

XTBA LightFlo 8x4 DMX/RDM Upgrade

ISSUE 1.1 R82

XTBA

Unit 2 The Old Curatage
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XTBA LightFlo 8x4 DMX/RDM Upgrade

1.1 R82 or later

Fitting the new micro controller is at the end of the document

The upgraded replacement micro controller enables users of the Anytronics LightFlo 8x4 to add full DMX/RDM functionality to the existing units with a simple chip change. All existing functions of the LightFlo have been emulated so functionally it is identical to a standard unit, so upgraded units can be mixed with standard units if the RDM functionality is not needed.

RDM is fully compatible with standard DMX512 but allows the user with a suitable controller to 'interrogate' the fixture and change aspects of the fixtures functions remotely. Most noticeably the fixture's start address and personality or 'mode', the four switched or four dimmed modes.

So numerous LightFlo's can be rigged without regard to their address or personality and once powered and data connected can be configured from the ground without the need for excessive preparation (making sure the correctly addressed fixture is in the right place) or a dull afternoon using a cherry picker setting the address once in place.

Discovery.

Once rigged fixtures need to be 'discovered' by the controller. Every unit has an individual UID (unique identification number) and the controller will search for these numbers. As each unit is found it will identify itself by flashing the rear LED's and tubes 1 and 8 will be set to full. So either from the front or the back you can see which unit you are controlling. The DMX address can now be set and the personality changed – if required.

The LED's on the rear will indicate which personality the unit is set to, but in addition the fixture will send back to the RDM controller its personality description. Once the unit has been set it is excluded from the discovery process and switches back non RDM mode, so you can move on to the next unit etc. etc.

Once the address has been changed by RDM control the local address switches are ignored. If the local address switches are changed or the personality then they will now take control. So next time the unit goes out on a standard rig the RDM address and personality can be overridden.

Additions and changes

In addition to the 8 standard modes of the original unit the upgrade has a ninth mode. In this mode tubes a switched from the middle of the unit in alternating pattern at 10% steps. This mode can be entered by pressing the mode and the

switch/dim button at the same time. The mode is indicated by both the mode and switch dim LED's being lit and all other LED's off.

To distinguish upgraded RDM units from standard units on power up the upgraded units will sequence the rear panel LED's on power up.

One minor software problem on the original unit has been fixed. If the address switches were set to more than 512 an erroneous start address would be created. On the upgrade if this condition occurs the green data LED will flash and the unit will not function until a valid address is set either from the address switches or via RDM.

RDM Commands supported:

SET Device Label - Label the unit

SET Display Level - turn on or off the back panel LED's

SET Factory Defaults - reset the unit back to initial state

SET DMX Address - The front panel address switches can be overridden by a SET Address RDM command. This value will be used as the DMX start address unless the rear panel address switches are changed. Once changed this new start address will now be used by the unit

SET DMX Personality - Lightflo has nine RDM personalities, 5 switched and four dimmed.

SET SELF TEST – will sequence in order all eight tubes until told to stop.

GET Commands Supported:

GET Device Model Description, Device Label, Manufacturer Label, Software Version, DMX Address/Slot Footprint, Personality, Self-Test Description, Comms Status.

DMX/RDM is fully compatible with standard DMX512.

If the control desk is not RDM it will not send a RDM request so the Lightflo can't respond.

Local control settings.

Before the fixture is powered up the BCD switches can be set to alter some of the features of the Lightflo. Once the unit has powered the changes are stored in the fixture so the DMX address can now be changed back to the correct start address.

Power up with the address set for:

000 - Set the unit back to factory setting - 8 channel mode hold last frame on.

801 - Hold last frame OFF. The original Lightflo always held the level if DMX was lost, this allows the tubes to turn off if DMX is lost.

701- Turn back on hold last frame, if off

999 – Run the tube test, the unit will stay in test mode until the address switches are altered.

RDM Control and Distribution

Many modern controls have RDM already fitted. If not the Goddard Design DMXter and MiniDMXter can provide simple and easy to understand RDM control. We sell them but there are other (less good – obviously) units available.

As RDM is a bi directional protocol standard splitters will not pass RDM data. So RDM compatible splitters are required. As with controllers we sell them but there are other (less good – obviously) units available.

Fitting the new micro controller.

- 1 Remove the mesh, remove the lower tubes and unscrew and remove the reflector.
 - a. These are the tubes in front of the address switches on the rear panel.

Make the swivel bank is set to flat to allow for access to the control PCB.

- 2 Remove the 4 and 8 way PCB connectors on back edge of the PCB facing you next to capacitor.
- 3 Using a small screw driver remove the existing 28pin micro controller situated in a socket in the middle of the PCB. Replace with the upgrade micro controller. Chip direction is with the text facing you – e.g. pin 1 is on the left.
- 4 Re-assembly is the reverse of the above - put back the 4 and 8 way connectors, replace the reflector and tubes.

CE Declaration of conformity

XTBA declares that the following equipment meets the requirements of the EMC Directive 89/366/EEC. WEE/FC2753ZS



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