



ALGORITHMIC FIRE DETECTION

CONTROL PANEL SERIES

AE/SA-C8 - AE/SA-C2

USER MANUAL

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1 . DISPLAY AND CONTROL PANEL



1.1. PILOT LAMPS

The front panel includes the following pilot lamps:

SYSTEM

POWER	Green	The Control Panel is powered up and operating.
SYSTEM FAULT	Yellow	Incorrect Control Panel operation.
SUPPLY FAULT	Yellow	Incorrect mains or battery supply.
DAY MODE	Yellow	Control Panel is only operating in day mode.
NIGHT MODE	Yellow	Control Panel is operating in night mode.



STATUS

FIRE	Red	An installation element has an alarm status.
PRE-ALARM	Red	An installation element has an pre-alarm status.
FAULT	Yellow	An installation element has a fault status.
DISABLEMENT	Yellow	An installation element has been disconnected.
TEST	Yellow	An installation zone or sector is operating in test mode.
OPERATIONS		
LOCAL SOUNDERS	Red	The local evacuation exit is enabled.
	Yellow	The local evacuation exit has a fault.
DELAYED MODE	Yellow	Immediate exit activation has been disabled.
		Operations delay is enabled.



1.2.KEYS

The front panel includes a series of function keys, which perform certain actions or permit access to menus displayed on the screen.

Each function is assigned an access level. For a given function to execute, the current access level at the Control Panel must be equal to or higher than the function's access level.

There is also a key in the front panel that allows the determination of the current Control Panel access level, as Level 1 or Level 2. Further details are provided in Section 2 – Access Levels.

The front panel function keys are (the access level is shown in brackets):

(1)	Display the zones with alarm status.
(1)	Display the zones with fault status.
(1)	Display the zones with disabled status.
(1)	Display the zones with test status.
(1)	Indicates that the incident has been acknowledged and the buzzer has been switched of.
(2)	Performs a reset of operations.
(2)	Performs a general installation reset.
(1)	Permits access to the Control Panel Operations menu.
(2)	Enables and resets the operations sequence associated with the key
(1)	Indicates the selected number or option.
(1)	Confirms the selected value or option.
(1)	Deletes the selected value or cancels the selected option.
	 (1) (1) (1) (1) (1) (2) (2) (1) (2) (1) (1) (1) (1)





2 . GENERAL CONTROL PANEL STATUS

The Control Panel is always has a specific status. This status is determined by the status of the zones in the configuration.

The actual Control Panel status can be one of the following two.

2.1. STANDBY STATUS

The standby status is the initial Control Panel condition after start-up and is maintained while all the associated zones remain in standby.

While in this condition, the screen appears as follows:

	Wed 03-Mar-04 09:40:38
(LOGO)	
TEXT CONFIGURABLE	Mod. AE/SA-C8 v1.0

The logo is a black and white bitmap with a size of 144 x 56 pixels.

The default logo is that of Aguilera Electrónica, but any other may be selected from the Installation Configuration Program.

2.2. ACTIVATION STATUS

When any installation zone changes its standby status, this forces a general Control Panel status change. The possible activation status levels are as follows:

- Fire (Alarm).
- Fault.
- Disabled
- Test.

Several of these status levels may exist at the Control Panel at the same time. Since the Control Panel can only display the information in relation to a single status, there is a priority system that determines which status is the most important and this is the one that is automatically displayed on the screen.

Each status level has an associated LED, which remains lit while the represented status is active.

The following sections provide details of the information displayed for each status level and each will be examined in decreasing order of priority.



2.2.1. FIRE (ALARM) STATUS

The Control Panel will have general fire (alarm) status when at least one zone has an alarm or pre-alarm status.

Under these conditions, the screen display will appears as shown below:

ALARM	STATUS : 5 zones
1 / -	
- 1/5	ZONE IN PRE-ALARM
0003	Floor 6: Administration office
- 4/5	ZONE IN ALARM
0015	Main entrance hall
- 5/5	ZONE IN ALARM (TESTS)
0124	Ground floor: Conference hall

- The first screen line indicates the current status, together with the number of zones in the installation currently having this status.
- The second line is used for separation and is always blank.
- The third and fourth lines contain information for the first zone that has passed to an alarm condition. In this example, zone 3 has entered a pre-alarm situation.
- The fifth and sixth lines show information for the penultimate installation zone to have entered an alarm condition. The above example shows that zone 15 has entered an alarm condition.
- The last two lines on the screen are used to display information on the most recent zone to enter an alarm situation. In this case, it displays a zone that is undergoing testing.

2.2.2.FAULT STATUS

The Control Panel will have a general fault status when at least one of the associated zones is in a fault condition.

The display of information under these circumstances is very similar to the previously described alarm status.

FAULT	STATUS : 2 zones	
- 1/2 0005	ZONE WITH FAULT STATUS Main entrance hall	
- 2/2 9999	ZONE WITH FAULT STATUS System zone	

As can be seen, the fifth and sixth lines of the above example are blank. This is because at this moment, there are only two zones with faults and therefore the penultimate zone with fault status coincides with the first and is not displayed.



2.2.3. DISABLED STATUS

The Control Panel will have a disabled status when at least one zone is in disabled condition.

Under these circumstances, all disabled zones are displayed independently of whether they have been disabled manually by user action or automatically because of a change in Control Panel operating mode.

DISABI	LED STATUS	:	9	zones
- 1/9	PARTIALLY D	ISAE	BLE	ED
0013	Machine room	m		
- 8/9	COMPLETELY	DISA	ABI	LED
0005	Main entran	ce ł	nal	11
- 9/9	PARTIALLY D	ISAE	BLE	ED
9999	System zone			

This example contains the two types of disabled conditions occurring in this status:

- Partially disabled.
 In this case, one or more, but not all points in the indicated zone are disabled.
- Completely disabled.
 This occurs when all points in the indicated zone are disabled.

2.2.4. TEST STATUS.

The Control Panel has test status when at least one zone is undergoing testing.

An example of the display of this status is provided below.







3 . MANUAL OPERATIONS

The previous chapter described how the Control Panel determined its current status from those of the installation zones. In the same way, using a priority system, it decides which status is the most important and then displays it on the screen and keeps it constantly updated. All this is carried out automatically, without any need for user intervention.

This chapter described how the operator can display one status or another, together with what action can be carried out on them.

3.1. SELECTING THE STATUS TO DISPLAY

The Control Panel operator can "force" the display of a specific status at any time by using the four zone display keys, which are located on the upper section of the Control Panel front panel.

If the Control Panel is not in the selected status, which means there is no zone with this status, then the display is as shown below.

ALARM	STATUS	:	0	zones

By pressing <NO>, the Control Panel will cancel the current display and return to the priority display.

3.1.1. AUTOMATIC CANCELLATION

When the operator selects the display of a status that is different to the current priority status, then the Control Panel enables a timer. When this timer runs out, it will cancel the current display and return to the priority status.

Each time the operator carries out any operation on the displayed status, such as entry into the detailed views or local menu activation, then Control Panel with reset this timer.

According to EN54-2, this time must not exceed thirty seconds.





3.2. DETAILED ZONE VIEW

Independently of the displayed general status, priority or manual, the detailed zone view can be enabled using the <YES> key.

The detailed zone view appears as shown below:

FAUL	I ZONES IN DETAIL
9999	System zone _
0017	Corridors G-H in main warehouse
0013	Machine room
0005	Main entrance hall
0003	6th floor: Administration office
0124	Ground floor: exhibition hall

This view contains all the zones that have the displayed general status. This example shows the fault status.

The display order is chronological, oldest to most recent.

The following keys are used to move through the list of zones:

Up Arrow:	Selects the previous zone or goes back one page if the first zone displayed is selected and backward movement is possible.
Down Arrow:	Selects the next zone or goes forward one page if the last zone displayed is selected and forward movement is possible.
Left Arrow:	Moves back a complete screen if this is possible.
Right Arrow:	Moves forward a complete screen if this is possible.

Pressing the <NO> key will cancel the detail view and return to the general status display.

3.2.1. LOCAL MENU

Pressing the <MENU> key accesses the local zone menu, from which it is possible to execute various options with respect to the currently selected zone in a quick, simple fashion.

The only zone that does not accept the local menu is the system zone, since this zone cannot be totally disabled or changed to test mode.

The local menu can be cancelled by pressing the <NO> key.

Execution of a local menu option will cancel the actual menu and the detailed view and return to the general status menu.



3.3. DETAILED POINT VIEW

A higher level of detail can be accessed from the detailed zone view, which will allow inspection of the points in a specific zone that is in the currently displayed status.

The detailed point view is activated by the <YES> key and has the following format:

DETAIL	OF A	CTIVE	POINTS	IN	ZONE	0003
1 /000 /1	0-1		T and i a			n al
1/023/1 1/023/2	Cal	point point	Equip.	not	respo	nd nd
1/027/1	Mast	ter	Disabl	ed		
1/028/1	Outp	outs	Fault			

The first line of this screen shows the number of zone that are being inspected and, next, are all the points of the inspected zone ordered by physical identification.

Each displayed point indicates:

- The point's physical identification (channel/equipment in the channel/ the point in the equipment).
- The risk to which the point belongs.
- The last incident that activated the point's inspection status.

The following keys are used to move through the list of zones:

Up Arrow:	Selects the previous point or goes back one page if the first point displayed is selected and backward movement is possible.
Down Arrow:	Selects the next point or goes forward one page if the last point displayed is selected and forward movement is possible.
Left Arrow:	Moves back a complete screen if this is possible.
Right Arrow:	Moves forward a complete screen if this is possible.

Pressing the <NO> key will cancel the detailed point view and return to the detailed zone view.



3.3.1. LOCAL MENU

Pressing the <MENU> key accesses the local points menu, from which it is possible to execute various options with respect to the currently selected point in a quick, simple fashion.

Some system zone points do not accept this type of functions and in these cases a message is displayed informing the user.

The local menu is cancelled by pressing the <NO> key.

Execution of a local menu option will cancel the actual menu and the detailed views and return to the general status menu.



4 . ACCESS LEVELS

4.1. DEFINITION

The access levels implement a security mechanism that prevents unauthorised persons from carrying out certain operations at the Control Panel.

In this way, all the options of the tree of menus of the Control Panel, as well as certain functions that are directly accessible from the front panel keys are associated with a specific access level.

4.2. EXISTING ACCESS LEVELS

The Control Panel manages three different levels of access.

4.2.1. LEVEL 1 OR FREE

The functions available on this level are always accessible, which means that they can be executed at all times independently of the current access level.

4.2.2.LEVEL 2 OR USER

In order to execute a function on this level, the current access level must be 2 or higher.

Level 2 access can be established by the Control Panel's front panel key or by entering the password of a user configured for level 2.

4.2.3. LEVEL 3 OR SUPERVISOR

This level is reserved for the most sensitive functions.

The only method of establishing a level 3 access is via the password of a user with level 3 access configuration.

4.3. CURRENT ACCESS LEVEL

The Control Panel has a specific access at all times. When the Control Panel initialises the system at switch-on, it will set the current access level as indicated by the front panel key to either 1 or 2.

Each time this key position is changed, the Control Panel will establish the access level in accordance with the key's new position.

When a user attempts to execute a function, either through the menu or the front panel keys, the Control Panel obtains the access level associated with that function. If the required level is less or equal to the current access level, then the option will be executed.

However, if the current access level is not sufficient, then a screen will be displayed requesting the password from a user with sufficient privileges. At this point there are two possibilities:



- The user cancels the password entry by pressing the <NO> key, a non-recognised password is entered or one belonging to a user with insufficient access privileges. The Control Panel will return to the previous situation without executing the option. An error message may be optionally displayed.
- 2. The entered password belongs to a user that has been configured with sufficient access privileges.

The Control Panel will then establish the access level of the registered user as that of the system, it also starts a timer that will automatically restore the previous access level and then executes the option.

4.4. RESTORING THE ACCESS LEVEL

As described above, when the user's password is entered, the Control Panel will initiate a timer to restore the previous access level.

This timing function can be configured for each Control Panel from the Installation Configuration Program. The default value is 60 seconds and it is employed to prevent the Control Panel from always having a certain access level.

Each time the user executes a new option, the timer is reinitiated and when it reaches zero again, it will restore the access level to that indicated by the front panel key, either 1 or 2.



5. CONTROL MENU STRUCTURE

In the following sections, the required access level for each option is shown in brackets.

5.1. MENU TREE IN NON-CONFIGURED CONTROL PANELS

If the Control Panel has not been configured, then pressing the "MENU" key will access the main menu, the structure of which is shown in the following diagram:

- 1. LED test (1)
- 2. Time setting (1)
- 3. Changing to start-up mode (1)
- 4. Coding mode (1).

The coding mode only applies to equipment fitted with an internal EEPROM for 2-wire installation models.

5.2. MENU TREE IN NORMAL MODE

With a configured Control Panel, pressing the "MENU" key will access the main menu, which has the following structure:

```
1. Listings (1)
        1. Zones (1)
                 1. With incidents (1)
                2. In alarm/active (1)
                3. In fault (1)
                4. Disabled (1)
                5. In test (1)
        2. Analogue detectors (1)
        3. Events log
                         (1)
                 1. Complete (1)
                2. Alarms (1)
                3. Faults (1)
                4. Disables (1)
                5. Tests (1)
                6. Message (1)
2. Control (2)
        1. Enabling (2)
                 1. Sector (2)
                2. Zone (2)
                3. Point (2)
                4. Risk (2)
                5. Operations (2)
                         1. Sequences (2)
                                 1. All sequences (2)
                                 2. Individual sequences (2)
                         2. Local evacuation relay (2)
                         3. Alarm repetition relay (2)
                         4. Pre-alarm repetition relay (2)
                         5. Fault repetition relay (2)
                         6. Operation delays (2)
```



- 2. Disabling (2)
 - 1. Sector (2)
 - 2. Zone (2)
 - 3. Point (2)
 - 4. Risk (2)
 - 5. Operations (2)
 - 1. Sequences (2)
 - 1. All (2)
 - 2. One (2)
 - 2. Local evacuation relay (2)
 - 3. Alarm repetition relay (2)
 - 4. Pre-alarm repetition relay (2)
 - 5. Fault repetition relay (2)
 - 6. Operation delays (2)
- 3. Activate sequence (2)
- 4. Reset sequence (2)
- 3. Tests (2)
 - 1. LED test (2)
 - 2. Initiate sector tests (2)
 - 3. Initiate zone tests (2)
 - 4. Terminate sector tests (2)
 - 5. Terminate zone tests (2)
- 4. Operating mode (2)
 - 1. Change to DAY mode (2)
 - 2. Change to NIGHT mode (2)
 - 3. Change to COMPLETE mode (2)
 - 4. Change to start-up mode (2)
 - 5. Coding mode (2)
- 5. Programming (2)
 - 1. Time setting (2)
 - 2. Descriptive texts (3)
 - 1. Sectors (3)
 - 2. Zones (3)
 - 3. Sequences (3)
 - 3. Analogue levels (3)
 - 1. Complete installation (3)
 - 1. Ionic (3)
 - 2. Optical (3)
 - 3. Thermal (3)
 - 2. Sectors (3)
 - 1. lonic (3)
 - 2. Optical (3)
 - 3. Thermal (3)
 - 3. Zones (3)
 - 1. lonic (3)
 - 2. Optical (3)
 - 3. Thermal (3)
 - 4. Points (3)
 - 4. Operation delays (3)
 - 5. Technique (3)
 - 1. Users (3)
 - 2. Detector flashing (3)
 - 3. Initiate (3)
 - 1. Delete events log (3)
 - 2. Delete configuration (3)



5.3. LOCAL ZONE MENU TREE

When zone incidents are displayed, pressing the "YES" key will access the detailed zone view, which displays all the zones with a specific status (alarm, fault, disabled or test), and from here, pressing the "MENU" key will access the local menu or fast access menu with the following structure:

- 1. Enable the zone (2)
- 2. Disable the zone (2)
- 3. Initiate zone tests (2)
- 4. Terminate zone tests (2)

5.4. LOCAL POINTS MENU TREE

By selecting an active zone from the detailed zone view and pressing the "YES" key will access the detailed points view and display all the active points associated with this same zone. Pressing the "MENU" key will access the local menu or fast access menu with the following structure.

- 1. Enable the point (2)
- 2. Disable the point (2)

5.5. MENU TREE IN START-UP MODE

The installation start-up mode has a single option, which is executed when the "MENU" key is pressed. This option displays a message to confirm the termination of the start-up mode and the system returns to normal mode operation.

5.6. MENU TREE IN CODING MODE

The coding mode has a single option, which is executed when the "MENU" key is pressed. This option displays a message to confirm coding mode termination and the system returns to normal mode operation.

The coding mode can only be used with equipment fitted with an internal EEPROM, which store the equipment identification number.







6 . START-UP MODE

The start-up mode is a special operating mode that enables specific start-up or maintenance tasks to be carried out on the installation supervised by the Control Panel. This is called either the maintenance or the start-up mode.

This operating mode does not require the Control Panel to be configured. If there is a configuration stored in the Control Panel's memory, then this will not be affected by the start-up mode.

Depending on how it is activated, there are two forms of executing the start-up mode.

6.1. REMOTE MAINTENANCE

This maintenance mode is established when the Start-up Mode Program (AGE41) sets up a connection with the Control Panel.

Once the connection has been established, the Control Panel is then completely subordinate to the Startup Mode Program independently of the mode in which it is operating until the connection is terminated. At this moment, the Control Panel performs an automatic reset, after which, it commences to operate in normal mode again.

PROCESS	IN COURSE
Control	Panel in Remote Maintenance mode
Please,	wait a moment

The Control Panel screen will display the following screen while the connection with the Start-up Mode Program is established.

6.2. LOCAL MAINTENANCE

The maintenance mode can also be initiated in local manner using the general menu, while the Control Panel operates in normal mode. The specific option path for this is:

Main Menu -> Operating mode -> Start-up mode

After receiving 'YES' in reply to the confirmation message, the Control Panel performs an automatic reset and commences operation in local maintenance mode.



In this mode, the Control Panel initially displays the following screen.

-RR-RVRRAR-M-RRRRRVRRRRRVRRRARRR RRRRRVRRRARRRRRRRR
Channel : 1 Type : <xxxxxxx> Equipment: 1 Status: Not respond</xxxxxxx>
18: Channel Cursors: Equip Menu: End

The first four lines show a character for each possible piece of equipment detected in the channel (a total of 125 equipment units).

The displayed character indicates the equipment status as follows:

'_'	A dash indicates that the associated equipment is not currently communicating.	
'R'	The equipment is communicating correctly and in standby.	
'Α '	The equipment is communicating correctly and in an alarm condition.	
" V "	The equipment is communicating correctly and in a fault condition.	
'M '	More than one equipment unit has been detected at this address.	
The following lines contain detailed information about the currently selected equipment:		

Channel	Indicates the current channel number. The possible range is: Control Panels AE/SA-C2: range [12] Control Panels AE/SA-C8: range [18] The actual channel selection is carried out using the numerical keys 1 to 8.
Equipment	Indicates the current equipment number. The possible range is [1125]. The actual equipment selection is carried out using the four cursor keys.
Туре	This is the commercial reference for the current equipment unit. If no equipment at the current address has responded, then ' <xxxxxx>' will be displayed</xxxxxx>
Status	This is an expanded form of the last known status of the current equipment as indicated by the previously described character. The possibilities are as follows: <i>Not respond, 'Standby, 'Alarm', 'Fault' and 'Multiple eqp'.</i>

6.2.1. INITIALISE.

Pressing the *<Reset>* key at any time will completely reinitialise the maintenance mode, displaying the initial screen without any equipment information. As the line control cards detect the presence of the individual equipment units, the corresponding information is displayed on screen.



6.2.2.TERMINATING MAINTENANCE MODE

The local maintenance mode must be terminating manually.

Pressing the *<MENU>* key will display a confirmation message and if this is then accepted using the *<YES>* key, the Control Panel will automatically carry out a reset in order to initiate normal mode operation.

6.3. IMPORTANT NOTES

6.3.1. "HOT-SWAPPING" EQUIPMENT

If the physical address of equipment belonging to the installation is "hot swapped", then it is recommended that at least the affected channel is reinitiated, or even the entire Control Panel. In this way, all equipment information is completely reinitiated. If this is not carried out, then it is possible, under certain circumstances, for the detection of multiple equipment unit units with the same address **not** to operate correctly.

6.3.2. NON-CONFIGURED CONTROL PANELS

The following situation could arise if the Control Panel being started up is not configured.

1.- Maintenance mode is initiated. It does not matter if this is local or remote.

2.- The equipment units existing in the channels is displayed normally.

3.- Maintenance mode is terminated. The Control Panels returns to normal mode operation and indicates it is not configured.

4.- Maintenance mode is again initiated, but none or only some of the equipment units are displayed.

5.- This situation can be resolved by reinitiating the process in the Control Panel:

- Local mode: Press the <Reset> key

- Remote mode: Execute the 'Reinitiate' option from the Main Menu.







SU PUNTO DE ASISTENCIA Y SUMINISTRO MAS PRÓXIMO

SEDE CENTRAL C/ Julián Camarillo, 26 – 2ª Planta – 28037 Madrid – Tel: 91 754 55 11 – Fax: 91 754 50 98

FACTORÍA DE TRATAMIENTO DE GASES Av. Alfonso Peña Boeuf, 6. Pol. Ind. Fin de Semana – 28022 Madrid – Tel: 91 754 55 11 – Fax: 91 329 58 20

> DELEGACIÓN NORESTE C/ Rafael de Casanovas, 7 y 9.- SANT ADRIA DEL BESOS – 08930 Barcelona Tel: 93 381 08 04 – Fax: 93 381 07 58

> DELEGACIÓN NOROESTE C/ División Azul, 17 – 15005 A Coruña – Tel: 98 114 02 42 – Fax: 98 114 24 62

DELEGACIÓN SUR Av. San Francisco Javier,9. Edificio Sevilla II, 2ª Planta. Módulo 7 - 41018 Sevilla Tel: 95 465 65 88 – Fax: 95 465 71 71

DELEGACIÓN CANARIAS C/ León y Castillo, 327 – 35006 Las Palmas de Gran Canarias – Tel: 928 24 45 80 – Fax: 928 24 65 72

www.aguileraelectronica.es e-mail: dptocom@aguileraelectronica.es