



ATTENTION!
Only to be used with
Transport-PC (TP 5103)
and dialler
as from Version 6.0

ADVISOR[®]

CD 7212
CD95/15012

Installation Manual

Software from Version: V6.0

COPYRIGHT

© SLC BV 1997. All rights reserved. No part of this publication may be reproduced, transmitted, stored in a retrieval system, or transmitted in any form, or by any means - electronic, photocopying, recording, or otherwise - without the prior written permission of SLC BV.

DISCLAIMER

SLC BV makes no representations or warranties with respect to the contents hereof and specifically disclaim any implied warranties of merchantability or fitness for any particular purpose. Further SLC BV reserve the right to revise this publication and to make changes from time to time in the contents hereof without the obligation of SLC BV to notify any person of any such revision.

HOW TO USE THIS MANUAL

This manual contains installation details for the CD72, CD95 and CD150. When used in conjunction with the Programming Manual and the User Manual, it provides the installation engineer with basic installation and programming information.

Programming

The '**Programming Manual**' for the CD72 or the CD95/CD150 covers all necessary aspects of programming the system. Everybody involved in installing or maintaining this panel should have access to a copy of this manual. The '**Programming Manual**' is available from your ARITECH national office.

The '**Programming Map**' for the various systems can be found at the end of this manual.

CONTENTS

INSTALLATION GUIDELINES	7
Before switching on the power.....	8
<i>Figure 1. Separate alarm and tamper connection</i>	<i>8</i>
<i>Figure 2. Joint Connecting the alarm & tamper</i>	<i>8</i>
<i>Figure 3. Overview of the dipswitches on remotes.....</i>	<i>9</i>
PROGRAMMING GUIDE.....	11
<i>Figure 4. Keys on a CD30xx.....</i>	<i>11</i>
Returning to default settings.....	12
Leaving programming mode.....	13
Dialler	13
Other manuals.....	13
INSTALLATION GUIDE	14
Wiring diagrams CD72	14
<i>Figure 5. CD72 cabinet.....</i>	<i>14</i>
<i>Figure 6. CD72 control panel.....</i>	<i>15</i>
Wiring diagrams CD95/150	16
<i>Figure 7. CD95 cabinet.....</i>	<i>16</i>
<i>Figure 8. CD150 cabinet.....</i>	<i>16</i>
<i>Figure 9. CD95/150 control panel.....</i>	<i>17</i>
Opening CD3008 / CD3048 keypad	18
<i>Figure 10. Opening the CD3008 / CD3048 keypad.....</i>	<i>18</i>
Opening CD3009 / CD3049 keypad	18
<i>Figure 11. Opening the CD3009 / CD3049 keypad.....</i>	<i>18</i>
CD3008 / CD3009 keypad.....	19
<i>Figure 12. CD3008 / CD3009 keypad</i>	<i>19</i>
CD3048 / CD3049 keypad.....	19
<i>Figure 13. CD3048 / CD3049 keypad</i>	<i>19</i>
CD9031 expander	20
<i>Figure 14. CD9031 expander</i>	<i>20</i>
Keypad back tamper	21
Connecting an extra power supply.....	22
<i>Figure 15. Use of an extra power supply.....</i>	<i>22</i>
Inputs	22
Connecting a detector without memory	23
<i>Figure 16. Dual loop Connecting a detector without memory.....</i>	<i>23</i>
Connecting a detector with Latch	23
<i>Figure 17. Dual loop Connecting a detector with latch</i>	<i>23</i>
Connecting a key switch.....	24
<i>Figure 18. Connecting a key switch with LED's.....</i>	<i>24</i>
Connecting a “nitewatch” system.....	24
<i>Figure 19. Connecting a CP4005 Nitewatch PCB.....</i>	<i>24</i>

Connecting a fire detector	25
<i>Figure 20. Connecting a fire detector</i>	<i>25</i>
Outputs	26
Connecting a relay or an LED.....	26
<i>Figure 21. Connecting a relay or an LED on the output</i>	<i>26</i>
Connecting an AS256 and AS294/394 sounder	27
<i>Figure 22. Connecting the AS294/394 + internal siren AS256</i>	<i>27</i>
<i>Figure 23. Connecting the AS294/394</i>	<i>27</i>
Connecting the GS600/610/710/711 shock sensor (CD72 only)	28
<i>Figure 24. Connecting the GS710/711 with separate alarm & tamper loops</i>	<i>28</i>
<i>Figure 25. Connecting the GS710/711 with combined alarm & tamper loops.....</i>	<i>28</i>
Printer output.....	29
<i>Figure 26. Printer connection</i>	<i>29</i>
AS270/AS271 internal siren.....	30
SPECIFICATIONS.....	31
PROGRAMMING MAP CD7212	33
PROGRAMMING MAP CD95/15012	37

INSTALLATION GUIDELINES

The CD72, CD95/150 control panels have been designed, assembled and tested to meet current standards of stability and resistance to electrical interference from the environment.

If the following guidelines are followed, the system should give many years of reliable service.

1. Ensure that there is a good earth for the alarm system.

A GOOD EARTH IS ESSENTIAL FOR EFFECTIVE RESISTANCE TO ELECTRICAL INTERFERENCE
--

Do not forget to provide a (network) earth for the telephone dialler.

2. Maintain a good separation between low voltage and mains supply cables, and use separate points of entry into the control panel cabinet.
3. Avoid loops of wire inside the control panel and route cables so they do not lay on top or underneath the printed circuit board. The use of cable ties is recommended and improves neatness in the box.
4. Mains switching relays must NOT be fitted inside the control panel cabinet. The switching of these relays may cause electrical interference.
 - 4.1 Use a relay with good insulation between the contacts and the coil.
 - 4.2 Place a suppression diode (e.g. a 1N4001) across the relay coil.
 - 4.3 Relays connected to open collector outputs of the alarm system should be rated at 12 volts DC with a coil impedance greater than 400 Ohms.
5. The remote bus cable is used for communication between the control panel and the keypads/expanders. The greatest care should therefore be taken when installing this cable. NEVER split this cable into separate cables. Do not use cables with wires which are used for TELEPHONE connections or for switching, for example, flashing lights, sirens or relays.
6. Avoid cable ducts and cable ways which contain mains power cables. This is particularly important when such ducts contain cables supplying electric motors, fluorescent lights or 3-phase power. If this is not possible, shielded cable should be used and the cable should be earthed at the control panel end ONLY.

BEFORE SWITCHING ON THE POWER

- Detectors (or key switches) can be connected in two ways:

Conventional: One zone each is required for both tamper and the alarm. Both zones should be closed with an end-loop resistor (4.7 kOhm). Program the 'zones' menu as 'Alarm'.

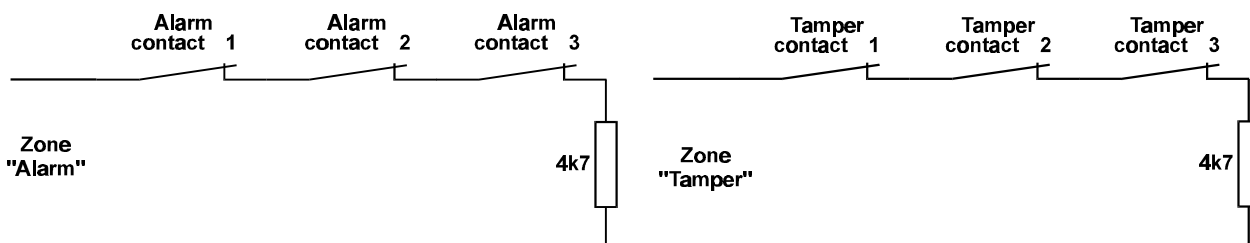


Figure 1. Separate alarm and tamper connection

Dual loop: The alarm and tamper are placed together in one zone. The zone has two end-loop resistors (4.7 kOhm) to differentiate between alarm and tamper. Figure 2 shows how they are connected. Program the 'zones' menu as 'Dual'.

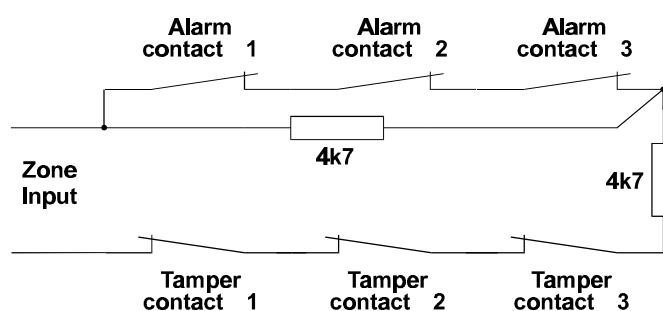


Figure 2. Joint Connecting the alarm & tamper

This connection method gives the following input values:

The zone is	Resistance	Panel zone voltages	Remote zone voltages	Reaction
on standby	3k5 - 6k2	2.1 - 2.8 V	4.7 - 6.8 V	none
triggered	6k6 - 11k7	2.9 - 3.6 V	6.9 - 8.6 V	alarm
open	> 12k7	> 3.7 V	> 8.7 V	tamper
short-circuited	< 2k9	< 1.9 V	< 4.6 V	tamper

Table 1. Operation of the inputs

2. Set the DIP switches of all the remote keypads and expanders.
 Remote 1 must be a keypad.
 CD72, remotes 2 to 4 must be keypads and remotes 5 and 6 expanders.
 CD95/150, remotes 2 to 8 can be keypads or expanders but remotes 9 to 16 must be expanders.

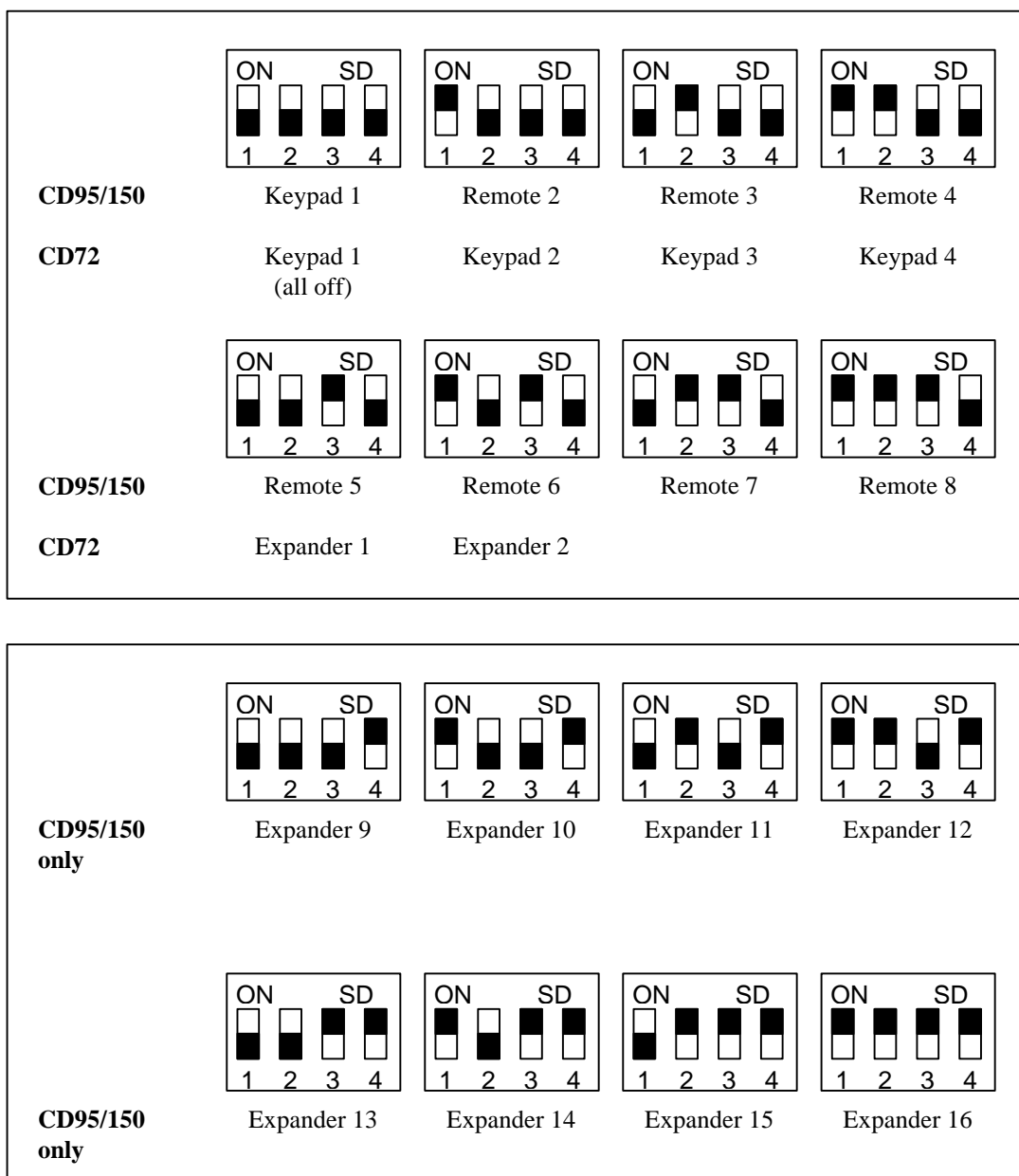


Figure 3. Overview of the dipswitches on remotes

3. Close the tamper switches on the remote keypads, expanders and the control panel. Also close all zones which can cause a direct alarm. If this is not done, the system will be triggered as soon as it is switched on.

4. Remove link LK1 or JP1 from the PCB so that it returns to default settings.

5. Supply only mains power to the control panel. The system will power up in the ARMED state. Any zones that may be open will initiate a full alarm condition and the sounders will activate.

Do not use a battery to power the system when installing or changing the installation. If there is a short circuit in the 12 volt power supply, the voltage regulators in the supply (together with the fuses) will prevent serious damage to the system. The 12 volt power supply will decrease sharply in the event of a short circuit.

If a short circuit should occur, remove the 12 volt connections one by one. When the connection with the short circuit is removed the power supply will return to 12 volts.

NOTE: ONLY KEYPAD ONE IS OPERATIONAL.

Every time power is removed from the system the control panel memorises its status. If power is restored to the panel, the system starts up again in this status (except if LK1/JP1 has been removed).

6. Enter '0' followed by the default user code '1122' at keypad 1. 'Disarm?' is shown on the display. System then disarms.

If the sirens have been activated, these will now stop. The status of the system or the time and date will now appear in the display.

7. Enter '0' followed by the default engineer's code '1278' at keypad 1 and press '↓' to return to programming mode.

N.B. Do not forget to initialise additional keypads and expanders with the menu:
'INSTALL REMOTE'

Replace LK1/JP1.

PROGRAMMING GUIDE

1. Take some time to become familiar with the overview of the programming maps which can be found at the end of this manual.
2. Any programming changes made may not take effect until you exit programming mode.
3. If while programming an option the message "No Privilege" is displayed, the configuration is "Split System" and you do not have access to all the areas. This may be caused by not obtaining "Extended Access" (Maintenance menu), or because one or more of the areas are armed.
4. The following keys may be used:

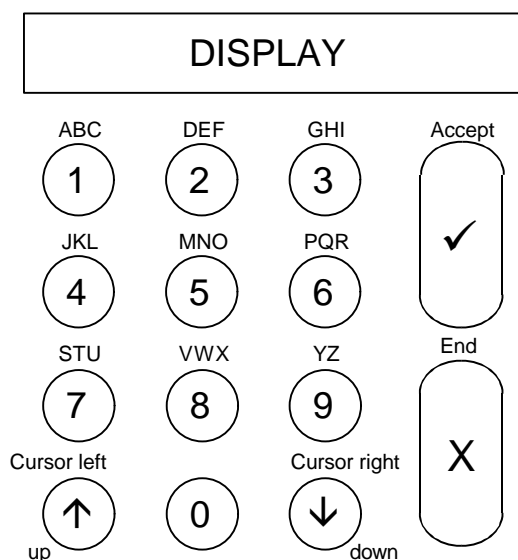


Figure 4. Keys on a CD30xx

Always enter a '0' before entering an engineer/user code to prevent errors !

Under keys 1 to 9 there are 3 letters of the alphabet: press the keys repeatedly to enter first the number, then the lower case letters and then the upper case letters. Keys 9 and 0 have special symbols such as the comma and space. The arrows move the cursor during entry. Press '✓' to accept an entry. Cancel an entry by pressing 'X'.

To delete a character, overwrite with another character or a space.

Note: CD30xx stands for the keypads:
CD3008, CD3048, CD3009 and CD3049

RETURNING TO DEFAULT SETTINGS

There are two methods of returning the system (not the dialler) to default settings, these are:

1. The removal of **JP1** (CD72) or **LK1** (CD95/150). Subject to the 'Engineers Lock' not being programmed, this method will return the panel to default settings without the use of an engineer's code. Proceed as follows:
 - Remove both the battery and the mains power.
 - Remove jumper **JP1/LK1**.
 - Connect the mains power. Only keypad 1 is operational. The software version is displayed on the other keypads (if present). As the default setting is "armed" any open zones will trigger the system and the sounders will activate.
Enter '0' followed by the default code '**1122**' to disarm the system.
Use code '**1278**' to return to programming mode.
If the default codes are invalid, the system had 'Engineers Lock' blocking programmed.
If the current engineers' code is known use procedure 2, if not, then replacement of the PCB is the only way to gain access to programming mode.
2. By programming. Use this method if 'Engineers Lock' blocking is active and the engineers' code is known. Proceed as follows:
 - KEYPAD ONE MUST BE USED FOR THIS PROCEDURE
ALL AREAS MUST BE DISARMED
 - Go to keypad 1.
 - Enter the installation engineers' code.
 - If the system is split, you will be asked for an area number, enter 1, press '←' and you will enter the '**Maintenance**' section of the engineers programming menu.
Accept this '✓' and use the down arrow key until '**Extended Access**' is displayed.
Accept this '✓' to gain extended access, then press '**X**' to return to '**Maintenance**'.
 - Press '**7**', '**6**' and '**1**' successively. You are now in the menu '**Miscellaneous**', '**Factory Prog. Menu**', '**Default Settings**'. '**Are you sure?**' flashes in the display.
If '**No Privilege**' appears, there are two possibilities:
 - ◇ You are not at keypad 1
 - ◇ The system is split and you do not have access to all areas. Check this using '**Extended Access**'.
 - Press accept ('✓'). '**Wait ...**' appears in the display.
 - The system has now reverted to default settings.

LEAVING PROGRAMMING MODE

Before leaving programming mode use the 'Show Open Zones' facility under the '**Maintenance**' menu (menu 1.3). If any zones shown are 24Hr zones (e.g. tamper or fire) the alarm will activate on leaving the engineers' programming mode.

If dual loop is programmed, the letter T will appear next to the zone number to indicate the tamper section of the loop is open.

Procedure:

- a. Check for open 24Hr zones (see above).
- b. Press '**X**' until '**Goodbye**' is displayed.
- c. Press accept '**✓**'.

DIALLER

The use of the RD6203 dialler is recommended. This dialler fits inside the control panel cabinet and is connected to the control panel's PCB using the cable supplied. The dialler may also be programmed via the keypad.

A separate manual is available for the dialler.

OTHER MANUALS

Programming Manual CD72 or CD95/150

A fully documented programming information manual. Separate versions for the CD72 and the CD95/150

User manual

Details user options

Manager Manual

A user manual which examines the options in more depth. Intended for the manager.

Programming Manual RD6203

Documented information on programming the RD6203 dialler

INSTALLATION GUIDE

WIRING DIAGRAMS CD72

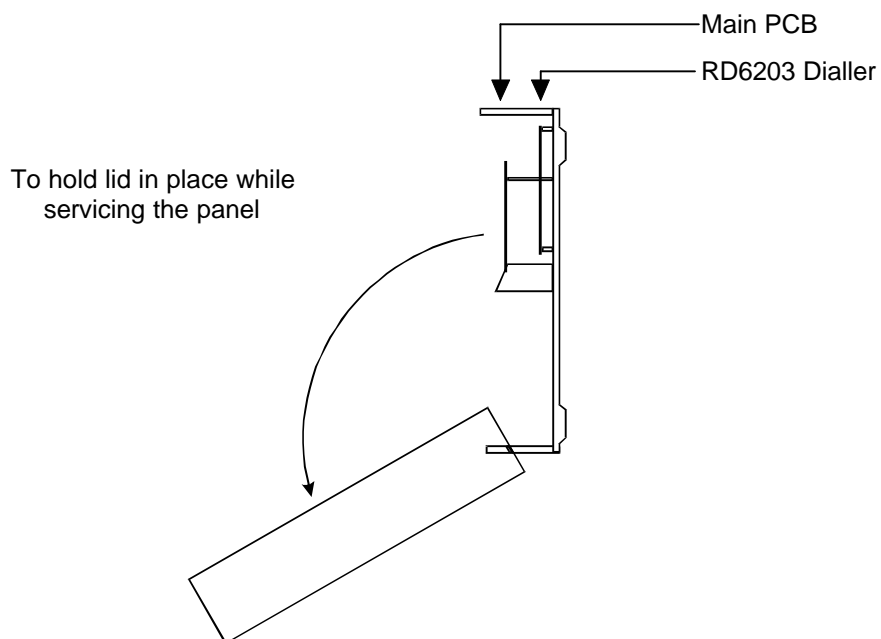
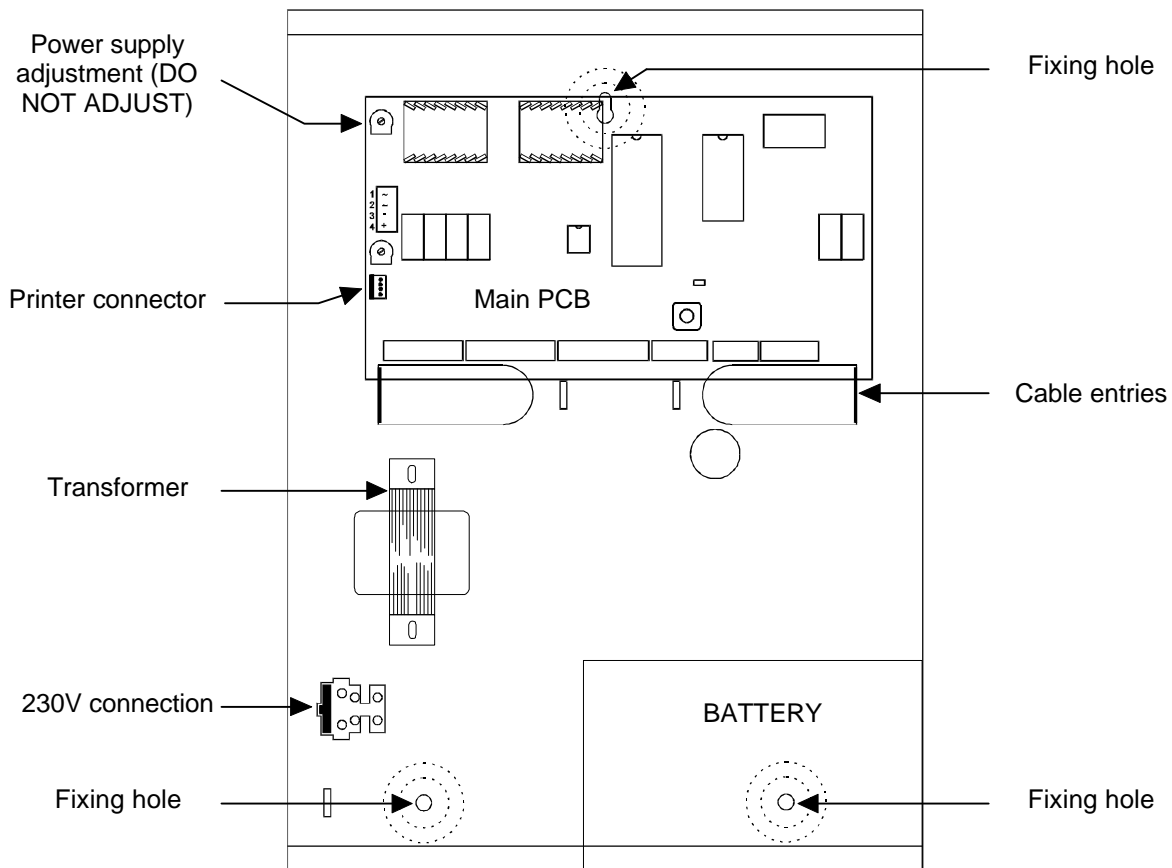


Figure 5. CD72 cabinet

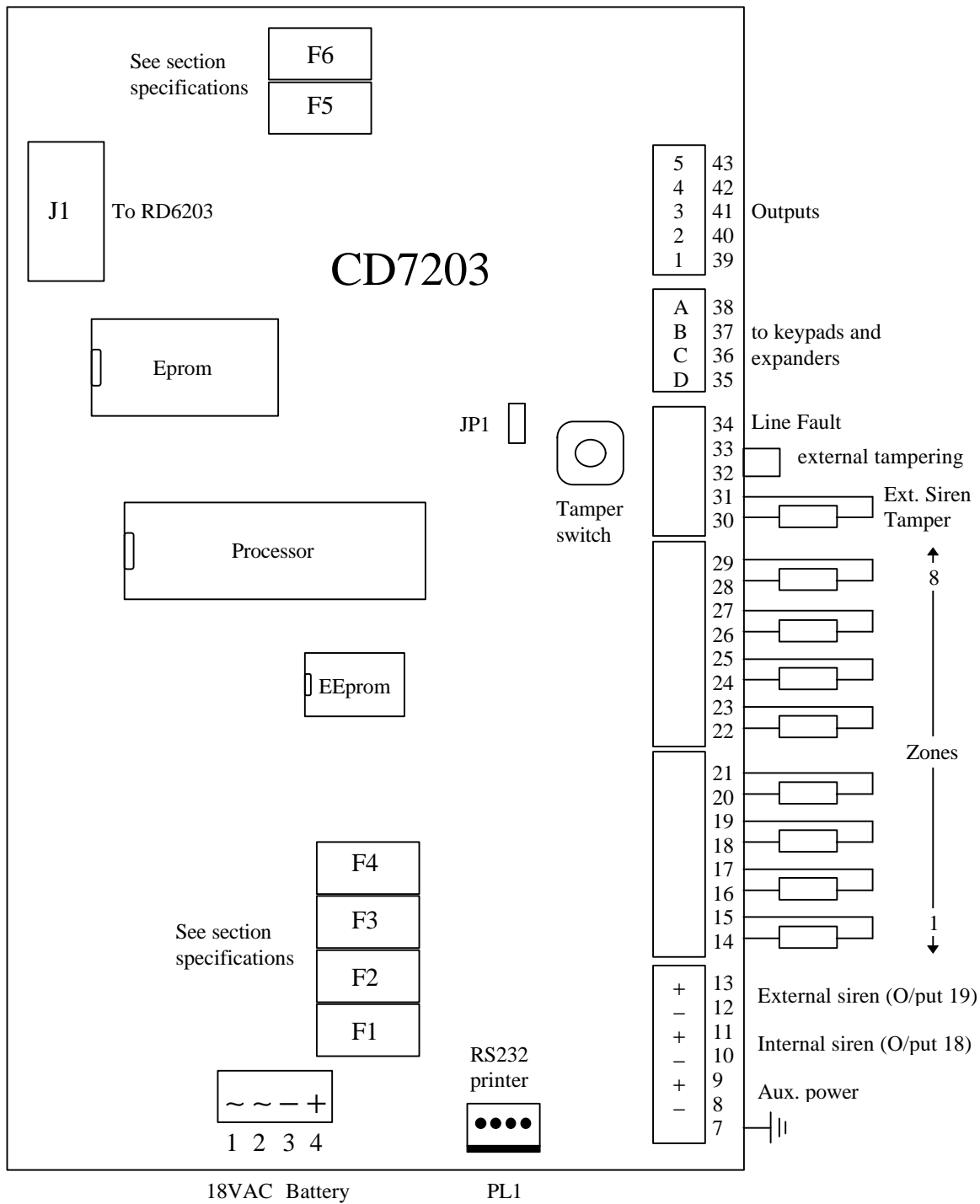


Figure 6. CD72 control panel

WIRING DIAGRAMS CD95/150

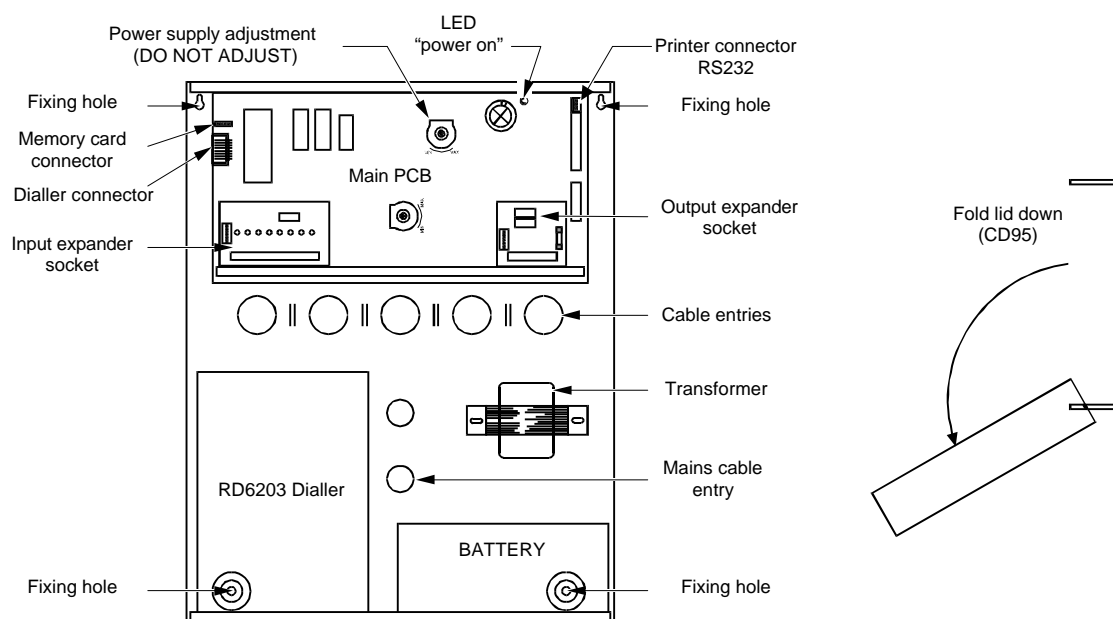


Figure 7. CD95 cabinet

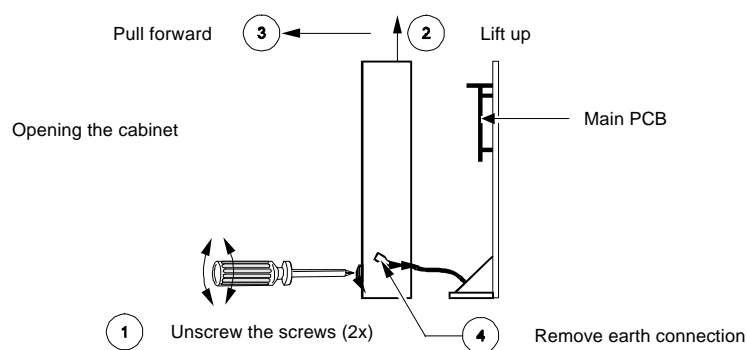
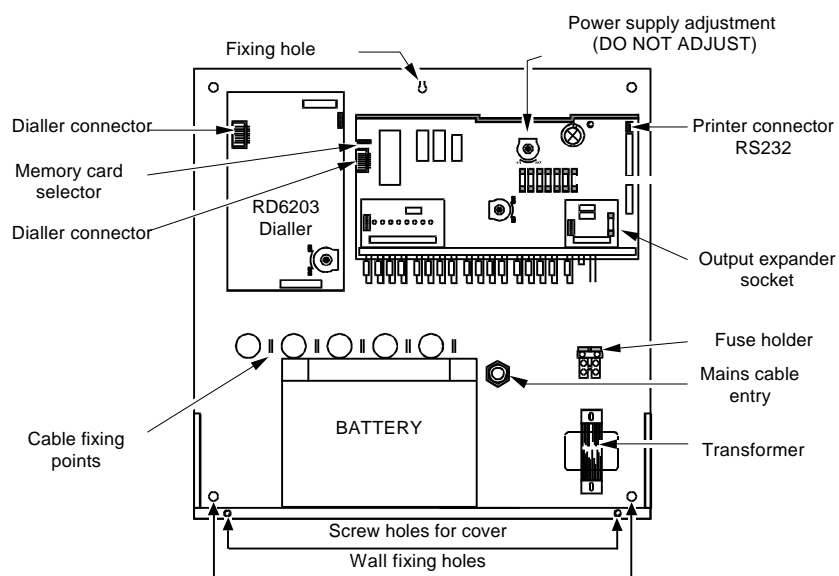


Figure 8. CD150 cabinet

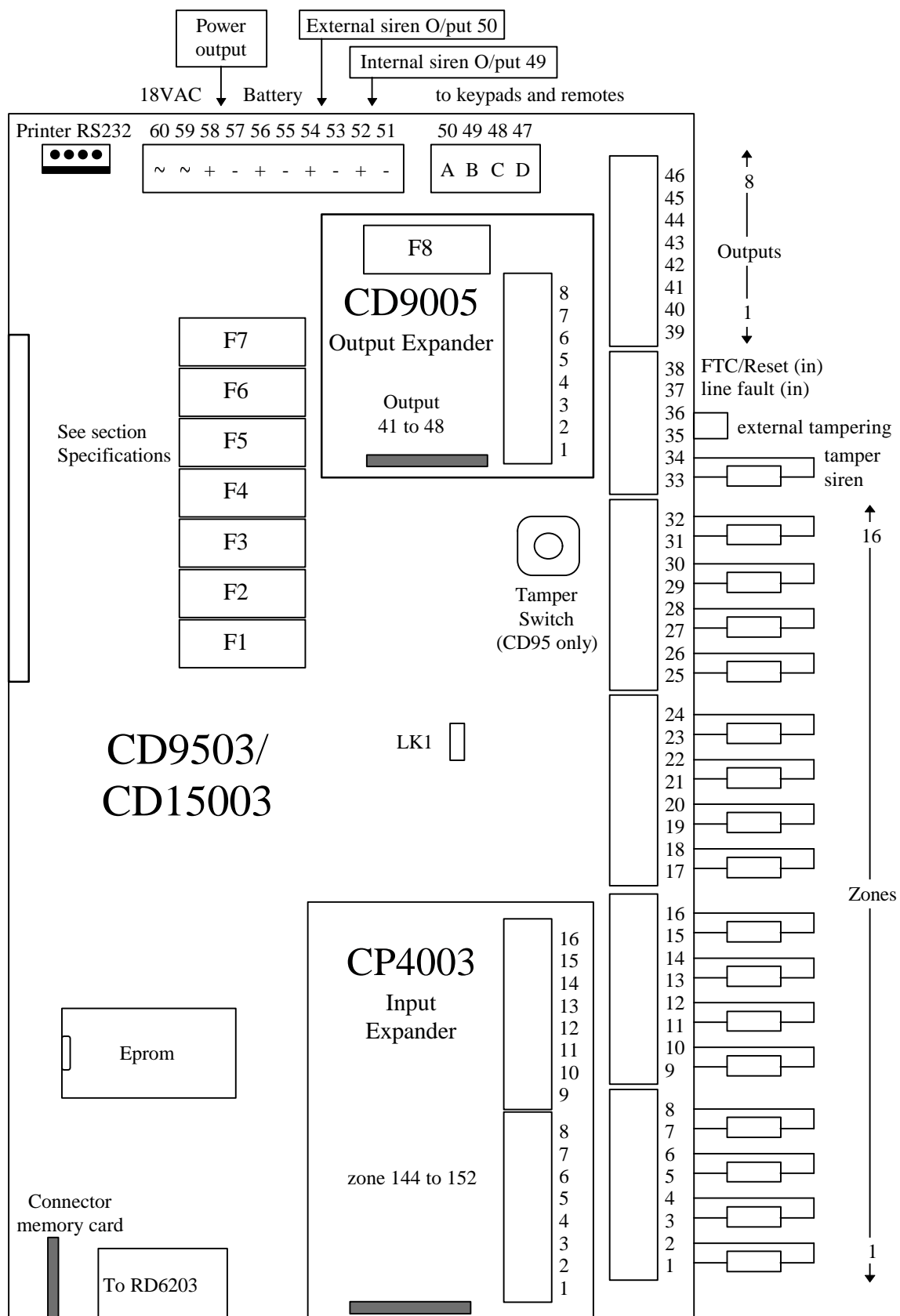


Figure 9. CD95/150 control panel

OPENING CD3008 / CD3048 KEYPAD

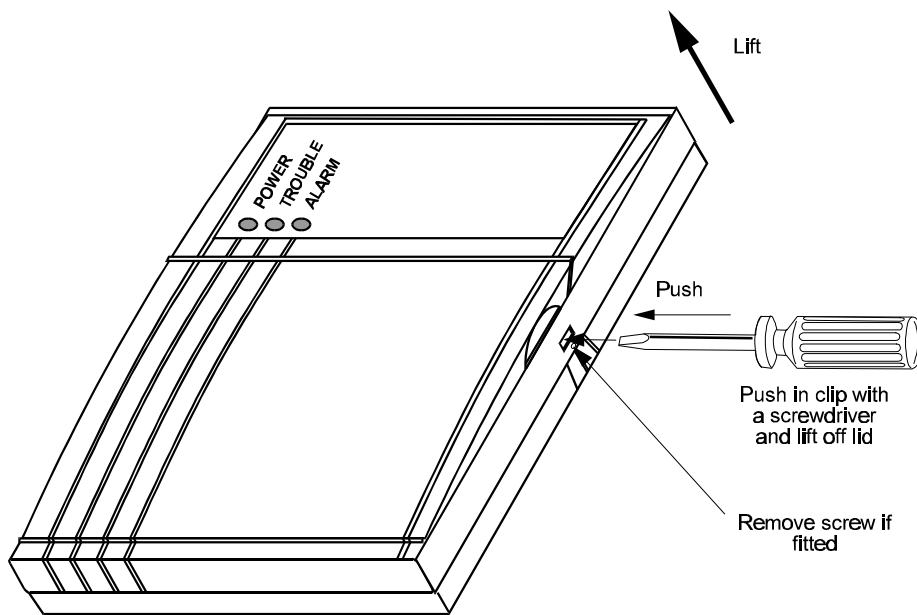


Figure 10. Opening the CD3008 / CD3048 keypad

OPENING CD3009 / CD3049 KEYPAD

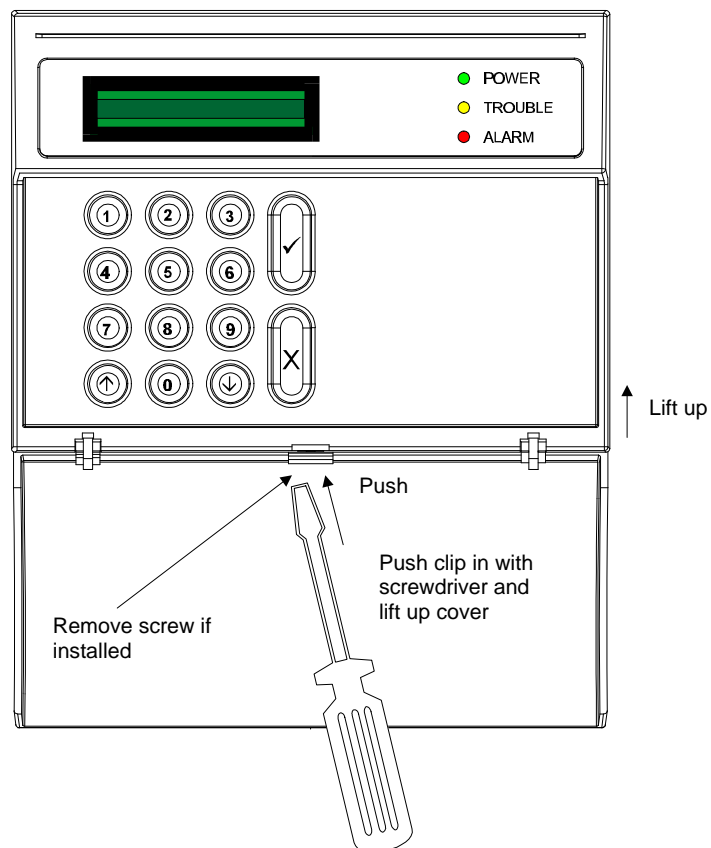


Figure 11. Opening the CD3009 / CD3049 keypad

CD3008 / CD3009 KEYPAD

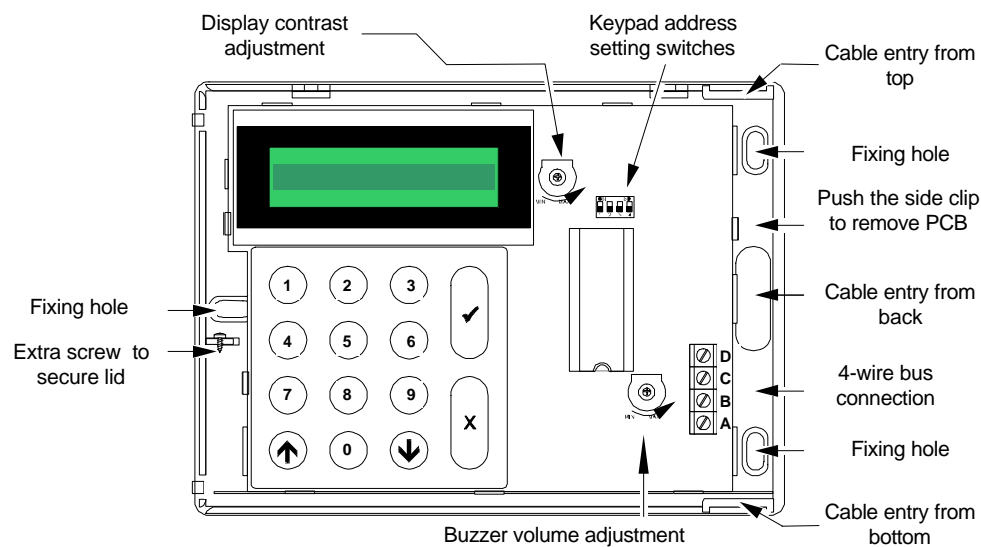


Figure 12. CD3008 / CD3009 keypad

CD3048 / CD3049 KEYPAD

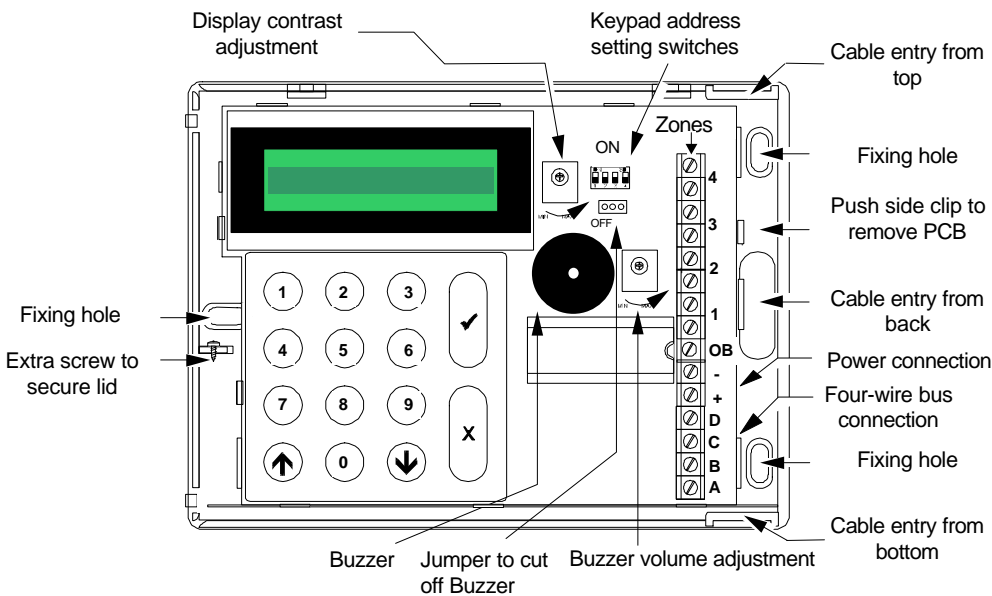


Figure 13. CD3048 / CD3049 keypad

Remote connections	Connection to	
	CD 72	CD 95/150
A	38	50
B	37	49
C	36	48
D	35	47

CD9031 EXPANDER

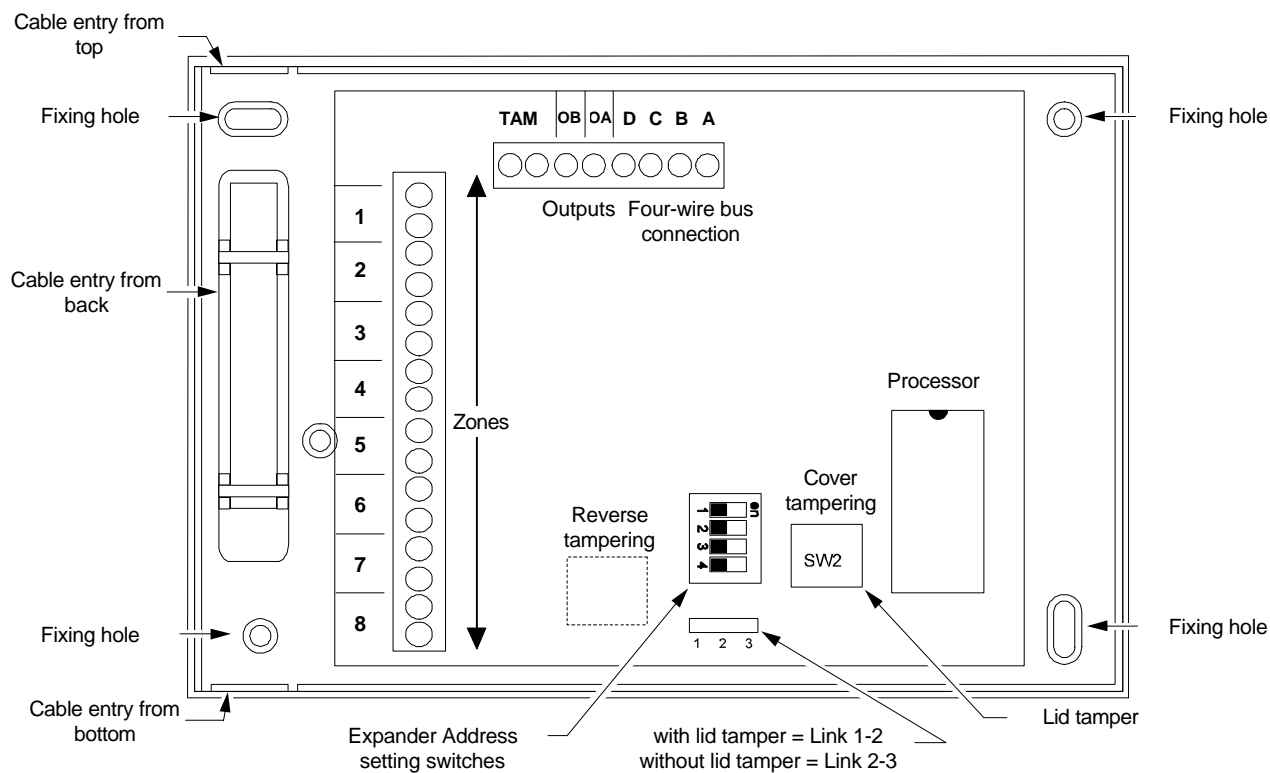
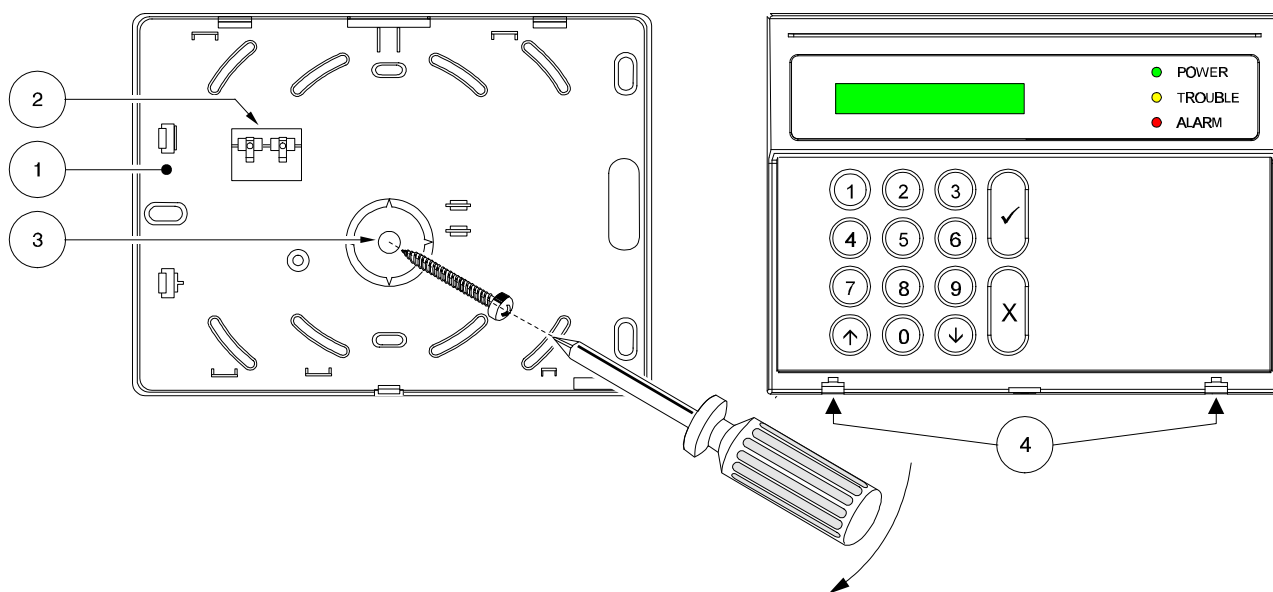


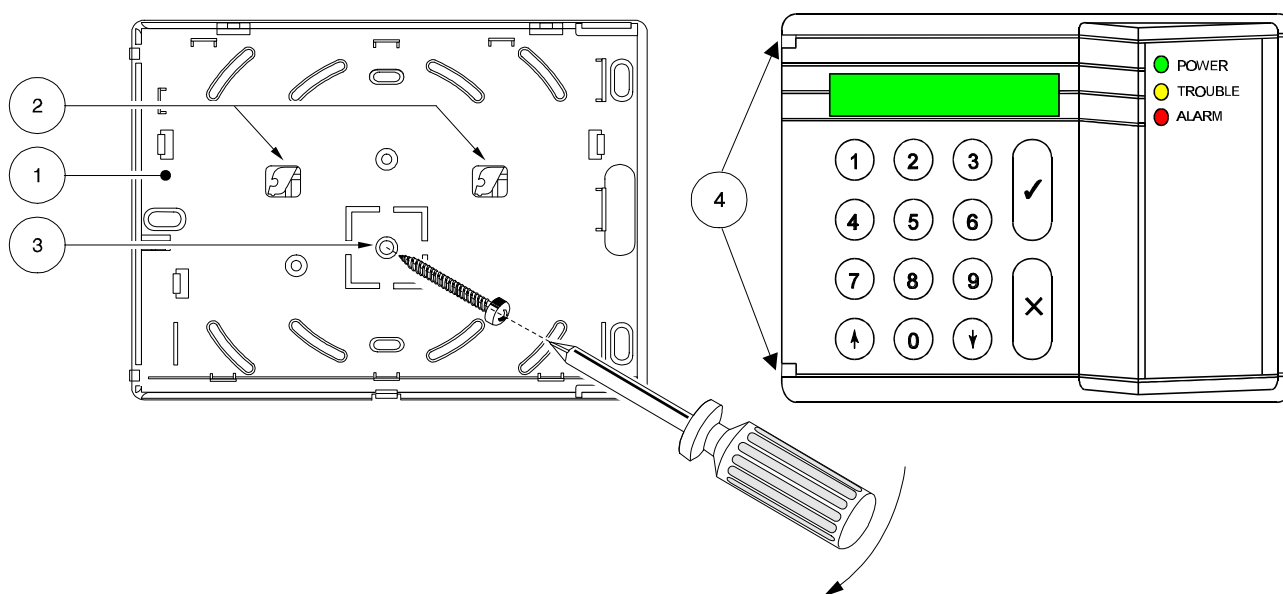
Figure 14. CD9031 expander

Remote connections	Connection to	
	CD 72	CD 95/150
A	38	50
B	37	49
C	36	48
D	35	47

KEYPAD BACK TAMPER



CD3009 / CD3049



CD3008 / CD3048

- CD30xx base ①.
- When the keypad lid is not used, remove the hinge-slot blanking pieces from the base ② and place them in the hinge-slot openings ④.
- For back tamper protection fix the screw through the hole into the wall ③.

CONNECTING AN EXTRA POWER SUPPLY

An auxiliary power supply will be required if the voltage is too low as a result of large cable runs or the current demand is in excess of the panels current supply rating.

To connect an extra power supply the '+' of the panel must not be connected to the '+' of the auxiliary power supply. Also do not connect the '+' of different auxiliary power supplies together. If the auxiliary power supply is used to power a remote expander/keypad, connect the "+" of the four wire bus ("A") to the "+" of the auxiliary power supply. A common reference is obtained by connecting together all power supplies "-".

IMPORTANT: NEVER INTERCONNECT POSITIVES OF POWER SUPPLIES. ALWAYS INTERCONNECT NEGATIVES OF POWER SUPPLIES

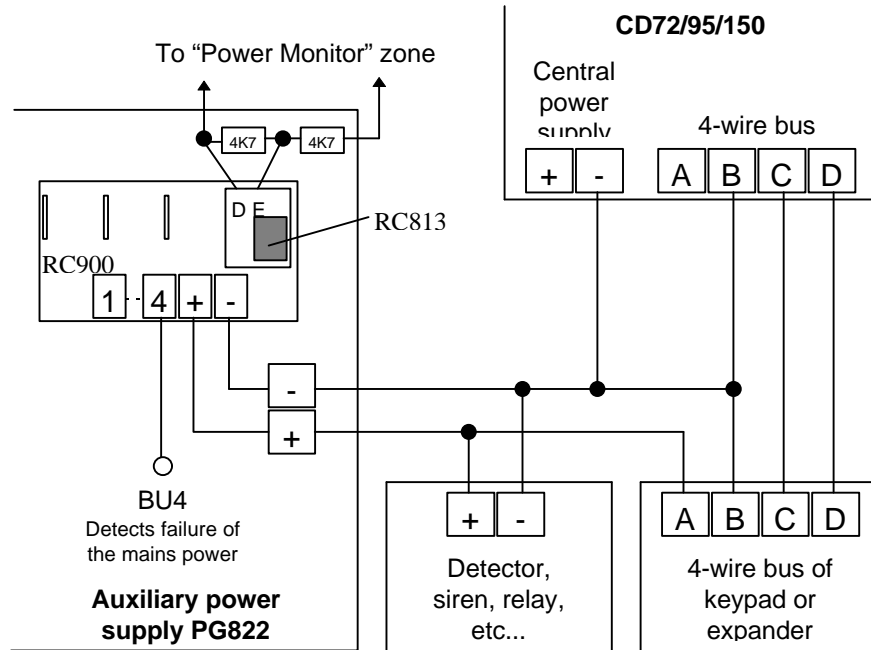


Figure 15. Use of an extra power supply

INPUTS

Numbering	Panel CD72	Panel CD95/150	Expander socket CD95/150
	1....8	1....16	145....152

	Keypad 1	Keypad 2	Keypad 3	Keypad 4	Expander 5	Expander 6
CD72	9....12	13....16	17....20	21....24	9....16	17....24

	Keypad 1	Remote 2	Remote 3	Remote 4	Remote 5	Remote 6	Remote 7	Remote 8
CD95/150	17....20	25....32	33....40	41....48	49....56	57....64	65....72	73....80
	Remote 9	Remote10	Remote11	Remote12	Remote13	Remote14	Remote15	Remote16
CD95/150	81....88	89....96	97....104	105....112	113....120	121....128	129....136	137....144

Table 2. Numbering of the inputs

Note: In the CD72 the expanders have priority over the keypads !

CONNECTING A DETECTOR WITHOUT MEMORY

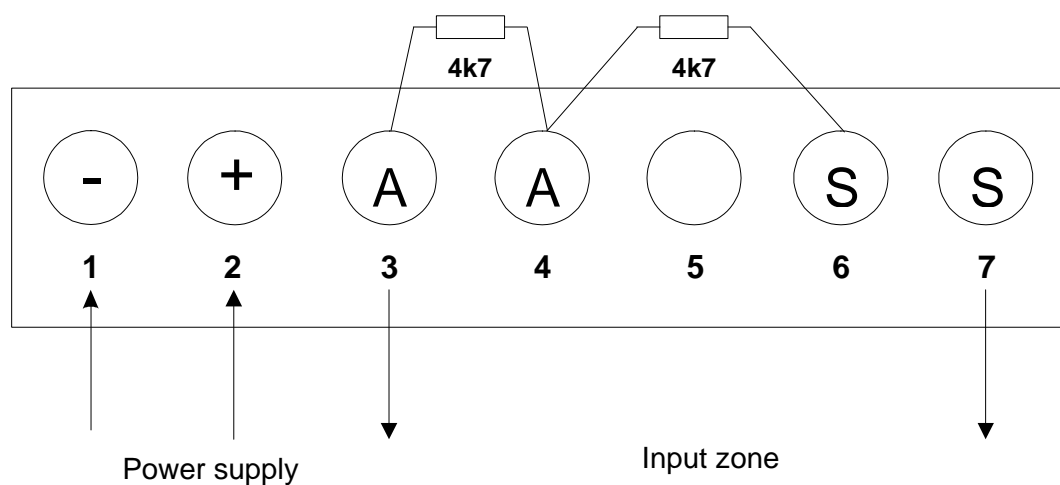


Figure 16. Dual loop Connecting a detector without memory

CONNECTING A DETECTOR WITH LATCH

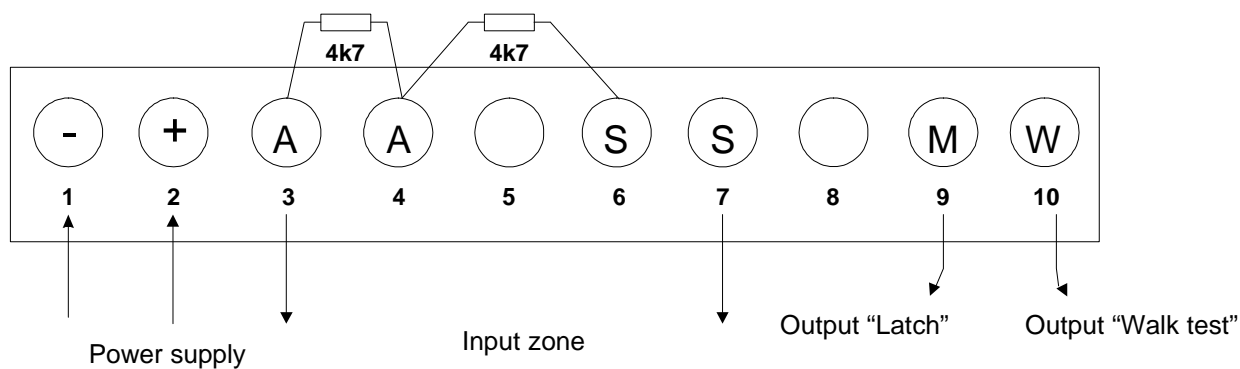
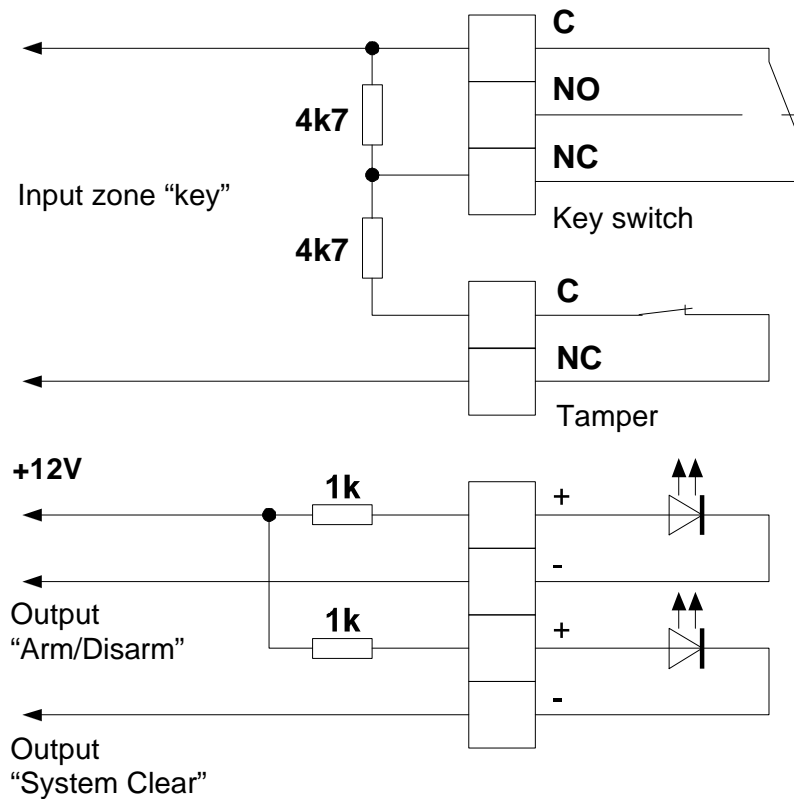


Figure 17. Dual loop Connecting a detector with latch

Note: Before connecting, the cable between terminal 2 and terminal 10 should be removed!

CONNECTING A KEY SWITCH



"Programme outputs for negative applied"

Figure 18. Connecting a key switch with LED's

CONNECTING A "NITEWATCH" SYSTEM

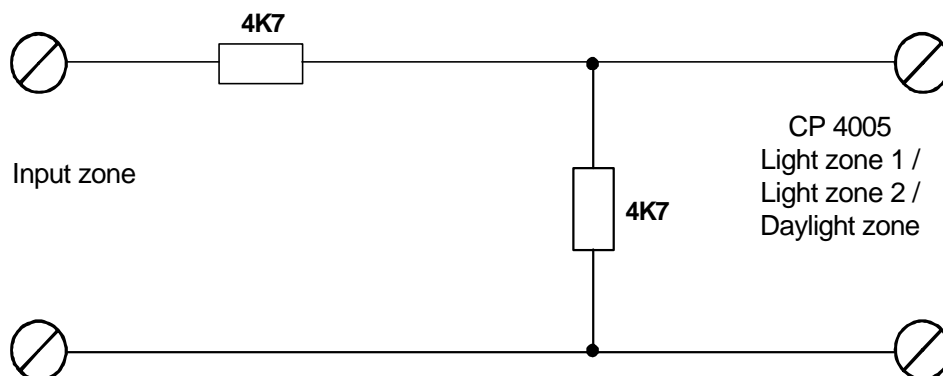


Figure 19. Connecting a CP4005 Nitewatch PCB

CONNECTING A FIRE DETECTOR

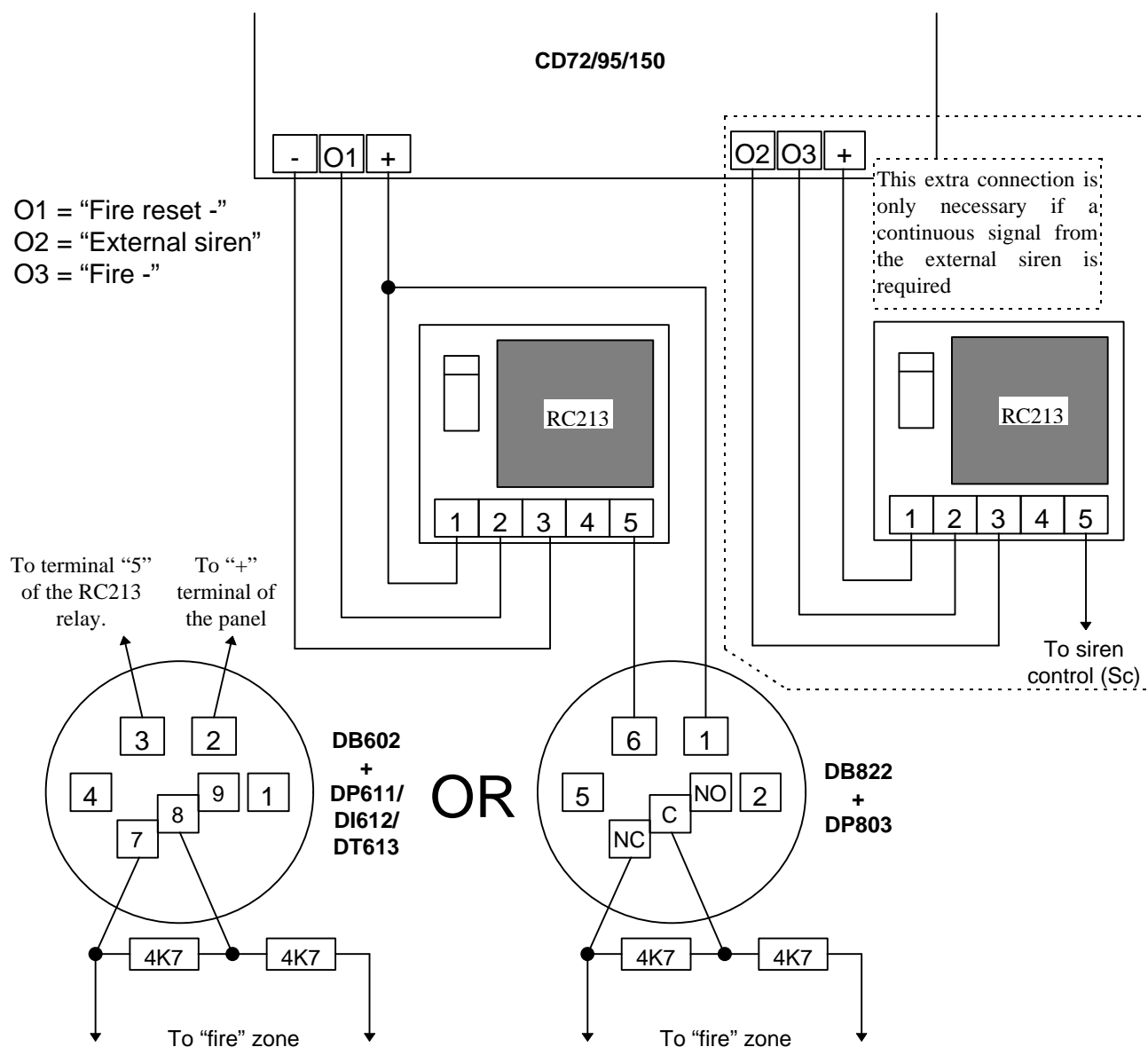


Figure 20. Connecting a fire detector

- Note 1: If there are several detectors place them in parallel and cable the zones as described in figure 1 or 2 (see page 8).
- Note 2: This connection also applied for detectors which require a reset after an alarm, e.g. the GS900 etc.
- Note 3: The reset is performed after the second entry of a code after an alarm.
- Note 4: Programme zone loop as "Dual".
- Note 5: Programme all outputs for negative applied "-".

OUTPUTS

	Panel	Internal siren	External siren	Output expander
CD72	1....5	18	19	
CD95/150	1....8	49	50	41....48

	Keypad 1		Remote 2		Remote 3		Remote 4		Remote 5		Remote 6		Remote 7		Remote 8	
	OA	OB	OA	OB	OA	OB	OA	OB	OA	OB	OA	OB	OA	OB	OA	OB
CD72	6	7	8	9	10	11	12	13	14	15	16	17				
CD95/150	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

	Remote 9		Remote10		Remote11		Remote12		Remote13		Remote14		Remote15		Remote16	
	OA	OB	OA	OB	OA	OB	OA	OB	OA	OB	OA	OB	OA	OB	OA	OB
CD150	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Table 3. Numbering of the outputs

NB: In a keypad OA is the buzzer. OB does not exist in a CD3008 / CD3009 keypad.

CONNECTING A RELAY OR AN LED

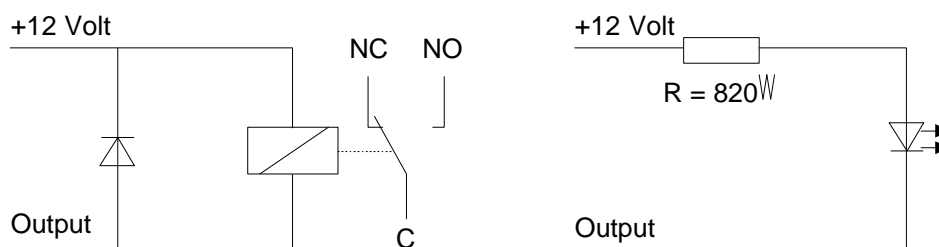


Figure 21. Connecting a relay or an LED on the output

The resistor R is necessary to adjust the current. This may not be greater than 40 mA. For most LEDs, however, a current of approximately 15 mA is sufficient. The resistance calculation is as follows:

$$R = \frac{V}{I} = \frac{13,8V - V_{led}}{15 \text{ mA}} = \frac{13,8V - 2V}{15\text{mA}} = 787\Omega$$

When rounded off this is 820 Ohms.

CONNECTING AN AS256 AND AS294/394 SOUNDER

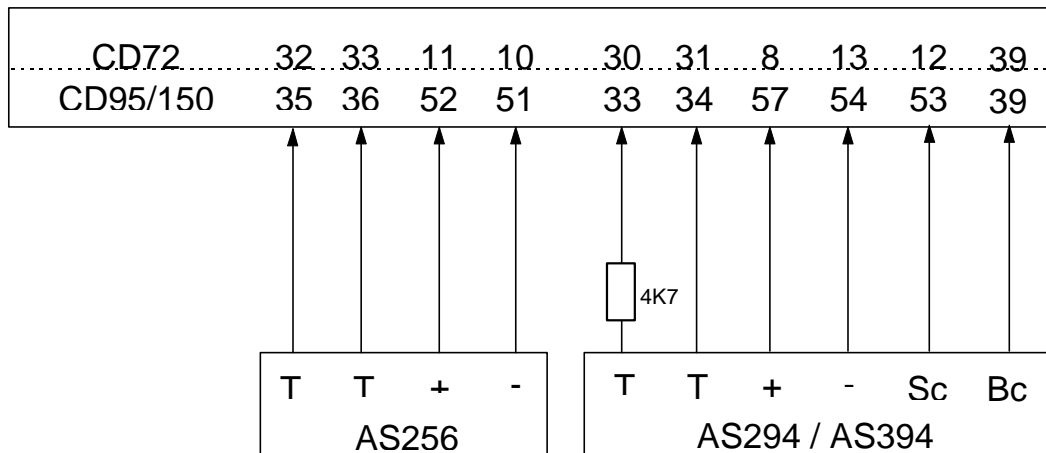


Figure 22. Connecting the AS294/394 + internal siren AS256

Programming	CD72	CD95/150
Beacon control	01 Int Sir Sy +	01 Int Sir Sy +
Internal siren control	18 Int Sir Sy -	49 Int Sir Sy -
External siren control	19 Ext Sir Sy +	50 Ext Sir Sy +

Table 4. Programming for the sirens

NB: If the tampers must be placed in separate zones, they can be connected according to figure 1 (1 end-loop resistor) or figure 2 (2 end-loop resistors) (see page 8).

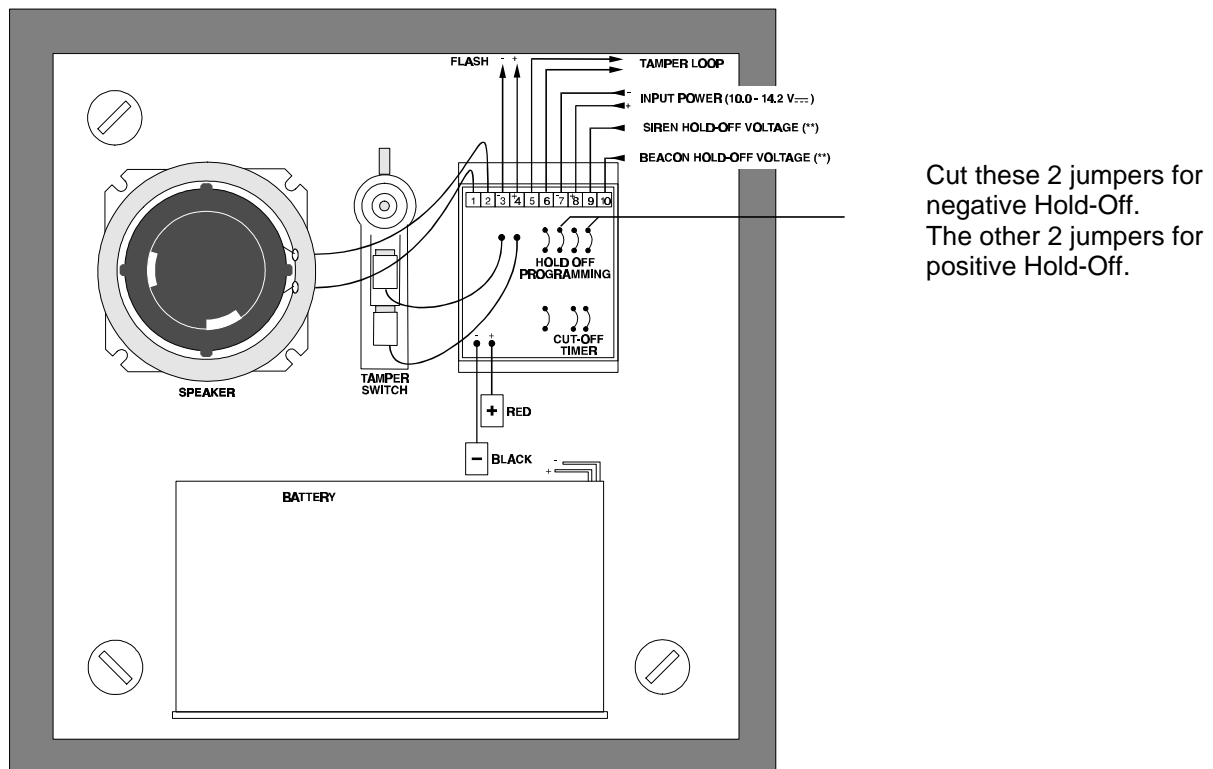


Figure 23. Connecting the AS294/394

CONNECTING THE GS600/610/710/711 SHOCK SENSOR (CD72 ONLY)

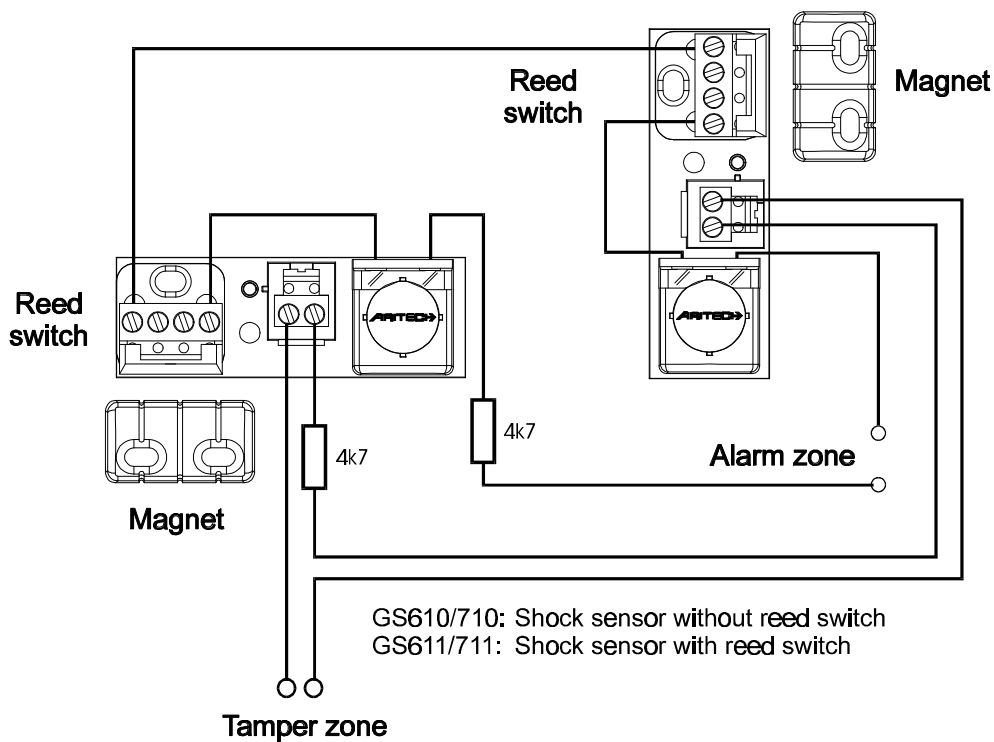


Figure 24. Connecting the GS710/711 with separate alarm & tamper loops

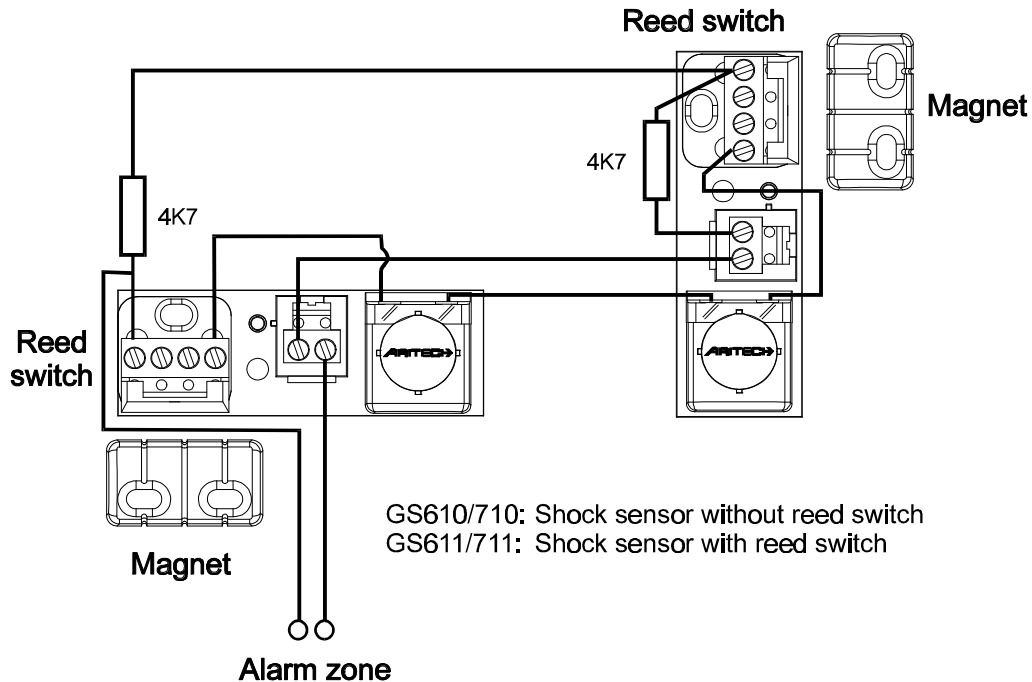


Figure 25. Connecting the GS710/711 with combined alarm & tamper loops

PRINTER OUTPUT

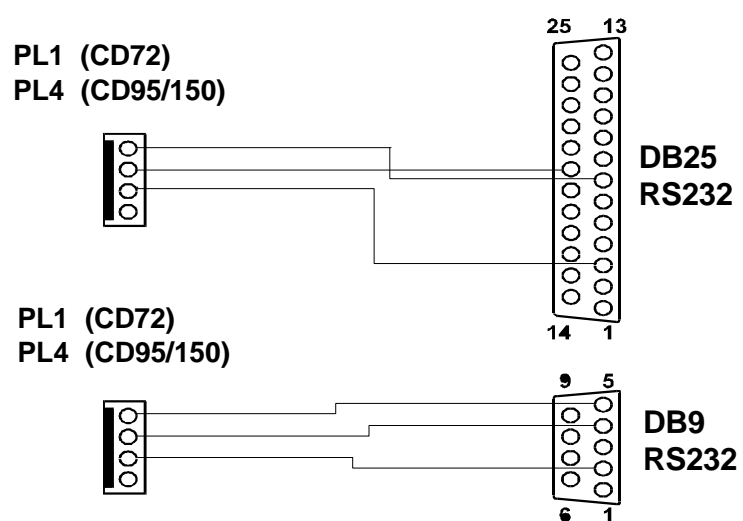
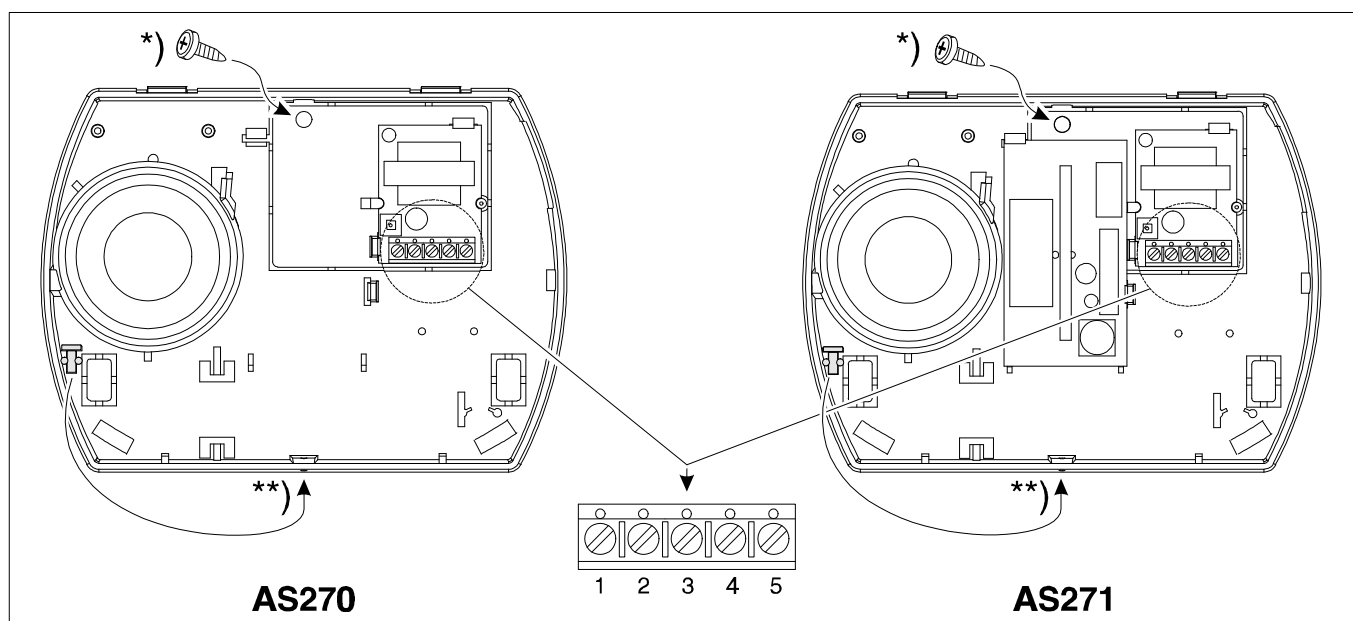


Figure 26. Printer connection

AS270/AS271 INTERNAL SIREN



Note:

- *) This fixing screw is used for pry-off tamper.
- **) Screw to close siren.

Connection:

1. Tamper
2. Tamper
3. + 12V
4. - 0V Speaker
5. - 0V Beacon

Programming in the panel:

	Connection AS270/AS271	Programming Output		Panel connection
		Description	Output	
CD72	1 Tamper			terminal 30
	2 Tamper			terminal 31
	3 + 12V			terminal 11
	4 - 0V	Internal siren	18 Internal siren -	terminal 10
	5 - 0V	Flash/Beacon	18 Internal siren -	terminal 10
CD95/150	1 Tamper			terminal 35
	2 Tamper			terminal 36
	3 + 12V			terminal 52
	4 - 0V	Internal siren	49 Internal siren -	terminal 51
	5 - 0V	Flash/Beacon	49 Internal siren -	terminal 51

SPECIFICATIONS

FUSES					
CD72			CD95/150		
230 V fuse	315 mA	20x5	230 V fuse	315 mA	20x5
F1 Battery	2 A	20x5	F1 Dialler	800 mA	20x5
F2 Auxiliary power	1 A	20x5	F2 Output 8	800 mA	20x5
F3 Internal siren	1 A	20x5	F3 Auxiliary power	1 A	20x5
F4 External siren	1 A	20x5	F4 Battery	3,15 A	20x5
F5 Dialler	1 A	20x5	F5 External siren	800 mA	20x5
F6 Remotes	1 A	20x5	F6 Internal siren	800 mA	20x5
			F7 Remotes	800 mA	20x5
			F8 Expander output	800 mA	20x5

230 VAC

secondary fuse 315 mA

Battery

12 Vdc, 16 Ah maximum for CD 72

12 Vdc, 24 Ah maximum for CD 95/150

Max. current consumption

max. 1.0 A, including remotes, dialler and unit for CD72

max. 2.0 A, including remotes, dialler and unit for CD95/150

Power consumption

	typ.	max.
CD 72	66 mA	
CD 95/150	117 mA	
CD 3008/3009	26 mA	52 mA
CD 3048/3049	30 mA	55 mA
CD 9031	26 mA	
RD 6203	45 mA	95 mA

End of line resistors

4k7, 2 %, 0.25W

1 resistor for Alarm loop

2 resistors for Dual loop

Data bus

A	+ 12V
B	GND
C	Data in (to panel)
D	Data out (from panel)

Distance for data bus

Max 1500m.

Dimensions (l x b x h)

CD 3008/3048	160 x 120 x 35 (3 mm ABS)
CD 3009/3049	160 x 120 x 35 (3 mm ABS)
CD 9031	175 x 125 x 37 (3 mm polycarbonate)
CD 72/95	315 x 385 x 88 (1,25 mm steel plate)
CD 150	475 x 460 x 160 (1,25 mm steel plate)

Output no.	Location	Output connected max.	Zone no.
1 to 5	control panel	100 mA	1 to 8
6 to 17	remotes	40 mA	9 to 24
18	internal siren CD72	1A	n/a
19	external siren CD72	1A	n/a

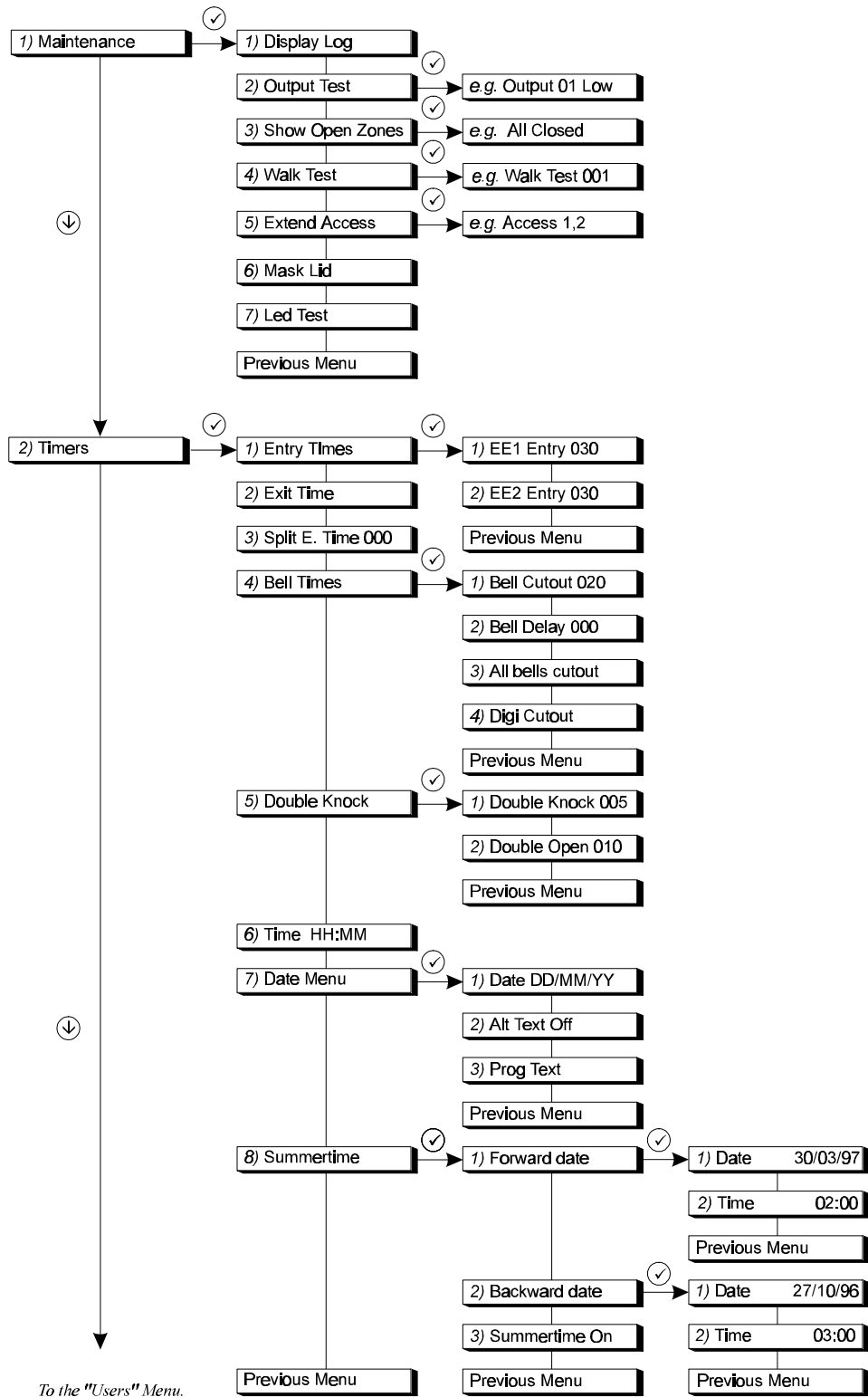
Table 5. Overview of the inputs and outputs on the CD72

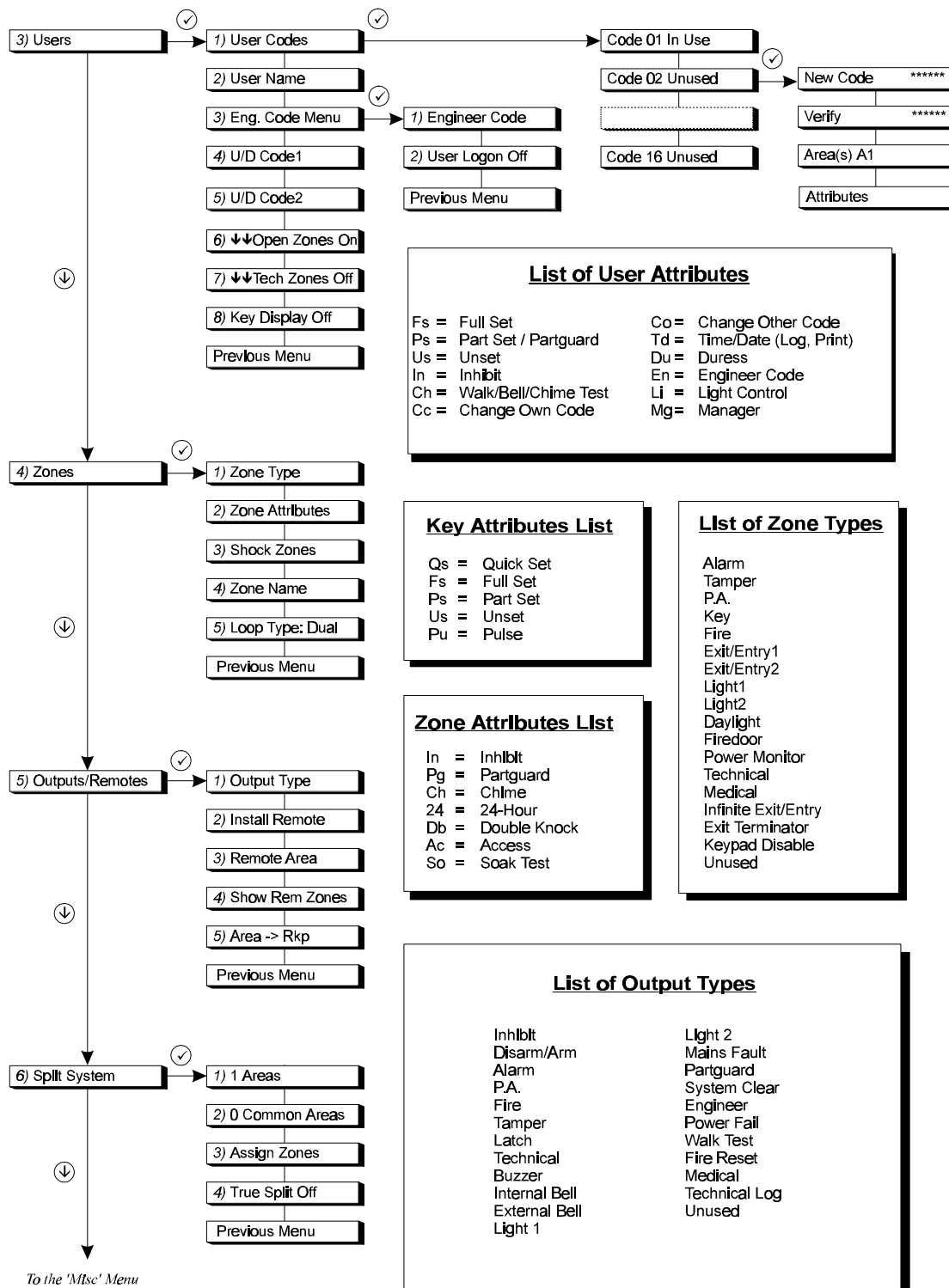
Output no.	Location	Output connected max.	Zone no.
1 to 8	control panel	100 mA (output 8 = 1 A)	1 to 16
9 to 40	remotes	40 mA	17 to 144
41 to 48	expanders	100 mA (output 48 = 1 A)	145 to 152
49	internal siren CD95/150	1A	n/a
50	external siren CD95/150	1A	n/a

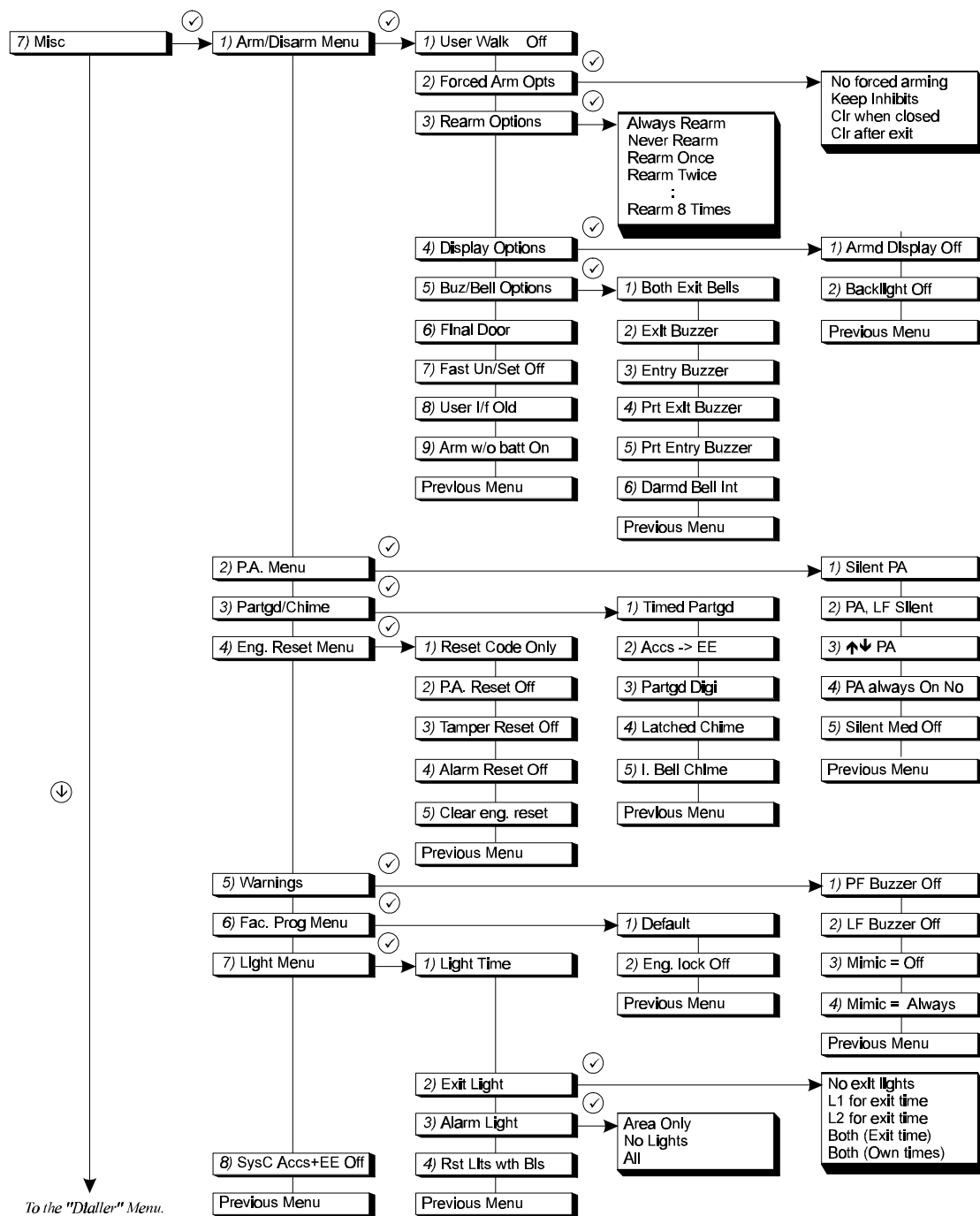
Table 6. Overview of the inputs and outputs on the CD95/150

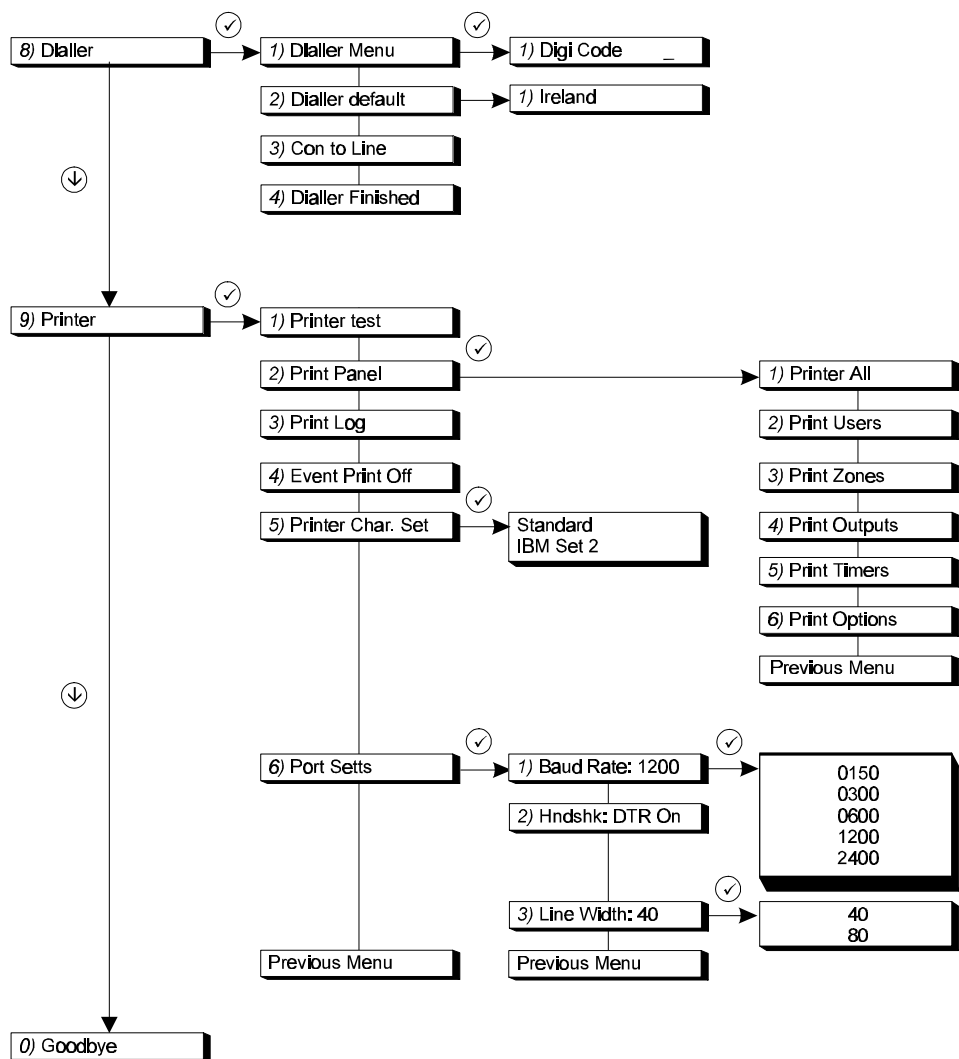
PROGRAMMING MAP CD7212

Note: The quick code numbers in front of each menu item (i.e. 2.4.4 to jump to 'Digi Cutout') are also the section heading numbers in the 'Menu Contents' chapter of the programming manual, where the items are explained.









PROGRAMMING MAP CD95/15012

Note: The quick code numbers in front of each menu item (i.e. 2.4.4 to jump to 'Digi Cutout') are also the section heading numbers in the 'Menu Contents' chapter of the programming manual, where the items are explained.

