

# AVR Programmer

## user manual

# INTRODUCTION

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The AVR Programmer allows you to install software updates in Martin products with the AVR-type CPU. The software update is first downloaded from a Windows computer to the AVR Programmer. The programmer is then connected to the fixture and software uploading begins automatically as soon as power is applied.

In addition to the AVR Programmer, you will need the following:

- A Windows 95/98 PC, preferably with Internet access.
- Update software, available from the Martin FTP site at <ftp://ftp.martin.dk/Martin/AVR/>.
- A standard 9-pin-female to 25-pin-male serial cable or adaptor. The connections are shown on page 4. *Cables included with the Martin MPBB1 Uploader and the 2532 D.A. Controller will not work as they lack connections for DTR and RTS signals.*

## UPDATE PROCEDURE

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### Install PC software

Windows 95/98 software is included that allows you to download fixture update files via the Internet to your computer, and then from your computer to the AVR Programmer. Install the software on a computer with Internet access, if available.

- 1 Insert the AVR Programmer CD-ROM into your computer.**
- 2 Close all applications.**
- 3 Execute “setup.exe” from the root directory of the CD-ROM. A setup wizard guides you through software installation.**

### Download fixture update software to PC

- 1 Launch the Martin AVR Uploader application from the Windows program menu.**
- 2 If you have Internet access, click “Get from Internet” in the program window. Click “Update list” in the pop-up window.**

This opens a connection to the Martin FTP site (<ftp://ftp.martin.dk/Martin/AVR/>) and lists the available update files. Only new files will be displayed if “Show only new files” is checked.

- 3 Click a file to download it to your computer. Click “OK” when finished downloading files.**
- 4 If the software update file is on floppy disk, copy the file to the directory containing the AVR program files.**

# Upload software to AVR Programmer

The AVR Programmer can store one type of fixture software at a time. Repeat this procedure each time you update a different product.

- 1 Plug the serial adapter cable into either end of the AVR Programmer and a serial port on the computer.**

If your computer has a 25-pin COM port, you can plug the AVR Programmer directly into the socket. It does not matter which end of the AVR Programmer is connected to the computer.

- 2 Launch the Martin AVR Uploader application from the Windows program menu.**
- 3 Select the serial COM port from the on-screen menu.**
- 4 Select the latest update software for the product.**
- 5 Click “Program interface.”**

The LED flashes slowly when the programmer is properly connected to the COM port and it flashes rapidly during an upload. If the LED stays on without flashing, there was an error during the transfer. Check the connections and repeat the upload.

LED	Message
••••••	uploading
• • •	power
off	no power
on	error

The AVR Programmer is now ready for use.

# Upload software to fixture

Update software is installed automatically when the fixture is powered on with the AVR Programmer connected to its main circuit board.

- 1 Connect the included data cable to either end of the AVR Programmer.**
- 2 Disconnect the fixture from AC power. Open the fixture so that you can get to the main circuit board.**
- 3 Connect the data cable’s small plug to the unused 6-pin male plug on the circuit board: the red lead on the data cable connects to pin 1. (No damage will occur if the plug is reversed.)**
- 4 Apply power to the fixture.**

The LED flashes rapidly, indicating that the upload is in progress. After about a minute the LED flashes slowly, the fixture resets, and the upload is finished.

*If the LED flashes slowly when power is applied, the 6-pin plug is reversed.* If the LED does not light, the plug is not properly connected, and if the LED lights but does not flash, there was an upload error. Check the connections, reverse the plug if necessary, and repeat the upload.

- 5 When the upload is complete, remove the data cable from the circuit board.**
- 6 Disconnect the fixture from power and replace all covers.**

The fixture is now ready for use with updated software. Placing a small label with the new software version number on the circuit board will make it easier to track updates.

# SERIAL CABLE CONNECTIONS

9-pin to 25-pin serial cables shall be wired as shown. 25-pin to 25-pin cables shall be wired with pins 2, 3, 4, 7, and 20 connected straight-through.

9-pin to 25-pin serial cable connections	
9-pin female	25-pin male
2	RXD 3
3	TXD 2
4	DTR 20
5	GND 7
7	RTS 4

## TROUBLESHOOTING

Problem	Possible cause	Remedy
LED does not flash at all when connected to serial port	Missing or bad contact in serial cable	Check serial cable and connections
	Too bright to see LED	Reduce ambient light
LED does not flash at all when connected to fixture PCB	Bad connection to PCB	Check connection
	Fixture off	Apply power to fixture
	Too bright to see LED	Reduce ambient light
Unsuccessful software upload from computer to AVR programmer	Wrong COM port selected	Select the correct COM port
	Missing or bad contact in serial cable	Check serial cable and connections
Unsuccessful software upload from AVR Programmer to fixture	Data cable reversed or not connected	Check cable connections, reverse if necessary
	No valid software in AVR memory	Upload software to AVR Programmer
	Data cable connected with fixture powered on	Turn off / disconnect fixture, then turn back on
Fixture does not respond as expected after resetting with new software	Wrong software	Upload correct software to AVR Programmer and repeat upload to fixture
	Software corrupted or erased	Reload software, then remove data cable <i>before</i> disconnecting power