

XTBA F451

DMX512 FIRE EFFECT

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Software 1.3 R83 or later

XTBA

Unit 2 The Old Curatage
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Introduction

The XTBA F451 DMX fire effect unit is designed as a stand-alone DMX unit or can also be used in conjunction with an existing DMX control system either in merge or replace mode. The F451 generates two hundred thousand random levels every second to provide 'randomness' to the output and can have a block of up to 250 random channel levels set. The output can be proportional or hard locked.

Controls for maximum and minimum level, flicker rate, start address and block length allow for easy integration into an existing control system or as a stand-alone system. The F451 can store up to eight setting memories and the unit itself will retain the existing settings when powered down.

The F451 has a simple five button control and will provide 'hours of fun for young and old alike' or alternatively is cheaper than setting fire to the 007 stage (again).

Operation:

FUNCTION BUTTON

FUNCTION Button Menu Loop – Pressing the Function button will take you around the menu loop as follows:

FLICKER RATE → START ADDRESS → BLOCK LENGTH → RANDOM ON/OFF → MAXIMUM LEVEL → MINIMUM LEVEL.

Flicker Rate

F L I C K E R R A T E = 5 0
u p / d o w n t o c h a n g e

Pressing the right hand side UP and DOWN buttons will change the random rate. The range is 1 to 100. The F451 generates 200K random levels every second and the rate control alters the number of times the DMX output is loaded with the random words. Pressing both the up and down keys will set the rate to 50.

Start Address

S T A R T A D D R E S S = 0 0 1
u p / d o w n t o c h a n g e

Using the UP and DOWN buttons will change the DMX start address the random channels are merged or replaced with.

If the start address is set so random levels are being lost e.g. beyond channel 512 (e.g. start address 280 with a block length of greater than 233) the screen will change to warn that channels are being lost:

S T A R T A D D R E S S = 2 8 0
a d d r e s s d a t a o v e r r u n

Block Length

B L O C K L E N G T H = 0 6 4
u p / d o w n t o c h a n g e

Using the UP and DOWN buttons the number of random channels transmitted can be altered. The F451 can transmit up to 250 random levels in 512 DMX channels.

So in combination with the start address a block of channels can be set anywhere in the DMX data. As with the Start Address menu if the block length and start address are set so channels are being lost the screen will warn you.

Random Output On/Off

R A N D O M O U T P U T O N
p r e s s u p t o t o g g l e

Setting the random to OFF switches out the random number engine.

With the F451 in line with a controller incoming data will still be passed through and can still be displayed on the DMX display function.

Maximum Level

M A X I M U M L E V E L = m a x
u p / d o w n t o c h a n g e

Using the UP and DOWN buttons the maximum level of all the random words can be set.

Minimum Level

M I N I M U M L E V E L = 0 0 %
u p / d o w n t o c h a n g e

Using the up and down keys the minimum level of all the random words can be set. So the minimum level gives a 'preheat' value. The F451 will block maximum levels below the minimum, and minimum levels above the maximum and warn you – you are being very silly.

DMX Button

Pressing the DMX button will display the output of the F451:

0 0 1 0 0 2 0 0 3 0 0 4 0 0 5 R
2 2 % 5 3 % 9 1 % 1 4 % 6 5 % P

Using the DMX button will scroll channels left and the SET key will scroll channels right. Pressing them both will set the first channel to 001.

The display shows all the DMX data being sent to the DMX output so incoming DMX combined with the random levels will be shown.

Pressing the Function button will take you back to the function last set. So it is easy to toggle between the Rate control and the output display. The upper right of the display will show either M or R in the top line for Merge or Replace and P for proportional or H for 'hard' limit in the lower right– see limits below.

SET BUTTON

SET Button Menu Loop – Pressing the Set button will take you around the menu loop as follows:

SET FOR REPLACE / MERGE → STORE SETTINGS → RECALL SETTINGS
→ RESET TO DEFAULTS → PROPORTIONAL or HARD LIMIT

On first entry the display will show if the F451 is in merge or replace. (Replace is the unit's default). Pressing the UP button will toggle the selection.

MERGE/REPLACE

If the unit is set to merge the selected start address and block length will merge HTP onto any existing DMX levels coming into the unit.

If set to replace any incoming DMX levels are ignored within the start address and block length and only the F451 flicker levels are transmitted in that DMX space.

STORE SETTINGS

The F451 retains all the settings on power down but in addition the unit has eight memories.

S T O R E S E T T I N G S
p r e s s u p t o e n t e r

Pressing the up button will take you to the memory screen:

S T O R E A S M E M O R Y 1
u p / d w n o r s e t = s a v e

Use the up down buttons to select which memory to save and then press SET to store the memory. If you need to escape without saving use the FUNCTION button.

RECALL SETTINGS

R E C A L L S E T T I N G S
p r e s s d o w n t o e n t e r

Pressing the DOWN button will take you to the recall screen:

R E S T O R E M E M O R Y 1
u p / d w n o r s e t = l o a d

Use the UP/DOWN buttons to select the memory and then press SET to load the memory. If you need to escape without saving use the FUNCTION button.

If no memory is recorded at that number the F451 will warn you and then escape without loading.

RESET TO DEFAULTS

R E S E T T O D E F A U L T
p r e s s u p t o r e s e t

Pressing the UP button the F451 will warn you are about to reset the unit.

Pressing the UP button again will reset the unit to the following:

Maxlevel = 100%, Minlevel = 0, Rate = 50, Random set ON, Start Address = 001 and Block Length = 64. Existing memories are retained.

LIMIT

P R O P O R T I O N A L L I M I T
p r e s s u p t o t o g g l e

The F451 can run in either proportional or 'hard' maximum level limits. Pressing the UP button will toggle between the two.

Proportional Limit

The maximum random level is proportionally controlled from maximum level – like a master fader on a lighting desk. So if the maximum level is set for 50% a random word generated at 100% will be transmitted at 50% and a random word generated

at 50% will be 25% etc. This allows the overall level of the effect to be 'faded' up and down.

Hard Limit

The maximum output of the random level is set using the maximum level. Any random level generated above the maximum level will be ignored and the maximum level transmitted. This gives a slower and less variable output.

If the unit is set to merge incoming data will be merged HTP in either mode.

DMX TEST FUNCTIONS

When in the DMX display pressing the UP button will enter the parameters mode:

B R K	M A B	S C D	C H N	S Y S
9 6	1 6	0 0 0	5 1 2	O K

In Parameters Mode the display is changed to display DMX timings and values.

Note: When in parameter mode the output of the F451 is turned off so the unit will stop transmitting.

Pressing DMX will take you back to the channel display menu or pressing Function will take you to the main menu loop.

The top line of the display shows what is being measured the figure below is the value, as follows:

BRK	DMX Break Time in micro seconds (us)
MAB	Mark after break time in micro seconds (us)
SCD	Start code in decimal
DIM	Number of channels
SYS	This will display OK all of the above are within the limits of DMX. If the View receives data that is outside the DMX512 specification the display will change to ERR.

When the SYS parameter shows ERR by pressing the down key ERR will be displayed below the parameter with the error. If an error is detected when in the parameters display the blue data led will fast flash.

The parameter screen allows incoming data to be checked in the event of a DMX problem.

RECEIVING LEVELS

If the random output is set to OFF and the unit set for merge the F451 can be used as a DMX level receiver to find out if incoming DMX channels are working.

Technical Specifications

Dimensions 143 x 93 x 48mm
Weight 1.0 Kg
Power 190/250V AC Nominal 2A 240V AC
Data Received DMX512 1986/1990
Data Transmitted Break 95us, MAB 14us, 512 channels.

Pin Configuration Pin 1 Common, Pin 2 minus data, Pin 3 plus data.
Pins 4+5 not connected.

General Information

This product may only be used for controlling dimmers and moving lights. It must not be used in DMX512 applications for stage machinery or pyrotechnics. Using the product out of these specifications will remove all responsibility from the supplier.

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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