LSC Lighting Playback Unit and Mantra Editor Program Software User Guide

**Mantra Mini Lighting Playback Unit and Mantra Editor Programing Software
Quick Start Guide**

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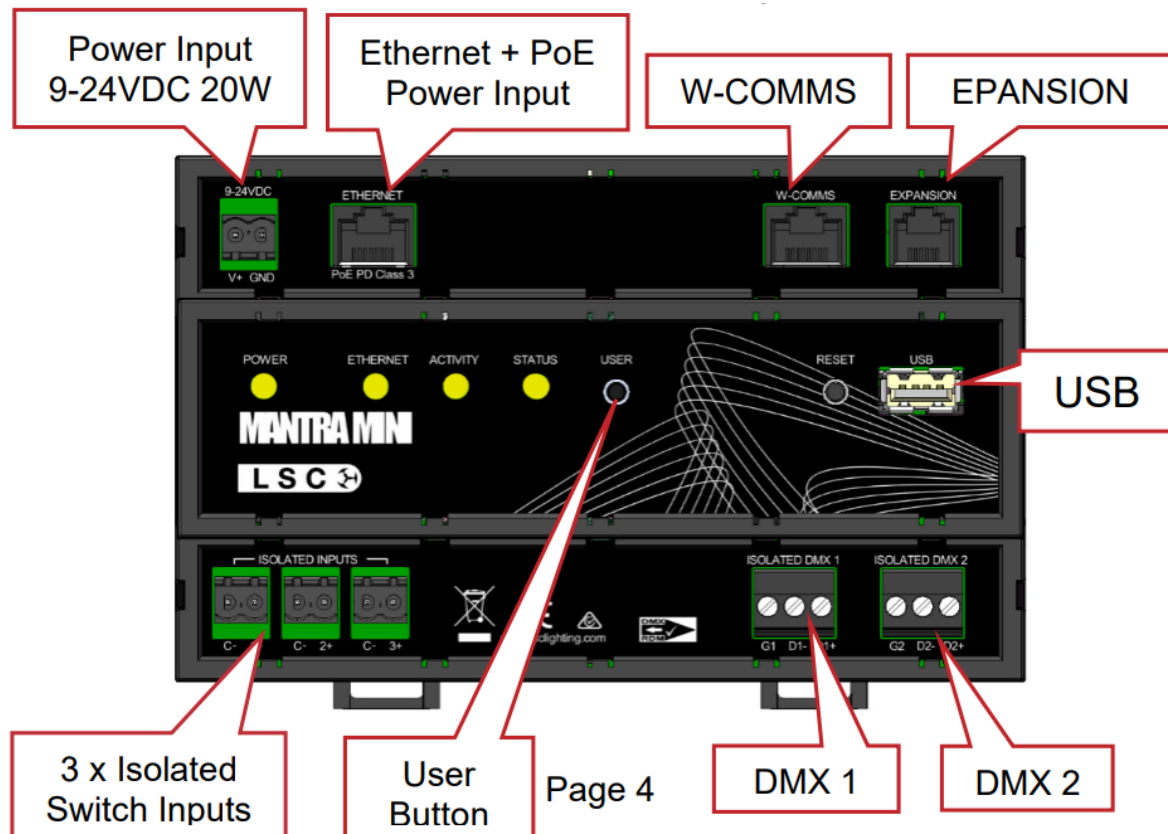web: **www.lsccontrol.com.au**

Contents

Overview

This "Quick Start Guide" provides basic information about powering, patching, controlling intensity, colour & position, creating a simple animation plus recording and playback. The "Mantra Mini User Manual" provides comprehensive information on all aspects of the Mantra Mini. It can be downloaded from **mantramini.lsccontrol.com.au** The Mantra Mini can control up to 48 lighting fixtures across 2 DMX universes that are output as DMX-512, Art-Net or sACN. Multiple Mantra Minis can be used if more than 48 fixtures are required.

Connection and Control Options

2.1 DIN Mount

The Mantra Mini mounts on a standard TS35 DIN rail. The Mantra Mini is 9 DIN modules wide (157.5mm). Allow adequate ventilation and do not expose the Mantra Mini to direct sunlight or moisture. The Mantra Mini is fitted

with a small internal automatic variable speed fan to internally circulate the air.

Power Input 9-24VDC 20W — **Ethernet + PoE Power Input** — **W-COMMS** — **EPANSION** — **USB** — **3 x Isolated Switch Inputs** — **User Button** — Page 4 — **DMX 1** — **DMX 2**

2.2 Power
The Mantra Mini offers many possible connection and control options.
Power can be supplied by either:

- External 9-24 volts DC power supply
- PoE via the RJ45 Ethernet connector. Note, PoE cannot be used if Wall Plates are connected to the WCOMMS connector

2.3 Programming
A computer or tablet running the Mantra Editor software can be connected to program the Mantra Mini by either:

- Wi-Fi. The Mantra Mini has a built-in low range Wi-Fi access point. The computer or tablet running the Mantra Editor software connects directly to the Mantra Mini Wi-Fi
- Ethernet, preferably via a network router or switch with DHCP capability
- Wi-Fi client. The Mantra Mini Wi-Fi can be changed from access point mode to client mode and can connect to an existing Wi-Fi network. The computer or tablet running the Mantra Editor software connects to the same Wi-Fi network

2.4 Playback
Playback from the Mantra Mini can be controlled by either:

- Internal day/date time scheduler
- OSC, UDP or TCP commands via the Ethernet connector
- Contact closures connected to the 3 "Isolated Inputs"
- Wall plate switches connected to the W-COMMS connector (future feature)

- Mantra Mini can send messages to other devices by OSC, UDP or TCP commands

Mantra Mini can control up to 48 lighting fixtures across 2 DMX universes that are output as:

- Isolated DMX-1 connector
- Isolated DMX-2 connector
- Art-Net (ethernet connector)
- sACN (ethernet connector)

Mantra Mini can accept an input from a lighting console connected to either:

- Isolated DMX-2 connector configured as an input
- Art-Net (ethernet connector)
- sACN (ethernet connector)

Front Panel LED's

3.1 Power LED
Long flash, pause, repeat. Power is present.
Double flash. Clock has lost its time setting.
3.2 Ethernet LED
Off. No network connection.
Flashes. Network data is being transmitted or received.
3.3 Activity LED
Off. No DMX, sACN or Art-Net is being transmitted.
Flickers. DMX, sACN or Art-Net is being transmitted.
3.4 Status LED
On. Normal operation
Slow flash. Override active.
Short flash, pause, long flash, pause etc. The Mantra Editor software is in control.
Fast flash. Evac Mode is active.
Rapid flash. Error.
3.5 USB Show Load Indication
If a USB stick containing a show file (in a folder named LSC) is inserted, all the front panel LEDs will triple flash for 5 seconds. Press the USER button before they stop flashing to load the show.
3.6 USB Software Update Indication
If a USB stick containing a software update file (in a folder named LSC) is inserted into the Mantra Mini, all the front panel LEDs will triple flash for 5 seconds. Press the USER button before they stop flashing to start the upgrade.
3.7 RDM Identify
If the Mantra Mini receives an RDM "Identify" command, the four LEDs on the front panel flash in pairs (left pair then right pair).

Mantra Editor

4.1 Overview
The Mantra Editor software is used to programme the Mantra Mini. Shows created on a Mantra Lite console can also be opened on the Mantra Editor, edited and saved onto the Mantra Mini.
Once the Mantra Mini has been programmed, playback can be either internally controlled by a day/date time "Schedule" or by "Remote Triggers" in the form of OSC, UDP or TCP commands over ethernet or contact closures on the 3 isolated inputs.
4.2 Install the Mantra Editor Software

The free Mantra Editor software is available from "mantramini.lsccontrol.com.au". Download and run the Mantra Editor Setup program on your computer or tablet. Follow the onscreen instructions and be sure to allow Mantra Editor access through your computers firewall. Run the Mantra Editor program.

4.3 Programming Mantra Mini with the Editor

The computer or tablet running the Mantra Editor can be connected to the Mantra Mini by either Wi-Fi or by Ethernet. LSC recommends that your first connection to the Mantra Mini is via Wi-Fi because this is the quickest method of connection.

The lighting cues to be played back by the Mantra Mini are saved in a show file that is saved in the Mantra Mini. Show files can also be saved in the Mantra Editor (the computer running the Mantra Editor) for back-up or off-line editing. When loading or saving show files,

- Select "View Local" to access the Mantra Editor
- Select "View Remote" to access the Mantra Mini

The Mantra Editor takes control of the Mantra Mini output whenever you,

- Save a show file to the Mantra Mini
- Load a show file from the Mantra Mini

The Mantra Editor is then used to control the lighting fixtures allowing you to see their output, create the desired lighting looks and to record those looks as lighting cues in the show.

The cues can be checked (and edited if necessary) by playing them back using the Mantra Editor. The Mantra Editor is then used to program how the Mantra Mini will playback the cues.

Playback can be performed by either the "scheduler" in Mantra Mini or by isolated inputs (contact closures), or OSC, UDP or TCP network commands.

When programming is completed, the Mantra Editor program is closed and after a brief pause, the Mantra Mini automatically resets and takes back control of its output.
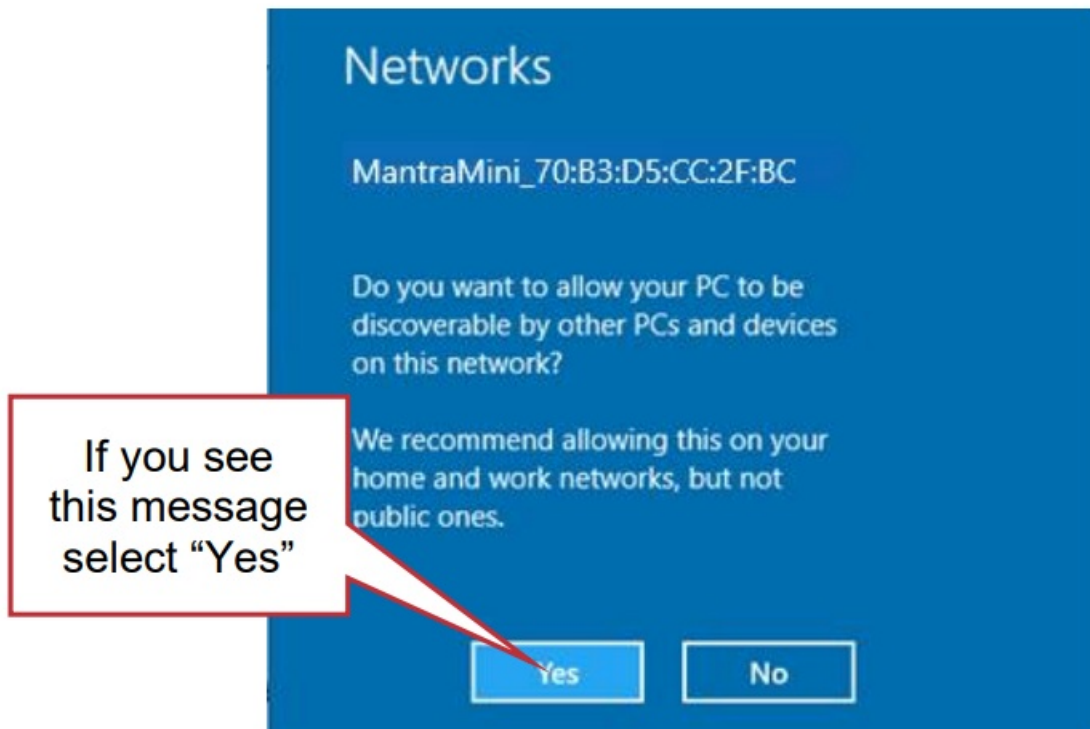
4.4 Connecting the Editor via Wi-Fi

Follow these steps,

1. Mantra Mini has short range inbuilt Wi-Fi Wi-Fi Access Point. Open your computers Wi-Fi settings and connect it to the Mantra Mini's Wi-Fi.
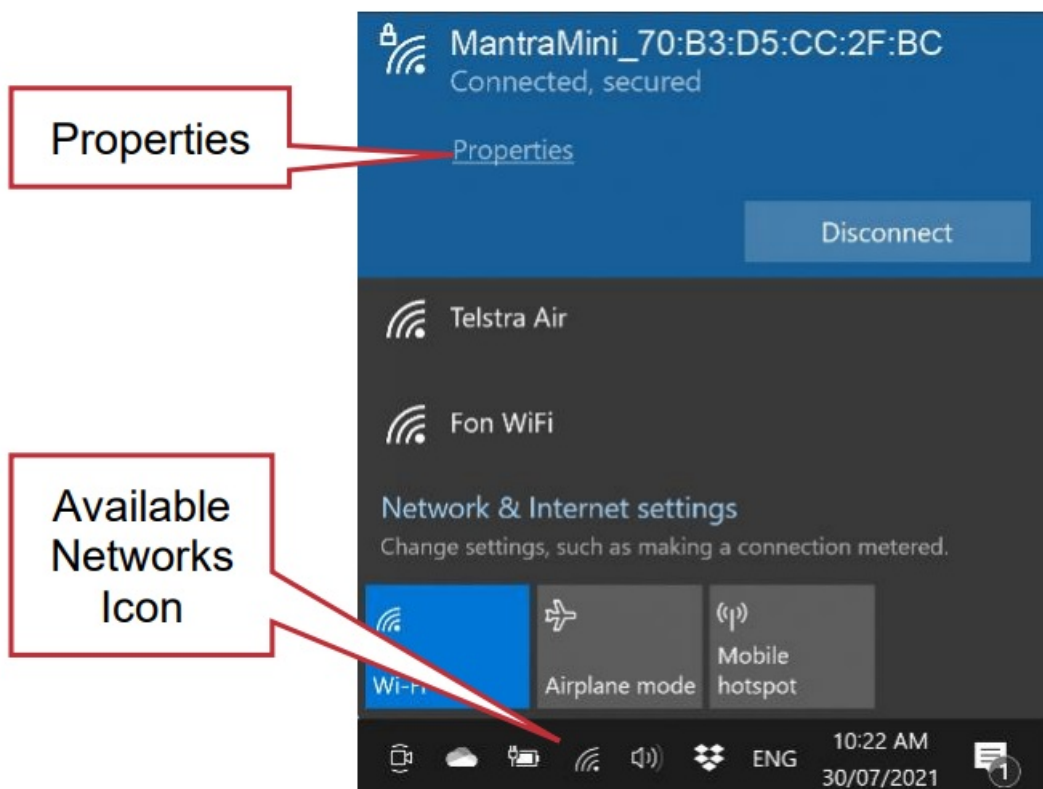
    The name of the Mantra Mini Wi-Fi is "MantraMini_###" (where ### is an exclusive number for every Mantra Mini) The security key is "mantra_mini".

    If there are multiple Mantra Minis in your installation make sure you select the desired one. The easiest way to identify the desired Mantra Mini is to remove the power from the other Mantra Mini's.

    When using Microsoft Windows to connect to a Mantra Mini, you must set your computers network profile to "Private". After connecting you might see the following message. Select "Yes".
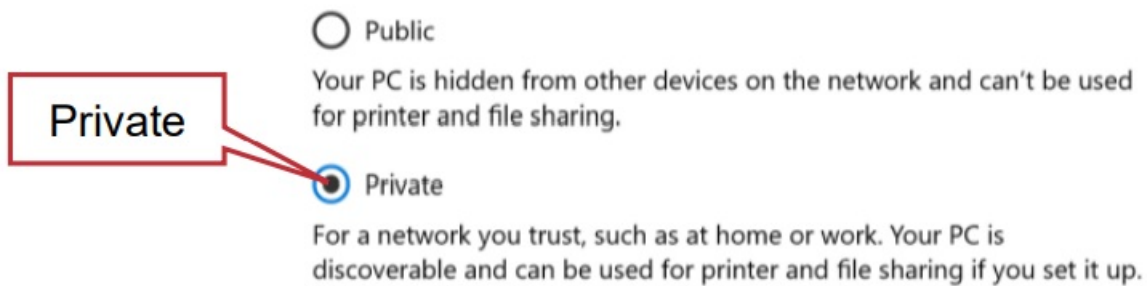
Alternatively, to manually change the network profile to "Private", click the available Network icon in the Notification area.
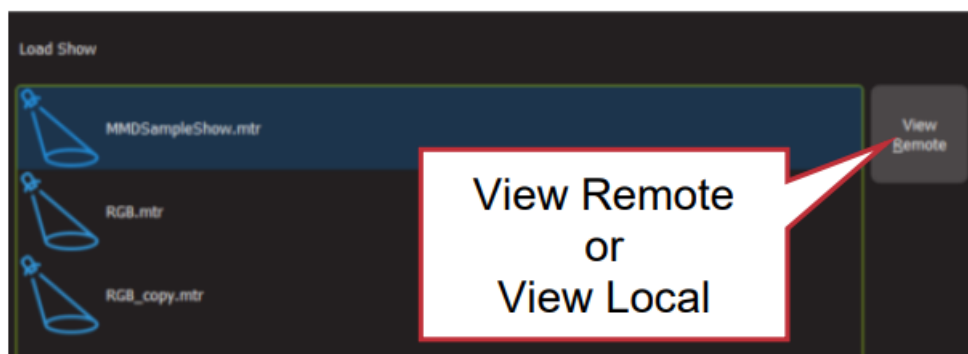

Select the Mantra Mini network and then click Properties and in the "Network profile" that opens select Private.

Network profile

Private

2. With the computer now connected to Mantra Mini's Wi-Fi Access Point, open the Mantra Editor application on your computer. To use the Wi-Fi connection, click Tools, Setup, System Settings. In the "Available Networks" pane click on WiFi then double click Back/Home.

3. To control the Mantra Mini's fixtures, create a new show and save it to the Mantra Mini by clicking Tools, New Show, Tools, Save Show, enter a name for the show then click View Remote, click the MMD (Mantra Mini Device) Icon. Click Save. The editor now controls the output of the Mantra Mini.

View Remote
or
View Local

4.5 Connecting the Editor via Ethernet

The Mantra Mini's default ethernet setting is DHCP (Dynamic Host Configuration Protocol). In order to have a network address automatically assigned, the Mantra Mini must be connected to a DHCP server. Most consumer routers are set up to act as a DHCP server and will automatically assign an IP address to the Mantra Mini.

When using Microsoft Windows to connect to a Mantra Mini, you must set your computers network profile to "Private". To change the network profile for a wired network, click Start, Settings, Network & Internet, Ethernet, then click your network adapter and choose the "Private" profile.
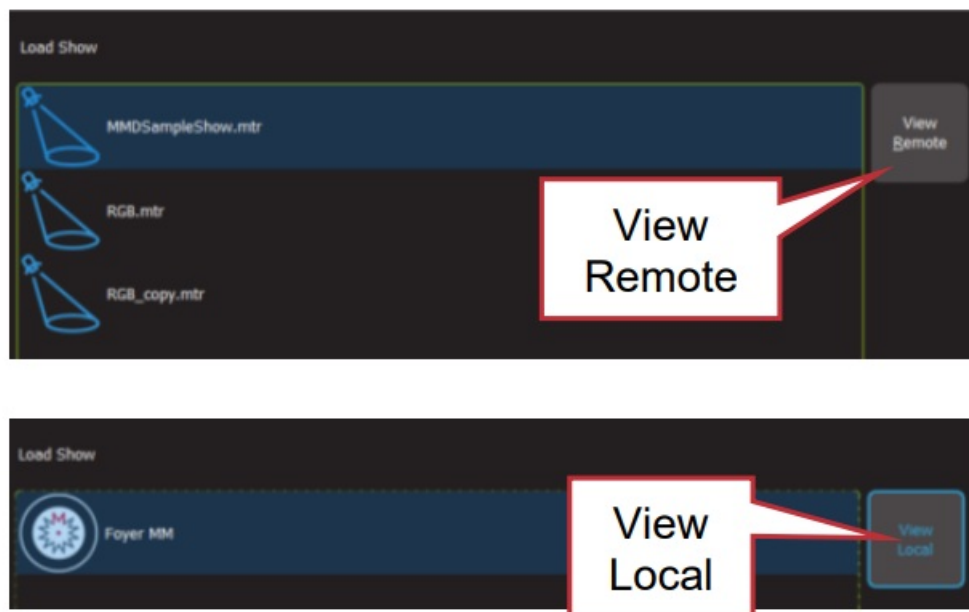

Network profile

Private

Follow these steps to connect the Editor to the Mantra via ethernet.

1. Connect the Mantra Mini and the computer or tablet running the Mantra Editor to the same DHCP server.

2. Re-boot the Mantra Mini by pressing its RESET button.

3. Open the Mantra Editor application. To use the ethernet connection, click Tools, Setup, System Settings. In the

    "Available Networks" pane click on Ethernet then double click Back/Home.

4. To control the Mantra Mini's fixtures, create a new show and save it to the Mantra Mini by clicking Tools, New

    Show, Tools, Save Show, enter a name for the show then click View Remote, click the Mantra Mini Icon. Click

    Save. The editor is now connected to the Mini and controls its output.

Note: If a DHCP server is not available you can connect the Mantra Mini using Wi-Fi and when connected, set a static IP address in the Mantra Mini. Alternatively, LSC's HOUSTON X software will find the Mantra Mini when connected by ethernet and can then be used to set a static IP address.
To edit a show that has already been saved on the Mantra Mini, click Tools, Load Show, View Remote. Click the Mantra Mini icon then click on the show file name then click Load.

4.6 Disconnecting the Editor from the Mantra Mini
The Mantra Editor is disconnected from the Mantra Mini when any of the following are performed,

- A show is saved to the (Local) Mantra Editor

- A show is loaded from the (Local) Mantra Editor

- A "New Show" is opened in the Mantra Editor

- The Mantra Editor program is closed

4.7 Basic Programming Steps
The following are the basic steps to program and playback a show on the Mantra Mini.
4.7.1 Step 1. Patch the Fixtures
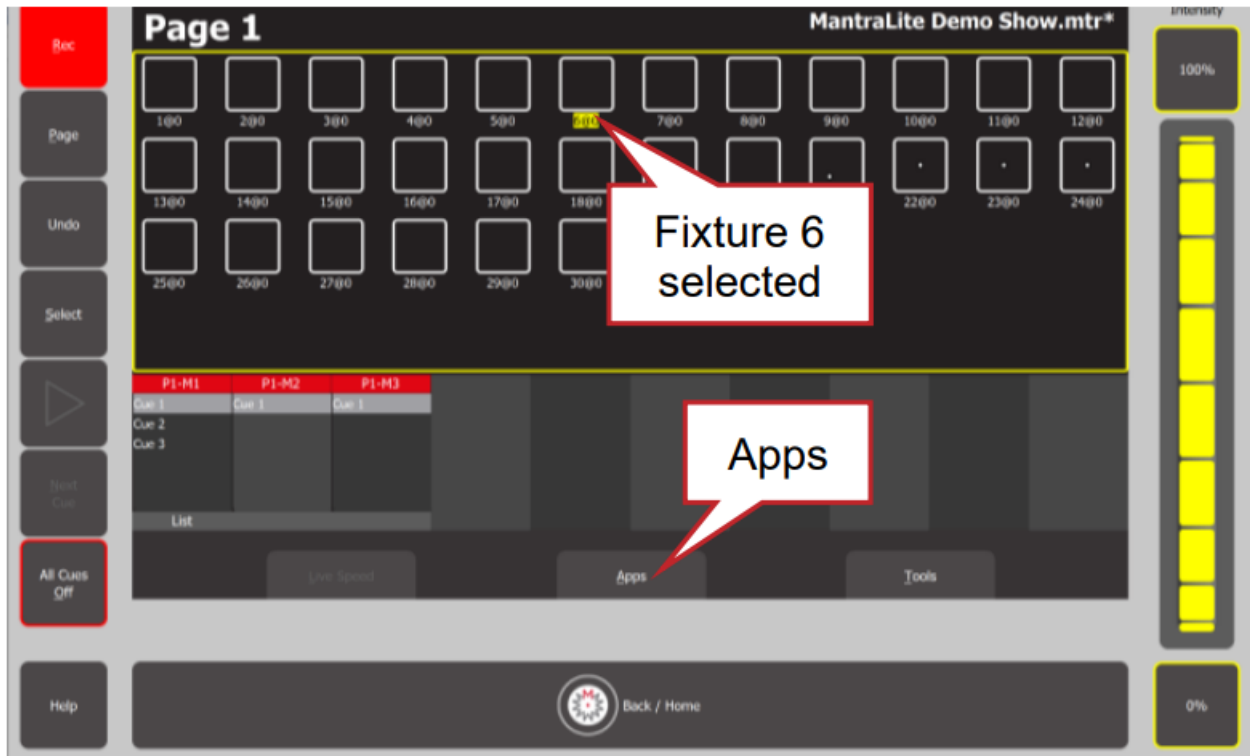On the Mantra Editor "Home" screen click Tools, Setup, Patch.

1.   Select the "Manufacturer" and "Model" of the fixture

2. Enter the Universe number (1 or 2)

3.   Enter the DMX address of the fixture

4. Click Patch then choose a fixture number (1 to 48).

5. Repeat for each fixture

6. Click ![Back/Home icon] Back/Home to finish.

4.7.2 Step 2. Control the Fixtures

Click Tools, Save Show As, View Remote. Click the Mantra Mini Icon, enter a name for the show then click Save.
To control a patched fixture using the Mantra Editor, click its numbered fixture icon (the number turns yellow).
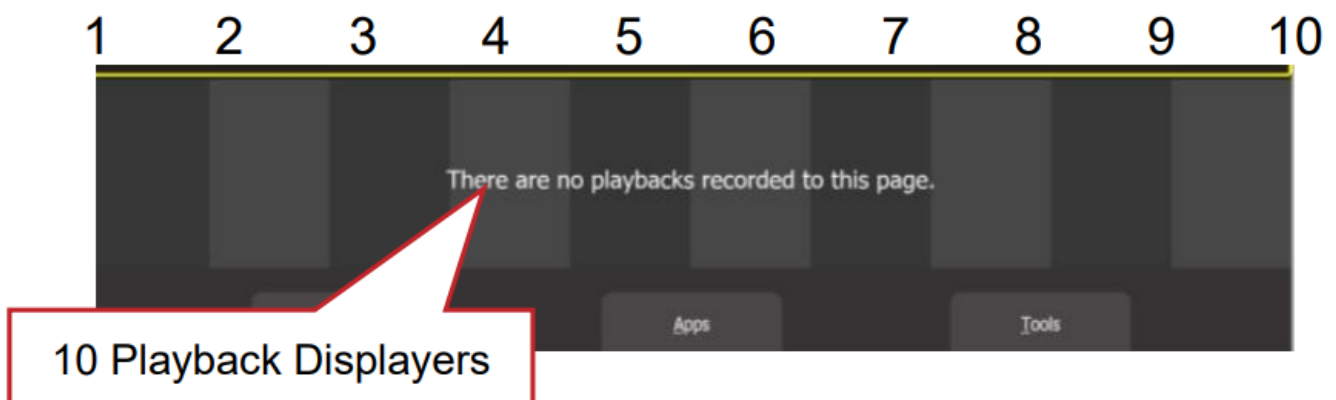Multiple fixtures can be selected.

- To adjust the intensity, click and scroll the "Intensity" wheel or click the 100% or 0% buttons.
- To control the other attributes of a fixtures, use an App.

  There are Apps for colour, position, beam, animations and shapes. Click Apps to open the "Apps "screen. Click

  the appropriate App (colour, position or beam) then adjust the attribute.

4.7.3 Step 3. Record the Output as a Cue

When you have adjusted the intensity and colour of your fixtures and possibly created animations or shapes, the
current output can be recorded into as a "cue" for later playback.
To record the current output, click Rec then click the Playback displayer of your choice (1-10).

Each playback can contain a single cue or a cue-list. To record a cue-list, create the next lighting look on the output then record to the same Playback number. Multiple cues and cue-lists can be recorded. 10 pages of playbacks are available.

4.7.4 Step 4. Playback and Check
Clear all fixtures back to no intensity and default attribute values by clicking Apps, Clear All.
Click on the playback displayer of the cue or cue-list to be played.
To fade up or fade down the cue click ►.
To crossfade to the next cue in a cue-list click Next Cue.

4.7.5 Step 5. Edit
If necessary, edit the fade times, intensities, animation speeds etcetera.

4.7.6 Step 6. Program the Playback
Playback can be controlled by either,

- Day/date time schedule. See below
- Remote Triggers. Contact closures (isolated inputs) or OSC, UDP or TCP network commands. See section 4.9.

4.8 Scheduled Events
Playback from the Mantra Mini can be internally controlled by a day/date time schedule. The Schedule contains a list of events. Each event fades up or fades down a memory (a cue) at either a specific time of the day or every day or on certain days of the week or on particular date(s).
The astronomical clock allows turning the lights on/off at sunrise/sunset, or any time before or after with a simple time offset (for example, Sunset + 30 minutes).

4.8.1 Add a Scheduled Event
To create a new scheduled event, click Tools, Setup, Schedule. To create a new event click Add.
Enter a descriptive name for the event. Click on a memory and cue to select it to be played by the event. When the event is played it can perform the following functions:

- Memory On. Fades up the selected the Memory / Cue Number
- Memory Off. Fades down the selected the Memory / Cue Number
- All Cues Off. All active Memories are faded down

The "Event Type" pane allows you to select what will trigger the event. Click on the type of event that you require. The choices are:
Day allows you to select the days of the week and the time at which the event will occur.
Date allows you to select a date from the calendar and the time at which the event will occur.
Sunrise / Sunset allows you to select either sunrise or sunset for the event. You can also set any time before or after sunrise or sunset with a time offset.
On Show Load will playback the selected cue when the Mantra Mini powers up or when it automatically re-starts after the Mantra Editor is dis-connected.
To save the event in the schedule click Save.

4.9 Remote Trigger Playback
The Mantra Mini can be controlled by "Remote Trigger Inputs".
There are 4 "message types" of remote trigger inputs available:

- Contact closures via the 3 "Isolated Inputs"
- OSC (Open Sound Control) via Ethernet or Wi-Fi
- UDP (User Datagram Protocol) via Ethernet or Wi-Fi
- TCP (Transmission Control Protocol) via Ethernet or Wi-Fi

These message types can be used to perform any of the following "Actions":

- Play Memory (with the option to turn all "Other Cues Off)

- Next Cue
- All Cues Off
- Override (enable/disable)
- Evac Mode (enable/disable)

4.9.1 Add a Remote Trigger

To open the Remote Triggers screen, click Tools, Setup, Remote Triggers. To create a new remote trigger click Add.

Enter a descriptive name for the trigger.

Select the "Message Type" of remote trigger:

- Contact (3 x "Isolated Input" contact closures)
- OSC (Open Sound Control)
- UDP (User Datagram Protocol)
- TCP (Transport Control Protocol)

Select the "Action" that you want the message to perform:

- Play Memory
- Next Cue
- All Cues Off
- Override (enable/disable)
- Evac Mode (enable/disable)

Select or enter all of the parameters for the selected "Action" then click Save.

See the "Mantra Mini and Mantra Editor User Guide" for detailed instructions for remote trigger playback.

4.10 Step 7. Save the Show

When you have finished programming, save the show to the Mantra Mini so that it can be played back when the computer is not present. Click Tools, Save Show As, View Remote. Click the Mantra Mini Icon, enter a name for the show then click Save.

4.11 Step 8. Disconnect the Editor

When the Mantra Editor connection is removed, the Mantra Mini automatically resets and then takes back control of its output. Playback is then performed by either the "scheduler" in Mantra Mini or by Remote Triggers.

Documents / Resources

LSC Lighting Playback Unit and Mantra Editor Program Software [pdf] User Guide
Lighting Playback Unit and Mantra Editor Program Software, Lighting Playback, Unit and Mantra Editor Program Software, Mantra Editor Program Software, Editor Program Software, Program Software

References

- **LSC**
- **MANTRA MINI - LSC**
- **LSC**
- **LSC**
- **LSC**