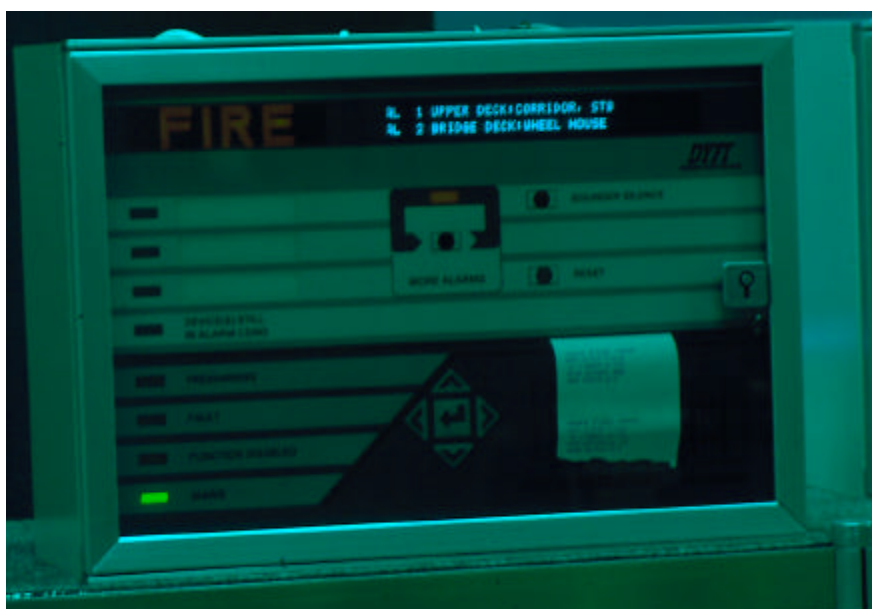


BS-100 *DYFI*

Fire Alarm Control Panel



Commissioning Handbook

Program Version P1-BS100-3-20

P5-BS100-3E20



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Test

1. Test

Test equipment

1.1 Recommended test equipment

High-ohmic universal measuring instrument.
(internal resistance about 5 Mohm).

Test procedure

1.2 Test procedure

- a) No power must be connected to the control panel.
- b) Power fuses (F1 and F2) must be removed.
Fuses F3, F4, F5, F6 and F7 shall remain connected.
- c) Check all cables for insulation resistance and continuity.
- d) Check battery polarity.
- e) Check the system's earth connection.

DIP-switches

2. Setting of DIP-switches on main board BSA-101

Setting of DIP-switches must be carried out without power connected to the system.

Do not operate any type of DIP-switches with a pencil!

2.1 DIP-switch location

See fig. no. 2.1 for DIP-switch location on the main board, and fig. no. 2.2 for the two versions of the DIP-switches.

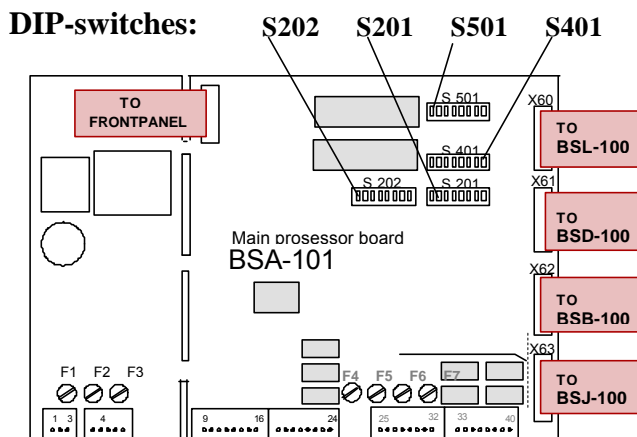
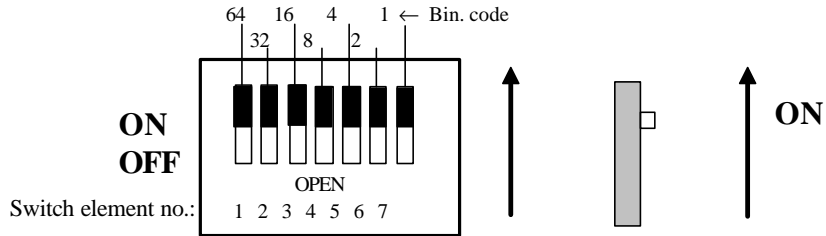


Fig. no. 2.1: Location of DIP-switches on main board BSA-101.

The DIP-switches on the main board may be supplied in one of two versions:
The “Sliding switches” or the “Tilting switches”.
 See fig. no. 2.2 a and 2.2 b.

Sliding switch:

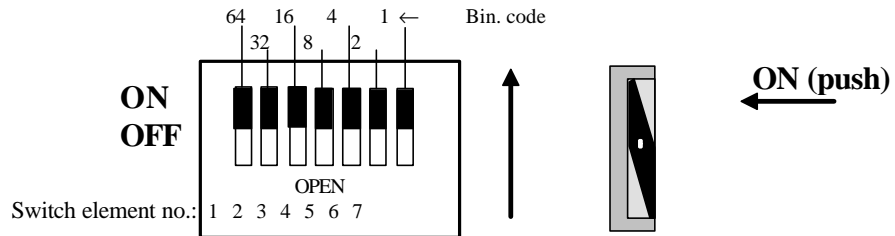


Front view:
 All switching elements
 are shown ON (closed).

Side view:

Fig. no. 2.2 a: Design of the “Sliding switch” version.

Tilting switch:



Front view:
 All switching elements
 are shown ON (closed)

Side view,
 cut through
 the switch.

Fig. no. 2.2 b: Design of the “Tilting switch” version.

S401

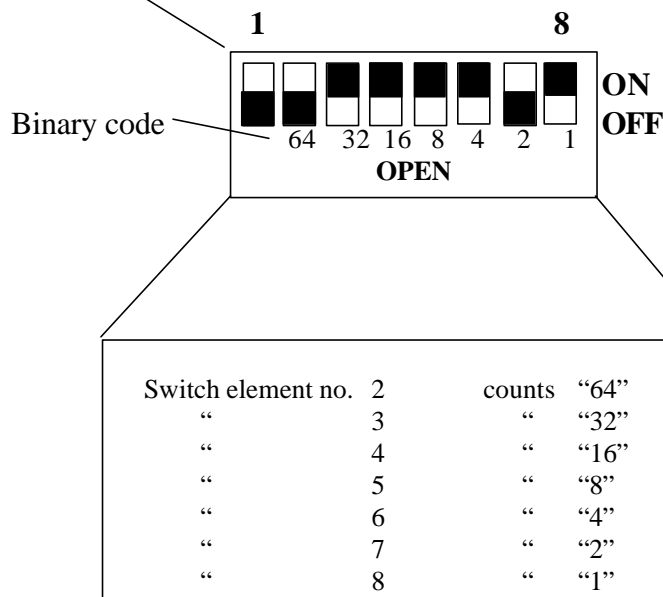
2.2 DIP-switch S401

The switch function is:

- * Setting of reset number for loop no. 00 (Location, see fig. no. 2.1).

Reset number = Number of addresses in the loop + 1.

Switch element no. 1 shall always be in the OFF position.



The switches give value in OFF position!

Fig. no. 2.3: Example of switch settings on DIP-switch S401.

In this example (ref. fig. no. 2.3) switch element no. 2(counts 64) and element no. 7 (counts 2) are set in the OFF (open) position.

The reset number will be: $64 + 2 = 66$.

S501

2.3 DIP-switch S501

The switch function is:

- * Setting of reset number for loop 01. (Location see fig. no. 2.1).

Setting of the reset number on loop 01 is carried out the same way as described for loop 00. See section 2.2 and fig. no. 2.3.

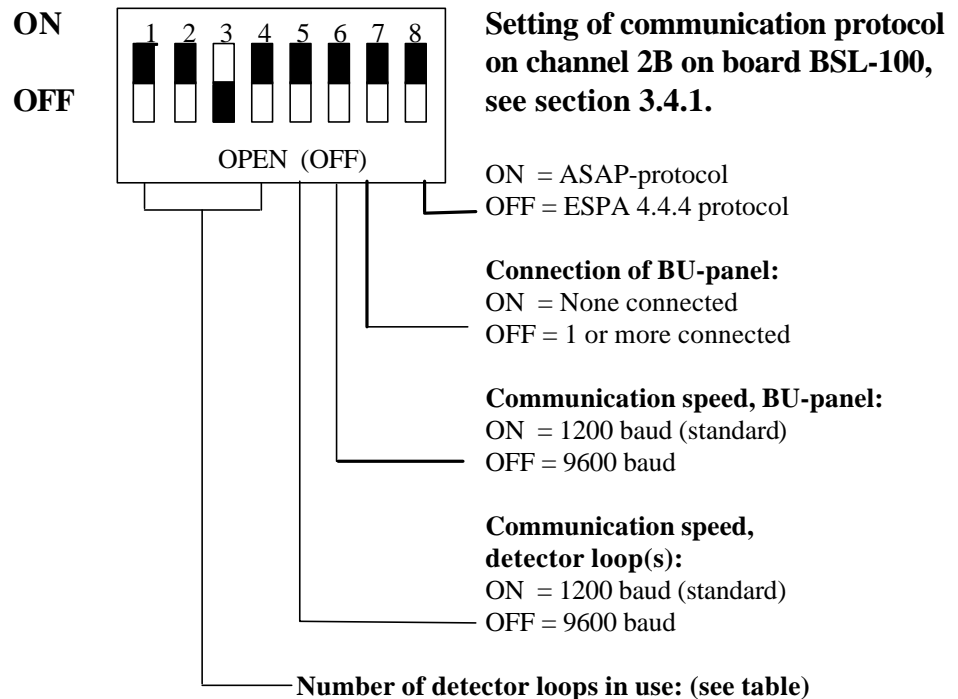
S201

2.4 DIP-switch S201

(Location, see fig. no. 2.1)

The switch functions are:

- * Setting the number of detector loops connected to the control panel. (Maximum number of loops can be up to 16 using additional modules BSD-100, see section 3.)
- * BU-panel (display unit) connected / not connected.
- * Setting of communication speed on BU-panel.
- * Setting communication protocol on channel 2B (ASAP / ESPA)
- * Setting of communication speed between main processor and loop processor.



Number of loops in use	Switch element no.:			
	1	2	3	4
1 loop (address 00) Standard	ON	ON	ON	OFF
2 loops (address 01)	ON	ON	OFF	ON
3 loops (address 02)	ON	ON	OFF	OFF
4 loops (address 03)	ON	OFF	ON	ON
5 loops (address 04)	ON	OFF	ON	OFF
6 loops (address 05)	ON	OFF	OFF	ON
7 loops (address 06)	ON	OFF	OFF	OFF
8 loops (address 07)	OFF	ON	ON	ON
9 loops (address 08)	OFF	ON	ON	OFF
10 loops (address 09)	OFF	ON	OFF	ON
11 loops (address A)	OFF	ON	OFF	OFF
12 loops (address B)	OFF	OFF	ON	ON
13 loops (address C)	OFF	OFF	ON	OFF
14 loops (address D)	OFF	OFF	OFF	ON
15 loops (address E)	OFF	OFF	OFF	OFF
16 loops (address F)	ON	ON	ON	ON

Fig. no. 2.4: Setting of DIP-switch S201

S202**2.5 DIP-switch S202**

(Location, see fig. no. 2.1)

The switch functions are:

- * Setting of the monitoring mode of the alarm outputs.
- * Setting of the number of optional alarm output modules BSB-100
- * Setting of the number of optional control output modules BSJ-100/101

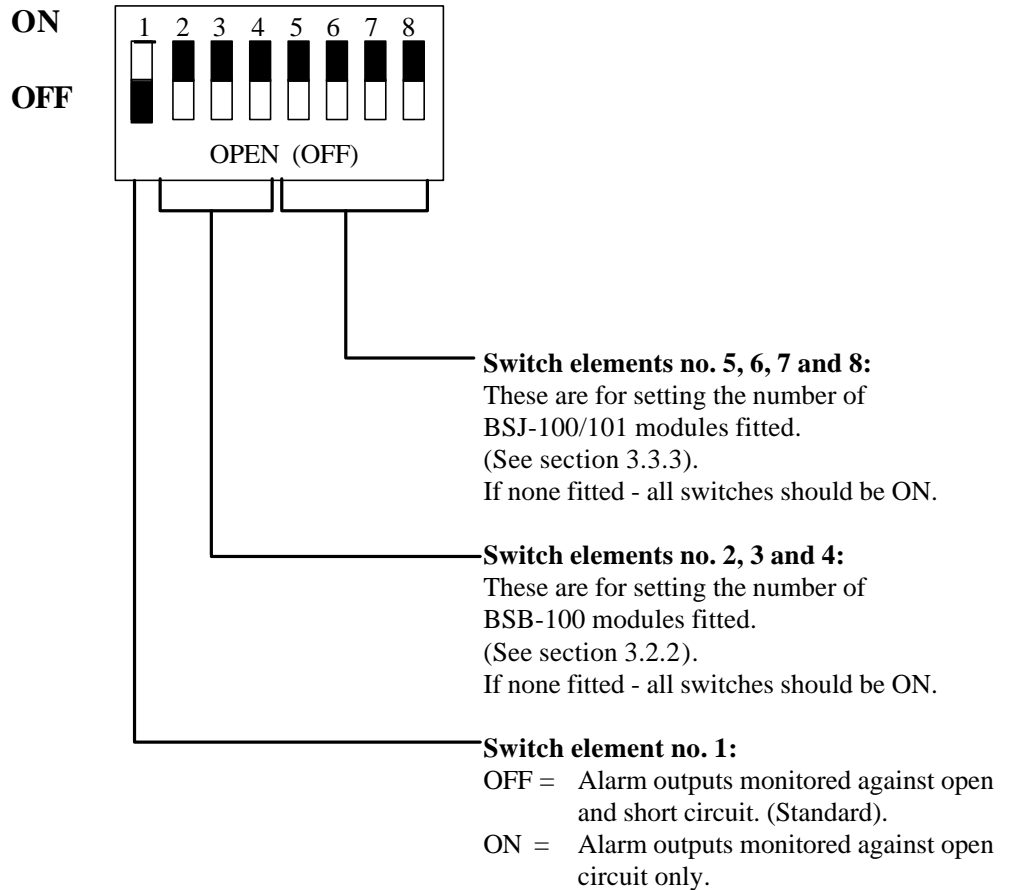


Fig. no. 2.5: Setting of the various elements on DIP-switch S202.

2.6 Straps (jumpers) on the main board BSA-101

The straps W14, W15, W16 and W17 control the different functions used in the various markets (function codes). This will normally be set correctly at delivery.

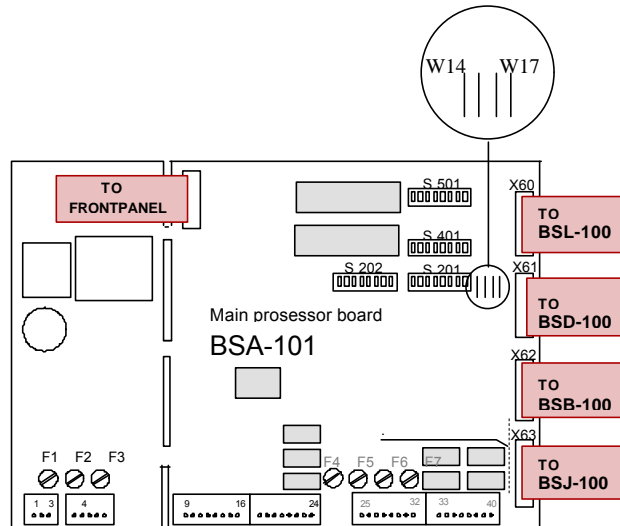


Fig. no. 2.6: Main board BSA-101

Legal function code for different countries.

Country	Program code Menu program	Function code															
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Norway	P5-BS100-3N20	X								X							X
Sweden	P5-BS100-3S20		X							X	X						X
Denmark	P5-BS100-3D20				X					X							X
England	P5-BS100-3E20				X					X			X				X
Finland	P5-BS100-3F20					X				X							X
Holland	P5-BS100-3H20							X			X						X
Italy	P5-BS100-3I20	X						X		X							X
Hungary	P5-BS100-3U20		X							X	X						X
Germany	P5-BS100-3T20	X								X				X			X
France	P5-BS100-3A20	X								X					X		X
Spain	P5-BS100-3P20	X								X						X	X
W14 W15 W16 Strapping field		W14	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
BSA-101		W15	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0
Ref. fig. 2.6		W16	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0
		W17		1	0	1	0	1	0	1	0	1	0	1	0	1	0

- *) Function code 8 is SOLAS version (for marin installations)
- ***) Function code 15 is OFFSHORE version
- I = Installed strap
- 0 = Open strap

Function specification, see Appendix A.

2.6.1 Strap functions

Strap W11: EPROM-selection

Installed: 256 kB EPROM in socket D111. (Menu program).

Cut (Open): Shall be open if W12 is installed.

Strap W12: EPROM-selection (standard)

Installed: 1 MB EPROM in socket D111. (Menu program).

Cut (Open): Shall be open if W11 is installed.

Strap W13: External fault (Connection block L3.12)

Installed: No connection of external fault input.

Cut (Open): External fault input is used.

Strap W19: For future use.

Installed:

Cut (Open): (Standard)

Strap W20: EPROM is used to store custom data.

Installed: EPROM is used to store custom data in D110. (Standard)

Cut (Open): Shall be open if W19 is installed.



Strap W401: Communication speed for loop module 00.

Installed: 1200 baud (standard).

Cut (Open): 9600 baud.

Strap W402: Reset input on loop proc. loop 00.

Install: Blocked loop output. If another loop processor is being used for loop processor 00 (eg. BS-60 panel with address 00).

Cut (Open): 9600 baud.



Strap W501: Communication speed for loop module 01.

Installed: 1200 baud (standard).

Cut (Open): The loop processor works normally.

Strap W502: Reset input on loop proc. loop 01.

Installed: Blocked loop output: If another loop processor is being used for loop processor 01 (eg. BS-60 panel with address 01).

Cut (Open): The loop processor works normally.



This list only applies to BSA-100/101 motherboard version 7212-042.0007 or greater.

The baud rate must be the same for all fitted loops.

Expansion
modules

3. Expansion modules

Setting of DIP-switches must only be carried out when no power is connected to the system.

BSD-100

3.1 Detector loop module BSD-100

On each detector loop module BSD-100 two detector loops, each with max. 99 addresses, can be connected.

Up to seven detector loop modules can be connected to the BS-100 panel. The addresses of each detector loop has to be set on the rotary switches S402 and S502, located on the BSD-100 module.

The reset number of each loop has to be set on the DIP-switches S401 and S501 located on the BSD-100 module.

Fig. no. 3.1 shows the location of the switches on the module BSD-100.

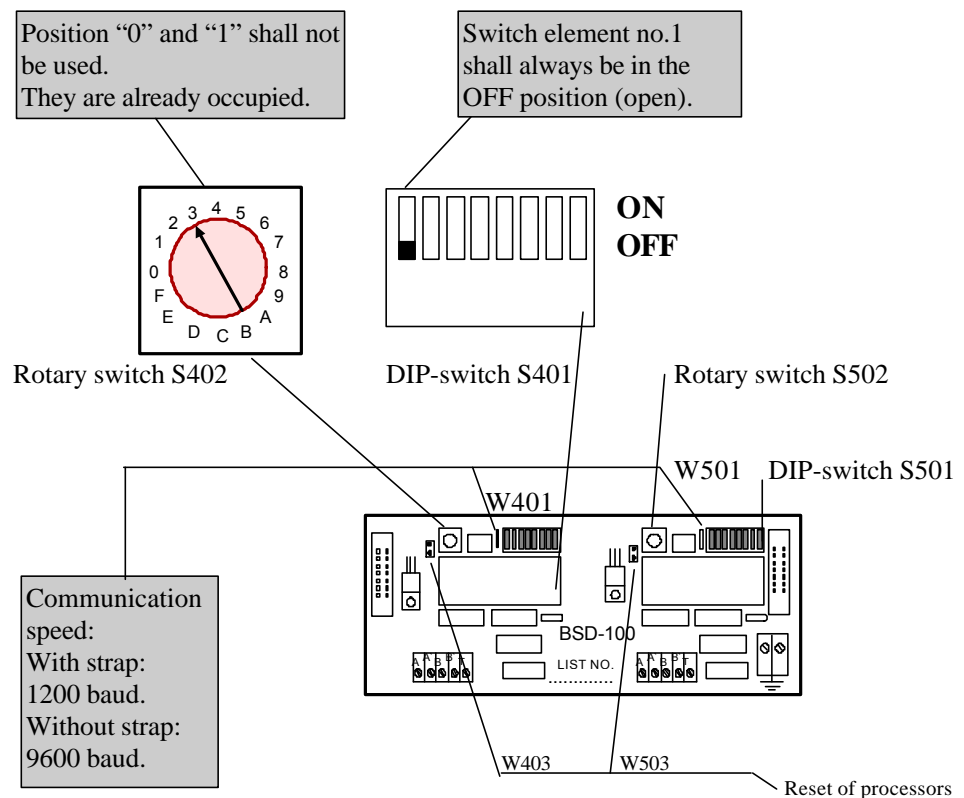


Fig. no. 3.1: Location of the switches on module BSD-100.

The switches S401 and S402 concern the first additional loop. S501 and S502 concern the second additional loop. In the figure only one set of switches enlarged. Both sets of switches are set (configured) the same way. See next page.

Loop addresses**3.1.1 Setting of detector loop addresses on the BSD-100 module**

See fig. no. 3.1.

S402 and S502 are used for setting of the loop addresses. The loop numbers from 2 to 9 are given by digits, and the number from 10 to 15 are given by the letter "A" (number 10) to "F" (number 15).

These two switches should be set by means of a small screwdriver.

Reset number**3.1.2 Setting of reset number on the BSD-100 module**

See fig. no. 3.1.

S401 and S501 are used for the setting of the reset number of the loops. (Reset number = Number of addresses in the loop +1).

Fig. no. 2.3 shows the function of the DIP-switch.

The method to do this is described in section 2.2 (DIP-switch S401/501).

Reset of loop processor**3.1.3 Reset of loop processor.**

Strapping W403 and W503 reset the loop processors. Installed strap gives continuous blocking of the loop module. Strap installed when BS-60 is used on this loop board address.

BSB-100**3.2 Alarm output module BSB-100.**

Each alarm output module BSB-100 comprises four alarm outputs (AK-1 to AK-4).

Up to four alarm output modules BSB-100 can be connected to the BS-100 panel.

Fig. no. 3.2 shows the location of DIP-switch S1 on the BSB-100 module.

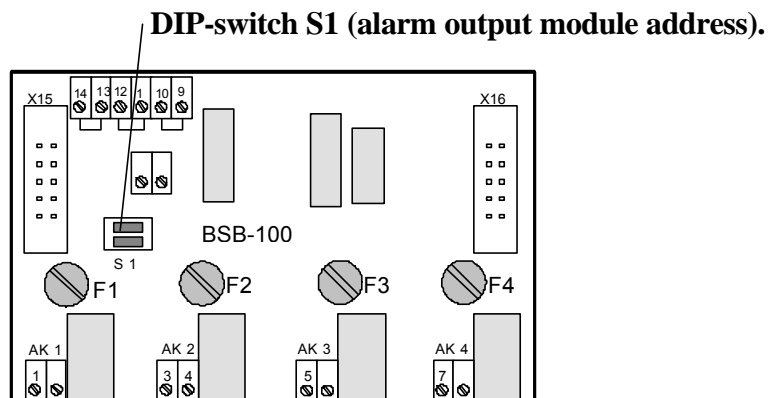


Fig. no. 3.2: Location of DIP-switch S1.

S1 (BSB-)**3.2.1 Addressing of alarm output module BSB-100****Setting of DIP-switch S1.**

The module address is set by means of DIP-switch S1 on the board BSB-100. Fig. no. 3.3 shows the switch.

S1 Setting of the switch elements.

ON

OFF

Module	Setting of switch element no.:	
	1	2
Module 1 (AK 5 to 8)	ON	ON
Module 2 (AK 9 to 12)	OFF	ON
Module 3 (AK 13 to 16)	ON	OFF
Module 4 (AK 17 to 20)	OFF	OFF

Fig. no. 3.3: Switch settings on S1.

S202 element 2,3 and 4 (BSA-101)**3.2.2 Programming the total number of BSB-100****Setting of DIP-switch S202 (element 2, 3 and 4) on the BSA-101 board.**

The number of alarm output modules BSB-100 connected to the BS-100 panel is defined by means of switch element no. 2, 3 and 4 on DIP-switch S202 on the main board BSA-101. See section 2.1 and 2.5

Fig. no. 3, 4 shows an enlarged view of the switch elements 2, 3 and 4 on S202. The elements are used when selecting the number of alarm output modules connected to the BS-100 panel.

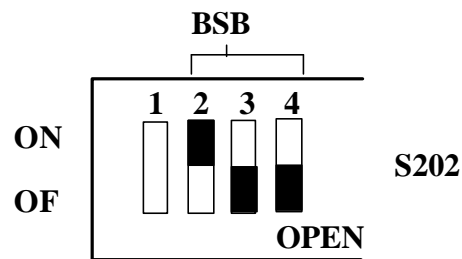


Fig. no. 3.4: Switch element 2, 3 and 4 on DIP-switch S202 (located on the main board BSA-101).

In the figure above, the switch elements are set for three BSB-100 alarm output modules connected.

The table below shows the switch settings for the number of alarm output modules connected to the BS-100 control panel.

Switch S202 (BSA-100)

Number of alarm output modules connected:	Setting of switch element no.:		
	2	3	4
0	ON	ON	ON
1	ON	ON	OFF
2	ON	OFF	ON
3	ON	OFF	OFF
4	OFF	ON	ON

**BSJ-100 /
BSJ-101****3.3 Control output module BSJ-100 / BSJ-101**

Each optional control output module BSJ-100 / BSJ-101 comprises 16 programmable outputs.

A total of eight BSJ-100 and seven BSJ-101 modules can be connected to the BS-100 panel.

Programmable outputs from 1 to 128 are handled by BSJ-100 modules.

Outputs from 129 to 240 are handled by BSJ-101 modules.

Fig. no. 3.5 shows the location of the DIP-switch S1.

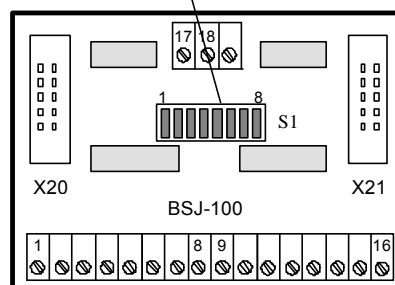
DIP-switch S1

Fig. no. 3.5: Location of DIP-switch S1 on control output module BSJ-100 / BSJ-101.

**Programming of
lamp test
function on BSJ-
100 / 101**

3.3.1 Programming of lamp test function on BSJ-100 / 101

Setting of DIP-switch S1 (element 1 and 2):

(See fig. no. 3.5 for location of the switch).

On the control output module BSJ-100 / 101 there is a test function (lamp test) which enables groups of outputs to be switched on via a push-button.



If module is used for controlling MIMIC panel LED's, it is not allowed to control other functions from the same BSJ-module.

The lamp test function is set by means of switch element 1 and 2 on DIP-switch S1. The table below indicates the various functions and settings:

Switch S1 (BSJ-100 / 101)

Function	Setting of switch element no.:	
	1	2
Lamp test not used	OFF	OFF
Lamp test on output 1 to 8	ON	OFF
Lamp test on output 9 to 16	OFF	ON
Lamp test on output 1 to 16 (All)	ON	ON

The test function is activated via terminal 17 and 19 on the board BSJ-100 / 101.

**Addressing of
control output
modules
BSJ-100 / 101**

3.3.2 Addressing of control output modules BSJ-100 / 101

Setting of DIP-switch S1 (elements 3 to 8):

See fig. no. 3.5 for location of the switch on the BSJ 100 / 101. Setting of DIP-switch S1 (elements 3 to 8).

See fig. no. 3.5 for location of the switch on the BSJ-100 / 101 modules. The address of the BSJ-100 / 101 module is set by means of elements no. 3 to 8 of DIP-switch S1.

The table below shows the switch settings for the number of control output modules BSJ-100 and BSJ-101.

Switch S1 (BSJ-100 / 101)

BSJ-module address:	Switch element no.						Outputs no.:
	3	4	5	6	7	8	
1	ON	ON	OFF	ON	OFF	ON	1-16
2	OFF	ON	OFF	ON	OFF	ON	17-32
3	ON	OFF	OFF	ON	OFF	ON	33-48
4	OFF	OFF	OFF	ON	OFF	ON	49-64
5	ON	ON	ON	OFF	ON	OFF	65-80
6	OFF	ON	ON	OFF	ON	OFF	81-96
7	ON	OFF	ON	OFF	ON	OFF	97-112
8	OFF	OFF	ON	OFF	ON	OFF	113-128
9	ON	ON	OFF	ON	OFF	ON	129-144
10	OFF	ON	OFF	ON	OFF	ON	145-160
11	ON	OFF	OFF	ON	OFF	ON	161-176
12	OFF	OFF	OFF	ON	OFF	ON	177-192
13	ON	ON	ON	OFF	ON	OFF	193-208
14	OFF	ON	ON	OFF	ON	OFF	209-224
15	ON	OFF	ON	OFF	ON	OFF	225-240

Setting of DIP-switch S202 (element 5 to 8):

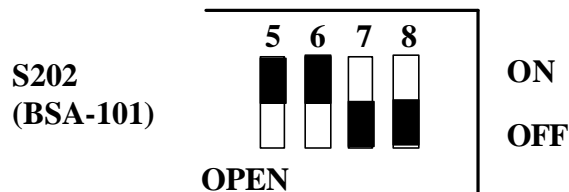


Fig. no. 3.6: Switch element 5, 6, 7 and 8 on DIP-switch S202 (located on the main board BSA-101).

**S202 (BSA-100)
Programming of
number of
control output
modules
BSJ-100 / 101
connected**

3.3.3 Programming the number of BSJ-100 / 101

(Located on main board BSA-101. See section 2.1 and 2.5).

The number of control output modules BSJ-100 / 101 connected to the BS-100 panel is set by means of switch element no. 5, 6, 7 and 8 DIP-switch S202 on the BSA-101 board.

Fig. no. 3.6 shows an enlarged view of the four switch elements on S202 used to set the number of control output modules BSJ-100 / 101 connected to the BS-100 panel.

In the figure 3.6 the switch elements shows the setting for three control output modules.

The table below shows settings of the switch elements in relation to the number of output modules connected to the BS-100 panel.

Switch S202 (BSA-101).

Modules connected	DIP-switch element no.:				Module type
	5	6	7	8	
1	ON	ON	ON	OFF	
2	ON	ON	OFF	ON	
3	ON	ON	OFF	OFF	
4	ON	OFF	ON	ON	
5	ON	OFF	ON	OFF	
6	ON	OFF	OFF	ON	
7	ON	OFF	OFF	OFF	
8	OFF	ON	ON	ON	
9	OFF	ON	ON	OFF	
10	OFF	ON	OFF	ON	
11	OFF	ON	OFF	OFF	
12	OFF	OFF	ON	ON	
13	OFF	OFF	ON	OFF	
14	OFF	OFF	OFF	ON	
15	OFF	OFF	OFF	OFF	

BSL-100

3.4 Communication output module BSL-100

RS232C / 20 mA current line.

Each communication output module BSL-100 comprises one communication line for use with external data equipment.

Up to four communication output modules BSL-100 can be connected to the BS-panel.

Fig. no. 3.7 shows the location of the DIP-switch S1 and S2 on the module.

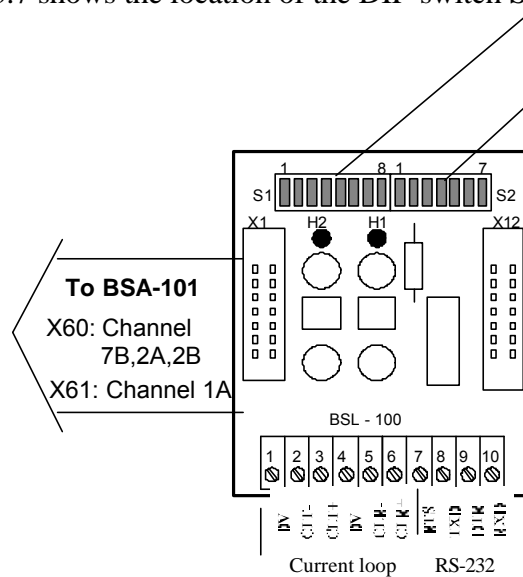


Fig. no. 3.7: Location of DIP-switch S1 and S2 on optional data output module.

Addressing of communication channel.
Configuration of data line

3.4.1 Addressing of communication channel

Configuration of data line for communication output module BSL-100.

Setting of DIP-switch S1 and S2.

All switch elements on S1 and elements no. 1 and 2 on switch S2 on BSL-100 are used to set the channel address (1A, 1B, 2A and 2B).

Switch elements no. 3 to 7 on S2 are used to configure active / passive transmitter / receiver on current loop (or RS232C).

The table on the next page gives the positioning of the elements both on S1 and S2.

Table below shows the position of the switch elements and the channel address. See fig. no. 3.7.

Communication settings by means of switch elements

Switch S1 / S2 (BSL-100)

DIP-switch	Element number:	Communication mode (communication channel address:)			
		1B	2A	2B	1A
S1	1	OFF	OFF	ON	OFF
S1	2	OFF	ON	OFF	OFF
S1	3	ON	OFF	OFF	ON
S1	4	OFF	OFF	ON	OFF
S1	5	OFF	ON	OFF	OFF
S1	6	OFF	OFF	ON	OFF
S1	7	OFF	ON	OFF	OFF
S1	8	ON	OFF	OFF	ON
S2	1	OFF	OFF	ON	OFF
S2	2	OFF	ON	OFF	OFF

Communication channel and protocol type:

1A = ASAP Autronica Standard Short Protocol. This channel is used for loop communication (eg. BS-60).

1B = ASSP Autronica Standard Short Protocol (for BU-units).

2A = ASAP Autronica Standard ASCII Protocol (for comm. with external data equipment).

2B = ASAP Autronica Standard ASCII Protocol or ESPA 4.4.4 (protocol for communication with pocket pager system). See sec. 2.4.

The table below shows the configuration of active / passive transmitter / receiver by means of the switch elements no. 3 to no. 7 on switch S2.

Config. of active / passive transmitter / receiver by means of switch elements on S2

Switch S2 (BSL-100)

		Comm. Config.	20 mA current loop				RS-232C
			AT/AR	AT/PR	PT/AR	PT/PR	
Switch element							
S2	3	ON	OFF	ON	OFF	-	
S2	4	ON	ON	OFF	OFF	-	
S2	5	ON	ON	ON	ON	OFF	
S2	6	OFF	OFF	OFF	OFF	ON	
S2	7	ON	ON	ON	ON	OFF	

AT/AR = Active transmitter / Active receiver

AT/PR = Active transmitter / Passive receiver

PT/AR = Passive transmitter / Active receiver

PT/PR = Passive transmitter / Passive receiver

Note!

Channel 1B is always config. as AT/AR when connected direct to BU-units. Channel 1A, 2A and 2B are usually config. as AT/PR.

Start-up

4. Start-up procedure

4.1 Control / connection procedure

Before any connection of power cables is made, check that the fuses F1 and F2 are removed. On some panels there may be additional fuses for d.c. power distribution. Ensure these are also removed.

- a) Connect all cables, also those for battery and mains. Check the battery polarity before connection (if this is carried out, see “Installation handbook”).
- b) Check all connections according to “Installation handbook”.
- c) “Activate” loop no. 00 by setting the switch elements on DIP-switch S201. See section 2.4. (Now only detector loop 00 is activated.)
- d) Set the switch element no.1 on DIP-switch S401 in position “OFF” (OPEN). See section 2.2 fig. no. 3.2.
- e) Set the reset number for loop 00 by setting the switch elements on DIP-switches S401. Remember that:
Reset number = *Number of addresses in the loop + 1*. See section 2.2.
The detector loop no. 00 is now connected to the BS-100 panel and is correctly configured if the communication speed has been correctly set.
- f) Replace the mains fuse(s) (F1) and the battery fuse(s) (F2). Location of the fuses on the main board BSA-101 is given on the main board cover.
Do not touch any buttons yet! The equipment needs time to record any possible errors on loop no. 00. Leave the front door open.
If a fault condition is present, the amber (yellow) light “FAULT” lights, the internal buzzer is activated and the nature of the fault is indicated in the front panel display. The following actions must be taken:
 1. Press the “SOUNDER SILENCE-button.
 2. Repair the fault condition(s).
 3. Reset the system by pressing the “RESET” button.
 4. Close the front door.
Only the green “MAINS” lamp shall light.
- g) When the connection of loop no. 00 is accomplished, checked and accepted, remove the fuses F1 and F2 again.
- h) Repeat the procedure from c) to g), this time for loop no. 01.

This sequence is repeated for each loop connections, on at the time, until all errors / faults are repaired and all detector loops are working satisfactorily.

**Normal
condition****4.2 Normal condition**

After the “RESET”-button is pressed, the following text will appear in the display on the front panel.

**RESET OK
NORMAL CONDITION**

This text is shown in the display for approx. 6 sec.

Only the green “MAINS”-lamp should be illuminated in the normal condition.

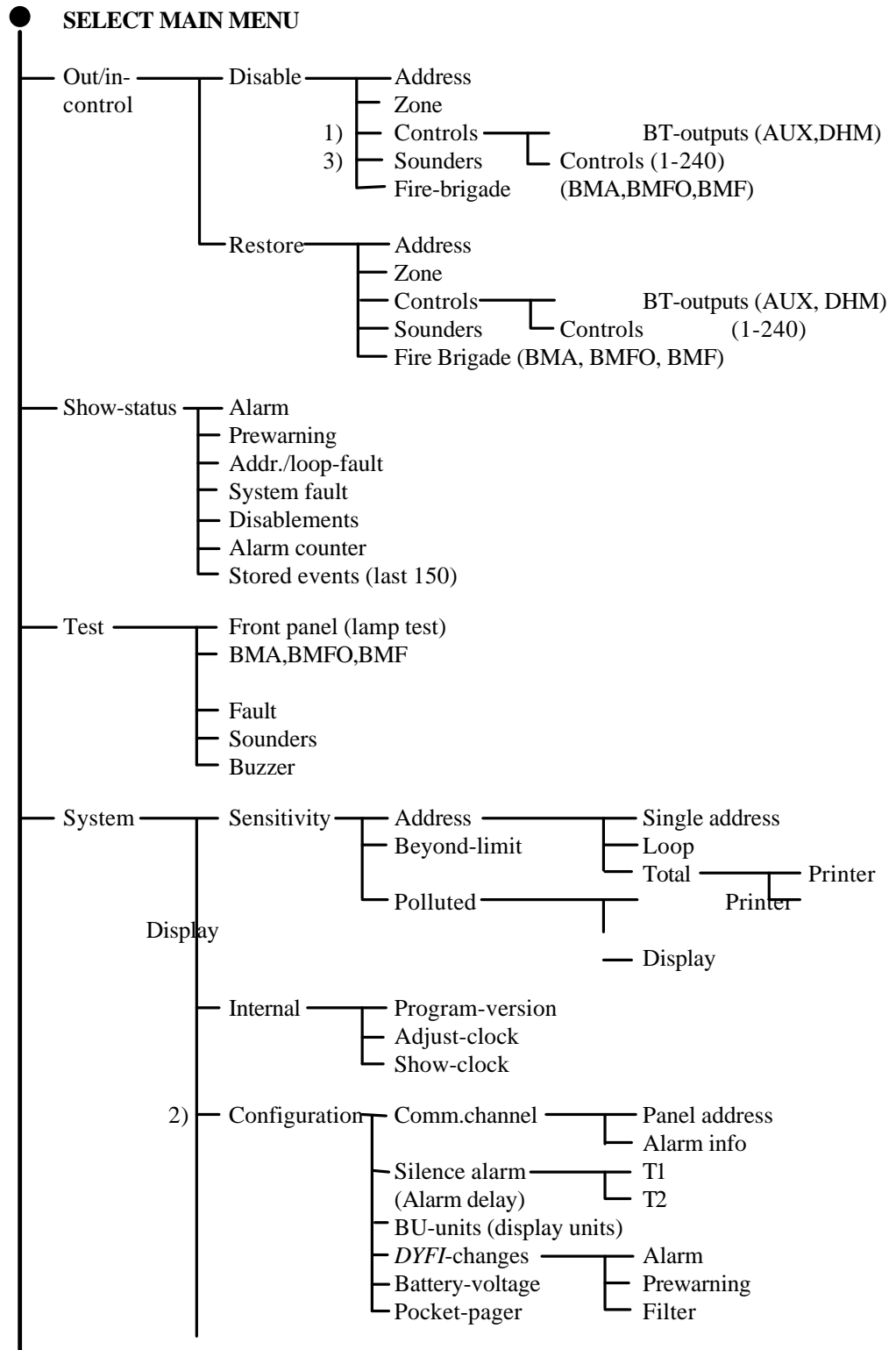
5.

Menu structure

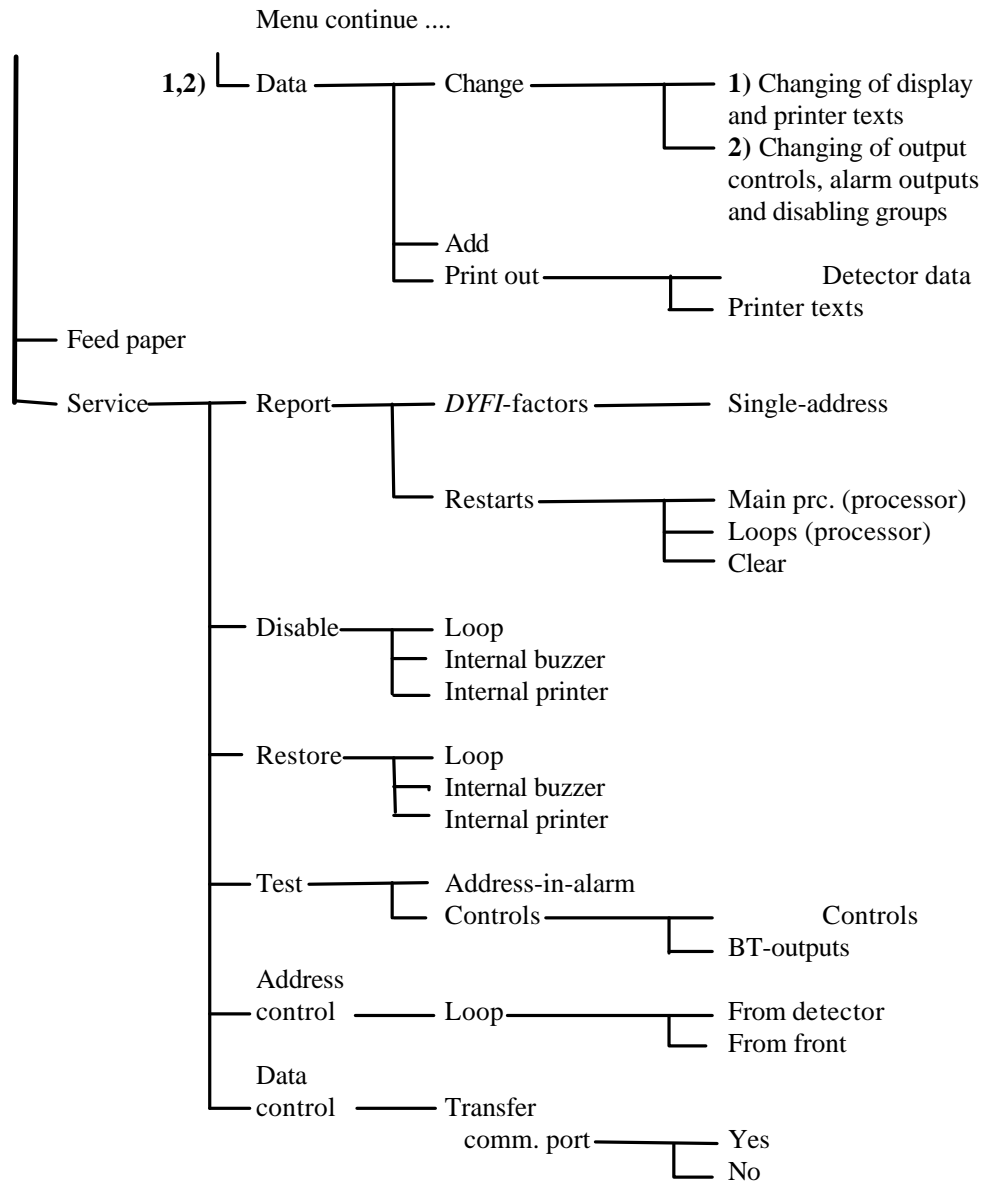
6. Menu structure

The whole menu structure is shown here, but only “SYSTEM-CONFIGURATION”, “SYSTEM-DATA” and “SERVICE” is described in this handbook. For information about the other functions, see “Operators handbook” for BS-100.

PROGRAM VERSION P1-BS100-3-20
P5-BS100-3E20 or higher



Cont. on next page: System-Data



Select "RET" to go 1 step back in the menu structure.

Select "MM" to return to main menu.

- 1) Password protected on level 1. (Operator level).
- 2) Password protected on level 2. (Service level).
- 3) Can be password protected in different market and installations.

Password

6.1 Password protected functions

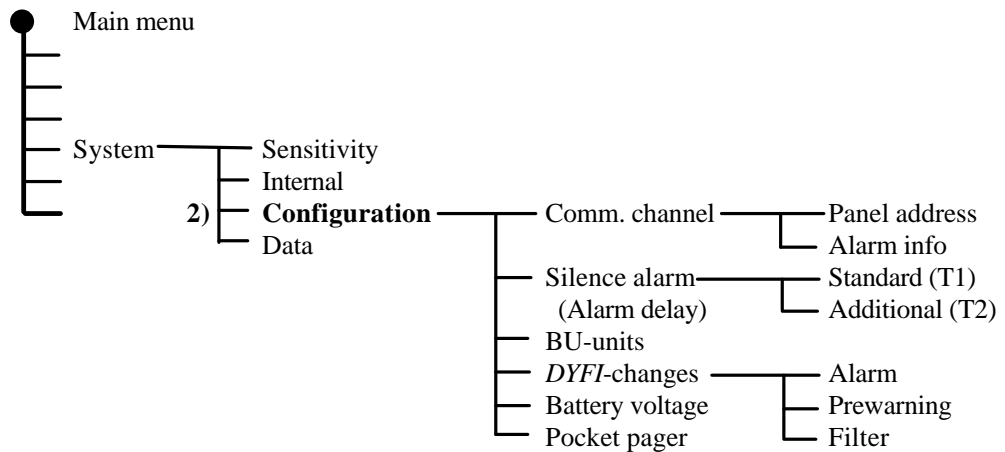
Some of the functions in the BS-100 menu are password protected on two levels.

Following functions are password protected:

Password level 1): "OPERATOR LEVEL"

- * Disable - Controls
- * System - Data
- * Disable - Sounders
- * Changing of display and printer text

Password level 2): “SERVICE LEVEL”
 * System - Configuration
 * Service
 * Changing of output controls, alarm outputs and disabling groups

Configuration
6.2 System-configuration (password protected on service level).


This function is “password protected” on service level. When this function is selected, the following text will appear in the display.

PASSWORD:

The password must be “entered” by means of the four \downarrow \uparrow \leftarrow \Rightarrow - keys. If the password is not correctly typed, the system returns to the “SYSTEM”-menu.

When the password is “entered” correctly, the options on the “CONFIGURATION” sequence are attainable. The following text will appear in the display:

**SYSTEM CONFIGURATION
 COMM. CHANNEL SILENT ALARM BU-UNITS \downarrow**

The \downarrow arrow at the right side of the lower line indicates that there is more text to display. The remaining text will appear by pressing the \downarrow key. The following text will appear in the display:

**SYSTEM CONFIGURATION
 DYFI-CHANGES BATTERY VOLTAGE \downarrow**

By pressing the \downarrow key once more the following text will appear in the display:

**SYSTEM CONFIGURATION
 POCKET-PAGER RET MM \downarrow**

Comm.-channel

6.2.1 Communication channel

If “SYSTEM”, “CONFIGURATION” and then “COMM. CHANNEL” are selected, the following text will appear in the display:

**CONFIGURATION ASAP CHANNEL:
PANEL-ADDRESS ALARM-INFO RET MM**

6.2.1.1 Panel address

When the BS-100 control panel is connected to a system with more BS-100 control panels, each control panel has to be addressed.

If “SYSTEM”, “CONFIGURATION”, “COMM. CHANNEL” and then “PANEL ADDRESS” are selected, the following text will appear in the display:

**PANEL ADDRESS
SELECT ADDRESS: A RET MM**

Select address (A-Z) with the ↓ and ↑ key and press **?**. (A is standard).
If address B is selected for the control panel, the following text will appear in the display:

**PANEL ADDRESS
ADDRESS B SELECTED AS PANEL ADDRESS**

Press **?**, and the system returns to “CONFIGURATION ASAP CHANNEL”-menu.

6.2.1.2 Alarm info

By means of the “ALARM INFO” the information to be transferred via ASAP-comm. line at alarm / prewarning is to be selected.

If “SYSTEM”, “CONFIGURATION”, “COMM. CHANNEL” and then “ALARM INFO” are selected, the following text will appear in the display:

**INFO. TRANSFERRED WHEN ALARM /PREWARNING
ADDRESS ZONE ADDRESS + ZONE RET MM**

Select the information for transferring at Alarm / prewarning and press **?**.
The system will return to the “CONFIGURATION ASAP CHANNEL”-menu.

Silent alarm

6.2.2 Silent alarm (T1, T2)

By means of the function “SILENT ALARM” delays of the alarm outputs and the BMA-outputs can be set. (This applies when the D/N input is active. See list no. 3 described in section 2.2 in Installation handbook: BS-100 *DYFI* Fire alarm control panel).

Alarm delay T1 starts at alarm. The alarm outputs and the BMA-outputs will not be activated.

If the “SOUNDER SILENCE” button on the front panel is pressed before the time-out of delay T1, delay T2 will then start.

If the “SOUNDER SILENCE” button not is operated before the time-out of delay T1, the alarm outputs and the BMA-output will then activate.

If the “RESET” button not is operated before time-out of the delay T2, the alarm outputs and the BMA-output will then activate.

Manual call-points and / or 2 or more detectors in alarm will over-ride either T1 or T2 delays.

If “SYSTEM”, “CONFIGURATION” and then “SILENT ALARM” are selected, the following text will appear in the display:

<p>TIME SILENT ALARM STANDARD (T1) ADDITIONAL (T2) RET MM</p>
--

6.2.2.1 Standard (T1) delay period


If “SYSTEM”, “CONFIGURATION”, “SILENT ALARM” and then “STANDARD (T1)” are selected, the following text will appear in the display:

<p>TIME SILENT ALARM (T1) TIME: mm MIN. ss SEC. RET MM</p>


mm = minutes

ss = seconds

The alarm delay T1 can be selected in the 10 sec. - 15 min. range. Default delay time is 2 min. See appendix A for more information.

Set in the values for T1, press  and the following text will appear in the display:

<p>TIME SILENT ALARM (T1) SELECTED TIME 02 MIN. 00 SEC. OK</p>

Press  and the system returns to the “SILENT ALARM” menu.

6.2.2.2 Additional (T2) delay period

If “SYSTEM”, “CONFIGURATION”, “SILENT ALARM” and then “ADDITIONAL (T2)” are selected, the following text will appear in the display:

TIME SILENT ALARM (T2) TIME: mm MIN. ss SEC.	RET MM
---	---------------

mm = minutes
ss = seconds

The alarm delay T2 can be selected in the 1-30 min. range.
See appendix A for more information.
Default delay time is 10 min.

Set in the value for T2, press **?** and the following text will appear in the display:

TIME SILENT ALARM (T2) SELECTED TIME 10 MIN. 00 SEC. OK
--

Press **?** and the system returns to the “SILENT ALARM”-menu.

BU-units

6.2.3 BU-units (the number of BU-70/BU-100 connected)

When BU-units (display units) are connected to the system, the number of these units must be specified in the menu. This does not apply to units controlled by control outputs (BU-65, BU-66).

If “SYSTEM”, “CONFIGURATION” and then “BU-UNITS” are selected, the following text will appear in the display:

CONFIGURATION BU-UNITS NO. OF UNITS: XX	RET MM
--	---------------

Enter number of BU-units and press the **?** key.
The number of units may also be defined and programmed within the custom data E-prom.

6.2.4 *DYFI*-changes

The analogue signals from the detectors are processed within the control panel by the *DYFI*-functions. The “*DYFI-CHANGES*” function enables the operator to change certain parameters.

Select “SYSTEM”, “CONFIGURATION” and then “*DYFI-CHANGES*”. The following text will appear in the display:

DYFI CHANGES ALARM PREWARNING FILTER RET MM

6.2.4.1 Alarm (change the alarm level)

If there is a need to change the alarm level for one or more detector addresses, select “SYSTEM”, “CONFIGURATION”, “*DYFI-CHANGES*” and then “ALARM”. The following text will appear in the display:

DYFI CHANGES ALARM ADDRESS: 0000 RET MM
--

If the address 0001 is selected and the **?** key is pressed, the following text will appear in the display:

ALARM LIMIT ADDRESS 0001 STATUS NORMAL NORMAL HIGH LOW RET MM

In the upper line of the display the present status of the selected address is shown. The changing of this status is made by moving the cursor, by means of the arrow keys, to the status required and pressing the **?** key.

NORMAL means that the address has normal (standard) alarm level. (ALI=5). HIGH means that the detector requires more smoke to raise an alarm. However, it is still well within accepted limits for detection. (ALI=7). LOW means that the detector requires less smoke to raise an alarm (ALI=3).

Be aware!

The prewarning level will also follow the alarm level.

6.2.4.2 Prewarning (on or off)

The prewarning function may be turned off or on (disabled or restored) for individual detector addresses.

If “SYSTEM”, “CONFIGURATION”, “*DYFI-CHANGES*” and then “PREWARNING” are selected, the following text will appear in the display:

DYFI CHANGES PREWARNING ADDRESS: 000<u>0</u>	RET MM
---	---------------

If address 0001 is selected the following text will appear in the display:

PREWARNING ADDRESS 0001 STATUS RESTORE RESTORE DISABLE	RET MM
---	---------------

RESTORE - the detector will give a prewarning indication when that level is reached.

DISABLE - the detector will not give a prewarning indication.

Select function in question and press the **?** key. Status will now be updated.

6.2.4.3 Filter (Changes of filter constant)

The *DYFI*-filter constant processes the analogue value of detectors and controls the speed at which the alarm indication will be raised.

All detectors connected to the same loop have the same *DYFI*-filter constant.

The *DYFI*-filter constant can only be changed on a loop-by-loop basis.

If “SYSTEM”, “CONFIGURATION”, “*DYFI-CHANGES*” and then “FILTER” are selected, the following text will appear in the display:

DYFI CHANGES FILTER LOOP NO: 00	RET MM
--	---------------

Select the loop number by means of the arrow keys and press the **?** key, the following text will appear in the display:

FILTER CONSTANT LOOP 00 STATUS NORMAL NORMAL LONG	RET MM
--	---------------

Normal indicates that the control panel will allow an alarm indication to be raised after a longer processing period. This means that the devices must be in an alarm condition for much longer giving a greater degree of resistance to unwanted alarms.


6.2.5 Battery-voltage (setting of warning level of low battery voltage)

When the battery voltage is lower than the pre-set level, the “FAULT”-indication lamp on the front panel will light and the internal buzzer will activate.

If “SYSTEM”, “CONFIGURATION”, and then “BATTERY-VOLTAGE” are selected, the following text will appear in the display:

CONFIGURATION BATTERY VOLTAGE LIMIT LIMIT: 25,5 VOLTS	RET MM
--	---------------

The warning limit of low battery voltage can be changed from 23,0 Volt to 26,9 Volt. Standard value is 25,5 Volt.

Reduce or increase the warning level by means of the ↓ ↑ keys and then press the  key.


6.2.6 Pocket Pager (configuration)

Data from the Fire Alarm Control Panel can be transmitted to the Pocket-Pager-system by use of the standard ESPA 4.4.4 protocol. Communication channel 2B has to be configured for the ESPA-protocol, (see section 2.4: “DIP-switch S201”), and the comm. channel 2B has to be set on the BSL-100. (See section 3.4: “Optional data comm. module BSL-100”).


If “SYSTEM”, “CONFIGURATION” and then “POCKET-PAGER” are selected, the following text will appear in the display:

MESSAGE TRANSFERRED TO POCKET-PAGER AL AL/FA AL/PW AL/FA/PW	RET MM
--	---------------

AL = Fire alarm **AL/PW** = Fire alarm / prewarning
AL/FA = Fire alarm / fault **AL/FA/PW** = Fire alarm/ fault / prewarning

Select the information which shall be transmitted to the Pocket-Pager system by means of the arrow keys and press the  key.
The following text will then appear:

CONFIG. POCKET-PAGER ADDRESS FIELD NUMBER OF CHARACTERS (1-5):4
--

Different types of Pocket-Pager systems use a different number of digits for the addressing of receivers. Select the required number between 1 and 5 and press .

It is possible to transfer three different message types: ALARM, FAULT and PREWARNING up to 5 different addresses.

Some Pocket-Pager systems operate with A and B addresses on the receivers. The address A may be the individual receiver and the address B may be a group of receivers.

The ALARM, FAULT and PREWARNING messages can be sent to both individual and group of receivers.

Those addresses to which the selected messages (ALARM, FAULT and PREWARNING) are to be sent, must be configured. In addition the system dependent parameters such as BEEP, TYPE and PRIOR are to be configured for every category of messages selected to be sent. (Information about these parameters are in the Pocket-Pager System handbooks).

Eg. If ALARM is selected to be transferred from the control panel to the Pocket-Pager System, the following text will appear in the display:

```

CONFIG. POCKET-PAGER   FIRE ALARM
ADDR.: .0000 .0000 .0000 .0000 .0000 B

```

Configure the address no. (individual / group) that are to receive the ALARM message by means of the arrow-keys.

When all necessary addresses are selected, move the cursor to the very left hand side, and the following text will appear in the display:

```

CONFIG. POCKET-PAGER   FIRE ALARM
CALL PARAM.: 'BEEP':4 TYPE:3 PRIORITY: Y

```

See appendix E for information about these parameters: (Parameters will vary according to manufacturer).

When addresses and parameters for the messages ALARM, FAULT and / or PREWARNING are config., press ↵ and the following text will appear in the display:

```

CONFIG. POCKET-PAGER
TEXT?           YES           NO

```

YES = custom designed text will be sent to the Pocket-Pager System.

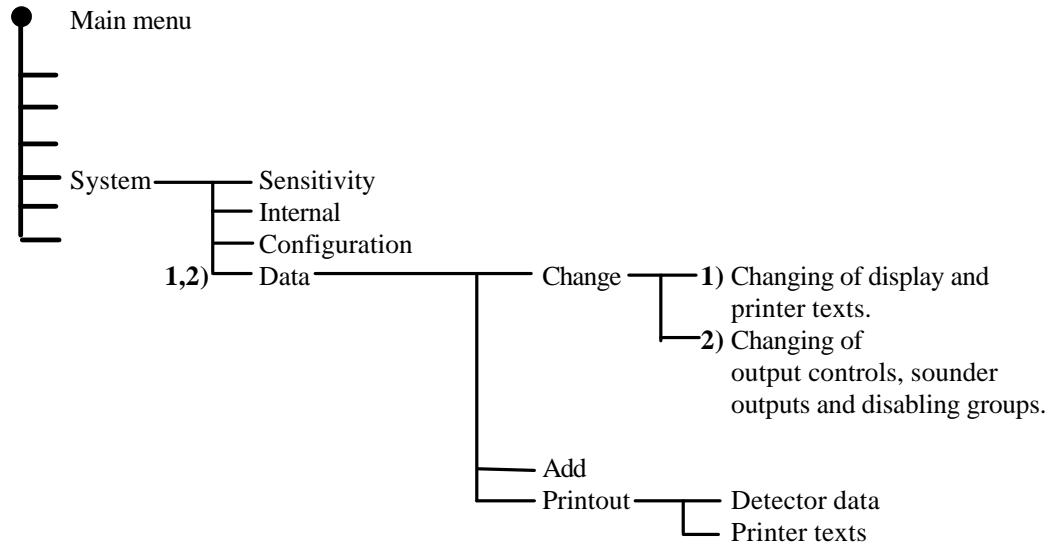
NO = only address no. will be sent to the Pocket-Pager System.

Select YES / NO and press ↵ and the system will return to the "CONFIG. POCKET-PAGER"-menu with possibility to return to main menu.

Data

6.3 System-Data (password protected)

Changing of display and printer texts are password protected on operators level (1). Changing of output controls, alarm outputs and disabling groups are password protected on service level (2).



All changes and additions to custom designed text, controls, alarm outputs, groupings and printer texts can be implemented in this function. A print-out of all custom text data / site data can also be made by using this function. The function is password protected.

Note! Changing of addresses between programmed zones is not possible through the key-pad.

By selecting “SYSTEM” and then “DATA” after having input the password, the following text will appear in the display:

DATA			
CHANGE	ADD	PRINTOUT	RET MM

Select the function in required by means of the arrow keys and press the **?** key.

6.3.1 Change (site data)

The “CHANGE” function gives possibilities for changing the existing data. Password level 1 only for changing display and printer texts. Password level 2 gives possibilities to change all custom data.

The function has limited capacity. Max. 20 addresses can be changed or added. When selecting “SYSTEM”, “DATA” and “CHANGE” the following text will appear in the display:

```
CHANGE SITE DATA
ADDRESS: 0000 RET MM
```

When the addresses in question is selected by means of the arrow key, press the **?** key.

6.3.1.1 Display text - Change

(Password protected on level 1).

The customised designed text will appear in the display eg.:

```
SITE DATA ADDRESS 0001
0001 LABORATORY 1. FLOOR. ROOM 3. B
```

By means of the two arrow keys $\leftarrow \rightarrow$ the cursor is moved to left or right. The changes are carried out by moving the cursor to the letter or figure to be changed and pressing the $\downarrow \uparrow$ arrow keys. Letters in alphabetic order, figures and special signs scroll every time one of the two keys is pressed.

After changing the display text, move the cursor to the end of the line and then the reference number for the printer text will appear in the display (if you are working on password level 1).

If you are working on password level 2, the output control data will appear on the display when moving the cursor to the end of the line.

6.3.1.2 Printer text - Changes

(Password protected on level 1)

```
SITE DATA ADDRESS 0001
PRINTER TEXT 0001 B Y
```

Changes the ref. number for the printer text and move the cursor to the end of the line. The following text will appear in the display:

```
SITE DATA ADDRESS 0001
SAVE-NEW-DATA ? RET MM
```

Keep the cursor in position “SAVE-NEW-DATA” and press **?** key. Changing of output controls and alarm outputs require password level 2 (service level).

6.3.1.3 Control outputs - Changes

Password protected on service level (level 2). When the correct letters and figures are set in the display text, move the cursor to the end of the line and the following text will appear in the display:

<p>SITE DATA ADDRESS 0001 OP 001 000 000 000 000 000 000 000 B Ý</p>

Each address can be programmed to control up to 16 control outputs. The display picture above shows the first 8 control outputs related to this address. The change(s) is carried out as described above by means of the arrow key. The change must be typed as a three digit number (the control output number).

By moving the cursor to the very right hand side position and pressing the right arrow key once more, the last 8 control outputs related to this address are shown in the display:

<p>SITE DATA ADDRESS 0001 OP 000 000 000 000 000 000 000 000 B Ý</p>

Changes are carried out as described above.

6.3.1.4 Alarm output - Changes

Alarm (Evacuate) Signals.

If changes are to be made for the alarm outputs from the address in question, move the cursor to the very right hand side of the display picture shown on the bottom of the previous page and press the ⇒ key once more.

The following text will appear in the display:

<p>SITE DATA ADDRESS 0001 SO AL 01 00 00 00 00 00 00 00 00 00 B Ý</p>
--

Each address can be programmed to control up to 20 alarm outputs (AK-outputs). This display picture shows the first 10 (of 20) alarm outputs controlled by this address. The programming can be changed the same way as described in sec. 5.3.1.3. - “Control output - Changes”.

If the cursor is moved to the very right hand side of the display picture and the ⇒ key is pressed once more, the last 10 (of 20) alarm outputs will be indicated in the display. The text in the display will be just like the one shown in the picture above. The program may be changed in the same manner as described in sec. 5.3.1.3. “Control outputs - changes”.

‘Warning’ (Alert) Signals.

The alarm outputs (AK-outputs) can be programmed to give a different signal in areas / floors located adjacent to the area where a detector / address is in alarm condition.

If the cursor in the previous display picture is moved to the very right hand side of the display picture and the ⇒ key is pressed once more, the following text will appear in the display:

SITE DATA ADDRESS 0001
SO WA 00 00 00 00 00 00 00 00 00 00 00 00 B Ý

This display picture shows the first 10 (of 20) alarm outputs which can be programmed as “adjacent area”. The last 10 alarm outputs will appear in the display as previously described.

Note ! All 20 alarm outputs (AK-outputs) can be selected to give an alarm signal or a “warning” signal. However, the same alarm output no. (AK-output) cannot be programmed to both options for the same detector.

6.3.1.5 Disabling group / Printer text - Changes

If the cursor is moved to the very right hand side of the display picture shown on the bottom of the previous page, and the ⇒ key is pressed once more, the following text will appear in the display:

SITE DATA ADDRESS 0001
DISABLE GROUP 1 0 0 PRINTER TEXT XXX B Ý

(The three “group disablements” are activated by connecting the inputs (L3.14,15,16) to 0V via an external switch).

The same address can be programmed into all 3 groups. The groups are indicated as GROUP 1, GROUP 2 and GROUP 3. If the indication reads GROUP 000, it means that the address in question has not been programmed into any group.

The number after PRINTER TEXT refers to the index no. of the text list stored for this function.

Changes in the “set-up” are carried out by means of the arrow keys as described previously.

If the cursor is moved to the very right hand side of this display picture and the ⇒ key is pressed once more, the following text will appear in the display:

6.3.1.6 Save New Data

SITE DATA ADDRESS 0001		
SAVE-NEW-DATA?	RET MM	Y

Select "SAVE-NEW-DATA" and press the **Y** key.

All new data will now be stored in the battery-RAM and will remain in the system even in the event of a power failure.

When the **Y** key is pressed, the next address will automatically be presented in the display. Changes to this address may now be carried out.

If no more changes are to be made, move the cursor to MM and press the **Y** key. Then the operator will be back to the start of the main menu.

*However, if there is a need for adding data, move the cursor to RET and press the **Y** key. The system returns to the "DATA"-menu.*

6.3.2 Add site data (New addresses)

Select "SYSTEM", "DATA" and then "ADD", and then the following text will appear in the display:

ADD SITE DATA SELECT COPY FROM	
ADDR. 0000 TO ADDR. 0000	RET MM

To make the adding of data as simple as possible, this sequence is based on copying existing text from other addresses to the addresses in question. Move the cursor to FROM ADDR and set the address number to be copied. Then move the cursor to TO ADDR and set the address number to be added.

If it is necessary to change the copied text output controls or sounder outputs, return to the "CHANGE" function and proceed as described in section 5.3.1.

6.3.3 Printout site specific data

If "SYSTEM", "DATA" and then "PRINTOUT" are selected, the following text will appear in the display:

PRINTOUT SITE SPECIFIC DATA		
DETECTOR-DATA	PRINTER-TEXT	RET MM

6.3.3.1 Printout detector data

If “DETECTOR-DATA” is selected, the following text will appear in the display:

PRINTOUT SITE DATA FROM ADDR. 0000 TO ADDR. 0000	RET MM
---	---------------

By means of the arrow keys it is possible to select the address data to be printed. Move the cursor to FROM ADDR and set the starting address, then move the cursor to TO ADDR and select the last address. Then press the **?** key for printout function. When completed move the cursor to RET (to return to previous function) or MM (to return to main menu) and press the **?** key.

With password level 1 display texts and reference numbers for printer texts are printed out.

With password level 2 all custom programmed information are printed out.

6.3.3.2 Printout printer-text

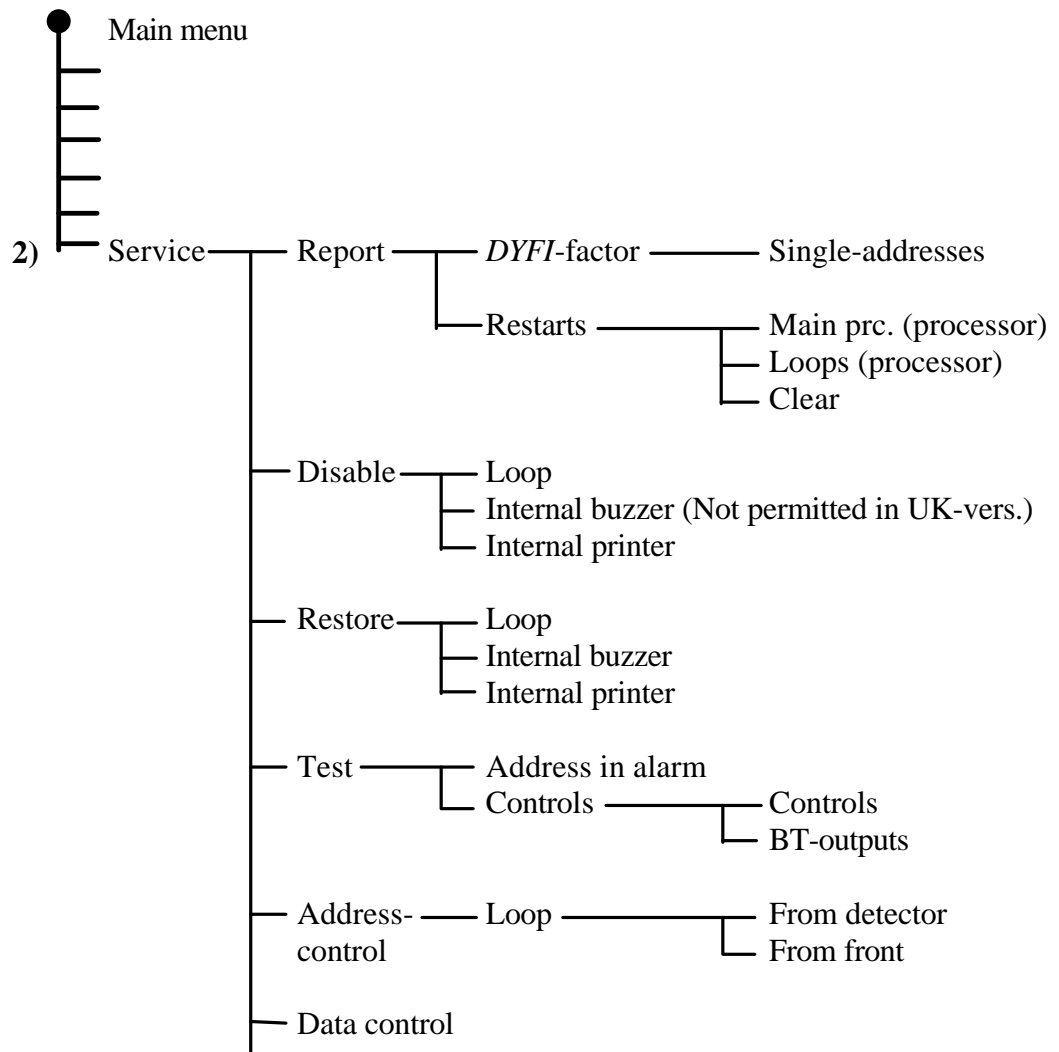
If “PRINTER-TEXT” is selected the following text will appear in the display:

PRINTOUT PRINTER-TEXT FROM NO. 000 TO NR. 000	RET MM
--	---------------

By means of the arrow keys it is possible to select the printer-text to be printed. Move the cursor to FROM NO. and set in the first no. Move the cursor to TO NO. and select the last no. Then press the **?** key and the selected printer-text will be printed out. Select RET to return to “PRINTOUT DATA”- menu or MM to return to the main menu.

Service

7. Service (Password protected on service level)



2) Service is password protected on service level.

When selecting the “SERVICE”-function and entering the password, the following text will appear in the display:

```
SERVICE:
REPORT  DISABLE  RESTORE  TEST  B
```

As indicated in the display by the ↓ arrow, more text will appear if the ↓ key is pressed:

```
SERVICE:
ADDRESS-CONTROL  DATA CONTROL  MM Y
```

Report

7.1 Service-report

When selecting “SERVICE” and then “REPORT”, the following text will appear in the display:

SERVICE REPORT DYFI-FACTORS RESTARTS	B
---	----------

7.1.1 *DYFI*-factors

By selecting “SERVICE”, “REPORT” and then “*DYFI*-FACTORS”, the following text will appear in the display:

SERVICE REPORT <i>DYFI</i>-FACTORS SINGLE-ADDRESS	RET MM
--	---------------

7.1.1.1 Single-address

By selecting “SINGLE-ADDRESS” the following text will appear in the display:

SERVICE REPORT <i>DYFI</i>-FACTORS ADDRESS: 0000	RET MM
---	---------------

In this display picture the operator can select any address connected to the system. If address number 0001 is selected the following text will appear in the display:

DYFI.FACT. ADDR: 0001	NEXT?	RET MM
ANA:056 MATS:05 PF:000	ALI:5 FATS:07:09	

This function gives access to stored data for the address in question. The letter given in the display means:

- ANA: The current stored analogue value of the detector (equal to ATS value).
- MATS: The maximum measured value of the detector (ATS) during the last 24 hours.
- PF: The detector “Performance factor” during the last 24 hours. This factor is an indication of the stability.
- ALI: The alarm limit index of the detector. This index expresses if the alarm limits is “NORMAL”(5), “HIGH”(7) or “LOW”(3).
- FATS: Filtered ATS-value measured every 23rd hour. This value indicates the status of the pollution factor. (9:00 indicates polluted device needing service).

The upper line of the display picture contains the word “NEXT?”. The cursor is automatically moved to this word. If the **?** key is pressed, the information concerning the next detector / address will be shown in the display.

7.1.2 Restarts

By selecting “SERVICE”, “REPORT” and then “RESTARTS”, the following text will appear in the display:

SERVICE REPORT RESTARTS MAIN PRC: NNN LOOPS: nnn CLEAR RET MM

NNN: Numbers of restarts of the main processor since last reset of the control panel.

nnn: Numbers of restarts of the loop processor since last reset of the control panel.

Numbers of restarts will be reset by pressing the **?** key when the cursor is in RESET position. Numbers of restarts of the main processor and the loop processor should be 0. Select RET or MM and press **?**.

Disable

7.2 Service-Disable

As long as parts of the system are disabled, the amber (yellow) lamp “FUNCTION DISABLED” on the front of the panel will light.

If “SERVICE” and “DISABLE” are selected, the following text will appear in the display:

SERVICE DISABLEMENTS LOOP INT.BUZZER INT.PRINTER RET MM

7.2.1 Disablement of loop(s)

When disabling a loop, the addresses connected to this will give no indications of alarm, prewarning or fault.

By selecting “SERVICE”, “DISABLE” and then “LOOP”, the following text will appear in the display:

DISABLEMENT OF LOOP(S) LOOP NO: <u>00</u> RET MM
--

The number of loops to be disabled are freely selectable by using the arrow keys. Then the loop number is selected and set, press the **?** key and the next display picture will be shown:

DISABLEMENT OF LOOP(S) DISABLEMENT OF LOOP NO. 00 OK
--

This picture informs the operator that the disablement of the loop in question has been carried out.

Press **?**, and another loop can be selected for disablement.

When all selected loops are disabled, select RET or MM.

Note! All disabled loops must be restored after ending the service-function.

7.2.2 Disablement - Internal buzzer

Not permitted in UK-version

**SERVICE DISABLEMENT
SELECTED FUNCTION NOT PERMITTED**

7.2.3 Disablement - Internal printer

When selecting “SERVICE”, “DISABLE” and then “INTERNAL PRINTER”, the following text will appear in the display:

**SERVICE DISABLEMENTS
DISABLEMENT EXECUTED**

The internal printer is now disabled, and must be manually restored.

Press the **?** key, and the system returns to the “SERVICE-DISABLEMENT”-menu, it is then possible to return to main menu.

Restore

7.3 Service-Restore

The amber (yellow) lamp “FUNCTION DISABLED” will switch off only when all parts of the system have been restored.

When selecting “SERVICE” and “RESTORE” the following text will appear in the display:

**SERVICE RESTORE
LOOP INT.BUZZER INT.PRINTER RET MM**

7.3.1 Restore-Loop

When selecting “SERVICE”, RESTORE” and then “LOOP”, the following text will appear in the display:

```
RESTORE LOOP
LOOP: 00                RET MM
```

Select the loop number and press **↵**.

The following text will appear in the display:

```
RESTORE LOOP
RESTORE COMPLETED
```

Press **↵**, and the next loop can be restored.
When all loops are restored, select RET or MM.

7.3.2 Restore - int. buzzer

Not permitted in UK-version.

```
SERVICE RESTORE
SELECTED FUNCTION NOT PERMITTED
```

7.3.3 Restore - internal printer

By selecting “SERVICE”, “RESTORE” and then “INT.PRINTER”, the following text will appear in the display:

```
SERVICE RESTORE
RESTORE COMPLETED
```

Press the **↵** key, and the system will return to the “SERVICE RESTORE”-menu, and it is possible to return to the main menu.

Test

7.4 Service - Test



Before any testing of the system is carried out it is important that all halon and / or extinguishing systems are made safe. Other plant functions may also need isolating.

This function enables the operator to carry out various system test functions. When selecting “SERVICE” and “TEST” the following text will appear in the display:

```
SERVICE TEST
ADDRESS IN ALARM  CONTROLS  RET MM
```

7.4.1 Address in alarm

Note! When an address gives a simulated alarm the indicator on the detector will light, and all programmed control outputs and functions will be activated.

By selecting “SERVICE”, “TEST” and then “ADDRESS-IN-ALARM” the following text appear in the display:

```
TEST ADDRESS IN ALARM
ADDRESS: 0000                                RET MM
```

Select the address by means of the **?** key. The following text will appear in the display:

```
TEST ADDRESS IN ALARM
AUTOMATIC  MANUAL
```

Here the operator must select between AUTOMATIC (automatic detector) or MANUAL (manual call-point) by means of the arrow keys.

The fire alarm control panel handles the two types differently regarding the filtering process. Manual call-points give alarm with minimal delay.

When the selection is made, the following text will appear in the display:

```
TEST ADDRESS XXXX IN ALARM IN PROGRESS
WAIT
```

The selected address, XXXX, will now enter alarm condition. Only one address at a time can be set to the alarm condition.

The “SOUNDER SILENCE” and “RESET” procedure must be operated if more than one address is to be tested. Select “SERVICE” once more, and then repeat the procedure described above.

7.4.2 Test - Controls (Programmed outputs)

By selecting “SERVICE”, “TEST” and “CONTROLS” the following text will appear in the display:

```
TEST CONTROLS
CONTROLS    BT-OUTPUTSRET MM
```

7.4.2.1 Test controls (1-240)

If the cursor is moved to “CONTROLS” by means of the arrow keys and the **↵**-key is pressed, the following text will appear in the display:

```
TEST CONTROLS
CONTROL: 000                                RET MM
```

Select the control-output number to be tested by means of the arrow keys.

If control-output 001 is selected and the **↵** key is pressed, the following text will appear in the display:

```
TEST OF CONTROL 001 IN PROGRESS
WHEN COMPLETED PRESS ↵
```

The test is active (control-output is active) as long as the text is shown in the display. If the **↵** key is pressed, the next control-output can be selected.

If control-output which not is available is selected, the following text will appear in the display:

```
TEST CONTROLS
CONTROL XXX DOES NOT EXIST
```

Press the **↵** key and return.

7.4.2.2 Test BT-output(s) (AUX, DHM)

If the cursor is moved to “BT-OUTPUT” by means of the arrow keys and the **↵** key is pressed, the following text will appear in the display:

```
TEST OF BT-OUTPUT(S) IN PROGRESS
WHEN COMPLETED PRESS ↵
```

AUX- and DHM-outputs are active as long as the text is shown in the display. The test will end by pressing the **↵** key.

When selecting “SERVICE” and “ADDRESS-CONTROL” the following text will appear in the display:

SERVICE ADDRESS-CONTROL LOOP: 00	RET MM
---	---------------

In this display picture it is possible to select the loop number of which the detector addresses are to be checked by using the arrow keys.

This function is the “OLD” spray bottle test. (Walk test).

This means that all addresses in the loop can be set into the alarm condition by inserting test gas or test smoke into the detector chambers or may also be simulated from the front panel.

By selecting loop 00 the following text will appear in the display:

SERVICE ADDRESS-CONTROL LOOP 00 FROM DETECTOR	FROM FRONT	RET MM
--	-------------------	---------------

7.5.1 Address-control from detector

The address can be set into the alarm condition from either the panel front or from the detector. When “FROM DETECTOR” is selected all detectors exposed to test gas or smoke will give a real alarm signal and illuminate the device led.

When a loop is set in this mode, the alarm level (ALI) is changed so that the detector will react much quicker than standard:

$$ALI = \text{Measured ATS} + 2 \text{ ATS}$$

After a detector has entered alarm condition, it is automatically reset after 20 seconds. The fire lamp will then extinguish.

The sounder outputs are activated in a special mode so they will only give a short pulse signal every 8 seconds, until RESET this gives an audible check when the device is in alarm.

When the test procedure is active the following functions do not operate:

- * BMA-, BMF- and BMFO-outputs.
- * No control outputs are influenced by this test.
- * Programmable outputs (BSJ-units).
- * No alarm information sent on serial outputs to AutoMaster systems. (Loop no. in test only transmitted).
- * Test not logged in stored events.

While the test is running, the following text will appear in the display:

SERVICE ADDRESS-CONTROL LOOP 00 ACTIVE

WHEN COMPLETED PRESS **↵**

SERVICE ADDRESS-CONTROL LOOP 00
SHOW RESULTS RET MM

If “SHOW RESULTS” is selected, the following text will appear in the display:

CONTROL RESULTS ADDR.CONTROL LOOP 00
PRINTER DISPLAY RET MM

The presentation can be on the printer or in the display. This selection is made by using the arrow keys.

By selecting display the following text will appear in the display:

The example shows 10 of total 60 detectors tested on the loop.

CONTROL RESULTS ADDR.CONTROL LOOP 00
10 alarms from total 60 addresses

However, if the presentation is to be on the printer, the alarms will be printed out showing the order they were operated.

When a display presentation is selected the registered alarms are also presented in the same order as they occurred.

As indicated in the display up to 10 addresses having been in alarm condition are presented in the lower line. If more addresses are to be presented, press the **↓** key. Continue this sequence until the last address in alarm condition is presented. Press the **↵** key and the display will return to the start of the “SERVICE” “ADDRESS-CONTROL”-function.

7.5.2 Address-control from front

When selecting “SERVICE”, “ADDRESS-CONTROL” and selecting loop 00, the following text will appear in the display:

SERVICE ADDRESS-CONTROL LOOP 00		
FROM DETECTOR	FROM FRONT	RET MM

If “FROM FRONT” is selected the following text will appear in the display:

SERVICE ADDRESS-CONTROL LOOP 00	
CONTROL DETECTOR: 00	FINISHED

In this display picture it is possible to select the address number to be checked by using the arrow keys. When the address number is selected, press the **?** key, and the function is started.

The cursor will puls as long as the function is working. When the detector enters the alarm condition, the red “FIRE”-lamp on the control panel front lights steady. The indicator on the detector will light until the function is reset / ended.

At an alarm condition on the selected address the following text will appear in the display with customised text:

... customised text information...	
CONTROL DETECTOR: 01	FINISHED

Without customised text:

ADDRESS NO: 0001	
CONTROL DETECTOR: 0001	FINISHED

If “FINISHED” is selected, the following text will appear in the display:

SERVICE ADDRESS-CONTROL LOOP 00		
SHOW RESULTS		RET MM

The presentation of the results is described in the “FROM DETECTOR” function.

Data control

7.6 Service-Data control

This function enables the operator to test programmed alarm- and control-outputs for the selected address. **Both the alarm- and control-outputs are tested simultaneously.** This means that the alarm outputs must be disabled if only the control outputs are to be tested. Vice-versa the control outputs must be disabled if only the alarm outputs are to be tested.

When selecting “SERVICE” and then “DATA-CONTROL”, the following text will appear in the display:

SERVICE DATA-CONTROL			
TRANSFER COMM.PORT?	YES	NO	RET MM

Select YES if you want to transfer the address to be tested through the communication port (ASAP). If the cursor is moved to YES or NO and the **?** key is pressed, the following text will appear in the display:

SERVICE DATA-CONTROL	
ADDRESS 0000	RET MM

Select address to be checked and press **?**.

The selected address will transmit an alarm to the data output line. Possible “AND”-function can be tested in this sequence. After having set the address number 0001, it is possible to set more addresses.

The following text will appear in the display:

SERVICE DATA-CONTROL ADDRESS 0001	
NEXT ADDRESS: 0001	CLEAR


When the test sequence for these selected addresses is complete, move the cursor to CLEAR and press the **?** key. The display picture will then change back to the starting picture of this function. Now a new sequence, involving other addresses can be carried out.

Appendix A - Country variations

A.1 Straps / Program code

Within the menu / system text EPROM's there is a code that must correspond to the code set with the function code straps (jumpers) W14, W15, W16 and W17 located on the main board BSA-100.

The function code is used inside the system program to perform the required functions for that particular country (or market, e.g. SOLAS or OFFSHORE).

Country	Program code Menu program	Function code															
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Norway	P5-BS100-3N20	X								X							X
Sweden	P5-BS100-3S20		X							X	X						X
Denmark	P5-BS100-3D20				X						X						X
England	P5-BS100-3E20				X					X		X					X
Finland	P5-BS100-3F20					X				X							X
Holland	P5-BS100-3H20							X			X						X
Italy	P5-BS100-3I20	X						X	X								X
Hungary	P5-BS100-3U20		X							X	X						X
Germany	P5-BS100-3T20	X								X			X				X
France	P5-BS100-3A20	X								X					X		X
Spain	P5-BS100-3P20	X								X						X	X
Polen	P5-BS100-3L20	X								X							X
 Strapping field BSA-101 Ref. fig. 2.6	W14	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	W15	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0
	W16	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0
	W17		1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

0

- *) Function code 8 is SOLAS version
 **) Function code 15 is OFFSHORE version
 I = Installed strap
 0 = Open strap

Function codes and belonging functions

Function code	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Function no.	0	7	2	1	1	5	0	0	16	7	0	1	0	0	0	16
Function number		12	3	4	3	11			22	12		4				22
See description		15	14	8	6	15			23	15		10				24
		18	15	9	13					18		21				25
		19	17	10	15					20		23				
		20	23	16												
				21												
				23												

Menu Program

P5 - BS100 - XNXX

- Version no.
- Language (N = Norwegian)
- Program no.
- Control panel type
- Menu program

System Program

P1 - BS100 - XXX

- Version no.
- System program

Functions:

Function no.	Description of function
0	Standard function
1	LED no. 2, Lights up when alarm sounders are disabled
2	LED no. 2, Lights up when address control is activated
3	LED no. 3, Lights up when front door is open
4	LED no. 4, Lights up when BMA is disabled
5	Mains LED, Lights when the central panel has working voltage 220 VAC or 24 VDC
6	Mains LED, Lights when the central panel is in normal condition
7	LED, "More alarms" is pulsating when more alarms is active, and switched off at the first registered alarm in the scrolling function
8	Internal buzzer gives signal when detectors are disabled. Silence by pressing silence sounder button.
9	Internal buzzer gives signal when BMA and AK are disabled. Can not be silenced by silence sounder button.
10	Internal buzzer gives signal after pressing silence sounder button in alarm condition.
11	Internal buzzer gives signal every 4th minute when the front door is closed and the central panel is in abnormal condition
12	Disabling of internal buzzer when the front door is open
13	Disabling of BMA, BMFO and BMF when the front door is open
14	Disabling of BMA, BMFO, BMFO and output control when the front door is open
15	Output no. 10 (SP) is active when the front door is open
16	System message is given 1 minute after interrupt of 220 VAC
17	System message is given 30 minutes after interrupt of 220 VAC
18	Silence sounders and reset buttons have to be operated for more than 2 seconds
19	Only 4 digit of text on the first line, additional text on the second line
20	BMF is active in normal condition and "OPEN" in fault condition. Resets to active at silence sounders.
21	Disabling of detectors and alarm sounders can be password protected on operator level in different countries
22	Alarm delay for marine installations (SOLAS)
23	Automatic disabling of detectors in alarm condition after reset has to be accepted within 10 seconds.
24	No automatic disabling of detector in alarm condition after reset
25	Reset time is programmed to be a minimum, also after alarm

Appendix A.2 - Function

A.2.1 Solas


Solas program version can be selected for all languages.


Verification before automatic disablement, see section 3.2 and 4.2 in “Operators handbook” - BS-100.

If one or more addresses are still in alarm condition after the RESET procedure, an operator acknowledge is required to have these addresses disabled.

At the end of the “RESET” procedure the following text will appear in the display:

**ADDRESS(ES) STILL IN ALARM
TO DISABLE PRESS  WITHIN 10 SECONDS**

If the  is not acknowledged within the limit of 10 seconds, new alarms will be given for these addresses.

By pressing the  key within the time limit, the address will automatically be disabled. To find the addresses concerned, the menu function “SHOW STATUS”, “DISABLEMENTS” should be used.

Alarm delay (T1, T2), see section 3.2 and 4.2 in “Operators Handbook”.

If the silent alarm input is active the alarm outputs will be delayed by period T1 at alarm from an automatic detector. In the standard version the additional alarm delay T2 will be started when the “SOUNDER SILENCE” button is pressed.

For the SOLAS version the alarm delay T2 will not be activated by operate “SOUNDER SILENCE” and the alarm output will be blocked.

This means that there will be no automatic alarm after ended alarm delay T1. If “SOUNDER SILENCE” is not operated, there will be an automatic alarm at the end of T1.

If more than one alarm is present within time limit of alarm delay (T1), the alarm delay will proceed unchanged from the first alarm and to the end of the selected alarm delay. If “SOUNDER SILENCE” is operated within selected delay, the AK/BMA-outputs will be blocked. If new alarms are registered after operating the “SOUNDER SILENCE”, a new delay period will start from the time the new alarm is registered.

If the AK/BMA-outputs are required to be activated the silent alarm input must be removed or a manual call-point operated.

A.2.2 LPC (England)

Disabling of loop (under service-menu) activates the internal buzzer.

If one or more addresses are still in alarm condition after “RESET” procedure, an operators acknowledge is required to have these addresses disabled by pressing the **?** key on the front panel (as SOLAS).
Disabling of the internal buzzer is not allowed.

Disabling the sounders through the menu will illuminate the “SOUNDERS DISABLED” lamp.

Disabling of the fire brigade output will illuminate the “FIRE BRIG. DISABLED” lamp.

A.2.3 Denmark

If one or more addresses are still in alarm condition after the “RESET” procedure, an operators acknowledge is required to have these addresses disabled by pressing the **?** key on the front panel (as SOLAS).

BMA, BMFO, BMF and output controls are disabled when the front door is open. System fault is given after 30 minutes interrupt of 220 VAC.

A.2.4 Sweden

Inverted BMF-output (active when there is voltage on the control panel).

Internal buzzer is disabled when front door is open.

Sounder silence and reset button must be pressed for more than 2 seconds to activate the function.

Custom specified address text is presented on line 1
line 2.

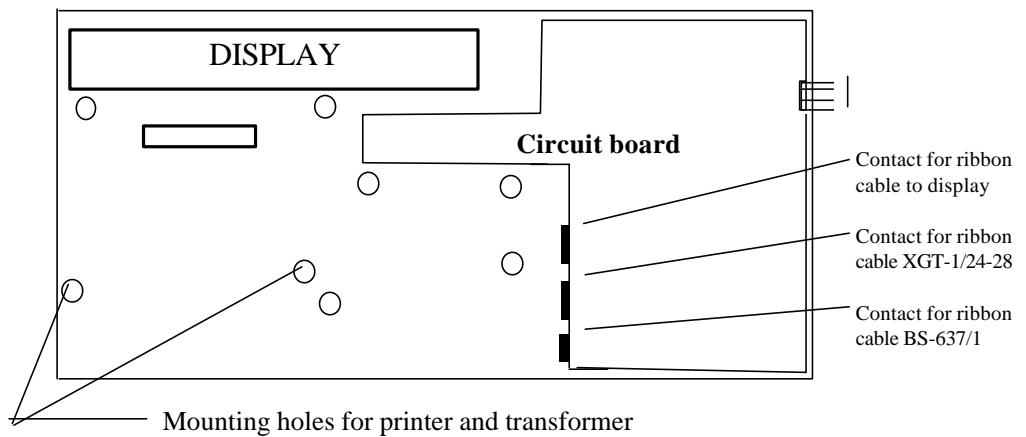
**Install
the optional
printer**

Appendix B - Printer

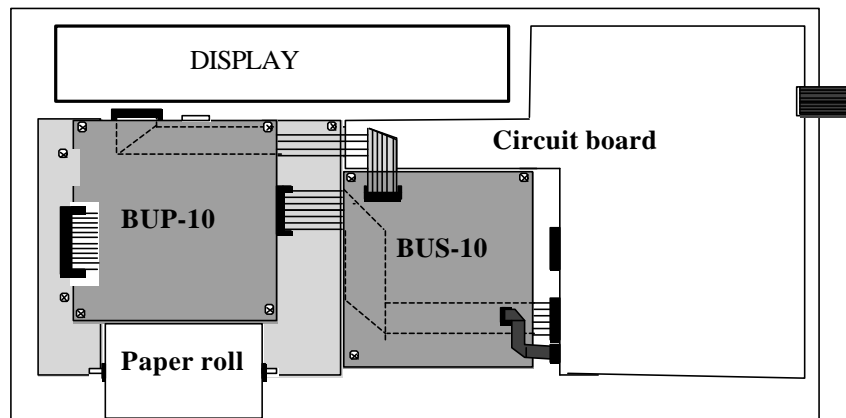
B1 Installing the printer

The fire alarm control panel BS-100 DYFI comes complete with fixings for installing the optional printer type BUP-10. The printer is delivered with all necessary accessories.

BUP-10 is installed on the rear side of the display panel door.



Before installing the printer, switch off the power!



1. Fit the printer as shown with the paper roll at the bottom ensuring that the paper is fed through the slot in the panel face.
2. Connect the ribbon cable XGT-1/24-28 from the printer to the circuit board.

Note: The ribbon cable is colour labelled on one side. The colour labelling has to point downwards when the cable is connected.

3. Connect the circuit board BUS-10 as shown, and connect the ribbon cable. Colour labelling as above.
4. Power up the system and check the operation of the printer by running the "front test"-function.

B2 Replacing the paper roll in the printer

If the printer is fitted, it is located on the inside of the control panel inner door.

- A: Open the control panel front door.
- B: Remove the empty roll by releasing the locking clip on the right-hand side of the paper roll shaft, and pull the shaft out to the other side. (See fig. 3).
- C: Let the free end of the new paper roll point downwards. Bend it and guide it into the printer paper slot in the lower end of the printer. (See fig. 3).
- D: Bend the end of the paper in an arrow shape to simplify the import into the printer paper slot.
- E: Put the new paper roll in its correct place, insert the paper roll shaft again and secure it by means of the locking clip.

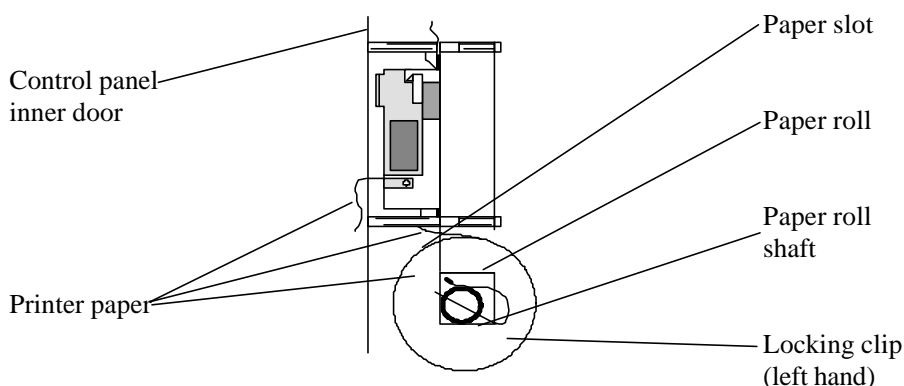


Fig. 3: Side view of the optional printer located at the rear side of the front door.

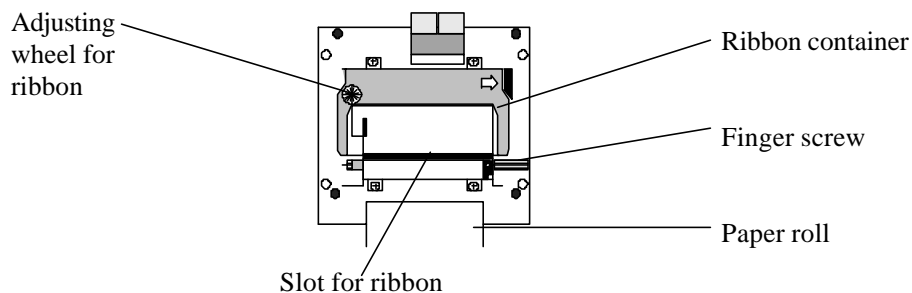


Fig. 4: Location of the finger screw on the printer

- F: Feed the paper manually through the printer by turning the finger screw.
- G: Close the control panel inner door.

B3 Replacing the carbon ribbon in the printer

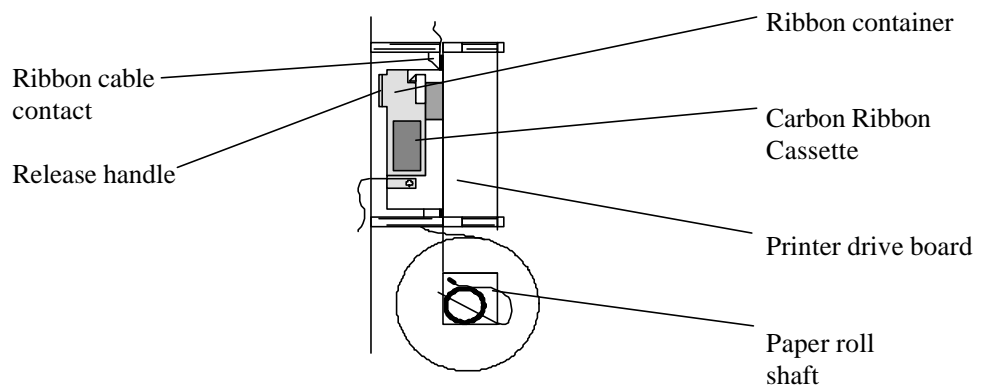


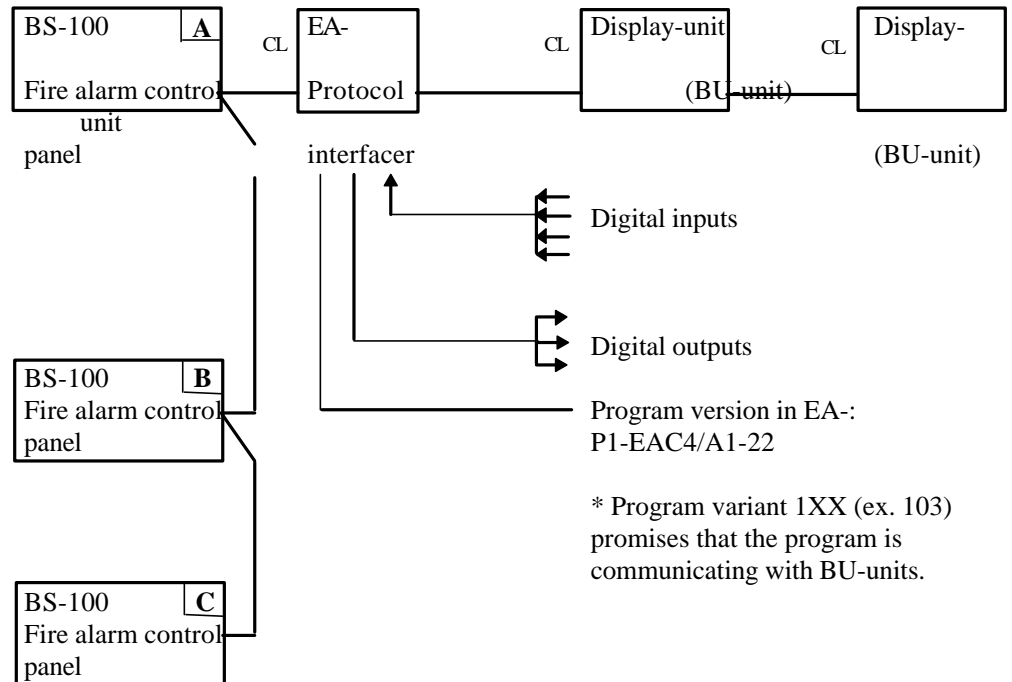
Fig. 5



Switch of all power on the control panel!

1. Remove the printer ribbon cable connections completely.
2. The ribbon container is removed by operating the release handle (fig.5).
3. Before a new ribbon is installed, tighten the ribbon by means of the adjusting wheel (fig. 4).
4. Locate the ribbon cassette adjusting wheel side first, and then the other side. Lock into position by pressing on the release-handle.
5. Check that the ribbon is in the correct position in the ribbon slot.
6. Crank the ribbon around by means of the adjusting wheel to be sure that it runs correctly.
7. Replace the printer and ribbon cables and set the power up.
8. Run the printer test function to be sure that everything is OK.

Appendix C - Multiple BS-100 / Control panels with common repeater units (BU-100 / 101 / 70).



There is no communication between the individual BS-100 control panel. Each individual BS-100 control panel gives warning about its own condition and relays this to the common BU-units.

(BU-units, common name for repeater units BU-100, BU-101 and BU-70).

- Custom designed texts within a special system program for comm. with BU-units.
- Digital in-/outputs can be used as supplement function from EA-.

The table below shows which operator buttons, indication lamps are fitted to the various BU-units.

Indication lamps	BU-100	BU-101	BU-70
H1 Indicator lamp	X	X	
H2 Indicator lamp	X	X	
H3 Indicator lamp	X	X	
Device(s) still in alarm cond.	X	X	
Prewarning	X	X	X
Fault	X	X	X
Function disabled	X	X	
Mains	X	X	X
More alarms	X	X	X
Operation buttons:			
More alarms	X	X	X
Sounder silence	X		
Sounder silence (buzzer)		X	X
Reset	X		

C.1 Alarm / Prewarning / Fault / More alarms

BU-units can be programmed to present fire alarm, prewarning and fault with text on the display.

C.1.1 Fire alarm from a BS-100

Fire alarm message (panel address, loop, detector no. or custom text) will only appear in the display of the BS-100 control panel which has registered the incident and on the BU-units.

BU-100 will present alarm from all detectors, BU-70 and BU-101 can be programmed into presentation zones.

Fire alarm message will only appear in the display of the BS-100 control panel even if the door is open.

Internal buzzer and Fire-indication lamps will be activated on the BS-100 control panel which registered the fire alarm and on the BU-units.

Only the BMA-output on the control panel which registered the fire alarm will be activated.

Only the control outputs on the BS-100 control panel which registered the fire alarm will be activated.

Only the sounders connected to the control panel which registered the fire alarm will be activated.

Alarm output on the EA- will be activated (output L57).

C.1.2 Prewarning

Prewarning message (panel address, loop, detector no. or custom text) will only appear in the display on the BS-100 control panel which registered the prewarning and on the BU-units.

If the front door is open on the BS-100 control panel, there will be no message in the display or transmitted to the BU-units. The message will appear when the door is closed.

Internal buzzer and PREWARNING indication lamps will be activated on the BS-100 control panel which registered the prewarning and on the BU-units.

Only the BMFO-output on the control panel which registered the prewarning will be activated.

Prewarning will be given on the BU-display depending of the programming. Prewarning output on the EA- will be activated (output L58).

C.1.3 Fault

Detector- / System faults registered on a BS-100 control panel will only give message to that control panel and on the BU-units. On the BS-100 control panel the fault message will appear in the display. Internal buzzer and FAULT indication lamp will also be activated.

If the door is open on the BS-100 control panel, there will be no fault message in the display. The message will appear when the door is closed.

On the BU-units the internal buzzer and the FAULT indication lamp will be activated. If programmed, text will appear in the display.

Fault output (not comm.fault) on the EA- will be activated (output L59).

Only the BMA-output on the control panel which registered the fault will be activated.

If a communication failure between the BS-100 control panel and the EA occurs, the fault message will be printed out on the printer on the BU-units. Comm.fault output BS-/EA- will be activated (output L60).

C.1.4 More alarms

The "MORE ALARMS" indication lamp will light on the BS-100 control panel which is registering more than one alarm. When there are two alarms on different BS-100 control panels, the "MORE ALARMS" indication lamp will not light.

The "MORE ALARMS" indication lamp on the BU-units will light if there are more than one alarm registered in the system. Two alarms from two different BS-100 control panels will activate the "MORE ALARMS" indication lamp on the BU-units.

C.1.5 Device(s) still in alarm cond.

After "RESET" the "DEVICE(S) STILL IN ALARM COND." indication lamp may light on the BS-100 control panel which still has addresses in alarm condition. If this lamp lights on one of the BS-100 control panels, it will also light on the BU-units.

C.1.6 Function disabled

The "FUNCTION DISABLED" indication lamp will only light on the control panel which is partly disabled. If this lamp is illuminated on one of the BS-100 control panels, it will also light on the BU-units.

C.1.7 Indication lamps H1, H2, H3

The indication lamps H1, H2 and H3 on the BS-100 control panel are controlled separately.

The indication lamps H1, H2 and H3 on the BU-units are controlled from the control outputs on the EA 2/3 (input L51, 52, 53).

C.2 Operation

C.2.1 Sounder silence

C.2.1.1 From fire alarm control panel

When “SOUNDER SILENCE” button on the BS-100 control panel which has registered the alarm is operated, all alarm devices connected to this control panel and the internal buzzer on the BU-units are switched off. If another BS-100 control panel also is in alarm condition, “SOUNDER SILENCE” also must be operated at that control unit.

C.2.1.2 From EA- or BU-100

If the “SOUNDER SILENCE” is operated from the EA 2/3 (separate input) or BU-100, all alarm devices and internal buzzers on all BS-100 control panels will be silenced.

C.2.2 Reset

C.2.2.1 From fire alarm control panel

When operating the “RESET” on a control panel in abnormal condition (all other control panels are in normal condition), this will reset the entire system. If another BS-100 control panel is in abnormal condition, operating of the “RESET” will only reset the control panel which is operated. To reset the entire system (BS-100 and BU-units) operate the last control panel in abnormal condition.

C.2.2.2 From EA- or BU-100

Operating of the “RESET” from EA 2/3 or BU-100 will reset the entire system.

C.2.3 More alarms

When operating the “MORE ALARMS” on the individual BS-100 control panels, it is only possible to scroll alarms registered in that particular BS-100 control panel which has been operated.

When operating the “MORE ALARMS” on BU-units, it is possible to scroll alarms registered in the entire system.

C.3 Disable / restore

Disablements on a BS-100 control panel will activate “FUNCTION DISABLED” only on this control panel and on the BU-unit(s).

Disablements will be stored in “STORED EVENTS” and only showed in the menu “SHOW-STATUS DISABLEMENTS” on the control panel where the disablement was carried out.

Disablements / restorations of address, zone, controls, sounders and Fire brigade can only be carried out on the individual BS-100 control panel.

C.4 System

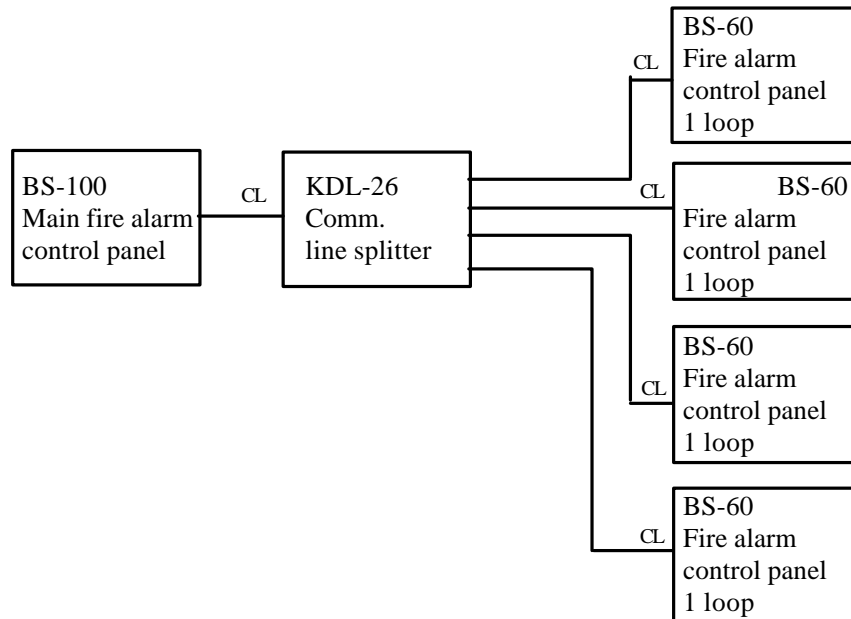
C.4.1 Sensitivity

Sensitivity control must be carried out at each individual BS-100 control panel.

C.4.2 Internal

The real-time clock in BS-100 control panels has to be set manually via menu. The EA-clock will be set equal to the clock in control panel with address A.

Appendix D - BS-100 master / Control unit with BS-60 slaves



When a condition (fire, fault, prewarning) is registered on a control panel (BS-100 / BS-60), the indication lamps on the panel front will light, the outputs will be activated etc. in a normal way.

The custom texts presented in the display on both BS-100 and BS-60 has to be manually programmed in both control panels.

There are no communication between the BS-60 control panels.

D.1 Alarm / Prewarning / Fault / More alarms

D.1.1 Fire alarm

Fire alarm from the BS-100 control panel is only registered on the BS-100 control panel. There will be no display of info. on the BS-60 control panel(s).

Fire alarm from a BS-60 control panel is registered on the relevant BS-60 control panel and on the BS-100 control panel.
There will be no display of info. on any other BS-60 control panel.

D.1.2 Prewarning

Prewarning from the BS-100 control panel is only registered on the BS-100 control panel. There will be no registering on the BS-60 control panel(s).

Prewarning from a BS-60 control panel is registered on the relevant BS-60 control panel and on the BS-100 control panel.
There will be no display of info. on any other BS-60 control panel.

D.1.3 Fault

(The BS-100 control panel will look at the BS-60 control panels as ordinary loops).

Fault from the BS-100 control panel is registered on the BS-100 control panel. There will be no display of info. on BS-60 control panel(s).

Fault from a BS-60 control panel is registered on the relevant BS-60 control panel and on the BS-100 control panel.

D.1.4 More alarms

More alarms from the BS-100 control panel will only be registered on the BS-100 control panel. There will be no display of info. on the BS-60 control panel(s).

More alarms from a BS-60 control panel will also be registered as more alarms on the BS-100 control panel. There will be no display of info. on other BS-60 control panels.

2 alarms from 2 different control panels will be registered as more alarms on the BS-100 control panel.

D.2 Operating

D.2.1 Sounder silence

The “SOUNDER SILENCE” function will be dependent upon how it is configured within each of the BS-60 control panels.

When operating the “SOUNDER SILENCE” on the BS-100 control panel, all alarm devices will be switched off (also devices connected to the BS-60 control panels).

If the “SOUNDER SILENCE” function is set to “OFF”, the “SOUNDER SILENCE” can only be operated from the BS-100 control panel.

If the “SOUNDER SILENCE” is set to “ON”, the “SOUNDER SILENCE” can be operated from both the BS-60 and BS-100 control panel.

If the “SOUNDER SILENCE” is operated from a BS-60, alarm devices connected to the BS-60 control panel which is operated, will be switched off.

D.2.2 Reset

The “RESET” function will also be dependent upon how it is configured within each of the BS-60 control panels.

When operating the “RESET” from the BS-100 the entire system will be reset.

If the “RESET” function is set to “OFF”, the “RESET” can only be operated from the BS-100 control panel.

If the “RESET” function is set to “ON”, the “RESET” can be operated from both the BS-100 and the BS-60 control panel.

When operating the “RESET” from the BS-60 control panel, only the BS-60 which is operated will be reset.

D.3 Disable / Restore

When disabling on a BS-60 control panel, the “FUNCTION DISABLED” indication lamp will light only on this control panel.

This will be logged in “SHOW-STATUS-DISABLEMENTS” and in “STORED-EVENTS” only on the current control panel.

It is advisable to disable / restore BS-60 addresses from the BS-100.

D.3.1 Address

The BS-100 can disable / restore all addresses in the system. The BS-60 can only disable / restore addresses connected at the relevant BS-60 control panel.

D.3.2 Zone

Only zones defined in the BS-100 control panel can be disabled / restored from the BS-100 control panel. Zones defined in a BS-60 control panel can be disabled / restored only at the relevant BS-60 control panel.

D.3.3 Controls

Controls connected to the BS-100 control panel can only be disabled / restored from the BS-100 control panel.

Controls connected to the BS-60 control panel can only be disabled / restored at the relevant BS-60 control panel.

D.3.4 Sounders

Sounders connected to the BS-100 control panel can only be disabled / restored from the BS-100 control panel.

Sounders connected to a BS-60 control panel can only be disabled / restored at the relevant BS-60 control panel.

D.3.5 Fire brigade / fighters

BMA, BMF, BMFO outputs from the BS-100 control panel can only be disabled / restored from the BS-100 control panel.

BMA, BMF, BMFO outputs from the BS-60 control panel can only be disabled / restored at the relevant BS-60 control panel.

D.4 System

D.4.1 Sensitivity

All addresses in the system (including those connected to the BS-60 control panel(s)) can be interrogated from the BS-100 control panel.

From the BS-60 control panel it is only possible to interrogate the addresses connected to it.

D.4.2 Internal

In all control panels the internal clock has to be set manually.

The internal clocks of all control panels are independent and must be set individually.

Appendix E - Pocket Pager

Pocket Pager can be directly connected to a communication module BSL-100 on the BS-panel.

Standard communication protocol is ESPA 4.4.4 and comm. channel 2B.

Teletracer / Contactor make use of the following codes:

Beep codes (0-9)

Beep codes (0-9)		Usual use of codes
Code 0:	Silent call	Test call
Code 1:	- - - - -	Meet me
Code 5:	- - - - -	“ “
Code 2:	-- -- -- --	Operator call
Code 3:	--- --- ---	Display message
Code 4:	-----	Important message
Code 6:	- special applications	Call with repetition
Code 7:	---	Speak call

Type (0-3)

Code 0:	Reserved
Code 1:	Reset call
Code 2:	Speak call
Code 3:	Standard call

Priority (0-3)

Code 0:	Reserved
Code 1:	Alarm (highest priority)
Code 2:	High
Code 3:	Normal

To transfer custom text / address to the receiver at alarm, prewarning and fault the Beep-code is set to selected “signal” for the different messages.

Type is set to “3” “Standard call”.

Priority should be set to “1” “ALARM” for fire and prewarning and “2” “High” at fault.

Appendix F - Fault messages

Autronica Table of fault code / reason

Fault code	Text	Reason	Remedies	Comments
(6.0) cause	Loop disabled "Reset"	Short at both terminals		Remove the fault
(8.3)	Communication fault	Loop not polled last min.	Is the comm. OK?	"Reset"
(D.0)	No answer from loop	Switch fault/Line problem	Correct switch value	Power up
(D.1)	Wrong answer from loop	Address double coded or line problem	Correct switch value	Power up
(D.2)	Loop scanner error?	Loop not connected		
(E.0)	No or short answer pulse	Detector in fault cond. or missing. Reset no.	Exchange unit Correct the reset no.	"Reset" Power up
(E.1)	Double addressing	Two det. with same addr. or polling problems.	Correct detector number	"Reset"
(E.2)	Address answer at reset no.	Reset number and det. address with same value.	Correct reset number	"Reset"
(E.3)	Address 100 answers, remove it.	Address value not allowed.	Correct the address or remove it.	"Reset"
(E.4)	No answer at power up	Detector that is not able to answer.	With power up only followed by mess. (E.0)	"Reset"
(E.5)	Not valid reset number	Reset no. in area 101-128	Correct reset number	"Reset"
(E.6)	Reset no. too low	Reset no. is set in the address area	Correct reset number	"Reset"
(E.7)	Reset no. too high	Reset no. is set outside the address area	Correct reset number	"Reset"
(F.0)	Loop is OK	The loop has been faulty but is now OK	Reset the message	"Reset"
(F.1)	Loop open circuit	The loop is fed from A' - B' terminals	Find and correct the fault	"Reset"
(F.2)	Loop open circuit	The loop is fed from A-B and A' - B' terminals	Find and correct the fault	"Reset"
(F.3)	Loop open circuit	The loop is fed from A-B terminals	Find and correct the fault	"Reset"
(F.4)	High current consumption	The idle current is above 60 mA	Control the loop for fault or faulty unit	"Reset"
(F.5)	High loop voltage	Voltage (B) over 16 V	Remove the fault intr. unit	"Reset"
(F.6)	High loop voltage	Voltage (B') over 16 V	Remove the fault intr. unit	"Reset"
(F.7)	High loop voltage	Voltage (A') over 3 V	Some unit is feeding current into the loop	"Reset"
(F.8)	High current consumption	The idle current is above 100 mA	Control the loop for fault or faulty unit	"Reset"
(X.X)	New or unknown fault	Fault type has not text	Note the fault code!	"Reset"
(7.0...7.F) (8.5,8.6) (9.0...9.F)	System fault sub-panel	Fault message from sub-panel BS-60	Control the fault message in BS-60 unit	"Reset"

BS-100

PCB 7212-142.000X (BSA-100)

Overview of program versions and versions of BSA-100.

Main program	Menu / System texts	Year, month	Techn. bulletin	X=2	X=3	X=3 Modification BS-662,663B	X=4	X=5	X=6 3proto types	X=7	Communication New protocols	Short description of changes and new functions:
P1-BS100-1-00					X							
P1-BS100-1-10	P5-BS100-1-10			X	X							
P1-BS100-2-00 ²⁾	P5-BS100-2b00 ¹⁾					X	X	X			ASSP ASAP 1 channel	Show-function, password routine, disable/restore, customer text.
P1-BS100-2-012)	P5-BS100-2b00					X	X	X				Alarm from manual call-points. Controls from customer data.
P1-BS100-2-02	P5-BS100-2b00					X	X	X				ASAP on 2-wired current loop.
P1-BS100-2-03	P5-BS100-2b03 ¹⁾					X	X	X				Adaption to different requirements. 16 detector loops.
P1-BS100-2-05 ³⁾	P5-BS100-2b05 ¹⁾					X	X	X			ASAP 2 channels	Adaption to Swedish requirements. Message buffer filled up after 20 changes.
P1-BS100-2-06	P5-BS100-2b05 ¹⁾					X	X	X				Changed initializing
P1-BS100-2-07 ⁴⁾	P5-BS100-2L07					X	X	X				Adaption to req. from Holland, England, Solas.X44 used as a Gainput. Several function changes and connections. 16 det. loops.
P1-BS100- 2-10	P5-BS100-2b10 ¹⁾					X	X	X				Parts of the service menu implemented. Changed reset procedure. Dyfi-settings remain after start up.
P1-BS100-8-10	P5-BS100-2b10 ¹⁾					X	X	X				Special program for
P1-KDBS-9-10	P5-BS100-2b10 ¹⁾					X	X	X			KD-10 protocol 1 channel	Special version for use in KD-10
P1-BS100-2-11	P5-BS100-2b11 ¹⁾					X	X	X				New functions, checking for polluted detectors, address control, disable/restore printer. Adaption to req. from England, DK, Sweden.
P1-BS100-2-12	P5-BS100-2b11 ¹⁾					X	X	X				Improvements regarding "locking" problems in version 2-10/2-11
P1-BS100-2-13	P5-BS100-2b11 ¹⁾					X	X	X				Corrections of service function "Adress control".
P1-BS100-2 ⁶⁾ 20 ⁵⁾	P5-BS100-2b20 ¹⁾	9201	005/92			X	X	X				Changes of batt.test at 10.00 AM.25V limit red. with 1%. No. of disablement and changes of cust.text incr. Watch-dog counter. Solas for all languages.
P1-BS100-2-21 ²⁾	P5-BS100-2b20 ¹⁾	9203	11/92			X	X	X				Corr.watch-dog front with several BU-units. Corr. disable/restore routine to avoid warm start.
P1-BS100-2-22	P5-BS100-2b20 ¹⁾					X	X	X				Disable controls password protected. Solas: Man.call-points can be delayed in customer data. Only T2 (adjustment) Holland: T1=1min.
P1-BS100-2-23 ⁷⁾	P5-BS-100-2b20 ¹⁾	9209				X	X	X				Corr.'locking" problems with "nervous door switch". New functions in Solas and DK.
P1-BS100-2-24	P5-BS-100-2b20 ⁸⁾	9210	045/92			X	X	X				Corr. sounder silence/reset with BU-100 and "locking" more alarms without BU-. Improved button functions.
P1-BS100-2-29	P5-BS100-2b20	9307	023/93			X	X	X	X			Open alarm route. Monitoring of sounder circuit changed.
P1-BS100-2-30	P5-BS100-2b30 ⁸⁾	9209				X	X	X	X			Special version to config. battery limit (only offshore)
P1-BS100-3-00	P5-BS100-3b00	9308	023/93			X	X	X	X		ESPA 4.4.4 ASAP-BPE-53	Paging, zoning, config. battery limit.
P1-BS100-3-10	P5-BS100-3b10					X	X	X	X		ASAP-BPE-53	
P1-BS100-3-11	P5-BS100-3B10		08/95			X	X	X	X		ASAP-BPE-53	Detction of comm. fault BSA/BSR. Monitoring of 24 VDC to BSB-100. Earth fault monitoring of AK-output. ASAP contr. of true time watch.2level of password
P1-BS100-3-20	P5-BS100-3B20	9509				X	X	X	X		ASAP-BS100-60	Standard and Offshore version.

Menu-/system texts: b means country code.

X = Program to be used together with the BSA-version

NB! When changing program it might be necessary change the menu-/system program. See column 1 and 2.

1) b= country code/language

2) Only few delivered

3) Version 2-04 not distributed

4) Only 1 copy delivered

5) When upgrading to 2-30 the BSL111 must be upgraded

6) From serial no..1458-

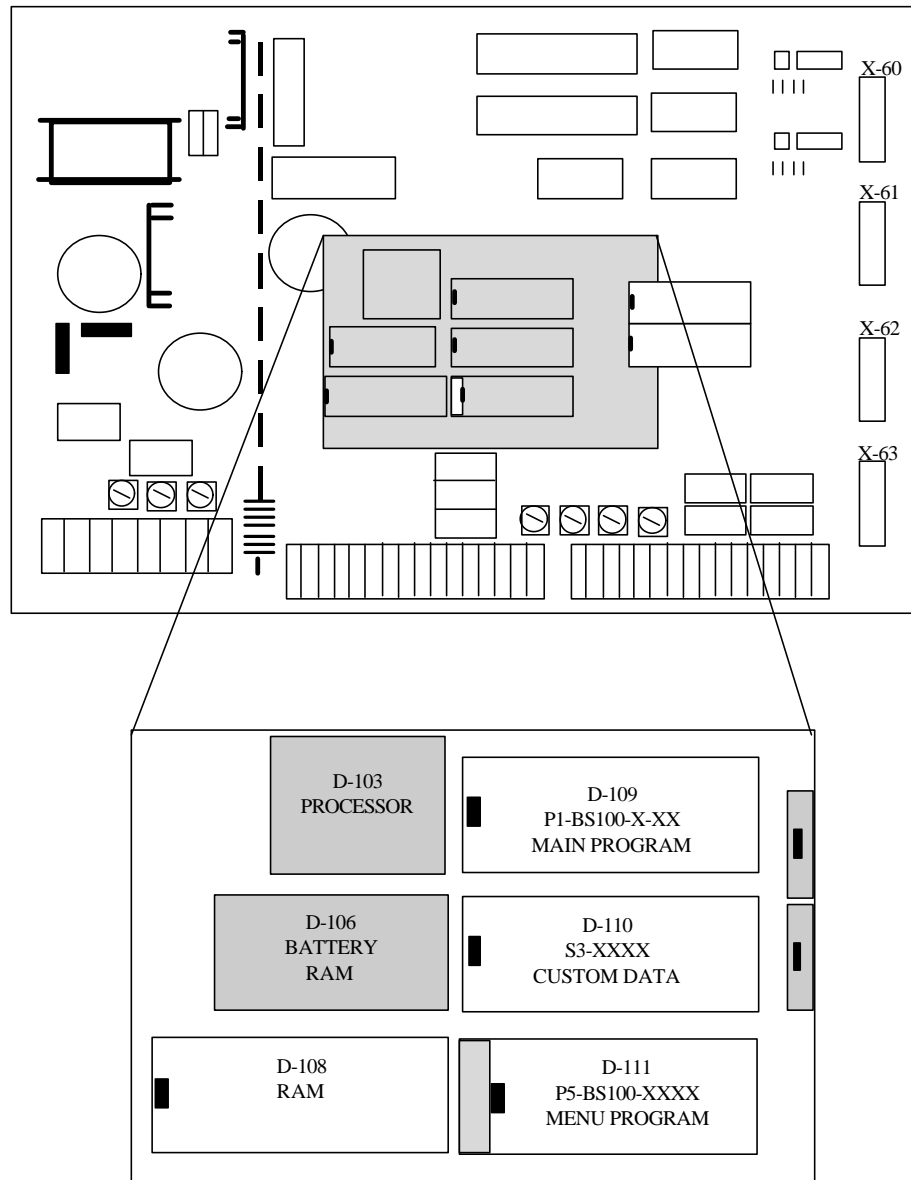
7) From serial no.. 1936-

8) Only with Norwegian and English text

Appendix H

Location of EPROM and RAM

BSA-101



The X in the EPROM's type description indicates the version number and will be changed for every new version.

Ensure that there is correct polarity when installing the EPROM's (pin 1 in position 1).

Autronica Fire and Security AS er et internasjonalt firma med hovedkontor i Trondheim, Norge og med verdensomspennende salgs- og service-nettverk. I mer en 40 år har Autronicas overvåkingssystemer reddet liv og hindret katastrofer på land og til sjøs. Autronica Fire and Securitys viktigste forretningsområde er deteksjon og varsling av brann. Autronica Fire and Security står for sikring av miljø, liv og verdier.

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- instrumenterings- og styresystemer for petrokjemi, olje og gass

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Autronica Fire and Security AS, Trondheim. Telefon: + 47 73 58 25 00, fax: + 47 73 58 25 01.
Oslo: 22 55 34 10, **Moelv:** 62 34 10 00, **Tønsberg:** 33 33 19 30, **Bergen:** 55 27 35 50,
Stavanger: 51 84 09 00, **Kristiansand:** 38 01 34 60, **Harstad:** 77 00 25 50.
Oil & Gas, Stavanger. Telefon: + 47 51 84 09 00, fax: + 47 51 84 09 99.