

Fire Control Panels “Solution F1” Operating and Installation Manual



Issue : June 2006

Content

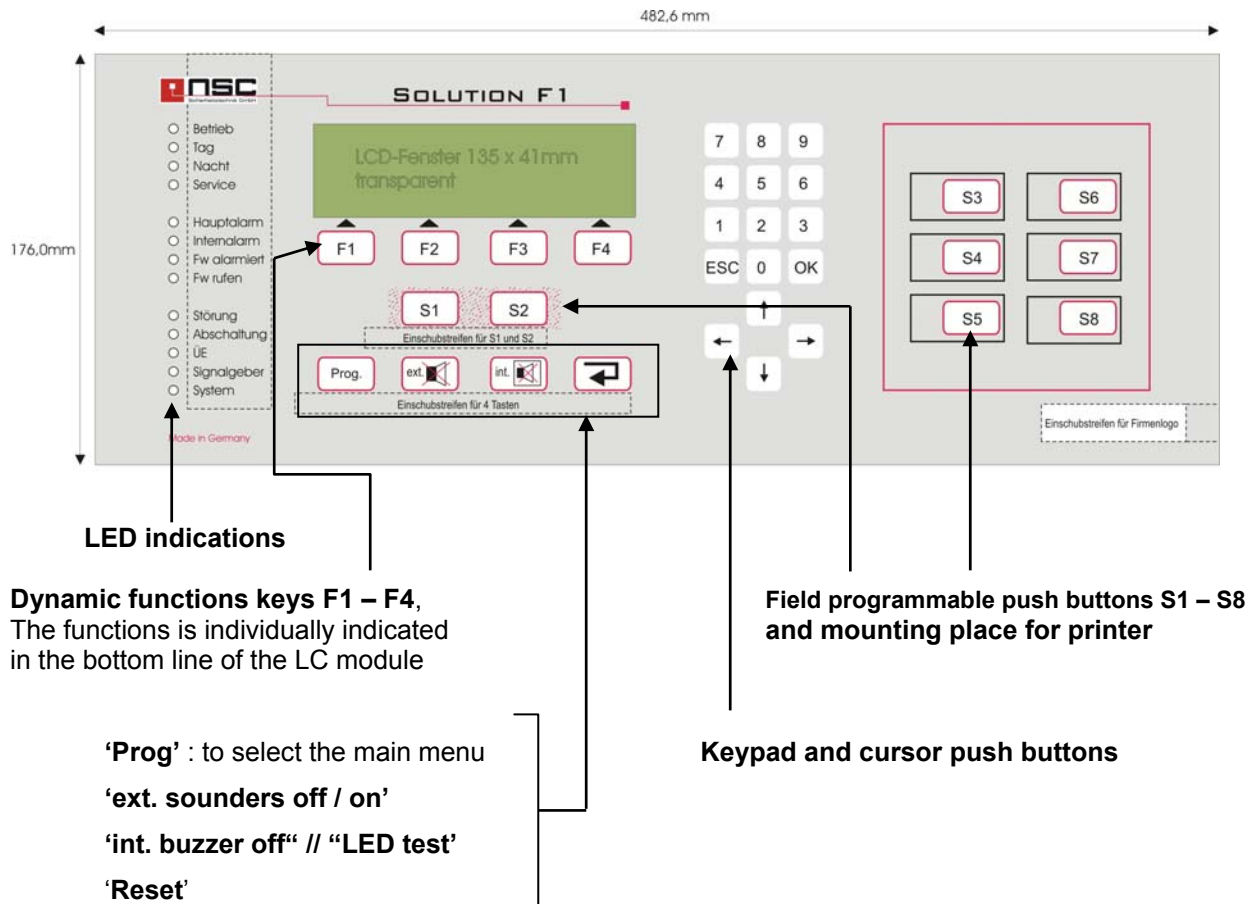
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1. Description of Control Panel :

Picture of the control panel of the „Solution F1“ :



LED indications :

LED :	Description :
green LED „In Operation“	The Fire Control Panel (FCP) is in operation.
green LED „Day Mode“	Indicates that the FCP is in „Day Mode“. That means the main alarm is delayed if a delay time is configured.
green LED „Night Mode“	Indicates that the FCP is in „Day Mode“. That means the main alarm is NOT delayed and any alarm activates the Fire Brigade immediately.
green LED „Service“	Indicates that the FCP is in „Service Mode“.
red LED „Main alarm“	Indicates that the FCP is in Alarm condition. See LC module for detailed information. If an alarm transmission device (TD) is connected to the panel the panel has tried to activate the TD.
red LED „Internal alarm“	Indicates that the FCP is in Alarm condition. See LC module for detailed information.
red LED „Fire Brigade alarmed“	Indicates that the FCP has activated the alarm transmission device (TD) to the Fire Brigade and the TD gave a response to confirm the activation. (Input "TD response" in the wiring diagrams can be used for

	this confirmation signal).
red LED „Call Fire Brigade“	Indicates that the FCP is in Main Alarm condition but the alarm transmission device (TD) could not be activated. So the Fire Brigade maybe has to be called by phone.
yellow LED „Fault“	Indicates that the FCP is in fault condition. At least one device (detector, module), input, output or system component is not in normal condition. See LC module for detailed information.
yellow LED „Disabling“	Indicates that at least one device (detector, module), input or output is disabled (switched off).
yellow LED „Transmission Device“ (TD)	In case of flashing this LED (and yellow LED „Fault“ is on) the TD is in fault condition. In case this LED is on (and yellow LED „Disabled“ is on) the TD is switched off.
yellow LED „Sounders“	In case of flashing this LED (and yellow LED „Fault“ is on) one of the sounder outputs is in fault condition. In case this LED is on (and yellow LED „Disabled“ is on) one of the sounder outputs is switched off.
yellow LED „System“	The FCP itself is in fault condition. That means that maybe the main board (micro controller) does not work well and the correct function of the FCP is not guaranteed. Please check immediately by the installation company.

LC module indications :

The LC module is a graphics LCD which is automatically illuminated in the case of any event. That means if an alarm message, a fault message, a disabled message or just if any push button is pressed the LC module activated the illumination. Then detailed information is shown in the display. Either the LCD shows the information in 8 lines of alpha numerical texts or in a graphics mode like bar charts or columns.

Usually the FCP shows the condition of the panel in the middle of the LC module. There is in big letter the current status on a dark background. The following messages are possible :

IN OPERATION	= normal condition
ALARM	= the FCP is in alarm condition
TEST ALARM	= the FCP is in test alarm condition
FAULT	= the FCP is in fault condition
SWITCH OFF	= certain devices of the FCP are switched off

If the user enters one of the menus (by pressing the push button „Prog“) at the bottom line of the LC module he sees the **dynamic function keys F1 – F4**. Sometimes all 4 keys are used, sometimes only one or two. It depends on the menu. Here we do not describe the function keys in details. Therefore please have a look into section 2.





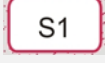



Please note that : usually there are the following standard functions for

- „F1“ = „cancel“ or „back“. Means to leave the current menu and jump into the menu above, and
- „F4“ = „Enter“. Means to select (or confirm) the function which is marked in the LC module by a black background.

Description of the push buttons :

The control panel of the FCP „Solution F1“ contains a brand new technology of push buttons. There are no more mechanical push buttons or ordinary foil key pads but it is a pressure sensitive piezo lacquer technology which is printed on the aluminium plate. **These push buttons must not be adjusted and this technology has not known any attrition or abrasion for many years and it is very resistant to EMC interferences and detergents.** An intelligent circuit detects any pressing of the push buttons and confirms it by a **beep**.

The push buttons which are maybe not self-explanatory are these :

Push button :	Description :
	By this push button the user leaves the normal operation and enters the main menu of the FCP. See the detailed description in section 2.
	This push button deactivates (switch off) the external sounder outputs in case of an alarm. This is a temporary deactivation because if another alarm comes in the sounders will be activated again.
	<ul style="list-style-type: none"> – This push button deactivates (switch off) the internal buzzer in case of an alarm or fault message. This is a temporary deactivation because if another message comes in the buzzer will be activated again. – In case of an alarm and if the alarm transmission is delayed, the delay time will be started. – If there is no alarm and no fault this push button activates an LED test.
	This push button resets the FCP.
	Field programmable push buttons (S1 – S8). See detailed description in the installer manual.
	Use this push button in the menus to confirm your inputs line by line.
	Use this push button in the menus to cancel your inputs.
	Cursor control keypad.

2. Menus for the end user :

The following description contains all the menus for the end user. If the push button „Prog“



is pressed it starts with the main menu.

No.	Indication of the LC module :	Description :
01	<pre> Main menu 1. Switch on/off 2. Alarm counter 3. End user code 4. Diagnosis Cancel Installer Enter Display on network devices Main menu FCP 001 1. Switch on/off 2. Alarm counter 3. End user code 4. Diagnosis Cancel FCP Installer Enter </pre>	<p>General Main menu for end user</p> <p>This menu appears immediately after pressing „Prog“.</p> <p>The functions have the followings meanings :</p> <ol style="list-style-type: none"> To switch on / off detectors, input-/ output modules, day/night mode, zones and general outputs → Jump to Menu 02 Indication of the alarm counter. This alarm counter cannot be set back. It is a 4 digit number (1 – 9999) Menü 03 To change the end user code → Jump to Menu 04 To jump to the diagnosis menu → Jump to Menu 05 <p>The push button "cancel" (F1) leads to the normal status indication of the FCP.</p> <p>The function "FCP" (F2) is only available in networked fire control panels. After pressing F2 a list of all networked devices appears Menü 1.1.</p> <p>The push button "Installer" (F3) is to use for the installer company only. It leads to the menus for service and configuration.</p> <p>The push button „Enter“ (F4) selects (activates) the function which is marked by a black background. Instead you can also select the function by pressing the no. left in front of the functions (here : 1 – 4).</p>
01.1	<pre> choose active device No. 001 : FCP 001 j+1 j-1 Selection -> +10 <- -10 >001 FCP 001 Zone offset 10000 < 001 FCP 002 Zone offset 20000 001 RCP 003 Zone offset 00000 001 FCP 000 Zone offset 00000 zurück all Selection </pre>	<p>FCP selection</p> <p>On networked systems here you can choose a device for which the next switching function should be done.</p> <p>You can scroll to a device by the cursor buttons and then activate this device by pressing "Selection" (F4). The next enable/disable function then will be executed for the chosen panel. To send a common command to all network devices you can push "all" (F3).</p>
02	<pre> Switch on/off 1. Zones & detect. 5. Sounder/Strobe 2. Output 6. Alarm Trans.Dev. 3. Relay 7. Delay 4. Power Output 8. Fire Outputs Cancel Enter </pre>	<p>Main menu „Switch on / switch off“</p> <ol style="list-style-type: none"> Switching on/off of zones and detectors → Jump to Menu 06 Switching on/off of OC-Outputs → Jump to Menu 07 Switching on/off of Relays inside the FCP → Jump to Menu 08 Switching on/off of 3 monitored power outputs → Jump to Menu 09

	<p>Display on network devices</p> <p>Switch on/off</p> <table border="0"> <tr> <td>1. Zones & detect.</td> <td>5. Sounder/Strobe</td> </tr> <tr> <td>2. Output</td> <td>6. Alarm Trans.Dev.</td> </tr> <tr> <td>3. Relay</td> <td>7. Delay</td> </tr> <tr> <td>4. Power Output</td> <td>8. Fire Outputs</td> </tr> </table> <p>Cancel FCP Enter</p>	1. Zones & detect.	5. Sounder/Strobe	2. Output	6. Alarm Trans.Dev.	3. Relay	7. Delay	4. Power Output	8. Fire Outputs	<ol style="list-style-type: none"> Continuously switching on/off of sounders / strobes (incl. loop sounders) → Jump to Picture 10 Switching on/off the alarm transmission device (TD) → Jump to Picture 11 To activate / deactivate the alarm delay for the TD → Jump to Picture 12 Temporary switching on/off the fire outputs. This means all outputs will be deactivated until this function is canceled → Jump to Picture 13 <p>The function "FCP" (F2) is only available in networked fire control panels. After pressing F2 a list of all networked devices appears Menü 1.1.</p>				
1. Zones & detect.	5. Sounder/Strobe													
2. Output	6. Alarm Trans.Dev.													
3. Relay	7. Delay													
4. Power Output	8. Fire Outputs													
03	<p>Alarmcounter</p> <table border="0"> <tr> <td>FCP</td> <td>- Alarm</td> <td>: 0025</td> </tr> <tr> <td></td> <td>Testalarm</td> <td>: 0011</td> </tr> <tr> <td>Network</td> <td>- Alarm</td> <td>: 0033</td> </tr> <tr> <td></td> <td>Testalarm</td> <td>: 0017</td> </tr> </table> <p>Cancel</p>	FCP	- Alarm	: 0025		Testalarm	: 0011	Network	- Alarm	: 0033		Testalarm	: 0017	<p>Alarmcounter</p> <p>This alarm counter cannot be set back. It is a 4 digit number (1 – 9999). Testalarms (Detector test/revision) will be displayed by a separate counter. The lower two rows only will be displayed in networked systems. Here the Alarms and testalarms of other devices in the network will be counted.</p>
FCP	- Alarm	: 0025												
	Testalarm	: 0011												
Network	- Alarm	: 0033												
	Testalarm	: 0017												
04	<p>End user</p> <p>old access code : 0000 new access code : 3528 new access code : 3528</p> <p>Cancel</p>	<p>Changing the end user access code</p> <p>First you have to type the old access code, then you have to type two times the new access code.</p> <p>Every line has to be confirmed with „OK“.</p> <p><u>Example left side : old access code 0000 is replaced by new access code 3528.</u></p>												
05	<p>Diagnosis</p> <table border="0"> <tr> <td>1. Event memory</td> <td>5. Voltages</td> </tr> <tr> <td>2. Detector data</td> <td>6. Power Outputs</td> </tr> <tr> <td>3. Internal Modules</td> <td>7. Inputs</td> </tr> <tr> <td>4. Network</td> <td>8. FCP data</td> </tr> </table> <p>Cancel Enter</p>	1. Event memory	5. Voltages	2. Detector data	6. Power Outputs	3. Internal Modules	7. Inputs	4. Network	8. FCP data	<p>Diagnosis Menu</p> <ol style="list-style-type: none"> To display the event memory on the LCD. The youngest message will be displayed first. → Jump to Menu 14 To analyse the zones and detector data. A list of all zones with detectors will be displayed. You can investigate in the details → Jump to Menu 15 A list with possible types of internal modules (PCBs) will be displayed → Jump to Menu 16 Here a list of all recognized network devices will be displayed -> Jump to Menu 17. A list will be displayed with real time measurements of power supply voltage and earth fault voltages. You can check power supply and earth fault messages here → Example in Picture 18 A list will be displayed with real time measurements of the monitored power outputs. You can check fault messages here → Example in Picture 19 A list will be displayed with real time measurements of the 8 monitored inputs. You can check fault messages here → Example in Picture 20 To display FCP Software version and Serial no. → Example in Picture 21 				
1. Event memory	5. Voltages													
2. Detector data	6. Power Outputs													
3. Internal Modules	7. Inputs													
4. Network	8. FCP data													

<p>06</p>	<pre>Zones & detect. FCP 001 Status from zone : 5 programmed zone text To zone : Cancel On Off Detect.</pre>	<p>Switching on/off : zones and single detectors</p> <p>You can switch off <u>single zones</u> or <u>several zones simultaneously</u>. This is done by using the “from ... to...” function. Please type the zone number and confirm by “OK”.</p> <p>„Status“ means the current status of the zone (e.g. normal, alarm, fault). To switch off the zone you have to press „Off“ (F3) or for switching on the zone you have to press „On“ (F2).</p> <p>If only <u>one</u> zone shall be switched the line „to zone“ can be missed and F2/F3 (on/off) can be pressed immediately.</p> <p>If single detectors shall be switched you have to type “Detect.” (F4) after the zone has been confirmed (do not use F2/F3 (on/off) in this case) → Jump to Menu 22</p>
<p>07</p>	<pre>Switch on/off RCP 003 from output : 001 normal to output : ↓+1 ↑-1 Selection -> +10 <- -10 >001 Output 001 Main processor 002 Output 002 Main processor 003 Output 003 Main processor Cancel On Off Enter</pre>	<p>Switching on/off : OC-Outputs</p> <p>Here the 16 OC-outputs on the main processor board of the FCP „Solution F1” as well as the OC-outputs on the loop cards can be switched on/off.</p> <p>The outputs are located like this :</p> <p>Outputs 1 – 16 : OC- Outputs on main board Outputs 17 – 24 : OC- Outputs on 1. loop card Outputs 25 – 32 : OC- Outputs on 2. loop card etc.</p> <p>To switch on/off the outputs there are two possibilities you can choose :</p> <ol style="list-style-type: none"> To type the output no. directly by the key pad and confirming with „OK”. Please use the line “from output” and “to output” for this. Select the outputs by using the cursor keys ↓ and ↑ (means 1 line up or 1 line down) or the cursor keys → and ← (means 10 lines down or 10 lines up) and confirm the output numbers with „Enter“ (F4) or “Ok”. <p>The actual „status“of the output (e.g. normal condition or active) will be displayed behind the number.</p> <p>After selecting the output / outputs you have to switch them by pressing F3 („off“) or F2 („on“).</p>
<p>08</p>	<pre>Switch on/off FCP 001 from relay : 001 normal to relay : ↓+1 ↑-1 Selection -> +10 <- -10 >001 Relay 001 Main processor 002 Relay 002 Main processor 003 Relay 003 Main processor Cancel On Off Enter</pre>	<p>Switching on/off : 4 internal relays</p> <p>Here the 4 internal relays on the main processor board of the FCP „Solution F1” can be switched on/off.</p> <p>To switch on/off the relays there are two possibilities you can choose :</p> <ol style="list-style-type: none"> To type the relay no. directly by the key pad and confirming with „OK”. Please use the line “from relay” and “to relay” for this. Select the relays by using the cursor keys ↓ and ↑ (means 1 line up or 1 line down) or the cursor keys → and ← (means 10 lines down or 10 lines up) and confirm the relay numbers with „Enter“ (F4) or “OK”. Then press „Enter“ (F4) to confirm the switching. <p>The actual „status“of the relay (e.g. normal condition or</p>

		<p>active) will be displayed behind the number.</p> <p>After selection the relay / relays you have to switch them by pressing F3 („off“) or F2 („on“).</p>
09	<pre>Switch on/off FCP 001 from power output : 001 normal to power output : ↓+1 ↑-1 Selection -> +10 <- -10 >001 Power Output 001 Main processor 002 Power Output 002 Main processor 003 Power Output 003 Main processor Cancel On Off Enter</pre>	<p>Switching on/off : 3 internal power outputs</p> <p>Here the 3 internal power outputs on the main processor board of the FCP „Solution F1“ can be switched on/off.</p> <p>To switch on/off the relays there are two possibilities you can choose :</p> <ol style="list-style-type: none"> To type the power output no. directly by the key pad and confirming with „OK“. Please use the line “from power output” and “to power output” for this. Select the power outputs by using the cursor keys ↓ and ↑ (means 1 line up or 1 line down) or the cursor keys → and ← (means 10 lines down or 10 lines up) and confirm the power output numbers with „Enter“ (F4) or “OK”. <p>The actual „status“of the power output (e.g. normal condition, fault or active) will be displayed behind the number.</p> <p>After selection the power output / power outputs you have to switch them by pressing F3 („off“) or F2 („on“).</p>
10	<pre>Switch on/off FCP 001 1. Zones & detect. 5. Sounder/Strobe 2. Output 6. Alarm Trans.Dev. 3. Relay 7. Delay 4. Power Output 8. Fire Outputs Cancel off</pre>	<p>Switching on/off : sounders / strobes</p> <p>After selecting this function in the switch on/off main menu you see at the bottom line of the LCD „off“ (F3) or „on“ (F2).</p> <p>By pressing F3 all sounders / strobes will be switched off continuously.</p> <p>Pay attention :</p> <p>By the function (F3) all sounders and strobes will be switched off continuously. If another alarm comes in the sounders / strobes will not be activated again until they are switched on again.</p>
11	<pre>Switch on/off FCP 001 1. Zones & detect. 5. Sounder/Strobe 2. Output 6. Alarm Trans.Dev. 3. Relay 7. Delay 4. Power Output 8. Fire Outputs Cancel off</pre>	<p>Switching on/off : Alarm Transmission Device (TD)</p> <p>After selecting this function in the switch on/off main menu you see at the bottom line of the LCD „off“ (F3) or „on“ (F2).</p> <p>By pressing F3 the Alarm transmission device will be switched off continuously.</p> <p>The current status of the TD will additionally indicated by the yellow LED on the control panel.</p>

<p>12</p>	<p>Switch on/off FCP 001</p> <table border="0"> <tr> <td>1. Zones & detect.</td> <td>5. Sounder/Strobe</td> </tr> <tr> <td>2. Output</td> <td>6. Alarm Trans.Dev.</td> </tr> <tr> <td>3. Relay</td> <td>7. Delay</td> </tr> <tr> <td>4. Power Output</td> <td>8. Fire Outputs</td> </tr> </table> <p>Cancel on</p>	1. Zones & detect.	5. Sounder/Strobe	2. Output	6. Alarm Trans.Dev.	3. Relay	7. Delay	4. Power Output	8. Fire Outputs	<p>Switching on/off : Alarm transmission delay</p> <p>Here the delay of the alarm transmission device of the FCP „Solution F1“ can be switched on/off.</p> <p>After selecting this function you see at the bottom line of the LCD „off“ (F3) or „on“ (F2). “On” means to activate the delay (Day Mode)</p> <p>The current status of the delay will be additionally indicated by the green LEDs (Day Mode, Night Mode) on the control panel.</p> <p>When the delay is activated there is an additional indication in the LC module (“Delay activated”)</p> <p>Pay attention : To switch on the delay of the alarm transmission device is only possible if “Response time” and “Inspection time” in the menus “Alarm configurat. - > Delay” are configured. This can only be done by the installer company.</p>													
1. Zones & detect.	5. Sounder/Strobe																						
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<p>13</p>	<p>Switch on/off FCP 001</p> <table border="0"> <tr> <td>1. Zones & detect.</td> <td>5. Sounder/Strobe</td> </tr> <tr> <td>2. Output</td> <td>6. Alarm Trans.Dev.</td> </tr> <tr> <td>3. Relay</td> <td>7. Delay</td> </tr> <tr> <td>4. Power Output</td> <td>8. Fire Outputs</td> </tr> </table> <p>Cancel off</p>	1. Zones & detect.	5. Sounder/Strobe	2. Output	6. Alarm Trans.Dev.	3. Relay	7. Delay	4. Power Output	8. Fire Outputs	<p>Switching on/off : Fire outputs</p> <p>This function disables in case of an alarm all outputs which have been configured with „yes“ in the menu „Automat. Controlling“ → Selection 1 to 4 → „Settings“ → „Operate like Fire Output“.</p> <p>These could be 3 internal power outputs, all OC-outputs, 4 internal relays and all loop output modules. After selecting this function you see at the bottom line of the LCD „off“ (F3) or „on“ (F2).</p> <p>Pay attention : By the function (F3) all fire outputs will be switched off continuously. If an alarm comes in no output will be activated.</p>													
1. Zones & detect.	5. Sounder/Strobe																						
2. Output	6. Alarm Trans.Dev.																						
3. Relay	7. Delay																						
4. Power Output	8. Fire Outputs																						
<p>14</p>	<p>Event memory</p> <p>Message 0001 of 0391</p> <p>Fault</p> <p>Power output 001 wire break</p> <p>08-07-2004 18:25:22</p> <p>Cancel Filter print</p>	<p>Event memory</p> <p>The last message (the youngest) is shown first in the upper area of the LC module. In the last but one line of the LCD data and time of the message are shown. This is the time when the event has appeared.</p> <p>You can scroll with the cursor keys up and down the messages :</p> <p style="padding-left: 40px;">↓ and ↑ : 1 line up or 1 line down → und ← : 10 lines down or 10 lines up</p> <p>By pressing F2 („Filter“) → Jump to Menu 23</p> <p>By pressing F3 („print“) → Jump to Menu 24</p>																					
<p>15</p>	<table border="1"> <thead> <tr> <th>Zone</th> <th>existing</th> <th>config.</th> </tr> </thead> <tbody> <tr> <td>> 0001</td> <td>010</td> <td>010</td> </tr> <tr> <td>0002</td> <td>010</td> <td>010</td> </tr> <tr> <td>0003</td> <td>011</td> <td>107</td> </tr> <tr> <td>0004</td> <td>003</td> <td>127</td> </tr> <tr> <td>0005</td> <td>010</td> <td>010</td> </tr> <tr> <td>0006</td> <td>021</td> <td>117</td> </tr> </tbody> </table> <p>Cancel Segment Details</p>	Zone	existing	config.	> 0001	010	010	0002	010	010	0003	011	107	0004	003	127	0005	010	010	0006	021	117	<p>Detector data</p> <p>Here the zones which contain at least one detector are listed line by line (left column).</p> <p>The middle column shows the number of detectors which were found during last loop scanning.</p> <p>The right column „config.“ shows the number of detectors which were configured by configuration</p>
Zone	existing	config.																					
> 0001	010	010																					
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Segment	existing	Current																																
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16	<p>Internal Modules</p> <table border="1"> <tbody> <tr> <td>1. Loop card HOCHIKI ESP</td> <td>: 01</td> </tr> <tr> <td>2. Loop card Apollo XP</td> <td>: 00</td> </tr> <tr> <td>3. Conventional detector card</td> <td>: 00</td> </tr> <tr> <td>4. Input-/output module</td> <td>: 00↓</td> </tr> <tr> <td>Cancel</td> <td>Details</td> </tr> </tbody> </table> <p>Cursor key „↓“ show more :</p> <table border="1"> <tbody> <tr> <td>5. Network interface card</td> <td>: 00</td> </tr> <tr> <td>6. Modem</td> <td>: 00</td> </tr> <tr> <td>7. RS485 Devices</td> <td>: 00</td> </tr> </tbody> </table>	1. Loop card HOCHIKI ESP	: 01	2. Loop card Apollo XP	: 00	3. Conventional detector card	: 00	4. Input-/output module	: 00↓	Cancel	Details	5. Network interface card	: 00	6. Modem	: 00	7. RS485 Devices	: 00	<p>Internal Modules (PCBs) : Overview</p> <p>Here all possible types of internal modules (PCBs) are listed and behind them you can see how many number of modules are installed in the FCP (here : only 1 pc. Loop card Hochiki ESP).</p> <p>These types of modules are possible (depending on software version) :</p> <ul style="list-style-type: none"> ➤ Loop card supporting Hochiki ESP detectors ➤ Loop card supporting Apollo XP95/Discovery detectors ➤ Conventional detector card ➤ Input- / Output module ➤ ARCNET network card ➤ Telephone modem for software configuration ➤ RS485 devices <p>Please select with the cursor keys the module which should be investigated more detailed and press „Details“ (F4) → Jump to Menu 26</p>																
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No.	Type	Zone offset	Mode																															
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Cancel			Details																															
18	<p>Voltages</p> <table border="1"> <tbody> <tr> <td>Power supply voltage</td> <td>: 28,15 V</td> </tr> <tr> <td>Battery charg. voltage</td> <td>: 27,72 V</td> </tr> <tr> <td>Pow. supply batt.volt.</td> <td>: 27,57 V</td> </tr> <tr> <td>Earth fault voltage</td> <td>: 1,57 V (00)</td> </tr> <tr> <td>RTC battery</td> <td>: 3,07 V</td> </tr> <tr> <td>Cancel</td> <td></td> </tr> </tbody> </table>	Power supply voltage	: 28,15 V	Battery charg. voltage	: 27,72 V	Pow. supply batt.volt.	: 27,57 V	Earth fault voltage	: 1,57 V (00)	RTC battery	: 3,07 V	Cancel		<p>Example of Power Supply Voltages</p> <p>The charging voltage should be in between 27,3V and 27,8V (20°C). This should be checked by voltage meter.</p> <p>Behind the earth fault voltage a counter is displayed to count the values beyond the threshold. On 10 consecutive faulty measurements a fault message will be displayed..</p> <p>The RTC battery should be replaced if the voltage drops below 2,1 V.</p> <p>Leaving the menu by pressing F1 („Cancel“).</p>																				
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19	<p>Power outputs</p> <p>Power Output 1: 1,77V Reply 1 : 3,37V Power Output 2: 1,79V Reply 2 : 3,67V Power Output 3: 1,72V</p> <p>KDB-output : 2,48V Extinguish.output : 13,7V</p> <p>Cancel</p>	<p>Example of Power Outputs Voltages</p> <p>Leaving the menu by pressing F1 („Cancel“).</p>
20	<p>Inputs</p> <p>Input 1 : 2,97V Input 5 : 2,98V Input 2 : 2,96V Input 6 : 2,96V Input 3 : 3,03V Input 7 : 2,98V Input 4 : 3,05V Input 8 : 2,97V</p> <p>Cancel</p>	<p>Example of Input voltages</p> <p>Here the FCP listed the input voltages of 8 OC-inputs which can be monitored if pull-down resistors are used (see schematic diagrams for installer company)</p> <p>Leaving the menu by pressing F1 („Cancel“).</p>
21	<p>FCP data</p> <p>Software version S040A04.03</p> <p>Serial number 0905/0067</p> <p>Cancel</p>	<p>Example of displaying software version and Serial No.</p> <p>Leaving the menu by pressing F1 („Cancel“).</p>
22	<p>Zone 0005 Status</p> <p>from detector : 1 normal evt. individual detector text to detector : 3 normal evt. individual detector text</p> <p>Cancel On Off</p>	<p>Switching on/off : Addressable detectors</p> <p>The first line of the LC module shows the zone where the detectors are located (here : 5).</p> <p>It is possible just to switch off only <u>one</u> detector as well as <u>several</u> detectors. Please type the detector number and confirm by “OK”.</p> <p>„Status“ means the current status of the detector (e.g. normal condition, alarm condition, fault condition). If a individual detector text has been configured, this text will be displayed right below the detector line after pressing “OK”.</p> <p>For switching off you have to press „Off“ (F3) or for switching on you have to press „On“ (F2).</p> <p>If only <u>one</u> detector shall be switched the line „to detector“ can be missed and F2/F3 (on/off) can be pressed immediately.</p>
23	<p>Filter</p> <p>1. Alarm x 5. Off - 2. Pre alarm x 6. Activation - 3. Test alarm - 4. Fault -</p> <p>Cancel on</p>	<p>Event memory : „Filter“</p> <p>The FCP Solution F1 saves all messages in their event memory.</p> <p>This filter functions allow to display only certain kind of messages in the LC module (e.g. only alarm messages).</p> <p>There are 6 different kinds of messages, which can be displayed in the LC module. If a message is marked with „x“ this message will be displayed. If it is marked with „-“, this message will not be displayed. You can switch from „x“ to „-“ by push button F3 (“off”) and from „-“ to „x“ by push button F2 (“on”).</p> <p>The example on the left side shows only alarm and pre alarm messages but all other kind of message are hidden.</p>

<p>24</p>	<p>Event memory</p> <p>from message : to message :</p> <p>Cancel print</p>	<p>Event memory : „Printing“</p> <p>Please type the number of messages and confirm every line by „OK“: The last (youngest) message is message no. 1 and the oldest one is message no. 1034.</p> <p>After selecting the messages press F4 („print“) for printing.</p> <p>The print goes out through the interface which is selected by menu „Settings 2“ -> „Interfaces“.</p>																																																																		
<p>25</p>	<p>Zone 0003 Detect. 002/010</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Type</th> <th>Seg.</th> <th>Add</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>001</td> <td>Conv. mo. CHQ_MZ</td> <td>01:0</td> <td>001</td> <td>Normal</td> </tr> <tr> <td>>002</td> <td>Flashl. CHQ_AB</td> <td>01:0</td> <td>002</td> <td>Normal</td> </tr> <tr> <td>003</td> <td>Ion. det. AIE_E</td> <td>01:0</td> <td>003</td> <td>Normal</td> </tr> <tr> <td>004</td> <td>opt. det. ALG_E</td> <td>01:0</td> <td>004</td> <td>Normal</td> </tr> <tr> <td>005</td> <td>Conv. mo. CHQ_Z</td> <td>01:0</td> <td>005</td> <td>Normal</td> </tr> </tbody> </table> <p>Cancel existing Details</p>	No.	Type	Seg.	Add	Status	001	Conv. mo. CHQ_MZ	01:0	001	Normal	>002	Flashl. CHQ_AB	01:0	002	Normal	003	Ion. det. AIE_E	01:0	003	Normal	004	opt. det. ALG_E	01:0	004	Normal	005	Conv. mo. CHQ_Z	01:0	005	Normal	<p>Table of detectors</p> <p>The first line of the LC module shows zone and number of the detector which is marked by „>“ in the left column of the display area. Here in this example it is zone 0003 and detector 002 of 10 detectors in this zone at all.</p> <p>The second column shows <u>all configured</u> detectors of this zone by name (abbreviated), doesn't matter if they are connected to the panel or not. If you want to see only the connected detectors of this zone press „existing“ (F2).</p> <p>In this case the bottom line changes and „config.“ is written above F2. Additionally the number of detectors in line 1 will change, if there is a difference between connected and configured detectors for this zone.</p> <p>Pressing F2 again will show all configured detectors again.</p> <p>One detector is shown per line. The grey line have the following meanings :</p> <p>No. : Detector number within the displayed zone Type : Kind of detector, e.g. optical, MCP etc. This information is automatically transmitted by the detectors to the FCP. The meanings of the abbreviations are :</p> <p>1. Hochiki ESP</p> <table> <tr> <td>opt. det. ALG-E</td> <td>Optical smoke detector</td> </tr> <tr> <td>Ion. det. AIE-E</td> <td>Ionisation smoke detect.</td> </tr> <tr> <td>Heat det. ATG-E</td> <td>Heat detector</td> </tr> <tr> <td>Multisen. ACA-E</td> <td>Multisensor</td> </tr> <tr> <td>Multisen. ACB-E</td> <td>Multisensor Heat</td> </tr> <tr> <td>MCP CHQ-CP</td> <td>Manual Call Point</td> </tr> <tr> <td>Sounder CHQ-BS</td> <td>Base Sounder</td> </tr> <tr> <td>Souderm. CHQ-B</td> <td>Sounder output module</td> </tr> <tr> <td>Inp.mod. CHQ_S</td> <td>Input module</td> </tr> <tr> <td>Zone mod.CHQ_MZ</td> <td>Mini convention. module</td> </tr> <tr> <td>Zone mod.CHQ_Z</td> <td>Conventional module</td> </tr> <tr> <td>Inp/Outp. CHQ_SIO</td> <td>Input-/output module</td> </tr> <tr> <td>Inp/Outp. CHQ_R</td> <td>Input-/output module</td> </tr> <tr> <td>Inp/Outp. CHQ_FIO</td> <td>Input-/output module</td> </tr> <tr> <td>Strobe CHQ-AB</td> <td>Addressable strobe</td> </tr> <tr> <td>Remote CHQ-ARI</td> <td>Addressable remote ind..</td> </tr> <tr> <td>Ad. Sock. YCA_3H2</td> <td>Addressable base</td> </tr> <tr> <td>Ad. Sock. YCA_5H2</td> <td>Addressable base</td> </tr> </table>	opt. det. ALG-E	Optical smoke detector	Ion. det. AIE-E	Ionisation smoke detect.	Heat det. ATG-E	Heat detector	Multisen. ACA-E	Multisensor	Multisen. ACB-E	Multisensor Heat	MCP CHQ-CP	Manual Call Point	Sounder CHQ-BS	Base Sounder	Souderm. CHQ-B	Sounder output module	Inp.mod. CHQ_S	Input module	Zone mod.CHQ_MZ	Mini convention. module	Zone mod.CHQ_Z	Conventional module	Inp/Outp. CHQ_SIO	Input-/output module	Inp/Outp. CHQ_R	Input-/output module	Inp/Outp. CHQ_FIO	Input-/output module	Strobe CHQ-AB	Addressable strobe	Remote CHQ-ARI	Addressable remote ind..	Ad. Sock. YCA_3H2	Addressable base	Ad. Sock. YCA_5H2	Addressable base
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2. Apollo Discovery/XP95/Xplorer

opt. det. DISCOV.	Optical smoke detector
Ion. det. DISCOV.	Ionisation smoke detect.
CO detect. DISCOV.	Co detector
Heat det. DISCOV.	Heat detector
Multisen. DISCOV.	Multisensor
MCP DISCOV.	Manual Call Point
opt. det. XP95	Optical smoke detector
Ion. Det. XP95	Ionisation smoke detect.
Heat det. XP95	Heat detector
H.Thermo. XP95	Heat detector high temperatur
Multisen. XP95	Multisensor
MCP XP95	Manual Call Point
Sounderm. XP95	Sounder output module
Inp.mod. XP95	Input module
Zone mod. XP95	Conventional module
Inp/Outp. XP95	Input-/output module
Flame det. XP95	Flame detector
Beam XP95	Beam detector
Ref.Beam XP95	Beam detector with reflector
opt. det. XPlorer	Optical smoke detector
Heat det. XPlorer	Heat detector
H.Thermo. XPlorer	Heat detector high temperatur

Seg. : Segment = Section of addresses with a maximum of 254 Hochiki detectors, modules / base sounders and a maximum of 126 Apollo detectors, modules. The segments are partitioned on the loop card according this list :

- Loop card 1 : Segment 1 and 2
- Loop card 2 : Segment 3 and 4
- Loop card 3 : Segment 5 and 6
- Loop card 4 : Segment 7 and 8
- Loop card 5 : Segment 9 and 10
- Loop card 6 : Segment 11 and 12
- Loop card 7 : Segment 13 and 14
- Loop card 8 : Segment 15 and 16
- Loop card 9 : Segment 17 and 18

- : This is a symbol for a loop.
- : This is a symbol for a stub line.

Adr. : Detector address (physical address stored in the detector)

Status : Current status of the detector (e.g. normal condition, alarm condition, fault condition, disabled condition)

By pressing **F4** („Details“) it is possible to display more details of the detectors. That means analogue values, dust contamination, input bits and so on.

- Jump to **Picture 27** for **Manual Call Points**
- Jump to **Picture 28** for **optical smoke detector**

26	<pre> Internal Modules 01/09 >01 Loop card HOCHIKI ESP 02 Conventional detector card 03 - 04 - 05 - 06 - Cancel Details </pre>	<p>Internal Modules (PCBs) : Details</p> <p>The FCP displays the physically installed internal modules (PCBs) with their addresses (1-9). These are the addresses of the DIL switches on the PCBs.</p> <p>Please select by the cursor keys the PCB which shall be investigated more detailed and press F4 („Details“) → Jump to Picture 29</p>
26.2	<pre> Arcnet 1 Arcnet 2 Station ID : 001 001 Next ID : 002 002 Receive : OK OK Token seen : OK OK Send : OK OK Counter Reconfig.: 000 000 Cancel </pre>	<p>Display of network adapters</p> <p>Installed network adapters will be displayed with the following informations:</p> <ul style="list-style-type: none"> • Station ID (1-255) is the network number of the device (device no. set in the network configuration Menu 81). • Next ID (1-255) is the device number, to which the token will be passed. • Receive (OK or F) shows, if the network card is receiving data from another device. • Token seen (OK or F) shows, if the network card has seen the token even if it doesn't take part at the network communication. • Send (OK or F) shows activity of the driver for sending. • Counter Reconfig. counts, how often this card initiated a network reconfiguration. Comparing this counter with other devices gives information about a damaged network component.
26.3	<pre> Modem Call accept off Cancel hang up </pre>	<p>Modem data</p> <p>If a telephone modem has been installed on the main board, this menu displays the following information :</p> <p>Line 2: Product code Line 3: Firmware version Line 4: Modem version Line 5: Country code (FD=Europe) Line 6: Version of "Data pump"</p> <p>In line 7 the actual modem status will be displayed. The modem only accepts an incoming call, if the automatic call acceptance has been activated in the installer menu Menü 80. Possible messages are:</p> <ul style="list-style-type: none"> • Call acceptance on • Call acceptance off • RING (of other modem) • CONNECT 33600 (Connection to other modem established) • NO CARRIER (Connection terminated) <p>You can cancel a connection by pressing F3 „hang up“.</p>

<p>26.4</p>	<pre> Internal Modules 01/63 >01 FRP with FBC 02 Remote LCD Panel A 03 Remote LCD Panel A 04 FRP A B 05 - 06 - Cancel Details </pre>	<p>Display of RS485 devices</p> <p>A number of max. 63 devices can be connected to the redundant RS485 interface.. The device types will be shown as text:</p> <p>By characters "A" and "B" will be signalised, on which channels a device has been connected. For further informations please press „Details“ (F4) → jump to menu 29.1</p>
<p>27</p>	<pre> 0001/001 MCP CHQ-CP Configured detector text 1 2 3 4 5 6 7 8 Inputs 0 Outputs 0 Fault : missing Cancel </pre>	<p>Example of detector data : MCP</p> <p>The input bits display the status of the alarm contact of the MCP or - in case of input modules – the status of the input bits of the module (high / low). The “Output” bits show – in case of output modules – which outputs are active or in fault condition. Following status are possible:</p> <ul style="list-style-type: none"> • 0 = inactive • 1 = active • x = reset • = open circuit • S = short circuit • U = undefined <p>The last but one line shows any additional fault information if the detector/module is not in normal condition (here : fault because detector is missing). Leaving the menu by pressing F1 („Cancel“).</p>
<p>28</p>	<p>Hochiki ESP</p> <pre> 0002/001 opt. det. ALG-E Configured detector text A-Value ██████████ 0,8%/m Pre alarm ██████████ 2,7%/m Alarm ██████████ 3,4%/m Cancel Calib. Details </pre>	<p>Example of detector data : Optical smoke detector</p> <p>The FCP displays the current values of the detector as horizontal bar charts. The meanings of the bars are :</p> <ul style="list-style-type: none"> • Analogue value (measured in detector chamber) • Pre alarm threshold • Alarm threshold <p>The percentage values on the right relates to the bar charts. The Pre alarm/alarm threshold depend on</p> <ol style="list-style-type: none"> a) the detector sensitivity which can be adjusted b) the mode if the detector is a multi sensor <p>Only for Hochiki ESP</p> <p>The push button „Calib“ration (F3) can be used to calibrate an optical smoke detector or a multi sensor manually. This will be done by the panel usually automatically once a day (see Settings -> System settings -> Parameter 12). That means usually this is not necessary to do manually except :</p> <ol style="list-style-type: none"> 1. after replacing a detector and if the fault message "Calibration fault" appears. 2. if after the daily automatic calibration the fault message "Calibration fault" appears. <p>The manual calibration process needs about 20 sec. If in the second case the fault message does not disappear the detector has to be replaced.</p>

	<p>Apollo</p> <p>0002/001 opt. det. XP95 Configured detector text</p> <p>A-Value ██████████ 025 Pre alarm ██████████ 045 Alarm ██████████ 055</p> <p>Cancel Compens. Details</p>	<p>The push button „Details“ (F4) shows the result of the last calibration of the detector → Jump to Picture 30.</p> <p>Only for Apollo By pressing „Compens.“ation (F3) an automatic smoke detector (Optical, Multi) can be readjusted manually. This should be done, if a polluted detector will be changed by a new one. By compensating the detector the drift value (Discovery) or the alarm threshold (XP95, XPlorer) will be reset. Without manual compensation the FCP will adjust these values automatically but this process may last several hours..</p> <p>The push button „Details“ (F4) shows more information for Apollo Discovery detectors→ Jump to Picture 30.</p>						
29	<p>Loop card HOCHIKI ESP</p> <p>Software version : S060A01.00-1 Status : OK Number of spurs : 2/4 Number of loops : 1,2</p> <p>Cancel</p>	<p>Example of loop card details</p> <p>The display indicates that the panel has 4 spurs or 2 loops.</p>						
29.1	<p>FRP with FBC</p> <p>Softwareversion : S150A01.01 24V 1 : OK 24V 2 : Fault FBC : OK Checksum : OK Restart : OK zurück</p>	<p>Example of details of a fire brigade repeater panel with fire brigade control panel</p> <p>In case of a fault of a RS485 device this menu gives a hint about fault reason. In this example 24V supply voltage on input 2 of the FRP is missing.</p>						
30	<p>Only for Hochiki ESP</p> <p>0002/001 opt. det. ALG-E</p> <p>029 ██████████ 094 ██████████ 156 ██████████ 232 ██████████ Zeropoint Firepoint 61 190</p> <p>Cancel</p> <p>0002/001 Multisen ALG-E</p> <p>029 ██████████ 094 ██████████ 156 ██████████ 232 ██████████ Zeropoint Firepoint 61 190</p> <p>Cancel</p> <p>0002/001 Ion det. ACA-E</p> <p>008 ██████████ 110 ██████████ 138 ██████████ 246 ██████████ Zeropoint Firepoint 61 190</p> <p>Cancel</p>	<p>Only for Hochiki ESP</p> <p>Example of „Zeropoint“ and „Firepoint“ display</p> <p>Zeropoint = quiescent analogue value (9-109 depending on detector type) Firepoint = testalarm threshold (139-246 depending on detector type)</p> <p>Out of these two values the actual smoke density and the alarm thresholds will be calculated. (s. picture 28).</p> <p>By calibrating the detector the smoke density will be set to 0 and the alarmthresholds will be readjusted. The zeropoint represents the pollution of the detector. In the bar charts on the left hand the limits and the standard values for the different detector types are demonstrated.</p> <p>A pollution fault will be generated automatically at the following smoke densities::</p> <table border="1" data-bbox="829 1877 1380 1975"> <tr> <td>opt. det. ALG-E</td> <td>+ - 1,1 %/m</td> </tr> <tr> <td>Multisen ALG-E</td> <td>+ - 1,1 %/m</td> </tr> <tr> <td>Ion det. ACA-E</td> <td>+ - 0,17%/m</td> </tr> </table>	opt. det. ALG-E	+ - 1,1 %/m	Multisen ALG-E	+ - 1,1 %/m	Ion det. ACA-E	+ - 0,17%/m
opt. det. ALG-E	+ - 1,1 %/m							
Multisen ALG-E	+ - 1,1 %/m							
Ion det. ACA-E	+ - 0,17%/m							

<u>Only for Apollo Discovery</u>	<u>Only for Apollo Discovery</u>
0002/001 opt. det. DISCOV.	
Date of manufact. : 04/05	<p>The Apollo "Discovery" series has the ability to store data in the flash memory of the detector itself. These data remains in memory even if the detector will be removed from the base. The reading and transmitting of the data will last about 1-2 seconds. Therefore you have a short delay before first value will be displayed.</p> <p>The following data is aavailable:</p> <ul style="list-style-type: none"> - date of manufacture of the detector in format MM/JJ - pollution in the range 0-31. <ul style="list-style-type: none"> • 16 = clean air value • <=3 and 31 = pollution fault • 0 = fault with analogue value 4 - sensitivity 1-5 (s. Picture 111) - date of last revision in format MM/JJ. If no revision alarm has been activated for this detector a "-".will be displayed. - detector LED at polling <ul style="list-style-type: none"> • 1 = LED flashes, if detector is polled. • 0 = LED off, if detector is polled this function can be set by system-parameter 8
Pollution : 16	
Sensitivity : 3	
Last revision : -	
Det.LED flash at poll. : 0	
zurück	


3. Menus for the installer :

The following menus are available only for the installer as the access is protected by a separate access code. When the panel is shipped out by NSC the access code for the installer is :

00000

This access code can be changed by the installer. In any case it should be kept at a save place. When the installer has changed this access code it is unique and nobody else can operate in the installer menus of the panel.

**Please keep the installer code (access code) in a save place.
It is the protection of the panel against wrong operation.**

After pressing the push button  you will enter the main menu of the FCP „Solution F1“. Then please press **F3 („Installer“)** to enter the installer menus. After that the installer code is required.

To select sub menus you have the following possibilities :

- Using the **cursor keys** ↓ and ↑ to mark the sub menu with the black background and then press **F4 („Enter“)** to confirm the selection.
- Directly by pressing the **number** of the sub menu. No „Enter“ button is necessary in this case.

Some times you will see a listing of e.g. outputs, inputs etc. in the LC module. In which case usually there is a selection bar like this :

```
↓+1   ↑-1   Selection   -> +10   <- -10
```

When there is such a selection bar you can use the **cursor keys** again and pressing **F4 („Enter“)** confirms the selection. The cursor keys ↓ and ↑ go one line down / up and the cursor keys → and ← will go 10 lines down / up.

There are some more standard operating functions :

- „Cancel“ in the bottom line of the LC module (right above F1) means always jumping into the menu before
- The „ESC“ push button cancels the current typing but do not lead to a jump out of the menu.

Usually the bottom line of the LC module looks like this (if there are no additional options to F2 and F3) :


```
Cancel
```

```
Enter
```

No.	Indication of the LC module :	Description :
31	Installer Access Code: ***** Cancel	Access to the installer menu After pressing push button F3 („Installer“) the FCP requires the installer access code. Please type this code and confirm by F4 („Enter“).
32	Main menu 1. Switch on/off 5. Test mode 2. Alarm counter 6. Autom.controlling 3. End user code 7. Alarm configurat. 4. Diagnosis 8. Settings Cancel End use Enter	General Main menu for installer This menu appears immediately after pressing „Prog“. The functions have the followings meanings : <ol style="list-style-type: none"> 1. To switch on / off detectors, input-/ output modules, zones and general outputs → Jump to Menu 02 2. Indication of the alarm counter. This alarm counter cannot be set back. It is a 4 digit number (1 – 9999). 3. To change the end user code → Jump to Menu 04 4. To enter the diagnosis menu → Jump to Menu 05 5. To enter the test mode. That are the following functions : <ul style="list-style-type: none"> ➤ Detector test ➤ Manual Controlling ➤ Simulation ➤ Revision → Jump to Menu 33 6. To enter automatic control functions. These are : <ul style="list-style-type: none"> ➤ OC outputs inside the FCP ➤ Relays inside FCP ➤ Power outputs of the FCP ➤ Output modules (on the loops) ➤ Input modules (on the loop) ➤ 8 monitored inputs of the main board ➤ 2 conventional inputs of the main board → Jump to Menu 34 7. To enter alarm configuration. These are : <ul style="list-style-type: none"> ➤ Configuring detectors / zones ➤ Alarm dependencies ➤ Configuring 16 timer programs ➤ Configuring alarm / fault delays → Jump to Menu 35 8. To enter settings menu. Which means : <ul style="list-style-type: none"> ➤ To set data and time ➤ National holidays ➤ System settings ➤ Scanning of detectors ➤ To delete the configuration ➤ To delete detector texts ➤ To delete event memory ➤ To configure push buttons S1-S8 ➤ To change installer access code ➤ To select the language ➤ To configure the interfaces ➤ To configure conventional zones ➤ To scan RS485 devices <p style="text-align: right;"> Settings 1 → Jump to Menu 36 Settings 2 → Jump to Menu 37 </p>

		<p>The push button „cancel“ (F1) leads to the normal status indication of the FCP.</p> <p>The push button „End user“ (F3) is for entering the end user area.</p> <p>The push button „Enter“ (F4) selects (activates) the function which is marked by a black background. Instead you can also select the function by pressing the no. left in front of the functions (here : 1 – 8).</p>								
33	<p>Test mode</p> <ol style="list-style-type: none"> 1. Detector test 2. Manual Control 3. Simulation 4. Revision <p>Cancel Enter</p>	<p>Main menu : Test functions</p> <p>As soon as this menu is selected the FCP is in the service mode. This will be indicated by the green LED „Service“. After leaving this menu the green LED is off.</p> <ol style="list-style-type: none"> 1. The function „Detector test“ can be used to set individual detectors in alarm condition (electronically) → Jump to Menu 50 2. „Manual Control“ means manual controlling of the outputs. With a simple press on a push button an output can be activated → Jump to Menu 51 3. „Simulation“ can be used to set individual detectors in alarm condition without connected detectors (by software). This is useful for testing the panel outputs / indications as long as the panel is not installed → Jump to Menu 52 4. „Revision“ means a „One-Man-Test procedure“ to set smoke and heat detectors in alarm by using special test equipment. During this procedure the FCP resets all alarms on the relevant zones automatically after a certain time → Jump to Menu 53 								
34	<p>Autom. Controlling</p> <table border="0" style="width: 100%;"> <tr> <td>1. Output</td> <td>5. Input module</td> </tr> <tr> <td>2. Relay</td> <td>6. Input</td> </tr> <tr> <td>3. Power output</td> <td>7. Monitored Input</td> </tr> <tr> <td>4. Output module</td> <td></td> </tr> </table> <p>Cancel Enter</p>	1. Output	5. Input module	2. Relay	6. Input	3. Power output	7. Monitored Input	4. Output module		<p>Main menu : Automatic Controlling</p> <p>The following options can be selected :</p> <ol style="list-style-type: none"> 1. Configuration of internal OC outputs (on main board and loop cards) → Jump to Menu 54 2. Configuration of 4 internal relays on main board → Jump to Menu 55 3. Configuration of 3 internal monitored power outputs on main board → Jump to Menu 56 4. Configuration of output modules on the loops → Jump to Menu 57 5. Configuration of input modules on the loops → Jump to Menu 58 6. Configuration of 8 internal digital inputs on main board → Jump to Menu 59 7. Configuration of 2 internal monitored conventional inputs on main board → Jump to Menu 60
1. Output	5. Input module									
2. Relay	6. Input									
3. Power output	7. Monitored Input									
4. Output module										
35	<p>Alarm configurat.</p> <ol style="list-style-type: none"> 1. Zones 2. Detector settings 3. Zone settings 4. Alarm coincidences 5. Timer program 6. Delay <p>Cancel Enter</p>	<p>Main menu : Alarm configuration</p> <p>The following options can be selected :</p> <ol style="list-style-type: none"> 1. Sub menu „Zones“ to configure detectors into zones → Jump to Menu 61 2. Sub menu „Detector settings“ to configure the detectors. E.g. day and night sensitivity, multi sensor modes, selecting timer 								

		<p>programs for detectors, delay and pre-alarm functions → Jump to Menu 62</p> <ol style="list-style-type: none"> Sub menu „Zone settings“ to configure the zones for 2-detector-dependency, internal alarm zones, technical or fault alarms etc. → Jump to Menu 63 Sub menu „Alarm coincidences“ to create alarm dependencies between two or more zones → Jump to Menu 64 Sub menu „Timer programs“ to configure up to 16 timer programs → Jump to Menu 65 Sub menu „Delay“ to configure „Response time“ and „Inspection time“ for the alarm transmission device (only relevant if the main alarm shall be investigated before passing to the Fire Brigade). → Jump to Menu 66 								
36	<p>Settings 1</p> <table border="0"> <tr> <td>1. Date/Time</td> <td>5. Delete program</td> </tr> <tr> <td>2. Holidays</td> <td>6. Delete texts</td> </tr> <tr> <td>3. System settings</td> <td>7. Delete Events</td> </tr> <tr> <td>4. Scan detectors</td> <td>8. Push buttons S_</td> </tr> </table> <p>Cancel more Enter</p>	1. Date/Time	5. Delete program	2. Holidays	6. Delete texts	3. System settings	7. Delete Events	4. Scan detectors	8. Push buttons S_	<p>Settings 1 of FCP</p> <ol style="list-style-type: none"> To change date, time and day of the week → Jump to Menu 67 To configure bank or national holidays which can be configured individually for any country → Jump to Menu 68 To enter sub menu for system settings where some individual hardware and software features can be configured → Jump to Menu 69 To enter sub menu for new scanning of addressable detectors → Jump to Menu 70 To delete configuration of FCP. Before deleting there will be a security inquiry → Jump to Picture 71 To delete detector texts. Before deleting there will be a security inquiry → Jump to Picture 72 To delete all events in event memory. Before deleting there will be a security inquiry → Jump to Picture 73 To enter sub menu for configuration of special push buttons S1 to S8 → Jump to Menu 74 <p>For another settings menu please press F3 („more“) to enter sub menu „Settings 2“ → Jump to Menu 37</p>
1. Date/Time	5. Delete program									
2. Holidays	6. Delete texts									
3. System settings	7. Delete Events									
4. Scan detectors	8. Push buttons S_									
37	<p>Settings 2</p> <table border="0"> <tr> <td>1. Installer code</td> <td>5. Scan RS485</td> </tr> <tr> <td>2. Language</td> <td>6. Modem</td> </tr> <tr> <td>3. Interfaces</td> <td>7. Network</td> </tr> <tr> <td>4. Convent. Detect.</td> <td>8. Flash Update</td> </tr> </table> <p>Cancel more Enter</p>	1. Installer code	5. Scan RS485	2. Language	6. Modem	3. Interfaces	7. Network	4. Convent. Detect.	8. Flash Update	<p>Settings 2 of FCP</p> <ol style="list-style-type: none"> To change installer access code → Jump to Menu 75 To change the panel's language → Jump to Menu 76 To enter sub menu of 3 serial interfaces RS-232. It is possible to configure the interfaces with different protocols and different baud rates → Jump to Menu 77 To configure alarm thresholds for conventional detectors so that it is possible
1. Installer code	5. Scan RS485									
2. Language	6. Modem									
3. Interfaces	7. Network									
4. Convent. Detect.	8. Flash Update									


		<p>to use conventional detectors of different manufacturers → Jump to Menu 78</p> <ol style="list-style-type: none"> After pressing 5. the RS-485 devices connected to the RS-485 interfaces will be scanned. The number of found RS-485 devices will be displayed in the last but one display line → Jump to Picture 79 Opens input screen "Modem" → Jump to Menu 80 Opens input screen for network settings → Jump to Menu 81 Facilitates a software update of the main board using the configuration software → Jump to Menu 82 <p>For another settings menu please press F3 („more“) to enter sub menu „Settings 3“ → Jump to Menu 38</p>
38	<p>Settings 3</p> <ol style="list-style-type: none"> Power outouts Loop parameters Options <p>Cancel Enter</p>	<p>Settings 3of FCP</p> <ol style="list-style-type: none"> Opens input screen to configure power output settings → Jump to Menu 83 Opens input screen to configure loop settings → Jump to Menu 84 Jumps into menu to unlock options → Menu 85
50	<p>Detector test Status</p> <p>Zone : 2 Normal</p> <p>Detector : 3 Normal</p> <p>Alarm unset (outputs inactive) !</p> <p>Cancel On set</p> <p>Example of detector test :</p> <p>Detector not yet in alarm :</p> <p>0002/002 opt. det.</p> <p>ALG-E</p> <p>Evt. individual detector text</p> <p>A-Value ██████████ 0,0%/m</p> <p>Pre alarm ██████████ 2,7%/m</p> <p>Alarm ██████████ 3,4%/m</p> <p>Cancel Calib. Details</p> <p>Detector in alarm :</p> <p>0002/002 opt. det.</p> <p>ALG-E</p> <p>Evt. individual detector text</p> <p>A-Value ████████████████████ 4,5%/m</p> <p>Pre alarm ██████████ 2,7%/m</p> <p>Alarm ██████████ 3,4%/m</p> <p>Cancel Calib. Details</p>	<p>Detector test (only for addressable detectors)</p> <p>First zone and detector number (within the zone) has to be typed. Every line has to be confirmed by "OK".</p> <p>The push button F4 („set / unset“) can be used to configure if the outputs of the FCP shall be activated during the test alarm or not. The current selection is displayed in the last but one line of the LC module (here : „outputs inactive“).</p> <p>After that the test alarm can be activated by pressing F2 („On“).</p> <p>By using the „System Settings“ (parameter 16) it is possible to configure an auto-reset of the test alarm condition or no auto-reset. In that case the test alarm has to be reset by pressing „Reset“ .</p> <p>The bar charts as in the <u>example on the left side</u> show how the test alarm will arise (see A-value). If the analogue value passes the alarm threshold the detector goes into alarm condition.</p>




<p>54</p>	<pre> Autom.controlling Status Output : 001 Normal ↓+1 ↑-1 Selection ->+10 <--10 >001 Output 001 Main board 002 Output 002 Main board 003 Output 003 Main board Cancel Enter Autom.controlling Status Output : 001 Normal ↓+1 ↑-1 Selection ->+10 <--10 >001 Output 001 Main board 002 Output 002 Main board 003 Output 003 Main board Cancel Settings Function Event </pre>	<p>Automatic Control : internal OC Outputs</p> <p>Please select the OC output which shall be configured by the cursor keys :</p> <p>↑,↓ : Marker „>“ one line up / one line down <-, -> : Marker „>“ 10 lines up / 10 lines down or type the number of the OC output directly by using the keypad and confirm this by “OK”.</p> <p>Underneath the grey line „Selection“ the FCB indicates where the selected outputs are. OC outputs 1 to 16 are on the main board, any further outputs are on the additional loop cards :</p> <p>OC outputs 01 – 16 : on Main board OC outputs 17 – 24 : on loop card / convent. card 1 OC outputs 25 – 32 : on loop card / convent. card 2 etc.</p> <p>The selected output has to confirmed by „OK“ or by F4 („Enter“). After this the last line of the LC module looks like the example left.</p> <p>Press F2 („Settings“) → Jump to Menu 104 (Menu 104 to assign on/off functions to the outputs)</p> <p>Press F3 („Function“) → Jump to Menu 105 (Menu 105 to link the outputs with fixed standard functions of activation)</p> <p>Press F4 („Event“) → Jump to Menu 106 (Menu 106 to configure cause and effects events <u>when</u> the output has to activate)</p>
<p>55</p>	<pre> Autom.controlling Status Relay : 001 Normal ↓+1 ↑-1 Selection ->+10 <--10 >001 Relay 001 Main board 002 Relay 002 Main board 003 Relay 003 Main board Cancel Enter </pre>	<p>Automatic Control : 4 internal Relays</p> <p>This configuration menu relates to 4 internal relays on the main board.</p> <p>The operation is he same as described in Menu 54.</p>
<p>56</p>	<pre> Autom.controlling Status Power Output : 001 Normal ↓+1 ↑-1 Selection ->+10 <--10 >001 Power Output1 Main board 002 Power Output2 Main board 003 Power Output3 Main board Cancel Enter </pre>	<p>Automatic Control : 3 monitored Power outputs</p> <p>This configuration menu relates to 3 internal power outputs on the main board.</p> <p>The operation is he same as described in Menu 54.</p>
<p>57</p>	<pre> Output module Segment : Address : Output : Cancel </pre>	<p>Automatic Control : Output modules (loop)</p> <p>This configuration menu relates to the output modules on the loops.</p> <p>Please type the loop number (“Seg.”)and the output module’s address and confirm every line by “OK”.</p> <p>Because some of the modules (B02450/51-00 and B02460/61-00) have two separate outputs you can select the output (1 or 2) in the line “Output” and confirm by “OK”.</p> <p>After this the last line of the LC module looks like the example on the left.</p>

	<pre> Example of loop 1, module addr. 99 : Output module Segment : 1 Address : 99 Output : 1 Cancel Module Sounder Event </pre>	<p>Press F2 („Module“) or F3 („Sounder“) → Jump to Menu 107 (Menu 107 to assign on/off functions to the output modules or to configure tones / volume for base sounders.)</p> <p>Press F4 („Event“) → Jump to Menu 106 (Menu 106 to configure cause and effects events <u>when</u> the output module has to activate)</p>
58	<pre> Input module Seg. : Address : Input : Cancel Event </pre>	<p>Automatic Control : Input modules (loop)</p> <p>This configuration menu relates to the input modules on the loops.</p> <p>You can use input modules to :</p> <ul style="list-style-type: none"> ➤ disable detectors / zones ➤ change the sensitivity of addressable detectors (Day mode/Night mode) ➤ activate outputs, relays and power outputs ➤ switch off the internal buzzer <p>Please type the loop number (“Seg.”) and the output module’s address as well as the input number and confirm every line by “OK”.</p> <p>Press F4 („Event“) → Jump to Menu 106</p>
59	<pre> Autom. controlling Status Input : 001 Normal ↓+1 ↑-1 Selection ->+10 <--10 >001 Input 001 Main board 002 Input 002 Main board 003 Input 003 Main board Cancel Enter </pre>	<p>Automatic Control : 8 resistor monitored Inputs</p> <p>This configuration menu relates to the 8 monitored inputs on main board.</p> <p>Please select the input which shall be configured by the cursor keys :</p> <p>↑,↓ : Marker „>“ one line up / one line down <-, -> : Marker „>“ 10 lines up / 10 lines down or type the number of the input directly by using the keypad and confirm this by “OK”.</p> <p>Underneath the grey line „Selection“ the FCB indicates where the selected inputs are : in this case on the main board.</p> <p>After selecting the input the last line of the LC module changes and you can choose :</p> <p>Press F2 („Settings“) → Jump to Menu 108 (Menu 108 to configure monitoring and delay of OC inputs) or</p> <p>Press F3 („Function“) → Jump to Menü 105 (selection of standard function for this input) or</p> <p>Press F4 („Event“) → Jump to Menu 106 (Menu 106 to configure cause and effects events <u>when</u> the output module has to activate)</p>

60	<pre> Autom.controlling Status Monitored Input : 001 ↓+1 ↑-1 Selection ->+10 <--10 >001 Monitored Input1 Main board 002 Monitored Input2 Main board Cancel Enter </pre>	<p>Automatic Control : 2 monitored, conventional inputs</p> <p>This configuration menu relates to the both monitored conventional inputs on main board.</p> <p>If no event is programmed each input has a standard function. These functions are :</p> <p>conventional input 1 = Key deposit box Alarm conventional input 2 = exting. syst. interface (VdS)</p> <p>As soon as one event has been programmed the standard functionen of this input will be out of order.</p> <p>Please select the input which shall be configured by the cursor keys :</p> <p>↑,↓ : Marker „>“ one line up / one line down and confirm this by “OK” or by F4 („Enter“). Then the function of F4 changes and please press F4 („Event“) → Jump to Menu 106</p>
61	<pre> Zones 1. Analogue Detect. 2. Convent. Detect. Cancel Enter </pre>	<p>Select the kind of detectors to configure : Loop or conventional</p> <p>Here you select the kind of detectors which shall be configured : analogue addressable or conventional. The FCP „Solution F1“ has the ability not only to configure analogue addressable detectors but conventional detectors too. That means you can assign to every hardware output for conventional detectors a software zone.</p> <p>Please select the right detectors by the push buttons 1 or 2 :</p> <p>Pressing 1 → Jump to Menu 109 Pressing 2 → Jump to Menu 110</p>
62	<pre> Detector settings Seg. : 1 from Address : 2 to Address : 2 Cancel </pre>	<p>Detector settings</p> <p>This menu is to configure every single (analogue addressable) detector with some of the following functions :</p> <ul style="list-style-type: none"> ➤ Sensitivity for the day ➤ Day mode (only Multi sensor) ➤ Sensitivity for the night ➤ Night mode (only Multi sensor) ➤ Assigning a timer program ➤ Delay in case of alarm condition ➤ Delay in case of fault condition ➤ Pre-alarm <p>After typing loop no. and address(es) (please confirm every line by „OK“) the LC module changes → Jump to Menu 111</p>
63	<pre> Zone settings Zone : 6 Cross detection : No Internal alarm zone : No Fault zone (non latching) : No Fault zone (latching) : No MCP zone : No ↓ Cancel No Yes save </pre>	<p>Zone settings</p> <p>Here you can configure certain settings for every software zone of the FCP.</p> <p>„Cross detection“ means at least 2 detectors of this zone have to be in alarm to activate the transmission devices to the fire brigade.</p> <p>A „fault zone“ does not activate an alarm but only a fault message. „non latching“ means a fault condition is automatically reset when the fault has disappeared.</p>

	<pre> Zone settings Alarm delay for convent. Detect.: No ↑ Extinguishsyst. Activ : No Cancel No Yes save </pre>	<p>By pressing the cursor push button „↓“ you find two more functions :</p> <ul style="list-style-type: none"> ➤ “alarm delay of conventional detectors”. This means, an alarm on a conventional zone will be reset automatically by the FCP has to return within 60 seconds. Otherwise no alarm will be displayed on the FCP. ➤ “Extinguish system active” :zones with this parameter set, can activate an output, signalling that an extinguishing system has been triggered. <p>Press the push button F2 („No“) for deactivating this functions and press F3 („Yes“) to activate the functions individually. Please confirm every line by OK. When you have finished all settings for one zone please press F4 („save“) to save the configuration.</p>
64	<pre> Alarm Coincidences 002/512 Zone 0007 with zone 0011 ↓+1 ↑-1 Selection ->+10 <--10 >001:Zone 0003 with Zone 0022 >002:Zone 0000 with Zone 0000 003:Zone 0000 with Zone 0000 Cancel save </pre>	<p>Zone Alarm Coincidences</p> <p>Use this menu to create alarm coincidences of two or more zones. An alarm coincidence means that at least 2 zones have to be in alarm condition to activate the main alarm passing to the fire brigade station. If only one of the relating zones is in alarm there is only an internal alarm indication on the FCP.</p> <p><u>Way of operation :</u></p> <ul style="list-style-type: none"> - You have to type the zones which shall be in alarm coincidence in the second display line. Therefore please use the keypad and confirm every zone by OK. - After this press F4 („save“) to save the configuration. - The new zone coincidence will be taken over into the list just underneath the grey selection line. There you can see all alarm coincidence which are configured yet. - The marker ,>' at the left side of the LC display jumps to the next line just after you have configured a new zone coincidence.
65	<pre> Timer programs 01/16 >Timer program 01 Day Timer program 02 Night Timer program 03 Night Timer program 04 Night Timer program 05 Night Timer program 06 Night Cancel Weekday </pre>	<p>Timer programs</p> <p>The FCP „Solution F1“ supports up to 16 different timer programs.</p> <p><u>A timer program has two different functions :</u></p> <ol style="list-style-type: none"> 1) You can assign a timer program to detectors and zones to <u>switch sensitivities or detector modes</u> 4 times per day. (Menu 62 „Detector settings“) 2) To switch from „day mode“ to „night mode“ and vice versa. During day mode the main alarm is not directly passed to the fire brigade but there is a delay to inspect the alarm condition (Menu 66 „Delay“). <p>The notation "Day" resp. "Night" behind the timer program number shows the actual status. Please select a timer program by the cursor keys : ↑,↓ : Marker „>“ one line up / one line down and then press F4 („Weekday“) → Jump to Menu 112</p>

<p>66</p>	<p>Delay</p> <p>Response time : 180 Sec. Inspection time : 7 Min. Timer program : 00</p> <p>Cancel save</p>	<p>Delay times of Main alarm (TD)</p> <p>These delay times – consisting of response time and inspection time – relates to the Main alarm and so usually to the transmission device (TD) of the fire brigade station.</p> <p><u>Way of operation :</u> If a smoke detector detects an alarm and the panel is in day mode – delay is activated – the response time will be started immediately. Now the end user has the obligation to acknowledge the alarm condition by pressing „internal buzzer off“  Otherwise if that is not done, the main alarm is indicated and the fire brigade will be called. If the button is pressed the inspection time will be started and the user has several minutes to inspect the alarm. At the end of the inspection time the main alarm is indicated and the fire brigade will be called. He can avoid that by resetting the FCP.</p> <p>If the user presses a MCP during one of the above described periods a main alarm will be activated immediately.</p> <p>The response time can be 0 – 180 Sec. The inspection time can be 1 – 7 Min.</p> <p>Please confirm every line by OK and press F4 („save“) to save the new delay times.</p> <p><u>Pay attention :</u> The delay can be linked to a timer program. This offers the possibility to configure the day and night mode individually for every weekday and – if necessary – to switch between day and night mode up to 4 times per day. So that means one of the timer programs should be reserved for this function if the user needs the day and night modes (Menu 65 „Timer programs“). If the user doesn't need an automatic switching from day to night mode and vice versa you can switch it manually too. Therefore please have a look in „Main Menu“ → „1. Switch on/off“ → „7. Delay“</p>
<p>67</p>	<p>Date/Time</p> <p>Day : 09 Friday Month : 07 Winter Year : 04 Hour : 07 Minute : 46 Second : 39</p> <p>Cancel Weekday Maintenanc save</p>	<p>To set date and time</p> <p>Please type the right data line by line and confirm every line by OK. Select the right weekday by pressing F2 („weekday“).</p> <p>It is not necessary to configure summer or winter time because the panel does this automatically. This means at the last weekend in March and October the panel switches to summer or winter time. This can be deactivated if you go to „System settings“ (Menu 69) → item 7.</p> <p>By pressing F3 („Maintenance“) a Maintenance interval can be configured. When this interval elapsed, a fault message will be generated -> Menü 116</p> <p>When you have finished data, time and weekday please press F4 („save“) to save the new configuration.</p>

<p>68</p>	<p>Holidays</p> <pre>Day : 25 Month : 12 ↓+1 ↑-1 Selection ->+10 <--10 01: Day 31 Month 12 >02: Day 00 Month 00 03: Day 00 Month 00 Cancel save</pre>	<p>To configure Holidays</p> <p>Please type the day of a holiday in the second line of the LC display and the month in the third line. The example on the left side shows Christmas holiday. Please confirm every line by OK.</p> <p>The marker „>“ indicates the number of holiday which the user is configuring at the moment.</p> <p>When you have finished day and month press F4 („save“) to save the holiday. It will be transferred into the list in the middle part of the LC display.</p> <p>To cancel a holiday : Please put the marker „>“ by the cursor push buttons ↑,↓ on the holiday which shall be erased and type „00“ for day and month and save it by F4.</p>																																																												
<p>69</p>	<p>System settings</p> <pre>FBC settings : 00 ↓+1 ↑-1 Selection ->+10 <--10 >01: FBC settings (0-5) 00 02: Transm. Device settings(0-2) 00 03: FCP cover contact (0-2) 01 Cancel save</pre> <p>*) If the German Fire Brigade Control Panel is connected to the „Solution F1“ the following outputs are occupied :</p> <ul style="list-style-type: none"> - Output OC 01 – 06 on main board for NSC-FBC - Output OC 01 – 07 on main board for SeTec-FBC - Input 01 – 05 on main board (see wiring diagram) 	<p>System settings</p> <p>Here the user can configure certain individual software and hardware settings which are listed in the table below.</p> <p>The marker „>“ indicates the kind of setting which the user is configuring at the moment. It is displayed in the 2. line of the LC module.</p> <p>Please select the setting by the cursor keys and type the right value according the table below. The possible values are listed in brackets.</p> <p>If all settings are configured please press F4 („save“) to save the new configuration.</p> <p>The FCP supports the following settings :</p> <table border="1" data-bbox="826 1198 1388 2020"> <thead> <tr> <th>Nr.</th> <th>Parameter</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td rowspan="3">01</td> <td>FBC</td> <td>0</td> <td>no FBC</td> </tr> <tr> <td>(Fire Brigade Control Panel)</td> <td>1 *)</td> <td>NSC-FBC</td> </tr> <tr> <td></td> <td>2 *)</td> <td>SeTec-FBC</td> </tr> <tr> <td rowspan="3">02</td> <td rowspan="3">Transm. Device (TD)</td> <td>3</td> <td>FBC Switzerland</td> </tr> <tr> <td>0</td> <td>Contin. signal</td> </tr> <tr> <td>1</td> <td>puls signal</td> </tr> <tr> <td rowspan="3">03</td> <td rowspan="3">FCP cover contact</td> <td>2</td> <td>puls signal and puls feed back</td> </tr> <tr> <td>0</td> <td>Deactivated</td> </tr> <tr> <td>1</td> <td>Switch off TD</td> </tr> <tr> <td rowspan="2">04</td> <td rowspan="2">Mains fault delay</td> <td>2</td> <td>Switch on and off TD</td> </tr> <tr> <td>0-30</td> <td>Minutes</td> </tr> <tr> <td rowspan="2">05</td> <td rowspan="2">Fault reset</td> <td>0</td> <td>Automatically</td> </tr> <tr> <td>1</td> <td>by „“</td> </tr> <tr> <td rowspan="2">06</td> <td rowspan="2">Fault remind</td> <td>0-30</td> <td>Minutes or 0=no remind</td> </tr> <tr> <td>0</td> <td>Automatically</td> </tr> <tr> <td rowspan="2">07</td> <td rowspan="2">Summer time switching</td> <td>1</td> <td>Off</td> </tr> <tr> <td>0</td> <td>Off</td> </tr> <tr> <td rowspan="2">08</td> <td rowspan="2">Detector LED flash at polling</td> <td>0</td> <td>Off</td> </tr> <tr> <td>1</td> <td>On</td> </tr> </tbody> </table>	Nr.	Parameter	Value	Description	01	FBC	0	no FBC	(Fire Brigade Control Panel)	1 *)	NSC-FBC		2 *)	SeTec-FBC	02	Transm. Device (TD)	3	FBC Switzerland	0	Contin. signal	1	puls signal	03	FCP cover contact	2	puls signal and puls feed back	0	Deactivated	1	Switch off TD	04	Mains fault delay	2	Switch on and off TD	0-30	Minutes	05	Fault reset	0	Automatically	1	by „  “	06	Fault remind	0-30	Minutes or 0=no remind	0	Automatically	07	Summer time switching	1	Off	0	Off	08	Detector LED flash at polling	0	Off	1	On
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	<p>The shielding will be controlled under the following conditions:</p> <ul style="list-style-type: none"> - During detector scanning - ca. 15 seconds after FCP reset - every 24h during detector calibration 	<table border="1"> <tr> <td>09 LED Intensity (LEDs of FCP)</td> <td>0-15</td> <td>0= dark 7= standard 15= bright</td> </tr> <tr> <td>10 Sounder output Activation</td> <td>0</td> <td>In case of main alarm</td> </tr> <tr> <td></td> <td>1</td> <td>At any alarm</td> </tr> <tr> <td>11 ext. Supply voltage 24V</td> <td>0</td> <td>No</td> </tr> <tr> <td></td> <td>1</td> <td>Yes</td> </tr> <tr> <td>12 Calibration time</td> <td>0-24</td> <td>Corresponds to time</td> </tr> <tr> <td>13 Earth fault detection</td> <td>0</td> <td>On</td> </tr> <tr> <td></td> <td>1</td> <td>Off</td> </tr> <tr> <td>14 Not used</td> <td></td> <td></td> </tr> <tr> <td>15 Pre alarm (for all detectors)</td> <td>0</td> <td>Off</td> </tr> <tr> <td></td> <td>1</td> <td>On</td> </tr> <tr> <td>16 Reset detector test</td> <td>0</td> <td>Automatic</td> </tr> <tr> <td></td> <td>1</td> <td>Manual</td> </tr> <tr> <td>17 RS485 channels</td> <td>1,2</td> <td>Corresponds to the numbers of channels</td> </tr> <tr> <td>18 Shielding control</td> <td>0-1</td> <td>0 = off 1 = on</td> </tr> </table>	09 LED Intensity (LEDs of FCP)	0-15	0= dark 7= standard 15= bright	10 Sounder output Activation	0	In case of main alarm		1	At any alarm	11 ext. Supply voltage 24V	0	No		1	Yes	12 Calibration time	0-24	Corresponds to time	13 Earth fault detection	0	On		1	Off	14 Not used			15 Pre alarm (for all detectors)	0	Off		1	On	16 Reset detector test	0	Automatic		1	Manual	17 RS485 channels	1,2	Corresponds to the numbers of channels	18 Shielding control	0-1	0 = off 1 = on
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70	<pre>Scan detectors Loop card : 01 ↑+1 ↑-1 Selection ->+10 <--10 > Loop card 01 Cancel all Enter</pre>	<p>Scan detectors</p> <p>This menu relates to <u>loop cards (addressable detectors)</u> only.</p> <p>The sense of this function is to scan all detectors of one loop card again to find some new installed detectors or if some detectors are removed. Always both loops of one loop card are scanned. Please type the address (IIC-BUS) of the loop card and confirm it by OK. After pressing „Enter“ (F4) a questions „Are you sure ?“ appears on the LC module. If you confirm it by F4 („Yes“) the selected loop card starts scanning all connected detectors again. Alternative you can select all loop cards for new scanning by pressing F2 („all“). Again the question „Are you sure ?“ appears on the LC module and you can confirm it by F4 („Yes“).</p>																																													
71	<pre>Delete program Are you sure ? No Yes</pre>	<p>Delete Configuration</p> <p>This function deletes all configurations besides the individual texts of the detectors. Even zones, macro push buttons and timer programs will be deleted.</p> <p>Before deleting there will appear the question „Are you sure ?“ on the LC module which has to be confirm by F4 („Yes“).</p> <p>These configurations will not be deleted :</p> <ul style="list-style-type: none"> ➤ Texts of the detector ➤ Event memory 																																													

72	Delete texts <div style="border: 1px solid black; padding: 5px; text-align: center;"> Are you sure ? No Yes </div>	Delete Texts This function deletes all individual texts of the detectors. Before deleting there will appear the question „Are you sure ?“ on the LC module which has to be confirm by F4 („Yes“).
73	Delete Events <div style="border: 1px solid black; padding: 5px; text-align: center;"> Are you sure ? No Yes </div>	Delete Events This function deletes the event memory. Before deleting there will appear the question „Are you sure ?“ on the LC module which has to be confirm by F4 („Yes“).
74	Push buttons S_ Push buttons S_ : 001 <div style="border: 1px solid black; padding: 5px;"> ↑+1 ↑-1 Selection ->+10 <--10 >001 Push button S_1 002 Push button S_1 003 Push button S_1 Cancel Settings Enter </div>	Configuring macro push buttons S1 – S8 Please select the push button which shall be configured by the cursor keys : ↑,↓ : Marker „>“ one line up / one line down or by typing the number of the push button on the keypad and confirm this by OK or by F4 („Enter“). The marker „>“ indicates the push button which the user is configuring now. Then press F4 („Event“) → Jump to Menu 106 After selecting a push button an access code can be specified by pressing F2 („settings“) -> Sprung in Menü 117
75	Installer old access code: 00000 new access code: 22351 new access code: 22351 <div style="border: 1px solid black; padding: 5px;"> Cancel </div>	Changing the installer access code First you have to type the old access code, then you have to type two times the new access code. Every line has to be confirmed with „OK“. <u>Example left side</u> : old access code 00000 is replaced by new access code 22351.
76	Language 1. German 5. Slovenian 2. English 6. Czech 3. French 7. Serbian 4. Dutch <div style="border: 1px solid black; padding: 5px;"> Cancel Enter </div>	Selecting the panel language Use this function to select the panel language on the LC module. Please choose one of the numbers offered on the LC module to select the right language.
77	Interfaces 1. UART 1 2. UART 2 3. UART 3 <div style="border: 1px solid black; padding: 5px;"> Cancel Protocol Baud rate </div>	Configuring the interfaces The FCP offers 3 different serial interfaces RS-232 (see wiring diagrams). UART 2 can also be used as RS-485 interface. For every interface a certain protocol can be configured e.g. for printer, PC configuration etc. This means the FCP is easily to adapt to the required application and very flexible. Please select UART 1, 2 or 3 by the cursor keys ↑,↓ and then press F2 („Protocol“) → Jump to Menu 113 After that you can configure the “baud rate” by pressing F3 → Jump to Menu 114


78	<p>Convent. Detect.</p> <pre> Loop card : 3 from ML : 1 to ML : 8 </pre> <p>Cancel</p>	<p>Alarm and fault thresholds for conventional - detectors</p> <p>This function enables the user to adjust every conventional zone individual relating alarm and fault thresholds. So nearly every detector on the fire market can be connected to the „Solution F1“.</p> <p>The conventional detector PCBs inside the „Solution F1“ are preset for Hochiki CDX detectors and Apollo S65/Orbis.</p> <p>For other detectors please have a look into their data sheet to adjust the right values.</p> <p>In the example on the left side „Loop card“ means conventional detector card and you have to type here the card address. Then type the zone(s) of this conventional detector card which shall be re-configured and after confirming every line by “OK” the LC display changes → Jump to Menu 115</p>
79	<p>INITIALISATION</p> <pre> RSRS485 Devices : 001 ----- </pre>	<p>Scanning RS485 devices</p> <p>The picture on the left side shows the scanning of the RS-485 devices. The line with the slashes „-“ is running from left to right und during this time the RS-485 interfaces addresses all the connected devices.</p> <p>In the last but one line of the LC module the FCP shows the number of RS-485 devices found. (here : 1).</p>
80	<p>Modem</p> <pre> 1. Call accept on 2. Call accept off 3. Initialisation 4. Hang up </pre> <p>Cancel OK</p>	<p>Modem functions</p> <p>If there is mounted a telephone modem in the FCP, from here you can send commands to the modem. These commands are:</p> <ol style="list-style-type: none"> <u>Call accept on</u> Will cause the modem to answer an external phone call. <u>Call accept off</u> Disables the automatic call acceptance <u>Initialisation</u> Initializes the modem with an ATZ command <u>Hang up</u> Disconnects modem from telephone line
81	<p>Network</p> <pre> Network device : 003 Device no. : 003 Device type : 000 Zone offset : 03000 Offset/Device no. : Zone offset Cancel Sections scan save </pre>	<p>Network settings</p> <p>Each networkcard has its own ID-number in the range 1-255. This ID-number will be determined by input a number in line Network device. Please take care, that each number is only existing one time in the whole network.</p> <p>The device number is the number that will be displayed in the panels LCD in case of a message. Existing device types are:</p> <ol style="list-style-type: none"> FCP = 000 RCP = 001 (Remote Control Panel) <p>The difference is, that in a RCP all incoming</p>

		<p>messages will be stored in the event memory. A FCP only will save ist own messages.</p> <p>Zone offset determines the starting number of zones for this FCP if ithe parameter Offset/Device no. Is set to zone offset. Then in case of a message from a detector/module the zone number plus zone offset will be displayed and not the device no.</p>
82	<pre>Flash Update Are you sure ? Nein Ja Flash Update ready repeat Flash Update 627 ready repeat</pre>	<p>Flash Update</p> <p>With this function you can update the software of the mainboard. The actual software version (e.g. S040A04.04.x) will be downloaded through RS232 interface by the NSC configuration software. The protocol for UART 1 has to be set to "PC" and the baudrate for UART 1 and the selcetd COM-interface of the computer have to be the same.</p> <p>After confirming the safety request with "yes" the opposite display will appear. Now you have to start the communication on the PC. Instaed of "ready" then the number of transmitted kilobytes will be displayed. A transmission error will be signalized by "error" and by pressing "repeat" F4 key the procedure can be restartet.</p> <p>After completed transmisson above key F1 "ready" will be displayed. Pressing F1 will erase and reprogram the flash memory. Afterwards the FCP will automatically restart. You can check the new version under diagnosis – FCP data..</p>
83	<pre>Load resistance Power output 1 : 0476 Power output 2 : 1059 Power output 3 : 0960 Cancel Calib. save</pre>	<p>Power outputs: Thresholds</p> <p>Here for the 3 monitored power outputs the thresholds for open curcuit and short curcuit will be adjusted. The thresholds depend on the loadresistance of the connected device inclusive the line resistance. This total resistance can be ascertained automatically for each power output individually by pressing "Calib." F3. The software then calculates the thresholds for open curcuit and short curcuit. The resistance can also be measured with a multimeter and typed in directly using the keyboard.</p>
84	<pre>Loop parameters Loop : 1 Open curcuit : 9999 mV Short curcuit : 100 mA Number of detector LEDs : 4 zurück speichern</pre>	<p>Loop parameters</p> <p>In this menu the values for open curcuit and short curcuit determined with the loopcalculation program (Excel sheet) can be entered. Furthermore the number of detector LEDs, that will be activated simultanously on a loop, can be specified in the range 3-12. This input is important for the maximum alarm current, which has influence on the maximum allowed cable length and, as a consequence, to the functionality of the system.</p>

85	<pre>Options 1. ESPA 4.4.4 zurück OK</pre>	<p>Options</p> <p>are additional functions that are not part of the standrd software. The release of these options has to be done by a 6 digit code you can request form NSC.</p>
100	<pre>Manual control Status from Output : 001 Active to Output : ↓+1 ↑-1 Selection ->+10 <--10 >001 Output 001 Main board 002 Output 002 Main board 003 Output 003 Main board Cancel On Off Enter</pre>	<p>Manual Control : internal OC Outputs</p> <p>This menu to activate open collector outputs manually by the user / installer to test their function.</p> <p>Please select the OC output which shall be activated by the cursor keys :</p> <p>↑,↓ : Marker „>“ one line up / one line down <-, -> : Marker „>“ 10 lines up / 10 lines down or type the number of the OC output directly by using the keypad and confirm this by “OK” or by F4 („Enter“).</p> <p>It is possible to operate several outputs simultaneously by using the “from – to” function.</p> <p>Underneath the grey line „Selection“ the FCB indicates where the selected outputs are. OC outputs 1 to 16 are on the main board, any further outputs are on the additional loop cards :</p> <p>OC outputs 01 – 16 : on Main board OC outputs 17 – 24 : on loop card / convent. card 1 OC outputs 25 – 32 : on loop card / convent. card 2 etc.</p> <p>After confirming the output the last line of the LC module changes and you can</p> <ul style="list-style-type: none"> ➤ activate the output by F2 (“On”) ➤ deactivate the output by F3 (“Off”) <p>The activations can be checked on the LC module because they will be displayed immediatly or you can check the status as shown “Active” in the picture left side. If the output is not active it is indicated as “normal”.</p>
101	<pre>Manual Control Status from relay : 001 Normal to relay : ↓+1 ↑-1 Selection ->+10 <--10 >001 Relay 001 Main board 002 Relay 002 Main board 003 Relay 003 Main board Cancel On Off Enter</pre>	<p>Manual Control : 4 internal Relays</p> <p>This menu to activate the 4 internal relay outputs on the main board manually by the user / installer to test their function.</p> <p>The way of operation is the same as in Menu 100.</p>
102	<pre>Manual Control Status from power output : 001 Normal to power out : ↓+1 ↑-1 Selection ->+10 <--10 >001 Power output1 Main board 002 Power output2 Main board 003 Power output3 Main board Cancel On Off Enter</pre>	<p>Manual Control : 3 monitored Power Outputs</p> <p>This menu to activate the 3 internal monitored power outputs on the main board manually by the user / installer to test their function.</p> <p>The way of operation is the same as in Menu 100.</p>

103	<table border="1"> <thead> <tr> <th colspan="2">Manual Control</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Zone</td> <td>: 2</td> <td>Normal</td> </tr> <tr> <td>Detect</td> <td>: 3</td> <td>Normal</td> </tr> <tr> <td>Output/Relay</td> <td>: 1</td> <td></td> </tr> <tr> <td>Cancel</td> <td>On</td> <td>Off</td> </tr> </tbody> </table>	Manual Control		Status	Zone	: 2	Normal	Detect	: 3	Normal	Output/Relay	: 1		Cancel	On	Off	<p>Manual Control : Output modules (loop)</p> <p>This menu to activate output modules on the loops.</p> <p>Please type :</p> <ul style="list-style-type: none"> – the zone of the module – die number of the module within the zone – the output (1 or 2) of the module <p>and confirm every line by “OK”.</p> <p>After confirming the output you can</p> <ul style="list-style-type: none"> ➤ activate the output by F2 (“On”) ➤ deactivate the output by F3 (“Off”) <p>The activations can be checked on the LC module because they will be displayed immediately or you can check the status as shown “Active” in the picture left side. If the output is not active it is indicated as “normal”.</p>																	
Manual Control		Status																																
Zone	: 2	Normal																																
Detect	: 3	Normal																																
Output/Relay	: 1																																	
Cancel	On	Off																																
104	<table border="1"> <thead> <tr> <th colspan="2">Settings</th> <th>Output</th> <th>001</th> </tr> </thead> <tbody> <tr> <td>On/Off like Fire Output</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>On/Off like sounders</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>On/Off like Transm.Dev.</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>Off like buzzer</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>Inactive by door cont.</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>Delay</td> <td>:</td> <td>000</td> <td></td> </tr> <tr> <td>Cancel</td> <td>No</td> <td>Yes</td> <td>save</td> </tr> </tbody> </table>	Settings		Output	001	On/Off like Fire Output	:	No		On/Off like sounders	:	No		On/Off like Transm.Dev.	:	No		Off like buzzer	:	No		Inactive by door cont.	:	No		Delay	:	000		Cancel	No	Yes	save	<p>Automatic Control : Settings for outputs</p> <p>This menu offers the possibility to assign certain on/off switching functions to outputs. For example it is possible to link the on/off switching of the Alarm Transmission Device to an output and in that case the output is disabled at the same time the user disables the Alarm Transmission Device.</p> <p>The following on/off switching functions are available :</p> <ul style="list-style-type: none"> ➤ On/Off like „Fire Outputs“. This function relates to the push button “Fire Outputs off” on the German Fire Brigade Control Panel. If this parameter is set to “yes” and the push button is pressed the relating outputs are disabled. ➤ On/Off like „external sounders“. This function relates to the push button . ➤ On/Off like „Alarm Transmission Device“ (TD). ➤ On/Off like „buzzer off“. This function relates to the push button . ➤ If the output shall be disabled by taking off the cover of the housing set this parameter to „yes“. ➤ Here the user can configure a delay for the activation of the output. The value for the delay is in seconds and the possible range is 0 – 240 s. <p>The functions are disabled by F2 („No“) and the functions are enabled by F3 („Yes“). After setting the parameters please press F4 („Enter“) to save the configuration.</p>
Settings		Output	001																															
On/Off like Fire Output	:	No																																
On/Off like sounders	:	No																																
On/Off like Transm.Dev.	:	No																																
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Inactive by door cont.	:	No																																
Delay	:	000																																
Cancel	No	Yes	save																															
105	<p>Functions for outputs</p> <table border="1"> <thead> <tr> <th colspan="2">Function</th> <th>Output</th> <th>001</th> </tr> </thead> <tbody> <tr> <td>Sounder/Strobe activation</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>Tansm.Dev. activat. permanent</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>Tansm.Dev. activat. impulse</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>Saved Reply Message</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>Reset FCP</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>KDB output active</td> <td>:</td> <td>No</td> <td></td> </tr> <tr> <td>Cancel</td> <td>No</td> <td>Yes</td> <td>save</td> </tr> </tbody> </table>	Function		Output	001	Sounder/Strobe activation	:	No		Tansm.Dev. activat. permanent	:	No		Tansm.Dev. activat. impulse	:	No		Saved Reply Message	:	No		Reset FCP	:	No		KDB output active	:	No		Cancel	No	Yes	save	<p>Automatic Control : Functions</p> <p>Here the user can assign certain fixed functions to the outputs. For example he can assign the “sounder/strobe activation” to an output and in that case this output is activated and deactivated at the same time as the external sounders/strobes.</p> <p>If one of these functions is used it is not possible</p>
Function		Output	001																															
Sounder/Strobe activation	:	No																																
Tansm.Dev. activat. permanent	:	No																																
Tansm.Dev. activat. impulse	:	No																																
Saved Reply Message	:	No																																
Reset FCP	:	No																																
KDB output active	:	No																																
Cancel	No	Yes	save																															

	<p><u>Functions for inputs</u></p> <pre> Function Input 001 Fire outputs : No Sounder : No Alarm Transm.Dev. : No Delay : No Buzzer off : No BMZ Rückstellen : No Cancel No Yes save </pre>	<p><u>to assign any other cause and effect events to the same output.</u></p> <p>The sense is to create a parallel output to the listed outputs on the left side.</p> <p>The function “Saved Reply Message” is a special function of the German Alarm Transmission Device. This device sends back a signal to the panel if the Fire Brigade is alarmed. This signal is acknowledged by the FCP and if this parameter is set to “yes” the relating output indicates this feed back signal by an activation.</p> <p>The functions are disabled by F2 („No“) and the functions are enabled by F3 („Yes“).</p> <p>After setting the parameters please press F4 („Enter“) to save the configuration.</p>
106	<pre> Autom.controlling Output 001 all events Events for selection Cancel Enter </pre>	<p><u>Selection of displaying cause and effect events</u></p> <p>A cause and effect event is a link / configuration of inputs and outputs combined with logical AND or OR. Cause and effect events are possible at the FCP „Solution F1“ for OC outputs, relays, power outputs, output modules, inputs, input modules und macro push buttons.</p> <p>The user can choose if he wants to see all events in the LC module or just the events relating to the output he is configuring at the moment :</p> <p>„All Events“ means all 2048 possible events will be displayed.</p> <p>„Events for selection“ means only the cause and effect events of the selected input / output / push button will be displayed.</p> <p>Please select your choice by the cursor keys : ↑,↓ : Marker „>“ one line up / one line down and confirm this F4 („Enter“) → Jump to Menu 121</p>
107	<p><u>Only for output modules</u></p> <pre> Settings Output module 01/099 On/Off like Fire Output : No Activ. in case of emerg. mode : No Cancel No Yes save </pre>	<p><u>Automatic Control : Settings for output modules (loop)</u></p> <p>The example on the left side shows an output module of segment (loop) 1, address 99 (indicated in the first line of the LC module).</p> <p>This menu offers the possibility to assign certain on/off switching functions to relay and sounder output modules.</p> <p>The following on/off switching functions are available :</p> <ul style="list-style-type: none"> ➤ On/Off like Fire Outputs - This function relates to the push button “Fire Outputs off” on the German Fire Brigade Control Panel. If this parameter is set to “yes” and the push button is pressed the relating outputs are disabled. ➤ Activation in case of emergency mode means that the output module is activated if there is a system fault on the main board (CPU) and simultaneously an alarm of a detector on the same loop card where the

	<p><u>Only for sounders/sounder modules</u></p> <table border="1"> <tr> <td>Settings</td> <td>Output module 01/099</td> </tr> <tr> <td>Activ. in case of emerg. mode</td> <td>: No</td> </tr> <tr> <td>Continous</td> <td>: Yes</td> </tr> <tr> <td>intermittent</td> <td>: No</td> </tr> <tr> <td>Sounder group (0-15)</td> <td>: 00</td> </tr> <tr> <td>Volume (0-10)</td> <td>: 04</td> </tr> <tr> <td>Tone 1 (0-7) : 0</td> <td>Tone 2 (0-7) : 0</td> </tr> <tr> <td>Cancel</td> <td>No Yes save</td> </tr> </table>	Settings	Output module 01/099	Activ. in case of emerg. mode	: No	Continous	: Yes	intermittent	: No	Sounder group (0-15)	: 00	Volume (0-10)	: 04	Tone 1 (0-7) : 0	Tone 2 (0-7) : 0	Cancel	No Yes save	<p>output module is connected too. The functions are disabled by F2 („No“) and the functions are enabled by F3 („Yes“).</p> <p>After setting the parameters please press F4 („Enter“) to save the configuration.</p> <p>Automatic Control : Settings for sounders/ sounder modules (loop)</p> <p>For base sounders and sounder modules the following functions can be configured:</p> <ul style="list-style-type: none"> ➤ Activ. in case of emerg. mode - same as for output modules (s.a.) ➤ Continous tone ➤ Intermittent (alternate) tone ➤ Sounder group – on each loop a maximum of 15 sounder groups can be configured. That means several sounders van be subsumed tinto one group. The setting of the group will be made by software (Hochiki) or by DIP switch (Apollo)..To activate all sounders of the group you just have to program events under "automatic controlling" for one device of this group.. ➤ The volume can be set in the range 0 (off) up to ten. See apndix C. (table of tones and volumes for loop sounders). ➤ The tone can be varied from 0 (off) up to 7. See apndix C. (table of tones and volumes for loop sounders). <p>See technical device specification for details of functionality of each device type.</p> <p><u>Note :</u> Sounder output modules are generally operated like sounders / strobes connected to the monitored power outputs : If the push button  is pressed they are silenced.</p>
Settings	Output module 01/099																	
Activ. in case of emerg. mode	: No																	
Continous	: Yes																	
intermittent	: No																	
Sounder group (0-15)	: 00																	
Volume (0-10)	: 04																	
Tone 1 (0-7) : 0	Tone 2 (0-7) : 0																	
Cancel	No Yes save																	
108	<table border="1"> <tr> <td>Settings</td> <td>Input 001</td> </tr> <tr> <td>with monitoring</td> <td>: No</td> </tr> <tr> <td>Switch</td> <td>: Yes</td> </tr> <tr> <td>Push button</td> <td>: No</td> </tr> <tr> <td>Activation delay</td> <td>: 000</td> </tr> <tr> <td>Cancel</td> <td>No Yes save</td> </tr> </table>	Settings	Input 001	with monitoring	: No	Switch	: Yes	Push button	: No	Activation delay	: 000	Cancel	No Yes save	<p>Automatic Control : Settings of 8 internal monitored inputs</p> <p>The picture on the left side shows an example of input 1 (indicated in the first line of the LC module).</p> <p>These inputs can be configured :</p> <ul style="list-style-type: none"> ➤ With monitoring (only wire break) or without (default value) ➤ wether a switch or a push button is connected to the input ➤ With or without activation delay. The delay can be adjusted in steps by one from 1 – 250. Every step means 0,1 sec. The sense of this delay is e.g. to compensate bouncing of a switch. The maximum delay is 250 x 0,1 s = 25 s. 0 means no delay. <p>The functions are disabled by F2 („No“) and the</p>				
Settings	Input 001																	
with monitoring	: No																	
Switch	: Yes																	
Push button	: No																	
Activation delay	: 000																	
Cancel	No Yes save																	

		functions are enabled by F3 („Yes“). After setting the parameters please press F4 („Enter“) to save the configuration.
109	<p>Zones</p> <pre> Seg. : 1 from address : 1 to address : 12 Zone : 32 from detector : 1 </pre> <p>Cancel save</p>	<p>Configuring zones (loop)</p> <p>Please type the loop number („Seg.“) and the detector address (from – to).</p> <p>Segment = Section of addresses (loop) with a maximum of 254 Hochiki detectors, modules / base sounders and a maximum of 126 Apollo detectors, modules. The segment are partitioned on the loop card according this list :</p> <ul style="list-style-type: none"> ➤ Loop card 1 : Segment 1 and 2 ➤ Loop card 2 : Segment 3 and 4 ➤ Loop card 3 : Segment 5 and 6 ➤ Loop card 4 : Segment 7 and 8 ➤ Loop card 5 : Segment 9 and 10 ➤ Loop card 6 : Segment 11 and 12 ➤ Loop card 7 : Segment 13 and 14 ➤ Loop card 8 : Segment 15 and 16 ➤ Loop card 9 : Segment 17 and 18 <p>Address = Detector address (physical address stored in the detector).</p> <p>Zone = logical group of detectors (software zone) where the detectors should be in</p> <p>from detector = means <u>the starting number</u> of the detector in the new zone.</p> <p>Please confirm every line by „OK“ and after finishing all lines press „save“ (F4) to save the new configuration.</p>
110	<p>Zones</p> <pre> Loop card : 3 from ML : 1 to ML : 8 from zone : 20 </pre> <p>Cancel save</p>	<p>Configuring conventional zones</p> <p><u>When using the FCP „Solution F1“ the conventional zones are field programmable too :</u></p> <p>Please type the address of the conventional detector card (PCB). That means the DIL switch address on the PCB (see wiring diagrams).</p> <p>The following inputs in the lines „from ML“ and „to ML“ relates to the terminals on the conventional detector card (1-8). See wiring diagrams again. In the wiring diagrams and on the PCB itself they are marked by „ML“.</p> <p>After this the user can select the <u>new zone(s)</u>. „From zone“ means the starting zone and any sequencing zones will be put into the next zones.</p> <p>Please confirm every line by „OK“ and after finishing press „save“ (F4) to save the new configuration.</p>
111	<pre> Sensitivity Day 4 Mode 3 Sensitivity Night 2 Mode 1 Timer program : 02 Delay on alarm : 000 Delay on fault : 000 Pre alarm : No </pre> <p>Cancel No Yes save</p>	<p>Analogue addressable detector's sensitivity / modes / delays</p> <p>Selected detectors can be configured :</p>

Only for Hochiki ESP

Table of the detector sensitivities :

Sens	Opt + Multi	Heat	Ion
0	2,0 %	50°	0,20 V
1	2,5 %	55 °	0,24 V
2	3,0 % EN54	60° - A1S	0,28V EN54
3	3,5 %	66°	0,32 V
4	4,0 %	72°	0,36 V
5	4,5 %	78° - BS	0,40 V
6	5,0 %	83°	0,44 V
7	5,5 %	88° - CS	0,48 V

(Opt. + Multi : smoke obscuration in %/m)

Table of multi sensor modes :

Mode	Operating
1	Multi sensor
2	Optical smoke detector
3	Heat detector

Table of multisensor sensitivities and modes:

Sens	Mode ½ Opt./ Multi	Mode 3 Heat	Mode 4 Heat+Opt.
1	2,0 %	50°	60°+2,0%
2	2,5 %	55 °	78°+2,0%
3	3,0 % EN54	60° - A1S	60°+3,0%
4	3,5 %	66°	78°+3,0%
5	4,0 %	72°	60°+4,0%
6	4,5 %	78° - BS	78°+4,0%
7	-	83°	88°+2,5%
8	-	88° - CS	88°+3,5%

Only for Apollo

Table for detector sensitivities:

Ionisation smoke detector Discovery

Sens	Alarm threshold	Minimum time to alarm
1	0,45	5 Sec.
2	0,45	30 Sec.
3	0,70	5 Sec.
4	0,70	30 Sec.
5	1,0	5 Sec.

Optical smoke detector Discovery

Sens	Alarm threshold	Minimum time to alarm
1	1,4	5 Sec.
2	1,4	30 Sec.
3	2,1	5 Sec.
4	2,1	30 Sec.
5	2,8	5 Sec.

Only for Hochiki ESP

- one of 8 sensitivities during the day (see table below)
- one of 8 sensitivities during the night (see table below)
- 4 different modes (only multi sensors) (see table below)

Mode 4 is a special setting, where an alarm in optical part will cause a prealarm at the FCP, independently of the parameter settings for prealarm. An alarm in the heat component will activate an alarm in any case. If there is programmed an alarm delay for a multisensor in mode 4, this will have the effect, that a prealarm of the optical part will change to an alarm after expiry of the delay. If the delay is 0 the optical component never will raise a real alarm.

Only for Apollo

- one of 5 sensitivities during the day (see table below)
- one of 5 sensitivities during the night (see table below)
- the mode has no meaning and will be automatically set by the sensitivities (see table on the left side of next page).


	<p>Heat detector Discovery</p> <table border="1"> <thead> <tr> <th>Sens</th> <th>Class EN54-5:2000</th> <th colspan="2">static alarm- temperature</th> </tr> <tr> <th>.</th> <th></th> <th>min.</th> <th>typ. max.</th> </tr> </thead> <tbody> <tr><td>1</td><td>A1R</td><td>54</td><td>57 65.</td></tr> <tr><td>2</td><td>A2</td><td>54</td><td>61 70</td></tr> <tr><td>3</td><td>A2S</td><td>54</td><td>61 70</td></tr> <tr><td>4</td><td>CR</td><td>84</td><td>90 100</td></tr> <tr><td>5</td><td>CS</td><td>84</td><td>90 100.</td></tr> </tbody> </table> <p>Multisensor Discovery</p> <table border="1"> <thead> <tr> <th>Sens</th> <th>Alarm threshold</th> <th>Minimum time to alarm</th> </tr> </thead> <tbody> <tr><td>1</td><td>1,1 Multi.</td><td>20 Sec.</td></tr> <tr><td>2</td><td>2,1 Optical</td><td>30 Sec.</td></tr> <tr><td>3</td><td>2,8 Multi.</td><td>20 Sec.</td></tr> <tr><td>4</td><td>4,2 Multi.</td><td>20 Sec.</td></tr> <tr><td>5</td><td>- Heat</td><td>30 Sec.</td></tr> </tbody> </table> <p>all automatic detectors XP95/XPlorer</p> <table border="1"> <thead> <tr> <th>Sens.</th> <th>Alarm threshold</th> <th></th> </tr> </thead> <tbody> <tr><td>1</td><td>45</td><td>EN54</td></tr> <tr><td>2</td><td>50</td><td>EN54</td></tr> <tr><td>3</td><td>55</td><td>EN54</td></tr> <tr><td>4</td><td>60</td><td>No EN54</td></tr> <tr><td>5</td><td>64</td><td>No EN54</td></tr> </tbody> </table>	Sens	Class EN54-5:2000	static alarm- temperature		.		min.	typ. max.	1	A1R	54	57 65.	2	A2	54	61 70	3	A2S	54	61 70	4	CR	84	90 100	5	CS	84	90 100.	Sens	Alarm threshold	Minimum time to alarm	1	1,1 Multi.	20 Sec.	2	2,1 Optical	30 Sec.	3	2,8 Multi.	20 Sec.	4	4,2 Multi.	20 Sec.	5	- Heat	30 Sec.	Sens.	Alarm threshold		1	45	EN54	2	50	EN54	3	55	EN54	4	60	No EN54	5	64	No EN54	<p><u>For all detector types</u></p> <ul style="list-style-type: none"> ➤ 1 timer program for switching day / night mode ➤ an alarm delay time – if the detector detects an alarm the acceptance of the alarm condition can be delayed here just to make sure that it is no false alarm. During this time the detector checks the alarm signal again and again. ➤ an fault delay time which way of operation is similar to the alarm delay above ➤ Individual pre alarm of every detector <p>If you want to use the Timer program it must be configured before according menu 65. This timer program handles the day / night mode switching and the switching from one sensitivity (mode) to another one and vice versa.</p> <p>Please confirm every line by “OK” and after finishing press „save“ (F4) to save the new configuration.</p>
Sens	Class EN54-5:2000	static alarm- temperature																																																																
.		min.	typ. max.																																																															
1	A1R	54	57 65.																																																															
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Sens	Alarm threshold	Minimum time to alarm																																																																
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112	<p>Timer program 01</p> <table border="1"> <tbody> <tr><td>1. Sunday</td><td>5. Thursday</td></tr> <tr><td>2. Monday</td><td>6. Friday</td></tr> <tr><td>3. Tuesday</td><td>7. Saturday</td></tr> <tr><td>4. Wednesday</td><td></td></tr> <tr><td>Cancel</td><td>Enter</td></tr> </tbody> </table>	1. Sunday	5. Thursday	2. Monday	6. Friday	3. Tuesday	7. Saturday	4. Wednesday		Cancel	Enter	<p>To configure timer programs</p> <p>The example on the left side shows timer program 01.</p> <p>Please first select the day by using the cursor keys \uparrow, \downarrow : Marker „>“ one line up / one line down and confirm this by F4 („Enter“) or type the number of the day directly by using the keypad → Jump to Menu 120</p>																																																						
1. Sunday	5. Thursday																																																																	
2. Monday	6. Friday																																																																	
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Cancel	Enter																																																																	
113	<p>Interfaces UART 1</p> <table border="1"> <tbody> <tr><td>1. Printer</td><td></td><td style="text-align: right;">x</td></tr> <tr><td>2. FRP</td><td></td><td></td></tr> <tr><td>3. PC</td><td></td><td></td></tr> <tr><td>4. ESPA 4.4.4</td><td></td><td></td></tr> <tr><td>Cancel</td><td>On</td><td>save</td></tr> </tbody> </table>	1. Printer		x	2. FRP			3. PC			4. ESPA 4.4.4			Cancel	On	save	<p>Interface protocols</p> <p>The example on the left side shows <u>UART 1</u>. Please select the protocol you want to assign to UART 1 by using the cursor keys. The following protocols are available :</p> <ul style="list-style-type: none"> ➤ Printer ➤ FRP (Fire Brigade Repeater Panel) ➤ PC configuration (Laptop) ➤ ESPA 4.4.4 (Option) <p>After selecting the protocol it has to be activated by pressing F2 („On“). The activation will be indicated by a „x“ at the end of the line.</p> <p>By pressing F3 („Off“) the protocol will be deactivated again.</p> <p>Press „save“ (F4) to save the new configuration.</p>																																																	
1. Printer		x																																																																
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114	<p>Interfaces UART 1</p> <table border="1"> <tbody> <tr><td>1. 4800</td><td></td><td>5. 57600</td></tr> <tr><td>2. 9600</td><td style="text-align: right;">x</td><td>6. 115200</td></tr> <tr><td>3. 19200</td><td></td><td>7. 1200</td></tr> <tr><td>4. 38400</td><td></td><td>8. 2400</td></tr> <tr><td>Cancel</td><td>Off</td><td>save</td></tr> </tbody> </table>	1. 4800		5. 57600	2. 9600	x	6. 115200	3. 19200		7. 1200	4. 38400		8. 2400	Cancel	Off	save	<p>Interface baudrates</p> <p>The example on the left side selects baudrate of 9600 of UART 1.</p> <p>The way or operation is similar to selecting the protocol as described above.</p>																																																	
1. 4800		5. 57600																																																																
2. 9600	x	6. 115200																																																																
3. 19200		7. 1200																																																																
4. 38400		8. 2400																																																																
Cancel	Off	save																																																																

115	Convent. detect.	<pre> Open Circuit [x0,01mA] : 0180 1. Alarm [x0,01mA] : 1000 2. Alarm [x0,01mA] : 3000 Reset time [x100ms] : 020 Cancel save </pre>	<h3>Configuring thresholds for conventional detectors</h3> <p>This menu is to configure several thresholds for conventional detectors. This is important if it is necessary to configure a threshold for open circuit (wire break), 1. and 2. alarm as well as a reset time for the detectors which is needed in case of alarm reset. This time determines the period when the voltage on the line drops down to zero to reset all detectors on this line.</p> <p>Press „save“ (F4) to save the new configuration.</p> <p>If you have any doubts about these values for the requested detectors have a look into their data sheet. If the FCP is shipped out by NSC the values above are adjusted for Hochiki CDX and Apollo S65 / Orbis.</p>
116	Maintenance	<pre> Day : 09 Status Month : 07 Off Year : 04 Hour : 07 Cancel On save </pre>	<h3>Maintenance</h3> <p>Here you can define a date for the next necessary maintenance. When this date is reached, a fault message will be generated.</p> <p>By pressing F2 ("on") this function will be enabled.</p> <p>By pressing F4 ("save") the date will be saved.</p>
117	Push button S_1	<pre> 1. End user code x 2. Installer code Cancel off save </pre>	<h3>Push button S_ settings</h3> <p>For the special push buttons S1-S8 the following access levels can be configured:</p> <ul style="list-style-type: none"> • No code • End user code • Installer code <p>By F2 ("on") resp.. F3 ("off") the code will be activated resp. deactivated..</p> <p>By F4 ("save") the settings will be saved..</p>
120	Timer program 01	<pre> Timer program 01 Sunday time 1: 06:00 Day time 2: 18:00 Night time 3: 00:00 Night time 4: 00:00 Night Cancel Day Night save </pre>	<h3>Configuring the timer</h3> <p>The example on the left side shows timer program 01. The selected weekday is indicated in the 2. line of the LC module.</p> <p>Please select first if you want to switch into day mode (F2) or night mode (F3) and then type in hour and minute. Please confirm hour and minute by "OK". The cursor runs automatically into the next line when you have confirmed the minute by OK.</p> <p>Day- and Night relates to the sensitivities/modes as described in Menu 111.</p> <p>When you have finished press „save“ (F4) to save the new configuration.</p>

121	<pre> Event Output module 01/089/01 0001/2048 Output 001 Inactive >0001:Alarm 0001/000-0003/000 0002:Activation Relay 0001-0001 0003:Alarm 0032/000-0064/000 0004:free 0005:free Cancel insert delete Enter </pre>	<h3>Cause and Effect events configuration 1</h3> <p>The example on the left side shows a list (an overview) of all configured cause and effect events. They have numbers at the left side of the LC module and behind there is written what kind of cause and effect event they are.</p> <p>The first line of the LC module shows the device which shall be configured at the moment because this has been selected before. The last two digits (here : 01) indicates that output 1 of this module is selected. The second line of the LC module relates to the marker „>“ and shows the configuration which is saved at the marker's position. In the example above it is the first cause and effect event at all and it is an alarm event of OC output 01 (on the main board).</p> <p>If you want to configure a new event you have to put the marker on a “free” event and type “Enter” (F4) → Jump to Menu 130</p> <p>The FCP “Solution F1-6 and F1-18” support up to 2048 events.</p> <p>The user can also „delete“ (F3) events and “insert” (F2) new events in between existing events. Therefore the marker „>“ has to be put at the right position. The sequence doesn't really matter but if the user likes to have e.g. all cause and effect events of the loop output modules one under the other he can arrange it by inserting at the right place.</p> <p><u>Left : Example of cause and effect event for macro push button S1.</u></p>
130	<pre> Event Push button S1 0001/2048 ->Output 001 Inactive 0001:Alarm 0000/000-0000/000 0002:Activation Relay 0001-0001 0003:Alarm 0000/000-0000/000 >0004:free 0005:free Cancel insert delete Enter </pre>	<h3>Cause and Effect events configuration 2</h3> <p>The example on the left side shows in line 1 that we are going to configure event 4 of 2048 possible events. The second line shows the selected device. In this case an <u>Output module on loop 1, address 89 output 1.</u></p> <p><u>The kind of event which shall cause an effect is always preset to “Alarm” (line 3 of the LC module).</u> If you want to change it please press F2 („modify“) → Jump to Menu 131</p> <p>Otherwise confirm the code by pressing F3 (“OK“).</p> <p>The number of the FCP is always 1 besides there is a network with several FCP interlinked.</p> <p>Then type the zone(s) and detector(s) which have to be in alarm to activate this output module. If you want to select whole zone(s) (and no individual detectors) leave the detector = 000. Please confirm every input by „OK“.</p> <p>Pay attention to the fact that the zone(s) and detector(s) can be configured logical AND or OR. That means (in case of AND) that all zones or detectors must be in alarm simultaneously to activate the output.</p>

		<p>You can change between "AND" and "OR" by F3. Then please press F4 („save“) to save the new cause and effect event.</p>																
131	<p><u>Codes for outputs</u></p> <p>Page 1</p> <p>Code</p> <table border="0"> <tr> <td>1. Alarm</td> <td>5. Switch off</td> </tr> <tr> <td>2. Pre alarm</td> <td>6. Reset FCP</td> </tr> <tr> <td>3. Main alarm</td> <td>7. Fault power sup.</td> </tr> <tr> <td>4. Fault</td> <td>8. Mains fault</td> </tr> </table> <p>Cancel more Enter</p> <p>Page 2</p> <p>Code</p> <p>1. Alarm autom. det. 2. Alarm MCP</p> <p>Cancel more Enter</p> <p><u>Codes for inputs</u></p> <p>Code</p> <table border="0"> <tr> <td>1. Alarm</td> <td>5. Switch off</td> </tr> <tr> <td>2. Pre alarm</td> <td>6. Change sensit.</td> </tr> <tr> <td>3. Main alarm</td> <td>7. Activation</td> </tr> <tr> <td>4. Fault</td> <td>8. Information</td> </tr> </table> <p>Cancel Enter</p> <p><u>Codes for push buttons</u></p> <p>Code</p> <p>1. Switch off 2. Change sensit. 3. Activation</p> <p>Cancel Enter</p>	1. Alarm	5. Switch off	2. Pre alarm	6. Reset FCP	3. Main alarm	7. Fault power sup.	4. Fault	8. Mains fault	1. Alarm	5. Switch off	2. Pre alarm	6. Change sensit.	3. Main alarm	7. Activation	4. Fault	8. Information	<p>Codes for cause and effect events</p> <p>Please type the code you need for the application directly by the keypad or use the cursor keys to put the grey background on it and press F4 („Enter“) to confirm your choice.</p> <p>The selection will be taken over to the menu before.</p> <p>By these codes outputs can be activated to verify the alarm origin..</p> <p>The events "Alarm", "Pre alarm", "Main alarm" and "Fault" require additionally the input of a zone- and a detector number. For this reason any non existing detector has to be programmed to the zone- and detector number specified in the eventt (see alarm configuration - zones ->Menu 109) That even can be a detector on a non existing loop card..This means, the input simulates an automatic detector with all programmable functions of the detector (i.e. customer text)and the zone (i.e. alarm configuration).</p> <p>The event "Information" just generates an activation message but no alarm or fault message.</p> <p>By programming the event "Activation" you can directly control OC outputs, relais, power outputs or modules on the loop..</p>
1. Alarm	5. Switch off																	
2. Pre alarm	6. Reset FCP																	
3. Main alarm	7. Fault power sup.																	
4. Fault	8. Mains fault																	
1. Alarm	5. Switch off																	
2. Pre alarm	6. Change sensit.																	
3. Main alarm	7. Activation																	
4. Fault	8. Information																	

4. Mounting instruction

1. First please remove the cover of the FCP. You will find the key on the backside of the panel housing.
2. The FCP „Solution F1“ has a wall mounting housing. The B1 and B2 housings provide a drilling template for easier mounting. Use this template for drilling the holes.
3. Please use 8mm dowels for fixing the screws. Don't put the batteries into the panel yet. Start with the upper screws, hang the back plate of the housing on the screws and then you can screw the lower holes.
4. The control panel can be opened by unscrewing the plastic screws only on the right side of the control panel, giving free access to the terminals for connecting the wires.
5. Don't connect the panel to Mains AC yet. Use the wiring diagrams for connecting loops, conventional zones and sounders / strobes.
6. If you are connecting the shielding of the loop wires (the FCP „Solution F1“ does NOT need that in any case but it can be advantageous to do so) then you have to connect the wire on both sides at the loop card.
7. Please connect peripheral components like LCD repeater panels, remote control panels etc.
8. Now you have to connect the Mains AC cable. Make sure that the Mains AC fuse on the power supply is plugged in.
9. Switch on Mains AC voltage.
10. If the internal buzzer sounds, please switch of by using push button  .
11. Put the batteries on the bottom of the panel housing and fix them by using the cable fixer. Connect the batteries to the power supply by using the supplied cables (see wiring diagram).
12. Please follow the commissioning instruction.

5. Commissioning certificate FCP „Solution F1“

Serial number	Date of delivery
F1-6 : <input type="checkbox"/>	F1-18 : <input type="checkbox"/>
Panel type (please mark)	Commission/ Sight
Installed by : date, technician	

General

The commissioning according the national rules requires the complete and accurate installation of all components of fire control system, as it is specified in the engineering documents.

Checking the documentation

Document	available yes/no	Repository
Engineering order		
Final planning documents		
Updated planning documents		
Fire brigade documents		

Checking the system components

You have to compare the quantity of planned components with the quantity of actually installed components.

Component	Planned quantity	Installed quantity
Fire control panel		
Modules for addressable detectors		
Modules for conventional detectors		
Automatic detectors		
Manual call points		
Input-/output modules		
Sounder modules		
Remote panel		
Fire brigade panel		
Fire brigade remote panel		
Transmission device		
Fire brigade key deposit box		
Key deposit box release device		
Additional power supply		
Sounder		
Flashlight		

Checking the wiring system

Before checking the wiring system you should disconnect all cables from the fire control panel by removing the pluggable terminals.

Measure end of line resistors of conventional zones (without voltage) .

6k8 (±10%) end of line resistor measurable on each conventional zone?	
<input type="radio"/> Fault	check wiring and end of line resistor.
<input type="radio"/> ok	plug terminals in fire control panel

Measure cable resistance of loop wiring (without voltage).

If isolators are installed on the loop you only can measure the resistance of the minus wire.

You have to measure the cable resistance of each loop. The minimum operating voltage for each loop device will be calculated from the cable resistance and the loop current, which has to be measured later.

The resistance of the shielding also has to be written down in the following table. Additionally this measurement guarantees that the shielding isn't interrupted in any loop device. As long as the shielding hasn't been connected to earth in the FCP there must not be any other connection to earth potential (e.g. in a detector base). You can check this by measuring the resistance between the shielding and earth potential.

Loopcard	Loop	ML-Wire [Ω]	Shielding [Ω]	Earthless wiring	
1	1 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
1	2 (ML-5-/ML-6-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
2	3 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
2	4 (ML-5-/ML-6-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
3	5 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
3	6 (ML-5-/ML-6-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
4	7 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
4	8 (ML-5-/ML-6-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
5	9 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
5	10 (ML-5-/ML-6-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
6	11 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
6	12 (ML-5-/ML-6-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
7	13 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
7	14 (ML-5-/ML-6-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
8	15 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
8	16 (ML-5-/ML-6-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
9	17 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
9	18 (ML-5-/ML-6-)			yes <input type="checkbox"/>	no <input type="checkbox"/>

If the cable resistance is correct please plug the terminals in the FCP.

Measurement of the end of line resistors of the monitored power outputs (without voltage) .

Power output	Key deposit box	Sounder/flashlight	Transmission device	
1	depends on type	1K Ω /1W tolerance 10%	-	O fault O ok
2	-	1K Ω /1W tolerance 10%	1K Ω /1W tolerance 10%	O fault O ok
3	-	1K Ω /1W tolerance 10%	1K Ω /1W tolerance 10%	O fault O ok

The end of line resistor has to be mounted in the last device of the power output cable. The adaption of open circuit and short circuit thresholds for the connected devices has to be done directly at the FCP. Please go to "Installer" -> "more" (F3) -> "more" (F3) -> "Power outputs".

Measurement of the end of line resistors of the monitored inputs (without voltage).

Input line	End of line resistor	
Key deposit box alarm	2,2K Ω /0,5W tolerance 10%	O fault O ok
Extinguish interface	3,3K Ω /0,5W tolerance 10%	O fault O ok

Checking the end of line resistor on the RS485 bus.

End of line resistor activated at first and last device (jumper matched)?	O o.k. O fault
---	----------------

Commissioning of the power supply

- plug 230VAC mains cable or check already plugged cable!
- switch on power supply for fire control panel!

The internal buzzer will be on: please switch off by pressing



Scanning of internal an external components

Detector modules

After scanning process and uploading of the programming out of the flash memory all recognised components will be displayed in a list.

Exampel:

```
Internal Modules
1. Loop card HOCHIKI ESP      : 01
2. Loop card Apollo XP       : 00
3. Conventional detector card : 01
4. Input-/output module      : 00↓

zurück
Details
```

Number of mounted detector modules correctly recognised?	O o.k. O fault
--	----------------

By pressing the „Details“ key **F3** the addresses of the modules can be checked.

Exampel:

```
Internal Modules
01/09
>01 Loop card HOCHIKI ESP
 02 Conventional detector card
 03 -
 04 -
 05 -
 06 -
Cancel                               Details
```

Addresses of the mounted detector modules correctly set?	O o.k. O fault
--	----------------

RS485 devices

Afterwards the RS485-BUS will be scanned for connected components. The result with the number of recognised devices will be noticed in the module list.

Exampel:

```
Internal Modules
4. Input-/output module      : 00↑
5. Network interface card    : 00
6. Modem                     : 00
7. RS485 device              : 04

zurück
Details
```

Number of installed RS485 devices correctly recognised?	O o.k. O fault
---	----------------

By pressing the „Details“key **F3** the addresses of the modules can be checked.

Exampel:

```

Internal Modules
01/63
>01 FRP with FBC           A  B
   02 Remote LCD Panel     A
   03 Remote LCD Panel     A
   04 FRP                   A  B
   05 -
   06 -
zurück
Details
  
```

By letters "A" und "B" will be displayed, on which channel of the redundant RS485 bus each device has been connected.

Addresses of the RS485 devices correctly set?	<input type="radio"/> o.k. <input type="radio"/> fault
Wiring of the RS485 devices correct?	<input type="radio"/> o.k. <input type="radio"/> fault

Addressable detectors/modules

During the initialisation permanently a counter will be displayed which is counting the total number of all detectors and modules. After scanning the loop devices, a list of these devices will be displayed. This list will be visible each time the number of recognised detectors/modules has changed after scanning the loops. Therefore after first time initialisation process all new recognised detectors/modules will be listed.

Exampel:

```

Detector configuration      0001/0265
  Seg. |Add| Error |
Zone  |Detect
>01 o 1|001| new   | 0000 | 000
   01 o 1|002| new   | 0000 | 000
   01 o 1|003| new   | 0000 | 000
   01 o 1|004| new   | 0000 | 000
   01 o 1|005| new   | 0000 | 000
continue      all ok
ok
  
```

In line 1 the number of all recognised detectors and modules will be displayed. In the table for each device will be displayed :

- Segment, where the device is connected to
- Symbol for loop "o" or spur wiring "-"
- number of loop/spur
- configured device address
- error code ("new" in this exampel)
- programmed zone and detector number

By pressing the "ok" key each single detector can be stored in the FCP programming, by pressing "all ok" all connected devices will be stored in the FCP flash memory simultaneously.

Checking of earth fault

A constant voltage must not be measurable between potential earth and fire control panel potential there

Voltage between PE / - accumulator	O o.k. O fault ->V
Voltage between PE / + accumulator	O o.k. O fault ->V

In case of an earth fault this has to be localised by disconnecting single cables in the fire control panel. Then the earth fault has to be removed. The supervision of an earth fault can be deactivated by system parameter 13.

Measurement of loop voltage and current

Dependent of the used multimeter the voltage and the current will vary differently. This is caused by the modulated protocol between the FCP and the loop devices. For the measurement of the current the loop has to be separated on one side in the FCP and on the other side the current has to be measured on the ML+ or ML- wire. At the same time the loop devices have to be in the quiescent state. Decisive for a faultless operation is the fact, that all loop devices are supplied by a sufficient voltage (17V). The voltage drop on the cable has to be calculated from the quiescent current and the cable resistance measured under point 4.2.

Loop card	Loop	Voltage 33V ± 3V	Quiescent current [mA]	Voltage drop[V] (quiescent current x cable resistance)
1	1 (ML-1-/ML-2-)			
1	2 (ML-5-/ML-6-)			
2	3 (ML-1-/ML-2-)			
2	4 (ML-5-/ML-6-)			
3	5 (ML-1-/ML-2-)			
3	6 (ML-5-/ML-6-)			
4	7 (ML-1-/ML-2-)			
4	8 (ML-5-/ML-6-)			
5	9 (ML-1-/ML-2-)			
5	10 (ML-5-/ML-6-)			
6	11 (ML-1-/ML-2-)			
6	12 (ML-5-/ML-6-)			
7	13 (ML-1-/ML-2-)			
7	14 (ML-5-/ML-6-)			
8	15 (ML-1-/ML-2-)			
8	16 (ML-5-/ML-6-)			
9	17 (ML-1-/ML-2-)			
9	18 (ML-5-/ML-6-)			

Configure power outputs

Load resistance

Power output 1 : 0476
 Power output 2 : 1059
 Power output 3 : 0960

Cancel Calib. save

The thresholds depend on the loadresistance of the connected device inclusive the line resistance. This total resistance can be ascertained automatically for each power output individually by pressing "calib." **F3**. The software then calculates the thresholds for open circuit and short circuit. The resistance can also be measured with a multimeter and typed in directly using the keyboard.

Configuration of the fire control system

The configuration of the fire control system is very comprehensive and is mainly dependent of the largeness of installation. The details have to be specified in the planning documents. The following checklist describes the individual steps of the programming of the fire control panel:.

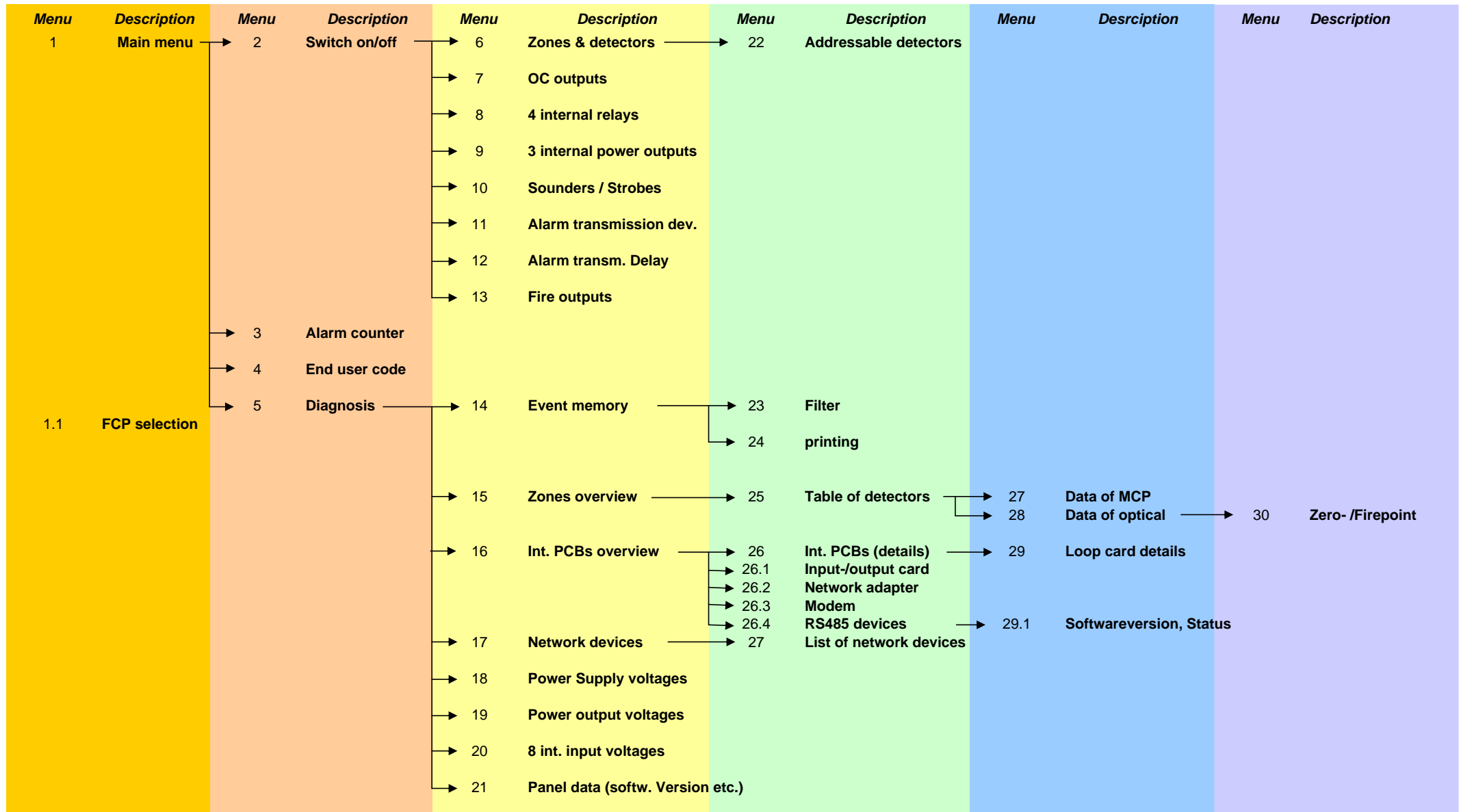
Programming	Menu topic		
Zones	Alarmorganisation	<input type="radio"/> ok.	
Detector configuration - sensitivity - mode of multisensors - time program - prealarm - alarm delay	Alarmorganisation	<input type="radio"/> ok <input type="radio"/> not used	
Detector texts	by PC software	<input type="radio"/> ok <input type="radio"/> not used	
Programming	Menu topic		
Zone parameters - cross detection - internal alarm zone - fault zone - manual call point (only for conventional detectors or modules)	Alarmorganisation	<input type="radio"/> ok <input type="radio"/> not used	
Cross zoning	Alarmorganisation	<input type="radio"/> ok <input type="radio"/> not used	
Timer programs - for delay - for detector sensitivity	Alarmorganisation	<input type="radio"/> ok <input type="radio"/> not used	
Delay	Alarmorganisation	<input type="radio"/> ok <input type="radio"/> not used	
Power outputs - key deposit box - sounders/flashlights - transmission device	Autom. controlling	<input type="radio"/> ok <input type="radio"/> not used	
Controlling of relays, outputs or output modules	Autom. controlling	<input type="radio"/> ok <input type="radio"/> not used	
Loop sounders	Autom. controlling	<input type="radio"/> ok <input type="radio"/> not used	
Controlling by special keys	Configuration	<input type="radio"/> ok <input type="radio"/> not used	
Systemparameters	Configuration	<input type="radio"/> ok <input type="radio"/> not used	
Holidays	Configuration	<input type="radio"/> ok <input type="radio"/> not used	
Interfaces	Configuration -> more	<input type="radio"/> ok <input type="radio"/> not used	
Thresholds for conventional zones	Configuration -> more	<input type="radio"/> ok <input type="radio"/> not used	

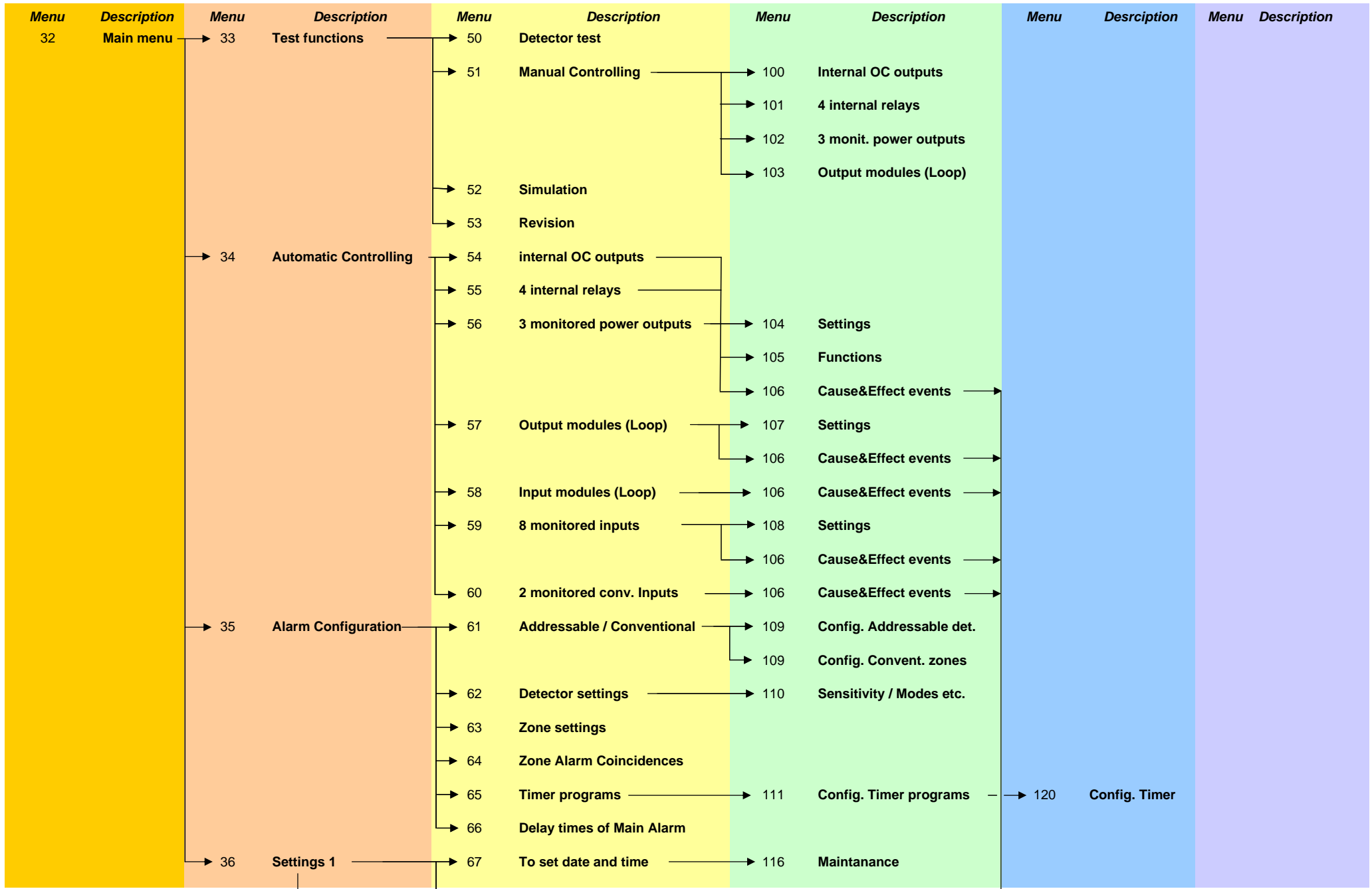
Functional tests

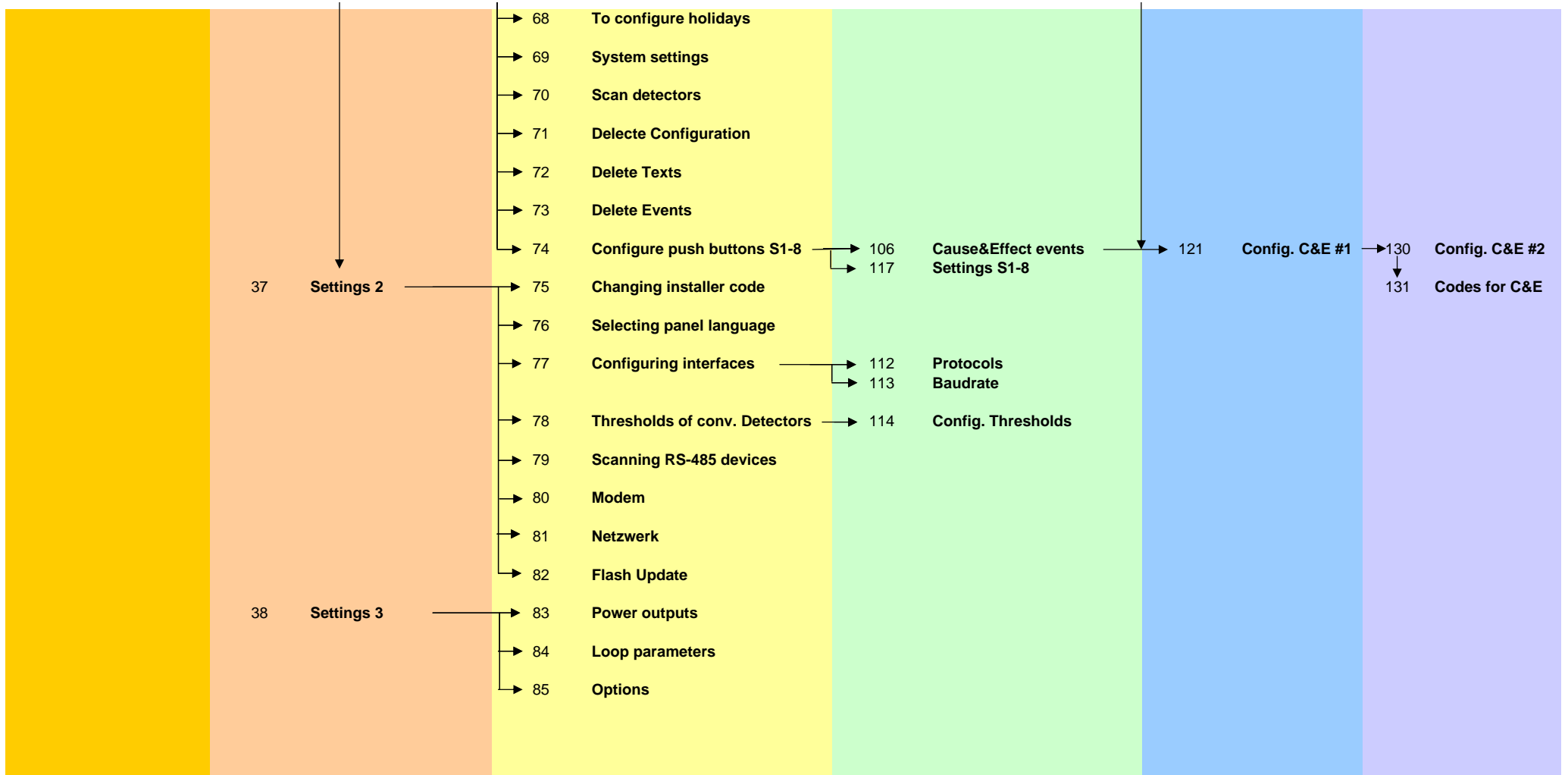
Test	Measured value	Test result
Normal operation - green LED „Operation“ lights - green LED „Night“ lights		<input type="radio"/> ok. <input type="radio"/> fault
Fire condition - Test of all automatic detectors - Test of all manual call points The fire condition can be generated in the installer level by functions „testalarm“ or „simulation“. Check display at FCP, remote panels and printer		<input type="radio"/> ok. <input type="radio"/> fault <input type="radio"/> ok. <input type="radio"/> fault
Fault condition - loop - power outputs - monitored inputs - RS485 bus - battery - mains fault (mains fault delay) Check display at FCP, remote panels and printerMin	<input type="radio"/> ok. <input type="radio"/> fault <input type="radio"/> ok. <input type="radio"/> fault <input type="radio"/> o.k. <input type="radio"/> fault <input type="radio"/> o.k. <input type="radio"/> fault <input type="radio"/> o.k. <input type="radio"/> fault
Disabled condition - detector - zone - power output Check display at FCP, remote panels and printer		<input type="radio"/> o.k. <input type="radio"/> fault <input type="radio"/> o.k. <input type="radio"/> fault <input type="radio"/> o.k. <input type="radio"/> fault
Alarm devices - transmission device activation - flash lights - sounders		<input type="radio"/> ok. <input type="radio"/> fault <input type="radio"/> ok. <input type="radio"/> fault <input type="radio"/> ok. <input type="radio"/> fault
Fire outputs - relays - outputs - output modules		<input type="radio"/> ok. <input type="radio"/> fault <input type="radio"/> ok. <input type="radio"/> fault <input type="radio"/> ok. <input type="radio"/> fault
Current of FCP at mains fault Required bridge over time Required battery capacitymAhAh	<input type="radio"/> ok. <input type="radio"/> fault <input type="radio"/> ok. <input type="radio"/> fault

6. Technical specifications :

Main AC voltage :	230V AC, -15% to +10%, 50 – 60 Hz
Operating voltage :	24V DC (21,0 – 29,2 V DC)
Output supply current Solution F1-6 (Order code B01050-00) :	Max. 4,2 A
Battery charging current Solution F1-6 (Order code B01050-00) :	Max. 2,5 A
Output supply current Solution F1-18 (Order code B01070-00) :	Max. 6,7,A
Battery charging current Solution F1-18 (Order code B01070-00) :	Max. 2,5 A
Quiescent current FCP w/o additional modules :	90 mA
Quiescent current loop card B01260-00 :	33 mA (without Detector)
Quiescent current loop card B01270-00 :	35 mA (without Detector)
Quiescent current conventional card B01300-00 :	40 mA (without Detector)
Quiescent current conventional card B01310-00 :	42 mA (without Detector)
Quiescent current relay card B01330-00 :	0 mA
Battery charging voltage :	27,6 V (at 20°C)
Battery low voltage :	21,0 V
Ripple voltage :	0,8 V pp
Operating temperature :	-5 to +40° C
Humidity :	Max. 95 % rel.
Housing :	Steel, RAL 7035
IP rating :	IP 40
Dimensions housing A1, A2 :	540 x 492 x 162 mm (B x H x T)
Weight FCP Solution F1-6 with housing A1, A2 :	14 kg
Dimensions housing B1, B2 :	540 x 540 x 245 mm (B x H x T)
Weight FCP Solution F1-18 with housing B1, B2 :	18,5 kg







Loop Sounder
Tones and volumes

Volumes

Value	Loop Sounder CHQ-BS / B07150-00 (Base sounder)		Loop Sounder CHQ-WS / B07160-00 (Wall Sounder)	
	dB	mA	dB	mA
0	Sounder off		Sounder off	
1	70	0,8	100	7,3
2	78	1,5	100	7,3
3	80	2	100	7,3
4	85	3	100	7,3
5	88	4,5	100	7,3
6	90	6,5	100	7,3
7	93	8	100	7,3
8	94	10	100	7,3
9	95	11	100	7,3
10	98	16	100	7,3

Tones

Value	Basesouder CHQ-BS	Wallsouder CHQ-WS
0	Sounder off	Sounder off
1	925Hz/628Hz (change rate 2Hz)	990Hz/650Hz (2Hz)
2	925Hz continual	990Hz/650Hz (2Hz)
3	628Hz continual	990Hz/650Hz (2Hz)
4	554Hz 100ms / 440Hz 400ms	990Hz/650Hz (2Hz)
5	660Hz 150ms on 150ms off	990Hz/650Hz (2Hz)
6	925Hz 150ms on 600ms off	990Hz/650Hz (2Hz)
7	670Hz 250ms / 845Hz 375ms	990Hz/650Hz (2Hz)