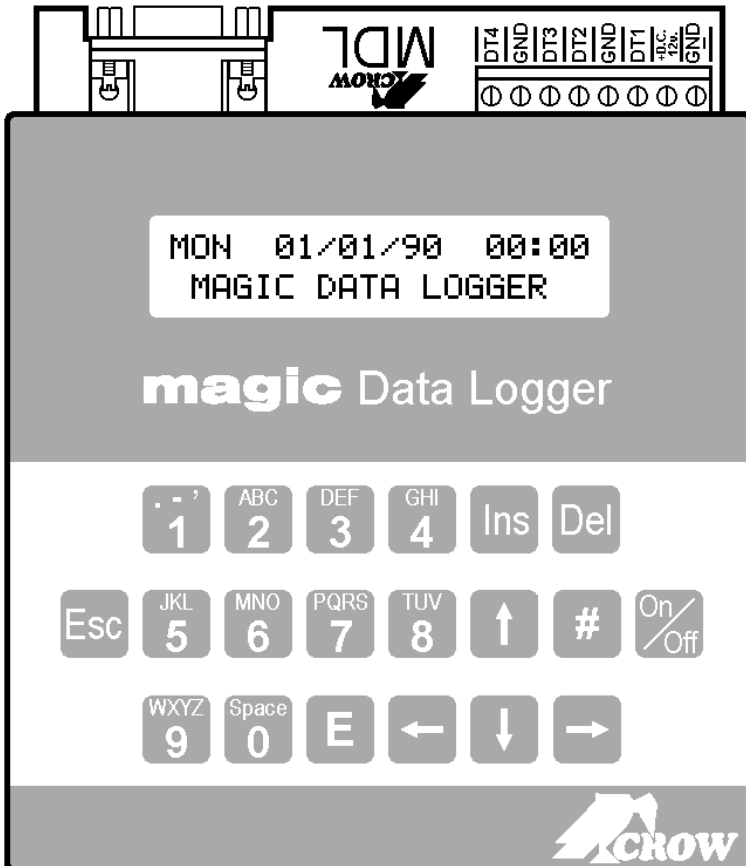




Magic

MDL

Magic Data Logger for Series 4 & 5 decoders
INSTRUCTION MANUAL – 4th EDITION



MAGIC DATA LOGGER

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PRODUCT FEATURES

- The ability to monitor and record all events on a Magic keypad and decoder system using two wires, the DLOG and Ground lines.
- Up to 4 decoders can be monitored at once.
- User names can be assigned to code numbers for easy identification.
- All events recorded are time and date stamped.
- Large memory can store 400 users, 10 operators and 6000 events.
- Battery backup keeps the clock running and retains the stored memory information for typically 20 days without power, 3 days minimum.
- User codes can be retrieved from any Magic decoder if the management code is known.
- All valid user codes used which are not in the data logger's user code memory are automatically recorded in the user code memory when they are used.
- When a new management code is programmed into a decoder, the data logger automatically updates the management code in its memory.
- An RS232 serial port is provided for the connection of a serial printer to print events or a computer to assist logging events.
- 2 line Liquid Crystal Display with back lighting for programming operations and displaying events.
- All programming is done via a built in 20 key keypad.
- Programming operations can also be done using a computer attached to the RS232 serial port.
- For security, an operator code is required to view events in memory, view and change user information and programming menus. Three levels of operator codes exist allowing different levels of access.
- Once an operator code has been entered, the data logger is placed in the off mode if no keys are pressed for a period of 5 minutes.
- Optional computer program available to store and manipulate data using a Personal Computer connected to the data logger.
- Requires a 12VDC, 200mA power supply.

SPECIFICATIONS

CONNECTIONS - 8 Screw Terminals.

POWER SUPPLY - 11.5 to 14V DC @ 200mA.

CURRENT REQUIREMENTS IN OFF MODE - 50mA Max.

SERIAL COMMUNICATIONS

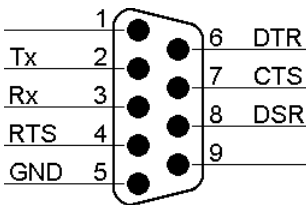
FORMAT - RS232.

CONNECTOR - Standard 9 pin "D" female.

BAUD RATE - 300, 600, 1200, 2400, 4800 and 9600 bps

FLOW CONTROL - None, DTR, Hardware and XON/XOFF.

DB9 Connections on the MDL



Note that the connections from the MDL allow a straight through wired 9 pin "D" male to 9 pin "D" female cable to connect the MDL to a 9 pin COM port on a PC. When connecting to a serial printer it will be necessary to check the connections required for the printer and a suitable cable will have to be sourced, this will usually be in the form of a 9 pin "D" male to 25 pin "D" male.

MECHANICAL

DIMENSIONS - 120mm wide x 145mm deep x 40mm high.

WEIGHT - 600 grams.

INSTALLATION

All connections to the data logger are done via the 8 screw terminals located at the rear of the unit. The +12volt, (200mA minimum) power supply is connect to the screw terminals labeled +D.C. 12v and GND. The data logger can use the same power supply as used by the decoders, however it must be 12V DC and have a current rating large enough to supply the decoder system and the data logger. Alternatively the data logger can be powered from an independent power supply which is recommended if it is located far from the power supply for the decoders.

There are only two wires required to connect the Magic data logger to a Magic decoder, DTA and Ground. These wires are connected via a screw terminal block located at the back of the data logger (see Figure 1 below).



Figure 1. The Data Logger Connectors.

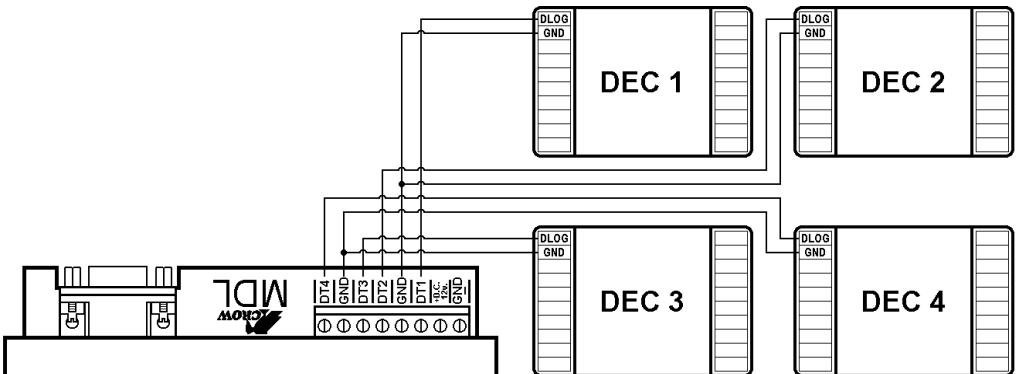
SCREW TERMINALS

- +D.C. 12v** The positive input of the power supply (11.5 to 14V DC).
- GND -** The negative (ground) input for the power supply.
- GND** Two terminals to which the ground wires of the decoder can be connected.
- DT1 - DT4** The DLOG line inputs from Magic decoders 1 to 4.

DB9 CONNECTOR

The DB9 connector is used to connect the data logger to a serial printer or computer.

WIRING DECODERS TO THE MDL



POWERING UP THE DATA LOGGER

The first time the MDL is powered up it will perform a ROM test, a RAM test and then display the Crow start up sequence. On subsequent power ups the RAM test will be skipped.

When the On/Off key is pressed, the data logger is placed in ON mode with the backlighting on and the following message displayed: (*with the cursor flashing*)

```
ENTER OPERATOR CODE
```

The default operator code is **1234** followed by **E**. This will log you on as a level 1 operator with access to all the programming features (to add, delete or change operator information, refer to section 2.2 Display Operators).

When the On/Off key is pressed, or no key is pressed for 5 minutes, the data logger will switch back into OFF mode with the display back lighting switched off and the display will show either the day, time, date and logo or the last event recorded (refer to section 3.3 Show Events When Off). While in the ON mode, pressing the On/Off key will return the data logger to the OFF mode regardless of which menu the operator is currently in.

PROGRAMMING

To gain access to the programming, viewing and printing menus the data logger must be in the ON mode, and a valid operator code must be entered. If three invalid operator codes are entered, the data logger will automatically turn to OFF mode and cannot be turned ON again for a period of 5 minutes.

There are three levels of operators, with level 1 having access to all the programming, viewing and printing functions. Level 2 operators have access to the Event Buffer, Operators and Users and Data Logger Options menus. Level 3 operators have access to the Event Buffer and Operators and Users menus only.

EDITING NAMES

When entering or changing a name, the 10 number keys (0 to 9) allow letters to be used. For each consecutive press of a key, the letter changes according to the letters above the number on that key. For example, the first time **3** is pressed, a D will appear and with each consecutive press, E, then F, then 3 and back to D. When a different key is pressed, the cursor will move to the next position and the first letter for that key is displayed. To insert consecutive letters from the same key, press the right arrow key once after the first letter has been entered to move the cursor to the next character space.

The left and right arrow keys can be used to move the cursor left and right. The insert (INS) key inserts a space before the letter that is highlighted by the cursor. Note that if the last visible character on the line occupies the last available space of the name, it will be lost when the insert key is pressed.

The delete key (DEL) deletes the letter highlighted by the cursor and moves the following text one space to the left.

Example:

The following example enters the name J. CITIZEN

5 1 0 2 2 2 4 4 4 8 4 4 4 9 9 9 9 3 3 6 6

THE MENU SYSTEM

Programming the Magic data logger is done using a series of menus which take you through to the particular function you require to change.

There are five main menus, Event Buffer, Operators and Users, Data Logger Options, Setup Decoders and Serial Communications. A complete map of the menu system is included with this manual.

Within the menu system there are keys which retain the same function as explained below.

- Up Arrow - Move to the previous menu item at this level.
- Down Arrow - Move to the next menu item at this level.
- E key (E) - Enter key - go to the next menu level or start a programming, printing or display operation.
- Esc - Escape key - go to the previous menu level or escape from a programming operation leaving the information as it was.
- On/Off - When the unit is in the OFF mode, this key will turn the display back lighting on and bring up the screen asking for an operator code to be entered. From anywhere in the menu system (i.e. when the unit is in the ON mode) pressing this key will return the unit to the OFF mode.

THE MENUS

1. EVENT BUFFER

The first menu displayed after an operator code has been successfully entered, is the EVENT BUFFER menu. The Event Buffer is the memory where all the events logged are stored. From within this menu logged events can be displayed and printed.

1.1 DISPLAY EVENTS

If **[E]** is pressed from the EVENT BUFFER menu, the DISPLAY EVENTS menu is displayed. Pressing **[E]** again will display the last event (chronologically) in the event buffer. A typical event is pictured below:

```
J. CITIZEN      OPI OFF
11:55 24/10/96 DEC 1
```

The first twelve characters represent the name of the user or the system event recorded. In the above example J. CITIZEN is a user. The information following the name represents the decoder output used (here output number 1) and shows if the output was turned on or off (when a timed output is being activated it will always be shown as ON). This information is only displayed when an event involving a user name is recorded.

The start of the second line shows the time and date of the event. The five remaining character spaces represent the decoder name as defined in the DECODER SETTINGS menu (refer to section 4.3).

The up and down arrow keys are used to go earlier and later events respectively through the event buffer. Note that when the latest event is displayed and the down arrow key is pressed, a beep is heard indicating the end of the event buffer. A beep is also heard when the up arrow is pressed while the earliest event is being displayed. To find an event of interest the following search methods may be much more useful than using the arrow keys on their own.

1.1.1 Jump to a Date

```
JUMP TO DATE
DATE: 01/01/90
```

By pressing **[5]** (or J for Jump) while displaying events, you can jump to any date entered. Simply enter the date using the numeric keys and press **[E]**. Either the first event on that date will be displayed, or if there are no events on that day, the event on the nearest date after is displayed. If the date is later than the date of the latest event in the buffer, the latest event will be displayed.

1.1.2 Name Search

When displaying events, a name search may be initiated by pressing **[6]** (or N for Name search) which will bring up a screen similar to this:

```
SEARCH DIR:  LATER
NAME:  SI
```

The flashing up/down arrow indicates that the direction (Earlier or Later) is chosen using the up and down arrow keys. Once the correct direction has been chosen, press **[E]** and the name can be entered. To begin the search press **[E]** when the cursor is flashing anywhere in the name field.

Note that only enough letters to identify the name need to be entered. e.g. if the name SIMPSON is required and there is also a SMITH, the only letters needed to find the name SIMPSON would be SI as shown above. To return to the direction field while changing the name, press the left arrow key repeatedly until the flashing up/down arrow appears next to the direction.

1.1.3 System Event Search

```
SEARCH DIR:  LATER
EVENT:  IN LOCKOUT
```

A system event search is used to search for an event that does not contain a name. These events are: 1 minute lockout; Door forced open; Door open too long (DOTL); Request To Exit (RTE); Invalid code; Decoder Off Line; Decoder On Line; Decoder power up; Reset all; and System on. While an event is displayed, press **[7]** (S for System event search), the search direction and type of event can then be selected using the up and down arrow keys. The search is started when the flashing up/down arrow is next to the system event and **[E]** is pressed.

1.1.4 Repeat Search

To make searching for names and system events more efficient, the left and right arrow keys may be used to repeat the last search. For example, if a name search for SIMPSON (as in the Name Search section) was the last name or system event search performed, pressing the right arrow key while viewing an event will search for events later than the current event for the name SIMPSON. Pressing the left arrow key will carry out the same search in an earlier direction.

1.2 PRINT EVENTS

If a serial printer is connected to the female 9 pin D connector located at the back of the data logger, events can be printed (refer to section 5. SERIAL COMMUNICATIONS for printer setup information). Located next to the DISPLAY EVENTS menu under the EVENT BUFFER menu is the PRINT EVENTS menu. This allows events to be printed in 4 different ways.

If printing is initiated and no events match the print criteria, the message "NO EVENTS TO PRINT" will be displayed for 2 seconds. Once printing has started, pressing **any** key will abort the print.

Note that if Computer is selected in the Device menu (refer to section 5.3), the Print Events menu will not be visible.

1.2.1 Print Between Dates

```
PRINT BETWEEN DATES
01/01/90 TO 01/02/90
```

The first method of printing under the PRINT EVENTS menu is printing between dates. When **[E]** is pressed here, the start and end date of the buffer appear and the cursor will flash at the start of the first date. The start and end print dates can be entered with the left and right arrow keys being used to move through the dates. To start printing, press **[E]** when the cursor is anywhere within the end date.

1.2.2 Print New Events

The data logger keeps a record of the events that have been printed when in Printer Continuous mode (refer to section 5.3 DEVICE) or printed using the PRINT NEW EVENTS menu. This menu option can be used to routinely print out new events if Printer Continuous mode is not desired. Note that **[9]** represents Y for yes when asked to press Y to print.

1.2.3 Print Events By Name

```
NAME: CITIZEN J.
01/01/90 TO 01/02/90
```

The events relating to a particular name between specified dates can be printed out. The dates which first appear are the start and end dates of the event buffer. To speed up entry of the name, the whole name does not need to be entered if it can be differentiated from all other names by using only the first few letters. For example SIM are the only letters necessary to differentiate SIMPSON from SINGLETON. This method also works for printing out all the names which start with the same letters.

1.2.4 Print System Events

```
EVENT: IM LOCKOUT
01/01/90 TO 01/02/90
```

All the system events can be printed out individually within a specified date period. Simply select the system event using the up and down arrow keys and then enter the date range required. To start printing press **[E]** when the cursor is anywhere in the date field.

2. OPERATORS AND USERS

The OPERATORS AND USERS menu is where operator and user names and codes can be added, deleted, viewed and changed.

OPERATORS are people who can access the Data Logger, whereas USERS are those who can access a Magic keypad with their own code.

2.1 DISPLAY USERS

This menu allows the operator to add, delete and change user information. It is not available to level 3 operators. When **[E]** is pressed, the name and code of user 000 is displayed. To display other users the up and down arrow keys can be used or any of the following search options may be employed: name search (section 2.1.4), code search (section 2.1.5) or jump to a user number (section 2.1.6).

Automatic User Update

When the information relating to a user has been changed, the operator will be asked if an automatic update of the decoders should be done. This will attempt to program the changes made into the relevant decoders. Note that this can only be done if the correct management code and decoder type has been entered under the DECODER SETTINGS menu (refer to section 4.3). If the Data Logger could not program in the changes made into the decoders, an error message will be displayed and the data logger will retain the old information.

2.1.1 Edit a User

```
U000: JOE CITIZEN
CODE: 1234567
```

To begin editing a user, the required user name number and code must first be displayed as shown above. When **[E]** is pressed the cursor will then start flashing over the first character of the user name. The name can be up to 12 characters in length and include any of the symbols generated by the data logger keys.

When the name has been correctly entered, press **[E]** to move on to the code field. The code may be between 3 and 9 digits in length and include hashes (#) and stars (*) except at the start of the code, however when a keypad is used to access the door, a maximum code length of 7 digits is allowed. If the code is invalid when **[E]** is pressed, a beep will sound and the cursor will be moved back to the start of the code.

NOTE: To enter a star (*) as a code digit use the up arrow key **[↑]**.

After the code has been entered and the **[E]** key pressed, the user decoder information may be edited. The following diagram shows the user decoder display for decoder 1. Decoder 1 has been defined as a MD02 decoder which has two outputs. If it were defined as a MD01 decoder only OU1 would be displayed.

```

0000:  OU1  OU2
DEC 1  MOM  NONE

```

To select the function of the user code for the output specified use the up/down arrow keys. There are three choices, NONE (code not valid for this output), MOM (momentary activation of the output) or TOG (toggle mode changes the state of the output from OFF to ON or vice-versa).

The example above would mean that user number 000 would be able to use his/her code for momentary operation of the door on output 1 of decoder 1, but the code would be invalid for output 2 of decoder 1.

NOTE: The user decoder display will only be displayed for a decoder if the decoder type for that decoder has been changed from NONE to either MD01 or MD02 in the DECODER SETTINGS menu (refer to section 4.3 DECODER SETTINGS).

2.1.2 Add a User

When the users are being displayed, the first available user number may be found by pressing the **Ins** key. The name, code and decoder information can then be entered. At the end of this procedure, the operator will be asked if an automatic update is to be performed.

2.1.3 Delete a User

To delete a user simply select the user and press the **DEL** key and then **9** (Y for yes) when requested to delete the user. By pressing **Esc** or **E**, instead of **9**, the delete operation can be aborted.

2.1.4 Name Search

A name search can be initiated by pressing **6** (or N for Name Search). The same rules apply to the entry and search for part of a name as specified in the buffer name search section (section 1.1.2).

2.1.5 Code Search

When displaying users, a code search may be initiated by pressing **2** (or C for Code search) which will bring up a screen similar to this:

```

CODE SEARCH
NAME: 1234


```

Simply enter the full code required and press **E** to initiate the search.

2.1.6 Jump to a User Number

To jump to a user number first press **8** (or U for jump to User number) and the user number jump screen will be displayed with the cursor flashing on the first digit of user number 000. Enter the user number required and press the **E** key.

2.1.7 Repeat Search


To make searching for names and codes more efficient, the right arrow key  may be used to repeat the last search in the users area.

2.2 DISPLAY OPERATORS

```
NAME: L1 OPERATOR
CODE: 1234      LEV: 1
```

Displayed above is the information for the factory default operator with the operator name (L1 OPERATOR), code (1234) and the level (1). The name can be up to 12 characters in length, the code must be between 3 and 7 digits long (hashes (#) are acceptable except as the first digit). A level 1 operator can edit, view, insert and delete all operators but can not delete their own information. A level 2 operator can display their own information, edit their own code, edit and view all level 3 operators and add and delete level 3 operators. A level 3 operator can only display their own information and change their operator code.

2.2.1 Edit an Operator

When displaying an operator pressing  will start the editing operation. The editing operations that can be performed depend upon the level of the operator doing the editing and the operator being edited as described in section 2.1.



2.2.2 Add an Operator

```
NAME:
CODE:          LEV: 3
```

If the **Ins** key is pressed when displaying an operator a new operator can be inserted and the template above is displayed. A name and code may then be added and the level of the operator changed (if your operator level permits you to do so). The message "OPERATOR LIST FULL" will be displayed if all 10 operator positions have been used and the **Ins** key is pressed.

2.2.3 Delete an Operator

```
DELETE: JOE CITIZEN
PRESS Y TO DELETE
```

To delete an operator, press the DEL key when displaying the operator to be deleted a similar message to that above will be displayed. Press  (Y for yes) to confirm the delete or **Esc** or  to keep the operator.

3. DATA LOGGER OPTIONS

From within the DATA LOGGER OPTIONS menu the following can be done: the time, day and date can be set; the date format can be selected; the type of display shown when the data logger is in the OFF mode can be selected; a choice can be made as to which system events are logged; the overwrite warning can be turned on or off; and the logo displayed when the data logger is in the OFF mode (if selected) may be edited. Only level 1 and 2 operators have access to this menu.

3.1 SET TIME AND DATE

```

SET TIME AND DATE
00:00 01/01/90 MON
  
```

This menu allows the operator to change the time, date and day. The current time, date and day are displayed with the time colon flashing to indicate the time is continuously being updated. When **[E]** is pressed, the time colon will stop flashing and the cursor will start flashing on the first digit of the time. If the **Esc** key is pressed while changing the time, date or day, the original settings will be restored.

The time is in a 24 hour format and the date format follows that shown under the DATE FORMAT menu (refer to section 3.2 Date Format), with the default being Month/Day/Year. If an incorrect entry is made in the time or date field and either **[E]** or the arrow keys are used to leave the field, a beep will be sounded and the cursor will return to the start of the field. An example of this would be if the time was set to 24:45, where 23:59 is the latest entry possible.

The day of week is changed by using the up and down arrow keys when the up/down arrow is flashing. When **[E]** is pressed while the up/down arrow is flashing next to the day of week field, the time, day and date are updated.

3.2 DATE FORMAT

```

DATE FORMAT
MM/DD/YY
  
```

The date format determines the way the date is displayed everywhere within the data logger. There is a choice of three formats, DD/MM/YY, MM/DD/YY and YY/MM/DD where DD represents the day of month, MM represents the month and YY represents the year. To change the date format simply press **[E]** and the up/down cursor will flash at the start of the current format. Use the up and down arrow keys to select the correct format and **[E]** to accept it. The factory default is MM/DD/YY.

3.3 SHOW EVENTS WHEN OFF

When the data logger is in the off mode, it can either display the time, day and date with the logo (refer to section 3.6 EDIT LOGO for details) running along the bottom line or it can display events as they happen (note that the events are displayed without the user codes). There is a choice of YES or NO, with YES indicating that events are displayed in the off state. The factory default is NO.

3.4 SELECT EVENTS LOGGED

```
SELECT EVENTS LOGGED
DOOR FORCED: YES
```

The Select Events Logged menu allows the operator to choose which types of events are recorded. This involves the following events: Door Forced Open; Door Open Too Long; Request To Exit (RTE); Invalid Code; and 1 Minute Lockout. This may be useful in situations where certain events occur often but are not considered to be worth recording the events. For example it may be more convenient not to record RTE events as they occur too often and cause too many events to be generated. The factory default is for Door Forced Open, Door Open Too Long and 1 Minute Lockout events to be recorded, RTE and Invalid Codes are not to be recorded.

3.5 OVERWRITE WARNING

An overwrite warning is sounded when 90% of the event buffer (6147 events) remains unprinted. This is to indicate that unprinted events may be overwritten by new events. To make the operator aware of this condition, the data logger sounds three beeps every minute until more than 10% of the events have been printed or the overwrite warning is turned off.

3.6 EDIT LOGO

```
EDIT LOGO
MAGIC DATA LOGGER
```

The logo is displayed together with the time, date and day when Show Logged Events (refer to section 3.3) is set to NO. The logo can be any text of up to 20 characters in length. To edit the logo, press **[E]** and enter the text required. Press **[E]** to save the new entry or **Esc** to restore the original logo.

3.7 BEEP ON KEY PRESS

To give audible feedback of when a key is pressed the data logger generates a beep, this beep can be turned on or off here. There is a choice of YES or NO, with YES indicating that events are displayed in the off state. The factory default is YES.


4. DECODERS


This menu is restricted to level 1 operators only. It contains all the decoder information, the decoder reprogramming operation and the ability to upload (read and record) all the user codes from any decoders in the system.



4.1 DECODER SETTINGS


```
DECODER 1: DEC 1
CODE: 1111      NONE
```

The diagram above shows the decoder information for decoder 1 which is connected to DT1. The decoder name may contain up to 5 characters and the management code can be between 3 and 9 digits in length and include hashes (#) and stars (*) except at the start of the code. The decoder type is chosen using the up and down arrow keys and may be either NONE, MD01s4, MD02s4, MD01s5 or MD02s5.

NOTE: To enter a star (*) as a code digit use the up arrow key .

The up and down arrows are used to change between decoders. To change the decoder information, press  when the decoder required is displayed and the cursor will begin flashing at the start of the decoder name. The name and management code may be entered and the decoder type selected.

If the decoder type is selected as a Series 5 and  is pressed when the up/down arrow is flashing next to the decoder type the data logger will bring up a series of menus allowing the changing of the decoder settings of Automatic Relock, RTE Switch type, ELC Relay Type, ELC Operating Time, Door Input, DOTL Timer, Door Forced Open Detection, 1 Minute Lockout, Two Codes Mode and Two Codes Timing. If the decoder type is selected as a MD02s5 the data logger will ask for each of these settings for both door 1 and door 2. Once all settings have been completed the data logger will then ask if you want to send these new settings to the decoder, press  (Y for yes) to send them, any other key to not send them.

If the decoder type is NONE, MD01s4 or MD02s1 and  is pressed when the up/down arrow is flashing next to the decoder type all the new information is saved.

If **Esc** is pressed while editing information, the original information will be restored.

NOTE: The management code for a Series 4 decoder cannot be programmed into the decoders from the data logger, it must be programmed into the decoder memory using the keypad connected to the decoder when the decoder is in programming mode.

4.2 REPROGRAM DECODER

```
REPROGRAM DECODER  
REPROGRAM: DEC 1
```

To reprogram a decoder with the settings (Series 5 decoders only) and user codes from the data logger memory, press **[E]** and the display above will appear (your own decoder name for the first decoder will be displayed). If the message “ERROR: NO DECODERS” is displayed, all the decoder types in the Decoder Settings menu (refer to section 4.1) are set to NONE and must be changed to the appropriate type. Next, select the decoder required by using the up and down arrow keys and press **[E]**.

With Series 4 decoders the management code must be pre-programmed into the decoder using the program link according to the decoder instructions and the decoder details correctly entered into the Decoder Settings menu (refer to section 4.1) in the data logger. If NONE is selected as the decoder type in the Decoders Settings, the decoder will not appear in the Reprogram Decoder list.

Reprogramming a decoder may take up to 5 minutes. Any errors encountered by the data logger will be displayed at the end of the reprogramming operation. An error code list and explanation can be found on page 20.

4.3 UPLOAD FROM DECODER

```
UPLOAD FROM DECODER  
DECODER: DEC 1
```

An upload involves reading all the user codes from a decoder and updating the data logger user code memory. In a situation where a data logger has been added to an existing Magic system, an upload can be used to read the existing user codes from the decoders. As with the reprogramming operation, the management code and decoder details must be correct in the Decoder Settings menu before an upload can be performed.

To upload user codes from a decoder, choose the decoder using the up and down arrow keys and press **[E]**. There are two stages of the upload which will be displayed as they are executed; the upload itself where “UPLOADING...” and the decoder name is displayed; and the user code update where “UPDATING USERS” and the decoder name is displayed.

An upload operation takes approximately 75 seconds.

5. SERIAL COMMUNICATIONS

The Serial Communications menu contains all the settings for the communications between the data logger and the printer via the 9 pin female “D” connector. This consists of the flow control to be used, the baud rate, the printout width and the choice of printing out events as they occur.

5.1 DEVICE

```
CONNECTED DEVICE
PRINTER CONTINUOUS
```

The Device menu defines the type of device connected to the RS232 port. There are two printer modes, Printer and Printer Continuous which allow the operator to print events using the utilities in the PRINT EVENTS menu (section 1.2) and Computer mode which allows a computer to be connected.

Printer Continuous mode is used when the data logger is required to print events as they occur. Note that when an operator is logged on (the data logger is in the ON mode) the events are stored up and printed when the operator logs off.

When Computer mode is selected for the RS232 port, the Flow Control (section 5.3) Printout Width (section 5.4) and Print Events menu (section 1.2) are disabled (no longer visible).

Computer mode indicates that a computer is connected to the data logger. This mode must be selected before the computer can communicate with the data logger. To change the device type, press **[E]** so that the up/down arrow cursor flashes and use the up and down arrow keys to choose between Computer, Printer and Printer Continuous mode. Press **[E]** to accept the new setting or **Esc** to restore the original setting.

5.2 BAUD RATE

```
BAUD RATE
          9600
```

The baud rate is the speed at which the data logger communicates with the printer in Bits per Second. A choice of 300, 600, 1200, 2400, 4800 or 9600 is available. Consult your printer manual for the correct baud rate for your printer. The highest baud rate acceptable to your printer is generally the best one to use. To change the baud rate press **[E]** and then select the required baud rate using the up and down arrow keys. Press **[E]** to accept the new setting of **Esc** to return to the original setting.

5.3 FLOW CONTROL

```
FLOW CONTROL
  NONE
```

The flow control governs the method by which the data logger communicates with the printer. If it is not set correctly the printer could miss characters or even whole events. The options available are: None; DTR; Hardware; and XON/XOFF. To change the type of flow control used, press **[E]** and select the type of flow control by using the up and down arrow keys. Press **[E]** to accept the new setting or **Esc** to return to the original setting. Consult your printer manual to determine the type of flow control your printer uses.

5.4 PRINTOUT WIDTH

```
PRINTOUT WIDTH
  22 COLUMNS
```

To facilitate narrower printers the data logger can print events over 2 lines instead of one. The 22 column print width option allows events to be printed to fit neatly within 22 columns. The 42 column option is used where the printer can print 42 columns or more in one line, resulting in only one line per event being printed.

NEW MDL INSTALLATIONS WITH SERIES 5 DECODERS

When using the MDL on a new Magic installation it is recommended that the following steps be followed:-

1. Complete all wiring for the installation including the connections from each Magic decoder to the Data Logger.
2. Power up the MDL and log into the system using the default level 1 operator code of 1234.
3. Power up each Magic decoder so that the MDL logs they are attached.
4. Go to DECODER SETTINGS (refer Section 4.1) and confirm that the MDL has correctly recorded the type of each decoder attached.
5. Edit the settings for each decoder, give each one a name, a management code (optional) and set the desired features of each decoder.
6. Add the users of the Magic decoders to the Data Logger's memory (refer Section 2.1.2). At the end of adding each user, update the decoders by answering Y (the key) to the prompt "PRESS Y TO UPDATE".
7. All user codes will now be programmed into the relevant decoders and the system is ready to be used.
8. Add a new level 1 operator with the name and code for the person who is to manage the Data Logger (refer section 2.2).
9. Log out of the MDL then log back in using the new level 1 operator code. Delete the default operator of L1 OPERATOR. Add other operators for levels 1, 2 and 3 as required (refer section 2.2.2).
10. Go through the other settings of the MDL and set them up according to the requirements of the installation.

FITTING A MDL TO AN EXISTING INSTALLATION

When adding an MDL to an existing Magic installation three details need to be known about the system, these are:-

1. The model of each Magic decoder being connected to the MDL.
2. The Management code for each decoder.
3. The User codes programmed into each decoder, the output that the code operates (if more than one is available) and who's code it is.

Once these details are known the MDL can be programmed for the installation by following the steps outlined below:-

1. Wire the MDL to power and the DLOG terminal from each installed Magic decoder to one of DT1, DT2, DT3 or DT4 on the MDL (remember if the decoders are running from separate power to the MDL a common ground is required).
2. Power up the Data Logger and log into the system using the default level 1 operator code of 1234.
3. Go to DECODER SETTINGS (refer Section 4.1) and edit the settings for each decoder, give each one a name, enter in the management code and select the correct model of the Magic decoder attached.
4. Go to UPLOAD FROM DECODERS and perform an upload from each of the attached decoders.
5. Edit the users of the Magic decoders in the Data Logger's memory (refer Section 2.1.1) and assign a name to each of the codes shown.
6. Add a new level 1 operator with desired name and code for the person who is to manage the Data Logger (refer section 2.2).
7. Log out of the MDL then log back in using the new level 1 operator code. Delete the default operator of L1 OPERATOR. Add other operators for levels 1, 2 and 3 as required (refer section 2.2.2).
8. Go through the other settings of the MDL and set them up according to the requirements of the installation.

ERROR MESSAGES

The following is a list of error numbers which might occur during an automatic update of a user, a reprogram operation or an upload operation. If the keypad connected to a decoder is used during one of the operations above any of the errors below could occur.

The “x” after the first digit represents the number of the decoder the error occurred on.

- 0x** Decoder busy. The decoder was sending information to the data logger try the operation again.
- 1x** Management code error. The management code in the Decoder Settings menu may not be correct. Try entering the code at the decoder’s keypad to verify its validity.
- 3x** New user code not accepted. The user code is already programmed into the decoder in another memory location, check that there are no user code the same as any of the management codes for each decoder.
- 4x** Upload code error. The decoder did not accept the upload code. Ensure that the decoder is configured properly and all wiring is correct.
- 5x** Error in received bytes. An error was detected in the information received during an upload operation. There are various causes of errors in received data including the use of the decoder’s keypad during the upload. Wait for about 1 minute then try the upload again.
- 7x** Incorrect number of bytes received. This error will only occur when an upload is attempted. It is usually caused by interference on the DLOG line, or when the decoder’s keypad is used during the upload.

Eg. error **11** = Management code error on decoder 1.

Other Available Magic Models and Accessories

- MD-01** Magic single door access decoder.
Series 4 400 programmable user codes.
1 x 5 Amp. 30 Volt Electric Latch Control relay.
1 x 1 Amp. 30 Volt alarm relay.
12 to 24 Volt D.C. or 16 to 24 Volt A.C. operation.
- MD-02** Magic dual door access decoder.
Series 4 400 programmable user codes.
2 x 5 Amp. 30 Volt Electric Latch Control relay.
2 x 1 Amp. 30 Volt alarm relay.
12 to 24 Volt D.C. or 16 to 24 Volt A.C. operation.
- MD-06** Six (6) open collector logic outputs.
Series 3 Timed or toggle operation.
125 programmable user codes.
12 Volt D.C. operation.
- MK-01** Standard keypad encoder for any Magic decoder. Up to 10 per system allowed.
- MK-02I** Rugged metal, back lit, vandal and weather resistant keypad encoder for any Magic decoder. Suitable for outdoor usage.
- MAGIC6** MD-06 decoder and MK-01 keypad packaged together.



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