Matsushita Electric Works Fire & Security Technology AB

Operating Instructions

MEW00228

Revision 2

Fire Alarm System EBL512 V2.1.x

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1 Introduction

EBL512 Operating Instructions is a document[1] intended to be used by the end user and the fire brigade personnel as well as service / commissioning engineers.

Due to continual development and improvement, different SW versions are to be found. This document is valid for **SW version 2.1.x**. On the date of revision 2 is x=3.

Since the EBL512 control unit (c.i.e.) is produced for many countries the look, the texts, the functions, etc. may vary.

Products

Consists of one or more parts (HW) according to a **Product Parts List**. A product has:

- a **type number** (e.g. **1548**)
- an **article number**, often = the type no. and sometimes is a country code added (e.g. **1548SE**)
- a **product name** (e.g. **EBL512 control unit, 128 addresses, without printer**)

HW

A HW (e.g. a **p**rinted **c**ircuit **b**oard) has:

- a **type number** (e.g. **1556**)
- an **article number**, often = the type no. and sometimes is a country code added (e.g. **1556SE**)
- a **product name** (e.g. **Main Board 128 addr.**)
- a **p.c.b. number** (e.g. **9261-3A**) and can also have a configuration (e.g. **CFG: 1**) and a revision (e.g. **REV: 2**)
- sometimes a **SW**

SW

A SW has:

- a **version number** (e.g. **V2.1.1**)
- sometimes additional information, such as **Convention** (different functions / facilities), **Language**, **Number of addresses**, etc.

PC SW

A PC SW is a program used for programming, commissioning, etc. It has a **version number**.

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[1] File name: K:\PRO\FIRE\512\Doc\2.1x\MEW00228.doc

2 Definitions / Explanations

Definitions / explanations / abbreviations / etc. frequently used or not explained elsewhere in the document.

2.1 MFSTech

Matsushita Electric Works **F**ire & **S**ecurity **Tech**nology AB

2.2 Alarm points

Units, which can generate fire alarm (in the control unit), i.e. a sensor, a conventional detector, a manual call point, etc.

2.2.1 Smoke detector

Two types of analog and conventional smoke detectors are available: photo electric (optical) and ionization.

2.2.2 Sensor

Sensor = Analog detector

2.2.3 Analog detector

Contains an A/D-converter. The **C**ontrol **U**nit pick up the digital values ("sensor values") for each detector individually. All evaluations and "decisions" are then made in the C.U. Analog detectors are addressable – an address setting tool is used for detector types **33**xx and a DIL-switch in the **ASB** (see below) for detectors **2**xxx. An analog detector has to be plugged in an ASB.

2.2.4 (Analog) Sensor Base (ASB)

A sensor is plugged in an ASB, which is connected to a COM loop (see below). Sensor Base types **2**xxx have a DIL-switch for COM loop address setting.

2.2.5 Conventional detector

Detector with two states, normal or fire alarm. The detector contains a closing contact and a series alarm resistor. Some types are plugged in an **ADB** (see below) or a **CDB** (see below). Some types are also available as addressable, to be connected to a COM loop (see below).

(Normally plugged in a **CDB** (see below), connected to a conventional zone line with end-of-line resistor.)

2.2.6 Conventional Detector Base (CDB)

A conventional detector is plugged in a CDB, connected to an external line, an addressable zone interface, conventional zone line, etc.

2.2.7 Addressable Detector Base (ADB)

A conventional detector is plugged in an ADB, connected to a COM loop (see below).

2.2.8 Addressable

A unit with a built-in address device, i.e. each unit is individually identified, handled and indicated in the control unit.

(The unit can consequently be an addressable zone interface, to which one or more conventional "alarm points" can be connected.).

2.2.9 Old detector

Conventional detector with a closing contact (short circuit; no alarm resistor), or detector with two breaking contacts.

2.2.10 External line / Conventional zone line

Input (to an ADB / an addressable zone interface or expansion board), intended for one or more conventional alarm points. End-of-line resistor in the last alarm point.

2.2.11 ADB input / Addressable zone interface

Unit with an input (ext. line / conventional zone line) intended for one or more conventional alarm points. End-of-line resistor in the last alarm point.

2.3 Output unit

Addressable unit with programmable control outputs. To be connected to a COM loop (see below).

2.4 Output / Control output

Defined or programmable function. Relay or (supervised / monitored) voltage output, in the C.U. or an output unit.

2.5 Short circuit isolator

Addressable unit for automatic disconnection of a part of a COM loop (see below) in case of a short circuit on the loop.

2.6 Display unit

Addressable unit for fire alarm presentation (incl. user definable text messages, if programmed). Connected to a COM loop (see below).

2.7 COM loop

Loop = a cable, with two wires, to which all the addressable MFSTech units can be connected. It starts in the C.U. and it returns back to the C.U.

2.8 BS4 loop

Loop = a cable, with two wires, to which all the addressable Autronica (BS100) units can be connected. It starts in the C.U. (EBL512) and it returns back to the C.U.

2.9 Control Unit (C.U.) / C.I.E.

Control **U**nit = **C.U.** = **C**ontrol and **I**ndicating **E**quipment = Unit to which the alarm points are connected, e.g. EBL512. Indicates fire alarm, fault condition, etc. Fire Brigade Panel & Control Panel (see below) included or not included. Printer included or not included.

2.10 Fire Brigade Panel (FBP)

Unit intended for fire alarm presentation, etc. for the fire brigade personnel. Can be a part of the control unit (front) or a separate unit; an **external FBP**.

In the ext. FBP a printer can be included or not included.

2.11 Control panel (CP)

A part of the control unit (front), intended for the building occupier, service personnel, etc., to "communicate" with the control unit / system.

2.12 System

Several control units connected via a TLON network (co-operating control units).

2.13 Network / TLON® / LonWorks® / Echelon / Node / TLON Conn. board / Gateway / Channel / Router / Repeater

Brief explanations to the words/expressions to be found in connection with a "network". See also separate TLON Technical description.

<u>TLON</u>® = TeleLarm Local Operating Network = a LonWorks®- based network[2] for communication between several control units (nodes). The protocol is LonTalk and the transmission works with doubly-terminated bus topology (Echelon FTT-10). To connect a control unit to the network, a <u>TLON connection board</u> is plugged in the control unit. (Some old types of control units, not prepared for network connection, have to be connected via a serial interface and a <u>Gateway</u>).

A network can be <u>one</u> <u>channel</u> (FTT-10) or <u>several</u> channels, connected via <u>routers</u> or <u>repeaters</u>.

<u>Repeaters</u> are used to increase the maximum cable length, C.U. to C.U. in a network.

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[2] LonWorks® = A "summing-up-name" for the market of Echelon Corporation Inc. technology.

Router or Repeater is the same type of unit (different configuration). All network programming (configuration) are made with the PC program "TLON Manager".

2.14 LED

LED (**L**ight **E**mitting **D**iode) = Yellow, green or red optical indicator ("lamp").

2.15 External Indicator (LED)

A unit with an LED. Connected to an ASB, ADB, CDB or a detector with a built-in LED. Lit when the built-in LED is lit.

2.16 Display / LCD

LCD (**L**iquid **C**rystal **D**isplay) = Display for presentation of fire alarms, fault messages, etc. Normally alphanumeric characters and backlight.

2.17 Door open / Key switch

In most EBL512 configurations there is a door switch which is activated when the control unit door is opened. In some configurations does a key switch replace this door switch.

The LED "Key switch" is indicating "door open" / key switch in position "access".

2.18 SSD / Site Specific Data

This data is unique for each installation. All alarm points, presentation numbers, user definable text messages, programmable outputs, etc. are programmed (configured) in the PC program **Win512** and has to be downloaded in EBL512.

2.19 SW / Software / System program

The SW makes the control unit (the microprocessor) work. It is factory downloaded but a new version can be downloaded in EBL512 on site.

3 Overview

3.1 The EBL512 system

EBL512 is a microprocessor controlled intelligent fire alarm system, intended for analog addressable smoke detectors, as well as conventional detectors and manual call points. Programmable control outputs and output units are available. Up to 512 addresses can be connected to each control unit (c.i.e.).

EBL512 is available in several types, versions and configurations. It can be connected to a TLON network, a "system", with up to 30 independent control units. Each control unit has total access to all information.

EBL512 is designed according to the European standard EN54, part 2 and 4.

3.1.1 Expansion boards

In the control unit (c.i.e.) it is possible to mount up to six expansion boards. The following types are available:

1580	8 zones expansion board
1581	8 relays expansion board
1582	External FBP interface board[3]
1583	German FBP interface board[4]
1584	Autronica interface board (four BS4 loops)[5]

Regarding the expansion boards, see also the EBL512 Planning Instructions and drawings.

3.1.2 Printer

Control unit 1549 is equipped with a printer.
In control unit 1548 it is possible to mount a 1558 Printer.

3.2 SW versions

Due to continual development and improvement, different SW versions can be found. When installing a new control unit in a system with "older" control units, you may have to update the SW in the old control units. It is **highly recommended** to have the same SW version in all control units but the **SW version 2.X.x require the same SW version in all control units**.

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[3] Max. two 1582 boards per control unit.

[4] Max. one 1583 board per control unit. 1583 board is **not** possible to use in Swedish (SBF) convention.

[5] Max. four 1584 boards per control unit. 1584 board is **only** possible to use in Swedish (SBF) convention.

3.3 Documents

The following documents are available:

- Planning instructions
- Drawings
- Operating instructions

Normally information that is found in one document is not to be found in another document, i.e. the documents complement each other.

3.4 Applications

The EBL512 system is intended for small, medium and large installations. The intelligent control units offer the system designer and end user a technically sophisticated range of facilities and functions. Programming (PC SW Win512) and commissioning of the control unit / system is very easy. Start with one control unit and then, when required, add more units. The TLON network makes it possible to install the control units in one building or in many buildings.

3.5 PC SW

Win512 is used for programming and commissioning of one or more control units:

- download / backup of site specific data (SSD)
- download of SW / settings / conventions / configurations / C.U. & system data / etc.
- create and download the user definable text messages shown in the alphanumeric display in the C.U. / ext. FBP and in the Display units.

Win512 shall have the same (or higher) version number as the EBL512 SW version number (e.g. 2.1). Backup require the same version number (in Win512 and EBL512). Old files can be opened and saved in a higher version of Win512 and thereafter downloaded.

TLON Manager is used for programming of network data / addresses / etc.

NEWTEXT (DOS based "older" program) can be used to create / download the user definable text messages in the Display units connected to the COM loops.

4 Control Unit

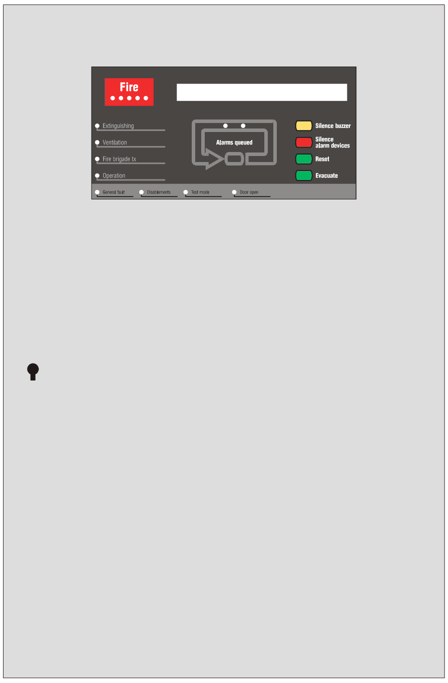

Figure 1. The EBL512 Control Unit (1548 / 1549). The look may vary according to configuration, country, etc.

The control unit (c.i.e.) is housed in a grey metal cabinet. The door has a Plexiglas ahead of the FBP part, see Figure 1. When the door is open, you fully see the front (the **F**ire **B**rigade **P**anel, **FBP**, and **C**ontrol **P**anel, **CP**), see Figure 2.

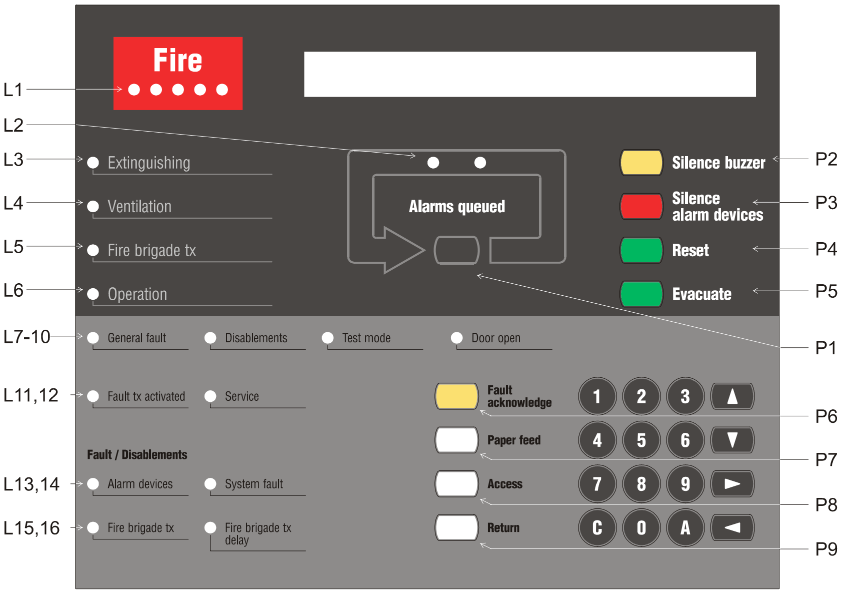

Figure 2. The EBL512 front; FBP (upper black part) and CP (lower grey part). The look may vary according to configuration, convention, etc. (English config. in figure). See also chapt. "LED indicators and push buttons", page 16.

The fire brigade personnel use the FBP to see which alarm point / zone(s) having generated fire alarm. In the alphanumeric display (LCD, 2x40 alphanumeric characters), the information displayed on the first row is depending on how many alarm points / zones having generated fire alarm (and also convention). On the second row is, for an alarm point or a zone, a user definable text message shown, if programmed.

Required fire brigade personnel manoeuvres can be performed from the FBP.

The CP is used to "communicate" with the system, e.g. for commissioning, monthly tests or maintenance. Access codes for different access levels are required. A keypad is used to get access to the system (a menu tree with main and sub menus) and for different manoeuvres. The CP has several system status LEDs.

5 LED indicators and push buttons

LEDs and push buttons can vary according to type and configuration (convention / country / language).

See also Figure 2, page 14.

LED indicators on the Fire Brigade Panel (FBP)		
LED indicator		**Indicating**
L1	Fire (5 red)	Fire alarm (also pre-warning, heavy smoke/heat alarm, key cabinet alarm & co-incidence alarm)
L2	Alarms queued (2 red)	More than one unit / zone have generated fire alarm.
L3	Extinguishing (red)	Output(s) for extinguishing equipment activated.[6]
L4	Ventilation (yellow)	Output(s) for fire/smoke ventilation equipment activated.[6]
L5	Fire brigade tx (red)	Output(s) for fire brigade tx (routing equipment) activated.[6]
		Test of routing equipment in progress (see menu H1).
L6	Operation (green)	Power on, i.e. the power supply (rectifier and/or battery are connected and working properly.

(FBP push buttons on next page)

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[6] L3-L5 can be individually programmed to indicate when its normal trigger condition is met or when a programmable input is activated (e.g. L5 can be turned on when an input is activated by a Fire brigade tx output.

Push buttons on the Fire Brigade Panel (FBP)		
Push button		**Operation/function**
P1	Alarms queued (black)	Used, when LEDs "Alarms queued" (L2) are lit, to scroll/browse through the queued alarms (zones).
P2	Silence buzzer (yellow)	Used to silence the buzzer in the c.i.e.
P3	Silence Alarm devices (red)	Used to silence the sounders (i.e. to "reset" outputs for alarm devices).
P4	Reset (green)	Used to reset the fire alarm(s).[7] Has to be pressed for > 0.5 sec.
P5	Evacuate (green) [8]	Used to activate the sounders (i.e. the outputs for alarm devices).

(CP LED indicators on next page)

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[7] **Multiple reset** (Default): All fire alarms in the system will be reset simultaneously. **Single reset**: The fire alarm displayed in the LCD (first row to the left) will be reset. When more than one fire alarm is generated (LEDs "Alarms queued" are lit) each fire alarm has to be individually reset. **Single encapsulated reset**: Fire alarm reset like "Single reset". Encapsulation function described in EBL512 Planning Instructions, chapter "System properties (settings).
NOTE (1)! When "Multi reset" or "Single reset" is used, encapsulated reset can be done by pressing "Reset" (P4) and 0.1 sec. later also press "Alarms queued" (P1) and hold them pressed for > 0.5 sec.
By Single reset: The fire alarm displayed in the LCD (first row to the left) will be encapsulated.
By Multiple reset: The fire alarm displayed in the LCD (first row to the left) will be encapsulated **or** the points in alarm status within one zone will be encapsulated **or** the whole zone (conventional) will be encapsulated. **NOTE (2)!** When "Single reset" or "Single encapsulated reset" is used, you can make a "Multiple reset" by pressing "Reset" (P4) and 0.1 sec. later also press "A" (in the keypad) and hold them pressed for > 0.5 sec.

[8] "Evacuate" is only valid in the "British Standard" convention. In "Polish" (CNBOP) convention, this button is used for "Alert annunciation Acknowledge".

LED indicators on the Control Panel (CP)		
LED indicator		**Indicating**
L7	General fault (yellow)	Fault(s) (i.e. not acknowledged fault(s)) and/or acknowledged but not corrected fault(s).
L8	Disablements (yellow)	Something in the system is disabled / disconnected.[9] **Blinking**: Single encapsulated reset performed [7].
L9	Test mode (yellow)	One or more zones are in "test mode".
L10	Door open (yellow)	A door is open.[10]
L11	Fault tx activated (yellow)	One or more not acknowledged faults in the system. Output(s) for fault tx (routing equipment) is(are) also activated, if not disabled before. Test of routing equipment in progress (see menu H1).
L12	Service (yellow)	One or more sensors have reached the service level. See menu H4/U6.
L13	**Fault / Disablements** Alarm devices (yellow)	One or more supervised outputs (type 3 = alarm device) in the system are disabled. **Blinking**: One or more supervised outputs (type 3 = alarm device) have generated fault(s).
L14	System fault (yellow)	EBL512 is not running (because of SW / CPU / memory fault).
L15	**Fault / Disablements** Fire brigade tx (yellow)	Output(s) for fire brigade tx (routing equipment) is(are) disabled via menu (H8/S1 or H2/B3) or via an open door.[10] **Blinking**: One or more supervised outputs (type 4 = routing equipment) have generated fault(s).
L16	Fire brigade tx delay (yellow)	Alert annunciation is activated.[11], i.e. "Acknowledge time" or "Investigation time" is running and output(s) for routing equipment (fire brigade tx) are not activated.

Push buttons / Keypad on the Control Panel (CP)		
Key/push button		**Operation/function**
P6	**Fault acknowledge**	Used to acknowledge the faults shown in menu H6.

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[9] See also chapter ""Silence Alarm devices" / Silence before a fire alarm", page 25.

[10] See chapter "Door open", page 29.

[11] Alert annunciation function described in EBL512 Planning Instructions, chapter "Alert annunciation".

	(yellow)	
P7	**Paper feed** (white)	Used for paper feed (when a built-in printer is available). [12]
P8	**Access** (white)	Used to log on, i.e. to get access to the menu tree (via an access code) to carry out disablements, etc.
P9	**Return** (white)	Used to stop input of data, leave a menu ("one step up") and to log off.
	1 – 9 and 0	Numeric keys for the figures 0-9.
	C	Used to clear /delete just written data.
	A	Used to accept a menu and accept input of data.
	← → ↑ ↓	Left / right keys are used to move the cursor in a menu. Up / down keys are used to scroll between the menus.

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[12] In Chinese convention only the following is valid: If "P7" and "C" are pressed simultaneously, the printer will be disabled. This is indicated by the LED "Printer disabled". The printer will be disabled until re-enabled again, i.e. "P7" and "C" are pressed simultaneously. All information that should have been printed while the printer was disabled, will be lost (not printed).

6 Normal operation

When the control unit / system is in normal operation, i.e. no fire alarm and normally no fault, no disablement, no service signal, no zones in test mode, no activated interlocking in / outputs and/or no open doors, only the LED "Operation" (L6) is to be lit.

6.1 Alphanumeric display in the control unit

In normal operation, there shall be no information shown in the alphanumeric display in the control unit but some information can be shown. The type of information and the priority order is as follows:

1. Fire alarms [13]
2. Co-incidence alarms
3. Pre-warnings
4. Evacuate information (only valid in "British Standard" and "British Standard Marine Application" conventions)
5. Faults (not acknowledged)
6. Disablements
7. Zones in Test mode
8. Interlocking inputs / outputs active (not valid in Chinese convention)

NOTE!

The different type of alarms, faults, etc. are described in other parts of this document.

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[13] Fire alarm have a "log off function", i.e. if a menu window is open when a fire alarm is activated, an automatic menu log off will be take place and the fire alarm will be presented in the alphanumeric display instead.

Some information is available and some actions are possible to perform via the "Fire alarm menu", see chapter "Fire alarm", page 34.

7 Access levels

The control unit has six access levels for different kind of users.

Access level 0	Door closed	Anybody	Scroll / browse through the queued alarms
Access level 1	Open door (key is needed)	Fire brigade personnel	Fire alarm handling
Access level 2	Access code for level 2 (or 3 or 4) is required	Building occupier	Installation handling, monthly tests, disablements, etc.
Access level 3	Access code for level 3 (or 4) is required	Service personnel	Service, maintenance
Access level 4	Access code for level 4 is required	Service / commissioning engineer	Service, commissioning the system, etc.
Access level 5	Access code for level 5 is required	Service / commissioning engineer	Code to connect a PC, i.e. for Win512.

The access codes can be changed. To change a code you have to know the valid code or use a code for a higher access level.

7.1 Access level 0

With the door closed, anybody has access to the push button "Alarms queued" (P1) to scroll / browse through the queued alarms.

7.2 Access level 1

After the door has been opened (LED "Key switch" is lit), the user / fire brigade personnel will be able to use the push buttons / keypad to:

(P2) Silence the buzzer in the c.i.e.
(P3) Silence the alarm devices (sounders) in the system.
(P4) Reset fire alarm(s).
(P5) Evacuate (start the sounders).[14]
(P7) Paper feed (when built-in printer is available.
(P8) Get access (after login) to some menus/functions in the system.[15]

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[14] Only valid in the "British Standard" convention. In "Polish" (CNBOP) convention, this button is used for "Alert annunciation Acknowledge".

[15] Normally, the fire brigade personnel have <u>no access code</u>.

7.3 Access level 2

From access level 1, the user can login to access level 2, which gives access to the following menus:

H1 Perform monthly test.
H2 Disable or re-enable.
B1 Disable zone
B2 Disable zone / address
B3 Disable control output
B4 Re-enable zone
B5 Re-enable zone / address
B6 Re-enable control output
B7 Re-enable non-reset zone / address[16]
B8 Control on / Control off
B9 Alarm devices on / Alarm devices off
H3 Set calendar and clock.
H4 Present system status on display and printer.
U1 Disablement
U2 Disablement by time channel.
U3 Show open doors.[17]
U4 Activated 2-zone / address dependent zone / address.
U5 Show sensor values.
U6 Sensors activating service signal
U7 Show event log
U8 Show configuration
H6 Acknowledge faults.
H7 Perform zone test (Test mode).
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs/inputs
C2 Activate interlocking output

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[16] This function is normally not enabled. It can be enabled via Win512, but this is a violation to the EN54-2 standard.

[17] A door is open. See chapter "Door open", page 29.

C3 Reset interlocking output
C4 Disable interlocking output
C5 Re-enable interlocking output
H10 Change access code for daily duties (access level 2).

7.4 Access level 3

From access level 2[18], the user can login to access level 3, which gives access to the following menus, normally used by service personnel:

Same menus as in access level 2 plus the following:
H8 Maintenance
S1 Disable or re-enable outputs for routing equipment (Fire brigade tx & Fault tx)
S2 Disconnect loop.
S3 Re-connect loop.
S4 Acknowledge service signal.
S5 Clear weekly average.
S6 Safe shut down of control unit.
S7 Activate address in alarm mode.
S8 Synchronize the control units.
S9 Change access code for maintenance (access level 3).

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[18] If code for access level 3 or 4 has been used to login to access level 2, new login to access level 3 is not required.

7.5 Access level 4

From access level 2[19], the user can login to access level 4, which gives access to the following menus, normally used by Service / Commissioning Engineers:

Same menus as in access level 2 and 3 plus the following:
H5 Service
A1 Calibration of supervised outputs
A2 Sensitive fault detection mode
A3 Direction for communication on COM-/BS4-loop
A4 Show information about site specific data.
A5 Display current consumption in control unit
A6 Display current consumption on COM-/BS4-loop
A7 Display statistics for COM-loop
A8 Select unit on COM-loop (and BS4 loop) to use for trigging
A9 Change access code for PC-communication (access level 5).
A10 Change access code for service (access level 4).

7.6 Access level 5

Used by Service / Commissioning Engineers when a PC is to be connected to the control unit, i.e. when Win512 is to be used for backup, downloading site specific data, downloading SW / settings / configurations / C.U. and system data, on-line status checking, etc.

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[19] If code for access level 4 has been used to login to access level 2, new login to access level 4 is not required.

8 "Silence Alarm devices"

In the control unit (on the FBP) there is a push button (P3) "Silence Alarm devices". Depending on convention, the function can vary.

8.1 Silence before a fire alarm

In most conventions is this function **not valid** since it is a violation to the EN54-2 standard.

If the push button "Silence Alarm devices" is pressed **before** a fire alarm / fault, the following will happen:

- LED "Disablements" (L8) will light up (steady ON)
- outputs programmed for sounders (type 3 = alarm devices) will be disabled

If case of a fire alarm, the sounders will **remain** turned OFF (not sound).
To reset this function, press "Silence Alarm devices" once more. The LED will be turned OFF (if there are no other disablements in the system), indicating a normal state.

8.2 Silence during a fire alarm

If the push button "Silence Alarm devices" is pressed **during** a fire alarm, the following will happen:

- LEDs "Fire" (L1) and "Alarms queued" [20] (L2) changes from blinking (0.8 / 0.8) to steady ON
- activated outputs, programmed for sounders (type 3 = alarm devices), will be turned OFF

In case of a new fire alarm, or if the push button "Silence Alarm devices" is pressed again, the sounders (i.e. the outputs), will automatically be turned ON again and LEDs "Fire" and "Alarms queued" starts blinking.

8.3 Alarm device on / Alarm device off

Via menu H2/B9, all outputs, programmed for sounders (type 3 = alarm devices), can be collective turned OFF (disabled), indicated by LED "Disablements" (L8) and LED **Fault / Disablements** "Alarm devices" (L13) steady ON.
In case of a fire, the sounders will **remain** turned OFF (disabled), i.e the alarm devices will not sound.
They will remain turned OFF (disabled) until they are turned ON (re-enabled) again, via menu H2/B9.

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[20] When more than one fire alarm is activated.

9 "Silence buzzer"

The **buzzer** in the control unit will sound for:

- pre-warning (0.8 / 5 sec.)
- 2-zone dependent or 2-unit dependent fire alarm: When only one **zone** or one **zone / address** (alarm point) is in alarm status (0.8 / 5 sec.)
- fire alarm (0.8 / 0.8 sec.)
- fault (steady)
- disablements and faults when the door to the C.U. is being closed (1 sec.)
- activated interlocking input (0.4 / 0.4 sec.), if this option is selected via Win512.

Press "Silence buzzer" (P2) **to silence the sounding buzzer.**

When the buzzer is silenced (via P2), it will sound again (re-sound) for a new "alarm" / fault / activated interlocking input.

"Old" front

For the function described above, the "new" front , with the push button "Silence buzzer" (P2) is required.

The "old" front (without the push button "Silence buzzer") results in the following function: The buzzer is silenced via the control unit door switch, i.e. the buzzer will be silent as long as the door is open.

In Win512 ("System" dialog box) is the "Silence Buzzer By Door Switch" check box unmarked as default. When this check box is marked (required with the "old" front), the buzzer is turned off as long as the control unit door is open but this function is a violation to the EN54-2 standard.

10 Controls ON / Controls OFF

Via menu H2/B8, all control output types:

0 = control (general)

1 = fire ventilation

2 = extinguishing system[21]

can be collective turned OFF (disabled), indicated by LED "Disablements" (L8).

They will remain turned OFF (disabled) until they are turned ON (re-enabled) again, via menu H2/B8.

---

[21] Also the "Extinguish equipment output" on the German FBP interface board 1583.

11 Evacuate

Only valid for the "British Standard" convention. English front with the push button "Evacuate" (P5) is also required.

When the push button "Evacuate" (P5) is pressed, all outputs, programmed for sounders (type 3 = alarm devices), will be collective turned ON. This is indicated by the following information in the alphanumeric display:

```
Evacuate in progress
```

They will remain turned ON until they are turned OFF by pressing the push button "Evacuate" (P5) again.

NOTE! The alarm devices (sounders) will always be steady activated (sound continuously) irrespective of the fact that the outputs can be set to anything else for fire alarm (e.g. intermittent).

12 Door open

A special key is used to open the control unit door to get access to the system, see chapter "Access levels", page 21. The same type of key is also used to open the ext. FBP door. Door open is indicated by LED "Door open" (L10). In Win512 ("System" dialog box, "Door open" tab), the following can be programmed (default settings shown):

12.1 LED "Door open"

Indication door open affected by

⊙ **Door in any control unit or any external FBP**: Door open in a C.U. is indicated by LED "Door open" in all C.U:s and in all ext. FBPs. Door open in an ext. FBP is indicated by LED "Door open" in all C.U:s and in all ext. FBPs.

○ **Door in any control unit**: Door open in a C.U. is indicated by LED "Door open" in all C.U:s and in all ext. FBPs. Door open in an ext. FBP is indicated by LED "Door open" in that ext. FBP only.

○ **Door in control unit or external FBP connected to own control unit**: Door open in a C.U. is indicated by LED "Door open" in that C.U. and all ext. FBPs connected to that C.U. Door open in an ext. FBP is indicated by LED "Door open" in the C.U. it is connected to and all ext. FBPs connected to that C.U.

○ **Door in control unit**: Door open in a C.U. is indicated by LED "Door open" in that C.U. and in all ext. FBPs connected to that C.U. Door open in an ext. FBP is indicated by LED "Door open" in that ext. FBP only.

12.2 Outputs for routing equipment (Fire brigade tx and Fault tx)

Disablement of routing equipment

⊙ **No disablement**: Door open in a C.U. or an ext. FBP will **not** disable the output(s) for routing equipment (Fire brigade and fault tx).

○ **Disable by door in any control unit**: Door open in any C.U. will disable the output(s) for routing equipment (Fire brigade and fault tx) in all C.U:s.

○ **Disable by door in any control unit or any external FBP**: Door open in any C.U. or any ext. FBP will disable the output(s) for routing equipment (Fire brigade and fault tx) in all C.U:s.

Disabled outputs for routing equipment are indicated by the LED "Disablements" (L8) and "**Fault / Disablements** Fire brigade tx" (L15).

13 Technical number / Presentation number

13.1 Technical number for COM loop units

The technical number, NNNNNN, is used when programming all units connected to the COM loops.
Technical number is also used to identify which unit has generated a fault.

NN N NNN

000-127

The address on the COM loop.
Avoid address 000. Start at 001.
Don't have to be in sequence.
The connections on the COM loop don't have to be in sequence.
The address is set on a DIL switch in some units and with a programming tool 3314 in some units.

0 - 3

COM loop number

00 - 29

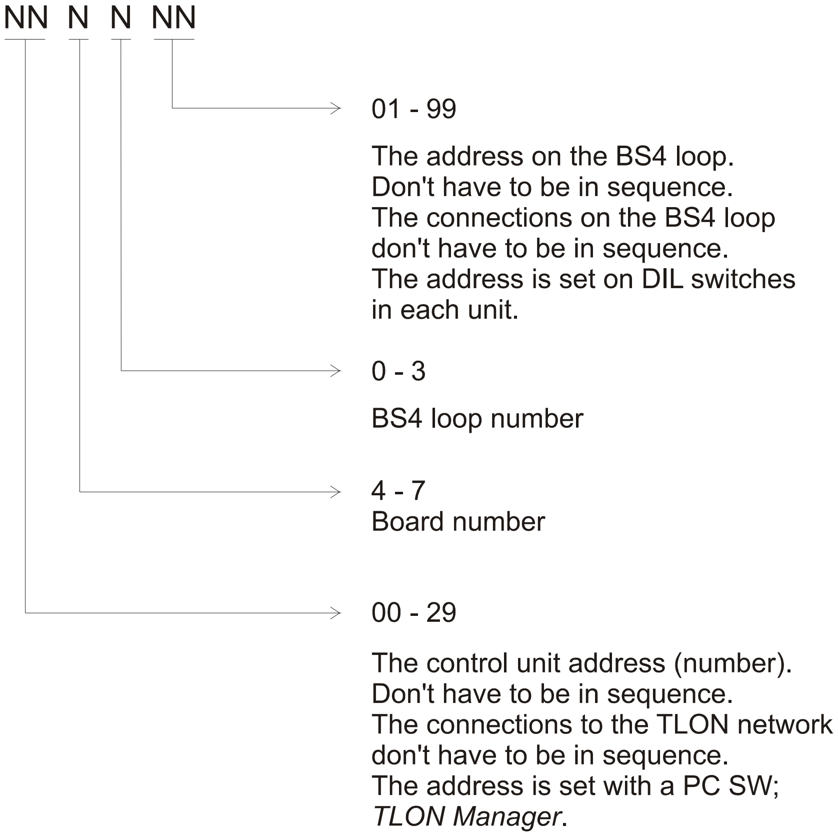
The control unit address (number).
Don't have to be in sequence.
The connections to the TLON network don't have to be in sequence.
The address is set with a PC SW; *TLON Manager*.

Regarding DIL-switch address setting, see dwg 512-71.

Regarding the Address setting tool 3314: Addresses 001 – 127 can be set (not 000).

13.2 Technical number for BS4 loop units

Autronica interface board 1584[22] (four BS4 loops) is required in the control unit.
The technical number, NNNNNN, is used when programming all units connected to the BS4 loops.
Technical number is also used to identify which unit has generated a fault.



01 - 99

The address on the BS4 loop.
Don't have to be in sequence.
The connections on the BS4 loop don't have to be in sequence.
The address is set on DIL switches in each unit.

0 - 3

BS4 loop number

4 - 7
Board number

00 - 29

The control unit address (number).
Don't have to be in sequence.
The connections to the TLON network don't have to be in sequence.
The address is set with a PC SW; *TLON Manager*.

NOTE! In the technical number for unit connected to a BS4 loop, the board number 4 = Autronica interface board 0, the board number 5 = Autronica interface board 1, the board number 6 = Autronica interface board 2 and the board number 7 = Autronica interface board 3 in the control unit.

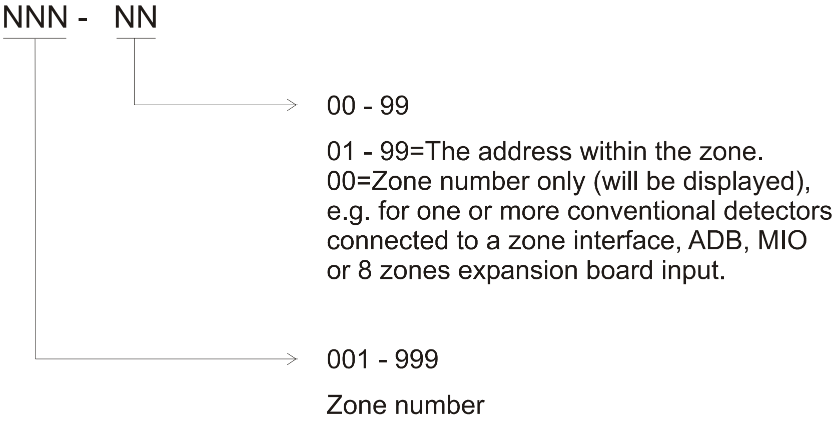
In fault messages for Autronica interface boards, the following information is shown: Control unit (00-29), BS4 board (0-3) and if required BS4 loop (0-3)

---

[22] Can only be used in Swedish (SBF) convention.

13.3 Presentation number

For each fire alarm point / input / zone, a presentation number, **NNN-NN**, has to be programmed. This number is shown in the FBP display(s)[23], to identify the point / zone generating fire alarm. It is also used to disable / re-enable fire alarm points / zones and in control conditions (expressions) to activate the programmable outputs.



00 - 99

01 - 99=The address within the zone.
00=Zone number only (will be displayed), e.g. for one or more conventional detectors connected to a zone interface, ADB, MIO or 8 zones expansion board input.

001 - 999

Zone number

Together with the zone number and the address, a user definable, 40 characters, text message can be displayed (if programmed).

NOTE! Zone numbers 001-999 can be used but > 512 alarm points or zones in one c.i.e. is a violation to the EN54-2 standard.

---

[23] The presentation number (or a user definable, 40 characters, text message) can also shown in the display units connected to the COM loops.

14 Alarm types

In case of a fire, analog detectors (sensors), conventional smoke and/or heat detectors, manual call points and programmable inputs can generate **fire alarm**. When somebody illegally breaks into a key cabinet, it will also generate a fire alarm (key cabinet alarm).

The analog detectors can also generate two other types of "alarm", i.e. **Pre-warning** and **Heavy smoke alarm** / **Heavy heat alarm**.

"Two unit dependent" addressable alarm points (normally only smoke detectors) or "2-zone dependent" zones, can generate a **Co-incidence alarm**.

The system can handle up to 15360 fire alarms. Up to 512 fire alarms will be shown in the c.i.e. display. No more fire alarms will be shown until one or more of the 512 alarms are reset.

14.1 Pre-warning

Pre-warning is a programmable option that will not be enabled if not programmed (in Win512). Note! Pre-warnings activated in other control units in the system will always be presented in all control units and all programmable outputs in the system (with trigger condition pre-warning) will be activated (if not disabled). An analog detector generates pre-warning for a lower alarm level than the fire alarm level.[24]

Pre-warning can be used when an early alarm / action is required (e.g. a "soft" computer shut down). Normal alarm devices, routing equipment, etc. will not be activated.
In case of a pre-warning, the following will happen:

- The buzzer in the control unit sounds 0.8 sec. each 5th sec. (0.8 / 5 sec.).
- LEDs "Fire" (L1) are blinking (0.8 / 0.8 sec.).
- Outputs programmed for pre-warning[25] are activated.
- On the first row in the control unit display, the presentation number (zone/address) is shown (for the first pre-warning).
- On the second row, a user definable text message (= that for fire alarm) will be shown (if programmed).

Example; pre-warning zone 123, address 45 (within zone 123):

```
Pre-warning detector 123/45
(user definable text message)
```

---

[24] See EBL512 Planning Instructions. Any programmable input can also be used to activate a pre-warning.
Regarding the BS4 exp. board 1584 for Autronica devices (BS4 loops), pre-warning can also be generated by detector(s) connected to address units.

[25] And outputs programmed for each specific pre-warning.

Example; pre-warning zone 123:

```
          Pre-warning zone 123
      (user definable text message)
```

If more than one pre-warning are generated, the LEDs "Alarms queued" (L2) are blinking and the pre-warnings will be automatically scrolled (each five seconds).
Pre-warning is automatically reset see chapter "Alarm reset", page 41.

14.2 Fire alarm

See also chapter "Alphanumeric display in the control unit", page 20. According to the EN54-2 standard[26], in case of a fire alarm, the following will happen:

- The buzzer in the control unit sounds 0.8 sec. each 0.8th sec. (0.8 / 0.8 sec.).
- LEDs "Fire" (L1) are blinking (0.8 / 0.8 sec.).
- Output(s) for routing equipment (Fire brigade tx) is (are) activated.
- Outputs for sounders (type 3 = alarm devices) are activated.
- Outputs for fire alarm[27] are activated.
- In the control unit display (and ext. FBP[28] display), the fire alarms are presented as follows.

Only one alarm point activated in a zone is presented as **zone-address** (**POINT:** or **LAST:**)
Two or more alarm points activated in a zone is presented as **zone** (**ZONE:** or **LAST:**).

One alarm point

```
POINT: 123-45                      No.:001
User definable text message for 123-45
```

More than one alarm point in a zone or
A conventional zone (zone line input)

```
ZONE: 123                          No.:001
User definable text message for zone 123[29]
```

More than one zone

```
ZONE: 234        LAST: 567         No.:002
User definable text message for zone 234
```

---

[26] Via Win512 can "Point alarm presentation" be selected (which is a violation to the EN54-2 standard).

[27] And outputs programmed for each specific fire alarm.

[28] Only the ten first fire alarms will be displayed in the ext. FBPs.

[29] More than one alarm point in the same zone: If no user definable text message is programmed, the text "Many alarms in zone" will be shown.

Only one alarm point in each zone

```
POINT: 123-45    LAST: 789-01     No.:003
User definable text message for 123-45
```

LAST = The most recent zone-address that activated fire alarm.

No. = The total number of zones[30] where fire alarm is activated.

User definable text message For an alarm point it is the individual (free) text for the alarm point (if programmed) or the default control unit text (if programmed).

User definable text message For a zone it is the individual (free) text for the zone (if programmed) or the text "Many alarms in zone".

LEDs "Alarms queued" (L2) blinking (0.8 / 0.8 sec.). More than one fire alarm is activated.[31] To scroll through the zones, use the push button "Scroll" (P1). The fire alarms are stored in a circular buffer and when scrolling from the last to the first alarm, the LEDs "Alarms queued" will be turned off for three seconds.
The first alarm will be automatically dispayed again, 20 seconds[32] after the latest time the "Scroll" button was used.

The printer [33] will print each fire alarm, e.g.:

```
           *** Fire Alarm ***
Point: 123-45   Time HH.MM   Date MM-DD
User programmable text message (if progr.)
or
Zone: 123       Time HH.MM   Date MM-DD
User programmable text message (if progr.)
```

Reset of the fire alarms, see chapter "Alarm reset", page 41.

14.2.1 Fire alarm menu

During the fire alarm presentation, a special fire alarm menu can be used.[34] (If this menu is excluded, via Win512, it is a violaton to the EN54-2 standard).

Press "Access" and **the user definable text message** will be replaced:

```
ZONE: 123       LAST: 789        No.:003
Display alarms                ACCEPT?  X1
```

"A", "↓", "↑", "→", "←" and "Return" are used like in the normal menu tree, see chapter "Access", page 68.

---

[30] In Chinese convention, the total number of alarm points.

[31] Up to 512 alarms can be presented in the display. Alarm = ZONE and/or ZONE-ADDRESS (depending on zone or point alarm presentation) but all possible alarms (15360) can be stored.

[32] In Chinese convention after 3 minutes.

[33] When printer is available (e.g. control unit 1549).

[34] Not valid in Chinese convention.

The original presentation (the user definable text message) will be automatically displayed again, 20 seconds after the latest time any of the push buttons "A", "↓", "↑", "→", "←" and "Return" was used.

Scroll ("↓", "↑") to the wanted menu and press "A".

14.2.1.1 Display alarms (X1)

```
ZONE: 123       LAST: 789        No.:003
Display alarms                ACCEPT?  X1
```

All fire alarms, also several alarm points in one zone, will be displayed here, in zone - address order (i.e. up to 15360 alarms).

Press "A". E.g.:

```
ZONE: 123       LAST: 789        No.:003
POINT: 123-45                    No.:001
```

"↓"

```
ZONE: 123       LAST: 789        No.:003
ZONE: 234                       No.:002
```

…and so on.

14.2.1.2 Display faults (X2)

```
ZONE: 123       LAST: 789        No.:003
Display faults                ACCEPT?  X2
```

Press "A". E.g.:

```
ZONE: 123       LAST: 789        No.:003
FAULT: Battery not connected CU xx
```

Only the fault message, for the fault respectively, is displayed here, not date, time and "status" information.

14.2.1.3 Display disablements (X3)

```
ZONE: 123       LAST: 789        No.:003
Display disablements          ACCEPT?  X3
```

Press "A". E.g.:

```
ZONE: 123       LAST: 789        No.:003
Zone XXX address XX disabled
```

14.2.1.4 Disable zone (X4)

```
ZONE: 123       LAST: 789        No.:003
Disable zone                  ACCEPT?  X4
```

Press "A". E.g.:

```
ZONE: 123       LAST: 789        No.:003
Disable zone: 000                ACCEPT?
```

Write zone number and press "A". If more zones are to be disabled, repeat the procedure.

14.2.1.5 Re-enable zone (X5)

```
ZONE: 123       LAST: 789       No.:003
Re-enable zone               ACCEPT?  X5
```

Press "A". E.g.:

```
ZONE: 123       LAST: 789       No.:003
Re-enable zone: ZZZ             ACCEPT?
```

This is a list of disabled zones. Scroll to or write the wanted zone number and press "A". If more zones are to be re-enabled, repeat the procedure.

14.2.1.6 Control on/off (X6)

```
ZONE: 123       LAST: 789       No.:003
Control on/off               ACCEPT?  X6
```

Press "A". E.g.:

```
ZONE: 123       LAST: 789       No.:003
Control on (=1) or off (=0)? 1  ACCEPT?
```

To activate Control off, press "0" and "A". (To activate Control on, press "1" and "A".). For more information, see chapter "Control on / Control off (H2/B8), page 79.

14.2.1.7 Alarm devices on/off (X7)

```
ZONE: 123       LAST: 789       No.:003
Alarm devices on/off         ACCEPT?  X7
```

Press "A". E.g.:

```
ZONE: 123       LAST: 789       No.:003
Alarm devices on(=1) off(=0)? 1  ACCEPT?
```

To activate Alarm devices off, press "0" and "A". (To activate Alarm devices on, press "1" and "A".). For more information, see chapter "Alarm devices on / Alarm devices off (H2/B9), page 80.

14.2.2 Alert annunciation

Indications, print-outs, actions etc. as for a normal fire alarm **except output(s) for routing equipment (fire brigade tx), which will not be activated.** This is indicated by the LED "Fire brigade tx delay" (L16). The alarm has to be acknowledged[35] and reset within an acknowledge time and an investigation time respectively, otherwise the output(s) for routing equipment (fire brigade tx) will be activated. See EBL512 Planning Instructions for more information.

---

[35] LED "Acknowledge" is indicating that the push button "Acknowledge" has been activated. A busy system can cause a time delay (up to 10 seconds) before the fire alarm is acknowledged.

Acknowledgement and reset of the alarm is normally done on a 2235 Display unit[36]. See also chapter "Alarm reset", page 41.

14.2.3 2-zone / address dependence (co-incidence alarm)

When only one **zone** or one **zone / address** (alarm point) is in alarm status[37], LEDs "Fire" (L1) are blinking (0.8 / 0.8 sec.), the buzzer sounds (0.8 / 5 sec.) and there is a **Co-incidence alarm** presentation in the display.

```
Co-incidence alarm detector ZZZ/AA
```

or

```
Co-incidence alarm zone ZZZ
```

See also chapter "Activated 2-zone/address dependent zone/address (H4/U4)", page 85.

If more than one Co-incidence alarm are generated, the LEDs "Alarms queued" (L2) are blinking and the Co-incidence alarms will be automatically scrolled (each 5th second).

Co-incidence alarm is automatically reset (i.e. when the zone / alarm point is no longer in alarm status), see chapter "Alarm reset", page 41.

14.3 Heavy smoke alarm / Heavy heat alarm

An analog detector generates heavy smoke / heat alarm for a higher alarm level[38] than the fire alarm level, i.e. fire alarm is already activated by the same detector.

Heavy smoke / heat alarm is a confirmation on that the smoke or heat is increasing and can be used for special actions, e.g. automatic activation of smoke ventilation, etc.

In case of a heavy smoke / heat alarm, the following will happen:

- Outputs for heavy smoke / heat alarm[39] are activated.
- Each heavy smoke / heat alarm is printed[40], e.g.:

---

[36] In "Polish" (CNBOP) convention, the "Evacuate" (P5) push button can be used for "Alert annunciation Acknowledge".

[37] When two or more **zones** or **units** (zone / addresses), dependent on each other, are in alarm status at the same time, normal fire alarm will be activated in the system. See also EBL512 Planning Instructions.

[38] See EBL512 Planning Instructions.

[39] And outputs programmed for each specific heavy smoke / heat alarm.

[40] When printer is available (e.g. control unit 1549).

```
      *** Heavy smoke ***
Point: 123-45   Time HH.MM   Date MM-DD
User programmable text message (if progr.)
```

or

```
Zone: 123       Time HH.MM   Date MM-DD
User programmable text message (if progr.)
      *** Heavy heat ***
Point: 123-45   Time HH.MM   Date MM-DD
User programmable text message (if progr.)
```

or

```
Zone: 123       Time HH.MM   Date MM-DD
User programmable text message (if progr.)
```

Heavy smoke / heat alarm will be reset when the fire alarm respectively is reset, see chapter "Alarm reset", page 41.

14.4 Key cabinet alarm

One programmable input[41] per control unit can be used to connect a key cabinet.

The fire brigade uses a key cabinet to store a key to the building.

NOTE! In the DBI (Danish) convention the key cabinet alarm function is a little different, see below.

14.4.1 Key cabinet opened before a fire alarm

If the key cabinet is opened before a fire alarm (e.g. if somebody illegally breaks into a key cabinet), a key cabinet alarm (a "fire alarm") will be generated.

Example; Key cabinet alarm (xx = control unit number):

```
POINT: KEY-xx                     No.:001
Alarm from key cabinet
```

It will be printed like a normal fire alarm (when printer is available), see chapter "Fire alarm", page 34.

Key cabinet alarm is reset like a normal fire alarm, see chapter "Fire alarm reset, page 41.

This alarm will also generate a fault message, see chapter "Key cabinet alarm reset", page 43. It is indicated by LED "Fault" (L8). Note! "Fault tx" output(s) will not be activated by this fault.

14.4.2 Key cabinet opened in conjunction with a fire alarm

The fire brigade personnel can open the key cabinet in case of a fire alarm. **No** alarm or fault will be generated when the key cabinet is opened (i.e. no key cabinet alarm).

---

[41] Input I0-I3 or COM loop input unit can be used.

14.4.2.1 Restoring the key after a fire alarm

When **all** fire alarms (in the system) are reset (see chapter "Alarm reset", page 41), the key has to be restored in the key cabinet **within 5 minutes**. If not, a fault will be generated, see chapter "Key cabinet alarm reset", page 43.

14.4.3 Key cabinet alarm, DBI convention

NOTE! Only valid for the DBI (Danish) convention.

When the key cabinet is opened, the "Fault tx" output(s) will be activated and a "key cabinet fault" will be generated:

```
FAULT: Key cabinet, control unit: xx
Date: MM-DD   Time: HH:MM
```

(In Danish: "`FEJL: Nøgleskab, central xx`")

When this fault is acknowledged (see chapter "Acknowledge FAULTS (H6)", page 109), there is a 5 minutes delay before a new "key cabinet fault" can be generated again.

15 Alarm reset

15.1 Pre-warning reset

Pre-warning is automatically reset.

15.2 Fire alarm reset

NOTE! The detectors having activated the fire alarms shall, after reset, be inspected, tested and replaced when required.

One of the following alarm reset alternatives is selected via Win512. "Multiple reset" is default.

15.2.1 Multiple reset

All the fire alarms will be reset by pressing "Reset" (P3). (According to the EN54-2 standard).
NOTE! The push button has to be pressed in for min. 0.5 sec.

When all fire alarms are reset, LEDs "Fire" (L1) and "Alarms queued" (L2) are turned OFF and the display is empty[42].

All outputs (for fire alarm) have been de-activated.

If a key cabinet is installed, the key (to the building) has to be put back into the key cabinet **within 5 minutes**. If not, a fault will be generated and a fault message will be shown in the display, see chapter "Key cabinet alarm reset, page 43.

15.2.2 Single reset

Each fire alarm has to be reset one by one. (This function, set in Win512, is a violation to the EN54-2 standard.) [43]

Press "Reset" (P3) to reset the fire alarm, shown in the display, on the first row to the left
NOTE! The push button has to be pressed in for min. 0.5 sec.

Output(s), programmed for this fire alarm, is (are) de-activated.

If more than one fire alarm is activated (i.e. LEDs "Alarms queued" (L2) are lit) the next fire alarm in the queue is now shown in the display, on the first row to the left. It has to be reset the same way as the first one.

When all fire alarms are reset, LEDs "Fire" (L1) and "Alarms queued" (L2) are turned OFF and the display is empty[42].

---

[42] If there is a fault condition (e.g. caused by the fire), a fault message will now be shown in the display.

[43] When "Single reset" or "Single encapsulated reset" is used, you can make a "Multiple reset" by pressing "Reset" (P4) and 0.1 sec. later also press "A" (in the keypad) and hold them pressed for > 0.5 sec.

All outputs (for fire alarm) have been de-activated.

If a key cabinet is installed, the key (to the building) has to be put back into the key cabinet **within 5 minutes**. If not, a fault will be generated and a fault message will be shown in the display, see chapter "Key cabinet alarm reset, page 43.

15.2.3 Single encapsulated reset (Zone/Detector not reset)

Like "Single reset" but with the encapsulation function as follows:

Normally if an alarm point or zone is reset while still in alarm status, it will activate a new fire alarm within 20 seconds. (According to the EN54-2 standard.)

When "Single encapsulated reset" is performed, an alarm point or zone still in alarm status will <u>not</u> activate a new fire alarm. It becomes encapsulated (sort of disabled) and has to be re-enabled via menu H2/B7 before it can activate a new fire alarm again. (This function, set in Win512, is a violation to the EN54-2 standard.)

LED "Disablements" (L8) is blinking, indicating that one or more zones / alarm points have been encapsulated. To re-enable, see chapter "Re-enable non-reset zone / address (H2/B7), page 78.

NOTE!
When "Multi reset" or "Single reset" is used, encapsulated reset can be done by pressing "Reset" (P4) and 0.1 sec. later also press "Alarms queued" (P1) and hold them pressed for > 0.5 sec.
By <u>Single reset</u>: The fire alarm displayed in the LCD (first row to the left) will be encapsulated.
By <u>Multiple reset</u>: The fire alarm displayed in the LCD (first row to the left) will be encapsulated **or** the points in alarm status within one zone will be encapsulated **or** the whole zone (conventional) will be encapsulated.

15.2.4 Alert annunciation

Regarding the function, see chapter "Alert annunciation", page 37 and EBL512 Planning Instructions, chapt. "Alert annunciation".
Reset of the alert annunciation fire alarm(s) is normally done on a 2235 Display unit (push button "Reset") but can be done via a programmable input or in the c.i.e. (push button "Reset" (P4)). If more than one "alert annunciation alarm" are active, they will be reset all at a time.

NOTE! <u>Reset via 2235 Display unit or programmable input</u> is only possible to do during the alert annunciation period, i.e. alert annunciation fire alarm(s) only. Normal fire alarms can not be reset.

15.2.5 Co-incidence alarm

Co-incidence alarm is automatically reset (i.e. when the zone / alarm point is no longer in alarm status). See also chapter "2-zone / address dependence (co-incidence alarm)", page 38.

15.3 Heavy smoke / heat alarm reset

If a heavy smoke / heat alarm has been activated, it will be automatically reset at the same time as the corresponding fire alarm is reset and resp. output(s) will be de-activated.

15.4 Key cabinet alarm reset

Not valid for the DBI (Danish) convention, see chapter "Key cabinet alarm, DBI convention", page 40.

After reset of the key cabinet alarm ("fire alarm"), a fault message is shown in the display to inform the user that the key cabinet has been opened.

```
FAULT: Key cabinet, control unit: xx
Date: MM-DD   Time: HH:MM
```

If the key cabinet is closed again, the "status" information `"Serviced"` is added.

This key cabinet fault message is to be acknowledged the same way as a "normal" fault, see chapter "Fault acknowledge", page 56.

When the key cabinet fault is acknowledged, the LED "General fault" (L7) will be turned OFF (if the key cabinet is closed and if there are no other faults in the system).

16 Fault

In case of a fault condition, the following has happened / will happen in the control unit:

- The buzzer in the control unit sounds (steady ON).
- Output(s) for routing equipment (Fault tx) is (are) activated.
- Output(s) for general fault / general charge fault is (are) activated.
- LED "Fault tx activated" (L11) is turned ON.
- LED "General fault" (L7) is turned ON.
- LEDs "**Fault / Disablements** Alarm devices" (L13), "System fault" (L14) and/or "**Fault / Disablements** Fire brigade tx" (L15) may be turned ON as well.
- A fault message incl. date and time is shown in the display.

Example; fault message:

```
FAULT: No reply techn.no. xxxxxx
Date: MM-DD   Time: HH:MM
```

- If more than one fault is activated, the text: **`"More faults"`** is added after the time.
- If a fault has been corrected before it has been acknowledged, the "status" text: **`"Serviced"`** is added after the time.[44]
- Fire alarm presentation has higher priority than the fault messages. During fire alarm presentation the faults can be shown via the special fire alarm menu X1, see page 36.

Faults have to be acknowledged, which is done via menu H6 (see page 109). This menu is a list of all <u>not acknowledged</u> and <u>acknowledged but not corrected</u> faults.

If a fault can not be corrected, it is important to contact service personnel / engineer immediately.

Note!

As a warning, faults (and disablements) are also indicated by a 2-sec. beep when an open control unit door is being closed.

---

[44] In Win512, <u>fault latching</u> or <u>not fault latching</u> can be selected.

Fault latching (default) = the faults always have to be acknowledged.

Not fault latching = corrected faults will automatically be removed from the fault list (menu H6).

16.1 Fault messages

Below follows a list of all fault messages, in alphabetical order:

`FAULT: 1580 8 zones board x, CU xx`

(8 zones expansion board, DET8)

Fault on / no communication to 1580 board No. x in control unit No. xx. Check address setting and connections on the board. Check programming (Win512).

`FAULT: 1581 Relay board x, CU xx`

(8 relays expansion board)

Fault on / no communication to 1581 board No. x in control unit No. xx. Check address setting and connections on the board. Check programming (Win512).

`FAULT: 1582 FBP interface board x, CU xx`

(External Fire Brigade Panel interface board)

Fault on / no communication to 1582 board No. x in control unit No. xx. Check address setting and connections on the board. Check programming (Win512).

`FAULT: 1583 Extinguishing system, CU xx`

Fault in the extinguishing system / equipment connected to the 1583 German Fire Brigade Panel interface board, in control unit No. xx.

`FAULT: 1583 GFBP interface board, CU xx`

(German Fire Brigade Panel interface board)

- Fault on / no communication to 1583 board in control unit No. xx. Check address setting and connections on the board. Check programming (Win512).
- Check the fuses F1 and F2 on the 1583 board.

`FAULT: 1584 Autronica board x, CU xx`

(Autronica interface board)

Fault on / no communication to 1584 board No. x in control unit No. xx. Check address setting and connections on the board. Check programming (Win512).

`FAULT: 24 V for ext. equipment, CU xx`
Check the fuses F2 and F4 on the connection board 1555. (Supervised output S2 is also supplied via F2 and F4).

`FAULT: 24 V for routing equipment, CU xx`
Check the fuses F1 and F3 on the connection board 1555. (Supervised output S3 is also supplied via F1 and F3).

`FAULT: ASF COM-loop x, control unit xx`
(ASF=2370, Addressable short circuit isolator) This message is only shown when the control unit works in Sensitive fault detection mode (menu H5/A2). A short circuit, shorter / faster than the time delay for an ordinary fault, has occurred on the COM loop. Can be used for commissioning / maintenance purposes.

`FAULT: Battery not connected CU xx`
• Batteries (2 x 12 V) are missing or not correctly connected. • Fuse(es) F2, F3 on the charger board 1557 is(are) blown. • Other battery fuse is blown (e.g. when the batteries are placed outside the control unit).

`FAULT: Battery output unit xxxxxx`
Check the output unit battery / connections / fuse F3 (on the power supply board) in the output unit.

`FAULT: Charging ext. power supply CU xx`
The fault is to be found in the external power supply equipment.

`FAULT: Checksum system program, CU xx`
A fault in control unit xx SW. This is very serious. Call for service personnel/engineer immediately.

`FAULT: Configuration control unit xx`

Fault in the **SSI** = EBL512 settings downloaded from Win512.

`FAULT: CU xx has no contact with CU xx`

Can be shown in conjunction with new SW download.

- Check the TLON network cable / connections.
- Faulty TLON connection board. 1590.
- No power supply to the control unit.

`FAULT: CU xx has wrong information`

Can be shown in conjunction with new SW download.
One or more control units have data stored, which is not the same in all control units. If a control unit restarts in conjunction with this fault, a synchronization will start automatically, otherwise a synchronization has to be started via menu H8/S8.
NOTE! It is important that all control units that are supposed to exist (SSD downloaded via Win512) are running and are connected to the TLON network. The TLON network programming has to be done.

`FAULT: CU xx high current consumption`

The control unit current consumption is over 2.5A, and because of this, the battery charging is turned off. Normally this fault only appears when starting up / expanding a system.

`FAULT: Cut-off COM-loop x, CU xx`

This is indicating a single break on the loop. Communication has to be performed in both directions, to find all units.
May also be shown after a short circuit on the loop when short circuit isolators are used (= communication in both directions).

(A double break will give the message: FAULT: No reply …..).

NOTE! Communication in both directions lasts for about ten minutes, when a new attempt to communicate in one direction is performed. If the break remains, a new ten minutes period starts, and so on. If the fault is acknowledged and the break is corrected during a ten minutes period, it will not disappear from the list until the end of the ten minutes period.

`FAULT:Cut-off input x,1580 board x,CU xx`

(8 zones expansion board, DET8)

This is indicating a break or missing end of line resistor on input x (zone line) on the 1580 board. A detector may have been removed (stolen) from its base.

```
FAULT: Cut-off loop x, BS4 x, CU xx
```

(1584 Autronica interface board, BS4)

Cut-off (break) on the BS4 loop. This is indicating a single break on the loop. Communication has to be performed in both directions, to find all units.
Each 10th minute is an attempt made to comm. in one direction again.

```
FAULT:Cut-off loop x,CU xx, CU<->ASF0
FAULT:Cut-off loop x, CU xx,ASF 0<->ASF 1
FAULT:Cut-off loop x, CU xx,ASF 1<->ASF 2
FAULT:Cut-off loop x, CU xx,ASF 2<->ASF 3
FAULT:Cut-off loop x, CU xx,ASF 3<->ASF 4
FAULT:Cut-off loop x, CU xx,ASF 4<->ASF 5
FAULT:Cut-off loop x, CU xx,ASF 5<->ASF 6
FAULT:Cut-off loop x, CU xx,ASF 6<->ASF 7
FAULT:Cut-off loop x, CU xx,ASF 7<->CU
FAULT:Cut-off loop x, CU xx,ASF 6<->CU
FAULT:Cut-off loop x, CU xx,ASF 5<->CU
FAULT:Cut-off loop x, CU xx,ASF 4<->CU
FAULT:Cut-off loop x, CU xx,ASF 3<->CU
FAULT:Cut-off loop x, CU xx,ASF 2<->CU
FAULT:Cut-off loop x, CU xx,ASF 1<->CU
FAULT:Cut-off loop x, CU xx,ASF 0<->CU
```

This is indicating a single break on the COM loop "x" **when one or more short circuit isolators 2370, ASF, are connected on the loop**. Communication has to be performed in both directions, to find all units. The break is to be found in the specified segment (e.g. `ASF 3<->CU` = between short circuit isolator number 3 and the control unit). Each 10th minute is an attempt to comm. in one direction made again.

```
FAULT: Display unit xxxxxx
```

Display unit out of work. Fault in the display unit EEPROM ("site specific data"). Download the data again or change the EEPROM and download the data again.

`FAULT: Double addresses techn. no.: xxxxxx`

Two (or more) units, connected to a BS4 loop (1584 board), have been given the same address. Check the units.

`FAULT: Earth fault (plus), CU xx`

`FAULT: Earth fault (minus), CU xx`

Earth fault is detected. Check all cables (for damage, etc.). The function of the control unit can not be guaranteed. Call for service personnel/engineer.

`FAULT: Earth fault, output unit xxxxxx`

Check all cables connected to the output unit.

`FAULT: External FBP x, board x, CU xx`

The control unit can not communicate with the ext. FBP (or data converter).

- Check the connections.
- Check the cable (break?).
- Check address DIL-switch in the ext. FBP. Is correct address set?
- Several ext. FBPs have the same address.
- Faulty ext. FBP.

`FAULT: External fuses, control unit xx`

The fault is to be found in the external power supply (blown fuses, etc.).

`FAULT: External power supply, CU xx`

The fault is to be found in the external power supply connected to input in control unit xx.

`FAULT: Fuse, 1580 8 zones board x, CU xx`

(DET8=1580, 8 zones expansion board)

Check for blown fuse on the 1580 board.

`FAULT: Fuse, 1582 FBP board x, CU xx`
(External Fire Brigade Panel interface board 1582)
Check for blown fuses on the 1582 board.

`FAULT: Fuse, 1584 Autron. board x, CU xx`
(Autronica interface board, BS4)
Blown fuse on the 1584 board. The fuse is not replaceable. The board has to be replaced.

`FAULT: Fuse on COM-loop x, CU xx`
The fuse is not replaceable. The main board 1556 has to be replaced.

`FAULT: Fuse, output unit techn no xxxxxx`
Fuse F9 (on the output unit p.c.b.) is blown.

`FAULT: High Current loop x, 1584 x CU xx`
(Autronica interface board, BS4)
The current consumption is >60 mA on the BS4 loop.

`FAULT: High Voltage, 1584 board x, CU xx`
(Autronica interface board, BS4)
The BS4 loop voltage is >16V (normally it is 14V ±0.1V).

`FAULT: ID fault display unit xxxxxx`
The display unit is not the same type as programmed. Change the programming **or** the unit.

`FAULT: Interlocking input AAA/PP`
An interlocking input is not activated within the time set for fault activation (5-255 seconds). The time is counted from the activation of the output (in the interlocking combination, area / point).

`FAULT: Key cabinet, control unit xx`

The key cabinet has been opened without a prior fire alarm (i.e. if somebody has opened the key cabinet illegally).

or

The key cabinet has not been closed within 5 minutes after reset of all fire alarms in the system.

`FAULT: L-C mixed COM-loop x, CU xx`

The two wires L (SA) and C (SB) have been mixed (alternated). Check so that the wire connections are correct according to drawing 512-41.

`FAULT: LON-board 1590, control unit xx`

(TLON connection board, 1590)

No communication / connection with the TLON network. The board has to be changed.

`FAULT: Loop unit technical number xxxxxx`

The communication with the unit is all right, i.e. the unit is out of order / faulty.

`FAULT: Low battery capacity, CU xx`

Battery voltage < 21.9 V (when a load resistor is connected). The battery is presumably too old.

`FAULT: Low main PWS, control unit xx`

- Mains voltage below 187 V AC. Blown fuse (230 V AC) or no voltage.
- Rectifier voltage below 21 V DC. Fuse F1 on the charger board 1557 is blown.

`FAULT: Low voltage, control unit xx`

System voltage < 21 V DC.

`FAULT: Mains, control unit xx`

- Loss of mains, i.e. no 230 V AC (the fault is activated after

1-300 minutes).[45]

- Blown fuse (230 V AC).

`FAULT: Mains, ext. power supply, CU xx`

Loss of mains, i.e. no 230 V AC to the ext. power supply equipment (the fault is activated after 1-300 minutes).[45] Check 230 V AC fuses.

`FAULT: Mains, output unit xxxxxx`

Loss of mains, i.e. no 230 V AC (the fault is activated after 1-300 minutes).[45] Check 230 V AC fuses and fuses F1 / F5 on the output unit rectifier p.c.b.

`FAULT: No reply techn.no. xxxxxx`

In spite of the control unit is communicating in both directions, one or more units can not be found.

- Check the unit's address. (DIL-switch in some unit or with programming tool 3314 in some units).
- Faulty unit.
- Double break on the COM / BS4 loop. (Note! Single break gives the fault message: FAULT: Cut-off …….).

`FAULT: Output unit techn. no. xxxxxx`

- Fault in the output unit RAM
- Fault in the output unit EPROM
- Fault in the output unit EEPROM ("site specific data")

Replace the output unit / output unit p.c.b.

`FAULT: Read/write site data (SSW), CU xx`

Some external influence has caused a fault in the SSW (data that is changed during operation, i.e. sensor values, access codes, etc.). This is very serious. Call for service personnel/engineer immediately.

`FAULT: Restart CU nn code xx  yyyyyyyyyy`

Control unit restart (reset) has occurred.

---

[45] The time is programmable in Win512. Max. 30 min. according to the EN54-2 standard. Default value depending convention.

nn: Control unit number (00-29)
xx=00: Power On Reset. (Power supply connected)
xx=01: Watchdog Reset.
xx=02: Accidental jump to reset vector.
xx=03: External reset caused by external watchdog/user (e.g. after SSD download) or RESET jumper JP4 on the main board 1556, has been used.
xx=4-19: Unexpected interrupt.
xx=20: SW monitoring fault
If xx=01,02 or 04-20 appear often, call for service personnel/ engineer.
yy – y = memory address (before restart)

`FAULT: Sensor techn. no. xxxxxx`

- The sensor is removed from its sensor base.
- Faulty sensor.
- Analog detector types 33xx (in NORMAL mode): The built-in self verification function has reported a fault status.

`FAULT: Short-circuit COM-loop x, CU xx`

Short circuit on COM loop "x" (**short circuit isolator is not connected on the loop**). Check the loop
NOTE! As long as there is a short circuit, the COM loop is disabled. Each 10th minute is an attempt made to re-enable the loop again.

`FAULT:Sh-circ input x,1580 board x,CU xx`

(8 zones expansion board, `DET8`)

This is indicating a short-circuit on input x (zone line) on the 1580 board. The wires (cable) may have been damaged.
NOTE! As long as there is a short circuit, the zone is disabled. Each 60th second is an attempt made to re-enable the zone again.

`FAULT: Short circ. loop x, BS4 x, CU xx`

(1584 Autronica interface board, BS4)

Short circuit, or current consumption >167mA, on the BS4 loop (**short circuit isolator is not connected on the loop**). Check the loop
NOTE! As long as there is a short circuit, the BS4 loop is disabled. Each 10th minute is an attempt made to re-enable the loop again.

`FAULT:Sh-circ loop x, CU xx, CU <->ASF0`

```
FAULT:Sh-circ loop x, CU xx,ASF0<->ASF1
FAULT:Sh-circ loop x, CU xx,ASF1<->ASF2
FAULT:Sh-circ loop x, CU xx,ASF2<->ASF3
FAULT:Sh-circ loop x, CU xx,ASF3<->ASF4
FAULT:Sh-circ loop x, CU xx,ASF4<->ASF5
FAULT:Sh-circ loop x, CU xx,ASF5<->ASF6
FAULT:Sh-circ loop x, CU xx,ASF6<->ASF7
FAULT:Sh-circ. loop x, CU xx, ASF7<->CU
FAULT:Sh-circ. loop x, CU xx, ASF6<->CU
FAULT:Sh-circ. loop x, CU xx, ASF5<->CU
FAULT:Sh-circ. loop x, CU xx, ASF4<->CU
FAULT:Sh-circ. loop x, CU xx, ASF3<->CU
FAULT:Sh-circ. loop x, CU xx, ASF2<->CU
FAULT:Sh-circ. loop x, CU xx, ASF1<->CU
FAULT:Sh-circ. loop x, CU xx, ASF0<->CU
```

Short circuit on the COM loop "x" (**one or more short circuit isolators 2370, ASF, are connected on the loop**). Check the specified and isolated segment on the loop (e.g. `CU <->ASF0` = between the control unit and short circuit isolator number 0). Each 10th minute is an attempt made to re-enable the isolated segment again.

```
FAULT: Site specific data (SSD), CU xx
```

Some external influence (or after download) has caused a checksum fault in the (from *Win512*) downloaded Site Specific Data (SSD). (An SSD download is required.). This is very serious. Call for service personnel/engineer immediately.

```
FAULT: Supervised output x, CU xx
```

If the output is programmed for sounders (alarm devices), it is also indicated by LED "**Fault / Disablements** Alarm devices" (L13).

x=0 (S0): Short circuit/break on the connected cable/ equipment and/or blown fuse F5 or F6, on the connection board.
x=1 (S1): Short circuit/break on the connected cable/ equipment and/or blown fuse F7 or F8, on the connection board.
x=2 (S2): Short circuit/break on the connected cable/ equipment
x=3 (S3): Short circuit/break on the connected cable/ equipment

- Connected equipment may be "stolen".
- Resistor(s) missing or not correct value (see dwg. 512-42).

`FAULT: Superv. output x tech.no. xxxxxx`

If the output is programmed for sounders (alarm devices), it is also indicated by LED "**Fault / Disablements** Alarm devices" (L13).

- Check fuses F1–F8 on the output unit p.c.b.
- Short circuit / break on the connected wires.
- Wrong / no end of line resistor.
- One or more connected units have been removed (stolen).

`FAULT: Wire to exting. system, CU xx`

Short circuit / cut-off on the wires from the 1583 German Fire Brigade interface board, in control unit No. xx, to the connected extinguishing system / equipment.

`FAULT: Wrong type of unit tech no xxxxxx`

The unit is not the same type as programmed. Change the programming **or** the unit.

`FAULT: Zone line input, tech no xxxxxx`

Detector mounted in an ADB 2330: faulty / removed detector

or

Ext. line (input) to an ADB 2330: break on a wire or wrong / no end-of-line resistor

or

Zone interface 2335 / 2226 (input): break on a wire or wrong / no end of line resistor.

or

Zone interface 2226: No ext. power supply.

or

Multi purpose I/O unit 3361, monitored zone line (input Z): break on a wire or wrong / no end-of-line capacitor / short circuit (if not programmed for fire alarm at short circuit).

`(User programmable text; External fault)`

Programmable input is used for an external fault; see fault message.

16.2 Fault acknowledge

The LEDs "Fault tx activated" (L11) and "General fault" (L7) are turned ON.
(LEDs "**Fault / Disablements** Alarm devices" (L13), "System fault" (L14) and/or "**Fault / Disablements** Fire brigade tx" (L15) may be turned ON as well.

Output(s) for routing equipment (Fault tx) is (are) activated.

Output(s) for general fault / general charge fault is (are) activated.

A fault message, date and time are shown in the control unit(s) display.

After the time may be shown `"More faults"` = more than one fault is generated in the system..

If **Fault latching** is selected in Win512, after the time may be shown `"Serviced"` = the fault is already corrected.

- Login, according to chapter "Access", page 68.
- Use menu H6 (access level 2) for fault acknowledge, see chapter "Acknowledge FAULTS (H6)", page 109.
- All faults have to be individually acknowledged one by one (push button "Fault acknowledge" (P6). Use ↑ or ↓ keys to scroll.
- If a fault has been corrected before it has been acknowledged, the text `"Serviced"` is added after the time. It still has to be acknowledged.
- When a fault is corrected and acknowledged, it will disappear from the list (H6).
- When **all** faults have been acknowledged, the LED "Fault tx activated" (L11) will be turned off and output(s) for routing equipment (Fault tx) is (are) reset.
- As long as there are faults (not acknowledged faults and/or acknowledged but not corrected faults) the LED "General fault" (L7) will be lit and general fault / general charge fault output(s) are activated.

The list in menu H6, shows a maximum of 200 faults (not acknowledged faults and/or acknowledged but not corrected faults). When a fault is acknowledged and corrected it will be removed from the list and a new fault can be shown. Corrected faults are shown in the event log (menu H4/U7).

17 Commissioning an installation

Before you connect the power supply to a control unit, all other cable connections shall be made. Check once more that they are correct.

17.1 Single Control Unit

1. Take away the rectifier fuse (F1) and a battery fuse (F2 or F3) on the charger board 1557.
2. Connect the batteries to the charger board 1557.
3. Connect the rectifier to the mains (230 V AC).
4. Replace the rectifier fuse (F1) and the battery fuse (F2 or F3) on the charger board 1557.
5. LED "Operation" (L6) indicate that the 24 V DC power supply (rectifier and/or battery) is okay.
6. An automatic reset/restart will now take place (see chapter "Reset / Restart", page 65.
7. The site specific data (SSD) can now be downloaded, see chapter "Programming (SSD download)", page 59.

17.2 Control Units in a TLON network

In a TLON network there are two or more control units connected. A **TLON connection board 1590** is required in each control unit connected to the network. When the 1590 board is on place and the cables connected[46], **for each control unit**, do as follows:

1. Take away the rectifier fuse (F1) and a battery fuse (F2 or F3) on the charger board 1557.
2. Connect the batteries to the charger board 1557.
3. Connect the rectifier to the mains (230 V AC).
4. Replace the rectifier fuse (F1) and the battery fuse (F2 or F3) on the charger board 1557.
5. LED "Operation" (L6) indicate that the 24 V DC power supply (rectifier and/or battery) is okay.
6. An automatic reset/restart will now take place (see chapter "Reset / Restart", page 65.

---

[46] The TLON connection board is to be mounted on the main board 1556. Cable connections are to be made on the connection board 1555 (T.B. P1).

When all control units are running (power supplied)[47], the TLON network programming (configuration) has to be done **before** the site specific data (SSD) can be downloaded, see chapter "Programming (SSD download)", page 59.

17.2.1 TLON network programming (configuration)

A PC is connected to the modular connector J2 in the control unit (main board 1556). The PC program **TLON Manager** is used, see separate TLON network documentation.[47]

---

[47] If one or more of the control units are to be started-up later, do as follow:
- Do all the programming for the whole project (system) in TLON Manager.
- Do all the Win512 programming of SSD for the whole system (all control units). Wait to do the download the SSD until the TLON Network programming is ready for the control unit respectively.
- Start-up the wanted control units according to chapter "Control Units in a TLON network", page 57 (i.e. power on and TLON Network programming of the control unit respectively).
- Since not all control units are started-up in the project (system), "FAULT: CU xx has no contact with CU xx" will be shown for the "missing" control units.
- Later, when one or more control units are stated-up, do also "Update all" and "Save all" in TLON Manager.

18 Programming (SSD download)

The PC program **Win512** is used for programming of the site specific data (SSD) and to download it into the EBL512 control unit(s).

When the control units is running (power supplied) and when required, the TLON network programming (configuration) is done, the SSD download can start.

The PC has to be connected to the "D" connector J1 in the control unit (main board 1556). Start Win512. Now you have to be authorised, i.e. you have to log on[48] to the control unit.

In Win512 (menu "Tools" | "Download"), you select the control unit(s) to which the SSD is be downloaded.[49]

18.1 Check All Loop Units

In the Win512 COM loop icon pop-up menu can "Check All Loop Units" be selected. This function can be used after (or before) the download of SSD. The function is as follows:
The control unit will find all units that are connected on the COM loop. The addresses (0-127) will be reported to Win512. For all 33xx units and some of the other units, the type of unit will also be reported. All differences compared to the Win512 SSD will be listed in the Win512 log view and can be saved and/or printed out.
NOTE! During this check the COM loop will be disconnected (disabled) and no alarms or faults can be activated. Disconnected COM loop is indicated by the LED "Disablements" (L8).

18.2 Single Control Unit

Start the downloading from Win512. A text message will be shown in the alphanumeric display in the control unit:

```
Download in progress......
Block nnnn out of xxxx
```

When the download is completed the following text message will be shown:

```
Download completed successfully.
Control unit will now restart
```

---

[48] Access code for level 5 shall be entered via the PC (Win512).

[49] It is recommended to select only one control unit at a time but of course, it is depending on the SSD quantity (i.e. the number of COM loop units, texts, outputs, etc.). Up to three control units are normally okay. NOTE! After the automatic reset/restart of a control unit, a number of faults might be generated. This will cause "heavy traffic" on the network, which might affect the SSD download to other control units.

Now, an automatic reset/restart will take place (see chapter "Reset / Restart", page 65.

If the download was not okey the following text message will be shown:

```
Checksum fault in downloaded data.
Control unit will now restart
```

Now, an automatic reset/restart will take place (see chapter "Reset / Restart", page 65. After the normal text message, another text message will be shown in the display:

```
FAULT: Site specific data (SSD), CU nn
Date: MM-DD   Time: HH:MM
```

This text message means that no SSD have been downloaded and that a new download has to be performed.

18.3 Control Units in a TLON network

The SSD for all control units can be downloaded via one control unit. Start the download from Win512. The download will now be performed to the control units, one at a time, according to the chapter "Single Control Unit" above.[50]

When the download to a control unit is completed, an automatic reset/restart will take place in that control unit (see chapter "Reset / Restart", page 65.

18.4 User definable text messages download

When a fire alarm is activated (e.g. an addressable alarm point), the presentation number (Zone & Address) will be shown on the first row in the control units' and the ext. FBPs' alphanumeric display. On the second row will be shown a user definable text message if programmed.

Each alarm point can have a unique text message. When several alarms are activated (in one or more zones) only the zone numbers are shown and each zone can have a unique text message.

Each zone line input can have a unique text message.

The user definable text messages will also be printed out when a printer is available.

See also chapter "Fire alarm", page 34.

---

[50] Downloading is performed in a consecutive order, i.e. 0-1-2-3-4-…….-29 (amongst the selected control units) **but** the control unit where the PC is connected will automatically be the last one to get the SSD downloaded.

Unique user definable text messages for each alarm point and each zone line input can also be shown in Display units connected on the COM loops.

All user definable text messages, up to 40 alphanumeric characters each, are created and downloaded via **Win512**. See Planning Instructions, chapter "User definable text messages".

(An "older" DOS based PC program NEWTEXT can also be used, see Planning Instructions, chapter "Display units (addressable)".

See also Win512 help.

18.4.1 Download in Control unit

The user definable text messages, which are to be displayed in the control units' / ext. FBPs' alphanumeric display, can be downloaded in one control unit (for the whole the system).[51] The user definable text messages are downloaded together with the SSD.

A specific addressable alarm point will have the same user definable text message in all control units / ext FBPs.
If a specific addressable alarm point has no individual text, a "default" alarm text can be displayed. This default text can be different in the different control units.

18.4.2 Download in Display unit

The user definable text messages, which are to be displayed in the Display units connected on the COM loops, are to be downloaded in each Display unit individually.

A specific addressable alarm point can have different user definable text message in the different Display units.
If a specific addressable alarm point has no individual text, a "default" alarm text can be displayed. This default text can be different in the different Display units.

---

[51] An ext. FBP will display the same text that is displayed in the control unit it is connected to.

19 New system program (SW) version download

SW download is normally factory made before delivery. Latest SW version is then downloaded.

Due to continual development and improvement, different SW versions can be found.

The valid SW version can be read in menu H3.

19.1 A single control unit (c.i.e.)

A single c.i.e. must not have a TLON connection board 1590 mounted.[52]

If you wish to download a new software (system program) version, a PC and **Win512** are used. Before download, the PC has to be connected to the "D" connector J1 in the control unit main board 1556 in question.

1. Start Win512. In the "Tools" menu open the "Download software" dialog box and do the required settings, e.g. the path for the SW (.BIN) file and/or the language (.SST) file[53]. Do not forget to mark the checkbox respectively.
2. Set the c.i.e. in "Bootstrap mode", i.e. set jumper "JP1 (BOOT)" in position on the main board 1556.
3. Do a reset/restart, i.e. set jumper "JP4 (RESET)" in position momentarily (approx. 1 second).
4. The buzzer will now sound intermittent and LED "LD101" starts blinking[54], indicating that the control unit is in "Bootstrap mode".
5. Start the downloading (click "Download"). The buzzer will now be silenced and LED "LD101" is turned on (continuously).
6. During the download of the SW and/or text file, some information will be shown in the Win512 log view and when the download is ready, "Downloading completed successfully." will be shown for the SW and text file respectively. Close the dialog box.

---

[52] When a c.i.e. has a TLON connection board 1590 mounted, it is expected to be one c.i.e. in a TLON network and TLON network programming is required.

[53] Normally only download of the new SW file is required. If, after the download and restart, a message is displayed that a new text (language) file also is required, download it as well.

[54] Also the LED "System fault" (L14) starts blinking.

7. Open the Tools" menu and open the "EBL512 settings" dialog box. See "3" & "4" above. Click "Read". In the log view will be shown: "System information has been uploaded". Check the settings, change when required. See "3" & "4" above. Click "Download". In the log view will be shown: "System information has been downloaded". Close the dialog box.
8. Remove jumper "JP1 (BOOT)". Do a reset/restart, see "3" above. Regarding the reset/restart, see chapter "Reset / Restart", page 65.

Follow the same procedure in each control unit.

19.2 Control Units in a TLON network

All control units connected to a TLON network **shall** have the same SW version.

For download of new SW in each control unit, follow the procedure described above.

Since some control units do not have contact with some control units during the downloading, the following faults may be generated:

"FAULT: CU xx has no contact with CU xx"

"FAULT: CU xx has wrong information"

The faults have to be acknowledged.

20 EBL512 settings download

EBL512 settings are normally factory made before delivery. It is however, possible to download the following on site:

- The number of addresses (max. loop units)[55]
- Serial number (normally not changed)
- Date (normally not changed)
- Adhesive type (Type 1 = "old", Type 2 = "new"; acc. to EN54)

If you wish to download new EBL512 settings, a PC and **Win512** are used. Before download, the PC has to be connected to the "D" connector J1 in the control unit main board 1556 in question.

1. Start Win512. In the "Tools" menu open the "EBL512 settings" dialog box.
2. Set the c.i.e. in "Bootstrap mode", i.e. set jumper "JP1 (BOOT)" in position on the main board 1556.
3. Do a reset/restart, i.e. set jumper "JP4 (RESET)" in position momentarily (approx. 1 second).
4. The buzzer will now sound intermittent and LED "LD101" starts blinking[54], indicating that the control unit is in "Bootstrap mode".
5. In the "Win512 settings" dialog box, click "Read". The buzzer will be silenced, the actual settings shown and in the Win512 log view will be shown: "System information has been uploaded."
6. Write the new settings in the fields respectively.
7. Do like 3 & 4 above. Click "Download". The buzzer will be silenced and a "Win512" box will be displayed. Click "OK". NOTE! If "Max. loop units" are changed, a "Please enter your password" dialog box will be shown. [55]
8. When the download is ready, in the Win512 log view it will be shown: " System information has been downloaded".
9. Read, see 3, 4 & 5 above, to verify the new settings.
10. Remove jumper "JP1 (BOOT)". Do a reset/restart, see 3 above. Regarding the reset/restart, see chapter "Reset / Restart", page 65.

Follow the same procedure in each control unit.

20.1 Control Units in a TLON network

All control units connected to a TLON network have the same convention (via the SSD download) but the number of addresses (max. loop units) and the language can vary if required.

---

[55] To change the "Max. loop units", a separate download password is required. This password is in conjunction with a "Key" (eight digits) and is available from the producer if you are authorized. The Key is shown in Win512 and the procedure is described in the Win512 help.

21 Reset / Restart

FFD = Fire alarms, faults and disablements.
SSW = Sensor week average values, access codes, supervised output calibration values, log buffers and in some conventions the alarm counter.
SSD = Site specific data, i.e. all the installation programming downloaded from Win512.
SSI = EBL512 settings downloaded from Win512.
SW = Software, i.e. the control unit system program.

Safe shut down of control unit (menu H8/S5) will save the SSW data in a Flash ROM, which saves the data although the control unit has no power supply. Before the first "Safe shut down" this memory is empty. After each "Safe shut down" the latest SSW data is saved.
The control unit RAM (working memory) will then read the saved data when the power supply returns.
Reset/restart[56] will reset/delete all FFD, i.e. activated fire alarms, faults and disablements. When required, make notes of the disablements before reset/restart, so that they can be disabled again after the reset/restart. Remaining fire alarms and faults will be activated again.

Reset/restart can be performed as follows:

Action	**Data, etc. which will be deleted**	**Data, etc. which <u>not</u> will be deleted**
Control unit **power OFF** [57] and then **power ON** again.	SSW[57] FFD	SSD, SSI, SW
RESET jumper JP4 on the main board 1556.	FFD	SSD, SSI, SW, SSW
Reset command from Win512 or TLON Manager	FFD	SSD, SSI, SW, SSW
Automatically due to <u>external disturbance</u>.[58]	FFD	SSD, SSI, SW, SSW
Automatically after <u>download of site specific data (SSD)</u> via a PC & Win512.	FFD	SSD, SSI, SW, SSW

---

[56] Reset/restart affects the control unit where it is performed and <u>that</u> control unit's data in a system.

[57] See "Safe shut down of control unit" above.

[58] If this happens often, call for service personnel / engineer.

By reset/restart, the following will happen:

The Fault tx output(s) will be "activated".

The "restart" begins and will last for up to 2 minutes. During this 2 minutes period, no fire alarm can be activated and the following text messages will be show in the alphanumeric display:

```
Checking program memory......
```

And after that (if everything is all right, else see Memory fault below):

```
Booting......
```

A **fault** is now generated in the system and the following text message will be shown in the display:

```
FAULT: Restart CU nn code xx  yyyyyyyyyy
Date: MM-DD   Time: HH:MM
```

Regarding code xx and yy - y, see page 52. This fault is also indicated by LEDs "Fault tx activated" (L11) and "General fault" (L7).

After fault acknowledge (menu H6), the LEDs will be turned OFF if there are no other faults.

After reset, a synchronization of the control units starts automatically. See also chapter "Synchronize the control units (H8/S8)", page 121.

After reset, required disablements have to be done.

Memory fault
In case of a fault in the SW (system program) the following text message will be shown in the display:

```
Memory fault in program area: xxx
```

This is also indicated by LED "System fault" (L14) and the buzzer (sounds steady). The Fault tx output is activated.
A new download of SW (system program) is required.

NOTE!

After **download of SSD** (see chapter "Programming (SSD download)", page 59), the following message might be shown in the display:

```
Checksum fault in downloaded data.
Control unit will now restart
```

After the reset/restart (see above) and the text message:

```
FAULT: Restart CU nn code xx  yyyyyyyyyy
Date: MM-DD   Time: HH:MM   Serviced
```

another text message will be shown in the display:

```
FAULT: Site specific data (SSD), CU nn
Date: MM-DD   Time: HH:MM
```

This text message means that no SSD have been downloaded and that a new download has to be performed.

21.1 Boot menu

NOTE! Only authorised personnel shall use the Boot menu!

The Boot menu is opened as follows:

Perform a reset / restart:

- Power off / power on
  or
- Jumper JP4 on the main board

The following text messages will be show in the alphanumeric display:

```
Checking program memory......
```

And after that:

```
Booting......
```

When the text "Booting……" appears, press **"Access"** and 0.1 sec. later also press **"1"** and the Boot menu will be shown:

```
1:Reset, 2:Clear mem, 4:Read AD, 5:MSClo
ck, 6:Checksum, 7:Cursor, 8:Texts
```

Press **"1"** to perform a reset / restart (i.e. you will also leave the Boot menu).
Press **"2"** to open the Clear memory menu, see below.
The other alternatives are for R & D use only!!

The Clear memory menu:

```
1 = SSD, 2 = SSW, 3 = SysInfo, 4 = Echel
oninfo, 5 = Texts
```

Press **"1"** to clear the SSD memory.[59]
Press **"2"** to clear the SSW memory.
The other alternatives are for R & D use only!!

"Erasing SSD" and "Erasing SSW" respectively will be shown and then will the Clear memory menu be shown again.

Press **"Return"** go back to the Boot menu.

NOTE! After clearing the SSW, perform a "Power off / power on" reset / restart directly.

---

[59] Can also be done in Win512, EBL512 settings dialog box, "Clear SSD".

22 Access

To be able to use the key pad in the control unit (to get access to the menu tree), it is necessary to login with an access code for level 2 ,3 or 4.

See also chapter "Access levels", page 21.

Open the door in the control unit (= level 1), press the "Access" button (P8) and continue as follows:

Action	Text in display	Comments
"Access"	`Access code: _`	
Enter the code (4 digits)	`Access code: ****`	The digits are replaced (****) in the display.
	`NO ACCESS!`	The access code was not correct. Try again.

	`Perform monthly test`
	`ACCEPT? H1`
		The access code was correct. This is menu H1. Press "A" to accept (to perform monthly test) **or** scroll to the following menus (H2-H10).

Explanations:

Action (in the table) = use push button / key (e.g. signed "Access"). **Text in display** (in the table) = what is shown in the alphanumeric display in the control unit (c.i.e.).

Use "↑" and "↓" to scroll between the main menus H1-H10. Use "A" to accept.

Some main menus have sub menus. Use "↑" and "↓" to scroll between the sub menus (e.g. B1-B9). Use "A" to accept.

If, instead of a menu identification (e.g. B1), the letter L is shown, it means that it is a List. Use "↑" and "↓" to scroll in the list.

Use "←" and "→" to move the cursor in a menu.

Use "Return" to return from a sub menu to the main menu (H1-H10).

Use "Return" to log off from a main menu (H1-H10).

There will be an automatic log off 10 minutes after the last action (i.e. if the key pad / a push button is not being used for 10 min.).

23 Perform monthly test (H1)

The control unit and the installation shall be tested on a regular basis. If one twelfth of the alarm points are tested each month, the whole installation will be tested after one year.
In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test.

If a real fire alarm is activated, for example by **an alarm point not in test mode**, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (sounders) activated, routing equipment (fire brigade tx) activated, etc.

See also chapter "Alphanumeric display in the control unit", page 20.

NOTE! If the control unit door is left open, the output(s) for routing equipment (fire brigade tx) may be disabled (if set so in Win512).

There will be an automatic ending of the test mode one hour after the latest tested alarm point / zone.
See also chapter "Perform ZONE TEST (test mode) (H7)″, page 110.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

	`Perform monthly test`
	`ACCEPT? H1`	

"A"	`Check that all LEDs light up!`
	`ACCEPT`	

"A"	▒▒ ▒▒	The buzzer (in the C.U.) sounds and all dots in the display are shown for 3 seconds. When printer is available, it will print out: ABCDE............Z abcde............z

	`Zone to be set in TEST MODE:`
	`??? ??? ??? ???   Start test:  ACCEPT`
		NOTE! In DBI (Danish) convention, only one zone.

Write zone numbers (e.g. 001, 002, 003, 004)	`Zone to be set in TEST MODE:`
	`001 002 003 004   Start test:  ACCEPT`
		Press "A" to start the test mode.

"A"	`Zones are set in test mode`
	`wait....`
		LED "Test mode" (L9) will light up.

	Zone in TEST MODE: 001 002 003 004 End test: ACCEPT	Perform the tests.

The zone(s) will stay in test mode until the test mode is ended but after 10 minutes or if you press "Return" two times you will be logged out from menu H1.

Perform the test as quickly as possible, since the output(s) for routing equipment (fire brigade tx) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled).

In the tested alarm point, the LED will light up, and the LEDs "Fire" (L1) in the C.U. will light up, about ten seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM).

A sensor in test mode will not be able to activate fault.

After 10 minutes **or** "Return" "Return"	Zones in test mode: 001, 002, 003, 004 NOTE! See chapter "Alphanumeric display in the control unit", page 20 regarding priority order.	You are no longer in menu H1 but still in test mode.
(When required: "Access", "code") "A"	Zone in TEST MODE: 001 002 003 004 End test: ACCEPT	Press "A" to end the test mode.
"A"	Test of routing equipment? 0 (1 = Yes, 0 = No) ACCEPT	The LED "Test mode" is turned OFF.

Some national regulations say that the routing equipment shall also be routine tested. Press "A" for no test and press "1" and "A" to start such a test. The following will happen (in the system):

- The "Fault tx" output[60] will be activated[61], indicated by the LED "Fault tx activated".
- After 30 seconds, the "Fire brigade tx" output[60] will also be activated, indicated by the LED "Fire brigade tx".
- After 60 seconds, the test will be stopped and the outputs and LED indications will return to "normal" status.

"1", "A"	Test of routing equipment in progress. nn seconds left.	"nn" starts at 60 and will count down to 00.
	Monthly test is completed! ACCEPT	
"A"	Perform monthly test ACCEPT? H1	Scroll or press "Return" to log off.

NOTE! During the test, the following information will be shown in all other c.i.e. displays:
Zones in test mode: 001, 002, 003, 004

(In DBI (Danish) convention, only one zone.)

---

[60] This is also valid for corresponding programmable outputs.

[61] NOTE! This output is activated in normal state, i.e. it will be de-activated.

24 Disable or re-enable (H2)

A whole zone, one or more alarm points within a zone and/or control outputs can be disabled via menus H2/B1-B3. This possibility can be used when a temporary disablement is wanted (e.g. craftsmen working in the premises, etc.).

The function **Enhanced disablement** is enabled as default i.e. disabled alarm points will not activate Pre-warning, fire alarm or fault.

If this function is not enabled (via Win512), fault can be activated but not pre-warning or fire alarm. (This is a violation to the EN54-2 standard.

Addressable manual call points can be disabled (but shall normally not be disabled). However, when a whole zone is disabled, the addressable manual call points will not be disabled for safety reasons.

Up to 512 whole zones can be disabled via menu H2/B1.
Up to 200 alarm points (zones / address) can be **individually** disabled via menu H2/B2 and/or COM / BS4 loops, zone interface inputs and/or MIO inputs can be disabled via menu H8/S2. (Alarm points disabled via time channels are not limited and must not be counted!)
Up to 200 outputs can be **individually** disabled via menu H2/B3. Disabled output will stay in (or return to) the normal condition for the output respectively. (Control OFF via menu H2/B8 and Alarm devices OFF via menu H2/B9 are not limited and must not be counted!)
Up to 200 Interlocking outputs can be **individually** disabled via menu H9/C4. (All interlocking outputs disabled via "000/00" are not limited and must not be counted!)

It is not possible to exceed the limits. A warning message will be shown:

```
Max. disablements reached!
Disablement not performed.   ACCEPT?
```

Don't forget to re-enable (via menus H2/B4-B6, B8 or B9, H8/S3, H9/C5 or use automatic re-enablement for zones and alarm points.
Disablements are indicated by LED "Disablements" (L8) and are also shown in the display [62]. An example:

```
Zone 001 is disabled
                                More...
```

More… is indicating two or more disablements.

Disablements (and faults) are indicated by a 2-sec. beep when an open control unit door is being closed.

---

[62] NOTE! See chapter "Alphanumeric display in the control unit", page 20 regarding priority order.

24.1 Disable zone (H2/B1)

When a whole zone is disabled, all alarm points within the zone are disabled exept the addressable manual call points.

Disabled zones are listed in menu H4/U1 from which it is also possible to get a print-out.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
"A"	Disable zone: 000 ACCEPT?	
Write zone number (e.g. 001)	Disable zone: 001 ACCEPT?	Press "A" to accept.
"A"	Automatic re-enabling:0 (0=No,1=Yes) Time: HH:MM ACCEPT? *(Default is current time + 3 hours)*	Press "1" for aut. re-enabling and accept or change the time (max. 24 hours). Press "A" to accept. LED "Disablements" (L8) will light up.
"A"	Disable zone: 000 ACCEPT?	If more disablements shall be done, continue like above. If not, press "Return" to menu B1. Scroll or press "Return" to menu H2. Scroll or press "Return" to log off.

24.2 Disable zone / address (H2/B2)

Addressable alarm points (also addressable manual call points), connected to the COM loop, can be individually disabled.

Disabled alarm points, zone / addresses, are listed in menu H4/U1 from which it is also possible to get a print-out.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H2.	`Disable or re-enable`
	`ACCEPT? H2`	

"A"	`Disable zone`
	`ACCEPT? B1`	

Scroll to menu B2.	`Disable zone / address`
	`ACCEPT? B2`	

"A"	`Disable zone: 000 Address: 00`
	`ACCEPT?`	

Write zone number and address (e.g. 001 / 01)	`Disable zone: 001 Address: 01`
	`ACCEPT?`
		Press "A" to accept.

"A"	`Automatic re-enabling:0 (0=No,1=Yes)`
	`Time: HH:MM ACCEPT?`
	(Default is current time + 3 hours)
		Press "1" for aut. re-enabling and accept or change the time (max. 24 hours). Press "A" to accept. LED "Disablements" (L8) will light up.

"A"	`Disable zone: 000 Address: 00`
	`ACCEPT?`
		If more disablements shall be done, continue like above. If not, press "Return" to menu B2. Scroll or press "Return" to menu H2. Scroll or press "Return" to log off.

24.3 Disable control output (H2/B3)

Control outputs can be individually disabled. Disabled output will stay in (or return to) the normal condition for the output respectively.

Disabled outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H2.	`Disable or re-enable`
	`ACCEPT? H2`	

"A"	`Disable zone`
	`ACCEPT? B1`	

Scroll to menu B3.	`Disable control output`
	`ACCEPT? B3`	

"A"	`Disable output control unit: 00 Type: 0`
	`0=Loopunit 1=S 2=R 3=RE 4=ES  ACCEPT?`
	(4=ES not valid in Swedish (SBF) convention)
		Write C.U. No. and press:
		"0"=RU4 (2265) or SU4 (2262 / 2263) or MIO (3361)
		"1"=S0-S3
		"2"=R0-R1
		"3"=Relay board 1581
		"4"=1583 board output "Extinguishing system".
		Press "A" to accept.

"A"
Depending on the chosen type, 0, 1, 2, 3 resp. 4, the following will be shown:
	`Disable 00 0000 control output 0`
	`ACCEPT?`
	`Disable S0`
	`ACCEPT?`
	`Disable R0`
	`ACCEPT?`
	`Disable relay board 0 output 0`
	`ACCEPT?`
	`Disable output for extinguishing system`
	`on 1583 board, CU 00          ACCEPT?`
		Write the data.
		Press "A" to accept.
		LED "Disablements" (L8) will light up.

"A"	`Disable output control unit: 00 Type: 0`
	`0=Loopunit 1=S 2=R 3=RE 4=ES  ACCEPT?`
		If more disablements shall be done, continue like above. If not, press "Return" to menu B3. Scroll or press "Return" to menu H2. Scroll or press "Return" to log off.

24.4 Re-enable zone (H2/B4)

Disabled zones are listed in menu H4/U1 from which it is also possible to get a print-out.

Re-enabling via this menu, has higher priority than automatic re-enabling.

When all zones have been re-enabled, The LED "Disablements" (L8) will be turned OFF, if there are no other disablements in the system.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H2.	`Disable or re-enable`
	`ACCEPT? H2`	

"A"	`Disable zone`
	`ACCEPT? B1`	

Scroll to menu B4.	`Re-enable zone`
	`ACCEPT? B4`	

"A"	`Re-enable zone: 000`
	`ACCEPT?  L`
		If there are no zones to re-enable, menu B4 will be shown again.
		L=a list in which you can scroll.
		If it's the correct zone to re-enable, press "A" to accept. If not, scroll or write the wanted zone and press "A" to accept.

"A"	`Re-enable zone`
	`ACCEPT? B4`
		If more re-enablements shall be done, continue like above. If not, scroll or press "Return" to menu H2. Scroll or press "Return" to log off.

24.5 Re-enable zone / address (H2/B5)

Disabled alarm points, zone / addresses, are listed in menu H4/U1 from which it is also possible to get a print-out.

Re-enabling via this menu, has higher priority than automatic re-enabling.

When all alarm points have been re-enabled, The LED "Disablements" (L8) will be turned OFF, if there are no other disablements in the system.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H2:	`Disable or re-enable`
	`ACCEPT? H2`	

"A"	`Disable zone`
	`ACCEPT? B1`	

Scroll to menu B5.	`Re-enable zone / address`
	`ACCEPT? B5`	

"A"	`Re-enable zone: 000 Address: 00`
	`ACCEPT?  L`
		If there are no zone / addresses to re-enable, menu B4 will be shown again.
		L=a list in which you can scroll.
		If it's the correct zone / address to re-enable, press "A" to accept. If not, scroll or write the wanted zone / address and press "A" to accept.

"A"	`Re-enable zone / address`
	`ACCEPT? B5`
		If more re-enablements shall be done, continue like above. If not, scroll or press "Return" to menu H2. Scroll or press "Return" to log off.

24.6 Re-enable control output (H2/B6)

Disabled outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

When all control outputs have been re-enabled, The LED "Disablements" (L8) will be turned OFF, if there are no other disablements in the system.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H2.	`Disable or re-enable`
	`ACCEPT? H2`	

"A"	`Disable zone`
	`ACCEPT? B1`	

Scroll to menu B6.	`Re-enable control output`
	`ACCEPT? B6`	

"A"	`Re-enable control output type: 0`
	`0=Loopunit 1=S 2=R 3=RE 4=ES  ACCEPT?`
	(4=ES not valid in Swedish (SBF) convention)
		Press:
		"0"=RU4 (2265) or SU4 (2262 / 2263) or MIO (3361)
		"1"=S0-S3
		"2"=R0-R1
		"3"=Relay board 1581
		"4"=1583 board output "Extinguishing system".
		Press "A" to accept.

"A"
Depending on the chosen type, 0, 1, 2, 3 resp. 4, the following will be shown:
	`Re-enable 00 0000 output 0`
	`ACCEPT?  L`
	`Re-enable control unit 00 S0`
	`ACCEPT?  L`
	`Re-enable control unit 00 R0`
	`ACCEPT?  L`
	`Re-enable control unit 00 relay board 0`
	`output 0  ACCEPT?  L`
	`Re-enable output for extinguishing`
	`system on 1583 board, CU 00  ACCEPT?  L`
		If there are no outputs to re-enable, menu B6 will be shown again.
		L=a list in which you can scroll.
		If it's the correct output to re-enable, press "A" to accept. If not, scroll or write the wanted output and press "A" to accept.

"A"	`Re-enable control output type: 0`
	`0=Loopunit 1=S 2=R 3=RE 4=ES  ACCEPT?`
		If more re-enablements shall be done, continue like above. If not, press "Return" to menu B6. Scroll or press "Return" to menu H2. Scroll or press "Return" to log off.

24.7 Re-enable non-reset zone / address (H2/B7)

See chapter "Single encapsulated reset (Zone/Detector not reset)", page 42.

LED "Disablements" (L8) **blinking** is indicating that one or more alarm points have been "encapsulated" and have to be re-enabled before they can generate a fire alarm again.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H2:	`Disable or re-enable`
	`ACCEPT? H2`	

"A"	`Disable zone`
	`ACCEPT? B1`	

Scroll to menu B7.	`Re-enable non-reset zone / address`
	`ACCEPT? B7`	

"A"	`Zone/address 000/00 non-reset`
	`Re-enable: push ACCEPT?  L`
		If there are no zone / addresses to re-enable, menu B7 will be shown again.
		L=a list in which you can scroll.
		If it's the correct zone / address to re-enable, press "A" to accept. If not, scroll or write the wanted zone / address and press "A" to accept.

"A"	`Re-enable non-reset zone / address`
	`ACCEPT? B7`
		If more re-enablements shall be done, continue like above. If not, scroll or press "Return" to menu H2. Scroll or press "Return" to log off.

24.8 Control on / Control off (H2/B8)

Outputs programmed as type 0 = control (general), type 1 = fire ventilation and/or type 2 = extinguishing system [63] can be disabled all at the same time. **Control off** means that even if the control expression (trigger condition) for the output respectively is fulfilled, the outputs will not be activated.
Control off is indicated by LED "Disablements" (L8) and is shown in menu H4/U1.

The outputs will be off, until re-enabled again (via this menu).

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H2.	`Disable or re-enable`
	`ACCEPT? H2`	

"A"	`Disable zone`
	`ACCEPT? B1`	

Scroll to menu B8.	`Control on / Control off`
	`ACCEPT? B8`	

"A"	`Control off (=0) or control on (=1)? 1`
	`ACCEPT?`
		Press "1" or "0" and press "A" to accept.

"A"	`Control on / Control off`
	`ACCEPT? B8`
		Scroll or press "Return" to menu H2. Scroll or press "Return" to log off.

---

[63] Also the "Extinguish equipment output" on the German FBP interface board 1583.

24.9 Alarm devices on / Alarm devices off (H2/B9)

Outputs programmed as type 3 = alarm device (sounder) can be disabled all at the same time. **Alarm devices off** means that even if the control condition (expression) for resp. output is fulfilled, the outputs will not be activated.
Alarm devices off is indicated by LED **Fault / Disablements** "Alarm devices" (L13) and LED "Disablements" (L8) and is also shown in menu H4/U1.

The outputs will be off, until re-enabled again (via this menu).

NOTE! This function is **not** the same as push button "Silence alarm devices" (P3), see chapter ""Silence Alarm devices"", page 25. This function has higher priority than "Silence alarm devices".

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H2.	`Disable or re-enable`
	`ACCEPT? H2`	

"A"	`Disable zone`
	`ACCEPT? B1`	

Scroll to menu B9:	`Alarm devices on / Alarm devices off`
	`ACCEPT? B9`	

"A"	`Alarm devices off(=0) or`
	`alarm devices on(=1)? 1 ACCEPT?`
		Press "1" or "0" and press "A" to accept.

"A"	`Alarm devices on / Alarm devices off`
	`ACCEPT? B9`
		Scroll or press "Return" to menu H2. Scroll or press "Return" to log off.

25 Set calendar and clock (H3)

The RTC component has a built-in battery. Normally, date, day of the week and time don't have to be set, except when the control unit is powered for the first time but if required, the clock may be corrected, so that the "time stamps" for fire alarms, faults, etc. will be correct.
In this menu is also the SW (system program) version shown.

NOTE! If you don't want to change anything (e.g. if you only want to see the SW version)**, press "Return"** (instead of "A") **to return to menu H3.**

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H3.	`Set calendar and clock`
	`ACCEPT? H3`	

"A"	`Date: YY-MM-DD  Time: hh:mm:ss`
	`Weekday:W (1=M, 7=S)    VER:vvvvvvvvvvvv`
		Here is the SW version shown (e.g. VER: 2.0).
		The time shown, is the time when "A" was pressed (in menu H3). Change the date, time and/or weekday. The "clock" starts again from the date, time, etc. shown in the display.
		NOTE! Press "Return" instead of "A" if no changes are to be done.

"A" **or**
"Return"
	`Set calendar and clock`
	`ACCEPT? H3`
		Scroll or press "Return" to log off.

26 Present system status on display and printer (H4)

A printer is factory mounted in control unit 1549. Printer 1558 is an option for control unit 1548.

26.1 Disablement (H4/U1)

A list of all disablements in the system. From this menu, it is also possible to get a print-out.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H4.	`Present system status on display and`
	`printer ACCEPT? H4`	

"A"	`Disablement`
	`Printout: (1=yes) U1`
		Press "1" for an automatic print-out of all disablements in the system.
		Press "A" for presentation in the display.

"A"
or
"1"
	When "A" is pressed, the disablements will be shown in the display. Some examples:
	`Zone XXX address XX disabled`
	A) `L`
	`or`
	`Zone XXX is disabled`
	A) `L`
	`or`
	`Alarm points are disabled by`
	`time channel in CU XX` B)
		L = a list in which you can scroll. If there are no disablements and if "Return" is pressed, menu U1 will be shown again.

	`Printing started. To stop printing press`
	`C and 0 simultaneously ACCEPT?`
		Press "A" and menu U1 will be shown again.

"Return"
or
"A"
	`Disablement`
	`Printout: (1=yes) U1`
		Scroll or press "Return" to menu H4. Scroll or press "Return" to log off.

A) On this row can also be shown adding information, e.g.:

- Automatic re-enablement HH:MM
- (by open door)

B) Disablements by time channel(s) are listed in menu H4/U2.

26.2 Disablement by time channel (H4/U2)

A list of all disablements by time channel(s) in the system. From this menu, it is also possible to get a print-out.

Note! Other disablements are listed in menu H4/U1.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H4.	`Present system status on display and`
	`printer                      ACCEPT? H4`	

"A"	`Disablement`
	`              Printout: (1=yes)       U1`	

Scroll to menu U2.	`Disablement by time channel`
	`              Printout: (1=yes)       U2`
		Press "1" for an automatic print-out of all disablements in the system.
		Press "A" for presentation in the display.

"A"
or
	When "A" is pressed, the disablements will be shown in the display, e.g:
	`Zone XXX address XX disabled`
	`(by time channel)                       L`
		L = a list in which you can scroll. If there are no disablements and if "Return" is pressed, menu U2 will be shown again.

"1"	`Printing started. To stop printing press`
	`C and 0 simultaneously       ACCEPT?`
		Press "A" and menu U2 will be shown again.

"Return"	`Disablement by time channel`
	`              Printout: (1=yes)       U2`
		Scroll or press "Return" to menu H4. Scroll or press "Return" to log off.

When scrolling in the list the message "No more zone/addresses disabled by time channel found in the system" can be shown.

26.3 Doors open (H4/U3)

The LED "Door open" (L10) is lit, to indicate that one or more doors are open. See chapter "Door open", page 29.
This menu is a list of all open doors and it is also possible to get a print-out.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H4.	`Present system status on display and`
	`printer ACCEPT? H4`	

"A"	`Disablement`
	`Printout: (1=yes) U1`	

Scroll to menu U3.	`Doors open`
	`Printout: (1=yes) U3`
		Press "1" for an automatic print-out of all "open doors".
		Press "A" for presentation in the display.

"A"
or
	When "A" is pressed, "open doors" will be shown in the display. Two examples:
	`Door open CU 00`
	`L`
	`or`
	`Door open FBP x board x CU xx`
	`L`
		L = a list in which you can scroll. If there are no "open doors" and if "Return" is pressed, menu U3 will be shown again.

"1"	`Printing started. To stop printing press`
	`C and 0 simultaneously ACCEPT?`
		Press "A" and menu U3 will be shown again.

"Return"	`Doors open`
	`Printout: (1=yes) U3`
		Scroll or press "Return" to menu H4. Scroll or press "Return" to log off.

26.4 Activated 2-zone/address dependent zone/address (H4/U4)

(**"Two unit dependent"** in Win512): When only one **zone** or one **zone / address** (alarm point) is in alarm status[64], the LEDs "Fire" (L1) are blinking (0.8 / 0.8 sec.), the buzzer (in the c.i.e.) sounds (0.8 / 4 sec.) and there is a **Co-incidence alarm** presentation in the c.i.e. display.

The unit(s) or zone(s) in Co-incidence alarm status is (are) shown in this menu, from which it is also possible to get a print-out.

Action	Text in display	Comments

	`Co-incidence alarm detector ZZZ/AA`
	`User definable text message (if progr.)`
	`or`
	`Co-incidence alarm zone ZZZ`
	`User definable text message (if progr.)`
		One alarm point or zone has activated a Co-incidence alarm.
		ZZZ = zone number
		AA = address

"Access"		According to chapter "Access", see page 68.

Scroll to menu H4.	`Present system status on display and`
	`printer                      ACCEPT? H4`	

"A"	`Disablement`
	`Printout: (1=yes)      U1`	

Scroll to menu U4.	`Activated 2-zone/address dependent`
	`zone/address  Printout: (1=yes)      U4`
		Press "1" for an automatic print-out.
		Press "A" for presentation in the display.

"A"
or
	When "A" is pressed, the active zone & address (or zone) will be shown in the display, e.g:
	`Co-incidence alarm detector ZZZ/AA`
	`L`
	`or`
	`Co-incidence alarm zone ZZZ`
	`L`
		This is a list in which you can scroll. If there are no "alarms" and if "Return" is pressed, menu U4 will be shown again.

"1"	`Printing started. To stop printing press`
	`C and 0 simultaneously       ACCEPT?`
		Press "A" and menu U4 will be shown again.

"Return"	`Activated 2-zone/address dependent`
	`zone/address  Printout: (1=yes)      U4`
		Scroll or press "Return" to menu H4. Scroll or press "Return" to log off.

---

[64] When two or more **zones** or **units** (zone / addresses), dependent on each other, are in alarm status at the same time, normal fire alarm will be activated in the system.

26.5 Sensor values (H4/U5)

The very first week average sensor value is calculated within 2 minutes after SSD download & restart. During these 2 minutes can no fire alarm be activated and the sensor value "000" will be shown.
The "Performance factor" and "Min. / Max." values are updated each night (00:00), i.e. the values shown are from the previous day.

Regarding the "British Standard Marine Application" convention, see chapter "Algorithm setting via menu H4/U5", page 89.

	Text in display	Comments
"Access"		According to chapter "Access", see page 68.
Scroll to menu H4.	Present system status on display and printer ACCEPT? H4	
"A"	Disablement Printout: (1=yes) U1	
Scroll to menu U5.	Sensor values Printout: (1=yes) U5	Press "A" (or "1") to accept.

Here follows the **alternative "A"** (= no printout). The alternative "1" (= printout) follows below.

"A"		Start Sensor : 000000	Write the sensor's techn. number and/or press "A" to accept.
E.g: "000001" Depending on the type, the following will be shown:	"A"	*Type 3304:* Sensor: 000001 Momentary: XX.X%/m Weekly: XX.X%/m	This is a list in which you can scroll or use "→" to see the next information window for the selected sensor. Press "Return" to the Start Sensor. Scroll or write a new techn. number or press "Return" to menu U5. NOTE! XX.X%/m = XX.X % obscuration per meter". XXX = sensor value. Perf. Factor: see below this table. nnnnnn = algorithm short name, see separate table, page 87.
	"→"	Sensor: 000001 Min: XX.X%/m Perf Factor: X.XX%/m Max: XX.X%/m	
	"→"	Sensor: 000001 Current algorithm: nnnnnn	
	"A"	*Type 23xx (22xx) & AUT:* Sensor: 000002 Momentary: XXX Weekly: XXX	
	"A"	*Type 3308:* Sensor: 000003 Min: XX°C Momentary: XX°C Max: XX°C	
	"→"	Sensor: 000003 Current algorithm: nnnnnn	
	"A"	*Type 3316:* Sensor: 00000N Momentary: XX.X%/m Weekly: XX.X%/m	
	"→"	Sensor: 00000N Min: XX.X%/m Perf Factor: X.XX%/m Max: XX.X%/m	

	"→"	Sensor: 00000N Current algorithm: nnnnnn	
	"→"	Sensor: 00000N Min: XX°C Momentary: XX°C Max: XX°C	
	"→"	Sensor: 00000N Current algorithm: nnnnnn	
"Return"		Start Sensor : 000000	Write the sensor's techn. number and/or press "A" to accept or press "Return" to menu U5.
"Return"		Sensor values Printout: (1=yes) U5	Scroll or press "Return" to menu H4. Scroll or press "Return" to log off.

When scrolling the message "Please Wait….." might be shown for " a second" and "No more sensors found in the system" (before lowest and after highest possible technical number in the system.

Here follows the **alternative "1"** (printout).

Scroll to menu U5.	Sensor values Printout: (1=yes) U5	Press "1" to accept.
"1"	Start Sensor : 000000 End Sensor :	Write the techn. numbers and/or press "A" to accept.
"A"	Printing started. To stop printing press C and 0 simultaneously ACCEPT?	Press "A" and menu U5 will be shown again.
"A"	Start Sensor : 000000	Write the sensor's techn. number and/or press "A" to accept or press "Return" to menu U5.
"Return"	Sensor values Printout: (1=yes) U5	Scroll or press "Return" to menu H4. Scroll or press "Return" to log off.

Perf. Factor = Performance factor:

Low (min. 0) = The detector is mounted in a "stable" environment.

High (max. 2.55) = The detector is mounted in an "unstable" environment.

See also Planning Instructions, chapter "Performance factor".

Table showing the algorithms and the shortenings respectively:

Algorithm	**Short name (nnnnnn)**[65]
Normal sensitivity & Normal detection (15 s)	N-15
High sensitivity & Normal detection (15 s)	H-15
Low sensitivity & Normal detection (15 s)	L-15[66]
Normal sensitivity & Slow detection (35 s)	N-35[66]
High sensitivity & Slow detection (35 s)	H-35[66]
Low sensitivity & Slow detection (35 s)	L-35[66]
Heat algorithm, Class A1	A1
Heat algorithm, Class A2 (S)	A2
Heat algorithm, Class B (S)	B
Decision algorithm	Dec[67]

Default is N-15 and A1 respectively.

26.5.1 Reset of a week average sensor value

If a sensor (analog smoke detector) is replaced without having generated SERVICE signal, its week average sensor value has to be set to the default value otherwise the new / clean sensor will inherit the old sensor's value. It is possible to clear the week average sensor value for each sensor individually, see chapter "Clear weekly average (H8/S5)", page 117. See also chapter "Acknowledge SERVICE signal (H8/S4)", page 116.

NOTE! Authorised service personnel only, must do the reset to default value. Used incorrectly it can cause nuisance fire alarms.

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[65] If some other short name is wanted, it can be changed in Win512. Up to six characters can be used. In the DBI (Danish) convention, up to five characters.

[66] Low sensitivity and/or slow detection (35 s) might not fulfil the EN54-7 specifications.

[67] Analog multi detector 3316 only.

26.5.2 Algorithm setting via menu H4/U5

NOTE! Algorithm setting via menu H4/U5 is only valid for the "British Standard Marine Application" convention.

The alarm algorithm can be set (changed) via menu H4/U5 for the following detectors:

3304 in NORMAL mode
3308 / 3309 in NORMAL mode
3316 in NORMAL mode (the "Decision algorithm" is not possible to use)

No alternative algorithm can be used.

No values (offset, level, etc.) can be set via menu H4/U5 (i.e. these values have to be set via Win512).

The "Short name" (set in Win512) can be ≤ **5** characters.

When scrolling the message "Please Wait….." might be shown for " a second" and "No more sensors found in the system" (before lowest and after highest possible technical number in the system.

NOTE! If an algorithm is set (changed) via menu H4/U5, the site specific data (SSD) in the c.i.e. is not equal to the SSD file downloaded from Win512, i.e. a back up is required to update the SSD file (xxxxxx.512).

If an algorithm is set (changed) via menu H4/U5, the information in menu H5/A4 will be changed from "Downloaded: xxxx" to "Modified by CU: xxxx".

Follow the instructions for 3304, 3308 / 3309 and 3316 respectively:

Show sensor values and setting alarm algorithm for the Analog photo electric detector 3304:

	Text in display	Comments
"Access"		According to chapter "Access", see page 68.
Scroll to menu H4.	Present system status on display and printer ACCEPT? H4	
"A"	Disablement Printout: (1=yes) U1	
Scroll to menu U5.	Sensor values Printout: (1=yes) U5	To make a printout, press "1", else press "A" to accept.
"A"	Enter technical number: 000000	Write the sensor's techn. number and/or press "A" to accept.
"A"	Sensor: 000001 Momentary: XX.X%/m Weekly: XX.X%/m	This is a list in which you can scroll or use "→" to see the next information window for the selected sensor. Press "Return" to Enter technical number.
"→"	Sensor: 000001 Min: XX.X%/m Perf Factor: X.XX%/m Max: XX.X%/m	NOTE! **XX.X%/m** = XX.X % obscuration per meter". **Perf Factor**: see below this table.
"→"	Sensor: 000001 Current algorithm: N-15	N-15 = short name, see separate table, page 87. Press "Return" to Enter technical number or press "Access" to change the algorithm.
"Access"	Access code: _	If login was made with code for level 3, no code is needed.
Enter code for level 3 (4 digits)	Access code: ****	The digits are replaced (****) in the display
	Change algorithm: (000001 Current N-15) L-15 L-35 N-15 N-35 H-15 H-35	Use "→" or "←".
"→"	Change algorithm: (000001 Current N-15) L-15 L-35 N-15 N-35 H-15 H-35	

"A"	Algorithm for sensor 000001 is changed from N-15 to N-35	
"Return"	Enter technical number: 000000	Write the sensor's techn. number and/or press "A" to accept or press "Return" to carry out the change of algorithm(s).
"Return"	Alarm algorithms have been changed. The affected CU:s will now restart. ACCEPT?	
"A"	Sensor values Printout: (1=yes) U5	Menu U5 will be shown for a few seconds and then the affected control unit(s) will restart.
See chapter "Reset / Restart", page 65.		

NOTE!
The new algorithm will not be in use until after the restart.
In case of an automatic log off (and one or more algorithms are changed), the affected control unit(s) will restart.

Perf. Factor = Performance factor:

Low (min. 0) = The detector is mounted in a "stable" environment.

High (max. 2.55) = The detector is mounted in an "unstable" environment.

See also Planning Instructions, chapter "Performance factor".

Sensor values and setting alarm algorithm for the Analog heat detector 3308 / 3309:

	Text in display	Comments
"Access"		According to chapter "Access", see page 68.
Scroll to menu H4.	Present system status on display and printer ACCEPT? H4	
"A"	Disablement Printout: (1=yes) U1	
Scroll to menu U5.	Sensor values Printout: (1=yes) U5	To make a printout, press "1", else press "A" to accept.
"A"	Enter technical number: 000000	Write the sensor's techn. number and/or press "A" to accept.
"A"	Sensor: 000003 Min: XX°C Momentary: XX°C Max: XX°C	This is a list in which you can scroll or use "→" to see the next information window for the selected sensor. Press "Return" to Enter technical number.
"→"	Sensor: 000003 Current algorithm: A1	A1 = short name, see separate table, page 87. Press "Return" to Enter technical number or press "Access" to change the algorithm.
"Access"	Access code: _	If login was made with code for level 3, no code is needed.
Enter code for level 3 (4 digits)	Access code: ****	The digits are replaced (****) in the display
	Change algorithm: (000003 Current A1) A1 A2 B	Use "→" or "←".
"→" "→"	Change algorithm: (000003 Current A1) A1 A2 B	
"A"	Algorithm for sensor 000003 is changed from A1 to B	

"Return"	Enter technical number: 000000	Write the sensor's techn. number and/or press "A" to accept or press "Return" to carry out the change of algorithm(s).
"Return"	Alarm algorithms have been changed. The affected CU:s will now restart. ACCEPT?	
"A"	Sensor values Printout: (1=yes) U5	Menu U5 will be shown for a few seconds and then the affected control unit(s) will restart.
See chapter "Reset / Restart", page 65.		

NOTE!
The new algorithm will not be in use until after the restart.
In case of an automatic log off (and one or more algorithms are changed), the affected control unit(s) will restart.

Sensor values and setting alarm algorithm for the Analog multi detector 3316:

The procedure is similar to the procedure for 3304 and 3308 respectively. When using "→", the smoke detector information will be shown before the heat detector information.

The algorithms can only be changed one at a time, i.e. if both algorithms are to be changed, start with the smoke detector algorithm and continue with the heat detector algorithm as follows:

If a smoke detector algorithm shall be changed, do as for 3304.

If a heat detector algorithm shall be changed, use "→" to pass the smoke detector windows. Then do as for 3308.

26.6 Sensors activating SERVICE signal (H4/U6)

Service signal is indicated by LED "Service" (L12). The sensor week average value is below or over the service level respectively for one or more sensors. (Regarding the service signal levels, see Planning Instructions, chapter "Service signal".

Menu H4/U6 is a list of the sensor(s) activating service signal.

NOTE! Service signal is only an information that the sensors have to be cleaned / replaced soon. The service signal has to be acknowledged, see chapter "Acknowledge SERVICE signal (H8/S4)", page 116.

It is not possible to get a print-out from menu H4/U6.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.
Scroll to menu H4.	Present system status on display and printer ACCEPT? H4	
"A"	Disablement Printout: (1=yes) U1	
Scroll to menu U6.	Sensors activating SERVICE signal U6	Press "A" to accept.
"A"	Sensor : xxxxxx needs service L	L = a list in which you can scroll. Press "Return" to menu U6. (If there are no sensors in the list, menu U6 will be shown again.).
"Return"	Sensors activating SERVICE signal U6	Scroll or press "Return" to menu H4. Scroll or press "Return" to log off.

26.7 Event log (H4/U7)

This is a list of events. Type and number of events in the list, etc. can be set in Win512 (see Planning Instructions and Win512 help).

From this menu, it is possible to get a print-out.

The events can be listed:
Via display: See Alternative "A" below.
Via a print-out: See Alternative "1" below.

NOTE! The event logging is disabled as long as menu H4/U7 is open.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.
Scroll to menu H4.	Present system status on display and printer ACCEPT? H4	
"A"	Disablement Printout: (1=yes) U1	
Scroll to menu U7.	Event log Printout: (1=yes) U7	Press "A" for display presentation **or** Press "1" for print-out.
Alternative "A"	*When "A" is pressed, an event will be shown in the display, e.g:* FIRE ALARM zone 123 address 45 MM-DD HH:MM XX or FIRE ALARM zone 456 Many alarms in zone A) MM-DD HH:MM XX	The most recent event will be shown, i.e. use "↑" to scroll upwards in the list. Press "Return" to menu U7. (XX in the example = control unit number. XX=99=Win512).
Alternative "1"	How many events should be printed? 000 ACCEPT?	
Write number of events to be printed, e.g. "010"	How many events should be printed? 010 ACCEPT?	Press "A" to start print-out.
"A"	Printing started. To stop printing press C and 0 simultaneously. ACCEPT?	
"A"	Show event log Printout: (1=yes) U7	Scroll or press "Return" to menu H4. Scroll or press "Return" to log off.

A) More than one alarm point in zone 456 have activated fire alarm.

26.8 Configuration (H4/U8)

In a control unit the menu H4/U8 can be used to see the following settings (made in Win512, "Tools" menu) for that specific control unit:

Number of addresses that can be used, i.e. xxx = 128, 256 or 512 (set in "EBL512 settings" dialog box).

Language The language for texts presented in the alphanumeric display / print-outs. Language file (nnnn.SST) to be downloaded is selected (in "Download software…" dialog box)

Convention Different countries have different conventions, i.e. country specific functions, etc. Convention is set (changed) in Win512, menu Tools | Settings…("Win512 Settings" dialog box).[68]

It is not possible to get a print-out from this menu.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H4.	`Present system status on display and`
	`printer                     ACCEPT? H4`	

"A"	`Disablement`
	`Printout: (1=yes)       U1`	

Scroll to menu U8.	`Show configuration`
	`U8`
		Press "A" to accept.

"A"	`Max number of allowed loop units xxx`
	`Language:nnnnnnnnnn Conv.:cccccccccc`
		Press "Return" to menu U8.

"Return"	`Show configuration`
	`U8`
		Scroll or press "Return" to menu H4. Scroll or press "Return" to log off.

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[68] To set (change) the convention in Win512, Level 2 has to be selected and a password is required.

27 Service (H5)

When commissioning an installation and by maintenance (power on and programming a control unit / a system), menu H5 is used to get certain information and help.

Only authorised personnel have access to level 4 menus. Access code for level 4 is required.

Via a PC[69] and Win512 (+ access code for level 5) you can:

- download / backup site specific data (SSD)
- download of SW / settings / configurations / C.U. & system data
- create and download the user definable text messages shown in the alphanumeric display in the C.U. / ext. FBP and in the Display units.

Via a PC[70] and TLON Manager you can do the TLON network programming / configuration.

TLON Manager is used for programming of network data / addresses / etc.

NEWTEXT (a DOS based "older" program) can be used to create / download the user definable text messages shown in the Display units connected to the COM loops.

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[69] Connected to the "D" connector J1 on the main board 1556.

[70] Connected to the modular connector J2 on the main board 1556.

27.1 Access code for service (H5)

Access code to level 4 is required.

If login to level 2 was made with code for level 4, no code is required here.

Action	Text in display	Comments
"Access"		According to chapter "Access", page 68

	`Perform monthly test`
	`ACCEPT? H1`	

Scroll to menu H5	`Service`
	`ACCEPT? H5`	

"A"	`Access code: _`	If login was made with code for level 4, no code is needed.
Enter code for level 4 (4 digits)	`Access code: ****`	The digits are replaced (****) in the display
	`NO ACCESS!`	The access code was not correct. Try again.

	`Calibration of supervised outputs`
	`ACCEPT? A1`
		The access code was correct. This is menu H5/A1. Press "A" to accept, scroll or press return to menu H5.

27.2 Calibration of supervised outputs (H5/A1)

The voltage outputs (S0-S3) in each control unit are supervised (monitored), as well as the outputs (0-3) in each output unit type 2262 and 2263.
When all alarm devices (sounders, etc.) have been connected, including required resistors and when the SSD download is ready, a calibration has to be done.

NOTE!
Each output's logic is programmable via Win512, i.e. normally low (default) or normally high (24V). During the calibration, the outputs have to be low, i.e. a normally high output will be low during the calibration (a few seconds).

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.

	`Calibration of supervised outputs`
	`ACCEPT? A1`	

"A"	`Calibration in progress`
	`Please wait......`	

	`Calibration of supervised outputs`
	`ACCEPT? A1`
		Calibration is ready. Scroll or press "Return" to H5. Scroll or press "Return" to log off.

27.3 Sensitive fault detection mode (H5/A2)

To increase the possibilities to detect faults during the commissioning, it is possible to use the "Sensitive fault detection mode. (The time delay for each fault will be reduced).

NOTE! Don't forget to turn off this mode after the commissioning.

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.

Scroll to menu A2	`Sensitive fault detection mode`
	`ACCEPT? A2`	

"A"	`Sensitive fault detection mode: 0`
	`(0 = off, 1 = on)`
		Press "A" or "1" and "A" to accept. ON is indicated by LED "Fault tx activated" (L11) and the "Fault" output for routing equipment. This mode is ON until turned OFF in this menu (A2).

"A"
or
"1", "A"
	`Sensitive fault detection mode`
	`ACCEPT? A2`
		Scroll or press "Return" to H5. Scroll or press "Return" to log off.

27.4 Direction for communication on COM-/BS4-loop (H5/A3)

The communication direction is normally automatically changed every minute, to ensure that the wires are okay all the way. To make trouble shooting easier (e.g. during the commissioning) it is possible to lock the communication on a COM or BS4[71] loop in one direction. **`FAULT: No reply techn. no. xxxxxx`** will be generated with a reduced delay time. This function can be used to list all techn. numbers "after" a loop cut-off.

NOTE! Loop cut-off and short-circuit faults can not be generated, since they require communication in both directions at the same time. The locking only works as long as you see the text:
`COM-loop is currently communicating in A-direction`
(alternatively **`B-direction`**) in menu A3.
When you log out or if you are automatically logged out (after 10 min.), the communication will start in the A-direction.

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.

Scroll to menu A3	`Direction for communication on`
	`COM-/BS4-loop ACCEPT? A3`	

"A"	`Select type of loop: 0 (0=COM, 1=BS4)`
	`ACCEPT?`
		Press "A" or "1" and "A" to accept.

"A"
or
"1", "A"
	`Lock COM-loop: 0 (0-3)`
	`Control unit: 00 ACCEPT?`
	`Lock direction on BS4-loop: 0,`
	`Board: 0, Control unit: 00 ACCEPT?`
		Write loop number (board number) and control unit number. Press "A" to accept.

"A"	`COM-loop is currently communicating in`
	`A-direction`
	See **NOTE!** above.
	*(When you select a **BS4** loop, the text in this menu will still be **COM** loop).*
		(Maybe the B-direction is shown instead.).
		Press "A" to change direction. Press "Return" to finish the locking (and return to menu A3).

"Return"	`Direction for communication on`
	`COM-/BS4-loop ACCEPT? A3`
		Scroll or press "Return" to H5. Scroll or press "Return" to log off.

---

[71] An Autronica interface board 1584 is required in the control unit.

27.5 Show information about Site Specific Data (H5/A4)

Information regarding the current site specific data (SSD) is shown. New SSD can be downloaded via a PC and Win512.

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.

Scroll to menu A4	`Show information about`
	`site specific data ACCEPT? A4`	

"A"	`Name: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx`[72]
	`Downloaded: YY-MM-DD hh:mm ACCEPT?`
	(see NOTE! below)
		YY=year, MM=month, DD=day.
		hh=hour, mm=minute

"A"	`Show information about`
	`site specific data ACCEPT? A4`
		Scroll or press "Return" to H5. Scroll or press "Return" to log off.

If there is no SSD downloaded to the control unit the following text message will be shown:

"No SSD downloaded".

NOTE! In the "British Standard Marine Application" convention it is possible to change the alarm algorithm for some type of analog detectors, see chapter "Algorithm setting via menu H4/U5", page 89.

If one or more alarm algorithms are changed, the following information will be shown instead of the information shown above:

"A"	`Name: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx`
	`Modified by CU: YY-MM-DD hh:mm ACCEPT?`
		YY=year, MM=month, DD=day.
		hh=hour, mm=minute

If an algorithm is set (changed) via menu H4/U5, the site specific data (SSD) in the c.i.e. is not equal to the SSD file downloaded from Win512, i.e. a back up is required to update the SSD file (xxxxxx.512).

"`Modified by CU`" will be changed back to "`Downloaded`" after the next SSD download and the alarm algorithms will be according to that SSD.

---

[72] "Logical Name" as written in Win512 dialog box "System Properties", tab "System Data".

27.6 Display current consumption in unit (H5/A5)

Control unit shows the total current consumption (including the charging current at 24V) for the whole control unit (c.i.e.).

Charging shows the charging current only.

NOTE! Control unit current >3800 mA is presented as >3800 mA.
Charging current <100 mA can not be correctly presented.

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.

Scroll to menu A5	`Display current consumption in unit`
	`ACCEPT? A5`	

"A"	`From which control unit shall current`
	`consumption be displayed: 00  ACCEPT?`
		Write control unit number. Press "A" to accept.

"A"	`Wait......`	
	`No reply from control unit.....`	If the control unit don't exist or don't answer, this message will be shown.

	`Current consumption control unit 00`
	`Control unit:  xxxx mA Charging: xxxx mA`	

"A"	`Display current consumption in unit`
	`ACCEPT? A5`
		Scroll or press "Return" to H5. Scroll or press "Return" to log off.

27.7 Display current consumption COM-/BS4-loop (H5/A6)

The current consumption (an average value) for each COM loop and BS4 loop[73] can be displayed.

NOTE! No, or very small current consumption, can not be presented correctly / precisely.

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.
Scroll to menu A6	Display current consumption on COM-/BS4-loop ACCEPT? A6	
"A"	Select type of loop: 0 (0=COM, 1=BS4) ACCEPT?	Select type of loop. Press "A" to accept.
"A" or "1", "A"	Display current consumption on COM-loop: 0, CU: 00 ACCEPT?	Write loop number, (board number; 0-3) and control unit number. Press "A" to accept.
	Display current consumption on BS4- loop: 0, board: 0, CU: 00 ACCEPT?	
"A"	Wait......	
	No reply from control unit.....	If the control unit don't exist or don't answer, this message will be shown.
	Current consumption on COM-loop: 0 control unit: 00 is xxxx mA	The current consumption accuracy is ±5 mA.
	Current consumption on BS4-loop: 0, board: 0, control unit: 00 is xxx mA	
"Return"	Display current consumption on COM-/BS4-loop ACCEPT? A6	Scroll or press "Return" to H5. Scroll or press "Return" to log off.

---

[73] An Autronica interface board 1584 is required in the control unit.

27.8 Display statistics for COM-loop (H5/A7)

The statistics can be used during commissioning, service, etc.

Pollings are the number of pollings ("questions") sent out by the control unit to the units connected on the COM loop.
Parity are the received number of parity faults and % (faults in relation to pollings).
Bit are the received number of bit faults and % (faults in relation to pollings).
Answer are the received number of answer faults / no answers and % (faults in relation to pollings).

All values are set to "0" after reset / restart and/or after re-connection of COM loop (menu H8/S3).

The Parity, Bit and Answer values shall normally be "0" or as close to "0" as possible. If not, there are some communication problems that have to be investigated. Check the COM loop, connections and the loop units.

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.

Scroll to menu A7	`Display statistics for COM-loop`
	`ACCEPT? A7`	

"A"	`For which CU 00 and COM-loop 0 shall`
	`statistics be displayed?      ACCEPT?`
		Write control unit and loop number. Press "A" to accept.

"A"	`Wait......`	
	`No reply from control unit.....`	If the control unit don't exist or don't answer, this message will be shown.

	`Pollings 1234567   Parity 000000 00.0%`
	`Bit 000000 00.0%   Answer 000000 00.0%`
		[74]
		Press "A" to menu A7.

"A"	`Display statistics for COM-loop`
	`ACCEPT? A7`
		Scroll or press "Return" to H5. Scroll or press "Return" to log off.

---

[74] Note! The values are not live updated. To see the actual values, press "A" to menu A7, press "A" and write control unit and loop number again and press "A". Normally is only the Pollings value changed.

27.9 Select unit on COM-loop to use for trigging (H5/A8)

This function is used by service engineer and by R&D for troubleshooting.
On the pin respectively you will get a pulse to trig an oscilloscope etc.

COM loop

Main board 1556, JP2, "upper" pin: Each unit not giving a correct answer.
Main board 1556, JP2, "lower" pin: A specific unit is being polled.

BS4 loop

Autronica interface board 1584 (in the c.i.e.), BY3, "left" pin: A specific unit is being polled.
Autronica interface board 1584, BY3, "right" pin: 0 V.

(BS4 board = Autronica interface board 1584)

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.

Scroll to menu A8	`Select unit on COM-/BS4-loop to use for`
	`trigging                    ACCEPT? A8`	

"A"	`Select type of loop: 0 (0=COM, 1=BS4)`
	`ACCEPT?`
		Select type of loop. Press "A" to accept.

"A"
or
"1", "A"
	`CU: 00 Loop: 0 Address: 000`
	`ACCEPT?`
	`CU 00, BS4-Board 0, Loop: 0, Address: 00`
	`ACCEPT?`
		Write control unit number, (board number; 0-3), loop number and address. Press "A" to accept.

"A"	`Select type of loop: 0 (0=COM, 1=BS4)`
	`ACCEPT?`
		Select type of loop. Press "A" to accept or press "Return" to menu A8..

"Return"	`Select unit on COM-/BS4-loop to use for`
	`trigging                    ACCEPT? A8`
		Scroll or press "Return" to H5. Scroll or press "Return" to log off.

27.10 Change access code for PC-communication (H5/A9)

As a protection against unauthorised personnel programming the system (via Win512), an access code (level 5) for PC-connection is required. For security reasons, the default code should be changed.

NOTE! This code require eight (8) digits.

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.

Scroll to menu A9	`Change access code for PC-communication`
	`ACCEPT? A9`	

"A"	`Access code: _`
	`New code: ******** Verify: ********`
		The digits are replaced (********) in the display.

	`Incorrect access code, NO change`	The code was not correct. Try again.

	`Change access code for PC-communication`
	`ACCEPT? A9`
		The code was correct and is now changed to the new code. Scroll or press "Return" to H5. Scroll or press "Return" to log off.

27.11 Change access code for service (H5/A10)

For security reasons, the default code should be changed.

Action	Text in display	Comments
"Access"		According to chapter "Access code for service (H5)", see page 98.

Scroll to menu A10	`Change access code for service`
	`ACCEPT? A10`	

"A"	`Access code: _`
	`New code:              Verify:`	

Enter the old code, the new code and the new code again.	`Access code: ****`
	`New code: ****         Verify: ****`
		The digits are replaced (****) in the display.

	`Incorrect access code, NO change`	The code was not correct. Try again.

	`Change access code for service`
	`ACCEPT? A10`
		The code was correct and is now changed to the new code. Scroll or press "Return" to H5. Scroll or press "Return" to log off.

28 Acknowledge FAULTS (H6)

Regarding fault indication, etc., see chapter "Fault", page 44.

See also chapter "Fault acknowledge", page 56.

All faults / fault status are stored in the event log and can be listed, see chapter "Event log (H4/U7)", page 95.

In menu H6 are up to 200 faults listed (<u>not acknowledged</u> and <u>acknowledged but not corrected</u> faults).

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H6.	`Acknowledge FAULTS`
	`ACCEPT? H6`	

"A"	`FAULT: Xxxxxxxx............`
	`Date: MM-DD Time: HH:MM See comments`
		This is a list in which you can scroll. If the fault is corrected, the text: **Serviced** is shown. To acknowledge the fault shown in the display, press "Fault acknowledge"

"Fault acknowledge"	`FAULT: Xxxxxxxx............`
	`Date: MM-DD Time: HH:MM Acknowledged`
		The fault is now acknowledged. If / when the fault is corrected, it is no longer shown in this list. Scroll in the list (e.g. to acknowledge more faults) or press "Return" to menu H6.[75]

"Return"	`Acknowledge FAULTS`
	`ACCEPT? H6`
		Scroll or press "Return" to log off.

---

[75] When the list is empty, i.e. when <u>all faults</u> are <u>acknowledged and corrected</u>, you will automatically return to menu H6:

29 Perform ZONE TEST (test mode) (H7)

Normally, zones are tested during the monthly test (menu H1). Via this menu (H7) it is possible to perform the zone test only.
In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test.

If a real fire alarm is activated, for example by **an alarm point not in test mode**, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (sounders) activated, routing equipment (fire brigade tx) activated, etc.

See also chapter "Alphanumeric display in the control unit", page 20.

NOTE! If the control unit door is left open, the output(s) for routing equipment (fire brigade tx) may be disabled (if set so in Win512).

There will be an automatic ending of the test mode one hour after the latest tested alarm point.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H7.	`Perform ZONE TEST`
	`ACCEPT? H7`	

"A"	`Zone to be set in TEST MODE:`
	`??? ??? ??? ???   Start test:  ACCEPT`
		NOTE! In DBI (Danish) convention, only one zone.

Write zone numbers (e.g. 001, 002, 003, 004).	`Zone to be set in TEST MODE:`
	`001 002 003 004   Start test:  ACCEPT`
		Press "A" to start the test mode.

"A"	`Zones are set in test mode`
	`wait….`
		LED "Test mode" (L9) will light up.

	`Zone in TEST MODE:`
	`001 002 003 004     End test:  ACCEPT`
		Perform the tests.

The zone(s) will stay in test mode until the test mode is ended but after 10 minutes or if you press "Return" two times you will be logged out from menu H7.

Perform the test as quickly as possible, since the output(s) for routing equipment (fire brigade tx) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled).

In the tested alarm point, the LED will light up, and the LEDs "Fire" (L1) in the C.U. will light up, about ten seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM).

A sensor in test mode will not be able to activate fault.

After 10 minutes **or** "Return" "Return"	`Zones in test mode: 001, 002, 003, 004` NOTE! See chapter "Alphanumeric display in the control unit", page 20 regarding priority order.	You are no longer in menu H7 but still in test mode.

(When required:
"Access", "code")
Scroll to menu H7
"A"
	`Zone in TEST MODE:`
	`001 002 003 004     End test:  ACCEPT`
		Press "A" to end the test mode.

"A"	`Perform ZONE TEST`
	`ACCEPT? H7`
		The LED "Test mode" is turned OFF.
		If more zones are to be tested, continue as above.
		If not, scroll or press "Return" to log off.

NOTE! During the test, the following information will be shown in all other c.i.e. displays:

`Zones in test mode: 001, 002, 003, 004`

(In DBI (Danish) convention, only one zone.)

30 Maintenance (H8)

30.1 Access code for maintenance

Access code for access level 3 is required for menu H8.
NOTE! If login to level 2 was made with code for level 3 or 4, no code to access level 3 is required here.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H8.	`Maintenance`
	`ACCEPT? H8`	

"A"	`Access code: _`	When required (see above), enter the access code for level 3.
Enter the code (4 digits)	`Access code: ****`	The digits are replaced (****) in the display.
	`NO ACCESS!`	The access code was not correct. Try again.

	`Disable or re-enable outputs for`
	`routing equipment ACCEPT? S1`
		The access code was correct. This is menu S1. Press "A" to accept **or** scroll to the following menus (S2-S8).

30.2 Disable or re-enable outputs for routing equipment (H8/S1)

Outputs for routing equipment (fire brigade tx / fault tx) can be disabled via this menu. They stay disabled, until re-enabled again via this menu. Can be useful during an installation test period, when only local alarms are required.
Disabled outputs are indicated by LEDs "Disablements" (L8) and "**Fault / Disablements** Fire brigade tx" (L15).

Disabled outputs are listed in menu H4/U1.

Action	Text in display	Comments
"Access"		According to chapter "Access code for maintenance", see page 112.

	`Disable or re-enable outputs for`
	`routing equipment ACCEPT? S1`	

"A"	`Routing equipment for FIRE:1, FAULT:1`
	`(1=enabled, 0=disabled) ACCEPT?`
		To move the cursor, press "→". Edit and/or press "A" to accept.

"A"	`Disable or re-enable outputs for`
	`routing equipment ACCEPT? S1`
		Scroll or press "Return" to return to H8. Scroll or press "Return" to log off.

30.3 Disconnect loop (H8/S2)

Before physical connection / disconnection of loop units, etc. to a loop or zone line, the "loop" shall be disconnected (disabled), i.e. there will be no voltage on the "loop" to avoid damage on the units and the control unit.

BS4 loop require an Autronica interface board 1584 in the control unit. DET8 "loop" (zone line) require an 8 zones expansion board 1580 in the control unit.

Action	Text in display	Comments
"Access"		According to chapter "Access code for maintenance", see page 112.

Scroll to menu S2.	`Disconnect loop`
	`ACCEPT?  S2`	

"A"	`Disconnect type: 0 (0=COM, 1=BS4,)`
	`2=DET8, 3=Loop Unit)         ACCEPT?`
		Press:
		"0"=COM loop
		"1"=BS4 loop
		"2"=Expansion board 1580
		"3"=Addr. zone interface 2226 / 2335 or 3361 (MIO).
		Press "A" to accept.

"A"
Depending on the chosen type, 0, 1, 2 or 3, the following will be shown:
	`Disconnect COM-Loop: 0, CU: 00`
	`ACCEPT?`
	`Disconnect BS4-Loop: 0, Board: 0, CU: 00`
	`ACCEPT?`
	`Disconnect DET8-input: 0, Board: 0,`
	`CU: 00                      ACCEPT?`
	`Disconnect input technical no.: 000000`
	`ACCEPT?`
		Write the required numbers. Press "A" to accept.

"A"	`Disconnect type: 0 (0=COM, 1=BS4,)`
	`2=DET8, 3=Loop Unit)         ACCEPT?`
		LED "Disablements" indicates disconnected loops, etc.. Continue to disconnect or press "Return" to menu S2.

"Return"	`Disconnect loop`
	`ACCEPT?  S2`
		Scroll or press "Return" to return to menu H8. Scroll or press "Return" to log off.

Don't forget to re-connect the loop / zone line again, via menu H8/S3.

30.4 Re-connect loop (H8/S3)

Disconnected (disabled) loops / zone lines (via menu H8/S2) are indicated by LED "Disablements" and listed in menu H4/U1.

NOTE! When you re-connect a COM loop all the statistics shown in menu H5/A7 will be erased and set to "0".

Action	Text in display	Comments
"Access"		According to chapter "Access code for maintenance", see page 112.

Scroll to menu S3.	`Re-connect loop`
	`ACCEPT?  S3`	

"A"	`Re-connect type: 0 (0=COM, 1=BS4,`
	`2=DET8, 3=Loop Unit)        ACCEPT?`
		Press:
		"0"=COM loop
		"1"=BS4 loop
		"2"=Expansion board 1580
		"3"=Addr. zone interface 2226 / 2335 3361 (MIO).
		Press "A" to accept.

"A"
Depending on the chosen type, 0, 1, 2 or 3, the following will be shown:
	`Re-connect COM-Loop: 0, CU: 00`
	`ACCEPT?`
	`Re-connect BS4-Loop: 0, Board: 0, CU: 00`
	`ACCEPT?`
	`Re-connect DET8-input: 0, Board: 0,`
	`CU: 00                     ACCEPT?`
	`Re-connect input technical no.: 000000`
	`ACCEPT?`
		Write the required numbers. Press "A" to accept.

"A"	`Re-connect type: 0 (0=COM, 1=BS4,`
	`2=DET8, 3=Loop Unit)        ACCEPT?`
		Continue to re-connect or press "Return" to menu S2. LED "Disablements" will be turned off if there are no other disablements in the system.

"Return"	`Re-connect loop`
	`ACCEPT?  S3`
		Scroll or press "Return" to return to menu H8. Scroll or press "Return" to log off.

30.5 Acknowledge SERVICE signal (H8/S4)

See chapter "Sensors activating SERVICE signal (H4/U6)", page 94.

When service signal from a sensor is acknowledged, the sensor is given a default sensor value (for a new / clean sensor), i.e. **first** replace the sensor, **then** acknowledge the service signal **as soon as possible**.

NOTE! If a sensor is replaced without activating service signal, it has to be reset to the default sensor value, see chapter "Clear weekly average (H8/S5)", page 117.

Action	Text in display	Comments
"Access"		According to chapter "Access code for maintenance", see page 112.

Scroll to menu S4.	`Acknowledge SERVICE signal`
	`ACCEPT? S4`	

"A"	`Sensor : xxxxxx needs service`
	`L`
	NOTE! The list order in this menu is as follows:
	a) Technical number order in the control unit this menu is opened.
	b) Technical number order in the rest of the system.
		If there are no sensors to acknowledge, menu S4 will be shown again.
		L = a list in which you can scroll. If it is the correct sensor to acknowledge, press "Fault acknowledge". If not, scroll or write the wanted sensor and press "Fault acknowledge" **or** press "Return" to S4.

"Fault acknowledge"	*The service signal for that sensor is now acknowledged and the next sensor will be shown in the display.*
	`Sensor : yyyyyy needs service`
	`L`
		If more service signal acknowledgements shall be done, continue like above. If not, press "Return" to menu S4.

"Return"	`Acknowledge SERVICE signal`
	`ACCEPT? S4`
		Scroll or press "Return" to menu H8. Scroll or press "Return" to log off.

LED "Service" (L12) will be turned of when all sensors have been acknowledged.

30.6 Clear weekly average (H8/S5)

If a sensor (analog smoke detector) is replaced without having generated SERVICE signal, its week average sensor value has to be set to the default value otherwise the new / clean sensor will inherit the old sensor's value. It is possible to clear the week average sensor value for each sensor individually.

NOTE! Authorised service personnel only, must do the reset to default value. Used incorrectly it can cause nuisance fire alarms.

The first week average sensor value (after clearing) will be calculated within one hour and after that each week.

Action	Text in display	Comments
"Access"		According to chapter "Access code for maintenance", see page 112.

Scroll to menu S5.	`Clear weekly average`
	`ACCEPT?  S5`	

"A"	`Enter technical number to clear: 000000`
	`ACCEPT?`
		Write the wanted techn. no. and/or press "A" to accept.

"A"	`Clear weekly average`
	`ACCEPT?  S5`
		Scroll or press "Return" to return to menu H8. Scroll or press "Return" to log off.

30.7 Safe shut down of control unit (H8/S6)

It's not recommended, to power off a control unit, without doing a safe shut down. This is because data can get lost. Safe shut down also put the CPU at rest.
NOTE!
By reset/restart and power off, the Fault tx output(s) will be "activated".

Before a "Safe shut down", see chapter "Reset / Restart", page 65.

Action	Text in display	Comments
"Access"		According to chapter "Access code for maintenance", see page 112.

Scroll to menu S6.	`Safe shut down of control unit`
	`ACCEPT?  S6`	

"A"	`Shut down control unit 00 ? 0`
	`(1 = Yes, 0 = No)          ACCEPT?`	

Write the C.U. number, "1" (=yes) and "A"	`Ready for shut-down, break the power.`
	`Automatic restart within nnn seconds!`
		Count down starts from nnn = 300 seconds. Disconnect the power supply (mains and battery). When the power supply is connected again **or** (if powered all time) after 300 seconds, there will be an automatic reset / restart.

	`FAULT: Restart CU xx code xx  yyyyyyy`
	`Date: mm-dd   Time: hh:mm   Serviced`
		After restart / power on (see page 65), there will be a fault activated. This fault has to be acknowledged, see chapter "Acknowledge FAULTS (H6)", page 109.

30.8 Activate address in alarm mode (H8/S7)

One alarm point (address), not a whole zone, can be set in alarm status. Among other applications, this function is used for installations on ships.

NOTE! All outputs, standard and programmable, which would have been activated by a real fire alarm from the same alarm point, will be activated by this manual alarm as well.

Action	Text in display	Comments
"Access"		According to chapter "Access code for maintenance", see page 112.
Scroll to menu S7.	Activate address in alarm mode ACCEPT? S7	
"A"	Select zone: 000 address: 00 ACCEPT?	
Write the zone and address.	Select zone: 123 address: 45 ACCEPT?	Press "A" to accept / start the fire alarm.
"A"	POINT: 123-45 No.: 001 User definable text, if programmed	Normal fire alarm presentation in the control unit(s) / FBPs display. If more alarm points have to be set in alarm status, press "Return" to select another zone - address and continue as above.
"Return"	Select zone: 000 address: 00 ACCEPT?	
Write the zone and address.	Select zone: 012 address: 34 ACCEPT?	Press "A" to accept / start the fire alarm.
"A"	POINT: 123-45 LAST: 012-34 No.: 002 User definable text, if programmed	

What happens by reset of the fire alarm(s) is depending on:

a) if you still are in menu H8/S7

b) if you are logged out (by pressing "Return" two times **or** automatically after 10 minutes).

Alternative a)
"Reset"
	`Activate address in alarm mode`
	`ACCEPT?  S7`
		Scroll or press "Return" to menu H8. Scroll or press "Return" to log off.

Alternative b) "Reset"	`(Blank)`	

NOTE!

The description above is valid for Multiple reset (default).[76]

By Single reset each point has to be reset individually.

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[76] Alarm reset is selected in the Win512 "System" dialog box.

30.9 Synchronize the control units (H8/S8)

The control units have to be synchronized when:

- The following fault message is shown:
  `FAULT: CU xx has wrong information`[77]
- After "Status Checking" has been enabled in Win512.

(When using Win512, you can use the "Synchronize" toolbar button.)

Action	Text in display	Comments
"Access"		According to chapter "Access code for maintenance", see page 112.

Scroll to menu S8.	`Synchronize the control units`
	`ACCEPT? S8`	

"A"	`Shall control units be synchronized? 0`
	`(1 = Yes, 0 = No) ACCEPT?`
		Press "A" to start the synchronisation.

"A"	`Synchronization will take about 30 sec`
	`for each CU.`
		Press "Return" after having read this information text.

"Return"	`Shall control units be synchronized? 0`
	`(1 = Yes, 0 = No) ACCEPT?`
		Wait until the syncronization is ready.[78] Press "Return" to menu S8.

"Return"	`Synchronize the control units`
	`ACCEPT? S8`
		Scroll or press "Return" to menu H8. Scroll or press "Return" to log off.

---

[77] If the control unit restart in conjunction with this fault, the synchronization will start automatically otherwise the synchronization has to be started via this menu.

[78] Normally a syncronization is done in conjunction with the fault message above. When the syncronization is ready the fault will be indicated as "Serviced". If a syncronization is done via Win512 (i.e. normally no fault message) there is no "syncronization is now ready" indication. The syncronization time is depending on the amount of data (faults, disablements, etc.) stored. If a new syncronization is started before a syncronization is ready, the syncronization will start from the beginning again.

30.10 Change access code for maintenance (H8/S9)

For security reasons, the default code should be changed.

Action	Text in display	Comments
"Access"		According to chapter "Access code for maintenance", see page 112.

Scroll to menu S9.	`Change access code for maintenance`
	`ACCEPT? S9`	

"A"	`Access code: _`
	`New code:              Verify:`	

Enter the old code, the new code and the new code again.	`Access code: ****`
	`New code: ****         Verify: ****`
		The digits are replaced (****) in the display.

	`Incorrect access code, NO change`	The code was not correct. Try again.

	`Change access code for maintenance`
	`ACCEPT? S9`
		The code was correct and is now changed to the new code. Scroll or press "Return" to menu H8. Scroll or press "Return" to log off.

31 Interlocking outputs and inputs (H9)

31.1 Activated interlocking outputs/inputs (H9/C1)

(In the Chinese convention the information[79] is shown in Kanji characters. In the Chinese convention, the LED "Input" is indicating one or more activated interlocking inputs. In the Chinese convention, the LED "Output" is indicating one or more activated interlocking outputs.)

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H9.	`Interlocking outputs and inputs`
	`ACCEPT? H9`	

"A"	`Activated interlocking outputs/inputs`
	`ACCEPT? C1`	

"A"
Depending on activated output and/or input, the following will be shown:
	`Output AAA/PP activated at HH:MM`
	`User definable text message (if progr.)`
	`Output AAA/PP act HH:MM, input act HH:MM`
	`User definable text message (if progr.)`
	`Input AAA/PP activated at HH:MM`
	`User definable text message (if progr.)`
		This is a list in which you can scroll.
		AAA=interlocking comb. area
		PP= interlocking comb. point within the area.
		Press "Return" to menu C1.

"Return"	`Activated interlocking outputs/inputs`
	`ACCEPT? C1`
		Scroll or press "Return" to menu H9. Scroll or press "Return" to log off.

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[79] Interlocking combination (area / point), activated interlocking output / input + timestamp for resp. and total number of activated interlocking inputs.

31.2 Activate interlocking output (H9/C2)

The output in each interlocking combination (area / point) can be manually activated via this menu. The corresponding interlocking input will be "monitored" in the same way as if the output was activated by its control expression.

Reset has to be performed via menu H9/C3.

(In the Chinese convention, the LED "Output" is indicating one or more activated interlocking outputs.)

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H9.	`Interlocking outputs and inputs`
	`ACCEPT? H9`	

"A"	`Activated interlocking outputs/inputs`
	`ACCEPT? C1`	

Scroll to menu C2.	`Activate interlocking output`
	`ACCEPT? C2`	

"A"	`Activate interlocking output`
	`area 000 point 00 ACCEPT?`	

Write the area and point, e.g.:	`Activate interlocking output`
	`area 001 point 01 ACCEPT?`
		Press "A" to accept and/or "Return" to menu C2.

"A"	`Activate interlocking output`
	`ACCEPT? C2`
		Scroll or press "Return" to menu H9. Scroll or press "Return" to log off.

31.3 Reset interlocking output (H9/C3)

All activated interlocking outputs are listed in this menu.

Interlocking output activated via its control expression and latching output selected (in Win512): The output has to be reset via this menu.

Interlocking output activated via its control expression and latching output **not** selected: The output can be reset via this menu.

Interlocking output activated via menu H9/C2: The output has to be reset via this menu.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H9.	`Interlocking outputs and inputs`
	`ACCEPT? H9`	

"A"	`Activated interlocking outputs/inputs`
	`ACCEPT? C1`	

Scroll to menu C3.	`Reset interlocking output`
	`ACCEPT? C3`	

"A"	`Reset interlocking output`
	`area 000 point 00          ACCEPT?`
		This is a list in which you can scroll. If there are no activated outputs, menu C3 will be shown again.
		Press "A" (for reset) or "Return" (no reset) to menu C3.

"A"
or
"Return"
	`Reset interlocking output`
	`ACCEPT? C3`
		Scroll or press "Return" to menu H9. Scroll or press "Return" to log off.

31.4 Disable interlocking output (H9/C4)

Interlocking outputs (Type = Interlocking) can be disabled via this menu but not via menu H2/B3.
The "Interlocking Combination" (Area / Point) is to be entered to disable the output. If "000/00" is entered, **all** interlocking outputs will be disabled at the same time.

Up to 200 interlocking outputs can be disabled.

The LED "Disablements" (L8) is also indicating one or more disabled interlocking outputs.

(In the Chinese convention, the LED "Interlocking output disabled" + The LED "Disablements" are indicating one or more activated interlocking outputs.)

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H9.	`Interlocking outputs and inputs`
	`ACCEPT? H9`	

"A"	`Activated interlocking outputs/inputs`
	`ACCEPT? C1`	

Scroll to menu C4.	`Disable interlocking output`
	`ACCEPT? C4`	

"A"	`Disable interlocking output`
	`area 000 point 00 ACCEPT?`	

Write the area and point, e.g.:	`Disable interlocking output`
	`area 001 point 01 ACCEPT?`
		Press "A" to accept and/or "Return" to menu C3.

"A"	`Disable interlocking output`
	`ACCEPT? C4`
		Scroll or press "Return" to menu H9. Scroll or press "Return" to log off.

31.5 Re-enable interlocking output (H9/C5)

Interlocking outputs (Type = Interlocking) can be re-enabled via this menu but not via menu H2/B6.
If "000/00" is entered, **all** interlocking outputs, disabled via menu H9/C4 and "000/00", will be re-enabled at the same time.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	
"A"	Activated interlocking outputs/inputs ACCEPT? C1	
Scroll to menu C5.	Re-enable interlocking output ACCEPT? C5	
"A"	Re-enable interlocking output area 000 point 00 ACCEPT?	This is a list in which you can scroll. If there are no disabled outputs, menu C5 will be shown again. Press "A" (for re-enable) or "Return" (not re-enable) to menu C5.
"A" or "Return"	Re-enable interlocking output ACCEPT? C5	Scroll or press "Return" to menu H9. Scroll or press "Return" to log off.

32 Change access code for daily duties (H10)

For security reasons, the default code should be changed.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 68.

Scroll to menu H10.	`Change access code for daily duties`
	`ACCEPT? H10`	

"A"	`Access code: _`
	`New code:              Verify:`	

Enter the old code, the new code and the new code again.	`Access code: ****`
	`New code: ****         Verify: ****`
		The digits are replaced (****) in the display.

	`Incorrect access code, NO change`	The code was not correct. Try again.

	`Change access code for daily duties`
	`ACCEPT? H10`
		The code was correct and is now changed to the new code. Scroll or press "Return" to log off.

33 Annual control

The building occupier is highly recommended, once a year, to do some tests, beside the monthly tests. To avoid the Fault tx output(s) to be activated, they can be disabled via menu H8/S1 (or via an open door, se chapter "Door open", page 29.).
Regarding the fault condition, see chapters "Fault", page 44 and "Fault messages", page 45.

NOTE! Some faults have a delay.

Each control unit should be tested as follows:

- Perform monthly test (menu H1).
- Remove one battery fuse (F2 or F3 on the charger board 1557). The following fault message is to be shown:

  `FAULT: Battery not connected CU xx`
  NOTE! xx is depending on control unit.
- Put back the fuse and acknowledge the fault (Menu H6).
- Remove fuse F5 (**not F1 - F4**) on the connection board 1555. The following fault message is to be shown:

  `FAULT: Supervised output 0, CU xx`
  NOTE! xx is depending on control unit.
- Put back the fuse and acknowledge the fault.

When output units type 2262 / 2263 are installed:

- Remove the battery fuse F3 on the rectifier p.c.b. The following fault message is to be shown:

  `FAULT: Battery output unit xxxxxx`
  NOTE! xxxxxx is depending on output unit and control unit.
- Put back the fuse and acknowledge the fault.
- Remove fuse F8 on the output p.c.b. The following fault message is to be shown:

  `FAULT: Superv. output 3 tech.no. xxxxxx`
  NOTE! xxxxxx is depending on output unit and control unit.
- Check the manual call points (the glass). Take required measures. Use the manual call point alarm test key.
- Check some control outputs. Are they activated according to programmed control expressions?

34 How to change paper in the printer

When the paper roll is almost empty, a red line appears on one edge of the paper. Change the paper roll before it's completely empty! Always have a spare paper roll on site.

Change the paper roll as follows:

- Read all instructions before changing the paper roll.
- Open the control unit door. Unlock the (metal) inner door by removing the screw, placed on top, to the left of the inner door. Open the inner door.
- Remove the old paper roll carefully, cut the paper, so that the paper within the printer remains there.
- Take the new paper roll, tape the new paper to the old paper and place the paper roll on the printer.
- Press the "Paper feed" button (P7) until the new paper comes out of the printer.

Cut off the paper and lock the inner door. Close the control unit door.

35 Replacing a TLON connection board and/or a main board

By the TLON network programming, some unique data will be stored in a memory on the 1590 TLON connection board and some unique data will be stored in a memory on the 1556 main board.

After replacing a TLON connection board to another or replacing both a TLON connection board and a main board, do "Replace", "Update" and "Save" in TLON Manager.

After replacing a main board to another (not the TLON connection board), do "Update" and "Save" in TLON Manager.

36 Battery maintenance

The batteries (2 x 12 V, 24 Ah) are normally placed in the control unit.

The control unit supervises the batteries and a fault will be activated if something goes wrong.

They are rechargeable sealed lead-acid batteries and maintenance-free but the producer's instructions are always to be followed.

The ambient temperature affects the battery capacity, self discharge and life span. It shouldn't be higher than normal room temperature. For highest safety, batteries used in fire alarm installations, should never be older than four years.

37 How to avoid unnecessary (nuisance) fire alarms

We all realise, when life, buildings, production facilities, etc. shall be saved, it is of utmost importance that an initial fire is detected as soon as possible. That's why more and more automatic fire alarm systems are installed.

In an automatic fire alarm installation, especially if smoke detectors (sensors) are used, everybody in the building needs to be informed how to avoid so called unnecessary (nuisance) fire alarms.

To avoid trouble and unnecessary expenses there are a couple of things to bear in mind. Here are some advice and tips.

Tobacco smoke

The detectors (sensors) can not sense the difference between "smoke" and "smoke". They can not separate tobacco smoke from smoke from a fire. Intensive tobacco smoking in connection with bad ventilation can cause a fire alarm.

Welding, grinding, cutting, sawing & drilling

These kind of jobs cause smoke.

Carpet welding

Welding of plastic carpets causes a smoke that can be almost invisible, but it still influences the smoke detectors (sensors).

Cooking fumes, toasting & candles

It is not only "normal smoke" that influences smoke detectors (sensors). It is all kinds of "combustion products", caused by cooking (frying/grilling), toasting, etc. Warning! Be careful when there are smoke detectors (sensors) near such activity.

Special environments

In certain premises, a special environment can exist which can influence smoke detectors (sensors) and cause alarm. It can be ions (from plastics), flour dust, oil haze, aerosols, strong perfumes, strong ventilation, insecticides, disinfecting sprays, etc. If many odd and unnecessary alarms occur, the environment must be examined and perhaps other detector types have to be chosen.

Steam / hot air

Smoke and heat detectors are influenced by steam and hot air, e.g. from an oven, dry-blower, heater, etc.

Exhausts

Exhausts from cars / trucks, lift trucks, lawn mowers, etc. influences smoke detectors (sensors). If windows and doors are open, exhausts can "slip in" that way.

Lack of maintenance

Smoke detectors (sensors) are influenced by their environment and become "dirty". In an analog system (like EBL512) a Service signal is given when it is time to clean or exchange the smoke detectors (sensors). The alternative is to exchange detectors at even intervals, to be on the safe side.

Change in activities or wrong choice of detector

If the activities in the premises are altered, the detector choice might also need altering. Due to special environments, see above, an inappropriate detector type might have been chosen from the beginning and thus cause unnecessary alarms.

Miscellaneous

Choosing another type of detector can solve certain problems. Bear also in mind, that the coverage area can be different for different types of detectors.

It is however not always the best action to change detector type. Here is a list of other actions, programmed via Win512, which can be used:

- Another alarm algorithm can be used.
- Alarm delay for smoke detectors / sensors can be used.
- Two-zone or two-unit dependent (co-incidence) fire alarm activation can be used.
- In an installation with addressable detectors / sensors (e.g. EBL512), the affected detectors can be individually disabled (or whole zones) when the work is in progress. Bear in mind that the smoke spreads, and consideration must be taken to adjacent detectors/zones. Disablements can be done automatically via a time channel (built-in or external) or via menu (H2/B1-B3). Automatic re-enabling can be used.
- If there is an alarm organisation for the personnel on site, alert annunciation can be used.
- Pre-warning can be used.

38 Information regarding radioactive radiation source

The installation might contain smoke sensors / detectors of the ionization type. They contain a small radioactive radiation source, Americium 241.

When the sensor/detector gets dirty and when service signal has been activated in the system, contact your local dealer for cleaning / replacement of the sensors / detectors.

Metal objects must absolutely not be stuck into the sensor / detector. Static electricity may destroy the detector.

Defective / faulty, discarded and replaced sensors / detectors shall be taken care of as radioactive waste. They shall be packed in chock absorbing material to make a stable parcel.

PLEASE NOTE!
Damaged sensors / detectors shall also be packed in a sealed packet whose surface must not be contaminated, that is, not be soiled with loose radioactive dust.

39 Revision history

Revision 1

Elucidation and small corrections.

EBL512 software version 2.1.1

- Chapter "Fault acknowledge", page56. The note about the Danish convention is removed. (Danish convention is now like all other conventions.)

Revision 2

SW version 2.1.3.

Chapter 5

- Tables; "L5" & "L11": added information.

Chapter 23

- Menu H1 extended (Test of routing equipment).

Elucidation and small corrections:

Chapter 16.1

- Information updated.

Chapter 17.2 / 17.2.1

- Footnote added.

Chapter 19.1

- Information added.

Chapter 19.2

- Information added.

Chapter 28

- Footnote added.

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