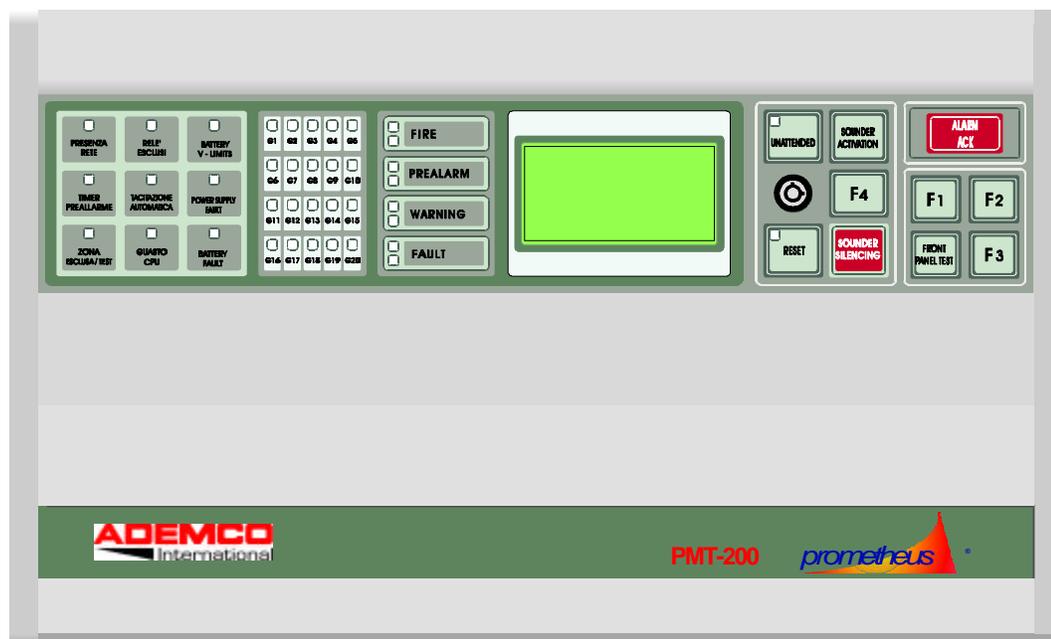


PMT - 200 FIRE CONTRL PANEL

PROGRAMMING

MANUAL



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INTRODUCTION

PMT-200 System description

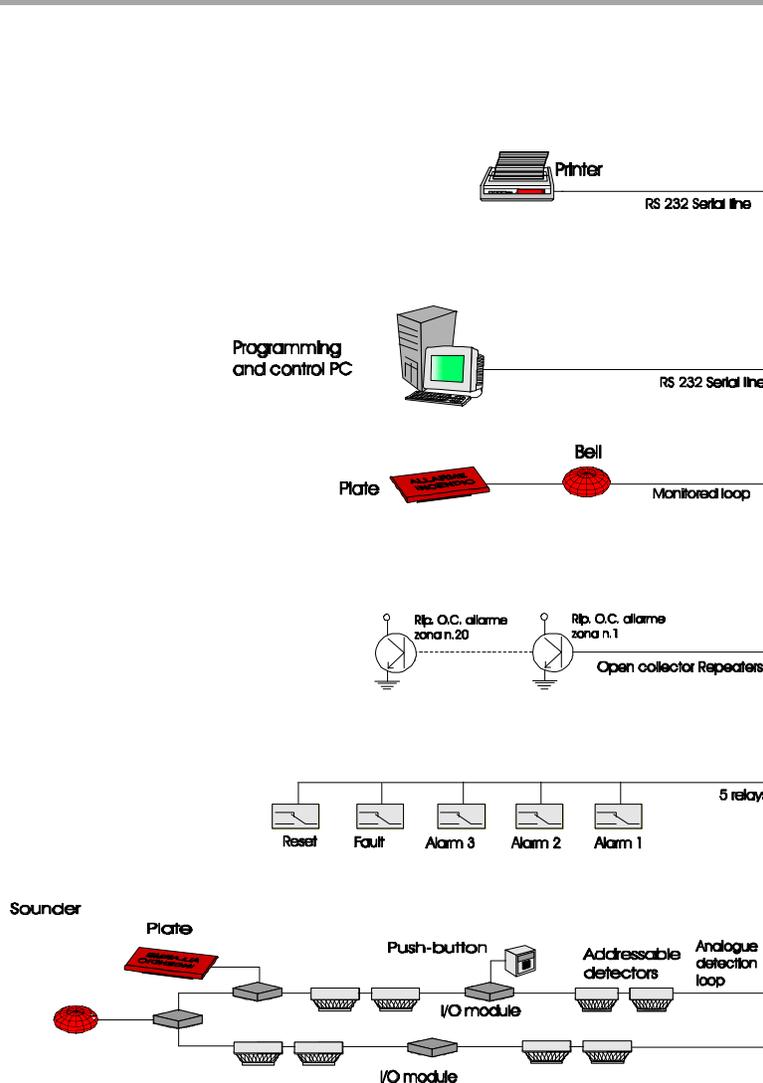
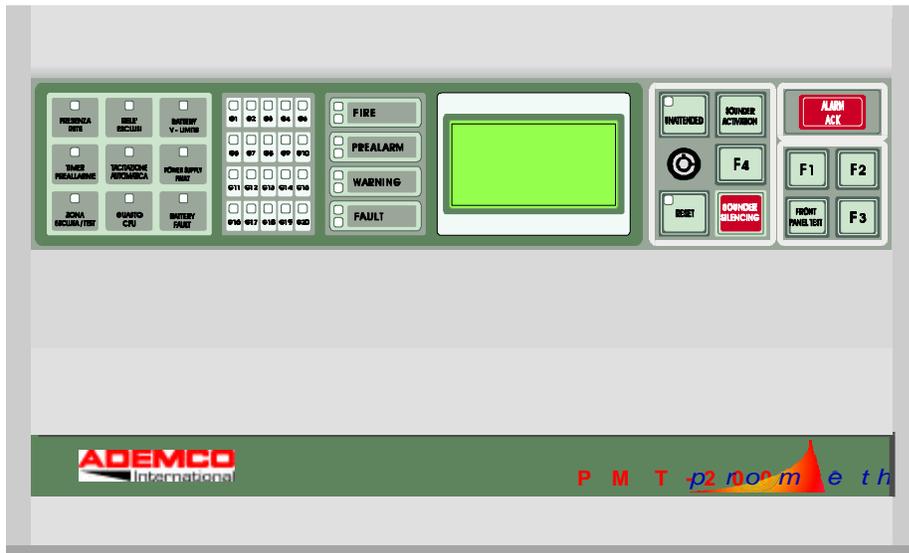
The control panel is constructed to meet the following standards CEI-EN60950, CEI 14-6, CEI 64-8, UNI 9795, EN 54-1 and the draft standards EN 54-2, EN 54-4, as well as the harmonised European standard on electromagnetic compatibility CE.

The PMT-200 is a programmable stand-alone fire alarm control panel, a list of the principal operating features appears below:

- The detection is accomplished through an addressable analogue detection loop loops to which can be connected up to 99 intelligent detectors and 99 I/O modules.
- All system components employ a 16 bit Microprocessor, RAM memory, EPROM resident program memory end EEPROM non-volatile memory for storing configuration data.
- The high level feedback via the alphanumeric display and the use of programming menus makes it extremely simple to install, program and manage systems.
- Dedicated software permits the programming of the control panel under Windows operation system (ver. 3.11 and '95).

The PMT-200 system architecture

The following diagram shows the architecture of the PMT200 analogue control panel:



OPERATING PROCEDURES

Description of the operating procedures

Using the operating panel, it is possible to input commonly used commands as well as have access to a series of management and control panel programming procedures.

Access to the different procedures is via a hierarchical menu structure, where the higher the access level number, the greater the number of operating functions available.

Four separate operating levels are available; each operating level displays not only its own menu but also that of the lower menus.

A hardware key and a password (obtained by pressing the function keys F2 & F3 in a particular manner) limit access to the various access levels.

The current access level is identified by a number (preceded with "Lev") displayed on the second line of the control panel's alphanumeric display when the latter is in a normal operating condition.

If, after having inserted an access level greater than 1, no action is performed on the panel keys within a pre-defined period (typically 30 sec's) the control panel returns automatically to access level 1. This is to avoid personnel having access to operating functions for which they do not have authorisation.

Below is a list of the user functions grouped together in their respective access levels.

LEVEL 1

Alarm, Pre- Alarm and Fault acknowledge.

Display of the alarms, pre-alarms and fault conditions that have occurred.

Operator Panel Test

LEVEL 2

All the functions of the previous level (with the exception of 'operator panel test)

Control panel reset

Silencing the sounders using the ACKNOWLEDGE push-button.

A00 Remote Transmission Enabled / Disabled

B00 Software Zone, Detector and I/O module Enable/Disable

C00 Read the Analogue detector value - I/O Modules

D00 Alarm Addressable Detector Test

F00 Display the event memory

LEVEL 3

All the functions of the previous level

G00 Print the event memory

H00 Modify the clock parameters

J00 set the relay delay timers

K00 set the sounder delay timers

L00 set the normal timings for a control panel operating under “attended” operating conditions

M00 Configuration of the detection analogue loop

LEVEL 4

All the functions of the previous level

P00 Delete the event memory

Q00 Set-up the communication ports

R00 Control panel set-up

S00 Master/slave set-up

Z00 Deleting the control panel set-up and that of the installed modules and loading the factory default set-up.

THE OPERATING LEVELS

Description of the operating levels

Access to the 4 operating levels is via the hardware key (by changing the position of the key in the key-block and therefore independently to its actual position.) and password.

The password must be keyed in the following manner:

Press F3;

Holding F3 pressed, press F2;

Release F2;

Release F3.

Access the 4 operating levels are as follows:

- **Level 1:** This is the lowest level and is always accessible
- **Level 2:** Accessible by using the password.
- **Level 3:** Accessible by inserting the hardware key.
- **Level 4:** Accessible by inserting the hardware key and keying in the password.

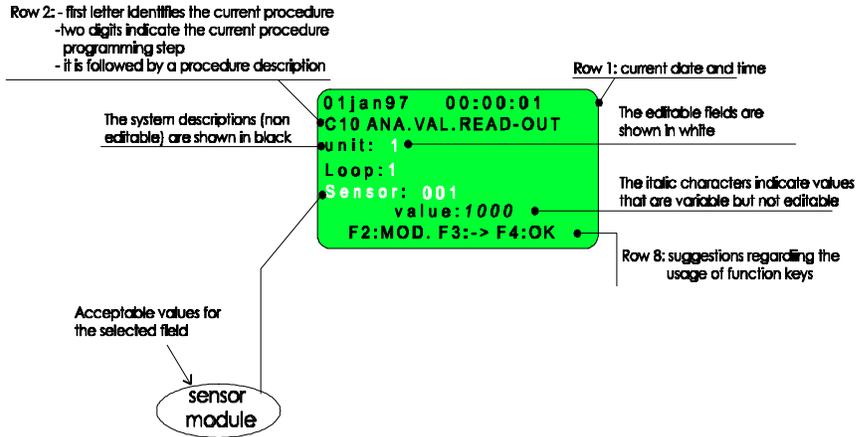
The **F1**, **F2**, **F3**, and **F4** push-buttons not only permit the password to be keyed, but also access to the operating procedures and editing of the fields contained in these procedures.

The Push-button **F1** normally accesses the functions available in an auto sequential manner. Push-button **F4** actions the function selected and confirms any changes made, Push-button **F3** scrolls through the different editable fields and Push-button **F2** edits the field selected.

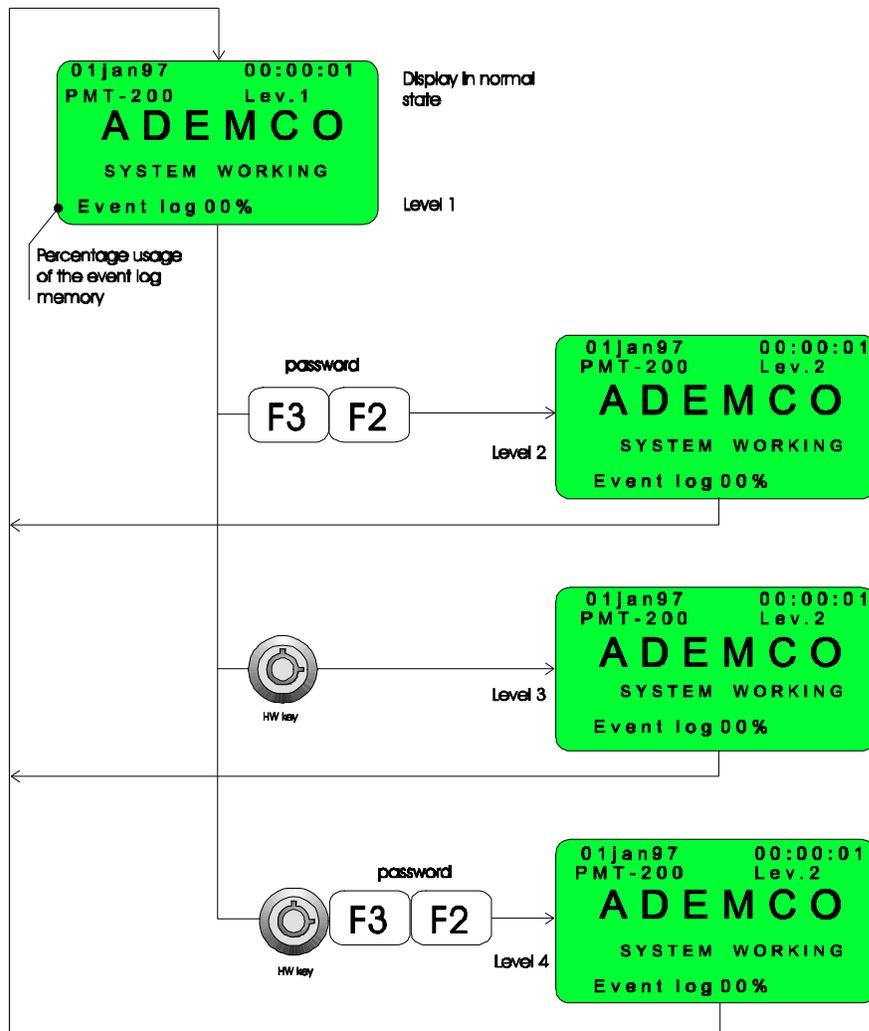
In the following paragraphs, all the procedures pertinent to the user interface are described in detail, using block diagrams.

Each diagram shows the various steps that the user must follow in order to use the system correctly.

The following legend is useful for the correct interpretation of the flow diagrams:



The following legend is useful for the correct interpretation of the flow diagrams.



Operating level 1

This is the lowest operating level available.

The procedures accessible are as follows:

- Alarm, Pre-Alarm and Fault acknowledge.
- Display of the alarms, pre-alarms and fault conditions that have occurred.
- Operator Panel Test.
- Switching between “attended and non-attended” mode of operation. (using the “non attended” key)

In the paragraphs, which follow, the function of each procedure is described in detail.

Acknowledge



Apart from the normal state of operation the control panel can display different alarm conditions.

A priority level is associated to each of these alarm conditions.

Below is a list of each of these alarm conditions in decreasing priority:

1. Fire Alarm.
2. Fire Pre-Alarm.
3. Technical Alarm.
4. Fault.

The display always shows the condition with the highest priority first, regardless of the chronological sequence of events.

All of the conditions are, however, memorised by the control panel.

After pressing the ALARM ACK. push-button, the condition displayed at that moment is “captured” and the display shows the alarm condition (if present) with the next (lower) priority.

Only after all of the alarm conditions, that have occurred, have been captured will the display revert to normal.

Pressing the ALARM ACK push-button also silences (deactivates) the sounders and audible indications at all of the panels.

Display of the captured alarms, pre-alarms and fault

F2

The alarm conditions (Alarm, Pre-Alarm, Technical Alarm and Faults) captured (by the procedure described in the preceding paragraph) are stored in groups of a maximum of 10 and in order of priority as a list within the control panel memory.

F3

Using the **F2** and **F3** push buttons it is possible to scroll through the event log and view an event on the display..

F2 scrolls in ascending order of priority.

F3 scrolls in descending order of priority.

Display test

**FRONT
PANEL TEST**

This procedure tests the correct operation of the alphanumeric display and all of the visual indications (LEDs).

Pressing the “F4 /Front Panel Test” starts the display test procedure and switches on all of the visual indicators (LEDs) for approximately 2 seconds.

At the end of this routine, both the display and the LEDs return to their normal state.

Attended / non-attended

UNATTENDED

Yellow LED:
- on = not attended
- off = attended

As described in Appendix A, the control panel has two distinct modes of operation, namely: attended and non-attended.

Selection of one or other of these modes of operation is by the appropriate key on the front panel BUT ONLY IF ACTIVATED during the panel set-up programming, menu R00 “CONTROL PANEL SET-UP”.

Operating level 2

Access to the group of procedures in this level is dependent on the keying of the correct password as described at the start of this chapter.

The procedures available are as follows:

- All the functions of the previous level (except the Display Test procedure).
- Silencing the sounders using the ACKNOWLEDGE push-button.
- Control panel reset and editing the menu language.
- Isolation / Arming of the repeater relays.
- Isolation / Arming of the configured detectors, I/O modules and software zones.
- Reading the analogue value from detectors.
- Detector Alarm -Test.
- Viewing the event log.

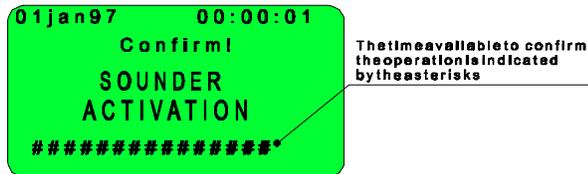
In the paragraphs, which follow, the function of each procedure is described in detail.

Activating/Silencing the alarm siren

The two pushbuttons: *Activate Sirens and Silence Sirens* can be found on the control panel front plate.

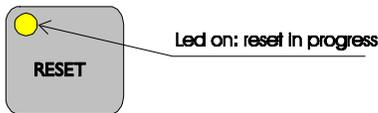
- *Activate siren*: pressing the pushbutton twice will cause the LCD display to show the Activation message and will request that the user confirms the action, this requires that the operator presses the pushbutton again before the timer expires (approximately 20 seconds) indicated by the row of "#" symbols displayed.

The display is as follows:



- *Silence Siren*: the operation of this push button is similar to that of the previous pushbutton described; the message "SILENCING SIRENS" will be displayed.

Control panel reset and editing the menu language



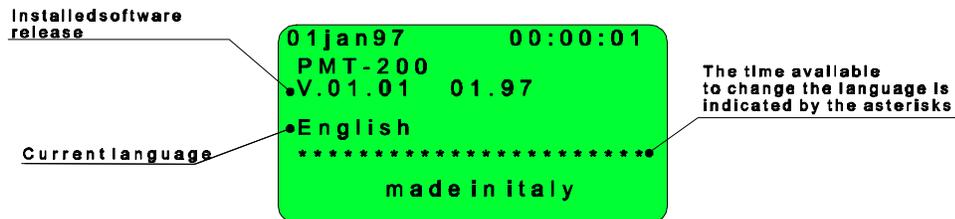
The reset procedure clears the control panel back to the "normal" state (using the relative key), resets the detection loop following an alarm, pre-alarm, technical alarm or fault condition, isolates all the relays, the sounders, all the open collector outputs and disables remote transmission (if isolated in menu A00).

The programmed system configuration is still memorised in the EEPROMs.

The system-reset action is also memorised in the event memory with the date and time at which it was done.

The procedure lasts about 1 minute, during which the alphanumeric display shows a message which contains not only the date and time and the menu language but also the version number of the software resident in the control panel. During this period, it is possible to alter the menu language by repeatedly pressing the same push-button.

The display will be as shown below:



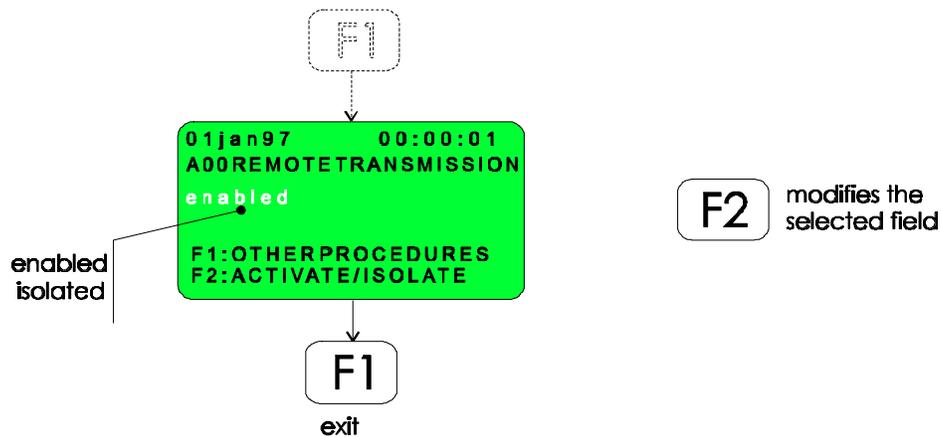
A00 - Remote transmission disable

It may be necessary to disable the alarm and fault repeater relays during installation or the normal course of maintenance, so as to avoid false alarms.

The Remote Transmission disable inhibits the activation of the following repeater relays:

- ALARM Relay 1.
- ALARM Relay 2 (PRE-ALARM).
- ALARM Relay 3 (TECHNICAL ALARM).
- GENERAL FAULT Relay.
- GENERAL ALARM Timed Relay.

The following illustrates the steps to follow:



Not only is the yellow “REMOTE TRANS” LED on the front panel “on” but the buzzer is also activated every 10 seconds.

The reset procedure re-enables the remote transmission status.

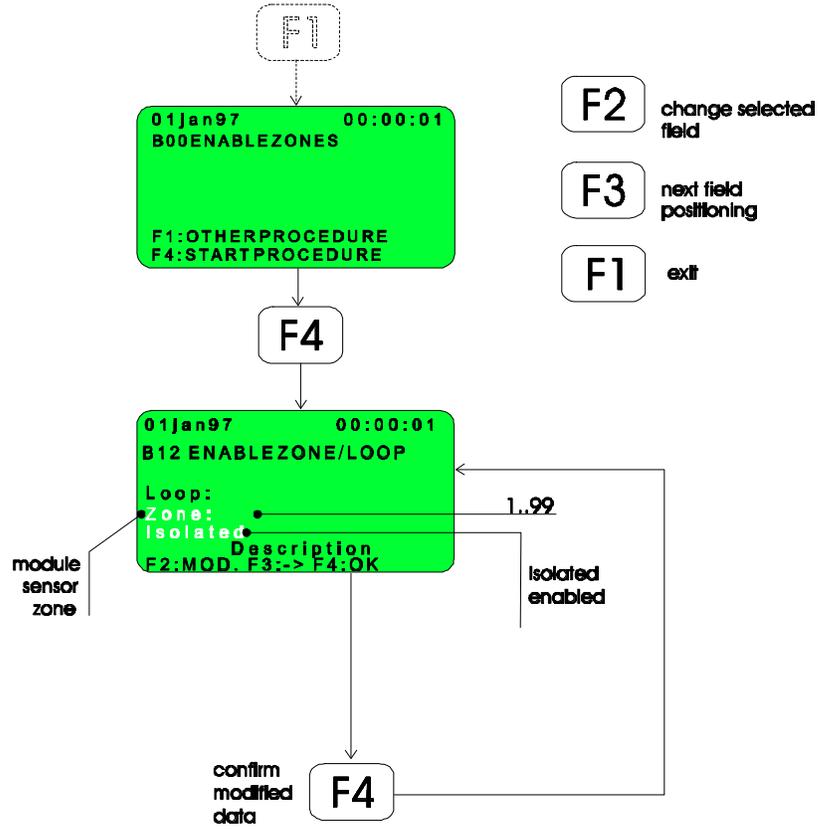
B00 - Isolation / arming of the configured software zones, detectors and I/O modules

This procedure allows the configured detectors, I/O modules and software zones (for instance during the system maintenance operations) to be isolated and re-enabled, to avoid the possibility of false activations.

The LEDs mounted on detectors or modules, which have been individually isolated or that belong to an isolated software zone, DO NOT FLASH.

All isolation and re-arming operations of zones/loops/modules and individual detectors are memorised in the event log in the “VARIOUS “ field.

The flow chart describing this operation is shown on the following page:

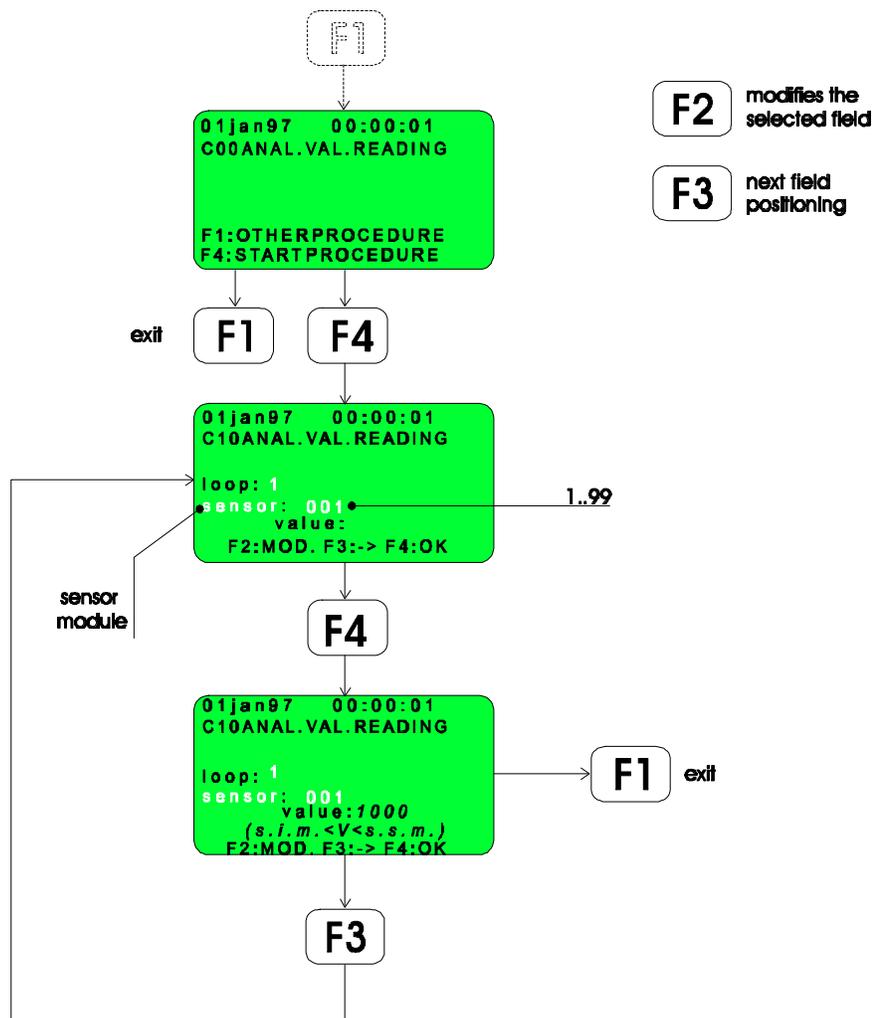


C00 - Reading the analogue value of the detectors and of the I/O modules - maintenance thresholds

This procedure not only allows the “analogue value” measured by the detectors or the I/O modules installed on the detection loop to be shown on the alpha-numeric display but also the maintenance threshold of each ADEMCO series detector (addressable):

- **1700ECB/A**: Ionisation smoke detector;
- **2700ECB/A**: Optical smoke detector;
- **3700ECB/A**: Rate of rise heat detector;

The following block diagram shows that which is shown on the display whilst executing this procedure:



The analogue detector models that can be installed together with the explanation of the values displayed during this procedure are analysed below.

A. SMOKE DETECTORS 1700ECB AND 2700ECB SERIES-(Set-up as ‘AUTOMATIC’ in menu M50)

It is possible, for these detectors, to define not only the analogue value, but also the decrease in performance over a period of time (for instance, due to the build up of dust deposits on the detecting element)

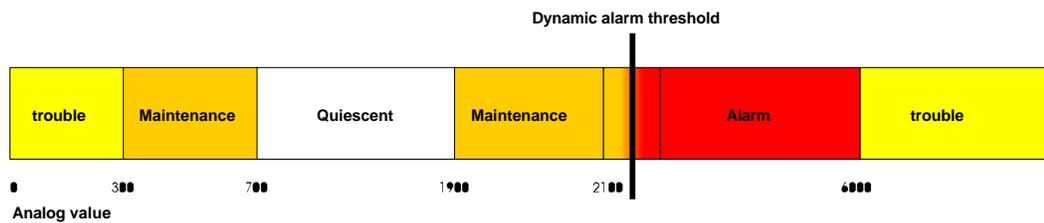
Using the correct procedure within the software developed for this type of detector, it is possible to assign a DYNAMIC ALARM THRESHOLD to each detector, which maintains the sensitivity constant in time hence making up for any reduction in the detectors performance.

Further more a MAINTENANCE condition has been defined, which when the reduction of the detectors' performance meets the limit, beyond which it can no longer be compensated automatically, a specific message is displayed.

☞ **value** : the analogue value of the detector/module selected.

☞ **alarm parameters** : This is a range of technical parameters whose characteristics can vary depending on the firmware release used.

The following diagram is valid for all ADEMCO series 2700ECB and 1700ACB detectors:



B. SMOKE DETECTORS 1700ECB AND 2700ECB SERIES-(Set-up as 'AUTOMATIC' in menu M50)

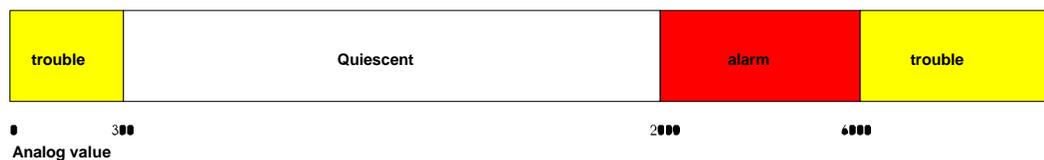
Using the correct procedure within the software developed for this type of detector, it is possible to assign a DYNAMIC ALARM THRESHOLD to each detector, which maintains the sensitivity constant in time hence making up for any reduction in the detectors performance.

C. DETECTORS (such as: UV FLAME – IR FLAME AND LINEAR HEAT SENSORS (CABLE) –I/O MODULES (PMT100) AND ADDRESSABLE BASES (AB401PMT) which are programmed in menu M50).

No provision has been made to vary the alarm threshold or to implement a maintenance routine of the detector in the event of decreased performance due to ageing of the detector.

All the thresholds for these detectors are therefore fixed.

The following diagram shows how the trouble, quiescent and alarm thresholds are set:



PLEASE NOTE: To read the analogue value of a detector/module all that is necessary is that the detector loop to which it is connected has been ENABLED in menu M40 (this procedure ignores whether the detector or module has been set-up – menu M50, M60 or isolated - menu B10).

D00 - Addressable detectors test

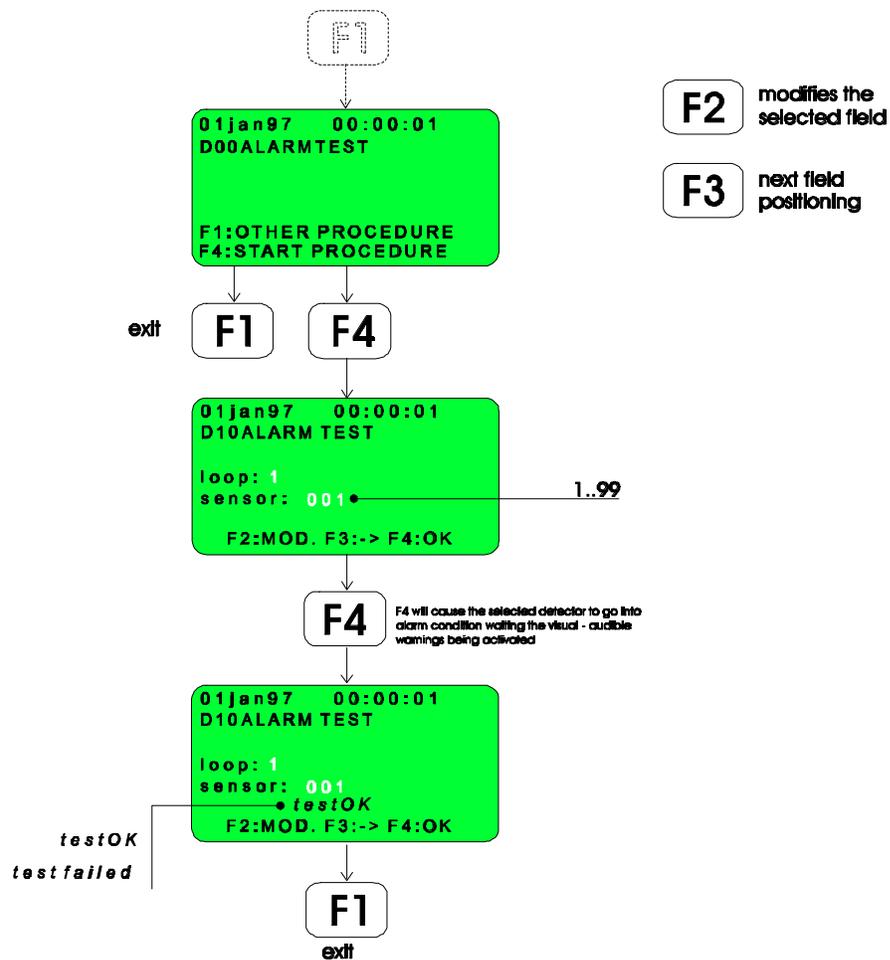
It may be necessary to test the addressable detectors during the installation phase or as part of the normal maintenance routine.

The test consists in generating an alarm condition in the selected detector; this operation however will not activate all of the visual - acoustic signals as would happen for a normal alarm event.

All the information relative to tests of each detector is printed in real time and is stored in the event log, in the VARIOUS field.

PLEASE NOTE: this test is ONLY valid if the detector selected and the software zone to which it belongs have been PROGRAMMED (menus M50 and M70) and ENABLED (menu B12).

The following block diagram shows that which is shown on the display whilst executing this procedure:



N.B. The test does not work with addressable bases (AB401PMT) and I/O modules (PMT100) installed.

F00 - Display of the event log

The control panel is equipped with EEPROM Memory in which is stored both the configuration data (which is inputted during programming of the control panel) and a memory of all the events that have occurred in the system.

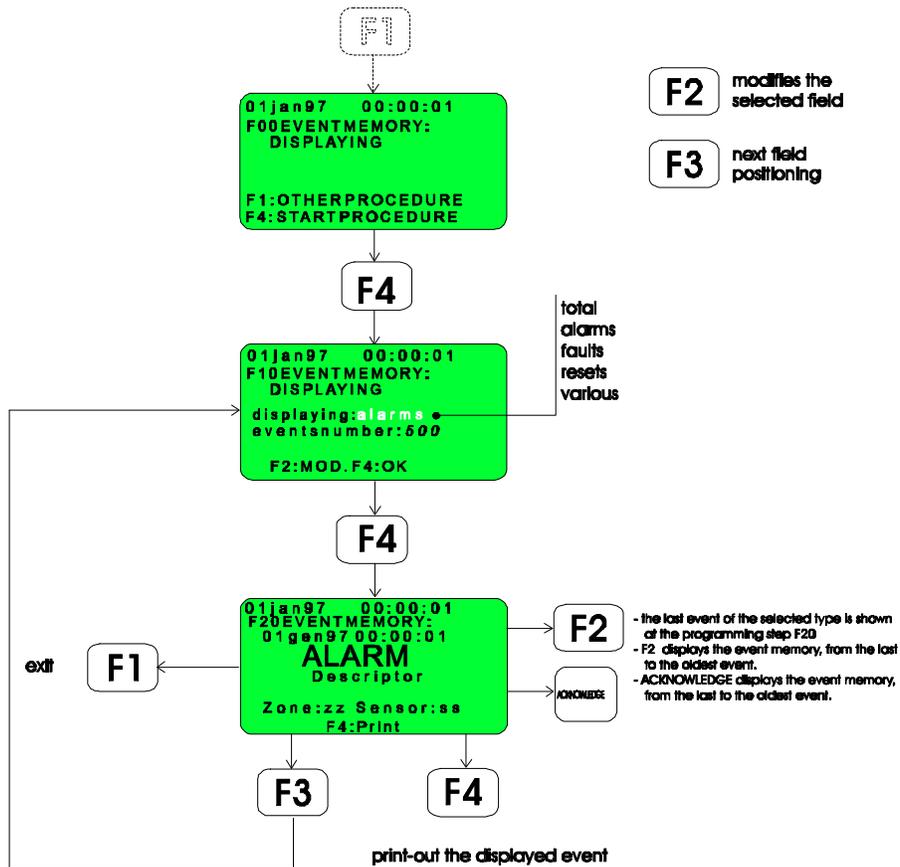
The maximum number of events that can be stored is **500**.

The following types of events are stored in the event memory:

- Alarms (Fire alarms, Pre-Alarms, Technological alarms).
- Faults.
- Resets.
- Mode of operation VARIOUS: (remote transmission isolate/enable, zone/detector/module isolate/enable, attended/ non-attended operation, conventional detector test, addressable detector test).

This procedure permits the operator to view the contents of the event memory using 5 different user definable search keys and to print the events displayed.

The following flowchart illustrates the states of the display during the different steps of the procedure:



Operating Level 3

The hardware key as described at the start of this chapter protects access to procedures at this operating level.

The accessible procedures are as follows:

- All the functions of the previous levels.
- Printing the Event memory.
- Changing the clock parameters.
- Setting the delay timer of the fire alarm relay.
- Setting the sounder delay timers.
- Setting the timers' characteristics for the "attended system" mode of operating.
- Configuration of the installed modules.

In the following paragraphs, each function is described in detail.

G00 - Printing the event log

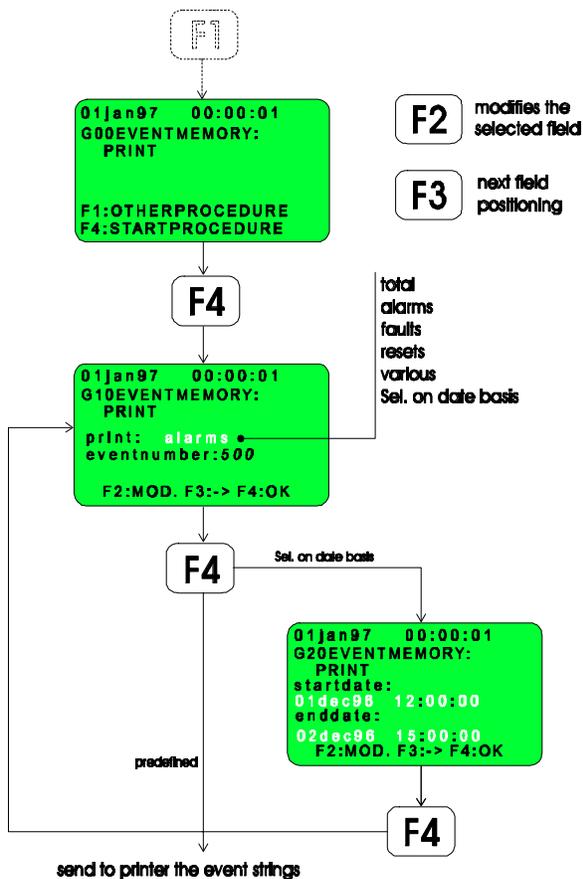
This procedure prints the contents of the event log.

A total of 6 different print options are available to give total or partial printouts of the event log:

- Print the whole event log.
- Print all of the alarms, pre-alarms and technological alarms.
- Print all of the faults.
- Print all of the resets.
- Print “Various” (remote transmission isolate/enable, zone/detector/module isolate/enable, attended/ non-attended operation, conventional detector test, addressable detector test).
- Personalised Printout (selection by date); all events between user definable start and stop dates are printed

PLEASE NOTE: the field “Start date” and “End date”, which can be modified using the F2 key, refer to dates of events which have been stored in the event log, (they are therefor not casually changeable by the user).

The following diagram shows how to obtain a printout:



Example:

- The most recent event is dated 31.06.97 (neglecting hours - min - sec's).

- A printout of all the events between the event dated 01.05.97 and the event dated 31.05.97 is wanted.

The dates that are displayed on entering procedure G20 correspond to the date of the most recent event (31.06.97).

1. Press F2 to return the “Start Date” and the “End Date” to the 31.05.97 (press the ALARM ACK key to advance the date).

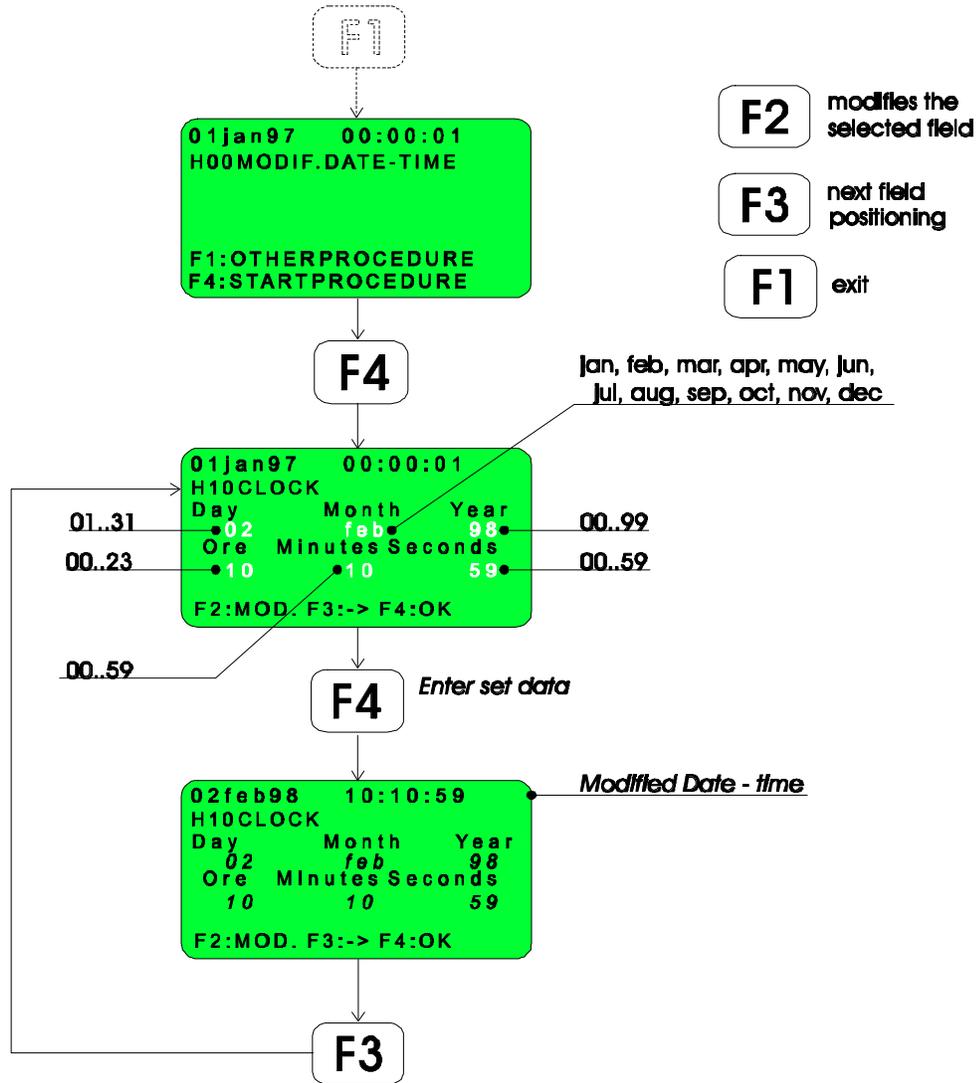
3. Press F3 to position the cursor on ‘End Date’.

4. Press F2 to return the ‘End Date’ to the 01.05.97 (97 (press the ALARM ACK key to advance the date).

5. Press F4 to print out the events.

H00 - Editing time and date

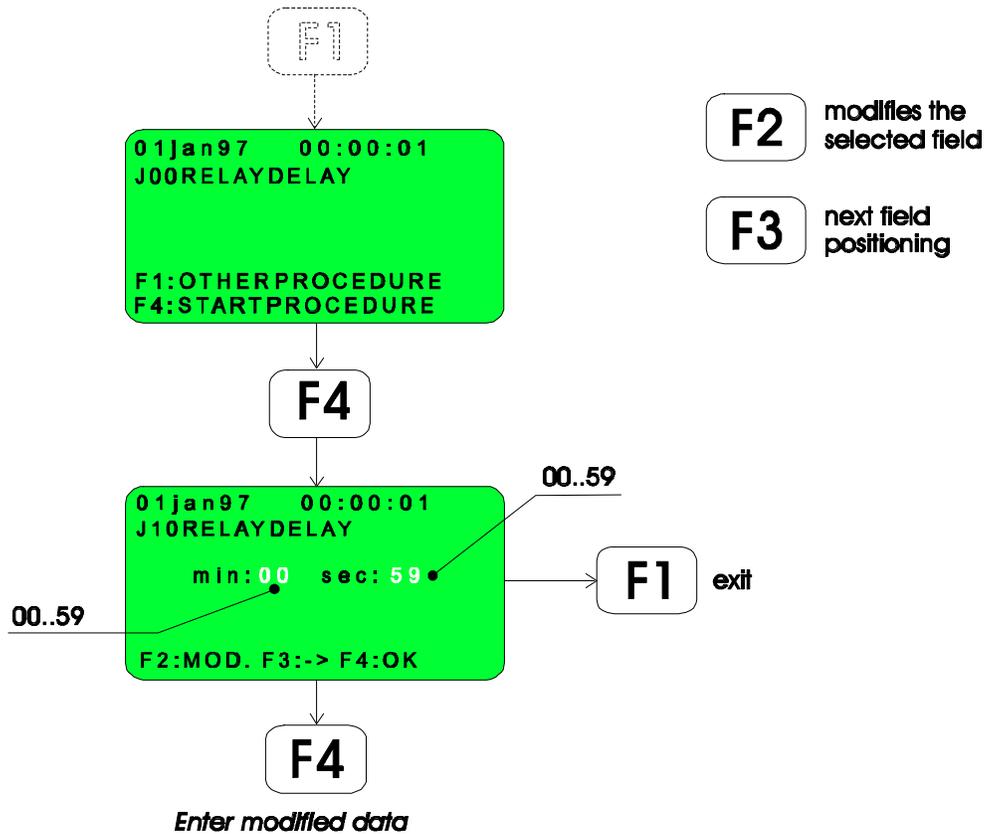
The block diagram below illustrates how to modify the clock:



J00 - Setting the relay timer delay

A general fire alarm repeater relay, which has a duration timer, is available on the terminal block of the control panel.

The following diagram shows the menu in which the relay timer delay can be set (the delay between the control panel receiving the alarm and the activation of the relay).

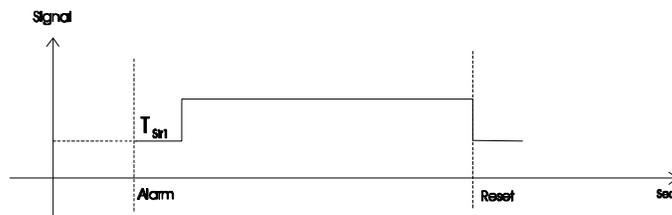
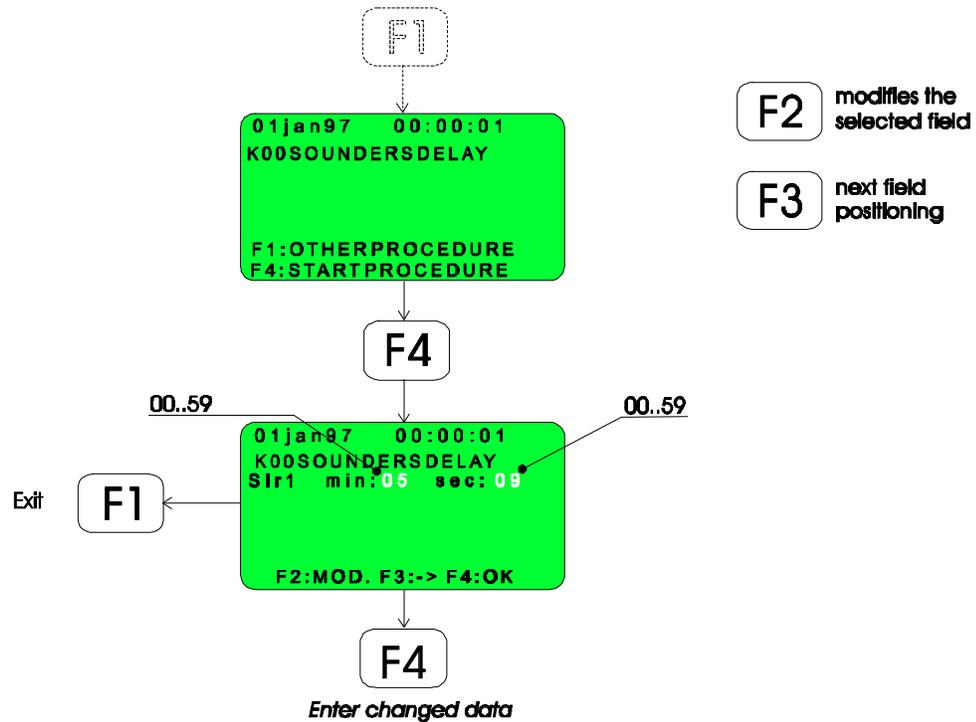


K00 - Sounder delay set-up

One monitored sounder loop which will signal the fire alarm on a sounder can be found on the control panel terminal block.

It is possible to program the sounder delay between the time that control panel receives the fire alarm signal and the when the sounder itself is activated.

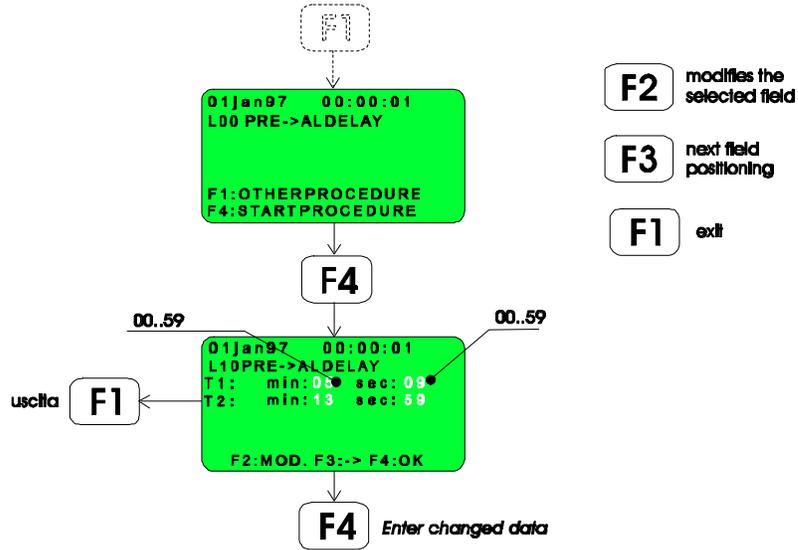
This set-up is shown in the following block diagram:



L00 - Setting the timers' characteristics for an attended system

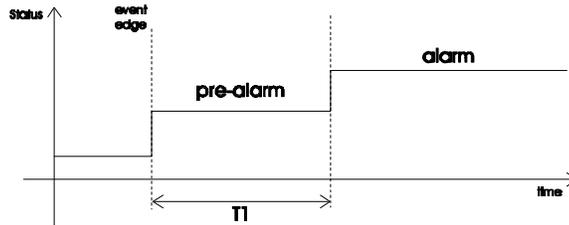
The following block diagram illustrates the to program the timers typical of the **manned control panel** mode of operation.

For more details regarding the operation of the control panel in its operational mode please refer to the relative paragraph in the appendix.

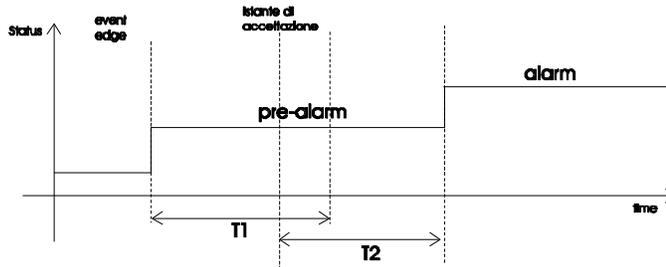


The meaning of T1 and T2 is shown in the 2 following diagrams:

1° possibility) No ACKNOWLEDGE is carried out during T1 (in this case T2 has no significant!)



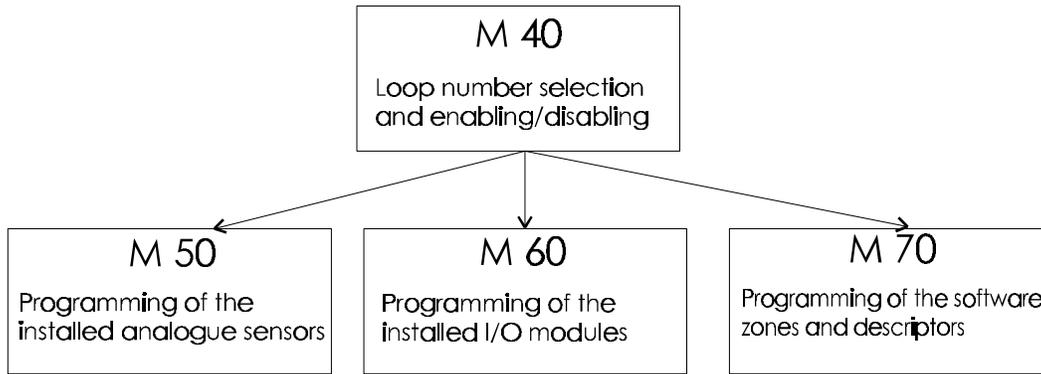
2° possibility) During T1 is carried out an ACKNOWLEDGE operation:



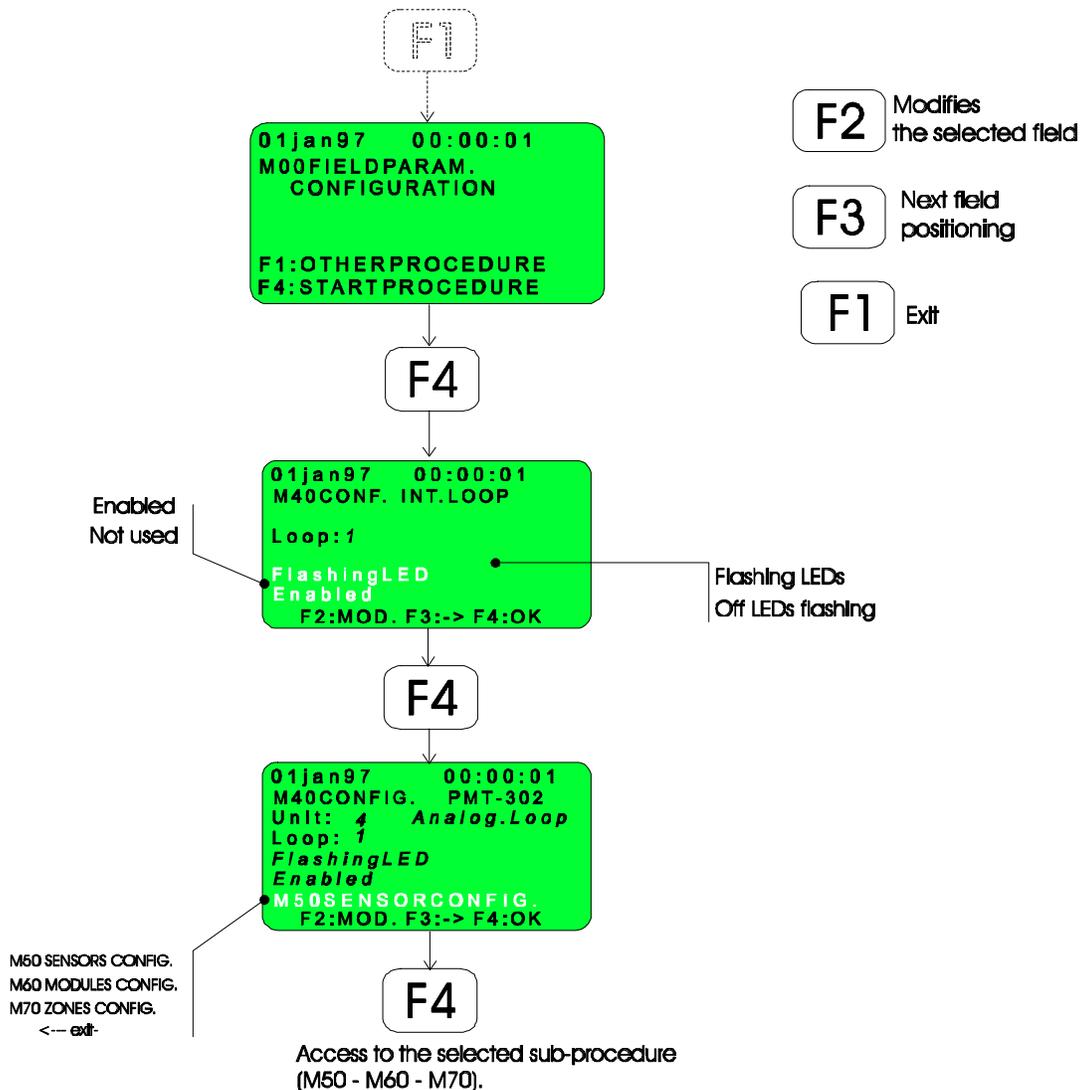
M00 - Set-up of the field parameters

The control panel is equipped with one analogue loop on which it is possible to install up to 99 intelligent analogue detectors and 99 addressable I/O modules.

It is possible to program the detection loop together with all devices connected to the unit by using the menu 40 and in the sub-menus M50 – M60 – M70 as in the following diagram:



The following flow diagrams illustrate this procedure:



The following is a description of the parameters that can be changed in menu M40:

☞ **Loop:** the loop number (1 or 2) to be programmed.

It is possible to program the following for each loop selected:

- ☞ **Flashing LEDs:** the LEDs of the detector on the I/O module being interrogated flash.
- ☞ **Off LEDs:** the LEDs on the detector being interrogated DO NOT flash.
- ☞ **Enabled:** the selected loop is operational.
- ☞ **Not used:** the operation of the selected loop is completely inhibited (Loop voltage =0).
- ☞ **M50 DET. PROG.:** pressing the F4 key accesses the sub-procedure allowing the programming of the installed detectors (M50).
- ☞ **M60 MODULE PROG.:** pressing the F4 key accesses the sub-procedure allowing the programming of the installed I/O Modules (M60).
- ☞ **M70 ZONE PROG.:** pressing the F4 key accesses the sub-procedure allowing the programming of the 99 software zones (M70).
- ☞ **<-- Exit--:** pressing the F4 key returns the operator to the M10 menu.

The following diagram shows what will appear on the display while the procedure M40 is being carried out:

M 50 - Configuration of the detectors

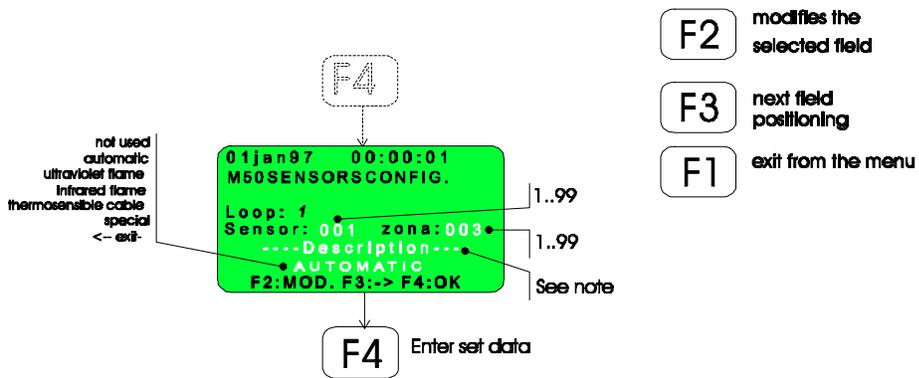
In this programming step it is possible to set the following parameters for each of the 99 detectors that can be installed: address, type, to which software zone the detector belongs, detector description (21 alpha-numeric characters max. word length) which gives a clear indication, for example, of where the detector is physically installed.

The following is a description of the parameters that can be changed:

- ☞ **Detector:** the detector address (from 1 to 99) installed to be programmed (this number must be the same as the address set on the detector using the dip-switch).
- ☞ **Zone:** the number of the software zone to which the detector previously selected is to be assigned. The programming of the software zones is shown in menu M70.
- ☞ **Descriptor:** This is a text string, which can be up to 21 alpha-numeric characters long, displayed whenever an event (fault – alarm etc.) relating to the programmed device occurs.

It is possible to set the following types for the detector selected:

- ☞ **Not used:** the operation of the selected detector is completely inhibited.
- ☞ **Automatic:** the installed detector must be an ADEMCO detector:
 - Low profile addressable ionisation smoke detector: 1700ECB.
 - Low profile addressable optical smoke detector: 2700ECB.
 - Addressable rate of rise heat detector: 3700ECB.
- ☞ **UV Flame detector:** the installed detector must be a FLAME DETECTOR (ultraviolet).
- ☞ **IR Flame detector:** the installed detector must be a FLAME DETECTOR (infra-red).
- ☞ **Line Heat Detectors:** detection is obtained using a line heat detector.
- ☞ **Addressable bases:** this option is for conventional detectors, which are made addressable, using the ADEMCO B401PMT detector base.
- ☞ **<-- Exit--:** pressing the F4 key returns the operator to the M40 menu.



NOTE: to enter the descriptors in the software zones, use the push-buttons in the following way:

- | | | | |
|--------------|-------------------------------|----|-------------------------------|
| ALARM
ACK | Quick decrement
of letters | F2 | Quick increment
of letters |
| F3 | Move to the next
letter | | |

M60 Configuration of the I/O modules

The control panel internal loop can control up to 99 PMT-100 I/O Modules.

Using the this programming step it is possible to program; the address, the type and assign a software zone and a descriptor (up to 21 alphanumeric characters) for each of the I/O Modules installed.

The following output parameters can be assigned for every unit programmed as *output*, *input/output*, *Single knock input/output* and *System Sensor output*:

1. Activation Delay: This is the time difference between the instant that the activation condition occurs and the output stage of the unit activates.

2. Activation Formula: Five activation formula can be programmed for each unit. These formulae are linked by the OR logical operator.

The two types of condition that can be linked to each of the five formulae are:

a) SIMPLE CONDITIONS: these can be programmed via the M60 menu using the keys on the control panel: following are the acceptable values:

- 0 = no formula;
- 1 = alarm in the zone to which the unit belongs;
- 2 = pre-alarm in the zone to which the unit belongs;
- 3 = alarm in any zone;
- 4 = pre- alarm in any zone;
- 5 = technical alarm in any zone;

b) COMPLEX CONDITION: these conditions can ONLY be programmed using the dedicated system set-up software. There is a maximum of 80 conditions that can be associated with the five formulae.

The following is the meaning of the editable fields:

- ☞ **Module:** the address of the module to be programmed; this number must be the same as the address set on the module using the dip-switch.
- ☞ **Zone:** the number of the software zone to which the module previously selected is to be assigned. The programming of the software zones is shown in menu M70.
- ☞ **Descriptor:** This is a text string, which can be up to 21 alpha-numeric characters long, displayed whenever an event (fault – alarm etc.) relating to the programmed device occurs.

It is possible to set the following types for the selected module:

- ☞ **Not used:** the operation of the selected module is completely inhibited.
- ☞ **Input:** the selected module functions as an addressable call point (code System Sensor M500KAC) and detector isolation unit (code System Sensor M512 ME).
- ☞ **Output:** the selected module (PMT100) functions as an external service actuator: the output is a clean contact obtained by using an opto-isolator (see the electrical characteristics in the installation manual).

- ☞ **Input/Output:** this option allows that the module (PMT100) module is used either as an addressable call point (zone input) or as an actuator (opto isolated output).
- ☞ **Tech. Input:** this mode of operation is the same as for the input module, however it's activation generates an Alarm 3 condition (TECHNOLOGICAL ALARM).
- ☞ **System Sensor Output:** This option permits the programming of System Sensor series M500CHE units.

PLEASE NOTE

The fire alarm status of the input and input/output types is dependent on how the software zones, to which they belong, have been programmed (refer to menu M70 zone programming).

- ☞ **Single Knock input:** this operates in a similar manner to the input module; activation of this type of module will generate a single knock type fire alarm independently to how the software zone, to which it is associated, is programmed (single or double knock).
- ☞ **Single Knock input/Output:** this operates in a similar manner to the input module; activation of this type of module will generate a single knock type fire alarm independently to how the software zone, to which it is associated, is programmed (single or double knock).
- ☞ **<-- Exit--:** pressing the F4 key returns the operator to the M40 menu.

PLEASE NOTE

If the module in question has been programmed as *Output, input/output and Single knock Input and System Sensor Output* pressing the F3 key, whilst the cursor is flashing under the "type" field, accesses the sub-menu where it is possible to program the activation of the selected module.

It is possible to set 5 equation for each module; each equation can express 6 different conditions.

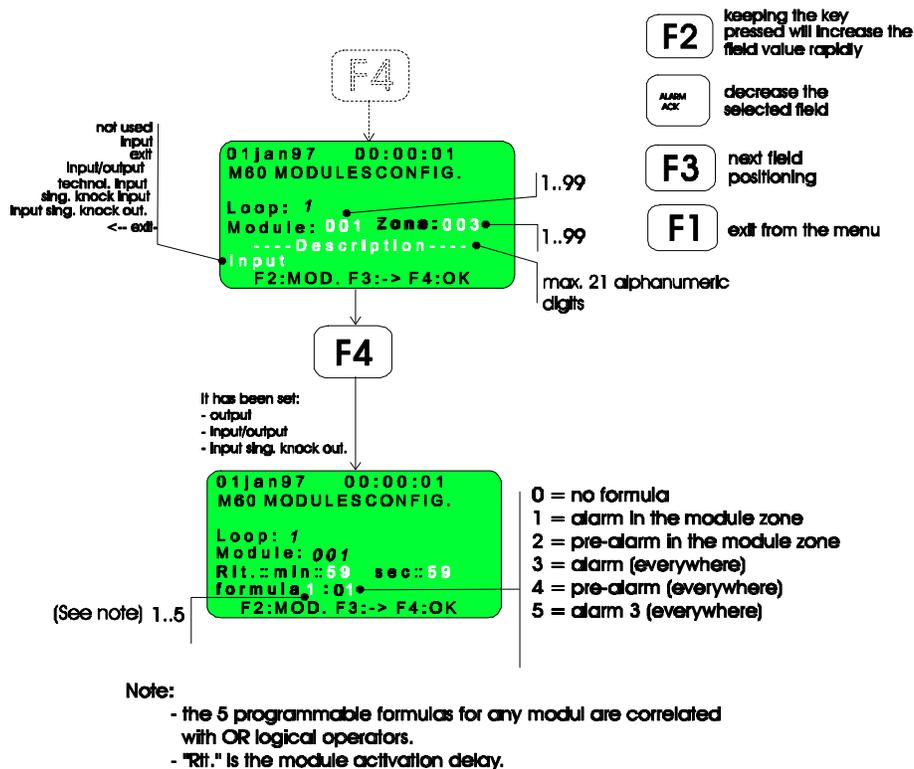
The module is activated when the argument of one equation is satisfied.

- ☞ **Del.: min: __ sec: __.:** This is the module activation delay.
- ☞ **Equation 1:** this is the progressive number (from 1 to 5) of the equation set out for the selected module.
- ☞ **00..89 :** this is the progressive number, which expresses the condition to be associated to the selected equation.

00..05: simple conditions;

10..89: complex conditions.

PLEASE NOTE: if COMPLEX CONDITIONS are included in the formulae any change to these conditions or to any SIMPLE CONDITIONS must be carried out on a personal computer using the system programming software.



M 70 - Configuration of the software zones

The devices installed on the analogue detection loops can be grouped in zones (called software zones), it is possible to program a maximum of 99 software zones for each loop.

During programming steps M50 (Det. prog.) e M60 (I/O Mod. Prog.), the software zones are assigned to each respective programmed detector and I/O module; the procedure for programming all the characteristic parameters of the software zone are described in this paragraph.

PLEASE NOTE:

For module programmed as *Single Knock Input* or *Single Knock Input/Output* (programming step M60) and belonging to a *Double Knock* type of zone, The FIRE ALARM is generated when 1 or more modules belonging to that zone are activated (the module type therefore has a higher priority than that of the zone to which it belongs).

The following is a description of the parameters that can be changed:

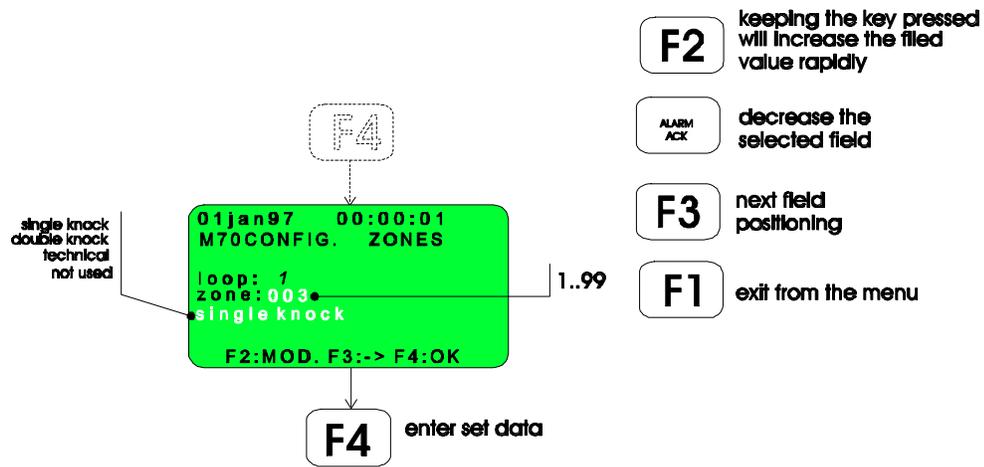
☞ **Loop:** The progressive number (from 1 to 99) of the zone selected to be programmed.

It is possible to assign one of the following types to the selected zone:

☞ **Single Knock:** the FIRE ALARM condition is generated when 1 or more detectors or input modules which belong to the zone in question go into alarm.

- ☞ **Double Knock:** the FIRE ALARM condition is generated when 2 or more detectors or input modules which belong to the zone in question go into alarm. Activation of only 1 detector or *input* module generates the PRE-ALARM.
- ☞ **Technological:** activation of a device programmed in this type of zone will generate TECHNOLOGICAL type ALARM.
- ☞ **Not used:** the operation of the selected loop is completely inhibited.
- ☞ **<-- Exit--:** pressing the F4 key returns the operator to the M40 menu.

The following block diagram shows how to carry out this programming:



PLEASE NOTE: It is necessary to carry out a system reset after having programmed the detection loop. During which the on the display will be shown "CALIBRATING SENSORS"; indicating that the system is carrying out the calibration of the detectors. It is **essential** that during this period, lasting about 1 minute, **no alarm conditions** are generated at the detectors, which would compromise the correct calibration of the alarm and maintenance thresholds of each detector.

Indications coming from the detector loop

In this paragraph what is shown on the LCD display after calibration of the unit. The display is as follows:



The *event description* field can have the following values:

- *Address conflict:* two or more detectors or I/O modules have been programmed with the same address.

- *Parameter error*: the type of detector (automatic, addressable base etc.) installed has not been correctly programmed.

- *Identification error*: the installed detector type is not compatible with the detector types recognised by the firmware installed.

- *Calibration error*: the calibration of the detectors did not finish correctly; possible causes might be the detector does not function correctly (the functional characteristics of the detector are incorrect = DETECTOR FAULT), the detector is not connected or there is no detector installed with a corresponding address.

Operating level 4

Access to procedures at this operating level is protected by the insertion of the hardware key and entering the password.

The procedures accessible are as follows:

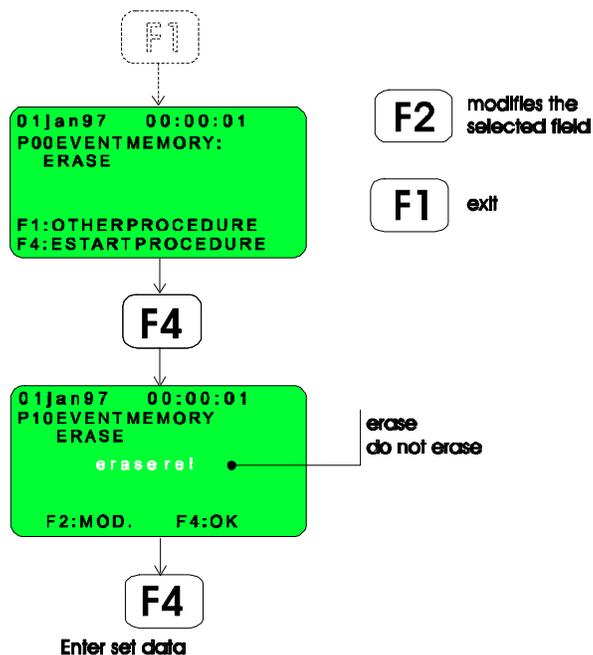
- All the functions of the previous level.
- Deleting the event memory.
- Setting the communication ports.
- Control panel programming.
- Deleting the module programming and loading the factory default programming.

In the following paragraphs, all of the listed procedures are illustrated in detail.

P00 - Deleting the event log

The following figure shows how to delete the whole event memory.

This operation is stored as the 1st event in the new event log.



Q00 - Communications port set-up

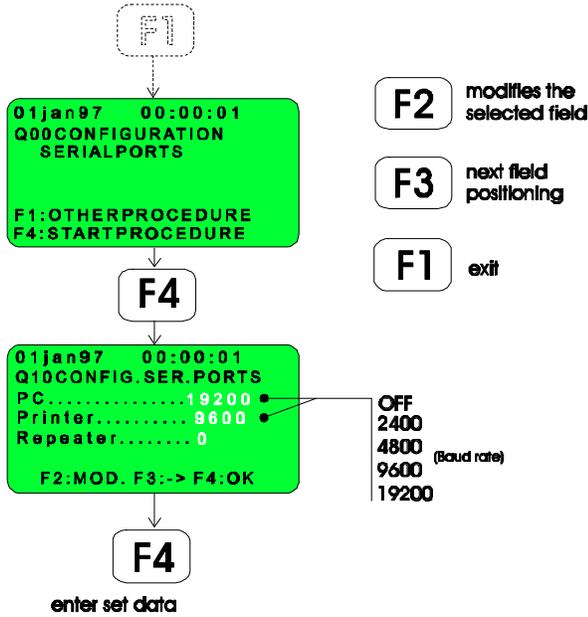
The control panel is equipped with 2 serial communication ports:

- N°1 RS 232 Printer.
- N°1 RS 232 Control / Programming PC.

The descriptions of the fields that can be changed are as follows:

- ☞ **PC:** the communication baud rate for the programming and/or control PC.
- ☞ **Printer:** the communication baud rate for the printer (the data format is: 8 data bits, 1 stop bit, no parity).
- ☞ **Automatic print-out:** disables (OFF) or enables (ON) events being echoed to the printer (real time printing).

The following block diagram shows this programming:



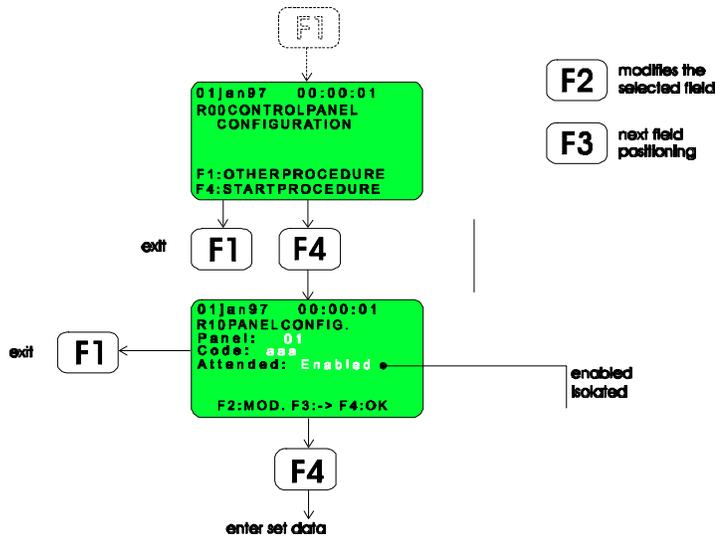
R00 - Configuring the attended control panel

The following is a description of the fields that can be changed by the operator:

Attended: - Enabled: enables the operation of the NOT ATTENDED push button, situated on the front panel, which is used to modify the operation of the control panel.

- Disabled: disables the operation of the NOT ATTENDED push button, The control panel operates in the NOT ATTENDED mode.

The following block diagram shows how to proceed:

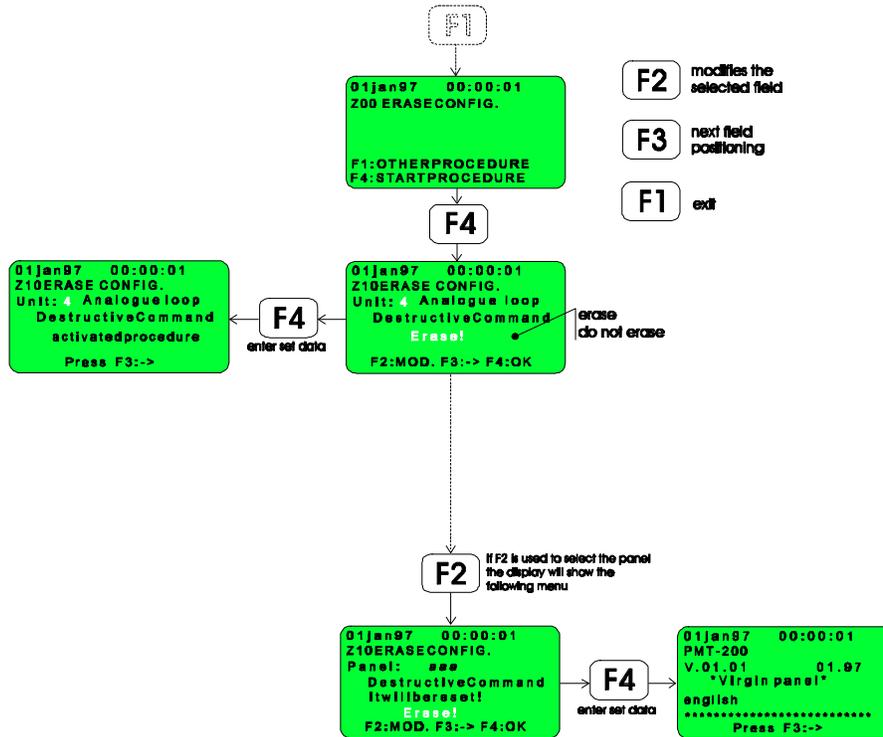


Z00 - Deleting the programming and loading the factory default values

This procedure allows that all the programmed parameters either in the installed modules or the control panel to be deleted and reload the factory default settings (see the appendix B).

Deleting the programming in the control panel is done separately from that of the detection loop.

The following block diagram shows how to proceed:



Appendix A

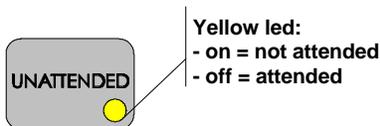
Operational mode - Attended system

The control panel can operate in two modes:

- A) Attended system.
- B) Not attended system.

Enabling these two modes of operation is done during the system set-up (level 4 R00 Control panel programming menu) and can only be modified by specialised personnel.

Whenever this feature has been enabled, selection of the feature is done using the appropriate push button on the front panel of the control panel:



ATTENDED SYSTEM

In the case of an attended system, when a fire alarm condition from a detector loop is generated the variable duration timer T1, (level 3. L00 Alarm-Pre-al. Delay) is started. At the same time the yellow "AUTOMATIC SILENCE" LED, on the front of the control panel, starts to flash.

In this case the control panel is in a PRE-ALARM condition.

If during the T1 time, an ACKNOWLEDGE is carried out, a new variable duration timer T2 is activated (level.3 L00 Alarm-Pre-al. Delay -> all).

The yellow "AUTOMATIC SILENCE" LED goes from flashing to permanently on and the yellow "PRE-ALARM TIMER" LED starts to flash, to indicate that the T2 timer has started.

If during the T1 time no acknowledge is effected, when the T1 timer runs out a normal Fire alarm condition is generated and the "AUTOMATIC SILENCE" LED lights permanently on.

In case that the zone remains in alarm at the end of the T2 time, the control panel will automatically pass from a PRE-ALARM condition to one of ALARM and will activate the programmed response. At the end of the T2 timer the yellow "PRE-ALARM TIMER" LED will change to permanently on.

NOT ATTENDED SYSTEM

In case of a not attended system, no timers are set and all the alarm procedures are activated immediately.

Appendix B

Control panel factory default settings

In the following table are shown the factory settings for the parameters that are programmed as the default factory set-up.

PROGRAMMING MENU	PARAMETER	FACTORY SETTING
A00 REMOTE TRANSMISSION	Remote Transmission	<i>Enabled</i>
H00 CHANGE TIME – DATE	Clock Parameters	<i>ARE NOT GET ALTERED</i>
J00 RELAY DELAY	Activation delay (min. sec.)	Min:00 sec:08
K00 SOUNDER DELAY	Sounder 1 delay 1 Sounder 2 delay Silencing mode Silencing delay (automatic)	Sndr1 min:00 sec:08 Sndr2 min:00 sec:08 Silencing: <i>manual</i> Delay min:00 sec:08
L00 PRE -> AL. DELAY	Attended System Timers	T1 min: 00 sec:08 T2 min: 00 sec:08
Q00 SERIAL PORT SETTING	PC Baud rate PRINTER Baud rate Enable/Disab. AUTOMATIC PRINTING.	PC 9600 Printer 9600 Automatic Printing <i>OFF</i>
R00 CONTROL PANEL PROGRAMMING	Attended/ not Attended system	Attended: <i>disabled</i>

Analogue loop factory default programming

In the following table are shown the factory settings for the parameters that are programmed into the on board EEPROM memory as the default factory set-up for the analogue addressable zone integrated on the unit.

PROGRAMMING MENU	PARAMETER	FACTORY SETTINGS
B12 ENABLE ZONE/LOOP	Enable/disable detectors, I/O modules and software zones	<i>All enabled</i>
M40 INTERNAL LOOP SETTING	LED status for addressable detectors Loops Enabled/disabled	LED status: <i>Flashing LEDs off</i> Loops: <i>enabled</i>
M50 DETECTOR SETTINGS	Zone and type	<i>All 99 detectors of each zone are in zone 99, which is a NOT USED type.</i>
M60 MODULE SET-UP	Zone and type Activation equation and delay.	<i>All 99 modules of each zone are in zone 99, which is a NOT USED type.</i> Delay min:00 sec:00 <i>All 5 equations are = 00.</i>
M70 ZONE SETTINGS	Type of zone Description	<i>The 99 software zones are a NOT USED type and have the description: -----.</i>