTS. The results are stored in a user selectable LOG file. This will be done each day at the selected time whilst the function is enabled. The log file that contains the collected information is overwritten each day.

When AUTO COLLECT is selected the following screen is displayed. Select the time at which the data is to be collected.



Select the **Enable** button to turn the Auto Collect function on. Alternatively, select the **Disable** button to turn Auto Collect off. The status of Auto Collect is shown in the status box at the bottom of the screen. When Enable is selected the next screen asks for the location of the LOG file that stores the collected information. Enter the file name and location and select **Open**.

NOTE: Ensure that the computer is set up so that it does not shut down automatically whilst awaiting the time set for the AUTOCOLLECT.

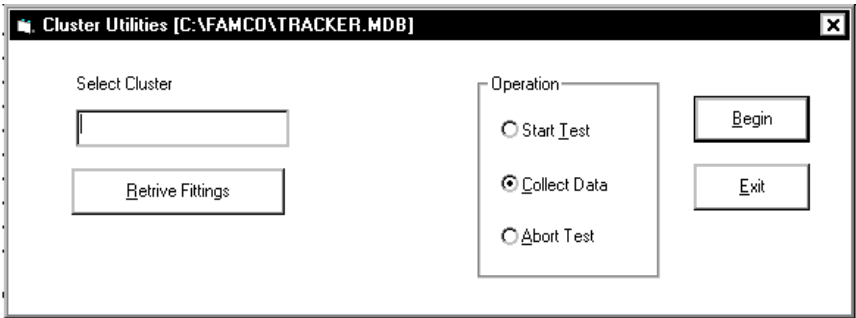
Cluster Utilities: Allows for the testing of 'clusters' of fittings. Refer to the section on the Fitting Tracker for a description of clusters and how to create them.



The cluster functions may not operate correctly with SCUs containing early version firmware. Contact Famco for information about firmware upgrades if this is necessary.

Type in the name of the cluster and then select RETRIEVE FITTINGS. A list of fittings in the selected cluster will be

displayed. Select the operation to be undertaken (START TEST, COLLECT DATA, ABORT TEST) and then select BEGIN.



NOTE: When a test is started using Cluster Utilities the LAST TESTED field in the Tracker database is automatically updated with the current date for each fitting tested.

Abort: Allows for tests to be aborted.

Search

Faulty Units
Failed Tests
Faulty Lamps
Faulty ITUs

Search Menu

- Faulty Units:** Identifies luminaires that the SCU cannot communicate with.
- Failed Tests:** Identifies luminaires that failed their last test. The test results are stored in each luminaire until a new test is run.
- Faulty Lamps:** Identifies all sustained luminaires with a faulty mains lamp, maintained luminaires with a faulty maintained lamp, and incandescent luminaires with a faulty lamp. NOTE: To identify faulty fluorescent lamps they must be switched on at the time of the search.
- Faulty ITUs:** Identifies ITUs that the SCU cannot establish communication with.

Clock

Read
Set >

Clock Menu

- Read:** Reads the time and date from the SCU.
- Set:** Allows the time and date to be set in the SCU. The clock in the SCU can be set automatically, using the time and date from the PC, or manually.

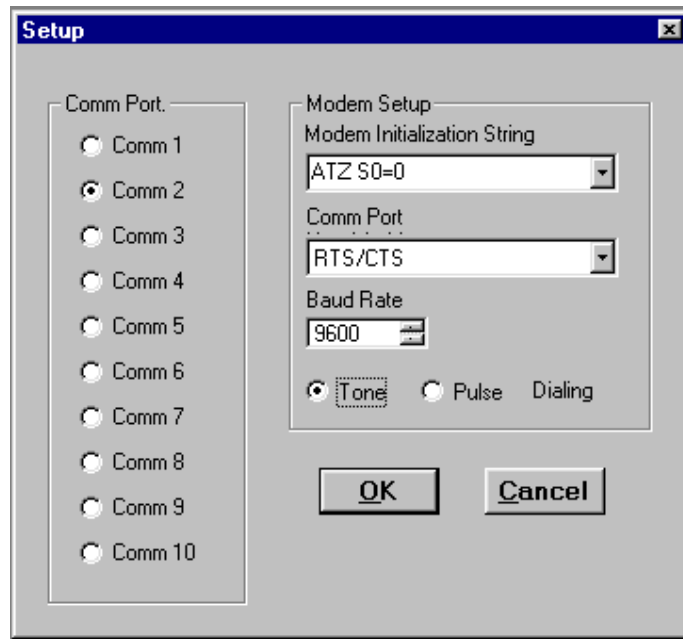
Setup Menu

Setup

Setup
Units
ITUs
Set Group
Remote Password
Main Password
Drawing Editor

These menu items must only be used by trained operators. They are usually only required during the system commissioning process.

Setup: Allows the operator to set up the serial communications port and several other options relating to how the software behaves.



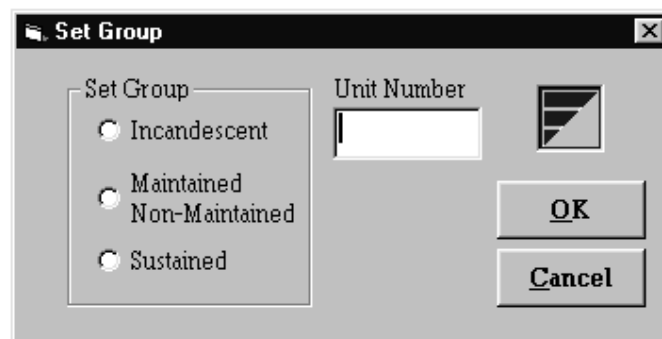
Comm Port Select the serial communications port to which the SCU or Modem is connected.

Modem Setup The 9600 bps Modem built in to the SCU5C does not support some of the functionality provided by high speed Modems. You must ensure that the settings on your Modem make it compatible with the 9600 bps Modem. An initialisation string that often works is “ATZ S=0” and “RTS/CTS” handshaking option must be selected. If these do not work refer to your Modem manual for the appropriate AT codes to connect to a V.32 9600 Bps Modem.

If an older SCU5 (SCU5,a,b) is being used a 2400 baud rate must be used and the setup string AT&F5 or AT&Q0&K0 must be used as well as the “No Handshaking”. If these do not work refer to your Modem manual for the appropriate AT codes to place the modem into asynchronous mode, turn off local flow control and turn off error correction.

Units: Allows the operator to enter the number of luminaires installed in the system.

- ITUs:** Allows the operator to enter the number of ITUs installed in the system.
- Set Group:** This is normally used if a luminaire has been programmed with the incorrect group. The following screen is displayed. Select **Incandescent** for an incandescent luminaire. When a **Collect** is undertaken an **N** is displayed before the luminaire number.
- Select **Maintained or Non-Maintained** when the luminaire has one fluorescent lamp (Maintained or Non-Maintained) monitored. When a **Collect** is undertaken an **S** is displayed before the luminaire number.
- Select **Sustained** when the luminaire has two fluorescent lamps monitored. When a **Collect** is undertaken a **D** is displayed before the luminaire number. This is commonly used for a sustained Exit luminaire.



- Remote Password:** *This menu item will only be displayed for an SCU5. The SCU5 must be directly connected to the computer – not via a Modem.* The remote password must be entered when accessing the SCU5 via a Modem. To display the current password select 'Read'. To change the password type in the new password and select 'Write'. The password can be a maximum of 8 characters.
- Main Password:** Use this option to change the password that must be entered when starting the MasterMinder software.
- Drawing Editor:** Select the CAD drawing program to be used for viewing the CAD files showing the fitting locations. For example, AutoCad LT, AutoCad or any other graphics application that you use for creating or viewing the drawings.

Utilities
Site Name
Retries
Continuous Mode
Font Size
Clear Screen
Fitting Tracker
Site Data

Utilities Menu

- Site Name:** *For SCU5 only:* Allows the operator to read or enter the site name into the SCU. This can only be changed with direct serial connection from the computer to the SCU.
- Retries:** Allows the operator to set the number of retries. If an SCU does not successfully communicate with a luminaire it can keep trying (retry) for an operator specified number of times - the number of retries is set using this menu option. The number of retries must be between 3 and 255.

Continuous Mode: *NOTE: Early version SCU4s and SCU5s do not support this function.*

Selection of this menu item allows you to put the system into a regular polling mode. CONTINUOUS MODE will be displayed on the LCD display together with SYSTEM OK or SYSTEM FAULT. SYSTEM FAULT is displayed when polling of the system has found a faulty mains lamp(s) and/or faulty fitting(s). The SCU4 has a relay (normally closed and normally open contacts) that is set when there is a system fault. This can be used to interface to a building automation system or alarm.

On the 3rd, 10th, 17th and 24th day of each month the system will be automatically checked (polled). This occurs at midnight. If the system is unable to communicate with one or more fittings it will try to communicate with them again at 1am. This is automatically repeated at 2am and 3am if necessary.

The SCU will indicate a system fault when appropriate. When this occurs you must fix the problem(s). The SCU can be reset by doing a manual poll (press the POLL button) – if the system is free of faults the SCU will reset to SYSTEM OK and the fault relay will be reset.

Font Size: Set the font size.

Clear Screen: Clears the current screen.

Fitting Tracker: This option gives access to a database that can hold key information about the MasterMinder emergency luminaires on the site. The database is Microsoft Access compatible. The following screen will be displayed.

The screenshot shows a Windows-style application window titled "Fitting Tracker [C:\PROGRAM FILES\FAMCO 6.3.0\TRACKER.MDB]". The window has a menu bar with "Hold" and "Exit". Below the menu bar is a toolbar with three buttons: "Open Database", "Print", and "Utilities". The main area of the window is divided into three tabs: "Edit Fitting Data", "View Database", and "Search for Data". The "Edit Fitting Data" tab is active and contains several input fields and buttons. The fields are: "Fitting ID Number" (text box), "Fitting Number on Drawing" (text box), "Drawing File" (text box), "Location" (text box), "Catalogue Number" (dropdown menu), "Cluster ID" (text box), "Lamp Fitted" (dropdown menu), "Series Type" (dropdown menu), "Last Tested" (text box), and "Comments" (text area). There are also several buttons: "Drawing" (button), "Add New" (button), "Delete Current" (button), "Previous" (button), "Next" (button), "First Fitting" (button), and "Last Fitting" (button).

The following definitions are used in the fitting tracker database.

Fitting ID Number:

The unique computer number programmed into the emergency luminaire.

Fitting Number on Drawing:

The fitting number (which may be different to the Fitting ID Number stored in the MasterMinder system) on the building plan identifying each MasterMinder luminaire.

Drawing File:

The file name and path of the CAD drawing showing the location of the fitting.

Location:

Enter information describing the physical location of the luminaire.

Catalogue Number:

Enter the Famco Model Number. A list of standard Famco emergency luminaires can be obtained by selecting the arrow at the end of the entry box. New model numbers can be added to this list.

Cluster ID:

Groups or clusters of fittings can be given a cluster identifier that, when selected, can be used to put that cluster of fittings into test or to collect data. For example, all the fittings in a car park could be given a cluster identifier of 'Car Park'.

Lamp Fitted:

The lamp type may be automatically displayed when a standard Famco model number is selected. Alternatively, you can select a lamp type from the standard list supplied (use the arrow at the end of the entry box), or enter another lamp type.

Series Type:

Select from the pull down list or enter manually. This field will default to the previously selected entry.

Last Tested:

Enter the date of the last test. Double clicking the mouse on this entry box will enter the current date. Use the UPDATE button to enter the current date into all records.

Hold

Drawing File
Cluster ID
Catalogue No.

Hold:

Selecting this option will give you the option to select Drawing File, Cluster ID or Catalogue Number. When selected the entry in the relevant field in the database will default to the previously entered value when new database records are added. A ✓ will appear next to a field displayed in the menu list that is in HOLD mode. On the EDIT FITTING DATA screen a picture of a lock will appear to the left of each field that is in HOLD mode. To turn off the 'hold' function reselect the relevant field. The HOLD function can also be activated by double clicking the mouse button on the relevant field name (i.e. Cluster ID) on the EDIT FITTING DATA screen. Repeating this will turn off the HOLD function.

There are 6 forms available in the Fitting Tracker:

- Edit Fitting Data

- View Database
- Search for Data
- Open Database
- Print
- Utilities

You can select each of these by clicking the mouse button when the cursor is on the required form name.

Edit Fitting Data

The EDIT FITTING DATA form is shown below. The different field descriptions are as described above. This form is used for adding or modifying fitting data. Note the 'lock' icon next to Drawing File and Cluster ID indicating that these are in HOLD mode (see above for description of HOLD mode).

The screenshot shows the 'Fitting Tracker' application window with the title bar 'Fitting Tracker [C:\PROGRAM FILES\FAMCO 6.3.0\TRACKER.MD8]'. The window has a menu bar with 'Hold' and 'Exit'. Below the menu bar are three tabs: 'Open Database', 'Print', and 'Utilities'. The 'Open Database' tab is active, showing the 'Edit Fitting Data' form. The form contains the following fields and buttons:

- Fitting ID Number**: Text input field.
- Fitting Number on Drawing**: Text input field.
- Drawing File**: Text input field with a lock icon.
- Location**: Text input field.
- Catalogue Number**: Dropdown menu.
- Cluster ID**: Text input field with a lock icon.
- Lamp Fitted**: Dropdown menu.
- Series Type**: Dropdown menu.
- Last Tested**: Text input field.
- Comments**: Text area.
- Drawing**: Button.
- Add New**: Button.
- Delete Current**: Button.
- Previous**: Button.
- Next**: Button.
- First Fitting**: Button.
- Last Fitting**: Button.

The lamp fitted field will be automatically filled when the Catalogue Number is selected from the pull down list of standard fittings. The current date is entered into the Last Tested field when the mouse is double clicked in the Last Tested box.

The **CLEAR** button is used to clear the currently displayed form.

The **ADD NEW** button is used to create a record for a new fitting. The Fitting Number can be automatically incremented for each new fitting. Some fields can optionally be held the same as for the previous fitting (see above).

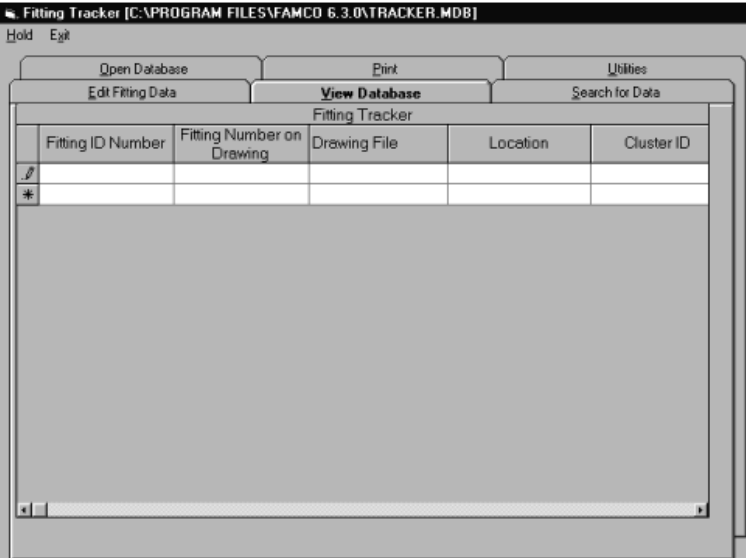
PREVIOUS and **NEXT** can be used for stepping through the records. The order of the fitting records may not necessarily be in Fitting Number numerical order.

The **DRAWING** button is used to display the CAD drawing showing the location of the fitting. The application used for

viewing the CAD drawing must have already been selected (refer to the SETUP menu for setting the drawing editor application). When selected, the CAD file specified in the **Drawing File** field is opened and displayed.

FIRST FITTING and **LAST FITTING** move to the last or first record respectively.

View Database The VIEW DATABASE form provides a different means of viewing and editing the data. As can be seen below the data is in a table format. The order of the fittings as displayed in the table can be changed by using the UTILITIES form (see below).



Search for Data The SEARCH FOR DATA form provides a means of finding data on specific fittings. Select the field to search, enter the text or number that you want to find, select the comparison criteria and then click on the BEGIN SEARCH button. The results of the search will be displayed on the EDIT FITTING DATA form.

Note *After a search, the fitting tracker data will be limited to the results of the search until a REFRESH is done. If a second search is undertaken (prior to a REFRESH) then the search will only look at the data resulting from the previous search.*

The screenshot shows the 'Fitting Tracker' application window with the title bar 'Fitting Tracker [C:\PROGRAM FILES\FAMCO 6.3.0\TRACKER.MDB]'. The menu bar includes 'Hold' and 'Exit'. The main window has several tabs: 'Open Database', 'Print', 'Utilities', 'Edit Fitting Data', 'View Database', and 'Search for Data'. The 'Search for Data' tab is active. It contains a 'Search Field' section with radio buttons for 'Fitting ID Number' (selected), 'Fitting Number on Drawing', 'Drawing File', 'Location', 'Catalogue Number', 'Lamp Fitted', 'Cluster ID', 'Last Tested', and 'Series Type'. To the right is a 'Search Text' input field. Below that is a 'Comparison' section with radio buttons for 'Equal to' (selected), 'Less than or Equal to', and 'Greater than or Equal to'. A 'Begin Search' button is located at the bottom right.

Open Database

The OPEN DATABASE form provides a means of opening the database file appropriate to the site or area that is being monitored. Enter or select the database file (.mdb) that you want and click on the LOAD button. To create a new database enter a file name that does not currently exist.

The screenshot shows the 'Fitting Tracker' application window with the title bar 'Fitting Tracker [C:\PROGRAM FILES\FAMCO 6.3.0\TRACKER.MDB]'. The menu bar includes 'Hold' and 'Exit'. The main window has tabs: 'Edit Fitting Data', 'View Database', 'Search for Data', 'Open Database', 'Print', and 'Utilities'. The 'Open Database' tab is active. It contains a 'Database Name to Open' input field and a 'Load' button. Below these is a file list showing 'TRACKER.MDB' and a directory tree with 'C:\', 'Program Files', and 'FAMCO 6.3.0'. At the bottom, there are two dropdown menus: one for the file type set to '*.mdb' and another for the drive set to 'c:'.

When an existing database is being loaded you will be asked to confirm that you want to open the file - select YES to open the file. You will also be asked to confirm the creation of a new file.

Utilities

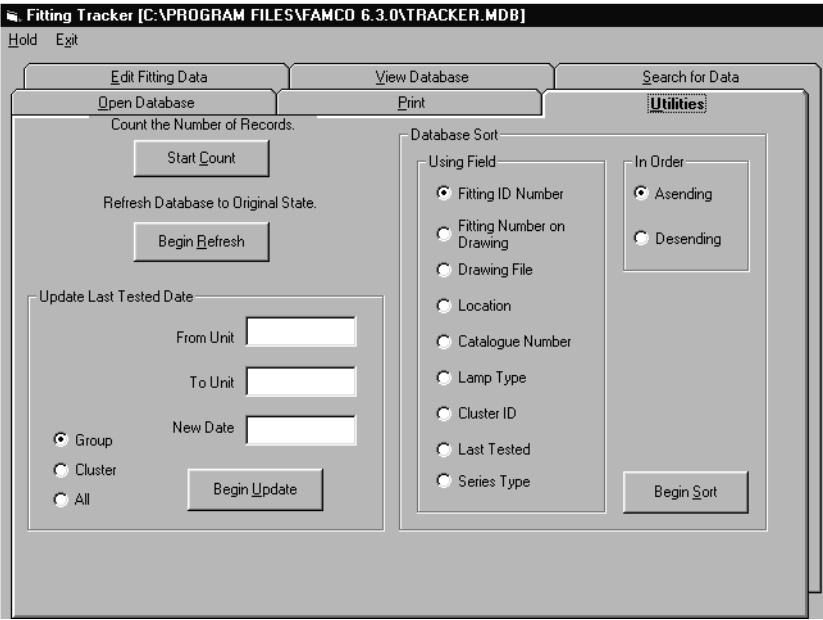
The UTILITIES form has 4 functions as follows:

Selecting the START COUNT button results in the number of database records being counted and displayed.

Selecting the BEGIN REFRESH button results in all database records being restored after a SEARCH FOR DATA activity has selected out a subset of database records.

UPDATE LAST TEST DATE is used to insert the last test date into selectable group of fitting records. Select GROUP to update a group of fittings with numbers between FROM UNIT and TO UNIT. Select CLUSTER to update fittings with a specified cluster ID. Select all to update all fittings in the database. To enter the last test date into the database for the selected fittings select the BEGIN UPDATE button.

DATABASE SORT allows you to sort the database records according to a user selectable field. Select the field to sort by and then select BEGIN SORT.

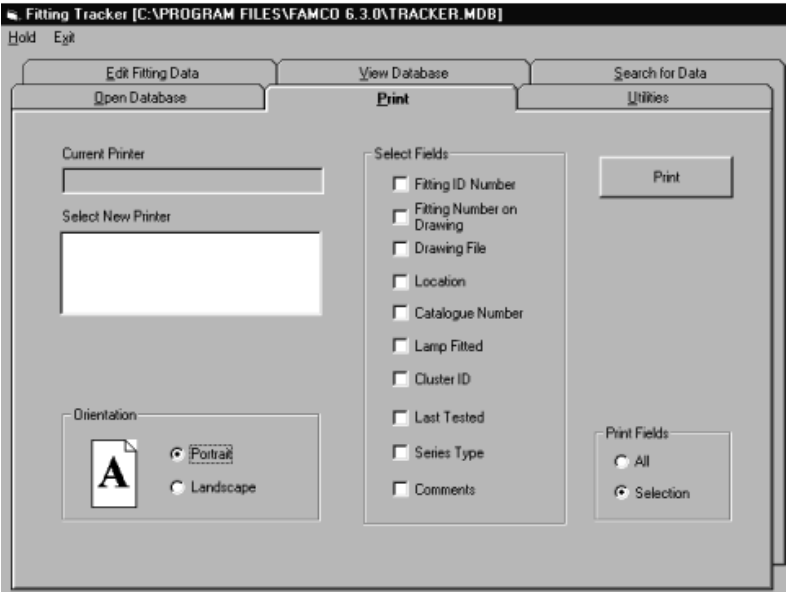


Print

The PRINT form provides a means of printing data from the fitting tracker database. The information that will be printed is limited to the data records displayed using VIEW DATABASE.

Each field printed will be printed on a new line. For instance, printing the fitting number, drawing number, floor level and location will take 4 lines per fitting. The fields to be printed can be selected.

A more comprehensive printing facility can be obtained by accessing the database using Microsoft Access.



Site Data: Selecting this option will toggle on/off the site data section at the bottom of the master screen.

Dial

Manual
Directory

Dial Menu

Manual: Only available if using a modem. Connect to the modem using Connect/Disconnect before selecting this menu item. The site telephone number of the SCU can be entered. The number will be dialled when **OK** is selected.

Directory: When selected the following screen will be displayed.

The screenshot shows a window titled "Phone Directory" with a close button (X) in the top right corner. The window contains the following fields and buttons:

- Site Name: A dropdown menu.
- Phone Number: A text input field.
- Last Dialed: A text input field.
- Address: A text input field.
- City: A text input field.
- Post Code: A text input field.
- State: A dropdown menu.
- Voice Contact: A text input field.
- Voice Phone: A text input field.
- Tracker File: A text input field.
- Buttons: New, Tracker, Dial, Save, and Exit, arranged vertically on the right side of the form.

Callouts with arrows point to the buttons and provide the following instructions:

- New:** Open a new record for another site or modem.
- Tracker:** Open a window to associate a fitting tracker file with this site.
- Dial:** Dial the telephone number displayed in phone number.
- Save:** Save the current record.

Site Name: The name of the MasterMinder installation. There may be more than one SCU at a site - be specific if appropriate.

Password: The password stored in the SCU.

Phone Number: The telephone number for the SCU.

Last Dialed: The date that the SCU telephone number was last dialed.

Address, City, Post Code, State: Address details for the site.

Voice Phone: Telephone number of the person that can be contacted on site.

Voice Contact: Person that can be contacted on site.

Tracker File: Displays the fitting tracker file for the site. This is created by selecting the TRACKER button and selecting the appropriate fitting tracker file for the site.

Master Screen - Toolbar



Open an existing data file.



Save data into a file.



Print.



Copy the selected text.



Cut the selected text.



Paste the selected text.



Open the screen to commence a manual test.



Open the screen to collect data.



Open the screen to abort a test.



Clear the screen.



Provides information about the MasterMinder software.



When the system is set up to log data into a file the name of the data file will be displayed here.



Start logging data to data logging file.



Interrupt logging data to file.



Stop logging data to file and close file (equivalent *to Close Log* in the *File* menu).

Conducting a Test

When and How to Test

Testing of emergency luminaires should be done early in the morning when the building is unoccupied. This allows for the batteries to recharge during the remainder of the night and daylight hours subsequent to the test.

Testing should be undertaken every 6 months. It is recommended that, although routine testing requires a 90 minute period during which the emergency luminaires remain on, testing should be of sufficient duration to fully discharge the batteries. A test period of 180 minutes should be sufficient. The luminaires should have had at least 16 hours to charge following any previous tests. This can be confirmed by collecting data from the luminaires and checking that the **Charge Rate Unit** is *float*.

1. Select the **Test** menu.
2. Select **Auto Test** for programming a test in the future or **Manual** for an immediate test.
3. Select the luminaire(s), test period and, for **Auto**, the date and time.

To abort a currently running test select the **Test** menu then **Abort**.

4. After completion of a test select the **Test** menu then **Collect**.
5. Select the luminaire(s) for which you want to collect test results.

Interpreting Test Results

The following table demonstrates the type of information obtained when test data is collected.

Unit Number	Volt at start	Charge rate Unit	Volt at Cutoff	Date of Last Test	Duration of Test	Test Out- come
D/0001	5.72	float	5.16	16/2/04	090	PASS
N/0002	5.76	float	5.24	16/2/04	090	PASS
?/0003						NOT FOUND
S/0004	8.88	float	8.88	16/2/04	001	LAMP
?/0005	UNIT NOT YET COMMISSIONED					
S/0006	8.96	float	8.16	16/2/04	090	PASS
D/0007	5.80	float	4.67	16/2/04	058	FAIL
D/0008	5.80	boost	5.42	16/2/04	120	PASS
N/0009	6.42	boost	5.78	16/2/04	090	PASS
S/0010	8.88	boost	8.04	16/2/04	090	PASS

Unit Number: The luminaire number is preceded by either a ?, N, S or D.

A “?” means that communication was not established with the fitting. Refer to NOT FOUND and UNIT NOT YET COMMISSIONED below.

An “N” means that the luminaire uses an incandescent lamp.

An “S” means that the luminaire monitors the light output from one lamp.

A “D” means that the luminaire monitors the light output from 2 lamps. This is commonly used for a sustained Exit luminaire.

Volt at Start: The battery voltage at the start of the test.

Charge Rate Unit: This indicates if the batteries are being boost charged (boost charging lasts for 16 hours after the completion of a test) or float charged.

Volt at Cutoff: This is the battery voltage when the test period is completed or when the luminaire turns itself off due to low battery voltage or a lamp fault before test completion (***Fail*** - see ***Test Outcome*** below).

Volt at 90 Min: Not used in FMX system.

Volt at 120 Min: Not used in FMX system.

Duration of Test: The period that the test lasted. If the luminaire passed the test then it indicates the set test period. If the luminaire failed the test then it indicates the period before the luminaire turned itself off due to low battery voltage or a lamp fault.

Test Outcome: **PASS:** The luminaire functioned correctly for the set test period.

FAIL: The luminaire turned itself off before the end of the set test period due to low battery voltage.

LAMP: Indicates a faulty emergency lamp.

NOT FOUND: Communication was not established with the fitting. There may be a fault with the fitting or interference on the building wiring. Check that the ITUs are functioning correctly and that the circuit breakers are on. If this occurs try increasing the number of retries. If communication still cannot be established contact Famco.

UNIT NOT YET


COMMISSIONED: The fitting has not been learned by the SCU. Run a learn routine for the fitting.


Logging Data


The logging data facility allows the user to store in a file (file type '.log') the data that is sent to the screen.

Open the log file to which the data will be sent. From the **File** menu select **Open Log**.

Enter the file details (name and directory) and select OK. The file name will be displayed at the right hand end of the Toolbar next to the logging control buttons. This box will display 'Closed' when there is not a file open for data logging.

The file will now be in data logging mode - all information that is sent to the screen for display will also be stored in this file. In the Toolbar the  will be depressed indicating that the file is logging data.

To interrupt data logging press the  button.

To restart data logging press the  button.

To close the logging file press the  button or select **Close Log** from the **File** menu.

To view or edit a data logging file open the **File** menu and select **Open**. The editing commands from the Edit menu can be used for editing the data. Use the **Save** command to save the file and the **Close** command to close the file.

Site Information

Site Name	
Site Address	
SCU Type	
SCU Telephone Number	
Installation Date	
Commissioned by	
Approved by	
Serial Number	