

INTERGRATED SECURITY MANUFACTURING LIMITED

1600 & 1602
FUNCTIONAL SYSTEMS
INSTALLATION AND TECHNICAL MANUAL

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TABLE OF CONTENTS

1:	INTRODUCTION	PAGE N°	
1.1	General Description	4	
1.2	System Specification	4	
2:	INSTALLATION		
2.1	Introduction	5	
2.2	Installation	5	
2.3	Connection details (Single Ent.)	5	
3:	SYSTEM TEST		
3.1	Test and Commission (All Systems)	7	
3.2	Annunciation Tones	9	
3.3	Lock Release	9	
3.4	Remote Additional A4 Cards	9	
3.5	Colour Codes	10	
3.6	Colour Codes Remote A4	11	
3.7	Handset testing Notes	11	
3.8	Time clock setting	12	
4:	TWO DOOR CONTROLLER		
4.1	Connection details	15	
4.2	Test and Commission	17	
4.3	Annunciation Tones	17	
5:	SYSTEM CARE		
5.1	MAINTENANCE	17	
5.2	AUXILIARY OUTPUT	17	
6:	OPTIONS		
6.1	1602 Display	18	
6.1	Video system	18	
6.2	Access Control	18	
7:	SCHEMATICS	19	
500-076	Issue 1	500-083	Issue 2
500-076a	Issue 2	1001-FDU	Issue 1
500-077	Issue 3		
500-079	Issue 2		
500-080	Issue 1		
500-080a	Issue 3		
500-081	Issue 3		

1: INTRODUCTION TO 1600 SERIES

1.1 General Description

The 1600 series forms the basis of an audio door entry system. It comprises of two main parts, the controller incorporating the trades clock and eight way distribution, and the power supply.

Fuse protection is provided for the mains input, low voltage AC and DC output within the power supply; with lock, battery backup and dwelling isolation on the controller.

The 1600 series system offers full isolation to dwellings via transistor switching. There are also modular four way distribution cards and a two door controller which enable flexibility in system design.

There are two styles of main entrance; the 1600 without display and the 1602 with a two line text display. This displays the building name and system operation messages.

The 1600 series has full privacy and only one dwelling may be called during the call time.

The system has separate call and talk times, call may be cancelled by replacement of handset.

The system is protected by surge absorbers.

1.2 System Specification

Power Supply : 220/240V ac 50Hz 2 Amp (Max).

Number of dwellings : 4 or 8 as standard, up to a Maximum of 24 with additional distribution cards

Lock Power : 1A @ 12v:
(Fail Safe / Fail Secure)

Door Open timer : 0 - 30 seconds.

Door Open Monitor:

Call Timer : 0 - 60 seconds.

Talk Timer : 0 - 60 seconds.

Optional Two Door Controller.

Optional two line LCD text display. (Maximum 20 character per line)

Call Reset: System timers are reset on replacement of handset.

System Backup - All control functions retained on power fail.

Note: Ensure that all metal work, cabinets, panels, locks etc. are bonded to earth.

2: INSTALLATION

IF AT ANY STAGE YOU ARE UNCERTAIN SEEK HELP AND ADVICE.

2.1 INTRODUCTION

The power supply unit is housed in a steel cabinet and should be mounted within an intake cupboard. All cables to the entrance panel and handsets must be BT type CW 1308 (0.5mm).

The lock supply cable should be minimum 1.5mm singles.

The power supply requires a 240Vac mains supply via a fused spur.

2.2 INSTALLATION

Before mounting the cabinet the chassis must be removed. Suitable cable entries should be made into the cabinet taking into account the locations of the power supply and circuit boards; Refit the chassis.

(See wiring diagram 500-076/076a (single entrance) or 500-080/080a for two entrances).

2.3 CONNECTION DETAILS Note: See Section 4 for 2 Door Controller Connections.

SAFETY CAUTION

ENSURE THE 240V MAINS IS OFF AND ISOLATED BEFORE PROCEEDING.

TAKE EXTRA CARE WHEN ADJUSTING VOLTAGES.

The connection from the mains to the power supply is made using the plug provided.

ENSURE THAT ALL EARTH BONDING IS MADE TO THIS UNIT.

DO NOT SWITCH THE MAINS ON UNTIL ALL CONNECTIONS ARE MADE.

2.3 CONNECTION DETAIL CONTINUED ..

POWER SUPPLY:

Connection from power supply to the controller is made via push together modular connectors. (On RED (+VE) and BLACK (-VE) wires.

CONTROLLER: 1600 and 1602 systems.

PL1 = Connections to additional distribution card via cable assembly.

PL2 = Dwelling call lines.

1 : Connect to CALL button in entrance panel, first dwelling.

2 : Connect to Call button in entrance panel, second dwelling.

Continue for remaining dwellings up to 8.

PL3 = Main connections to Entrance panel, Lock, Battery backup etc.

COMM = Connected to the common of all the call buttons at the entrance panel

1602 panels: Plus Display TI4

2 = Amplifier Audio to handsets (2)

3 = Amplifier Audio from handsets (3)

12v+ = Amplifier supply (+)

0v- = Amplifier supply (4/)

TR = Connected to TRADES button

TR = Connected to TRADES button

FS = Connected to lock override switch (Option)

FS = Connected to lock override switch (Option)

LCK+ = 12v+ supply to lock release

LCK- = 0v- supply to lock release

1602 panels: Plus Display TI2 (Fail Safe locks)

DM = Connected to door monitor contact

DM = Connected to door monitor contact

AUX+ = 12v+ Auxiliary supply (Maximum 1 Amp)

AUX- = 0v- Auxiliary supply

Note: Use in conjunction with 1001/FDU Fused Distribution Unit. See drawing 1001/FDU

BATT+ = 12v+ standby battery

BATT- = 0v- standby battery

RESET = 1602 panels Only: Display TI3

SEE WIRING SCHEMATICS 500-076/076a and 500-080/080a Section 7

2.3 CONNECTION DETAIL CONTINUED ..

TB 1-8 = Handset connections (On 1600)
V+ = 12V Supply to handset
2 = Audio to handset
3 = Audio from handset
CT = Call tone
P1 = Lock release
DM = Door monitor
0v = 0v supply to handset. (COMMON).

ADDITIONAL DISTRIBUTION CARD:

1: Connected to CALL button (Dwelling Wired to Output 1)
2: Connected to CALL button (Dwelling Wired to Output 2)
3: Connected to CALL button (Dwelling Wired to Output 3)
4: Connected to CALL button (Dwelling Wired to Output 4)

3: SYSTEM TEST Single and Two entrance Systems

IF AT ANY STAGE YOU ARE UNCERTAIN SEEK HELP AND ADVICE.

Ensure 1600 controller lock links are set as VF & FC when using a 2 Door Switcher. See Section 4 for connections.

3.1 TEST AND COMMISSION

Testing of the system can be made when all connections have been made and checked.

DISCONNECT THE TWO SETS OF MODULAR CONNECTORS LINKING THE POWER SUPPLY AND THE CONTROLLER.

CONNECT THE MAINS AND CHECK THE OUTPUT VOLTAGE OF THE POWER SUPPLY AT THE MODULAR CONNECTORS. THIS SHOULD GIVE A READING OF ≈ 13.4 VOLTS MAXIMUM. THIS MAY BE ADJUSTED IF NECESSARY BY REMOVING THE POWER SUPPLIES COVER AND ADJUSTING 'VR1' ON PSU BOARD; REFIT COVER.

CAUTION DO NOT EXCEED MAXIMUM 1600 RATED INPUT VOLTAGE.

DISCONNECT THE MAINS AND RECONNECT THE DC MODULAR CONNECTORS.

Set lock type links on main PCB for DC fail open, fail secure or voltage free depending on lock/system used.

See Section 3.3 for lock type link settings. (Page 9)

3.1 TEST AND COMMISSION CONTINUED ..

Turn ON the mains to the unit and check the output voltage at the auxiliary terminals. **This should be about 12.4 volts + 0.5 Volts depending on load.**

If the voltage is less than 12 Volts turn mains off immediately and check connections.

Set trades to ON (using override button) and check trades button and lock release functions. *On 1602 systems ensure the display shows 'Door Open'*. Lock release time may be adjusted using VR3 on main PCB. Turn trades clock OFF (using override button) and re-check trades does not work.

Using a dwelling in the middle of the system (*preferred*) or test handset check call tone audio and lock release.

Turn VR1 fully anti-clockwise.

Call handset and turn VR1 clockwise until LD2 (just above trades battery) lights up and call tone stops. Back off VR1 (anti-clockwise) to extinguish LD2: approximately one eighth turn. Call handset again - *On 1602 systems ensure the display shows 'Flat Calling'*; on lifting the handset LD2 should illuminate - *On 1602 systems ensure the display shows 'Call Answered'*. Check audio and test lock release button and door open LED (if fitted).

Repeat above as necessary.

Audio volume may be adjusted at the amplifier if required.

Due to the privacy functions of the 1600 series it is only possible to call one dwelling during the call/talk time. The time period must reset before further calls can be made.

Call time may be adjusted using VR4 and Talk time may be adjusted using VR2 on the main controller.

Test all dwelling handsets for correct operation use the above procedure. (I.e. Call handset, check Audio and Lock).

When all handsets and lock release have been tested re-check the voltage at the auxiliary terminals; 12.4 volts. Connect the standby battery (optional) and set the trades clock time and open periods. See section 3.8 for setting.

Two Door Systems

Check Busy LED or 'System Busy' (1602) message is displayed on opposite entrance when a call is made.

Check door open LED (if fitted) or 'Door Open' (1602) message on display when door is opened/unlocked.

3.2 ANNUNCIATION TONES

To change the audible tone for lock release, call tone Etc. adjust the jump links as follows:

J P	1	Lock tone high
J P	2	Lock tone low
J P	3	Call tone high
J P	4	Call tone low

3.3 LOCK RELEASE

ENSURE THAT ALL LOCK RELEASES ARE BONDED TO EARTH

To change lock release output to operate with various locks releases, adjust the jump links as follows:

1602 SYSTEMS WITH DISPLAY ONLY TO BE USED WITH FAIL OPEN LOCKS

12V	DC	Release Fail Secure	Place link on DC & DC Place link on FC
12V	DC	Release Fail Open	Place link on DC & DC Place link on FO
Voltage Free			Place link on VF (downwards)
		Fail Close (secure)	Place link on FC
		Fail Open	Place link on FO

Note: IF TWO DOOR CONTROLLER IS FITTED THE 1600 LOCK TYPE LINKS MUST BE SET TO: VF & FC.

Note: A 2 amp diode (minimum) must be fitted across ALL lock release, see drawing 500-076(a) and 500-080(a) for 2 Door Controller.

3.4 REMOTE ADDITIONAL - AUTO ISOLATION CARDS

The Auto isolation cards are supplied in the following format:

A4	-	4 Dwellings
A3	-	3 Dwellings
A2	-	2 Dwellings
A1	-	1 Dwelling

When ordering a 1600 series system, please specify the location and number of dwellings installed remote from the 1600/AF/BSU.

The input and output from the first and last card will be supplied with a female plug strip terminal block to enable termination of commons

3.5 COLOUR CODES

See Job schematics for cable requirements. *If uncertain please ask.*

Controller to Handset

		2404 (OKAY) Type Handset.						
Colour.	E	N	NI	ND	NID	NIT	NIDT	
V+	Brown/White		+	+	+	+	+	
3	White/Blue	3	3	3	3	3	3	
2	Blue/White	2	2	2	2	2	2	
CT	Orange/White	S	SI	SI	SI	SI	SI	
LK	White/Brown	P1	P1	P1	P1	P1	P1	
DM	White/Green				DM	DM	DM	
0V	Green/White	4	4	4	4	4	4	

NOTE: FOR AUDIO HANDSETS SEE WIRING SCHEMATIC 500-081
FOR VIDEO HANDSET SEE WIRING SCHEMATIC 500-083
(Section 7).

ENSURE THAT ALL UNUSED CORES ARE BONDED TO EARTH

Entrance Panel to PSU

Panel	Controller/ 2 Door Controller	Colour
Buttons common	COMM	Blue/Red Pair
Amp 2	2	Blue/White
Amp 3	3	White/Blue
Amp +	12V+/A+	Orange/White Pair
Amp 4	0V-/A-	Green/White Pair
Trades Button	TR	Brown/White
Trades Button	TR	White/Brown
Lock override sw.	FS/IP+	Slate/White
Lock override sw.	FS/IP-	White/Slate
Lock release +ve	LCK+	Red 1.5mm single
Lock release -ve	LCK-	Black 1.5mm single
Door switch	DM	Orange/Red
Door switch	DM	Red/Orange

2 Door - No Display (1600)

B+ Busy LED +ve	/B+	Brown/Red
B- Busy LED -ve or TR1	/B-	Red/Brown
DO+ Door open LED +ve	/DO*	Slate/Red
DO- Door open LED -ve	/0V	Red/Slate

1602 - With Display (Single and /Two Door)

Display TI1	12V+/B-	Red/Brown
Display TI2	LCK-	Red/Slate
Display TI3	RESET	Green/Red
Display TI4	Pre wired to button	COMM in entrance panel

3.5 COLOUR CODES CONTINUED ..

If wiring a 2 door controller, repeat above for second entrance. (* DO1 or DO2 depending on Entrance).

SEE WIRING SCHEMATICS 500-076/076a and 500-080/080a Section 7

Entrance panel to dwellings (call lines).

Dwelling 1	Blue/black	
Dwelling 2	Black/blue	
Dwelling 3	Orange/Black	Continue standard colour
Dwelling 4	Black/Orange	code for remaining
Dwelling 5	Green/Black	dwellings.
Dwelling 6	Black/Green	Note: A larger cable
Dwelling 7	Brown/Black	will be required
Dwelling 8	Black/Brown	

Entrance panel to lock release.

Lock +ve	Orange/white pair or RED 1.5mm single.
Lock -ve	Blue/white pair or BLACK 1.5mm single.
Door monitor	Green/white pair

3.6 COLOUR CODES TO REMOTE A1 - A4 CARDS

(left to right)

Functions

1	Not used	
2	Reset *	Green/White
3	2 audio	Blue/white
4	Call tone	orange/white
5	Set Line	White/brown
6	Lock release	white/brown
7	Door monitoring	White/green
8	OV DC *	White/green
9	3 Audio	White/Blue
10	12V + DC	Brown/White

Call wires for each dwelling to be as from entrance panel to 1600/AF/BSU.

* These connections must be the same twisted pair.

3.7 SERVICE/COMMISSIONING NOTES - TESTING OF HANDSET

When installing a new system or a service replacement, test all controller and A2 - A4 dwelling outputs by linking from common to call input numbers 1-8 on controller or 1-4 on distribution board. This will cause the handset/test phone to call and a lock and audio test should be carried out. **ALSO TEST FROM ENTRANCES.**

3.8 TIMECLOCK SETTING

Features

112 memory locations

8 ON and 8 OFF different switching commands available each day (up to 56 ON/OFF switchings per week).

Self cancelling ON and OFF override.

Day and Time omit capability.

Shortest switching interval 1 minute.

Programming

Five setting buttons are provided; the Set button is used to sequence the module in programming mode. The Day, Hrs and Mins buttons are used to set the days, hours and minutes required.

ON/OFF programmes can also be overridden till the third subsequent programme change by using the O'ride button.

To prepare the module for programming clear the memory by pressing both the Set and Day buttons simultaneously until the display disappears. On releasing the buttons the display will show 0:00 INT with the colon flashing.

Setting the Clock Time

To set the clock time press the Set button briefly and release, the display shows 0:00 INT with "C" flashing at the right of the display. Press the Day button until the black dot indicates the desired day of the week (1-7). If in doubt use day 1 as Monday.

Use the Hrs button to set the hours followed by the Mins button to set the minutes to the actual clock time. Rapid selection can be achieved by continuously holding down either the Hrs or Mins buttons.

If the Set button is now pressed briefly and then released, the display will return to the correct time of day with the colon flashing. The module is now in its operating condition and will switch "ON" and "OFF" according to the programmes set. To alter the clock setting subsequently there is no need to clear the memory first.

NB: Pauses of 15 seconds or more during the clock setting will result in automatic return to the operating condition.

Important: After setting a clock time that falls within a programmed "ON" period, the unit will not switch "ON".

An "ON" time only (leaving the "OFF" time blank i.e. --:--
-) can be programmed for just after the current clock
time on the current day and the unit will turn "ON" when
the clock time equals the programmed "ON" time and behave
to programme subsequently. There is no need to remove
this "ON" programme after start up.

Planning the Programmes

A programme is a pair of ON/OFF settings that will
dictate when the appliance will switch "ON" and "OFF".
Programmes can be set before or after setting the clock
time.

Programmes can be carried over midnight by programming
the required "ON" time and then an "OFF" at 0:00 for the
first day, followed by an "ON" at 0:00 and the required
"OFF" time for the second day.

Setting Programme 1

Press the Set button and hold it down for about 3 seconds
until the display shows --:-- on with a flashing "1"
(indicating programme 1) appearing underneath the "ON"
indicator and the day indicator will point to day 1.

To programme the first ON/OFF times for day 1 set the
"ON" time required by pressing the Hrs and Mins buttons
separately until the desired time is displayed. Press
the Set button briefly and the display shows --:-- on and
the programme 2 "ON" time can now be entered as for
programme 1.

NB: Pauses of 15 seconds or more during programming will
result in automatic return to the operating condition.

Programming the module for day 1 should continue in this
way up to programming eight is so desired.

NOTE: It is not necessary to enter all eight programmes
available to you on this day, those not required should
be left blank (-- :--). You can also day omit by not
programming any ON/OFF times on the day you require no
switchings.

Setting Programmes - Day 2, 3 etc.

If the display still shows a day 1 "ON" or "OFF"
programme press the Day button and the day indicator will
move above day 2. If, instead, the display shows the
clock time with the colon flashing press the Set button
and hold down for about 3 seconds until the display shows
the first programme "ON" time for day 1. Press the Day
button again briefly and the day indicator will move

above day 2. In either case the display will change to --:-- on with a flashing 1 (indicating programme 1 on day 2) appearing underneath the "ON" indicator.

The required programmes can now be set for day 2 in the same way as for day 1. Days 3 to 7 can be programmed in the same way as for days 1 and 2.

Once the programming is complete press the Set button and hold down for about 3 seconds until the display returns to the correct time of day with the colon flashing. The module is now in its operating condition.

Suspending Programmes

Press and hold down the Set button for about 3 seconds until the first "ON" programme, day 1 is displayed. Press the Day button repeatedly until the day indicator points to the day on which you wish to suspend the ON/OFF time. Press the Set button repeatedly until the "ON" or "OFF" time of the programme you wish to suspend is displayed.

Now press the O'ride button. A black "X" will appear indicating that both the "ON" and "OFF" times for this programme have been suspended until reinstatement by the user. There is no limit to the number of programmes you can suspend.

To reinstate a suspended programme return to either the "ON" or "OFF" time of the programme which has been suspended and cancel the black "X" by pressing the O'ride button. The ON/OFF programme will now operate on the selected day.

Reviewing the Programmes

Press and hold down the Set button for about 3 seconds until the first programme "ON" time for day 1 is displayed. Press the Day button repeatedly until the day indicator points to the day to be reviewed after which repeated brief pressing of the Set button will display each programme or unused setting in sequence for that day. At any point the setting may be altered, if required, by use of the hour and minute buttons. To review another day press the Day button until the day indicator points to the required day and use the Set button to select programme times as before.

4: TWO DOOR CONTROLLER

4.1 CONNECTION DETAILS

Note: See Section 2 for Single Door Controller Connections.

SAFETY CAUTION

ENSURE THE 240V MAINS IS OFF AND ISOLATED BEFORE PROCEEDING.

TAKE EXTRA CARE WHEN ADJUSTING VOLTAGES.

The connection from the mains to the power supply is made using the plug provided.

ENSURE THAT ALL EARTH BONDING IS MADE TO THIS UNIT.

DO NOT SWITCH THE MAINS ON UNTIL ALL CONNECTIONS ARE MADE.

POWER SUPPLY:

Connection from power supply to the controller is made via push together modular connectors. (On RED (+VE) and BLACK (-VE) wires.

1600 CONTROLLER:

PL1 = Connections to additional distribution card via cable assembly. (Optional).

PL2 = Dwelling call lines.

1 : Connect to CALL button in entrance panel, first dwelling.

2 : Connect to Call button in entrance panel, second dwelling.

Continue for remaining dwellings up to 8.

PL3 = Link via cable to Two Door Controller board **PL1** (1600SW2D) and battery backup.

4.1 CONNECTION DETAIL CONTINUED ..

1600SW2D TWO DOOR CONTROLLER: 1600 and 1602 systems

TB2 = Main connections to Entrance panel and Lock.

COMM = Connected to the common of all the call buttons at the entrance panel

2 = Amplifier Audio to handsets (2)

3 = Amplifier Audio from handsets (3)

A+ = Amplifier supply (+)

A- = Amplifier supply (4/)

I/P+ = Lock override +ve input (Option)

I/P- = Lock override -ve input (Option)

TR = Connected to TRADES button

TR = Connected to TRADES button

LCK+ = 12v+ supply to lock release

LCK- = 0v- supply to lock release

1602 panels: Plus Display TI2 (Fail Safe locks)

DM = Connected to door monitor contact

DM = Connected to door monitor contact
(This may be connected to lock release-latch bolt monitoring if fitted)

RESET = 1602 panels Only: Display TI3

B+ = Connect to busy LED +ve (B+)

B- = Connect to busy LED -ve (B-)

1602 Panels: Display TI1

Repeat for second entrance: **TB4**

NOTE: PL3 COMM from 1600 controller connects to Display TI4

TB3 = Connections to Entrance panel

1600 - With No Display

DO1 = Connect to door open LED +ve (D+) Door 1
Optional buzzer

12V = Auxiliary output +ve

0V = Auxiliary output -ve

Note: Use in conjunction with 1001/FDU Fused Distribution Unit. See drawing 1001/FDU

DO2 = Connect to door open LED +ve (D+) Door 2
Optional buzzer

1602 - With Display

Display TI1 B- (As above)

Display TI2 LCK- (As above)

Display TI3 RESET (As above)

Display TI4 Pre wired to button COMM in entrance panel

SEE WIRING SCHEMATIC 500-080 and 500-080a Section 7

4.2 TEST AND COMMISSION

Follow Section 3 for test procedure.

Check audio and test lock release button and door open LED (if fitted) to all dwellings from both Entrances.

4.3 ANNUNCIATION TONES

To change the audible tone for call, adjust the jump links as follows:

J P	1	Not Fitted
J P	2	Not Fitted
J P	3	Call tone high
J P	4	Call tone low

5: SYSTEM CARE

5.1 MAINTENANCE

The 1600 system requires little or no maintenance due to its design, using C.M.O.S. Technology. However, it is recommended that the following check is carried out annually.

BATTERY

Battery should be tested for voltage by removing charger leads and placing meter across + and - Voltage reading must be 12.0 - 13.0 volts. If Battery voltage exceeds or is below these readings. Change battery for new unit.

VOLTAGE OUTPUT

Place meter across aux + and -
Reading must be 12.0 - 13.0 volts. If reading exceeds or is below these perimeters check system completely including wiring and if necessary adjust voltage regulation by turning VR1 in the power supply unit.

5.2 AUXILIARY OUTUT

The Auxiliary output is NOT to be used for the main Lock supply.

The Fused Distribution Unit (1001/FDU) should always be used with this output.

If the +12V fails to the entrance amp and Auxiliary output, but the rest of the board is functional, check for any short circuits or overload to these outputs. These outputs are protected by a resettable fuse; once the short/overload has been removed the supply will return.

6: OPTIONS (INCLUDING ADDITIONAL CABLING REQUIREMENTS)

6.1 1602 DISPLAY

Top line: Block/Building Name up to 20 characters

Bottom line; Operation messages:

Flat Calling
Call Answered
Door Open
System Busy

6.2 VIDEO SYSTEM (1600)

From handset to controller cabinet. (Distribution Amps).	RG59 Coaxial cable.
From controller (amps) cabinet to remote distribution cabinet.	1 x RG59 Coaxial cable.
From entrance panel to controller cabinet. (Amps).	1 x RG59 Coaxial cable.
*From 18 Volt PSU to controller cabinet (Upto 8 dwellings)	2 x 1.5mm Singles
*For each additional 12 dwellings	2 x 1.5mm Singles

NOTE: FOR VIDEO HANDSET WIRING SEE SHEMATIC 500-083 (Section 7).

6.3 ACCESS CONTROL Examples Only - Please call ISM Projects

KERI

Reader to Controller.	1 x Beldon 9536
Locks	2 x 1.5mm Red & Black
Exit Button	1 x 4 Pair 1308 CW
Controller to 1600/FBSU	1 x 4 Pair 1308 CW

KERI Network

From first controller to PC	1 x Beldon 8723
Between controllers.	1 x Beldon 9502 or 8723

PAC

Reader to Controller	6 Core Alarm cable
Locks	2 x 1.5mm Red & Black
Exit Button	1 x 4 Pair 1308 CW
Controller to 1600/FBSU	1 x 4 Pair 1308 CW

For modem connections please call ISM Projects

PAC Network

Between Controllers	6 Core Alarm cable
---------------------	--------------------

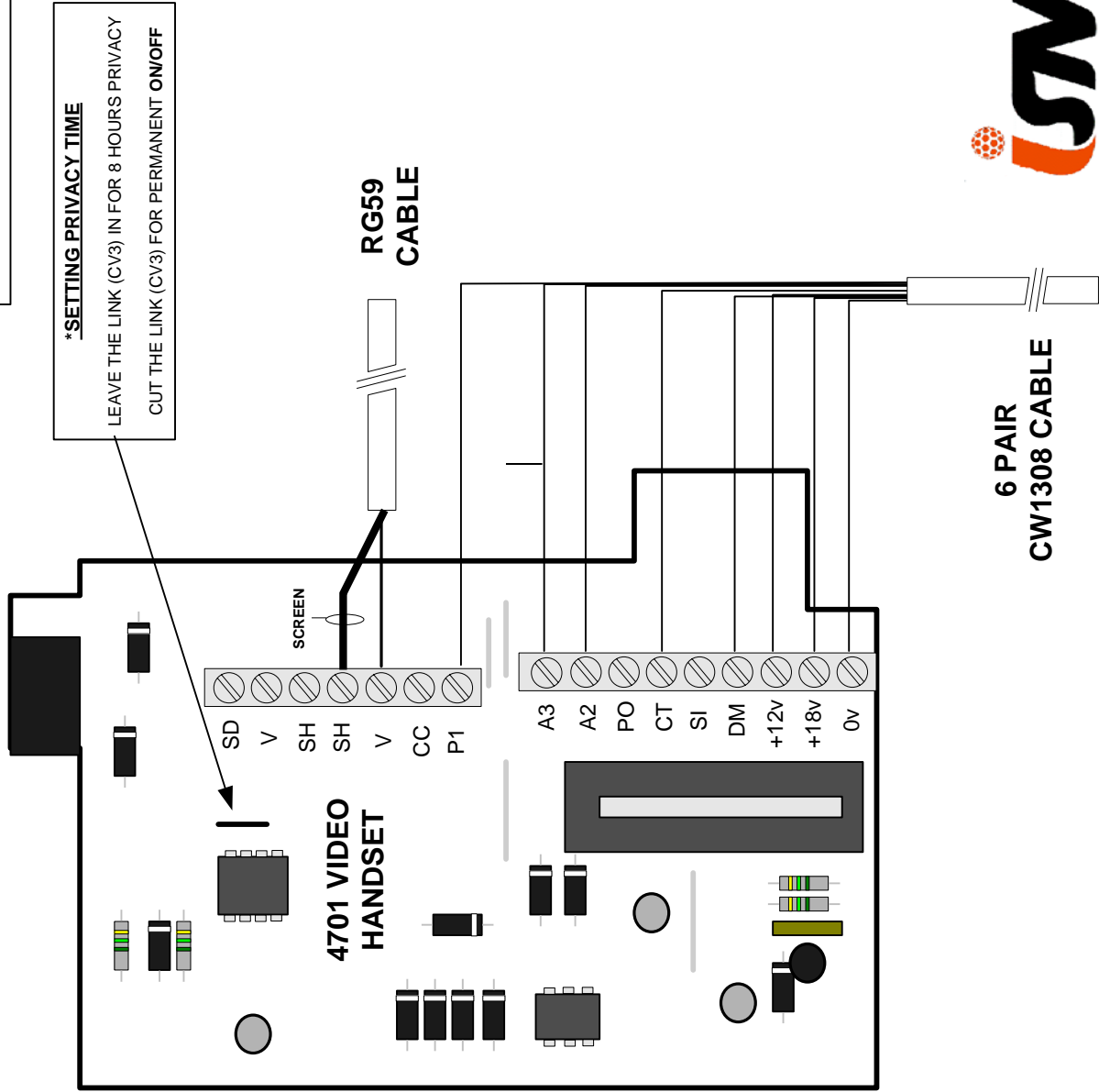
SCHEMATICS

WIRING TERMINATIONS

HANDSET	COLOUR	DECODER
12v+	Brown/White	V+
A2	Blue/White	2
A3	White/Blue	3
CT	Orange/White	CT
P1	White/Brown	LK
DM	White/Green	DM
0v	Green/White	0v
18v+	Red/Blue	18v PSU +
0v	Blue/Red	18v PSU 0v
V	Centre Core	Signal
SH	Shield	Screen

VIDEO HANDSET TERMINAL DETAILS

12v +	12 volt supply to handset
2	Audio line
3	Audio line
CT	Call tone signal
P1	Lock release
DM	Door monitor
0v -	0 volt supply
18v+	18v Video supply
0v-	0 volt for 18v supply
V	Video Signal
SH	Video Screen



ISSUE	DESCRIPTION	DATE
1	VIDEO HANDSET WIRING DIAGRAM	02/98
2	REVISED	

TITLE
1600 SERIES
 TYPE 4701/NIDT
 VIDEO HANDSET

I.S.M Limited
 INTEGRATED SECURITY
 MANUFACTURING LTD
 26/29 THE BELL CENTRE
 NEWTON ROAD, CRAWLEY
 WEST SUSSEX, RH10 2FZ
 PHONE 01293 528990
 FAX 01293 528023

DRAWN BY	CHECKED	APPVD	DATE
TS	TS/SC		07/12/04

Drawing No. 500 083



**6 PAIR
 CW1308 CABLE**

**RG59
 CABLE**

FIGURE 1

5-7mm



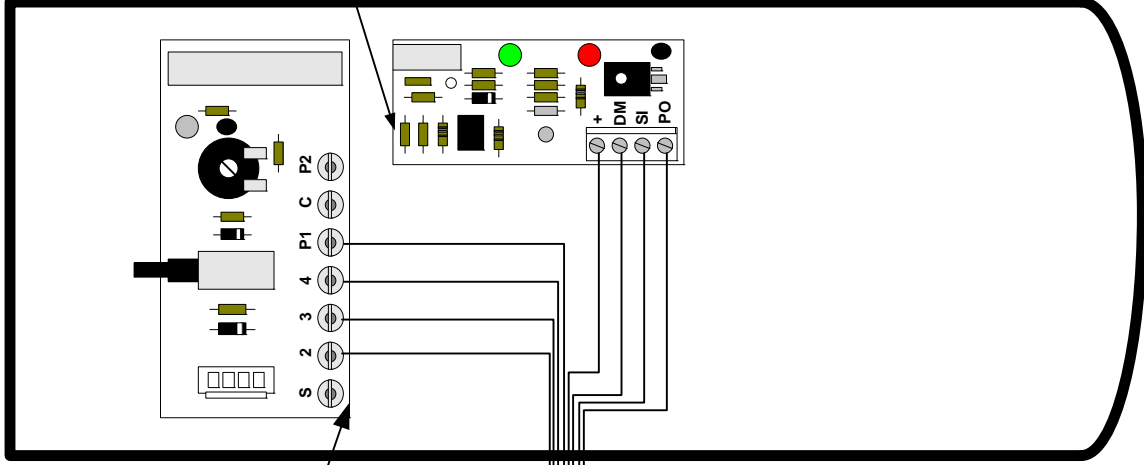
WHEN TERMINATING **DO NOT** EXPOSE THE CORE MORE THAN 5-7mm. CONNECTION MUST BE MADE UNDER THE SCREW AS SHOWN IN FIGURE 1

TERMINATE BETWEEN CRADLE BOARD AND NUT

6 PAIR CW1308 CABLE

CONNECT HANDSET AS BELOW:

COLOUR	HANDSET TERMINAL	DECODER
Brown/White	+	V+
Blue/White	2	2
White/Blue	3	3
Orange/White	S1	CT
White/Brown	P1	LK
White/Green	DM	DM
Green/White	4	0v
Slate/White	PO	NOT WIRED



LINKS FOR SETTING PRIVACY *SEE BELOW

SETTING PRIVACY TIME

LEAVE BOTH LINKS (4 & 8) FOR 12 HOURS PRIVACY

CUT LINK (4) FOR 4 HOURS PRIVACY

CUT LINK (8) FOR 8 HOURS PRIVACY

CUT BOTH LINKS (4 & 8) FOR PERMANENT ON/OFF



ISSUE	DESCRIPTION	DATE
1	HANDSET WIRING DIAGRAM	09/97
2	REVISED	01/98
3	REVISED	12/04

TITLE:
1600 SYSTEM
TYPE 2404NIDT
HANDSET

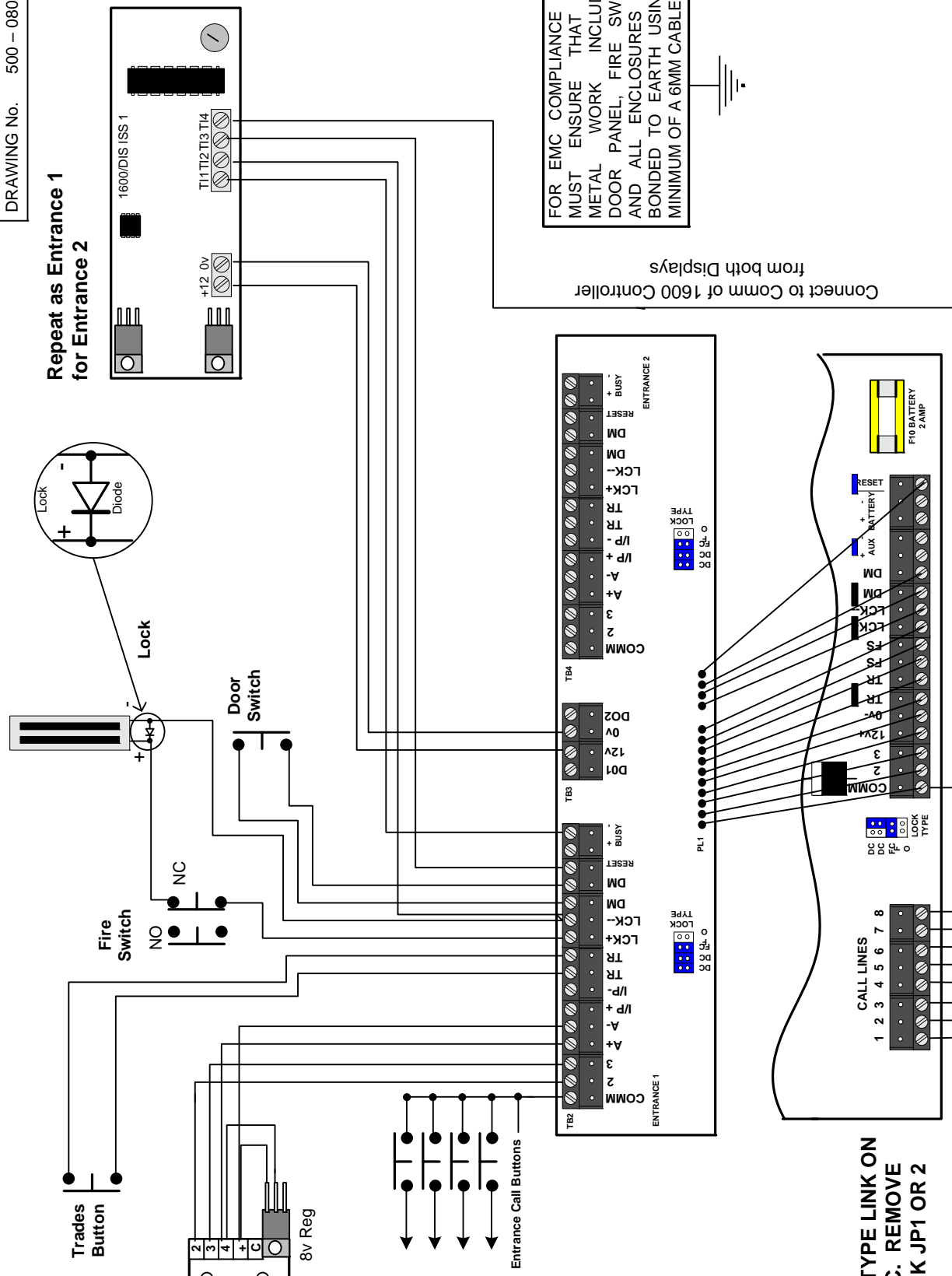
I.S.M Limited
INTERGRATED SECURITY
MANUFACTURING LTD
26/29 THE BELL CENTRE
NEWTON ROAD, CRAWLEY
WEST SUSSEX, RH10 2FZ
PHONE 01293 529990
FAX 01293 528023

DRAWN BY	CHECKED	APPVD	DATE
TS	RH/SC		07/12/04

Drawing No. 500-081



Repeat as Entrance 1
for Entrance 2



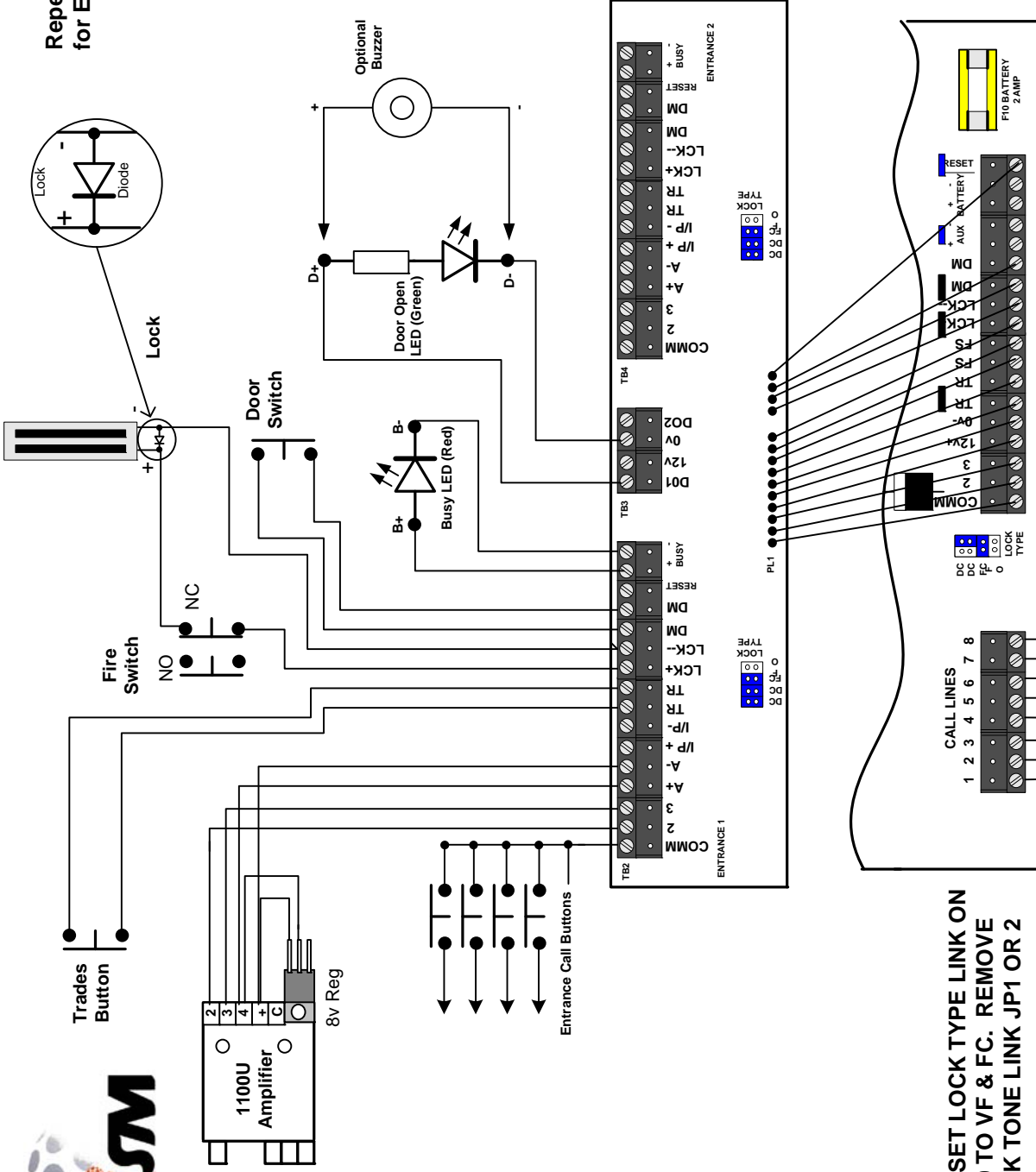
NOTE: SET LOCK TYPE LINK ON 1600 TO VF & FC. REMOVE LOCK TONE LINK JP1 OR 2

FOR EMC COMPLIANCE YOU MUST ENSURE THAT ALL METAL WORK INCLUDING DOOR PANEL, FIRE SWITCH AND ALL ENCLOSURES ARE BONDED TO EARTH USING A MINIMUM OF A 6MM CABLE.

Connect to Comm of 1600 Controller from both Displays

ISSUE	DESCRIPTION	DATE	TITLE	I.S.M Limited		
1	ORIGINAL	08/97	1600 Series Functional 2 Door Controller with Display	INTERGRATED SECURITY MANUFACTURING LTD 26/29 THE BELL CENTRE NEWTON ROAD, CRAWLEY WEST SUSSEX, RH10 2FZ PHONE 01293 529990 FAX 01293 528023		
2	DISPLAY ADDED	25/04/03		DRAWN BY	CHECKED	APPVD
3	COMM WIRE MOD	26/05/04		MR	SC	
						DATE
						26/05/03
				Drawing No. 500 – 080a		

Repeat as Entrance 1
for Entrance 2



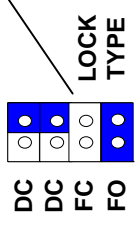
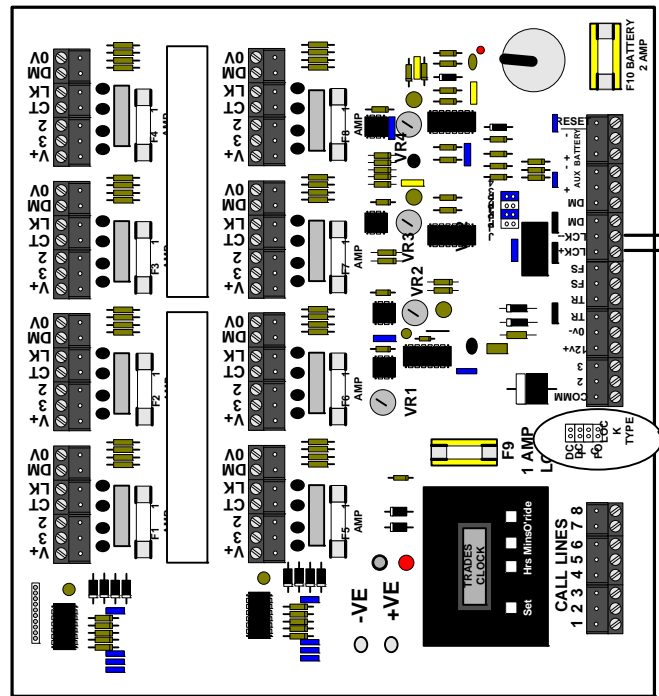
FOR EMC COMPLIANCE YOU MUST ENSURE THAT ALL METAL WORK INCLUDING DOOR PANEL, FIRE SWITCH AND ALL ENCLOSURES ARE BONDED TO EARTH USING A MINIMUM OF A 6MM CABLE.

NOTE: SET LOCK TYPE LINK ON 1600 TO VF & FC. REMOVE LOCK TONE LINK JP1 OR 2

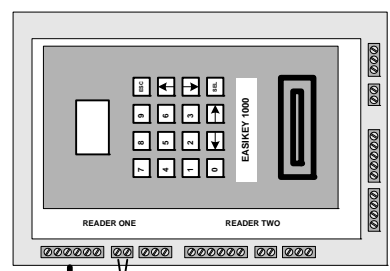
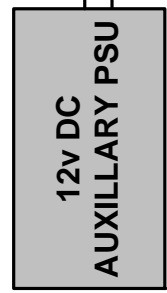
ISSUE	DESCRIPTION	DATE	TITLE	DRAWN BY	CHECKED	APPVD	DATE
1	ORIGINAL	08/97	1600 Series Functional 2 Door Controller	MR	SC		26/05/03
				Drawing No. 500 – 080			

I.S.M Limited
 INTEGRATED SECURITY
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 26/29 THE BELL CENTRE
 NEWTON ROAD, CRAWLEY
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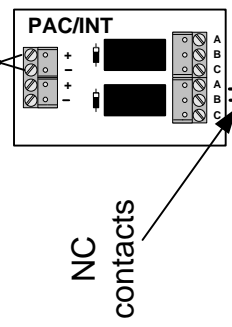




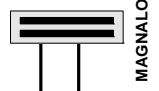
NOTE* LOCK TYPE LINKS MUST BE SET AS ABOVE



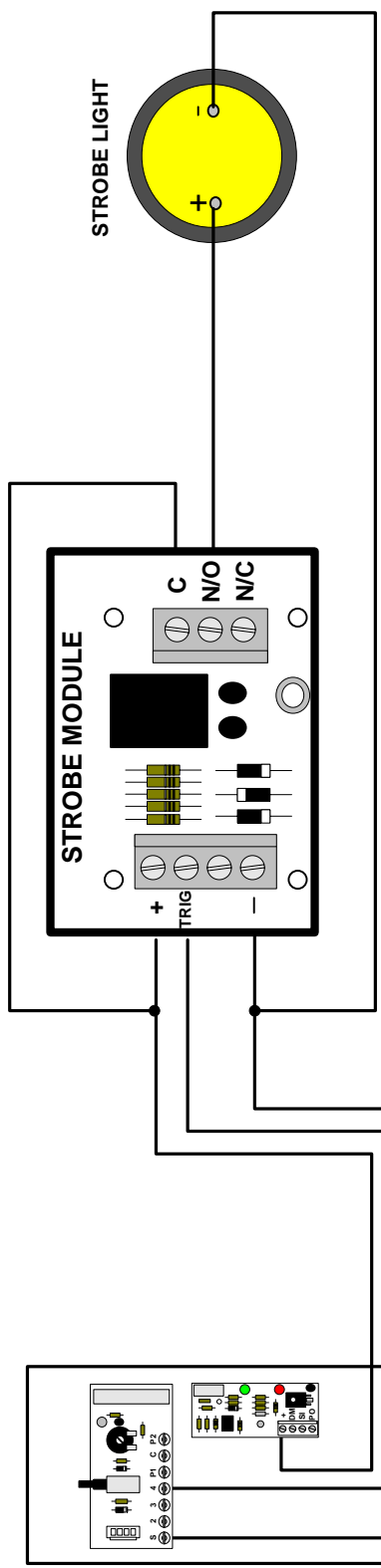
From lock release output, pos to pos, neg to neg.



ENSURE A 2 AMP DIODE IS FITTED ACROSS LOCK TERMINALS

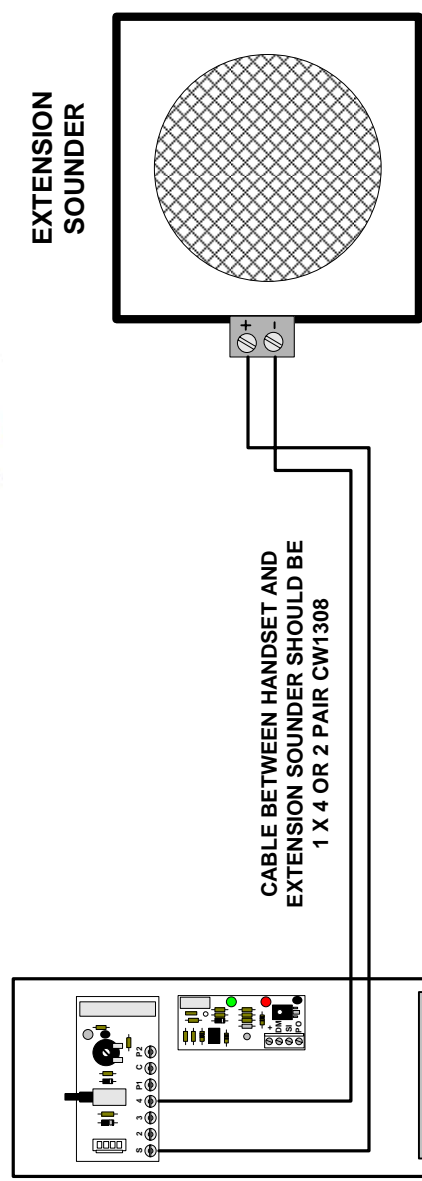


ISSUE	DESCRIPTION	DATE	TITLE	I.S.M Limited INTEGRATED SECURITY MANUFACTURING LTD 26/29 THE BELL CENTRE NEWTON ROAD, CRAWLEY WEST SUSSEX, RH10 2FZ PHONE 01293 529990 FAX 01293 528023		DRAWN BY	CHECKED	APPVD	DATE
1	ORIGINAL	08/97	1600 SERIES EASIKY LOCK WIRING WITH AUXILIARY PSU	DRAWING No. 500-079	TS	SC	SC	07/12/04	
2	REVISED	12/04							



2404 HANDSET TO STROBE LAMP

CABLE BETWEEN HANDSET AND STROBE MODULE SHOULD BE 1 X 4 PAIR CW1308



2404 HANDSET TO EXTENSION SOUNDER

NOT LESS THAN 50 OHMS

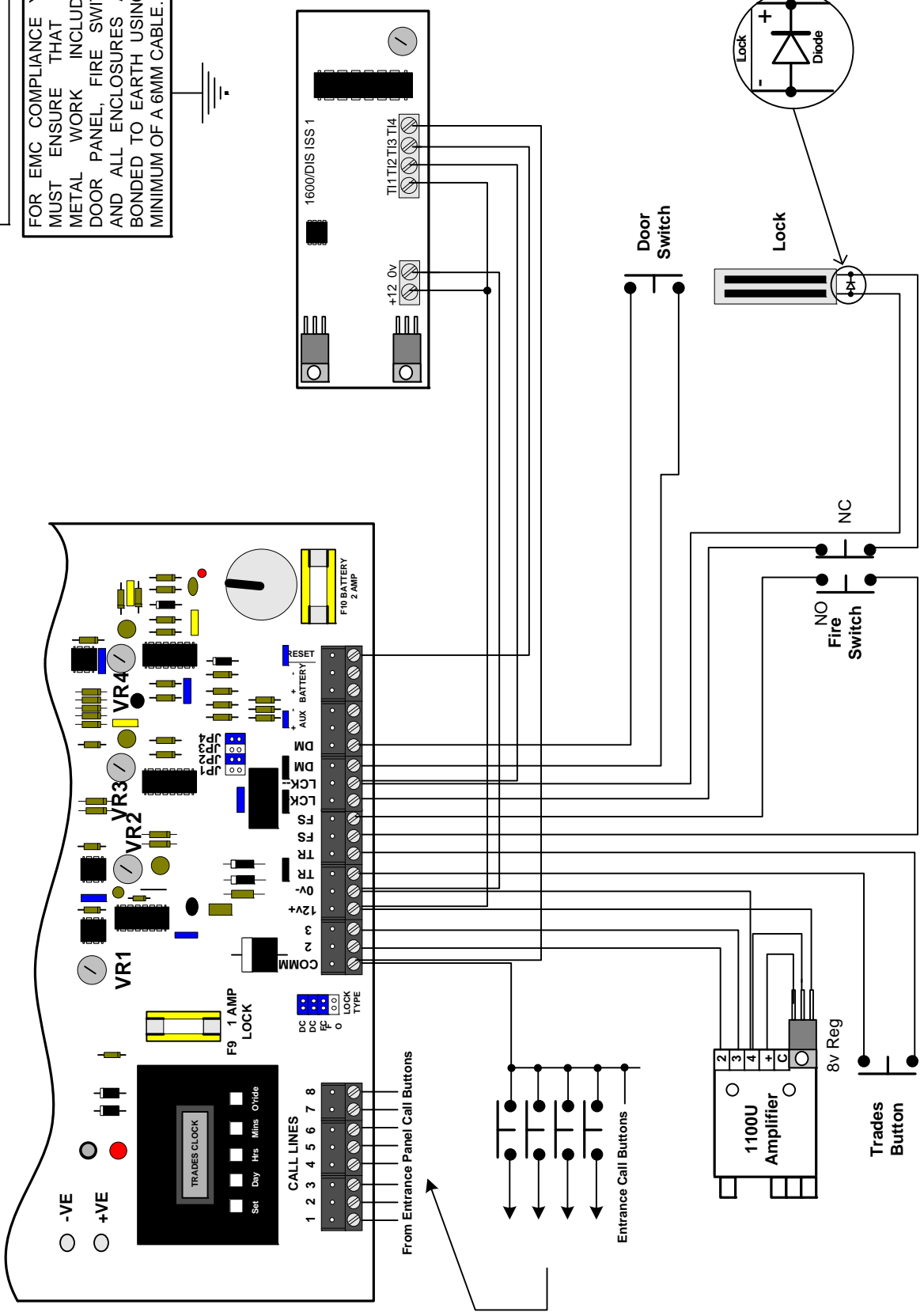
CABLE BETWEEN HANDSET AND EXTENSION SOUNDER SHOULD BE 1 X 4 OR 2 PAIR CW1308

ISSUE	DESCRIPTION	DATE	TITLE	I.S.M Limited INTEGRATED SECURITY MANUFACTURING LTD 26/29 THE BELL CENTRE WEST SUSSEX, RH10 2FZ PHONE 01293 528990 FAX 01293 528023			
1	CABLE SCHEMATIC DRAWING	02/98	1600 SERIES EXTENSION SOUNDER & STROBE LAMP WIRING	DRAWN BY	CHECKED	APPVD	DATE
2	REVISED	06/99		TS	TS/SC	SC	08/12/04
3	REVISED	08/12/04					
				Drawing No. 500-077			



DRAWING No. 500 - 076a

FOR EMC COMPLIANCE YOU MUST ENSURE THAT ALL METAL WORK INCLUDING DOOR PANEL, FIRE SWITCH AND ALL ENCLOSURES ARE BONDED TO EARTH USING A MINIMUM OF A 6MM CABLE.



ISSUE	DESCRIPTION	DATE
1	ORIGINAL	08/97
2	DISPLAY ADDED	20/03/03

TITLE
1600 Series Functional Controller with Display

I.S.M Limited
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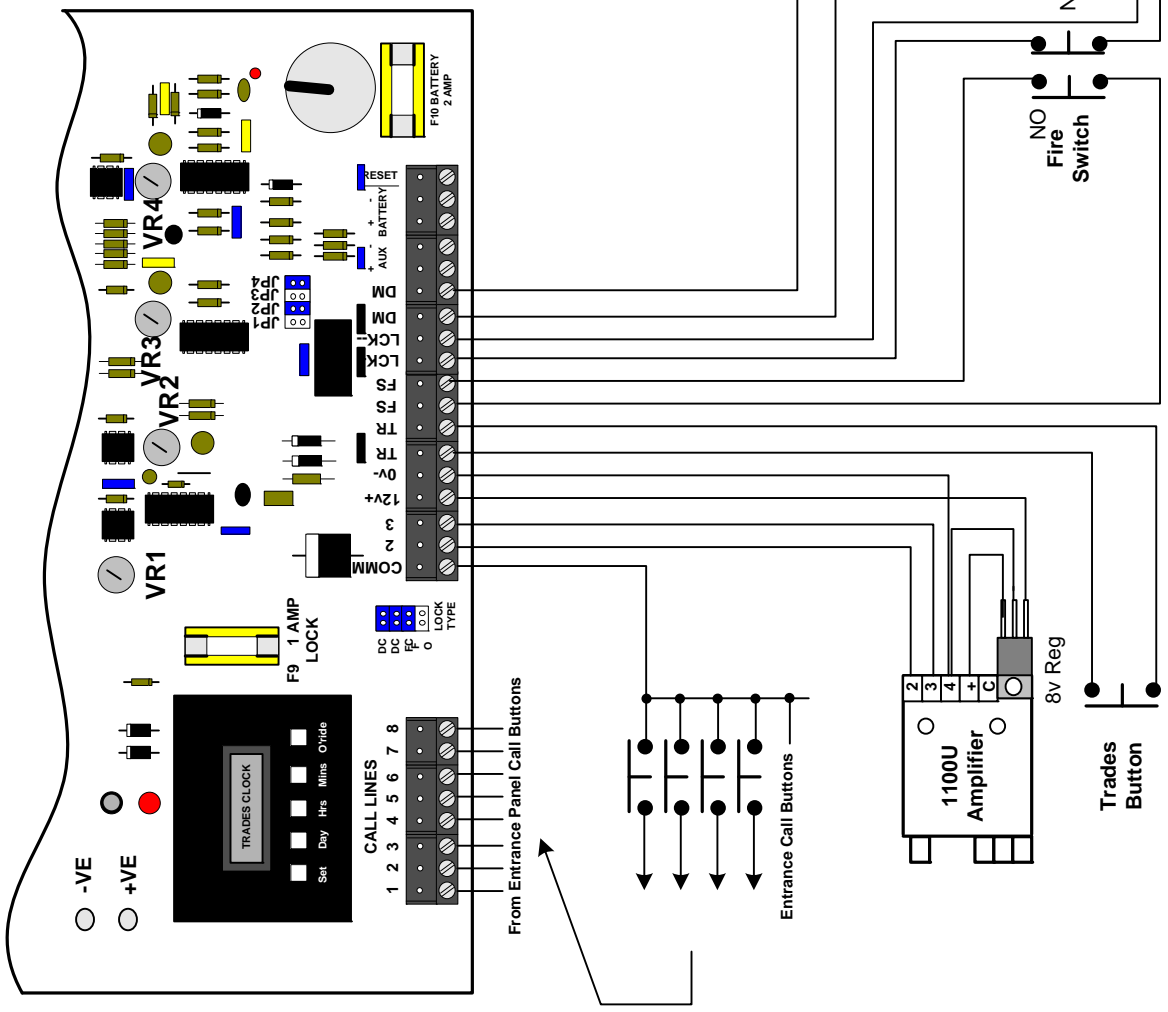
DRAWN BY	CHECKED	APPVD	DATE
MR	SC		20/03/03

Drawing No. 500 - 076a



DRAWING No. 500 - 076

FOR EMC COMPLIANCE YOU MUST ENSURE THAT ALL METAL WORK INCLUDING DOOR PANEL, FIRE SWITCH AND ALL ENCLOSURES ARE BONDED TO EARTH USING A MINIMUM OF A 6MM CABLE.

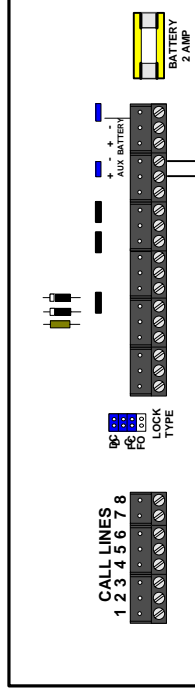


ISSUE	DESCRIPTION	DATE	TITLE	I.S.M Limited INTERGRATED SECURITY MANUFACTURING LTD 26/29 THE BELL CENTRE NEWTON ROAD, CRAWLEY WEST SUSSEX, RH10 2FZ PHONE 01293 529990 FAX 01293 528023		DRAWN BY	CHECKED	APPVD	DATE
1	ORIGINAL	08/97	1600 Series Functional Controller	MR	SC				20/03/03

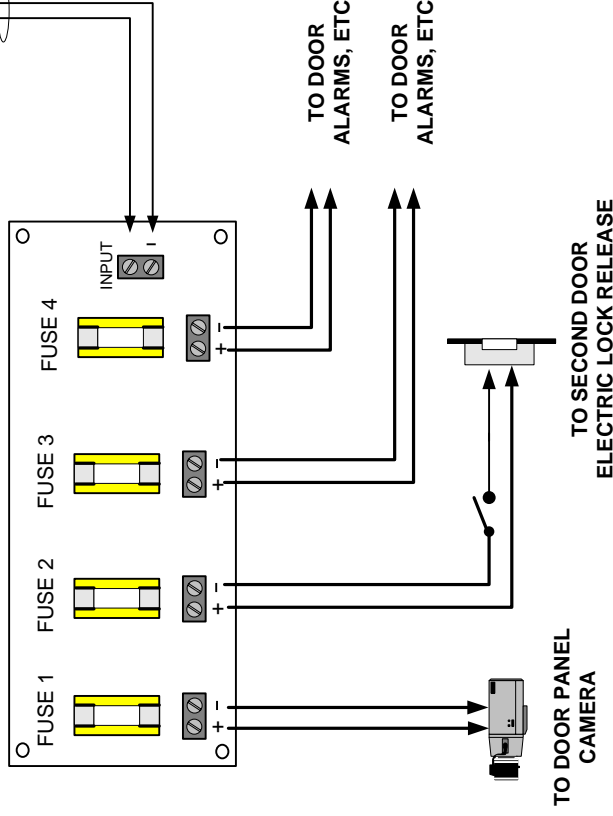
Drawing No. 500 - 076



1600/AF/BSU MOTHERBOARD



AUX OUTPUT OF 1600/AF/BSU MOTHERBOARD



NOTE 1
DO NOT USE ANY OUTPUT WITHOUT FUSE PROTECTION ON REMOTE DEVICES

NOTE 2
WHEN INSTALLING SECOND DOOR* OR AUXILIARY EQUIPMENT SUCH AS VIDEO ENTRANCE CAMERAS, AUTO DOOR TRIGGERS, ETC, YOU MUST USE THIS CARD AS IT OFFERS FUSE PROTECTION FOR EACH DEVICE OUTPUT.

* WHEN A SECOND DOOR IS INSTALLED AND A PAC EASIKEY 1000 CONTROLLER IS CONNECTED, THE FUSE PROTECTION IS WITHIN THE PAC DEVICE.

ALTERNATIVELY, YOU CAN CONNECT THE SUPPLY TO LOCK + AND ANY - OUTPUT ON THE 1600/AF/BSU MOTHERBOARD, SUBJECT TO THE LOAD NOT EXCEEDING 1 AMP.

ISSUE	DESCRIPTION	DATE	TITLE	I.S.M Limited	
1	CIRCUIT DIAGRAM	17/09/03	OPTION CARD FOR 1600/AF/BSU WITH AUXILIARY FUSED OUTPUTS	INTERGRATED SECURITY MANUFACTURING LTD 26/29 THE BELL CENTRE NEWTON ROAD, CRAWLEY WEST SUSSEX, RH10 2FZ PHONE 01293 528990 FAX 01293 528023	
				DRAWN BY TS	DATE 17/09/03
				CHECKED TS/DJ	
				APPVD	
				Drawing No. 1001/FDU	

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