Installation Guide
P3™ Upgrade Kit for LC™ Panels

Introduction

This Installation Guide explains how to install a Martin™ P3™ Upgrade Kit to convert a standard Martin LC™ Series video display panel to use the same proprietary P3™ video data processing technology, onboard control panel and utility display as the Martin LC Plus™ Series.

For the latest documentation and information about this and all Martin Professional™ products, please visit the Martin website at www.martin.com.

Part numbers

- The P3 Upgrade Kit for the LC2140 panel has P/N 91614030.
- The P3 Upgrade Kit for the LC1140 panel has P/N 91614031.

Safety precautions

Warning! Read and follow the safety precautions in the LC panel user manual before installing the P3 Upgrade Kit. You must continue to ensure that all precautions listed in the LC panel user manual are observed after the P3 Upgrade Kit is installed. The user manual is supplied with the LC panel and is also available for download from www.martin.com

The LC panel P3 Upgrade Kit must be installed by qualified professional technicians only. Read all of this Installation Guide carefully before starting to install the Upgrade Kit. Martin Professional A/S and its affiliated companies cannot be held responsible for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss resulting from failure to follow the instructions or respect the safety precautions listed in this Installation Guide.

If you have any questions about how to install the P3 Upgrade Kit or use the LC panel safely, please contact your local Martin distributor (see www.martin.com/distributors for details) or call the Martin 24-hour service hotline on +45 8740 0000, or in the USA on 1-888-tech-180.

Disconnect the panel from power and allow to cool before starting work.

Important! To avoid damage to PCBs and their sensitive electronic components, take precautions to avoid ESD (electrostatic discharge) and carry out work at an ESD-free workstation.

P/N 35000606 Rev. C

Parts list

The LC panel P3 Upgrade Kit contains the following items:

    A   Upgrade kit assembly. . . . . P/N 62400898
    B   Connections label . . . . P/N 33150091
    C   M3x8 countersunk Torx 10 self-tapping screws (x2) . . . . P/N 08050804
    D   LC Panel P3 Upgrade Kit Installation Guide . . . . P/N 35000606

Setting LC panels to factory defaults

Before installing the P3 Upgrade Kit in an LC panel or group of LC panels, each panel must be reset to its default factory calibration values. To do this you will need a Windows PC, a Martin DVI Buffer Box (P/N 91611269), the DVI Buffer Box user manual and the Martin LCS software application supplied with the DVI Buffer Box. The DVI Buffer Box user manual and latest version of the LCS application are available for download free of charge from www.martin.com

To reset LC panels to factory defaults:

1. Connect a PC with the LCS application to a panel or group of panels via a DVI Buffer Box as described in the DVI Buffer Box user manual. Apply power to the PC and panels and start the LCS application.
2. See Figure 1. Select one panel by clicking on its icon (**A**). Panel icons turn green when selected.
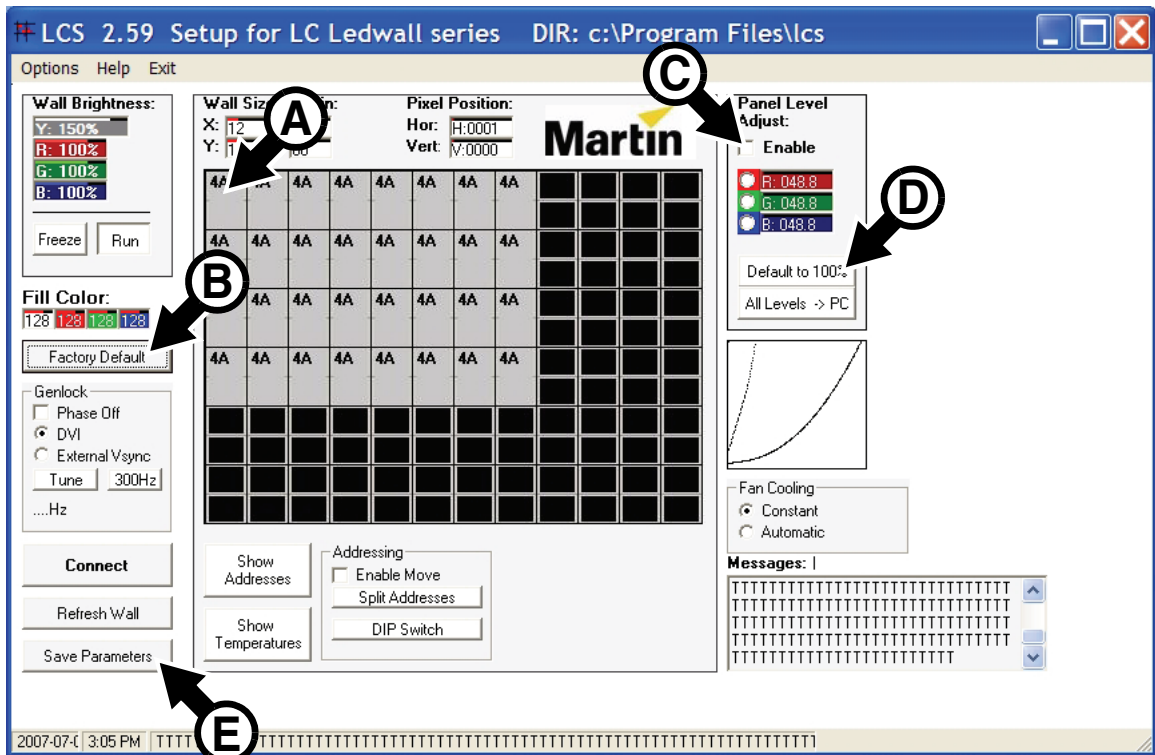

Figure 1

3. Click on the **Factory Default** button (**B**).
4. Mark the **Enable** checkbox (**C**) to enable color level adjustment for the selected panel, then click on the **Default to 100%** button (**D**) to set RGB values to 100%.

5. Click on the **Save Parameters** button (**E**) to save the default settings.
6. Repeat this procedure for all the panels you are going to upgrade.

Installation of components

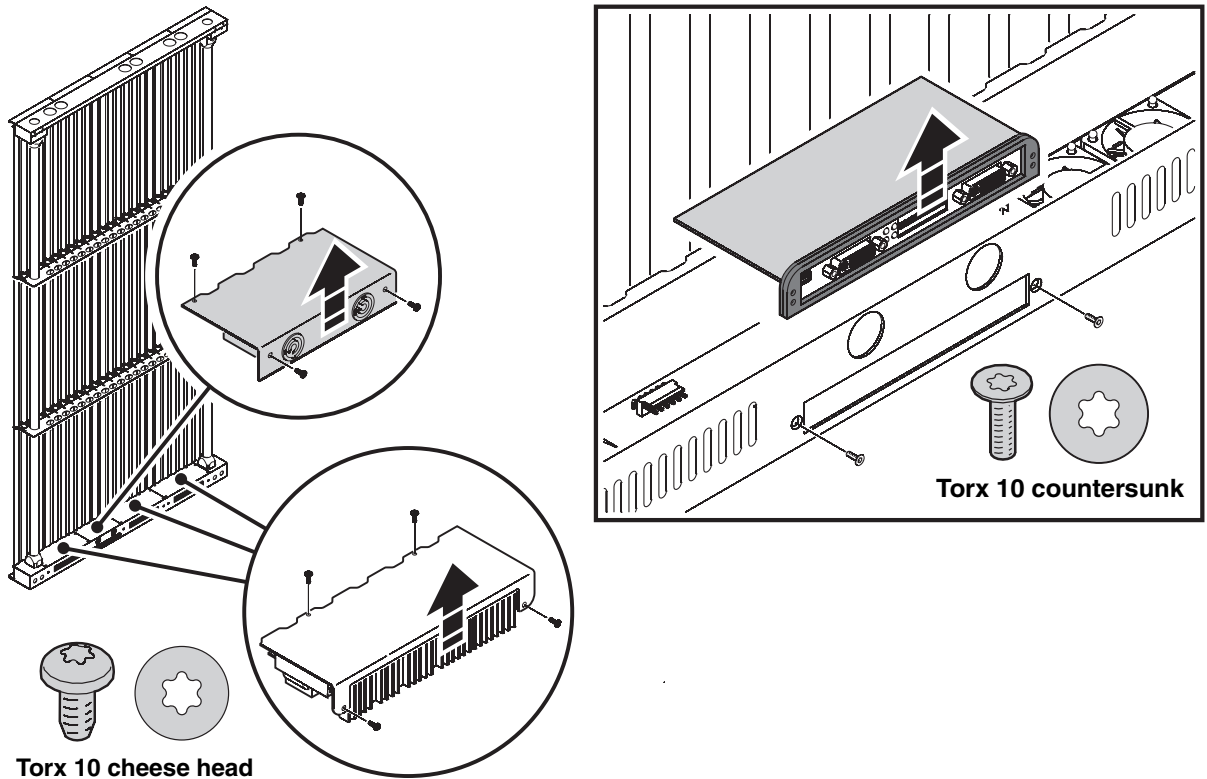**Torx 10 countersunk**

Torx 10 cheese head

Figure 2

To install the P3 Upgrade Kit components in an LC panel:

1. Disconnect the panel from power and allow to cool. Take precautions against ESD (electro-static discharge).
2. Remove the Torx 10 cheese head base cover retaining screws and lift the base covers up as illustrated on the left in Figure 2. Keep the screws for re-use.
3. Remove the two Torx 10 countersunk screws and lift the connections panel and main PCB out of the LC panel base as illustrated on the right in Figure 2, disconnecting the pins under the PCB from the sockets in the base as you lift. The two screws are no longer needed.
4. At this point in the procedure, we recommend that you clean all cooling fans and vents with a vacuum cleaner or compressed air. Dislodge dust and dirt with a soft brush if necessary.
5. See Figure 3. An 8-leg EEPROM chip on the main PCB holds the panel's LED tube calibration data. Transfer it from the old PCB to the new one. Chips are marked with a cutout (arrowed) at one end. Insert the chip into the chip socket so that this
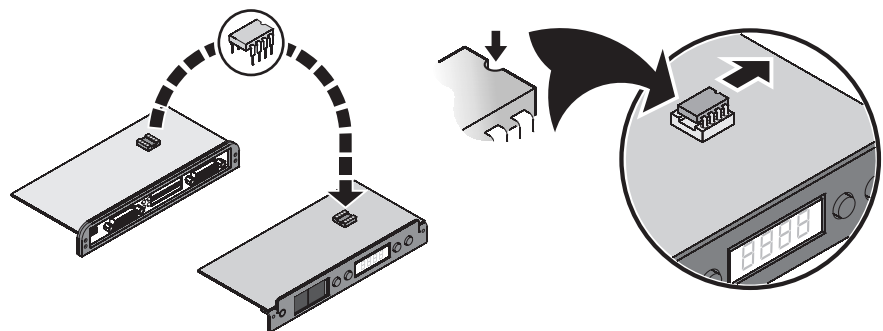

Figure 3

mark is at the right-hand end of the chip socket (i.e. pointing away from the Ethernet sockets and towards the **Enter** button) when you look at the control/display panel.

6. Wiring must be kept well clear of cooling fans to avoid any possibility of damage to the wiring. See Figure 4. Check that the power leads inside the base are routed alongside – and not over – the fans in the base.

7. Line up the pins under the new main PCB with the corresponding sockets in the base and gently press the new PCB down so that the pins engage.

Figure 4

8. Use the two new Torx 10 screws supplied in the Upgrade Kit to fasten the new main PCB/control panel assembly into the base with reference to Figure 2.

9. Use the Torx 10 cheese head screws you removed earlier to re-install all covers with reference to Figure 2.

10. Turn the panel so that you can see the bottom of the base and check that no wiring is visible behind any of the cooling fans. If you can see any wiring here, then wires are incorrectly routed: open the covers, reroute the wiring away from the fans, reinstall the covers and check again that no wiring is visible behind the fans.

11. See Figure 5. Stick the connections/control panel key label supplied in the Upgrade Kit onto the LC panel base as illustrated.

Figure 5

12. Obtain the Martin LC Plus™ Safety and Installation Guide, P/N 35000218, available for download free of charge from the LC Plus product support page at www.martin.com.

13. Apply power to the panel and check for correct operation by selecting local LED display test patterns in the control menu as described in the LC Plus Safety and Installation Guide.
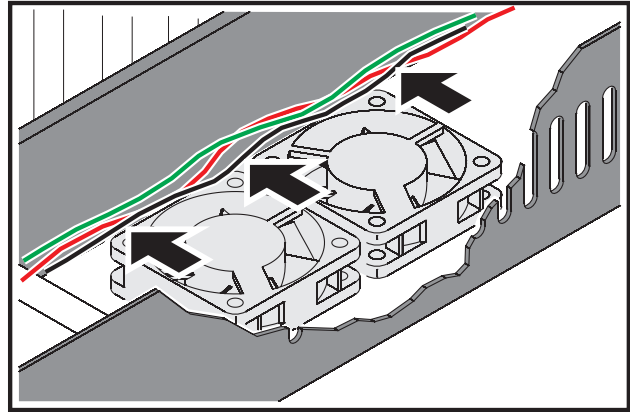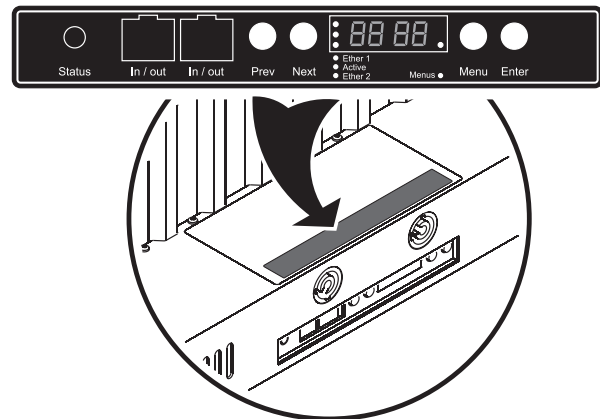
Using the upgraded product

An LC video display panel with the P3 Upgrade Kit installed can be connected to a P3 video data link, configured and operated in the same way as Martin LC Plus panels. Regardless of which cable type is required with LC Plus panels, UTP (unshielded twisted pair) CAT 5e or better Ethernet cable must be used for the P3 link in an installation with upgraded standard LC panels.

A Martin P3-100™ System Controller will recognize the upgraded LC panel and show its panel type in the P3-100™ System Controller's user interface. Refer to the LC Plus Safety and Installation Guide and the P3-100 System Controller user manual for configuration and operating instructions.

Warning! You must continue to refer to the standard LC Panel user manual (originally supplied with the product and available for download free of charge from www.martin.com) for safety precautions as well as physical and electrical installation details.

Important! Use UTP CAT 5e or better cable to create the P3 video data link for standard LC panels that have been upgraded with the P3 Upgrade Kit.