

IR DMX Controller Instructions

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For use with
Lowel IR DMX
Translator

LOWEL IR DMX CONTROLLER

Overview

The Lowel IR DMX Controller™ & IR DMX Translator™ are designed to allow wireless handheld control of 1–512 DMX controllable devices

Note: *The IR DMX Controller also allows communication with up to 64 dimmable Lowel/Fluo-Tec fixtures, when used in combination with the Lowel IR Sensor™. You can also add Fluo-Tec dimmable fixtures to a Translator driven DMX circuit. For use in either of these manners, please consult the companion booklet; Lowel IR DMX Controller, Instructions for use with the Lowel/Fluo-Tec Studio Fluorescent system.*

The dimmable fixtures connect to each other via DMX in/out cables, with the IR DMX Translator being connected to the first fixture. The IR Sensor (internal or attached external) receives infrared signals from the IR DMX Controller and sends them to the first DMX-512 dimmable fixture in the chain. This allows the IR DMX Controller to identify each fixture, via its separate DMX-512 address, and send dimming commands to it, either separately or to the entire group. The fixtures can be dimmed throughout their entire range.

In addition, the Controller will allow storage of up to 10 “scenes”, with each scene containing dimming levels for up to 512 DMX dimmable fixtures. This allows preset storage of 10 different “looks” for the set that is being lit.

The IR DMX Controller keeps all address and dimming information

in an internal non-volatile memory, which is retained even if the controller has been shut off.

Note: *When batteries are removed for longer than 15 seconds, all stored information will be lost and the unit will default all stored information to a level of 0%. See “Changing Batteries” for more information.*

If AC power to the IR DMX Translator is interrupted it defaults back to “pass thru” mode, reverting control to an attached DMX console.

Preparing for DMX-512 control using the IR DMX Translator with IR DMX Controller.

Whether you intend to control single DMX device or multiple units, you must first assign DMX addresses to the devices. Consult the instructions for the devices used.

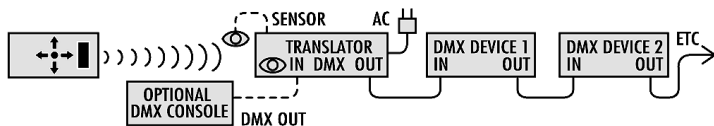
Connect the IR DMX Translator in the following manner (see below illustration):

- 1 IR DMX Translator must be 1st in** DMX chain. Make sure it is not connected to a DMX-512 console.
- 2 If DMX chain is also controlled** by console, Translator must be connected between console & 1st DMX device (use IR DMX Controller to disable console).
- 3 Connect AC power supply to Translator.**
- 4 Connect Translator DMX Out to 1st** DMX Device DMX In.
- 5 Daisy-chain remaining DMX Devices** (Out > In, Out > In, etc.)

Note: For more information, a comprehensive explanation of DMX-512 control may be found by visiting <http://www.usitt.org> (not a Lowel site).

IR Sensor

Two options exist for receiving commands from the IR DMX Controller, the internal sensor on the Translator and the external plug-in IR Sensor. Choose either based on the ability to have line-of-sight communication with the Controller. The external sensor will give more placement options, but may not be necessary, based on your installation placement of the Translator. The external IR Sensor plugs into the telephone style jack on the Translator end-plate. See next page for more information on the IR Sensor.





Installation

The IR DMX Translator has a built in sensor behind the translucent dark red end-plate. This end-plate also holds the telephone style jack for the external IR Sensor (pictured above). Both internal and external sensors have the same sensitivity

Attach the IR Sensor with the sensing element to a lighting truss, fixture, yoke, ceiling, etc. using enclosed velcro in such a way that there will always be a line of sight between the IR DMX Controller and the IR Sensor from every point of the studio where remote operation is likely to be needed. The same placement concept is true for the Translators internal sensor.

Use only the supplied telephone style interconnecting cable, and plug into both sensor and Translator.

Locate the IR Sensor away from light sources that may compete with the signal from the IR DMX Controller, and therefore blind or desensitize the IR Sensor.

The IR Sensor is designed to be used at an maximum range of 45 ft. between the IR DMX Controller and itself. If using the controller at a distance closer than 6 ft., you may need to slightly weaken the sensor's "eye" with a piece of diffusion gel to cut down the strength of the incoming signal. Ambient light levels may affect maximum operating distance.

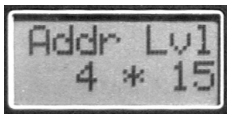
Experiment to find the placement and distance that works best for you.

After the installation, make sure that the LED flashes steadily from every intended point of operation when operating the remote control, and by watching the IR LED indicator (located on the IR Sensor's body). By fine tuning its location using this method, you will achieve the maximum coverage of the room.

Signs of improper IR Sensor's positioning are a "jumping" displayed level, or level differences between the level indicated on the Remote IR Control and the level displayed on the rear LED of the fixture. Also, a non steadily flashing LED in the pick-up IR Sensor is an indication that the IR signal is not being received properly.

LCD

The remote control contains a 2 line, 8 character LCD (Liquid Crystal Display).



Once turned ON, the Left side displays the DMX-512 Address channel being accessed (1-512 max) or ALL (in which case up to 512 fixtures will be accessed simultaneously). The Right side displays the dimming level (0-100%) of the unit corresponding to that address.

In addition, an asterisk will also be displayed in the center of the lower line when the MODE button has been pressed, to indicate an **instant ON** (level of 100%) or an **instant OFF** (level of 0%) capability, upon pressing the +LEVEL or -LEVEL. Otherwise, the unit will dim up or down when the LEVEL buttons are pushed.

Note: a flashing "dot" in place of the asterisk = **low battery**.

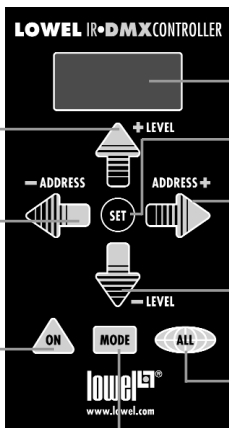
Buttons

Familiarize yourself with the location of the control buttons. Some buttons control more than one function. Read pages 6-8 for more information.

+ Level
will increase the dimming level (%) of the fixture from 0-100%.

- Address
will change the address of the fixture that is being accessed, descending from max. 512-1.

ON
Quickly press to turn the unit ON.



LCD
(Liquid Crystal Display)

SET
This is a multifunction button.

+ Address
will change the address of the fixture that is being accessed from 1-512 max.

- Level
Will decrease the dimming level (%) of the fixture from 100%-0.

ALL
This is a toggle function.

MODE
This is a multifunction button.



ON

Quickly press to turn the Controller ON.

- To start or return to active operation press the ON button.

Shutdown

- To turn the IR DMX Controller OFF, hold the SET button for 2 seconds.

Auto Shutdown

- To extend the life of the batteries, the unit will shut down automatically after 5 minutes of no operation (if no button is pressed).

MODE MODE

a multifunction button.

Instant 100% ON / Instant OFF

- By clicking on it once, an asterisk will be displayed in the center of the unit's LCD display.
- After this, if the +LEVEL button is pressed, the level will be increased quickly to 100% (instant ON).
- If the -LEVEL is pressed, the level will be quickly decreased to 0% (instant OFF).
- Clicking singly on any other button will cancel the instant ON mode.

Entering Sub-Menu Mode

- Pressing the MODE for several seconds yields 5 sub-menu choices, see below chart.

MODE Sub-Menu List (scroll through sub-menus using -Level / +Level buttons)

- 1 Scene Mode?** This selection gives the option of entering the Scene Mode. To enter Scene Mode, press the MODE button again. See pg. 9 for instructions on Setting & Recalling Scenes.
 - 2 Enable IR/DMX?** Press SET button in this mode to bypass a connected DMX console and enable Translator. When enabled, Translator will generate DMX, indicated by steady-lit LED.
 - 3 Disable IR/DMX?** Press SET button in this mode to bypass the Translator and enable a connected DMX console. When disabled, Translator will only respond to Enable IR/DMX command, Disable status is indicated by blinking LED (approx. 2 flashes per second).
 - 4 Set DMX Channels?** This selection gives the option to enter a mode where you can determine the number of DMX channels (fixtures) the IR DMX Controller will communicate with. To enter, press the MODE button again and the LCD screen will display the maximum channels the controller is set to control (min: 10, max: 512). Use -ADDRESS or +ADDRESS buttons to select total number. Press MODE again to store that number & exit mode.
 - 5 Software Version Number.** This selection gives the revision number of the software stored in the IR DMX Controller. It is important information in case technical support is needed.
-



ALL
a toggle function.

ALL vs. Single Fixture Command

- Pressing this button, allows the IR DMX Controller to send DMX-512 dimming commands to ALL fixtures connected in the circuit simultaneously.
- The Address field of the LCD display will read "ALL", meaning that ALL channels will receive the same dimming level (%) indicated in the Level field.
- Clicking the ALL button again toggles it back to communicating with a single chosen addressed channel.

Note: *When in ALL mode, the –ADDRESS and +ADDRESS buttons are not active. It is important to understand that once the ALL mode is turned off, all channels but the one indicated in the address field will revert back to their previously set dimming levels.*

Example: *if channel 15 is set to a level of 38%, selecting the ALL mode will take all fixtures in the DMX-512 line go to 38% intensity.*

Once this mode is reverted back to single channel operation, ONLY address 15 will be set to 38%. The rest of the remaining channels will revert to the intensity levels previously stored in memory.



SET
a multifunction button.

Transmitting Pre-stored Levels

- When pressed, the IR DMX Controller updates (retransmits) all channel levels to their previously set levels, as saved in the remote's internal, non-volatile memory.

If the IR Sensor did not receive any part of the infrared beam while transmitting dimming commands (ex.—something blocking the line of sight between the IR DMX Controller and the IR Sensor unit), the dimmable fixture will be set to a different level than is displayed in the IR DMX Controller LCD. By pressing the SET button, all values will be retransmitted, "re-synchronizing" the dimming levels of the fixtures to the displayed level in the IR DMX Controller.

Note: *Pressing SET while sending values will interrupt transmission.*

If one or more dimmable fixtures were turned off (i.e. at night, or for lamp change), after turning them back on, their dimming levels will be different than what has been saved in the IR DMX Controller's memory. Pressing the SET button, updates all the fixtures to their desired levels simultaneously.

Saving Scenes

- A secondary function of the SET button is to save Scenes. See pg. 9 for more information.

Shutting Down

- To turn the IR DMX Controller OFF, hold the SET button for 2 seconds.



+ Level

will increase the dimming level (%) of the fixture from 0–100%.

- The level can be increased one percent at a time by clicking the button singly.
- Holding the button down, will gradually increase the fixture to 100%.
- The longer the + Level button is held, the faster dimming will occur.

Note: Console DMX-512 dimming can be divided into 256 steps covering the range of dimming from 0–100%. The IR DMX Controller dims from 0–00% in 100 steps, so some fine-tuning of dimming levels may not be possible.

Also, due to the nature of dimmable ballast's, the Lowel Fluo-Tec dimmable studio fixtures begin their dimming levels at 3%, to prevent flicker at lower levels. Other DMX-512 dimmable fixtures (ex. tungsten) can be controlled from 0–100%.



- Level

will decrease the dimming level (%) of the fixture from 100–0.

- The level can be decreased one percent at a time by clicking the button singly.
- Holding the button down, will gradually decrease the fixture to 0%.
- The longer the – Level button is held, the faster dimming will occur.



-Address

will change the address of the fixture that is being accessed, descending from max. 512–1.

- The +Address button advances one at a time by clicking the button singly.
- Holding the button down, will gradually scroll through the addresses.
- The longer the button is held, the faster it will scroll.
- After unit 512 max. is reached, the remote control will return to unit 1.



+ Address

will change the address of the fixture that is being accessed from 1–max. 512.

- The –Address button advances one at a time by clicking the button singly.
- Holding the button down, will gradually scroll downward through the addresses.
- The longer the button is held, the faster it will scroll.
- After unit 1 is reached, the remote control will return to unit 512 max.

Note: When using the IR DMX Controller with the IR DMX Translator, you have the ability to control up to 512 fixtures. However, for situations where you are controlling significantly fewer fixtures, it may be more efficient to trim the maximum number of addresses to avoid excessive scrolling, or transmitting empty dimming commands when sending values to all fixtures at once. See MODE Sub-Menu List description for Setting DMX Channels on pg. 6.

The IR DMX Controller can store up to 10 different scenes, with each scene containing dimming levels for up to 512 dimmable fixtures. All scenes are saved in non-volatile memory.

Note: see *Replacing Batteries* (pg. 11) for important information.

To set and store scenes:

- Select any addressed channels from 1–512 and set levels for them.
- When you have set all selected fixtures to desired levels, hold down the MODE button for two seconds. The LCD display will show a Scene number, from 1–10.
- Use the UP/DOWN arrow buttons to move between scenes.
- Once the desired scene is selected, pressing the SET button to store the levels for that scene in the IR DMX Controllers memory.
- Press the MODE button again to exit.

To recall a stored scene:

- Press the MODE button for 2 seconds, the LCD screen will display “Scene Mode?”.
- Press the MODE button once more, quickly.
- Find the desired scene using the UP/DOWN arrow buttons and press the MODE button once to transmit those dimming values and return to normal operation.

To save a variation of a stored scene as a different scene:

- Hold down the MODE button for two seconds. The LCD display will show Scene Mode?. Press the MODE button again to enter. The display will show the Scene number, from 1–10.
- Use the UP/DOWN arrow buttons to move between scenes.
- Once the scene you want to create a variation of is selected, press the MODE button again to exit. The display will show Sending Values as the fixtures are set to the values of the scene.
- You may now adjust the dimming levels of any fixture you want to vary in that scene.
- When you have set all selected fixtures to their desired levels, hold down the MODE button again for two seconds and then use the UP/DOWN arrow buttons to select the number for the new scene to be stored in.
- Pressing the SET button stores the levels for that scene in the IR DMX Controllers memory.

Note: the SET button will “refresh” (re-send) the values of all 512 max. channels corresponding to the values stored in the current chosen scene. The display again will show Sending Values, as it updates itself.

Replacing Batteries

A flashing “dot” in place of the asterisk = low battery. In order to replace batteries and keep stored address dimming level & scene information:

Note: *Be careful to properly install the batteries. Battery reversal may cause a permanent damage to the remote control.*

- 1 Press the SET button for 2 seconds to turn the unit off, or wait until the IR DMX Controller shuts down on its own (after 5 minutes of no activity).
- 2 Remove the 2 AA alkaline batteries and quickly insert a new set within 15 seconds of the removal, making sure to properly orient the battery contacts as shown on the bottom of the battery compartment.
- 3 Close the battery compartment.
- 4 After turning the IR DMX Controller back ON, point it at the IR Sensor and press the SET button a few times. This will guarantee that the dimmable fixtures are set to the same levels that were previously saved in the IR DMX Controller.

When powering the IR DMX Controller up for the first time after a battery change, the Controller's LCD will show its installed software version. Make note of this number in case it is needed for technical assistance.

Note: *Be careful to properly install the batteries. Battery reversal may cause a permanent damage to the remote control.*

If the IR DMX Controller is left without batteries for a period longer than 15 seconds, all the previously stored dimming, addressing & scene information will be lost, reverting to a default value of 0%.

Note: *Remove the batteries from the compartment if you plan on not using the IR DMX Controller for an extended period of time*

Low Battery Warning is displayed in the LCD as a flashing dot, in the center of the bottom line of the display.

Read battery manufacturers warnings for safe use.

Dispose of batteries safely per state and federal guidelines.

Software revision updates:

IR DMX Controller: To find the software version installed on your Controller, power it up and press the MODE button for a few seconds. The words “Scene Mode?” will be displayed on the LCD screen. Pressing the – LEVEL button once will scroll to the installed software version number of the IR DMX Controller. It is important information in case technical support is needed.

Fluo-Tec Studio Fixtures: all dimmable fixtures should have software Revision 1.7 or later installed, in order to work with the IR DMX Controller. To check the software version of your fixture, disconnect it from the DMX-512 circuit and power it up. The LED on the fixture back will display the model of the fixture and its software version. If it is not Revision 1.7 or later, contact Lowel (800-334-3426).

Warranty, Problems, Repairs & Info

Lowel equipment and kits are sold through authorized Lowel Dealers and, in some countries, Authorized Lowel Distributors.

Repairs, problems, suggestions, and requests for brochures, instructions, parts lists may be handled by your authorized Lowel Dealer (Distributor) or directly through Lowel. Electrical repairs should be made only by Lowel or a qualified electrician.

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Patent Pending

Version 1.0 330

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