# ERA 800 Performance
# ERA 800 Profile

## User Guide

**Martin**®
by HARMAN

**User Documentation update information**

Any important changes in the ERA 800 Performance / Profile User Guide are listed below.

**Revision E**

Updated to include ERA 800 Profile.

**Revision D**

Covers firmware version 2.3.0. Theater Mode added. Calibration settings management improved. Minor corrections to control panel menus.

**Revision C**

Not released. Revisions go from B directly to D in order to stay parallel with Safety and Installation Manual.

**Revision B**

Zoom control via DMX corrected: operates from narrow to wide as DMX values are increased.

**Revision A**

First version released. Covers ERA 800 Performance firmware version 1.1.0

**ERA 800 Performance / Profile User Guide, P/N 5124284-00 Rev. E**

# Contents

# Introduction

⚠️ *Warning! Before installing, operating or servicing the ERA 800 Performance / Profile, read the latest version of the product's Safety and Installation Manual, paying particular attention to the Safety Precautions section. The Safety and Installation Manual is supplied with the fixture. The latest version is also available for download from the ERA 800 Performance / Profile area of the Martin® website at www.martin.com.*

This User Guide is a supplement to the Installation and Safety Manual that is supplied with the ERA 800 Performance / Profile. Both these documents are available for download from the ERA 800 Performance / Profile area of the Martin website at www.martin.com. This User Guide contains information that is mainly of interest for lighting designers and operators, whereas the Safety and Installation Manual contains important information for all users, especially installers and technicians.

We recommend that you check the Martin website regularly for updated documentation, because we publish revised versions each time we can improve the quality of the information we provide and each time we release new firmware with changes or new features. Each time we revise this guide we list any important changes on page 2 so that you can keep track of updates.

### ERA 800 Performance and Profile models

The ERA 800 Performance and ERA 800 Profile fixtures share the effects described in this user guide apart from one difference – the ERA 800 Performance has a four-blade rotating framing module while the ERA 800 Profile has an additional rotating gobo wheel with six rotating gobos.

Spare parts available from Martin let you convert fixtures from ERA 800 Performance to ERA 800 Profile and vice versa. You can find details of the parts required and the conversion procedure in the ERA 800 Performance / Profile Safety and Installation Manual.

From firmware version 2.3.0, the same firmware is installed in the ERA 800 Performance and ERA 800 Profile. When running version 2.3.0 or later, the fixture automatically recognizes its physical configuration (Performance or Profile) and adapts its DMX protocol, control panel menus and RDM PIDs to match the correct fixture type. The fixture type appears in the control panel display at startup and can be called up in the INFORMATION menu in the control panel at any time.

ERA 800 Profile fixtures feature a lithium battery that can power the control panel, letting you set up the fixture without being connected to mains power. A fully charged battery can hold a charge for up to 3 months. Connecting a fixture that has been in storage or a new fixture to mains power for at least two hours will fully charge the battery.

# Operating the fixture

Before applying power to or operating the ERA 800 Performance / Profile:
- Read the 'Safety Information' section of the fixture's Safety and Installation Manual.
- Check that the installation is safe and secure.
- Check that the base is fastened securely so that the torque reaction when the head moves will not cause the base to move.
- Check that the head tilt lock is released.
- Be prepared for the fixture to light up suddenly. Check that no-one is looking at the fixture from close range.
- Be prepared for the head to move suddenly. Check that there will be no risk of collision with persons or objects.

The ERA 800 Performance / Profile does not have an On/Off switch. To apply power to the fixture, apply power to the power input cable. The fixture's Neutrik powerCON TRUE1 connectors can also be connected live or under load.

# Effects

This section gives details of the effects available in the ERA 800 Performance / Profile. See the DMX protocol table on page 18 for a list of channels and commands used to control the effects via DMX.

Where fine control is available, the main control channel sets the first 8 bits (the most significant byte or MSB), and the fine channels set the second 8 bits (the least significant byte or LSB) of the 16-bit control byte. In other words, the fine channel works within the position set by the coarse channel.

## Shutter and strobe effects

The ERA 800 Performance / Profile's electronic shutter effect provides instant blackout and snap open as well as regular or random strobe and pulse effects with variable speed from approx. 1Hz to 20 Hz.

## Dimming

Smooth 0-100% overall dimming is available with 16-bit control resolution. Four dimming curves are available (see Figure 7 on page 14).

## Color mixing

The ERA 800 Performance / Profile features dichroic CMY color filters, with 16-bit continuous color mixing available on six DMX channels.

## Color temperature control

16-bit color temperature control is available on two dedicated CTO channels. You can adjust the fixture's color temperature smoothly and continuously from 6500 K to 2700 K.

## Color wheel

The ERA 800 Performance / Profile provides a color wheel that lets you select from six dichroic color filters plus open (see Figure 1).

The color wheel can be scrolled continuously with variable speed and direction.

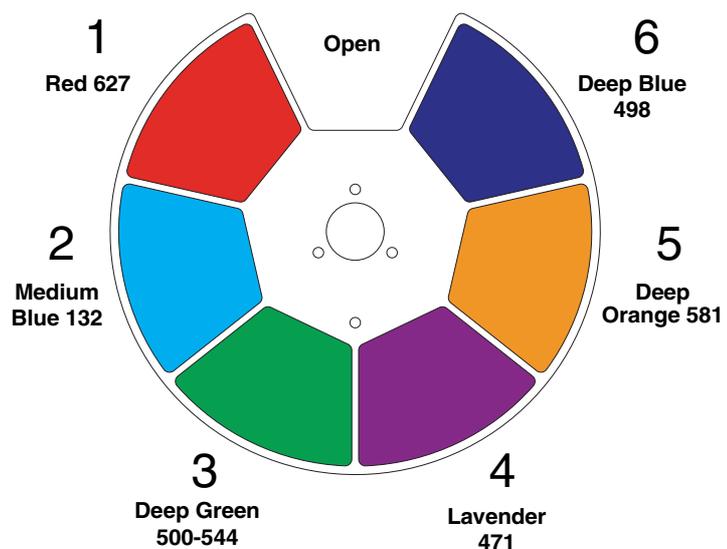All color filters are interchangeable.



**Figure 1: Color wheel**

# Rotating gobos

The ERA 800 Performance has one rotating gobo wheel (Gobo Wheel 1) and a rotating framing effect, while the ERA 800 Profile has two rotating gobo wheels (Gobo Wheel 1 and Gobo Wheel 3) and no framing effect.

The gobos on Gobo Wheel 3 in the ERA 800 Profile have the same dimensions and specifications as those on Gobo Wheel 1 and are therefore interchangeable, but the goboholders on the two gobo wheels are slightly different and are not interchangeable.

A CRI (color rendering index) boost filter is available from Martin as an accessory (see the product specifications at www.martin.com). If you replace one of the gobos with the CRI boost filter, you can obtain a CRI of over 80.

Martin is making parts available that allow you to convert between Performance and Profile models by swapping Gobo Wheel 3 and framing modules. See the ERA 800 Performance / Profile Safety and Installation Manual for details.

### Gobo Wheel 1

Gobo Wheel 1 in the ERA 800 Performance / Profile has six rotating gobos that can be selected, indexed (positioned at an angle), rotated continuously and shaken (bounced). The gobo wheel itself can also be scrolled continuously or shaken. Gobo selection and control type (indexing, continuous gobo rotation, gobo shake or continuous gobo wheel scrolling) are selected on channel 13. Depending on what is selected on this channel, the gobo indexed angle or gobo rotation speed are set on channels 14 and 15 with 16-bit control resolution.

The standard gobos are shown in the correct order in Figure 2. All gobos are interchangeable except Gobo 3 (Limbo), which is fused glass and is glued into a special goboholder. The ERA 800 Performance / Profile Safety and Installation Guide contains details of gobo replacement procedures.



| 1 | 2 | 3 | 4 | 5 | 6 |



*Rotating gobo wheel seen from LED side*
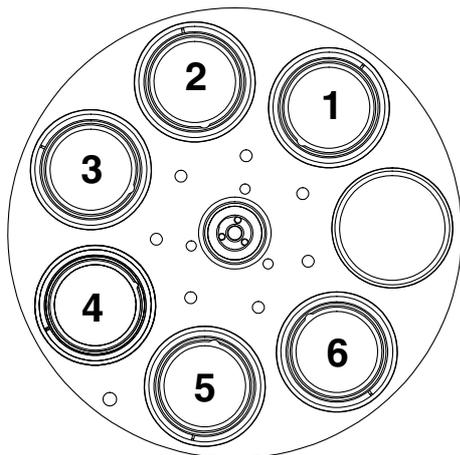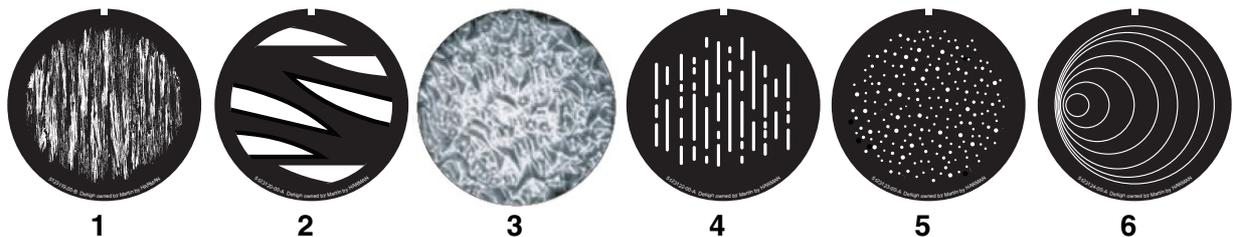
| Slot - Gobo | Part number |
| --- | --- |
| 1. Ray Brush | P/N 5123119-00 |
| 2. Too Many Doctors | P/N 5123120-00 |
| 3. Limbo (fused glass) | P/N 5123121-00 |
| 4. Light Lines | P/N 5123122-00 |
| 5. Dots in Space | P/N 5123123-00 |
| 6. Sonar | P/N 5123124-00 |

**Figure 2: Rotating gobos installed as standard**

## Gobo Wheel 3 (ERA 800 Profile)

Gobo Wheel 3 in the ERA 800 Profile has six rotating gobos that can be selected, indexed (positioned at an angle), rotated continuously and shaken (bounced). The gobo wheel itself can also be scrolled continuously or shaken. Gobo Wheel 3 selection and control type (indexing, continuous gobo rotation, gobo shake or continuous gobo wheel scrolling) are selected on channel 17. Depending on what is selected on this channel, the gobo indexed angle or gobo rotation speed are set on channels 18 and 19 with 16-bit control resolution.

The standard gobos are shown in the correct order in Figure 3. All gobos are interchangeable. The ERA 800 Performance / Profile Safety and Installation Guide contains details of gobo replacement procedures.
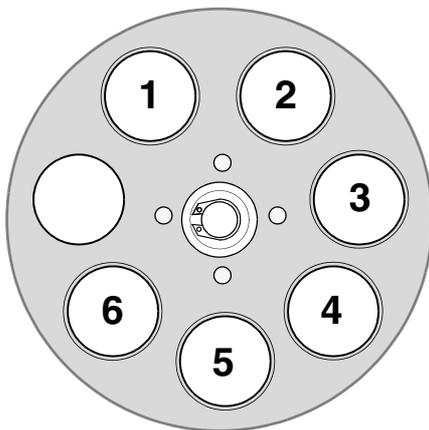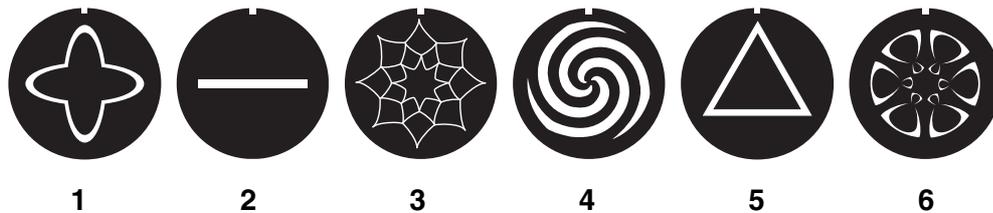




| Slot - Gobo | Part number |
|---|---|
| 1. 4D Cone | P/N 5127163-00 |
| 2. Bar | P/N 5127164-00 |
| 3. Spidey 1 | P/N 5127165-00 |
| 4. Spiral | P/N 5127166-00 |
| 5. Triangle | P/N 5127167-00 |
| 6. Bite It | P/N 5127168-00 |

*Gobo Wheel 3 seen from LED light source side*

**Figure 3: Rotating gobos installed on Gobo Wheel 3 as standard**

# Static gobos

The static gobo wheel in the ERA 800 Performance / Profile has seven static gobos. The static gobo wheel can be scrolled continuously or shaken. Gobo selection and control type (indexing, continuous gobo rotation, gobo shake or continuous gobo wheel scrolling) are selected on channel 6. Depending on what is selected on this channel, the gobo indexing angle or gobo rotation speed are set on channels 7 and 8, where 16-bit control is available.

The standard gobos are shown in the correct order in Figure 4.
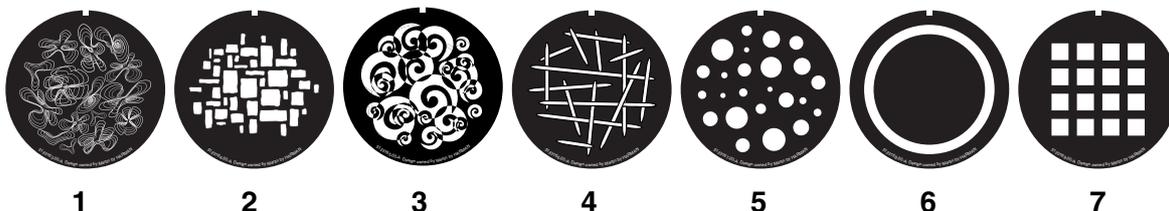


| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| Slot - Gobo | Part number |
|---|---|
| 1. Ray Flowers | P/N 5123163-00 |
| 2. Brick It | P/N 5123164-00 |
| 3. Happy | P/N 5123165-00 |
| 4. Mikado | P/N 5123166-00 |
| 5. Dots | P/N 5123167-00 |
| 6. Lasercone Single | P/N 5123168-00 |
| 7. Squares | P/N 5123169-00 |
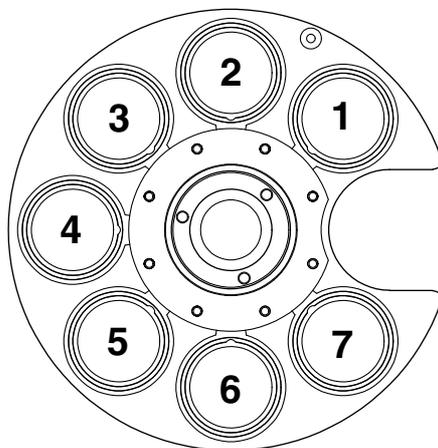


*Static gobo wheel seen from LED side*

**Figure 4: Static gobos installed as standard**

Static gobos may be replaced by Martin Global Service or its authorized agents only.

# Animation wheel

The ERA 800 Performance / Profile is supplied with the "Radial Breakup" animation wheel installed. The wheel can be used to add animation effects to gobo projections.

When using gobo animation, adjust the fixture's focus to obtain the most realistic results.

# Frost

The ERA 800 Performance / Profile has two frost effects: a soft and a heavy frost. You can use the frost filters to give wash-type projections and soften gobo outlines.

# Rotating prisms

The ERA 800 Performance / Profile has two rotating prisms: one four-facet circular prism and one six-facet linear prism. Both prisms can be inserted into the beam at indexed angles or rotated with variable direction and speed.

**Figure 5: 'Radial Breakup' animation wheel**

# Iris

The iris diameter can be varied continuously from fully open to almost closed. Opening and closing pulse effects with variable speed are also available.

# Framing (ERA 800 Performance)

The 4-blade framing module in the ERA 800 Performance can be rotated to an indexed position within a total range of 120°.

The framing blades have independent control of angle and amount of insertion for each blade. By adjusting these parameters you can form the beam into any shape with three or four sides.

# Zoom and focus

Adjusting focus lets you vary the sharpness of projected images at different distances. It can be particularly effective when used together with gobos and the animation wheel.

The ERA 800 Performance / Profile's zoom lens varies the focused beam angle from 7° to 56°. Wide zoom angles allow sharp focus on projection surfaces close to the fixture. At narrower zoom angles, sharp focus is only possible further from the fixture.

Long-range focus can always be set to infinity.

# Pan and tilt

The ERA 800 Performance / Profile offers 540° of pan and 260° of tilt.

16-bit pan and tilt control are available. In each case, the second (LSB) DMX channel adjusts the position set on the first (MSB) channel.

# Control panel

You can configure individual fixture settings (such as the fixture's DMX address), read out data, execute service operations and view error messages using the fixture's backlit graphic display and control panel.
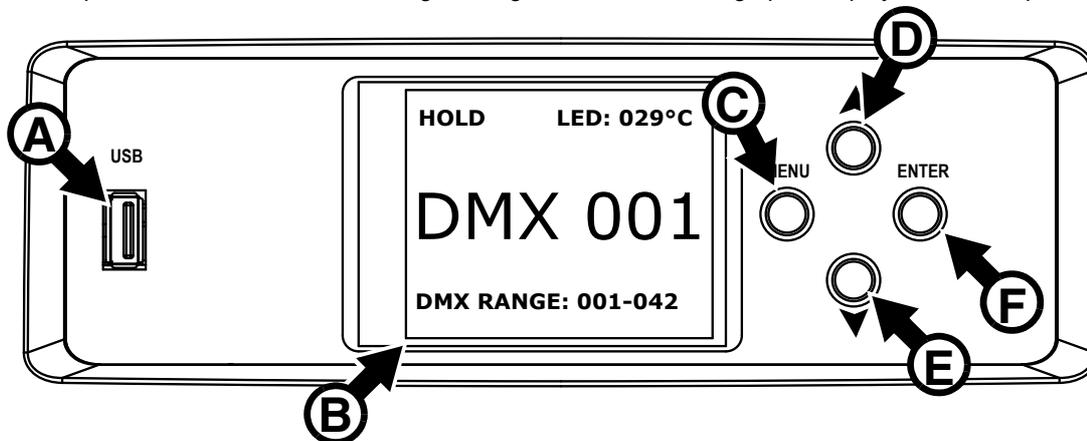


A - USB port
B - LCD display
C - Menu button

D - Up button
E- Down button
F - Enter button

**Figure 6: Display and control panel**

When the fixture is powered on, it boots and carries out a reset. Then it shows the default information display shown in Figure 6:

- Fixture's DMX address
- 'No data' mode setting (in Figure 6 it is set to HOLD)
- Current LED temperature sensor reading.
- DMX channels occupied by the fixture. If the DMX address is set to 001, for example, an ERA 800 Performance fixture will occupy channels 001–042.

## Status messages

If the fixture has registered any error or warning messages while it boots, the display will show a red warning triangle. Press the ENTER button to see the messages.

## Display appearance

The display flashes if no DMX signal is being received.

The display enters sleep mode and blacks out after 60 seconds with no activity. If you want to see the display of a fixture that is hanging in a rig, for example, you can bring it out of sleep mode remotely by sending a 'Display ON' command on the Control / Settings DMX channel.

The display can be rotated to match standing or hanging fixture orientation in the **PERSONALITY** → **DISPLAY** menu.

## Using the control panel

- Press the Menu button **C** or Enter button **F** to access the menus.
- Use the Up and Down buttons **D** and **E** to scroll up and down menus.
- Press the Enter button **F** to enter a menu or make a selection.
- The currently selected item in a menu is indicated by a star ✳ .
- Press the Menu button **C** to step backwards through the menus.

## Key combination shortcuts

The following control panel key combinations have special functions:

- Hold the MENU button pressed in – opens a shortcut menu with two menu items:
  - **RESET ALL**
  - **ROTATE DISPLAY**
- Hold the MENU button pressed in and press the UP button – makes the fixture carry out a reset.
- Hold both the MENU and ENTER buttons pressed in when you apply power to the fixture – puts the fixture into Service mode (pan and tilt motors powered off, head can be moved freely by hand). To take the fixture out of Service mode, power the fixture off and then apply power normally.
- Hold both the UP button pressed in and press the DOWN button – rotates the display 180°.

## Settings stored permanently

The following settings are stored permanently in the fixture memory and are not affected by powering the ERA 800 Performance / Profile off and on or by updating the fixture software:

- DMX address
- Fixture ID
- All personality settings (pan/tilt, cooling mode, dimming curve, display settings etc.)
- Resettable counters
- Service settings

## Using the control panel on battery power (ERA 800 Profile)

The ERA 800 Profile contains a lithium battery that lets you use the control panel to set up the fixture even when it is not connected to mains power.

All the main setup options in the control panel are accessible on battery power but the **DMX LIVE** and **MANUAL CONTROL** menus are not available.

# Control options

## DMX

The ERA 800 Performance / Profile accepts a DMX-512A data signal.

### DMX setup

The DMX address, also known as the start channel, is the first channel used to receive instructions from the controller. For independent control, each fixture must be assigned its own control channels. If you give two fixtures of the same type the same address, they will behave identically. Address sharing can be useful for diagnostic purposes and symmetrical control, particularly when combined with the inverse pan and tilt options.

DMX addressing is limited to make it impossible to set the DMX address so high that you are left without enough control channels for the fixture.

To set the fixture's DMX address:

1. Press Menu to open the main menu. Scroll to **DMX SETUP**.
2. Press Enter to enter the **DMX ADDRESS** menu, then scroll to the desired address and press Enter to save.
3. Press Menu to exit.

## RDM

The ERA 800 Performance / Profile can communicate using RDM (Remote Device Management) in accordance with ESTA's *American National Standard E1.20-2010*.

RDM is a bi-directional communications protocol for use in DMX512 control systems, it is the open standard for DMX512 device configuration and status monitoring.

The RDM protocol allows data packets to be inserted into a DMX512 data stream without affecting existing non-RDM equipment. It allows a console or dedicated RDM controller to send commands to and receive messages from specific fixtures.

Note that a firmware update can sometimes expand a fixture's RDM functionality. If this happens, the firmware release notes will give details.

### RDM ID

Each ERA 800 Performance / Profile has a factory-set RDM UID (unique identification number) that makes it addressable and identifiable in RDM systems. The number can be found in the control panel **INFORMATION** menu under **RDM UID**.

### Supported RDM PIDs

The ERA 800 Performance / Profile supports the standard RDM PIDs (Parameter IDs) required by ESTA plus two manufacturer-specific PIDs that:

• Set how the fixture behaves if the DMX signal is lost
• Select from one of the four available dimming curves.

See the following tables.

# Standard RDM Parameter IDs

| GET allowed | SET allowed | RDM parameter IDs | Notes |
|:-:|:-:|---|---|
| **Network Management** | | | |
| | | DISC_UNIQUE_BRANCH | |
| | | DISC_MUTE | |
| | | DISC_UN_MUTE | |
| **Status Collection** | | | |
| ✓ | | QUEUED_MESSAGE | |
| ✓ | | STATUS_MESSAGES | |
| ✓ | | STATUS_ID_DESCRIPTION | |
| | ✓ | CLEAR_STATUS_ID | |
| **RDM Information** | | | |
| ✓ | | SUPPORTED_PARAMETERS | |
| **Product information** | | | |
| ✓ | | DEVICE_INFO | |
| ✓ | | DEVICE_MODEL_DESCRIPTION | |
| ✓ | | MANUFACTURER_LABEL | |
| ✓ | ✓ | DEVICE_LABEL | |
| ✓ | | SOFTWARE_VERSION_LABEL | |
| ✓ | | BOOT_SOFTWARE_VERSION_ID | |
| ✓ | | COMMS_STATUS | |
| **DMX Setup** | | | |
| ✓ | ✓ | DMX_PERSONALITY | |
| ✓ | | DMX_PERSONALITY_DESCRIPTION | |
| ✓ | ✓ | DMX_START_ADDRESS | |
| **Sensors** | | | |
| ✓ | | SENSOR_DEFINITION | |
| ✓ | | SENSOR_VALUE | |
| **Usage information** | | | |
| ✓ | ✓ | DEVICE_HOURS | |
| **Configuration** | | | |
| ✓ | ✓ | PAN_INVERT | |
| ✓ | ✓ | TILT_INVERT | |
| **Control** | | | |
| ✓ | ✓ | IDENTIFY_DEVICE | |
| | ✓ | RESET_DEVICE | |

# Manufacturer-specific RDM Parameter IDs

| GET allowed | SET allowed | RDM parameter ID's (slot 21-22) | Notes |
|:-:|:-:|---|---|
| **Fixture behavior** | | | |
| | ✓ | LAST_STATE (0XA004) | Behavior if loss of DMX signal. Set to: <br> 00 BLACKOUT <br> 01 HOLD |
| | ✓ | DIMMER_CURVE (0X0343) | Set dimming curve to: <br> 00 LINEAR <br> 01 SQUARE LAW <br> 02 INV SQ LAW <br> 03 S-CURVE |

# Fixture setup

The onboard control panel (see "Effects" on page 5) and the Control / settings DMX channel let you configure the fixture via a range of fixture settings.

## Fixture ID

The ERA 800 Performance / Profile lets you set a four-digit ID number to ease identification of the fixtures in an installation. When a fixture is powered on for the first time, it displays its DMX address by default. As soon as you set an ID number other than **0** in **FIXTURE ID**, the ERA 800 Performance / Profile will display this ID number by default, and indicate **FIXTURE ID** in the display.

## Personality

The ERA 800 Performance / Profile provides several options that let you optimize the fixture for different applications in the **PERSONALITY** menu:

- **PAN INVERSE** and **TILT INVERSE** let you invert the direction of pan and tilt movement. This can be a fast way of setting symmetrical action in multiple fixtures with no need to reprogram cues.

- **PAN/TILT SPEED** lets you set pan and tilt movement to **FAST** (optimized for speed) or **SLOW** (optimized for smooth movement – useful for slow movements in long-throw applications).
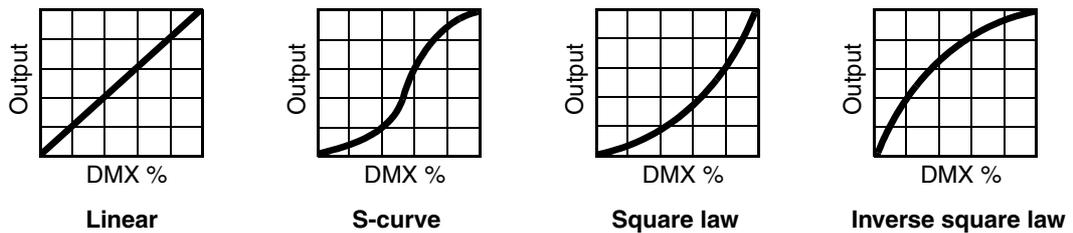


**Figure 7: Dimming curve options**

- **DIMMER CURVE** provides four dimming options (see Figure 7) that you can scroll through in the selection pane:
  - **LINEAR** – (optically linear) the increase in light intensity appears to be linear as DMX value is increased.
  - **S-CURVE** – light intensity control is finer at low levels and high levels and coarser at medium levels. This curve emulates the RMS voltage dimming characteristics of an incandescent lamp such as the tungsten halogen lamp of the Martin™ MAC TW1™.
  - **SQUARE LAW** – light intensity control is finer at low levels and coarser at high levels.
  - **INV SQUARE LAW** – light intensity control is coarser at low levels and finer at high levels.

- **DIMMING SPEED** lets you select a speed for reactions to changes in dimming level. At the **FAST** setting, the fixture reacts immediately to any change in dimming level and snaps to the new level. At the **SLOW** setting, the fixture will always carry out a short, smooth fade from one dimming level to the next.

- **NO DATA MODE** defines how the fixture reacts if it is powered on but not receiving a DMX signal (for example, if the DMX signal is lost during a show). If set to **BLACKOUT**, the fixture will black out. If set to **HOLD**, the fixture will hold all the last DMX values that it received and continue to show its current scene. It will continue to show this scene until it receives new DMX signals or it is powered off.

- **COOLING MODE** lets you select between three cooling fan options:
  - **REGULATED FANS** optimizes cooling fan operation for light output. It controls fixture temperature by varying cooling fan speed up to the maximum speed available and does not limit light intensity provided that the ambient temperature does not exceed the specified maximum of 40° C (104° F).
  - **FULL** optimizes cooling fan operation for the lowest possible temperature by setting cooling fans to run constantly at full speed.
  - **THEATER MODE** optimizes the fixture to obtain the lowest possible noise levels. It limits maximum light output to 70% of the normal maximum level, it sets cooling fans to run at **REGULATED** speed (see above) and it sets the LED PWM frequency to 19 200 Hz.
- **DISPLAY** offers the following options for the LCD display:
  - **DISPLAY ROTATION** lets you rotate the display manually through 180° so that it can be read easily no matter how the fixture is oriented.
  - **DISPLAY INTENSITY** lets you adjust the brightness of the display backlighting by setting the intensity to a level from 10% to 100%.
  - **TEMPERATURE UNIT** lets you choose whether the fixture should display all temperature readings in Celsius or Fahrenheit.

# Factory defaults

**DEFAULT SETTINGS** lets you reload the fixture's factory default settings. Effect calibration settings are not affected, but all other user settings are returned to factory defaults.

# Test sequences

The **FIXTURE TEST** menu lets you test:

- all the fixture's effects
- dimming functionality
- each individual mechanical effect, or
- pan and tilt only.

Before you run a test, prepare for the head to move and the fixture to light up suddenly without warning.

To run a test:

- In the **FIXTURE TEST** menu, scroll to **TEST ALL**, **TEST DIMMER**, **TEST EFFECTS** or **TEST PAN/TILT** and press Enter.
- In the **TEST EFFECTS** menu, scroll to the effect you want to test and press Enter to start a test sequence for that effect.
- In the **TEST PAN/TILT** menu, choose **PAN** or **TILT**, make sure that the fixture is held securely and that there is no danger of the head colliding, then press Enter to start the test sequence.
- Press Menu to stop the test sequence.

# Fixture information readouts

The following fixture information can be called up in the display:

- **POWER ON TIME** is a non user-resettable counter that displays total hours the fixture has been powered on since manufacture.

- **LED HOURS** is a non user-resettable counter that displays total hours the LEDs have been powered on since manufacture.

- **SW VERSION** displays the currently installed firmware (fixture software) version.

- **FIXTURE ID** lets you set a custom four-digit ID number for the fixture.

- **RDM UID** displays the fixture's factory-set unique ID for identification in RDM systems.

- **TEMPERATURES** displays the current PCB temperature readouts for the fixture's base and LED array.

- **FIXTURE TYPE** displays the current fixture configuration: ERA 800 Performance or ERA 800 Profile. If you convert the fixture by removing the Performance's framing module and replacing it with the Profile's Gobo Wheel 3 module, for example, the fixture will automatically detect the new module and switch to the

ERA 800 Profile fixture type. It will adapt its DMX control functions to match the Gobo Wheel 3 module. The FIXTURE TYPE readout lets you check which module is installed (or check that the fixture has updated itself after you have carried out a conversion).

# DMX signal monitoring

The **DMX LIVE** menu lets you scroll through all the fixture's DMX channels and display the DMX values from 0 - 255 that are being received on each channel.

# Manual control

The **MANUAL CONTROL** menu lets you reset the ERA 800 Performance / Profile and operate the fixture without a DMX controller.

To execute commands in the **MANUAL CONTROL** menu, select the effect that you want to control, then enter a value from 0 to 255 to apply a command. The menu items and values correspond to the commands listed in the DMX protocol in this User Manual.

When you exit the **MANUAL CONTROL** menu, the fixture reverts to default positions and settings.

# Service

Servicing the fixture and the contents of the **SERVICE** menu are covered in the ERA 800 Performance / Profile Safety and Installation Manual supplied with fixtures and available for download from the product pages on the Martin website at www.martin.com.

# Adjusting settings via DMX

Certain fixture settings and parameters can be adjusted from the DMX controller on Channel 42, the Fixture control/settings channel.

Commands sent on the fixture control channel override any settings entered in the fixture's onboard control menus.

To help you avoid accidentally applying a setting that may disrupt a light show, for example, the commands must be held for a certain time before they are applied. For example, the command that turns off the display illumination must be held for one second to activate it. The command that resets the fixture must be held for five seconds to activate it. The DMX protocol table in this user manual gives details of times required.

## Resetting

Either the entire fixture or individual effects can be reset to their initial positions. Resetting individual effects can allow on-the-fly recovery if an effect loses its correct position, for example, without having to reset the entire fixture.

## Illuminating the display

The fixture's display panel can be set to ON or OFF with a DMX command. This makes it possible to read the fixture's DMX address while the fixture is installed in the rig but black out the display panel during a show.

If the display is set to ON via DMX, it will enter sleep mode and black out after a short period of inactivity. To bring it out of sleep mode, set the display to ON again via DMX.

## Control menu setting overrides

The following fixture settings can be adjusted via DMX, overriding the settings entered in the onboard control menus. Changes to these settings are not affected by cycling power off and on.
- Dimming curve
- Pan and tilt speed
- Cooling mode

See the Control/Settings channels in the DMX protocols later in this User Guide for full details of the options available.

# DMX protocol

This chapter lists the DMX control commands implemented in firmware version 2.3.0. The fixture recognizes automatically its physical configuration (Performance or Profile) and adapts its DMX protocol to match the correct fixture type.

## ERA 800 Performance

| Channel | DMX Value | Function | Fade type | Default value |
|---|---|---|---|---|
| 1 | 0 - 21<br>22 - 24<br>25 - 64<br>65 - 69<br>70 - 84<br>85 - 89<br>90 - 104<br>105 - 109<br>110 - 124<br>125 - 129<br>130 - 144<br>145 - 255 | **Strobe/shutter effect**<br>Shutter closed<br>Shutter open<br>Strobe, slow → fast<br>Shutter open<br>Opening pulse, slow → fast<br>Shutter open<br>Closing pulse, slow → fast<br>Shutter open<br>Random strobe, slow → fast<br>Shutter open<br>Random opening pulse, slow → fast<br>Shutter open | Snap | 0 |
| 2 | 0 - 65535 | **Dimmer fade (MSB)**<br>Closed → open | Fade | 0 |
| 3 | | **Dimmer fade, fine (LSB)** | Fade | 0 |
| 4 | 0 - 65535 | **Cyan (MSB)**<br>0 → 100% | Fade | 0 |
| 5 | | **Cyan fine (LSB)**<br>0 → 100% | Fade | 0 |
| 6 | 0 - 65535 | **Magenta (MSB)**<br>0 → 100% | Fade | 0 |
| 7 | | **Magenta fine (LSB)**<br>0 → 100% | Fade | 0 |
| 8 | 0 - 65535 | **Yellow (MSB)**<br>0 → 100% | Fade | 0 |
| 9 | | **Yellow fine (LSB)**<br>0 → 100% | Fade | 0 |
| 10 | 0 - 65535 | **CTO (MSB)**<br>0 → 100% | Fade | 0 |
| 11 | | **CTO fine (LSB)**<br>0 → 100% | Fade | 0 |

**Table 1: ERA 800 Performance DMX Protocol**

| Channel | DMX Value | Function | Fade type | Default value |
|---|---|---|---|---|
| **12** | | **Color wheel** | Fade | 0 |
| | | **Indexing** | | |
| | | *Solid colors* | | |
| | 0 - 6 | Open | | |
| | 7 - 13 | Color 1 (Red) | | |
| | 14 -20 | Color 2 (Medium Blue) | | |
| | 21 - 27 | Color 3 (Deep Green) | | |
| | 28 - 34 | Color 4 (Lavender) | | |
| | 35 - 41 | Color 5 (Deep Orange) | | |
| | 42 - 48 | Color 6 (Deep Blue) | | |
| | | *Split colors (continuous color wheel indexing)* | | |
| | 49 - 51 | Open | | |
| | 52 - 61 | Open → Color 1 | | |
| | 62 | Color 1 (Red) | | |
| | 63 - 72 | Color 1 → Color 2 | | |
| | 73 | Color 2 (Medium Blue) | | |
| | 74 - 83 | Color 2 → Color 3 | | |
| | 84 | Color 3 (Deep Green) | | |
| | 85 - 94 | Color 3 → Color 4 | | |
| | 95 | Color 4 (Lavender) | | |
| | 96 - 105 | Color 4 → Color 5 | | |
| | 106 | Color 5 (Deep Orange) | | |
| | 107 - 116 | Color 5 → Color 6 | | |
| | 117 | Color 6 (Deep Blue) | | |
| | 118 - 127 | Color 6 → open | | |
| | | **Continuous rotation** | | |
| | 128 - 190 | CW, fast → slow | | |
| | 191 - 192 | Stop (wheel stops at current position) | | |
| | 193 - 255 | CCW slow → fast | | |
| **13** | | **Gobo wheel 1 (rotating gobos)** | Snap | 0 |
| | | **Gobo selection** | | |
| | 0 - 6 | Open | | |
| | 7 - 13 | Gobo 1 (Ray Brush) | | |
| | 14 -20 | Gobo 2 (Too Many Doctors) | | |
| | 21 - 27 | Gobo 3 (Limbo) | | |
| | 28 - 34 | Gobo 4 (Light Lines) | | |
| | 35 - 41 | Gobo 5 (Dots in Space) | | |
| | 42 - 48 | Gobo 6 (Sonar) | | |
| | 49 - 55 | Gobo 1 shake | | |
| | 56 - 62 | Gobo 2 shake | | |
| | 63 - 69 | Gobo 3 shake | | |
| | 70 - 76 | Gobo 4 shake | | |
| | 77 - 83 | Gobo 5 shake | | |
| | 84 - 90 | Gobo 6 shake | | |
| | | **Continuous gobo wheel rotation** | | |
| | 91 - 171 | CCW fast → slow | | |
| | 172 - 174 | Stop (wheel stops at current position) | | |
| | 175 - 255 | CW slow → fast | | |
| **14** | | **Gobo wheel 1** | Snap | 0 |
| | | **Gobo indexing/rotation** | | |
| | 0 - 127 | Gobo indexing 0 - 360° | | |
| | 128 - 190 | Gobo rotation CW fast → slow | | |
| | 191 - 192 | Stop | | |
| | 193 - 255 | Gobo rotation CCW slow → fast | | |
| **15** | | **Gobo wheel 1** | Fade | 0 |
| | | **Gobo indexing/rotation fine** | | |
| | 0 - 255 | Indexed position / rotation speed fine | | |

**Table 1: ERA 800 Performance DMX Protocol**

| Channel | DMX Value | Function | Fade type | Default value |
|---|---|---|---|---|
| **16** | | **Gobo wheel 2 (static gobos)** | Snap | 0 |
| | | **Gobo selection** | | |
| | 0 - 6 | Open | | |
| | 7 - 13 | Gobo 1 (Ray Flowers) | | |
| | 14 -20 | Gobo 2 (Brick It) | | |
| | 21 - 27 | Gobo 3 (Happy) | | |
| | 28 - 34 | Gobo 4 (Mikado) | | |
| | 35 - 41 | Gobo 5 (Dots) | | |
| | 42 - 48 | Gobo 6 (Lasercone Single) | | |
| | 49 - 55 | Gobo 7 (Squares) | | |
| | 56 - 62 | Gobo 1 shake | | |
| | 63 - 69 | Gobo 2 shake | | |
| | 70 - 76 | Gobo 3 shake | | |
| | 77 - 83 | Gobo 4 shake | | |
| | 84 - 90 | Gobo 5 shake | | |
| | 91 - 97 | Gobo 6 shake | | |
| | 98 - 104 | Gobo 7 shake | | |
| | | **Continuous gobo wheel rotation** | | |
| | 105 - 178 | CCW fast → slow | | |
| | 179 - 182 | Stop (wheel stops at current position) | | |
| | 183 - 255 | CW slow → fast | | |
| **17** | | **Animation** | Snap | 0 |
| | 0 - 5 | Open | | |
| | 6 - 128 | Indexing CCW 0° → 540° | | |
| | 129 - 191 | Continuous rotation CW fast → slow | | |
| | 192 | Stop | | |
| | 193 - 255 | Continuous rotation CCW slow → fast | | |
| **18** | 0 - 255 | **Frost 1: Light frost** No frost → full frost | Fade | 0 |
| **19** | 0 - 255 | **Frost 2: Heavy frost** No frost → full frost | Fade | 0 |
| **20** | 0 - 10<br>11 - 255 | **Rotating Prism 1 deployment** Off<br>On | Snap | 0 |
| **21** | 0 - 127<br>128 - 190<br>191 - 192<br>193 - 255 | **Rotating Prism 1 movement** Indexing 0° - 360°<br>Rotation CW fast → slow<br>Stop<br>Rotation CCW slow → fast | Snap | 0 |
| **22** | 0 - 10<br>11 - 255 | **Rotating Prism 2 deployment** Off<br>On | Snap | 0 |
| **23** | 0 - 127<br>128 - 190<br>191 - 192<br>193 - 255 | **Rotating Prism 2 movement** Indexing 0° - 360°<br>Rotation CW fast → slow<br>Stop<br>Rotation CCW slow → fast | Snap | 0 |
| **24** | 0 - 255 | **Iris** Open → closed | Fade | 0 |
| **25** | 0 - 65535 | **Zoom (MSB)** Narrow → wide | Fade | 0 |
| **26** | | **Zoom fine (LSB)** | Fade | 0 |
| **27** | 0 - 65535 | **Focus (MSB)** Infinity → near | Fade | 0 |
| **28** | | **Focus fine (LSB)** | Fade | 0 |
| **29** | 0 - 255 | **Framing blade 1: position** Out → in | Fade | 0 |
| **30** | 0 -126<br>127 - 128<br>129 - 255 | **Framing blade 1: angle** Angle –<br>Parallel<br>Angle + | Fade | 127 |
| **31** | 0 - 255 | **Framing blade 2: position** Out → in | Fade | 0 |

**Table 1: ERA 800 Performance DMX Protocol**

| Channel | DMX Value | Function | Fade type | Default value |
|---|---|---|---|---|
| 32 | 0 -126<br>127 - 128<br>129 - 255 | **Framing blade 2: angle**<br>Angle –<br>Parallel<br>Angle + | Fade | 127 |
| 33 | 0 - 255 | **Framing blade 3: position**<br>Out → in | Fade | 0 |
| 34 | 0 -126<br>127 - 128<br>129 - 255 | **Framing blade 3: angle**<br>Angle –<br>Parallel<br>Angle + | Fade | 127 |
| 35 | 0 - 255 | **Framing blade 4: position**<br>Out → in | Fade | 0 |
| 36 | 0 -126<br>127 - 128<br>129 - 255 | **Framing blade 4: angle**<br>Angle –<br>Parallel<br>Angle + | Fade | 127 |
| 37 | 0 -126<br>127 - 128<br>129 - 255 | **Framing module angle**<br>Minimum (-60°)<br>0°<br>Maximum (+60°) | Fade | 127 |
| 38 | 0 - 65535 | **Pan (MSB)**<br>Left → right | Fade | 32768 |
| 39 | | **Pan, fine (LSB)** | | |
| 40 | 0 - 65535 | **Tilt (MSB)**<br>Up → down | Fade | 32768 |
| 41 | | **Tilt, fine (LSB)** | | |
| 42 | 0 - 9<br>10 - 14<br>15<br>16<br>17<br>18<br>19 - 22<br>23<br><br>24<br><br>25<br><br>26<br><br>27<br>28<br><br>29<br><br>30 - 51<br>52<br>53<br>54<br><br>55<br><br>56<br><br>57 - 255 | **Fixture control/settings**<br>*(hold for number of seconds indicated to activate)*<br>*No function*<br>Reset entire fixture – 5 sec.<br>*No function*<br>Reset color – 5 sec.<br>Reset beam only– 5 sec.<br>Reset pan and tilt only – 5 sec.<br>*No function*<br>Linear dimming curve – 1 sec.<br>(menu override)<br>Square law dimming curve – 1 sec.<br>(menu override, default setting)<br>Inverse square law dimming curve – 1 sec.<br>(menu override)<br>S-curve dimming curve – 1 sec.<br>(menu override)<br>*No function*<br>Fast pan and tilt speed – 5 sec.<br>(menu override, default setting)<br>Smooth pan and tilt speed – 5 sec.<br>(menu override)<br>*No function*<br>Control panel display = ON – 1 sec.<br>Control panel display = OFF – 1 sec.<br>Regulated fan speed, fixed light output intensity – 1 sec.<br>(menu override, default setting)<br>Full fan speed, regulated light output intensity – 1 sec.<br>(menu override)<br>Theater mode: reduced light output, low-noise operation – 1 sec.<br>(menu override)<br>*No function* | Snap | 0 |

**Table 1: ERA 800 Performance DMX Protocol**

# ERA 800 Profile

| Channel | DMX Value | Function | Fade type | Default value |
|---|---|---|---|---|
| **1** | 0 - 21<br>22 - 24<br>25 - 64<br>65 - 69<br>70 - 84<br>85 - 89<br>90 - 104<br>105 - 109<br>110 - 124<br>125 - 129<br>130 - 144<br>145 - 255 | **Strobe/shutter effect**<br>Shutter closed<br>Shutter open<br>Strobe, slow → fast<br>Shutter open<br>Opening pulse, slow → fast<br>Shutter open<br>Closing pulse, slow → fast<br>Shutter open<br>Random strobe, slow → fast<br>Shutter open<br>Random opening pulse, slow → fast<br>Shutter open | Snap | 0 |
| **2** | 0 - 65535 | **Dimmer fade (MSB)**<br>Closed → open | Fade | 0 |
| **3** | | **Dimmer fade, fine (LSB)** | Fade | 0 |
| **4** | 0 - 65535 | **Cyan (MSB)**<br>0 → 100% | Fade | 0 |
| **5** | | **Cyan fine (LSB)**<br>0 → 100% | Fade | 0 |
| **6** | 0 - 65535 | **Magenta (MSB)**<br>0 → 100% | Fade | 0 |
| **7** | | **Magenta fine (LSB)**<br>0 → 100% | Fade | 0 |
| **8** | 0 - 65535 | **Yellow (MSB)**<br>0 → 100% | Fade | 0 |
| **9** | | **Yellow fine (LSB)**<br>0 → 100% | Fade | 0 |
| **10** | 0 - 65535 | **CTO (MSB)**<br>0 → 100% | Fade | 0 |
| **11** | | **CTO fine (LSB)**<br>0 → 100% | Fade | 0 |
| **12** | 0 - 6<br>7 - 13<br>14 -20<br>21 - 27<br>28 - 34<br>35 - 41<br>42 - 48<br><br>49 - 51<br>52 - 61<br>62<br>63 - 72<br>73<br>74 - 83<br>84<br>85 - 94<br>95<br>96 - 105<br>106<br>107 - 116<br>117<br>118 - 127<br><br>128 - 190<br>191 - 192<br>193 - 255 | **Color wheel**<br>**Indexing**<br>*Solid colors*<br>Open<br>Color 1 (Red)<br>Color 2 (Medium Blue)<br>Color 3 (Deep Green)<br>Color 4 (Lavender)<br>Color 5 (Deep Orange)<br>Color 6 (Deep Blue)<br>*Split colors (continuous color wheel indexing)*<br>Open<br>Open → Color 1<br>Color 1 (Red)<br>Color 1 → Color 2<br>Color 2 (Medium Blue)<br>Color 2 → Color 3<br>Color 3 (Deep Green)<br>Color 3 → Color 4<br>Color 4 (Lavender)<br>Color 4 → Color 5<br>Color 5 (Deep Orange)<br>Color 5 → Color 6<br>Color 6 (Deep Blue)<br>Color 6 → open<br>**Continuous rotation**<br>CW, fast → slow<br>Stop (wheel stops at current position)<br>CCW slow → fast | Fade | 0 |

**Table 2: ERA 800 Profile DMX Protocol**

| Channel | DMX Value | Function | Fade type | Default value |
|---|---|---|---|---|
| **13** | | **Gobo wheel 1 (rotating gobos)** | Snap | 0 |
| | | **Gobo selection** | | |
| | 0 - 6 | Open | | |
| | 7 - 13 | Gobo 1 (Ray Brush) | | |
| | 14 -20 | Gobo 2 (Too Many Doctors) | | |
| | 21 - 27 | Gobo 3 (Limbo) | | |
| | 28 - 34 | Gobo 4 (Light Lines) | | |
| | 35 - 41 | Gobo 5 (Dots in Space) | | |
| | 42 - 48 | Gobo 6 (Sonar) | | |
| | 49 - 55 | Gobo 1 shake | | |
| | 56 - 62 | Gobo 2 shake | | |
| | 63 - 69 | Gobo 3 shake | | |
| | 70 - 76 | Gobo 4 shake | | |
| | 77 - 83 | Gobo 5 shake | | |
| | 84 - 90 | Gobo 6 shake | | |
| | | **Continuous gobo wheel rotation** | | |
| | 91 - 171 | CCW fast → slow | | |
| | 172 - 174 | Stop (wheel stops at current position) | | |
| | 175 - 255 | CW slow → fast | | |
| **14** | | **Gobo wheel 1** | Snap | 0 |
| | | **Gobo indexing/rotation** | | |
| | 0 - 127 | Gobo indexing 0 - 360° | | |
| | 128 - 190 | Gobo rotation CW fast → slow | | |
| | 191 - 192 | Stop | | |
| | 193 - 255 | Gobo rotation CCW slow → fast | | |
| **15** | | **Gobo wheel 1** | Fade | 0 |
| | | **Gobo indexing/rotation fine** | | |
| | 0 - 255 | Indexed position / rotation speed fine | | |
| **16** | | **Gobo wheel 2 (static gobos)** | Snap | 0 |
| | | **Gobo selection** | | |
| | 0 - 6 | Open | | |
| | 7 - 13 | Gobo 1 (Ray Flowers) | | |
| | 14 -20 | Gobo 2 (Brick It) | | |
| | 21 - 27 | Gobo 3 (Happy) | | |
| | 28 - 34 | Gobo 4 (Mikado) | | |
| | 35 - 41 | Gobo 5 (Dots) | | |
| | 42 - 48 | Gobo 6 (Lasercone Single) | | |
| | 49 - 55 | Gobo 7 (Squares) | | |
| | 56 - 62 | Gobo 1 shake | | |
| | 63 - 69 | Gobo 2 shake | | |
| | 70 - 76 | Gobo 3 shake | | |
| | 77 - 83 | Gobo 4 shake | | |
| | 84 - 90 | Gobo 5 shake | | |
| | 91 - 97 | Gobo 6 shake | | |
| | 98 - 104 | Gobo 7 shake | | |
| | | **Continuous gobo wheel rotation** | | |
| | 105 - 178 | CCW fast → slow | | |
| | 179 - 182 | Stop (wheel stops at current position) | | |
| | 183 - 255 | CW slow → fast | | |
| **17** | | **Gobo wheel 3 (rotating gobos)** | Snap | 0 |
| | | **Gobo selection** | | |
| | 0 - 6 | Open | | |
| | 7 - 13 | Gobo 1 (4D Cone) | | |
| | 14 -20 | Gobo 2 (Bar) | | |
| | 21 - 27 | Gobo 3 (Spidey 1) | | |
| | 28 - 34 | Gobo 4 (Spiral) | | |
| | 35 - 41 | Gobo 5 (Triangle) | | |
| | 42 - 48 | Gobo 6 (Bite It) | | |
| | 49 - 55 | Gobo 1 shake | | |
| | 56 - 62 | Gobo 2 shake | | |
| | 63 - 69 | Gobo 3 shake | | |
| | 70 - 76 | Gobo 4 shake | | |
| | 77 - 83 | Gobo 5 shake | | |
| | 84 - 90 | Gobo 6 shake | | |
| | | **Continuous gobo wheel rotation** | | |
| | 91 - 171 | CCW, fast → slow | | |
| | 172 - 174 | Stop (wheel stops at current position) | | |
| | 175 - 255 | CW slow → fast | | |

**Table 2: ERA 800 Profile DMX Protocol**

| Channel | DMX Value | Function | Fade type | Default value |
|---|---|---|---|---|
| **18** | 0 - 127<br>128 - 190<br>191 - 192<br>193 - 255 | **Gobo wheel 3**<br>**Gobo indexing/rotation**<br>Gobo indexing 0 - 360°<br>Gobo rotation CW fast → slow<br>Stop<br>Gobo rotation CCW slow → fast | Snap | 0 |
| **19** | 0 - 255 | **Gobo wheel 3**<br>**Gobo indexing/rotation fine**<br>Indexed position / rotation speed fine | Fade | 0 |
| **20** | 0 - 5<br>6 - 128<br>129 - 191<br>192<br>193 - 255 | **Animation**<br>Open<br>Indexing CCW 0° → 540°<br>Continuous rotation CW fast → slow<br>Stop<br>Continuous rotation CCW slow → fast | Snap | 0 |
| **21** | 0 - 255 | **Frost 1: Light frost**<br>No frost → full frost | Fade | 0 |
| **22** | 0 - 255 | **Frost 2: Heavy frost**<br>No frost → full frost | Fade | 0 |
| **23** | 0 - 10<br>11 - 255 | **Rotating Prism 1 deployment**<br>Off<br>On | Snap | 0 |
| **24** | 0 - 127<br>128 - 190<br>191 - 192<br>193 - 255 | **Rotating Prism 1 movement**<br>Indexing 0° - 360°<br>Rotation CW fast → slow<br>Stop<br>Rotation CCW slow → fast | Snap | 0 |
| **25** | 0 - 10<br>11 - 255 | **Rotating Prism 2 deployment**<br>Off<br>On | Snap | 0 |
| **26** | 0 - 127<br>128 - 190<br>191 - 192<br>193 - 255 | **Rotating Prism 2 movement**<br>Indexing 0° - 360°<br>Rotation CW fast → slow<br>Stop<br>Rotation CCW slow → fast | Snap | 0 |
| **27** | 0 - 255 | **Iris**<br>Open → closed | Fade | 0 |
| **28** | 0 - 65535 | **Zoom (MSB)**<br>Narrow → wide | Fade | 0 |
| **29** | | **Zoom fine (LSB)** | Fade | 0 |
| **30** | 0 - 65535 | **Focus (MSB)**<br>Infinity → near | Fade | 0 |
| **31** | | **Focus fine (LSB)** | Fade | 0 |
| **32** | 0 - 65535 | **Pan (MSB)**<br>Left → right | Fade | 32768 |
| **33** | | **Pan, fine (LSB)** | | |
| **34** | 0 - 65535 | **Tilt (MSB)**<br>Up → down | Fade | 32768 |
| **35** | | **Tilt, fine (LSB)** | | |

**Table 2: ERA 800 Profile DMX Protocol**

| Channel | DMX Value | Function | Fade type | Default value |
|---|---|---|---|---|
| **36** | | **Fixture control/settings** | Snap | 0 |
| | | *(hold for number of seconds indicated to activate)* | | |
| | 0 - 9 | *No function* | | |
| | 10 - 14 | Reset entire fixture – 5 sec. | | |
| | 15 | *No function* | | |
| | 16 | Reset color – 5 sec. | | |
| | 17 | Reset beam only– 5 sec. | | |
| | 18 | Reset pan and tilt only – 5 sec. | | |
| | 19 - 22 | *No function* | | |
| | 23 | Linear dimming curve – 1 sec. (menu override) | | |
| | 24 | Square law dimming curve – 1 sec. (menu override, default setting) | | |
| | 25 | Inverse square law dimming curve – 1 sec. (menu override) | | |
| | 26 | S-curve dimming curve – 5 sec. (menu override) | | |
| | 27 | *No function* | | |
| | 28 | Fast pan and tilt speed – 5 sec. (menu override, default setting) | | |
| | 29 | Smooth pan and tilt speed– 5 sec. (menu override) | | |
| | 30 - 51 | *No function* | | |
| | 52 | Control panel display = ON – 1 sec. | | |
| | 53 | Control panel display = OFF – 1 sec. | | |
| | 54 | Regulated fan speed, fixed light output intensity – 1 sec. (menu override, default setting) | | |
| | 55 | Full fan speed, regulated light output intensity – 1 sec. (menu override) | | |
| | 56 | Theater mode: reduced light output, low-noise operation – 1 sec. (menu override) | | |
| | 57 - 255 | *No function* | | |

**Table 2: ERA 800 Profile DMX Protocol**

# Control panel menus

*ERA 800 Performance / Profile firmware version 2.3.0.*

| Menu level 1 | Menu level 2 | Menu level 3 | Menu level 4 | Notes (Default settings in bold print) |
|---|---|---|---|---|
| DMX SETUP | DMX ADDRESS | **1** – XXX | | DMX address (default address = **1**). The DMX address range is limited so that the fixture will always have enough DMX channels within the 512 available. |
| PERSONALITY | PAN INVERSE | **NO**/YES | | Inverse DMX pan control: right → left |
| | TILT INVERSE | **NO**/YES | | Inverse DMX tilt control: down → up |
| | PAN/TILT SPEED | **FAST** | | **Optimize pan/tilt movement for speed** |
| | | SLOW | | Optimize pan/tilt movement for smoothness |
| | DIMMER CURVE | LINEAR | | Optically linear dimming curve |
| | | **SQUARE LAW** | | **Square law dimming curve** |
| | | INV SQ LAW | | Inverse square law dimming curve |
| | | S-CURVE | | S-curve (fixture emulates incandescent lamp voltage linear RMS dimming curve) |
| | DIMMING SPEED | **FAST** | | **Snap dimmer reaction** |
| | | SLOW | | Short crossfade when dimmer value changes |
| | NO DATA MODE | BLACKOUT | | If data signal stops, fixture blacks out |
| | | **HOLD** | | **If data signal stops, fixture holds last received data on all channels (holds current scene)** |
| | COOLING MODE | **REGULATED FANS** | | **Fan speed optimized for light intensity: temperature-controlled by regulating fan speed, light output unaffected as long as ambient temperature is within specified range, max. 40° C (104° F)** |
| | | FULL | | Fans run at constant full speed |
| | | THEATER MODE | | Low-noise mode. Maximum output limited to 70%, fans set to **Regulated**, PWM frequency set to 19 200 Hz. |
| | DISPLAY | DISPLAY ROTATION | **NORMAL** / ROTATE 180 | Display orientation **normal** or rotated 180° |
| | | DISPLAY INTENSITY | 10 ... **100 %** | Set display intensity in % (default = **100**) |
| | | TEMPERATURE UNIT | **°C** / °F | Set temperature readouts to display in Celsius / Fahrenheit |
| DEFAULT SETTINGS | FACTORY DEFAULT | LOAD | ARE YOU SURE? YES/NO | Return all settings (except calibrations) to factory defaults |
| FIXTURE TEST | TEST ALL | TESTING | | Run test sequence of all LEDs and all effects |
| | TEST DIMMER | DIMMER | | Run dimming test sequence. Press Enter to pause and to restart test sequence. Press Menu button to exit test |
| | TEST EFFECTS | CYAN ... BLADE 4 ANGLE | | Run test sequence of effects. To test a specific effect, use Up/Down buttons to scroll to effect. Press Enter to pause and restart test sequence. Press Menu button to exit test |
| | TEST PAN/TILT | PAN | | Run test sequence of pan functions. Press Menu button to exit test |
| | | TILT | | Run test sequence of tilt functions. Press Menu button to exit test |

**Table 3: Control menus**

| Menu level 1 | Menu level 2 | Menu level 3 | Menu level 4 | Notes (Default settings in bold print) |
|---|---|---|---|---|
| INFORMATION | POWER ON TIME | 0 ... XXXH | | Display number of hours fixture has been powered on since manufacture (not user-resettable) |
| | LED HOURS | 0 ... XXXH | | Display number of hours LEDs have been powered on since manufacture (not user-resettable) |
| | SW VERSION | V.X.X.X | | Displays currently active fixture software (firmware) version |
| | FIXTURE ID | 0000 - 9999 | | User-settable ID number. Use Up and Down buttons to scroll to the chosen ID number. Use Enter to confirm. |
| | RDM UID | 4D50XXXXXXXX | | Displays fixture's unique RDM ID |
| | TEMPERA-TURES | LED / BASE | | Scroll through current readings on all PCB temperature sensors |
| | FIXTURE TYPE | ERA 800 PERFORMANCE / ERA 800 PROFILE | | Displays the configuration that the firmware has recognized: Performance or Profile |
| DMX LIVE | STROBE ... PAN/TILT SPEED | 0 - 255 | | Scroll to see values currently being received on each DMX channel |
| MANUAL CONTROL | RESET | ALL | | Reset fixture |
| | | PAN / TILT | | Reset pan and tilt only |
| | | EFFECTS | | Reset effects only |
| | STROBE ... TILT FINE | | | Scroll through effects, then manually control an effect |
| SERVICE* | PAN/TILT FEEDBACK | ON | | **Enable pan/tilt position feedback system** |
| | | OFF | | Disable pan/tilt position feedback system |
| | CALIBRATION | PAN ... BLADE4 ANGLE (in Performance fixtures) or FOCUS (in Profile fixtures) | -127 – +128 ... -127 – +128 | Scroll through effects, press ENTER to select effect. Adjust home position from -127 to +128 and press ENTER to confirm the new custom setting. *Important! If you want to keep custom settings you must apply a SAVE SETTING → SAVE command before you leave the CALIBRATION menu.* |
| | | LOAD DEFAULTS | LOAD | Load the factory default calibration settings |
| | | | SAVE | Save current custom calibration settings as default settings. *Important! Applying LOAD DEFAULTS → SAVE and confirming with SAVE SETTING → SAVE will permanently overwrite the factory default calibration settings and should normally be used by Martin Service only!* |
| | | SAVE SETTING | SAVE | Confirm any changes made to calibration values and any changes made in the LOAD DEFAULTS and CLEAR ALL VALUES menus |
| | | CLEAR ALL VALUES | RESTORE | Reset all calibration values to zero. *Important! Applying CLEAR ALL VALUES → RESTORE and confirming with SAVE SETTING → SAVE will permanently overwrite the factory default calibration settings and should normally be used by Martin Service only!* |
| | USB | UPDATING FILES | ERA800 1.1.0 ... ERA800 X.X.X | Displays firmware upload status |

**Table 3: Control menus**

*** See the fixture's Safety and Installation manual for full details of the SERVICE control menu functions**

# Status messages

The ERA 800 Performance / Profile monitors its own performance and has a diagnostic error recognition system that lets it display messages with information about any problem detected.

If the fixture has a status message to report, a red warning triangle appears in the bottom right of the control panel display. If the red triangle is present, pressing the Enter button displays any active status messages.

## Excessively high temperatures

If any of the temperature sensors reports that the fixture has exceeded its recommended temperature range, the fixture reports a temperature warning and reduces light output to reduce its temperature. If the temperature reaches a dangerous level, light output is shut down completely.

Temperature warnings are canceled and full light output becomes available again as soon as the temperature returns to normal.

## Status message list

The status messages that the fixture can display are listed in Table 4 below:

| Code | Notes |
| --- | --- |
| Animation 1 | Animation wheel error |
| BaseFan | Base cooling fan warning |
| BaseTemp | Base temperature warning |
| Blade | Framing module error |
| CoolFan1 | LED cooling fan 1 warning |
| CoolFan2 | LED cooling fan 2 warning |
| CoolFan3 | LED cooling fan 3 warning |
| CoolFan4 | LED cooling fan 4 warning |
| CoolFan5 | Cooling fan 5 warning |
| CoolFan6 | Cooling fan 6 warning |
| CMYFan1 | CMY module cooling fan 1 error |
| CMYFan2 | CMY module cooling fan 2 error |
| CPU1 | CPU 1 (Display PCB) error |
| CPU2 | CPU 2 (Pan/tilt control) error |
| CPU3 | CPU 3 (CMY control) error |
| CPU4 | CPU 4 (Gobo/color wheel control) error |
| CPU5 | CPU 5 (Framing control) error |
| CPU6 | CPU 6 (Zoom/focus control) error |
| CPU7 | CPU 7 (Prism/frost control) error |
| CPU8 | CPU 8 (LED control) error |
| CTO | Color Temperature Control color flag error |
| Cyan | Cyan color flag error |
| FixedGobo | Fixed gobo wheel error |
| Focus | Focus error |
| Frost1 | Frost 1 (Light Frost) error |
| Frost2 | Frost 2 (Heavy Frost) error |
| GoboFan | Gobo wheel cooling fan warning |
| GoboRot | Gobo rotation error |

**Table 4: Status messages**

| Code | Notes |
| --- | --- |
| **HeadFan1** | Head cooling fan 1 error |
| **HeadFan2** | Head cooling fan 2 error |
| **HeadTemp** | Head temperature warning |
| **Magenta** | Magenta color flag error |
| **Pan** | Pan error |
| **Prism1** | Prism 1 error |
| **Prism1Rot** | Prism 1 rotation error |
| **Prism2** | Prism 2 error |
| **Prism2Rot** | Prism 2 rotation error |
| **RotGobo** | Rotating gobo wheel error |
| **Temp** | LED temperature error |
| **Tilt** | Tilt error |
| **Yellow** | Yellow color flag error |
| **Zoom** | Zoom error |

**Table 4: Status messages**

**Martin**
by HARMAN