



THEIA ECHO

USER MANUAL & INSTALLATION GUIDE

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MANUAL FOR END USER AND INSTALLER

Thank you for purchasing the Scynce Theia Echo. This manual contains all the information needed to quickly familiarize yourself with the product. Please review this information carefully, before installing and/or operating the product.

We recommend you keep this manual on hand for future reference.

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THEIA ECHO USER MANUAL

The Echo is a control interface for Scynce Wireless Led Lights.

The Echo provides two main functions:

1. An interface between external control systems using 0-10v inputs
2. A real-time clock with battery backup to maintain a synchronized time between all lights during periods of intentional or unintentional power outages.

The Echo offers the ability to control the Scynce light fixtures using other off the self controllers. It features five 0-10V analog inputs that communicate with the Scynce lights over the mesh network and are used to control the intensity of each spectrum. The Echo also offers the ability to control other systems outside the Scynce mesh network. It features two standard analog 0-10V outputs for future expansion, that aren't currently active.

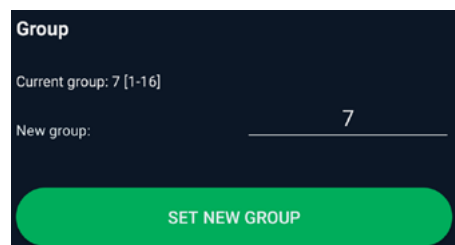
The Echo contains a radio that supports Bluetooth along with Thread Mesh networking for communication between lights. If the Echo is configured in a network of lights, it will send out a real-time signal to the network periodically. This prevents the internal time of the network from drifting so all lights stay perfectly synchronized.

SETUP

The Echo is configured using the Theia App that can be downloaded from the Android or iOS store. The app is used to set the group and time in the Echo. These settings are on the configuration page in the app. The configuration page is selected from the slide out menu on the top left corner of the screen.

GROUPING

To set up the Echo to control Scynce lights, the internal group that the Echo has assigned to it must be set to the same group as the lights. To do this, connect to the Echo from the App. Navigate to either the SPECTRUM or the RECIPE page and make sure the slider is in group mode.

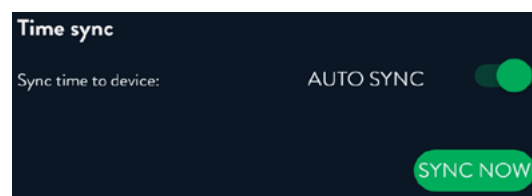


Next, navigate to the CONFIGURATION page. Tap the “New group” edit area and a keyboard will be displayed. Enter the group the lights are in and press the “set new group” button. This will load the new group information into the Echo. After receiving the new group information the Echo will reboot and be able to connect to the lights.

NOTE: A reboot will cause the app to disconnect from the Echo.

SET THE TIME

To set the time, connect to the Echo from the app and navigate to the CONFIGURATION page. Scroll down to the Time Sync and press the “Sync Now Button”, which will send the current time to the Echo. Now the Echo’s internal clock will be synchronized with your phone or tablet’s time. If the app connects to the Echo with “Auto Sync” enabled, the Echo’s internal clock will synchronize with your phone or tablet’s time.



LIGHT SPECTRUM AND RECIPE CONTROLS

When connected to an Echo, it functions exactly like as light would for spectrum tuning and recipe loading. If your Echo is configured correctly and in a group with other lights, you can control the spectrum exactly as if you were directly connected to any light in the group.

One thing to note is that the Echo will send commands to the lights based on the following priority list.

1. Recipe
2. Sliders in the app
3. Inputs (shown below) - available on the Echo2 only.

INPUTS

The five 0-10V inputs are mapped to the four color channels (some lights only have 2 or 3 channels) and the master intensity. For each channel, please see the chart below for mapping. When a signal is received of 1v or less, the Echo interprets this to be a command for 0% light output. Anything 9V or above is equal to 100% light output. A change on any of the inputs will cause the Echo to transmit the light spectrum data across the mesh network to synchronize the request across all lights in the group.

If left unconnected, the inputs will not have any effect on the output levels. That means the spectrum, timing and recipes configured will be in control. Based on the internal priority, if a change to the spectrum is made using the Theia app the lights will change to the Theia app setting. The analog input settings will not be sent to the lights until a change to the analog input voltage is made again. If the recipes have been enabled by the app, the analog inputs will be overridden by the recipe.

Light Intensity % vs Input Voltage

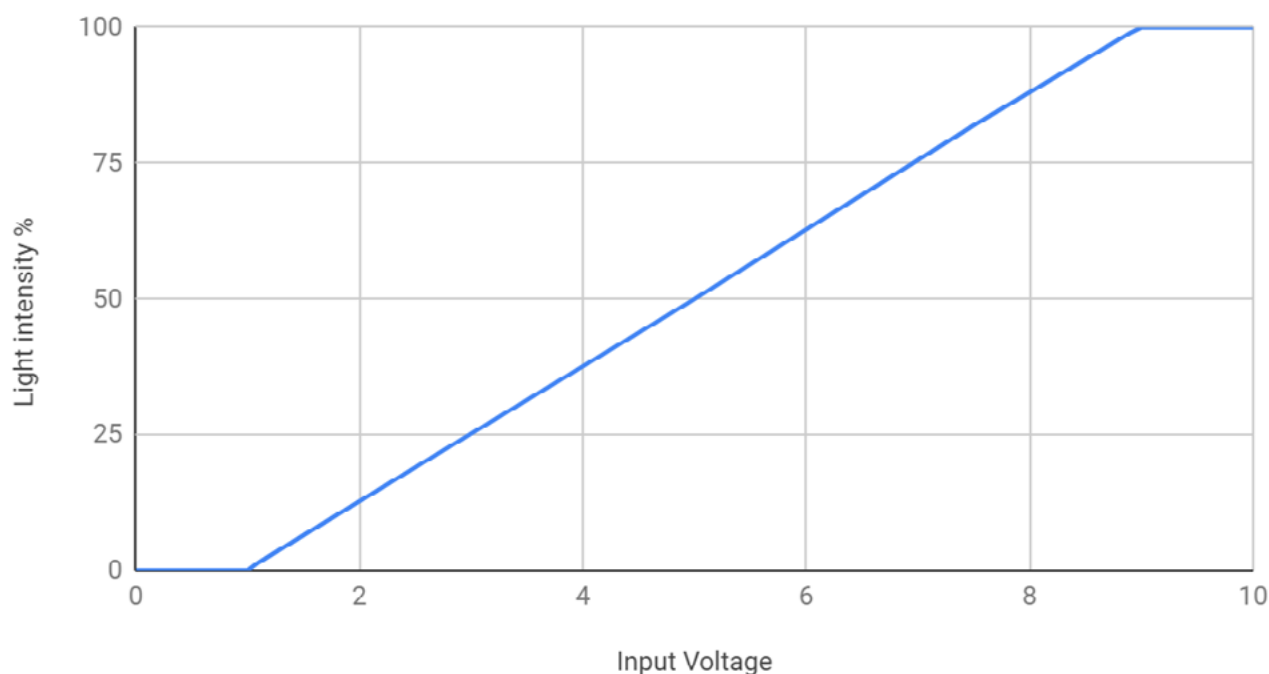


Fig.1 0-10 Input Voltage vs Light Intensity

OUTPUTS

The Echo2 outputs are not currently active and will be used for future expansion or custom applications. Please contact Scynce if you have a desired custom use for the two 0-10v output channels.



Fig. 2 Echo2 IO Connections

I/O CONNECTIONS

The terminal block has the following physical interfaces:

- Five channels of 0-10V signal in mapped to light controls.
 - Input 1 (1+,1-) is mapped to the overall Master output intensity slider
 - Input 2 (2+,2-) is mapped to the Cool intensity slider
 - Input 3 (3+,3-) is mapped to the Natural intensity slider
 - Input 4 (4+,4-) is mapped to the Red intensity slider
 - Input 5 (5+,5-) is mapped to the Warm intensity slider
- Two channels of 0-10V out.
 - Not currently active
 - Can be custom programmed upon request
- 12 volt DC input (1 amp)
 - This port powers the Echo
 - UL approved charging block is included with the Echo

Each in/output has both a negative connection (ground) and a positive connection (0-10V).

NOTE: Please use caution to ensure your inputs are correctly and firmly connected.

CAUTION: Do not supply voltage in excess of 12v to the inputs of the Echo2, otherwise permanent damage may occur.

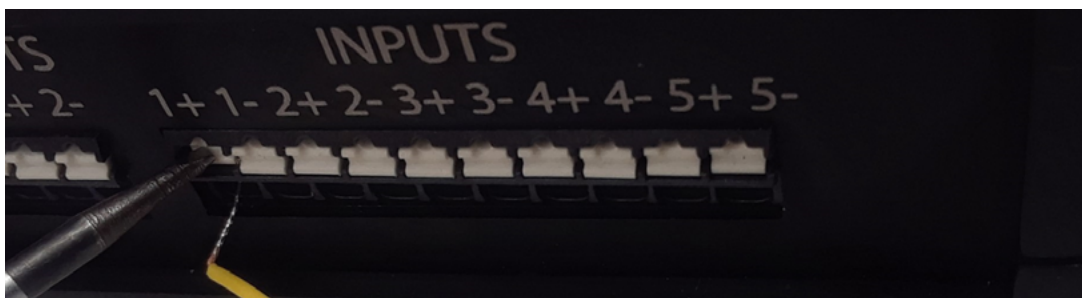


Fig. 4 Wire Connection

Two cables are included (both configured for use with a TrolMaster Hydro X) in the Echo packaging that have an RJ9 (phone plug) on one end and a pigtail-to-stripped dual wires on the other. To connect the wires to the input terminal block it is suggested to use a small flat head screwdriver to push in the white locking mechanism. Once depressed, you can insert or remove the wire. To test the connection of the wire, gently pull on it to confirm a secure seating within the locking mechanism. In most cases, the yellow wire will be the +V and the green wire will be the ground or -V.

NOTE: If you lose or break your included cable, or need one of a longer length, please contact our support department for assistance.

CONNECTION TO 3RD PARTY ENVIRONMENTAL CONTROLLERS

If you are connecting a system such as Argus, Hoogendorn or any other environmental control system besides TrolMaster, please contact our support department. We have the ability to work with you on custom wired setups as well as custom programming to allow communication protocols such as ModBus or TCP/IP to control the Echo.

TROLMASTER SETUP

Hardware Requirements:

- Theia Echo & Power Supply
- Trolmaster Hydro X & Power Supply
- Trolmaster Type F Lighting Adapter
- RJ9 Cable (Provided with Echo)
- Scynce LED fixtures of choice
- Micro Screwdriver



STEP 1

Begin by plugging the TrolMaster Hydro X into a power source. Continue to configuring the general time settings of the device.

- Using the Key Pad on the Trolmaster, navigate as follows:
- Enter > System > Time Settings Set time to desired point).



Time display setting on TrolMaster

STEP 2

The Echo requires a TrolMaster Type F Lighting Adapter connection (sold separately) in order to create a communication path between the two devices. Begin by plugging the Type F Lighting Adapter into the “Line 1” or “Line 2” inputs on the bottom on the TrolMaster. This specific adapter will be used to connect the TrolMaster to the Echo, which will then wirelessly transmit commands to the fixtures.



Inputting Trolmaster Type F Lighting adapter into Line 1.

STEP 3



Inputting RJ9 Pin Connector into the Type F Lighting Adapter.

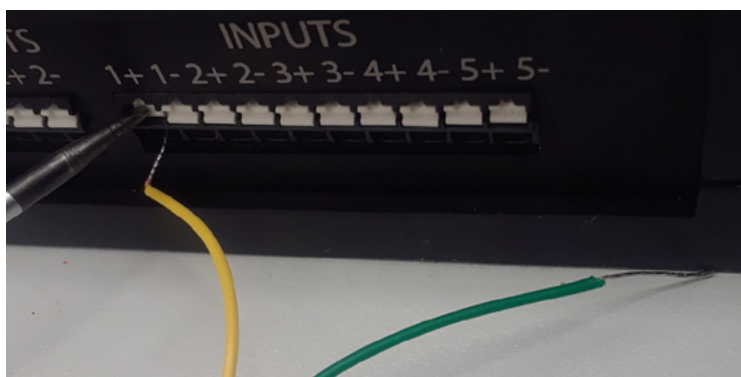
Using the included RJ9 cable, plug the male pin connector into the input side of Trolmaster Type F Lighting adapter. The open ended portion of the RJ9 cable will be wired into the Echo.

STEP 4

Referring to the I/O Connections map, press the white locking mechanism on the bottom of the Echo using a micro screwdriver and insert the wires into the correlating +/- terminals.

The most common and recommended connection will be Input (1+1-) to control the Master Intensity of the fixtures.

Plug your Echo into a power source.



Wiring RJ9 hardwire into +/- Input terminals of Echo 2.

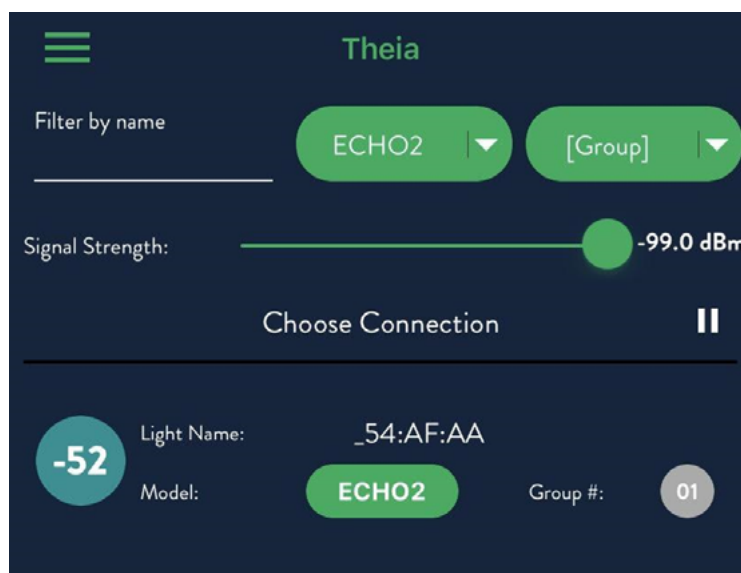
STEP 5

The Echo will serve as the central hub that communicates between the TrolMaster Hydro X and your Scynce LED fixtures.

Open the Theia App on your Android or iOS device, and verify that you are using the most recent version of the application from the Google Play or Apple Store.

Once plugged into a power source, your Echo will become recognizable within the Device Selection screen on the Theia App. Select the available Echo unit. Do not connect directly to the Echo through the Bluetooth on your device, only connect through the Theia app.

NOTE: Refer to the Configuration tab in the side menu to adjust the Group settings of the Echo 2.



Echo 2 displayed in Device Selection landing page.

NOTE: Verify that all fixtures to be controlled by the Trolmaster/Echo are within the same Group, and have the Group slider toggled on, which is accessible from the configuration screen.

STEP 6

Once connected, the app will bring you to the Spectrum adjustment page of the Echo.

Ensure that the Group toggle is “on” in the upper left hand corner in order to pair with your fixtures.

NOTE: Group changes can be made in the Configuration section of slider window.

Any changes made to this Spectrum screen will be transmitted through the Echo to any of the fixtures that are also within the same Group as the Echo.



Note: Ensure that the Group slider in the upper left corner is toggled ON. Adjust spectrum of fixtures from this screen.

It's important to note that the current configuration of the TrolMaster/Echo was intended to allow for the control of the Master Intensity (via the TrolMaster) of the spectrum that was previously sent to the lights via the Theia app.

The user will set their desired spectrum within the Echo 2 on the Theia App, and through the TrolMaster interface, they will set their ramp up/down and on/off times. Intensity, ramping and timing will be determined by the TrolMaster system, sent to the Echo and then wirelessly relayed to the fixtures within the same group as the Echo.

STEP 7

- Using the Key Pad on the Trolmaster, navigate as follows:
- Enter > Light > Line # > Set Parameters for Echo 2 to transmit.



Mode: LED

Output Max: Set max intensity for fixtures.

On at: (Set desired time on).

Off at: (Set desired time off).

Dim: 86f (Fixtures will auto dim after this temperature is reached within the room)

Stop at: 90f

SunR/Stime: (Ramp up and down times for beginning and end of cycle.)

Once these parameters are set, the TrolMaster will transmit the data to the Echo. The Echo will wirelessly transmit the commands to all of the fixtures set within the Group that the Echo is set to.

STEP 8

Return to the home screen of the TrolMaster Hydro - X. If properly connected, the Echo unit will broadcast the Spectrum set within the Theia App to the Scynce LED fixtures, according to the time parameters set within the TrolMaster Hydro X.

If the current display time is during a dark cycle, the fixtures will dim out completely.

If the current display time is during the photo cycle, set within the parameters of the TrolMaster Hydro X, the Scynce LED fixtures will display the Spectrum set within the Theia App and the overall intensity set within the Trolmaster interface.

NOTE: When using the TrolMaster in combination with the Echo, you will not be able to utilize the Recipe function on the Theia app. Spectrum tuning will be available, as well as overall intensity control. All ramping and dimming in and out of photo cycles will be controlled via the TrolMaster interface.