2510 Controller

user manual

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section 1
INTRODUCTION

Congratulations on your choice of the Martin 2510 controller, which is an easy-to-use playback controller dedicated to Martin Professional's range of intelligent lights.

The 2510 controller contains 128Kb of non-volatile memory, enough for 8024 lighting scenes for one light fitting. The 2510 offers individual control of up to 31 Martin lights, and furthermore the software onboard the 2510 is independent of which lights are controlled, thus no update is necessary when new lights are introduced.

Sequences and shows are programmed on the Martin 3032 PC based controller system and transferred to the 2510 via a standard RS-232 connection. This process is referred to as downloading.

The controller has an extra feature, which allows it to convert a standard RS-232 input-signal to a Martin RS-485 output-signal. This function can be used for those who wish to control the lights with their own controller system. You may obtain further information about the protocol converting ability from your local Martin dealer.

CONNECTING AND ADDRESSING

Fitting the mains plug

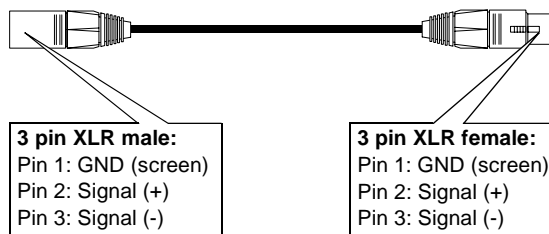If necessary connect a three pin plug to the mains cable using

1. the BROWN wire for the LIVE pin,
2. the BLUE wire for the NEUTRAL pin and
3. the GREEN/YELLOW wire for the EARTH (ground) pin.

Connecting the lights

To connect the lights, used with the 2510 controller, use the 3 pin XLR link cables supplied with the controller and lights.

1. First, connect the data output of the controller to the data input of the first light.
2. Next, connect the data output of the first light to the data input of the next.
3. Continue the link this way, always connecting output to input (daisy-chain), until all lights are linked together.
4. Finally, insert the male XLR termination plug, that is supplied with the controller, in the free output socket of the last light on the link. It is very important to insert this plug to ensure correct and error-free communication between the 2510 controller and the lights.

Extra XLR cables can be supplied by your local Martin dealer. You may also use standard balanced microphone cable (twisted pair with screen) and 3 pin XLR plugs. The connections should be as per the table on the left.

3 pin XLR male:
Pin 1: GND (screen)
Pin 2: Signal (+)
Pin 3: Signal (-)

3 pin XLR female:
Pin 1: GND (screen)
Pin 2: Signal (+)
Pin 3: Signal (-)

Addressing the lights

As the 2510 is unaware of which lights it is actually controlling, the DIP-switches on the lights must remain at the same addresses as when the lighting programming was originally done on the 3032 controller. For further information about setting the DIP-switches, please refer to the user's manual for the relevant light. Please note that address 32 not can be used.

Up to 31 Martin lights may be daisy-chained.

Insert male XLR termination plug (120Ω)
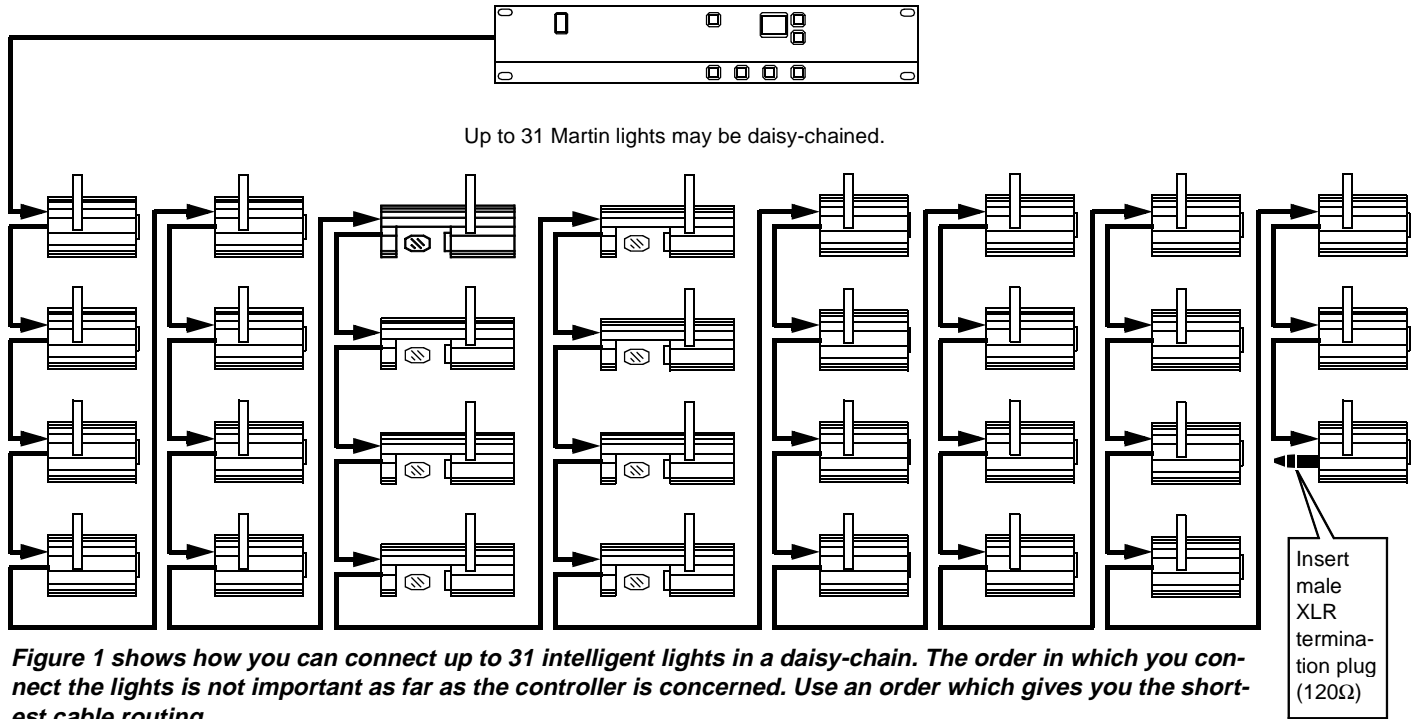
Figure 1 shows how you can connect up to 31 intelligent lights in a daisy-chain. The order in which you connect the lights is not important as far as the controller is concerned. Use an order which gives you the shortest cable routing.

section 3

OPERATING THE CONTROLLER

Switching on the controller

After having connected the 2510 controller to the mains, you can switch it on by pressing the power switch at the upper left part of the 2510 front panel. The controller will then show the following in the display:

{25} {10} {X. X} {##} {##} {##} {##} {##},

where {X.X} indicates the software version and {##} the number of sequences (flashing five times).

NOTE: If the 2510 is used as a protocol converter it will show {PC} in the display. To disable this function and re-enable playback mode, press and hold the [↑] key while powering up.

Download mode

The playback mode is the default mode of the 2510 controller. The 2510 will not contain any programs when supplied, so before this mode is usable some lighting programs must be downloaded into the memory. Currently, only the 3032 controller is capable of creating download data for the 2510 controller, but any PC with a serial port may be used for the actual download process. Please refer to the 3032 documentation on how to create and download programs.

NOTE: It is advisable to program 'Lamp On' instructions in all sequences to ensure that the lamps are powered on no matter which sequence you start running.

CONNECTING THE 2510 TO THE 3032/PC

You should use the 9 pin to 25 pin cable supplied with the 2510 to connect to the PC's serial port. If the PC is equipped with a 9 pin socket only, you may use a standard 25 to 9 pin converter available from any computer store.

ENABLING THE DOWNLOAD MODE

After having connected your 2510 controller to the 3032 controller or PC you are ready to begin the download.

1. To enable the download mode press and hold the [↓] key when powering up the 2510. The display will show {do} to indicate that download mode is enabled.

2. Now, start the download transmission from the 3032 or PC. While the actual download takes place, the display will flicker a lot - don't worry this is quite normal.

3. As soon as the display shows {rd} the download has finished and you will have to switch the 2510 off to disable the download mode.

NOTE: If the display shows {er} an error has occurred during the download. Check all connections and try again.

Playback mode

The playback mode is the default mode after switching on the 2510. After the starting message ({25}{10}{X.X}), the 2510 will immediately start executing the first Sequence in memory. To transmit a reset to the connected light fittings, press and hold the [ENTER] key while switching on. Depending on the options selected when the original list of Sequences was created, the 2510 will either execute the Sequences one after the other (referred to as Show mode), or loop the first Sequence over and over. While running in Show mode the 2510 will use the pre-programmed Trig modes and Trig rates originally selected.

Show mode may be disabled by pressing any of the four bottom keys. To restart Show mode, switch off the 2510 controller and then back on again.

SELECTING SEQUENCES

When the 2510 is not in Show mode you may choose between any of the programmed Sequences, and any of the three Trig types.

To preset a Sequence or a Show to run, simply use the [↑] and [↓] buttons until the desired Sequence number appears in the display. The Sequence number flashes to indicate that it is only preset - not yet being executed. To start executing the flashing Sequence or Show simply press [ENTER].

The first program selected after power up, starts with the pre-programmed default Trig rate. Changing from one Trig mode to another is done by pushing the desired Trig mode button (Manual, Auto or Music).

The current Trig mode is indicated by the dots in the display. If the Trig mode is Manual, the left dot will be flashing every time the [MANUAL] button is pushed. If Auto Trig mode is selected the right dot flashes with the beat of the Trig rate. In Music Trig mode, both dots flash every time the built-in microphone triggers the 2510 controller.

AUTO TRIG RATE

To change the Auto Trig rate push [AUTO] two or more times in the rhythm you wish the sequence to trigger.

By keeping [AUTO] pressed two or more seconds the controller returns to default Trig rate.

Please note that the controller does not change the Trig mode or Trig rate when a new sequence is selected.

MANUAL TRIG

Pushing [MANUAL] switches to Manual Trig mode. The sequence is triggered each time you push the [MANUAL] button.

MUSIC TRIG

Pushing [MUSIC] switches to Music Trig mode. A built-in microphone will pick up the beat of the music and trigger the sequence accordingly.

BLACKOUT

When [BLACKOUT] is pushed all lights blackout and execution of the program stops. To re-activate execution push [BLACKOUT] again.

DEFAFAULT START-UP SEQUENCE

It is possible to select the current sequence as default start-up sequence. This means that the 2510 Controller automatically starts up in this sequence every time you switch it on. Press [MANUAL] + [ENTER] to select the current sequence. To clear the default start sequence press [AUTO] + [ENTER]. In both cases the 2150 Controller will respond by displaying [..] briefly in the display.

NOTE: To enable the 2510 Controller running with a default start-up sequence, the 2510 sequence mode MUST be downloaded as MANUAL from the 3032 Controller - not LINKED. Otherwise, the 2510 will link the sequences as normal. The default start-up feature also requires software version 1.4+ installed in the controller.

section 4
MEMORY TEST

It is possible to test the internal memory of the 2510 controller. Do this if the lights connected to the controller start responding erratically. Please refer to the 3032 controller's documentation on how to make a memory test. The memory test requires software ver 1.3+ in the 2510 controller.

TECHNICAL SPECIFICATIONS

- 8024 lighting scenes
- Auto, Manual and Music trigger (built-in microphone)
- Blackout function
- RS-232 input (may be used as RS-232 to Martin RS-485 converter)
- Two digit 20x25 mm LED display
-
- 19"/2U rack-mounting
-
- Dimensions (LxWxH): .... 483 x 65 x 89 mm (19 x 2.6 x 3.5")
- Weight: .... 1.0 kg (2.2 lb)
- Shipping weight: .... 2.0 kg (4.4 lb)
- Shipping dimensions (LxWxH): .... 580 x 260 x 150 mm (22.9 x 10.2 x 5.9")
- AC Voltage (EU model): ....210-250 V / 50-60 Hz
- AC Voltage (US model): ....100-130 V / 50-60 Hz
- Power consumption: .... 2.5 W
-
- Link cable (standard): .... 5 meters (21'10")
- Link termination: .... 120 Ω
- RS-232 connection as per appendix b

RS-232 CABLE CONNECTIONS

25 pin PC output	9 pin PC output	2510 RS-232 input
pin 2	pin 3	pin 3
pin 7	pin 5	pin 5

TROUBLE SHOOTING GUIDE

problem	probable cause(s)	suggested remedy
None of the lights respond to the controller.	The controller is disconnected from the data link.	• Connect controller.
	The controller may be in protocol-converter mode (displays {Pr}).	• First, switch off the controller. Then, press and hold down the [↑] button while switching on the controller.
Some lights are not responding or respond erratically.	Bad data link connection.	• Check connections/cables in the daisy-chain and correct accordingly.
	Data link not terminated with 120 Ω termination plug.	• Insert termination plug in the last light on the data link.
	Incorrectly addressing (DIP-switch setting) of lights.	• Ensure that all lights are addressed in compliance with the original 3032 link configuration.
	Lights not powered on.	• Power on lights.
	Lights may have failed in the protocol auto-detection.	• Switch off the lights and then back on again. In general, switch on the 2510 controller before the lights.
No light emission from some or all lights.	The sequences do not contain 'Lamp On' instructions for lights with remote lamp on/off.	• Correct your sequences on the 3032 controller so that they all contain 'Lamp On' instructions. Then, download the new sequences to the 2510 controller.
{er} appears on the display when attempting to download.	An error has occurred during the download process due to a bad RS-232 connection between the 2510 and the PC.	• Check the RS-232 connection and then try to download the sequences again.