

Martin to DMX Converter

user manual

INTRODUCTION

Thank you for selecting the Martin to DMX Protocol Converter. This device employs a unique *NMBE* algorithm to convert 16 channels of Martin data to 128 channels of DMX data, allowing you to control DMX-only fixtures with Martin's 3032 and 2510 controllers.

CONTROLLER REQUIREMENTS

Version 2.08 of the 3032 PC software is required for use with the Martin to DMX Protocol Converter. This software may be downloaded from the Martin web site at <http://www.martin.dk>. No upgrade of the 2510 Controller firmware is required.

SAFETY INFORMATION

Warning! This product is for professional use only. It is not for household use.

To protect yourself and others from electric shock

- Disconnect the fixture from AC power when not in use.
- Always ground (earth) the fixture electrically.
- Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault protection.
- Do not expose the fixture to rain or moisture.
- Do not open or modify the fixture. Refer all service to a Martin service technician.

UNPACKING

The Martin to DMX Protocol Converter comes with:

- 3 m, 3-pin IEC mains cable
- user manual

AC POWER


Warning! *For protection from fire and electric shock, the fixture must be grounded (earthed). The power supply shall have overload and ground-fault protection.*

Important! *Check the voltage setting before applying power!*

To install a plug on the mains lead

The mains lead must be fitted with a grounding-type cord cap that fits your power distribution system. Consult a qualified electrician if you have any doubts about proper installation.

- Following the cord cap manufacturer's instructions, connect the yellow and green wire to ground (earth), the brown wire to live, and the blue wire to neutral. The table below shows some pin identification schemes.

| Wire | Pin | Marking | Screw color |
|--------------|---------|---|-----------------|
| brown | live | "L" | yellow or brass |
| blue | neutral | "N" | silver |
| yellow/green | ground |  | green |

To set or verify voltage setting

The Martin to DMX Protocol Converter may be switched between 115 and 230 V. Verify the voltage setting before applying power.

- Slide the voltage switch located on the side to the voltage setting closest to the local mains AC voltage.

To apply power

- Verify the voltage setting. Plug the prepared power cord into the mains input socket and the AC distribution system.

CONVERTER SET UP

SOFTWARE CONFIGURATION

The Martin to DMX Protocol Converter (the hardware) allows for control of up to 128 channels of DMX data. The interface (the software) is an 8-channel DMX fader that requires 1 Martin channel. You may define from 1 to 16 interfaces per converter in the 3032 to control from 8 to 128 DMX channels. To control a 12-channel DMX fixture, for example, requires 2 software interfaces and 2 Martin channels.

Each set of faders is given a Martin address in the 3032. Interfaces can be customized in the Link Configuration module, under Setup, with names for the icons as well as individual channels.

A fixture code can also be assigned to create fixture groups for rapid multi-selection with the middle or right mouse button. If no code is assigned, all interfaces are selected.

To set up interfaces in the 3032

- 1 From the 3032 main menu, select **Link Configuration**.
- 2 Select **"Martin->DMX Interface"** in the fixture menu.
- 3 Assign interfaces to up to 16 Martin channels. If you do not need all 16, the channels need not be consecutive but the highest channel may be no more than 15 channels above the lowest channel.
- 4 Click **"SETUP"** to customize an interface. To enter an icon label, click on the field to the right of **"User Name"** and enter up to 5 characters. To enter a channel label, click a channel field and enter the data. To assign the interface to a fixture group, enter a group **"Fixture Code"** of up to 3 characters. Quit the setup menu.
- 5 When you are finished, click **"SAVE"** and **"QUIT"** to exit the link configuration session.

HARDWARE CONFIGURATION

The converter connects to the Martin serial link like a fixture. The DIP-switch address for the converter hardware is the Martin address for the first set of faders. Set the address with pins 1-6 of the DIP-switch.

DMX output is transmitted on a separate data link. The DMX transmission rate can be slowed, if necessary, for use with older devices. “Slow DMX” is set using DIP-switch pin 8.

To set the converter DIP-switch

- 1 Set the converter’s address on the front panel DIP-switch. Flip pins 1-6 to the OFF position (up). Then flip ON (down) the pins listed in table below for the selected channel.

| Ch | ON pins | Ch | ON pins | Ch | ON pins | Ch | ON pins |
|----|---------|----|------------|----|------------|----|---------------|
| 1 | 1 | 9 | 1, 4 | 17 | 1, 5 | 25 | 1, 4, 5 |
| 2 | 2 | 10 | 2, 4 | 18 | 2, 5 | 26 | 2, 4, 5 |
| 3 | 1, 2 | 11 | 1, 2, 4 | 19 | 1, 2, 5 | 27 | 1, 2, 4, 5 |
| 4 | 3 | 12 | 3, 4 | 20 | 3, 5 | 28 | 3, 4, 5 |
| 5 | 1, 3 | 13 | 1, 3, 4 | 21 | 1, 3, 5 | 29 | 1, 3, 4, 5 |
| 6 | 2, 3 | 14 | 2, 3, 4 | 22 | 2, 3, 5 | 30 | 2, 3, 4, 5 |
| 7 | 1, 2, 3 | 15 | 1, 2, 3, 4 | 23 | 1, 2, 3, 5 | 31 | 1, 2, 3, 4, 5 |
| 8 | 4 | 16 | 5 | 24 | 4, 5 | 32 | 6 |

- 2 Set DIP-switch pin 7 to ON if you want to disable the status LEDs.
- 3 Set DIP-switch pin 8 to OFF for normal operation. If you experience trouble controlling older DMX devices, setting pin 8 (Slow DMX) to ON may help.
- 4 Pins 9 and 10 currently have no function: set them to OFF.

To connect the converter to the Martin link

The converter may be inserted like a fixture anywhere in the Martin link. The IN and THRU sockets are Martin-compatible, i.e., wired with pin 1 to ground, pin to signal + (hot), and pin 3 to signal - (cold).

- 1 To place the converter in the middle of a link, unplug 2 data cables at a any convenient point. Plug the cable leading to the controller into the Martin IN socket. Plug the other cable into the Martin THRU socket.
- 2 To place the converter at the end of the link, connect a data cable between the output of the last fixture and the Martin IN socket. Plug the termination plug into the Martin THRU socket.

DMX FIXTURE SETUP

For maximum flexibility when programming fixtures that run both Martin and DMX protocols, configure and program the fixtures in Martin mode. Configure DMX-only fixtures in “vector” mode, if applicable.

DMX ADDRESS SELECTION

A fixture’s DMX address depends on the Martin channel for the fader interface, the first fader used, and the converter’s DIP-switch address. It can be calculated with the formula below.

DMX address = Fader No. + ((Martin Channel - Converter Address) x 8)

EXAMPLE

You want to control two MX-1s and a one-channel smoke machine with your 3032. Martin channels 28 and 32 are free. Control the first MX-1 with faders 1 - 6 of one interface and control the smoke machine with fader 8. Control the second MX-1 with the second interface.

Set the software interfaces to channels 28 and 32 on the 3032. Set the converter DIP-switch to channel 28. Set the fixture addresses as follows:

- First MX-1: DMX address = 1 + ((28 - 28) x 8) = 1 + (0 x 8) = 1
- Smoke machine: DMX address = 8 + ((28 - 28) x 8) = 8 + (0 x 8) = 8
- Second MX-1: DMX address = 1 + ((32 - 28) x 8) = 1 + (4 x 8) = 33

DATA CONNECTION

The converter’s DMX output accommodates a link of up to 32 fixtures. The 3-pin “DMX OUT” XLR socket is wired for DMX compatibility, i.e., with pin 1 to ground, pin 2 to signal - (cold), and pin 3 to signal + (hot). A 3-pin to 5-pin adaptor cable (P/N 11820004) is available to connect DMX fixtures with 5-pin XLR sockets.

Connect the DMX fixtures to the “DMX OUT” socket just as if connecting them to a controller. The link must be terminated at the end.

OPERATION

DMX fixtures are programmed and operated using DMX commands directly according to their protocol. This means that any DMX-compatible device may be operated through the converter.

The procedure for programming channel values is described below. Once programmed, a similar procedure can be used in Cue mode to override values. Please read the 3032 user manual for general programming information.

The green and red LEDs on the front panel of the converter provide constant status information. The green LED lights to indicate DMX signals are being transmitted. The red LED flashes when Martin signals are received. If desired, the LEDs can be disabled using DIP-switch pin 7.

To control DMX fixtures in the Sequence Editor

- 1 Set up the converter, software interfaces, and DMX fixtures as described in the previous sections.**
- 2 From the 3032 main menu, open the Sequence Editor.**
- 3 To toggle access to a single fixture interface, left-click on its icon. Right-click on an icon to toggle access to its fixture group.**
- 4 Left- or right-click on channel faders to select channels to program.**
- 5 Click (and hold) the + and - buttons to increase or decrease the DMX value. Alternatively, you can click the fields below the faders and enter values directly.**

SPECIFICATIONS

6

DIMENSIONS

| | |
|-------------|-----------------|
| Length..... | 240 mm (9.4 in) |
| Width..... | 118 mm (4.6 in) |
| Height..... | 51 mm (2.0 in) |
| Weight..... | 0.9 kg (2.0 lb) |

ELECTRICAL

| | |
|----------------------------|--|
| Power connection..... | IEC 3-prong male |
| Power supply settings..... | 115/230 V, 50-60 Hz, switch selectable |
| Power consumption..... | 2 W |
| Current..... | 20 mA at 115 V |

CONSTRUCTION

| | |
|--------------|------------------------------|
| Housing..... | steel |
| Finish..... | electrostatic powder coating |

DATA CONVERSION

| | |
|------------------|---------------------------|
| Data input..... | 16 Martin RS-485 channels |
| Data output..... | 128 DMX-512 channels |

DATA CONNECTIONS

| | |
|------------------|--|
| Martin IN..... | 3-pin XLR male, pin 2 (+), pin 3 (-) |
| Martin THRU..... | 3-pin XLR female, pin 2 (+), pin 3 (-) |
| DMX OUT..... | 3-pin XLR female, pin 2 (-), pin 3 (+) |