FireFly FF-351
Instructions and Specifications

QUICK START

If you're one of those folks that just wants to start using your new FF-351 now and read the instructions later, it's quite easy to be up and running, literally in seconds. Three easy steps are all that are necessary for professional lightning simulation.

1) Connect lights (up to 1500 watts per channel) to the left and right channel sockets on the rear of your FF-351.

2) Connect your amplifier or amplified speakers to the 1/8" stereo AUDIO OUTPUT jack on the rear of the lightning simulator.

3) Connect AC power.

No other connections or adjustments are required for basic operation.

WHEN POWERING UP…

Upon power up, the FF-351 goes through a quick self-test and the Lights Alive logo appears. After about three seconds, the test is complete and the system is fully functional. If the audio source was in the loop mode at power down, the 351 will begin operation automatically. If it was in the triggered mode, it is now awaiting a trigger to begin operation.

CUSTOMIZED SETTINGS

Five pushbuttons allow you to fully customize your FF-351 settings. Pressing the center MENU button gives you access to seventeen (17) additional windows. Pressing the UP and DOWN buttons scrolls through the windows. The (+) and (–) buttons alters the setting for that particular window. Pressing MENU again will exit the program mode and save your changes. The windows in order are:

POWER OFF
> A soft power off happens immediately at the press of the (+) button. The unit will be back up and running after touching any button.

LEVEL-LEFT
> Adjusts the audio level (sensitivity) of the left channel.

LEVEL-RIGHT
> Adjusts the audio level (sensitivity) of the left channel.

DEPTH-DIMMER
> Determines the amount (depth) of the dimming effect.

LEVEL-STROBE
> Sets the level (sensitivity) of the strobe control channel.

THRESHOLD-LEFT
> Adjusts the minimum amount of voltage applied to connected lights to increase sensitivity and reaction time.

THRESHOLD-RIGHT
> Same as left threshold, except affects right channel only

DIMMER MAX
> Sets the maximum brightness of lights connected to the dimmer channel.

AUDIO MODE
> Choose between continuous loop, triggered tracks or external audio.

AUDIO TRACK
> Choose the specific audio track to use. In the LOOP mode, you can choose between pure thunder or thunder plus rain and occasionally wind. In the TRIGGERED mode, the options are 5-second, 15-second or 30-second.

LIGHTNING AUDIO
> Determines the routing of the audio for the lightning channels. A drawing showing details on audio routing may be found here:
> *http://www.lightsalive.com/skin/frontend/lightsalive/default/pdf/ff351_audio_routing.pdf*

DIMMER SOURCE
> Determines audio routing for the dimmer channel. The dimmer can react to left channel audio, right channel audio or a combination of both.

TEST MODE
> Tests each channel of the FF-351, as well as confirming the compatibility of any LED fixtures in use. Lights will ramp up, fade down, then flash rapidly.

MENU BACKLIGHT
> Sets the intensity of the LCD display while in any of the setup up menu windows. Range is 0-10. The default is 9 (bright).

MAIN BACKLIGHT
> Sets the intensity of the LCD display in the "run" mode. Range is 0-10. Default is 1.

FACTORY RESET
> Restores all the factory default settings within seconds.

BACK TO TOP
> Returns you to the to the top of the menu.

ADVANCED OPERATION

The FF-351 will work right out of the box with no adjustments as mentioned in the QUICK START section. However, you can customize some of the settings to optimize the system to better fit your needs.

LEVEL adjustments should be set so that lights react to subtle sounds, yet lights aren't on solid during a lightning strike. For the dimmer channel, the **LEVEL** will determine the depth of dimming or how dim the light will become during a strike.

THRESHOLD controls are one of the most important settings. Set too high, the lights will always glow. If set too low, the system will still work, but the lights will seem more "choppy" and they will lose sensitivity to subtle sounds. Always adjust this control until your lights just begin to glow, then back it down a step or two.

MAXIMUM DIMMER LEVEL allows you set the maximum brightness of the lights connected to the dimmer channel. You can now dim those lights, while still having the FF-351 flicker and dim them more during a "lightning strike". This adjustment is purely a matter of preference.

AUDIO SOURCE defaults to internal, so no adjustment is necessary to operate the FF-351 out of the box. However, you may prefer your own thunder track audio. If so, you can select EXTERNAL and connect your CD/DVD deck, portable CD player, MP3 player, iPod, iPad, laptop or other line level or earphone level audio source. Most of these sources will require their levels to be set fairly high. You can tweak the level using the level controls within the FF-351.

You may also like the idea of lightning on demand. When the AUDIO SOURCE is set to triggered and you have connected a Lights Alive brand Intelligent Sensor or trigger through our proprietary LADC connection, there will be a burst of thunder and lightning each time the sensor is tripped. Most third party sensors may also be used by connecting to the screw terminals located on the back of the FF-351. A simple switch closure is all that is required, making it possible to use pushbuttons, pressure mats or other basic trigger devices. We also provide regulated 12volt DC at up to 250mA at the screw terminals to power external triggers.

STROBE CONTROL While the use of strobes for lightning is strongly discouraged as the primary light source, the FF-351 does offer a strobe control channel. When used to supplement ProLight-400 LED fixtures or incandescent light, strobes can add to the light intensity and provide an additional effect. Only professional strobes with low voltage control circuits should be used. Strobes should be connected with industry standard cables utilizing ¼" TR (mono) plugs on both ends. Assuming your strobe permits, multiple strobes may be daisy-chained together per the instructions with your particular strobe. Strobes should NOT be connected via the FF-351's AC outlets.

SPECIFICATIONS AND FEATURES

MAXIMUM POWER HANDLING -
>   Left Lightning Channel – Up to 1,500 watts
>   Right Lightning Channel – Up to 1,500 watts
>   Dimmer Channel – Up to 750 watts
>   TOTAL SYSTEM – **All lights combined must not exceed 3,000 watts**

EXTERNAL INPUT: 10k ohm impedance, 1-volt peak-to-peak

ELECTRICAL ISOLATION – Low voltage is provided by an isolated switch mode power supply. Solid-state optical isolation is utilized to separate low voltage and audio circuits from AC power circuits.

SAFETY FEATURES – A user accessible master fuse (20 amp) is located on the back panel. Individual channels are internally fused. Internal surge suppression is provided to protect your investment from power surges. An internal heat sensing circuit measures the temperature inside the enclosure and will temporarily shut the system down when overheated. The display will inform you that it is overheated. Once it has cooled down to 50ºC (122ºF), the controller will resume operation.

LIGHTS SUPPORTED – Lights Alive ProLight-400 LED (preferred), incandescent, halogen plus many dimmable LEDs and dimmable compact fluorescent bulbs.

THRESHOLD – This feature extends the life, improves response time and increases sensitivity of incandescent and halogen bulbs. It also improves apparent sensitivity of LED fixtures. Always adjust to where the light just begins to glow, then back the setting down until the light goes out again.

FACTORY DEFAULT – When in doubt, start over. The factory default option allows you to quickly return to known working values and be back in operation within seconds.

CONTROL METHOD – Digitally generated phase cut dimming. The amplitude (volume) of the thunder determines the intensity of the light.

ELECTRICAL REQUIREMENT –
   • Recommended: 120 volts, 60 Hz, up to 20 amps.
   • Supported: 100-130 volt, 50/60Hz, 20 amps.

PREFERRED ENVIRONMENT – 0ºF to 100ºF, 10-90% (non condensing) relative humidity. This unit is not weatherproof. Always protect from direct exposure to the elements.

WARRANTY – Lights Alive provides an unprecedented three (3) year limited warranty on all FireFly models. We will repair or replace (our option) any unit that is found to be defective in materials or workmanship within three (3) years of the date of purchase. This warranty does not apply to units that have been physically opened, damaged, improperly connected, altered, subjected to water, significant power spikes or any other issue beyond the control of Lights Alive. No other warranty is expressed or implied. By using this equipment, you understand and agree that Lights Alive will not be responsible for injuries or damages, whether direct or indirect, even if they are a result of our negligence.

To obtain warranty service, please call or email support@lightsalive.com for a return authorization number, then return the unit, prepaid, including a copy of your original invoice and a detailed description of the problem to Lights Alive at the address listed below. For your protection, we suggest insuring your package and using a method that will provide tracking information. If we find the unit to be defective and under warranty, we will promptly repair or replace it. If it is a non-warranty issue, we will contact you with details and options.

WARNING- Your FF-351 is equipped with security screws to prevent personal injury and/or damage to your system. There are no user serviceable parts inside. Any attempt to defeat these security screws to gain entry into the enclosure will void your warranty and may subject you to high voltage that could cause serious injury or death.

SUPPORT - If you need help with your FF-351, Lights Alive is there for you. Please feel free to contact us at:
   Email: Support@LightsAlive.com
   Phone: 317.280.3000, option 2
   Web: www.LightsAlive.com

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