SD-1 Controller

User Manual

Order code: LEDJ462

WARNING

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP!

- Before your initial start-up, please make sure that there is no damage caused during transportation.
- Should there be any damage, consult your dealer and do not use the equipment.
- To maintain the equipment in good working condition and to ensure safe operation, it is necessary for the user to follow the safety instructions and warning notes written in this manual.
- Please note that damages caused by user modifications to this equipment are not subject to warranty.

CAUTION!
KEEP THIS EQUIPMENT AWAY FROM RAIN, MOISTURE AND LIQUIDS

CAUTION!
TAKE CARE USING THIS EQUIPMENT!
HIGH VOLTAGE-RISK OF ELECTRIC SHOCK!!

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorised modification to the equipment.

- Never let the power cable come into contact with other cables. Handle the power cable and all mains voltage connections with particular caution!
- Never remove warning or informative labels from the unit.
- Do not open the equipment and do not modify the unit.
- Do not connect this equipment to a dimmer pack.
- Do not switch the equipment on and off in short intervals, as this will reduce the system's life.
- Only use the equipment indoors.
- Do not expose to flammable sources, liquids or gases.
- Always disconnect the power from the mains when equipment is not in use or before cleaning! Only handle the power-cable by the plug. Never pull out the plug by pulling the power-cable.
- Make sure that the available mains supply voltage is between 100~240V AC, 50/60Hz.
- Make sure that the power cable is never crimped or damaged. Check the equipment and the power cable periodically.
- If the equipment is dropped or damaged, disconnect the mains power supply immediately and have a qualified engineer inspect the equipment before operating again.
- If the equipment has been exposed to drastic temperature fluctuation (e.g. after transportation), do not connect power or switch it on immediately. The arising condensation might damage the equipment. Leave the equipment switched off until it has reached room temperature.
- If your product fails to function correctly, stop use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Pro Light dealer for service.
- Only use fuses of same type and rating.
- Repairs, servicing and power connection must only be carried out by a qualified technician. THIS UNIT CONTAINS NO USER SERVICEABLE PARTS.
- This fixture is for professional use only - it is not designed for or suitable for household use. The product must be installed by a qualified technician in accordance with local territory regulations. The safety of the installation is the responsibility of the installer. The fixture presents risks of severe injury or death due to fire hazards, electric shock and falls.
- WARRANTY: One year from date of purchase.

OPERATING DETERMINATIONS

If this equipment is operated in any other way, than those described in this manual, the product may suffer damage and the warranty becomes void. Incorrect operation may lead to danger e.g: short-circuit, burns and electric shocks etc.

Do not endanger your own safety and the safety of others!

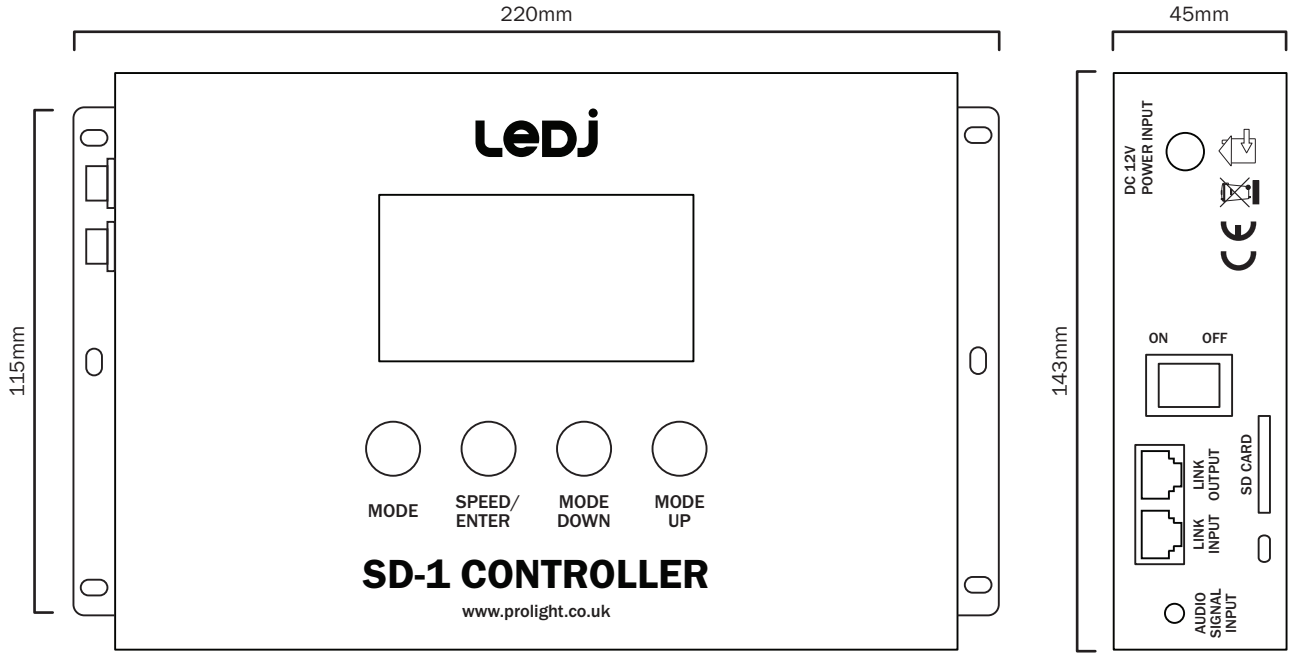
Incorrect installation or use can cause serious damage to people and/or property.

SD-1 Controller

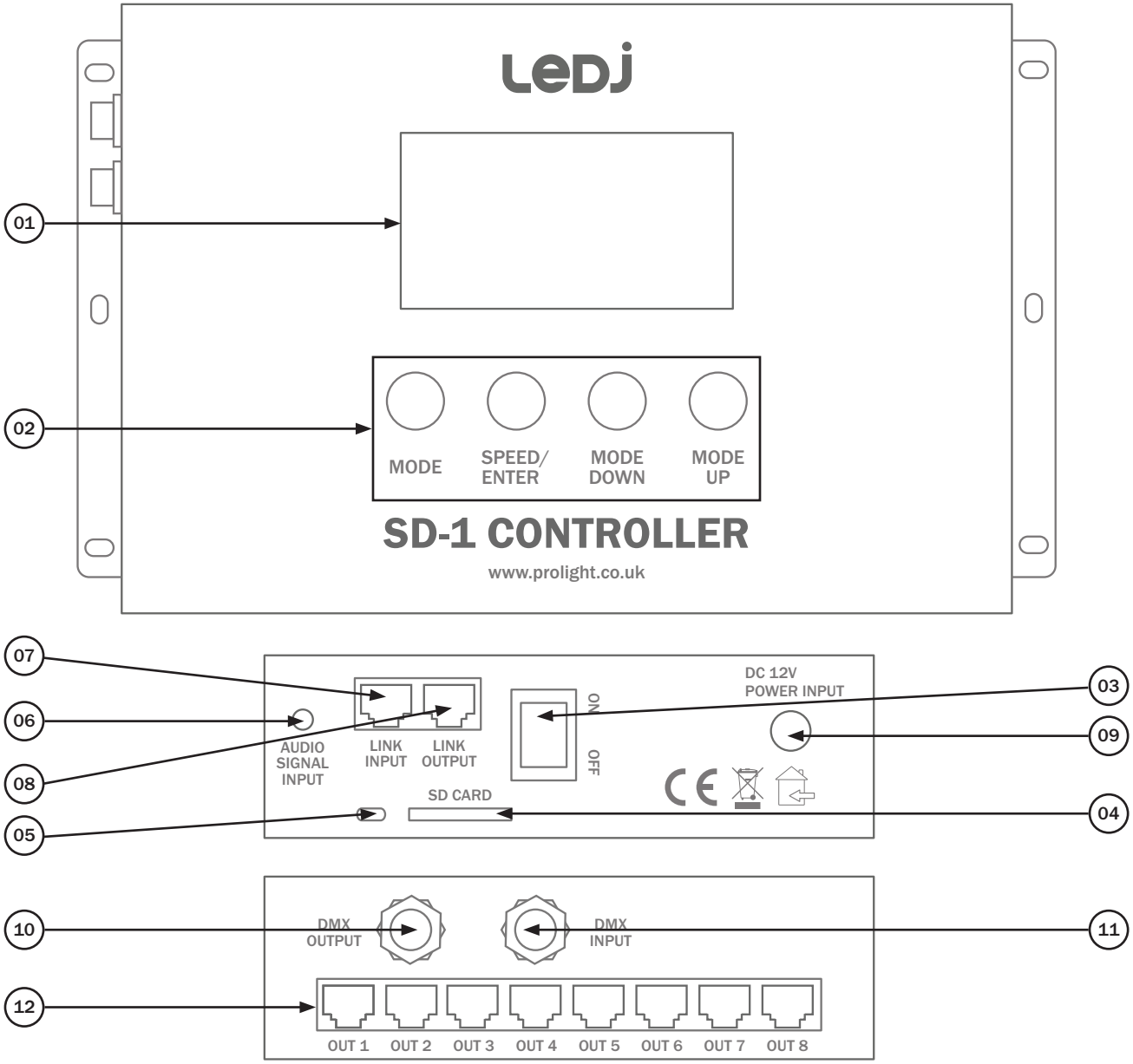
The SD-1 is a dedicated controller for the Display Panel, Display Qube and Display Floor fixtures. Features include 82 programs with auto run and 18 speed settings, master/slave mode for multiple fixture linking, sound active with sensitivity adjustment, brightness and DMX modes.

- DMX channels: 12
- Sound active and master/slave modes plus built-in programs
- 4 push button menu with LCD display
- DC 12V power input
- 3-Pin XLR input/output trailing sockets
- RJ45 Link input/output
- 8 RJ45 zone outputs
- 3.5mm audio source input jack
- Wireless remote included

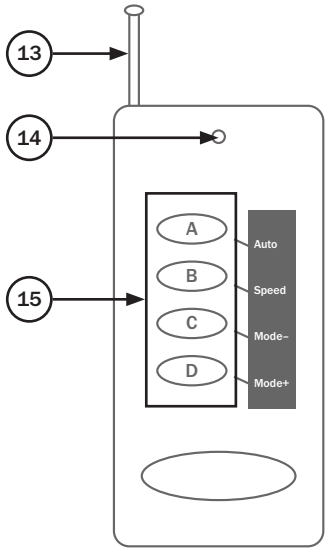
Specifications	SD-1 Controller
Power consumption	10W
Power supply	DC 12V
Dimensions	45 x 220 x 143mm (controller) 103 x 38 x 12mm (remote)
Weight	1kg (controller) 0.1kg (remote)
Order code	LEDJ462



Attention: SD-1 Controller (Order code: LEDJ462) and Display Series fixture **CANNOT** be switched on at the same time, as this will damage the files on the SD card.



01 - LCD display
02 - Function buttons
03 - On/off power switch
04 - SD card slot
05 - Antenna (for wireless remote)
06 - 3.5mm audio signal input
07 - RJ45 link input
08 - RJ45 link output
09 - DC 12V power input
10 - 3-Pin DMX output
11 - 3-Pin DMX input
12 - RJ45 zone outputs (1-8)
13 - Wireless remote antenna
14 - Wireless remote transmitting signal LED
15 - Wireless remote function buttons



In the box: **1 x controller, 1 x power supply, 1 x wireless remote, 1 x RJ45 link cable 1 x SD card & 1 x user manual**

DMX mode:

Operating in a DMX control mode environment gives the user the greatest flexibility when it comes to customising or creating a show. In this mode you will be able to control each individual trait of the fixture and each fixture independently.

When a DMX signal is introduced, the controller will automatically enter its DMX mode at the DMX address preset in the menu.

To change the DMX address, press the "**MODE**" button until the sub menu appears. Use the "**MODE UP**" and "**MODE DOWN**" buttons until "**DMX ADDR**" is selected. Press the "**SPEED/ENTER**" button and use the "**MODE UP**" and "**MODE DOWN**" to set the DMX address between "**001-506**". Press the "**SPEED/ENTER**" button once to save the chosen DMX address. To exit the "**DMX ADDR**" menu press the "**MODE**" button once. To exit the full sub menu press and hold the "**MODE**" button until the controller returns to its home menu.

12 channel mode:

Channel	Value	Function
1	000-042	Sound sensitivity 1 (low)
	043-085	Sound sensitivity 2
	086-128	Sound sensitivity 3
	129-171	Sound sensitivity 4
	172-214	Sound sensitivity 5
	215-255	Sound sensitivity 6 (high)
2	000-042	100% brightness
	043-085	50% brightness
	086-128	25% brightness
	129-171	12.5% brightness
	172-214	6.25% brightness
	215-255	3.125% brightness
3	000-085	Built-in programs
	086-170	Built-in programs (via built-in mic)
	171-255	Built-in programs (via audio signal input)
4	000-041	Speed 3 (fastest)
	042-055	Speed 4
	056-069	Speed 5
	070-083	Speed 6
	084-097	Speed 7
	098-111	Speed 8
	112-125	Speed 9
	126-139	Speed 10
	140-153	Speed 11
	154-167	Speed 12
4 cont.	168-181	Speed 13
	182-195	Speed 14
	196-209	Speed 15
	210-223	Speed 16
	224-237	Speed 17
	238-255	Speed 18 (slowest)
5	000-255	No function
6	000-128	Blackout
	129-255	LEDs on
7	000-126	No function
	127-255	Auto mode
8	000-012	No function
	013-024	Built-in program 1
	025-036	Built-in program 2
	037-048	Built-in program 3
	049-060	Built-in program 4
	061-072	Built-in program 5
	073-084	Built-in program 6
	085-096	Built-in program 7
	097-108	Built-in program 8
	109-120	Built-in program 9
	121-132	Built-in program 10
	133-144	Built-in program 11
	145-156	Built-in program 12
	157-168	Built-in program 13
	169-180	Built-in program 14
	181-192	Built-in program 15

12 channel mode:

Channel	Value	Function
8 cont.	193-204	Built-in program 16
	205-216	Built-in program 17
	217-228	Built-in program 18
	229-255	Built-in program 19
9	000-012	No function
	013-024	Built-in program 20
	025-036	Built-in program 21
	037-048	Built-in program 22
	049-060	Built-in program 23
	061-072	Built-in program 24
	073-084	Built-in program 25
	085-096	Built-in program 26
	097-108	Built-in program 27
	109-120	Built-in program 28
	121-132	Built-in program 29
	133-144	Built-in program 30
	145-156	Built-in program 31
	157-168	Built-in program 32
	169-180	Built-in program 33
	181-192	Built-in program 34
	193-204	Built-in program 35
	205-216	Built-in program 36
	217-228	Built-in program 37
	229-240	Built-in program 38
	241-255	Built-in program 39
10	000-012	No function
	013-024	Built-in program 40
	025-036	Built-in program 41
	037-048	Built-in program 42
	049-060	Built-in program 43
	061-072	Built-in program 44
	073-084	Built-in program 45
	085-096	Built-in program 46
	097-108	Built-in program 47
	109-120	Built-in program 48
	121-132	Built-in program 49
	133-144	Built-in program 50
10 cont.	145-156	Built-in program 51
	157-168	Built-in program 52
	169-180	Built-in program 53
	181-192	Built-in program 54
	193-204	Built-in program 55
	205-216	Built-in program 56
	217-228	Built-in program 57
	229-240	Built-in program 58
	241-255	Built-in program 59
11	000-012	No function
	013-024	Built-in program 60
	025-036	Built-in program 61
	037-048	Built-in program 62
	049-060	Built-in program 63
	061-072	Built-in program 64
	073-084	Built-in program 65
	085-096	Built-in program 66
	097-108	Built-in program 67
	109-120	Built-in program 68
	121-132	Built-in program 69
	133-144	Built-in program 70
	145-156	Built-in program 71
	157-168	Built-in program 72
	169-180	Built-in program 73
	181-192	Built-in program 74
	193-204	Built-in program 75
	205-216	Built-in program 76
	217-228	Built-in program 77
	229-240	Built-in program 78
	241-255	Built-in program 79
12	000-014	No function
	015-028	Built-in program 80
	029-042	Built-in program 81
	043-255	No function

Built-in programs:

To access the built-in programs, press the "**MODE**" button until "**MAIN**" is displayed in the top right hand corner of the LCD display. Now use the "**MODE UP**" and "**MODE DOWN**" buttons to select the mode required, Auto (all programs) or programs 01-82. To change the speed press the "**SPEED/ENTER**" button until the desired speed is selected.
(03 = speed fast, 18 = speed slow).

Built-in programs (via built-in mic):

To access the built-in programs via the built-in mic, press the "**MODE**" button until "**MAIN**" along with a speaker symbol is displayed in the top right hand corner of the LCD display. Now use the "**MODE UP**" and "**MODE DOWN**" buttons to select the mode required, Auto (all programs) or programs 01-15. To change the speed press the "**SPEED/ENTER**" button until the desired speed is selected.
(03 = speed fast, 18 = speed slow).

Built-in programs (via audio signal input):

To access the built in programs via audio signal input connect the controller to the audio input via a 3.5mm speaker jack cable. Press the "**MODE**" button until "**MAIN**" along with a music note is displayed in the top right hand corner of the LCD display. Now use the "**MODE UP**" and "**MODE DOWN**" buttons to select the mode required, Auto (all programs) or programs 01-15. To change the speed press the "**SPEED/ENTER**" button until the desired speed is selected.
(03 = speed fast, 18 = speed slow).

Master/slave mode:

If more than 16 Qubes are required then an additional "**SUB**" controller will be needed. Connect the "**MAIN**" controller to the "**SUB**" controller via the "**Link output**" RJ45 socket from the "**MAIN**" controller to the "**Link input**" RJ45 socket in the "**SUB**" controller. The Qubes connected to the "**SUB**" controller will now run in sequence with the "**MAIN**" controller.
Please note: the maximum distance between controllers is 100m.

Time and date:

To adjust the time and date, press and hold the "**MODE**" button until the sub menu appears. Use the "**MODE UP**" and "**MODE DOWN**" buttons until "**TIME DATE**" is selected. Press the "**SPEED/ENTER**" button and use the "**MODE UP**" and "**MODE DOWN**" to set the day (**MONDAY-SUNDAY**). Press the "**SPEED/ENTER**" button and then use the "**MODE UP**" and "**MODE DOWN**" buttons to select the hour (**00-23**). Press the "**SPEED/ENTER**" button again and use the "**MODE UP**" and "**MODE DOWN**" buttons to select the minutes (**00-59**). Repeat this process for the year, month and then the day. Press and hold the "**SPEED/ENTER**" button to save the time and date. To exit the "**TIME DATE**" menu press the "**MODE**" button once. To exit the full sub menu press and hold the "**MODE**" button until the controller returns to its home menu.

Brightness:

To adjust the brightness, press and hold the "**MODE**" button until the sub menu appears. Use the "**MODE UP**" and "**MODE DOWN**" buttons until "**BRIGHT.**" is selected. Press the "**SPEED/ENTER**" button and use the "**MODE UP**" and "**MODE DOWN**" to select the brightness between (**1-6**). Press the "**SPEED/ENTER**" button once to save the chosen brightness. To exit the "**BRIGHT.**" menu press the "**MODE**" button once. To exit the full sub menu press and hold the "**MODE**" button until the controller returns to its home menu.

(1 = high brightness, 6 = low brightness).

Sensitivity:

To adjust the sound sensitivity, press and hold the "**MODE**" button until the sub menu appears. Use the "**MODE UP**" and "**MODE DOWN**" buttons until "**SENSTV.**" is selected. Press the "**SPEED/ENTER**" button and use the "**MODE UP**" and "**MODE DOWN**" to select the sound sensitivity between (**1-6**). Press the "**SPEED/ENTER**" button once to save the chosen sensitivity. To exit the "**SENSTV.**" menu press the "**MODE**" button once. To exit the full sub menu press and hold the "**MODE**" button until the controller returns to its home menu.

(1 = low sensitivity, 6 = high sensitivity).

Wireless remote operation:

Built-in programs:

To access the built-in programs, press the "**AUTO**" button until "**MAIN**" is displayed in the top right hand corner of the LCD display. Now use the "**MODE +**" and "**MODE -**" buttons to select the mode required, Auto (all programs) or programs 01-82. To change the speed press the "**SPEED**" button until the desired speed is selected.

(03 = speed fast, 18 = speed slow).

Built-in programs (via built-in mic):

To access the built-in programs via the built-in mic, press the "**AUTO**" button until "**MAIN**" along with a speaker symbol is displayed in the top right hand corner of the LCD display. Now use the "**MODE +**" and "**MODE -**" buttons to select the mode required, Auto (all programs) or programs 01-15. To change the speed press the "**SPEED**" button until the desired speed is selected.

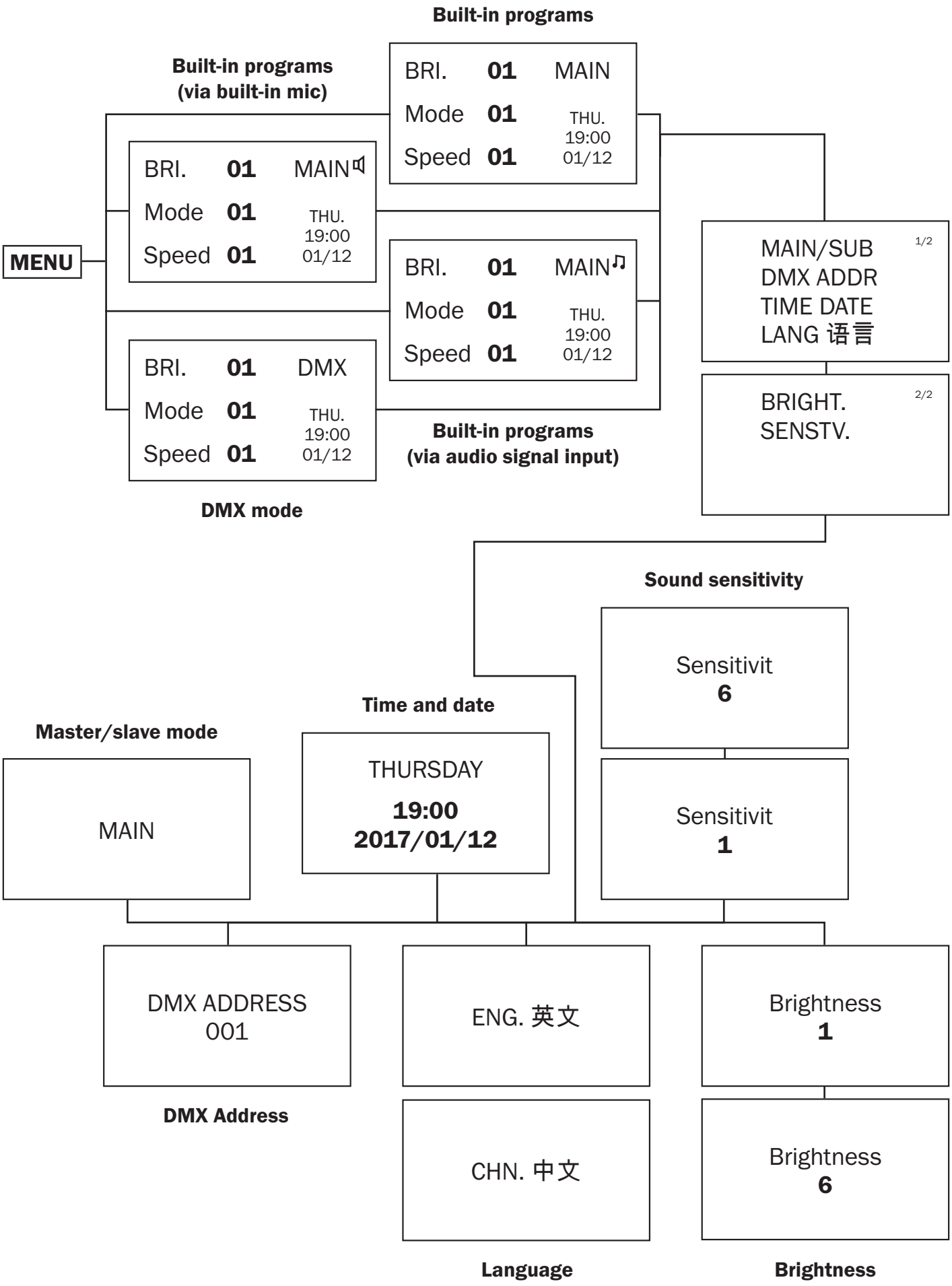
(03 = speed fast, 18 = speed slow).

Built-in programs (via audio signal input):

To access the built in programs via audio signal input connect the controller to the audio input via a 3.5mm speaker jack cable. Press the "**AUTO**" button until "**MAIN**" along with a music note is displayed in the top right hand corner of the LCD display. Now use the "**MODE +**" and "**MODE -**" buttons to select the mode required, Auto (all programs) or programs 01-15. To change the speed press the "**SPEED**" button until the desired speed is selected.

(03 = speed fast, 18 = speed slow).

Please note: the maximum control distance from the remote to the controller is 10-15m.


Built-in programs
Built-in programs
(via built-in mic)
BRI. 01 MAIN
Mode 01
Speed 01
THU.
19:00
01/12
MENU
BRI. 01 MAIN
Mode 01
Speed 01
THU.
19:00
01/12
BRI. 01 MAIN
Mode 01
Speed 01
THU.
19:00
01/12
BRI. 01 DMX
Mode 01
Speed 01
THU.
19:00
01/12
DMX mode
Built-in programs
(via audio signal input)
MAIN/SUB 1/2
DMX ADDR
TIME DATE
LANG 语言
BRIGHT. 2/2
SENSTV.
Sound sensitivity
Sensitivit
6
Sensitivit
1
Time and date
THURSDAY
19:00
2017/01/12
Master/slave mode
MAIN
DMX ADDRESS
001
DMX Address
ENG. 英文
CHN. 中文
Language
Brightness
1
Brightness
6
Brightness

Setting the DMX address:

The DMX mode enables the use of a universal DMX controller. Each fixture requires a “start address” from 1- 511. A fixture requiring one or more channels for control begins to read the data on the channel indicated by the start address. For example, a fixture that occupies or uses 7 channels of DMX and was addressed to start on DMX channel 100, would read data from channels: 100,101,102,103,104,105 and 106. Choose a start address so that the channels used do not overlap. E.g. the next unit in the chain starts at 107.

DMX 512:

DMX (Digital Multiplex) is a universal protocol used as a form of communication between intelligent fixtures and controllers. A DMX controller sends DMX data instructions form the controller to the fixture. DMX data is sent as serial data that travels from fixture to fixture via the DATA “IN” and DATA “OUT” XLR terminals located on all DMX fixtures (most controllers only have a data “out” terminal).

DMX linking:

DMX is a language allowing all makes and models of different manufactures to be linked together and operate from a single controller, as long as all fixtures and the controller are DMX compliant. To ensure proper DMX data transmission, when using several DMX fixtures try to use the shortest cable path possible. The order in which fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned to a DMX address of 1 may be placed anywhere in a DMX line, at the beginning, at the end, or anywhere in the middle. When a fixture is assigned a DMX address of 1, the DMX controller knows to send DATA assigned to address 1 to that unit, no matter where it is located in the DMX chain.

DATA cable (DMX cable) requirements (for DMX operation):

This fixture can be controlled via DMX-512 protocol. The DMX address is set on the back of the unit. Your unit and your DMX controller require a standard 3-pin XLR connector for data input/output, see image below.

Note: DMX cable must be daisy chained and cannot be split.

Further DMX cables can be purchased from all good sound and lighting suppliers or Prolight Concepts dealers.

Please quote:

CABL10 – 2m
CABL11 – 5m
CABL12 – 10m

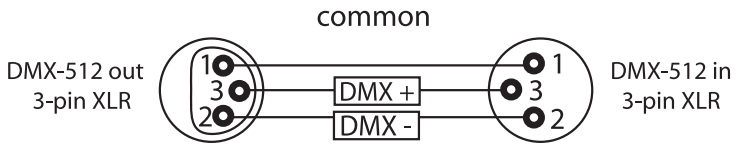
Further RJ45 cables can be purchased from all good sound and lighting suppliers or Prolight Concepts dealers.

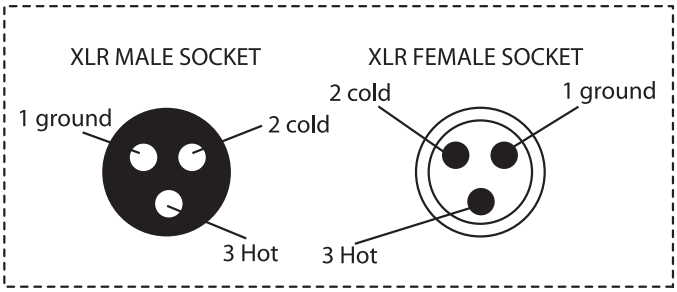
Please quote:

CABL262 – 2m
CABL263 – 5m
CABL264 – 10m

Notice:

Be sure to follow the diagrams below when making your own cables. Do not connect the cables shield conductor to the ground lug or allow the shield conductor to come in contact with the XLRs outer casing. Grounding the shield could cause a short circuit and erratic behaviour.





XLR Pin Configuration
Pin 1 = Ground
Pin 2 = Negative
Pin 3 = Postive

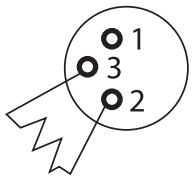
Special note:

Line termination:

When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behaviour.

Using a cable terminator will decrease the possibilities of erratic behaviour.

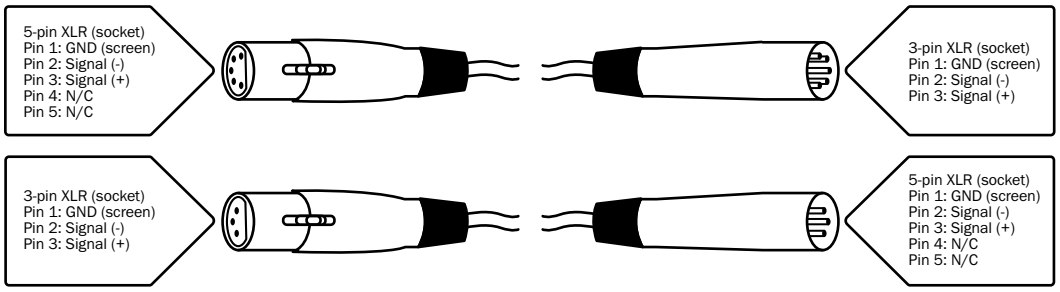
(3-pin - Order ref: CABL90, 5-pin - Order ref: CABL89)



Termination reduces signal transmission problems and interference. It is always advisable to connect a DMX terminal, (resistance 120 Ohm 1/4 W) between pin 2 (DMX-) and pin 3 (DMX+) of the last fixture.

5-pin XLR DMX connectors:

Some manufactures use 5-pin XLR connectors for data transmission in place of 3-pin. 5-pin XLR fixtures may be implemented in a 3-pin XLR DMX line. When inserting standard 5-pin XLR connectors in to a 3-pin line a cable adaptor must be used. The diagram below details the correct cable conversion.



Correct Disposal of this Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.