# The Light Labyrinth
# Instruction Guidebook

# The Light Labyrinth Manual

**CAUTION:  It is unsafe to look directly into the Light Projector LED's:**

*Light Labyrinth & Holotope projectors startup at 50% maximum light intensity.*

*Begin all light programs at >50% of maximum light intensity until eyes adjust.*

*For those with a history of ocular impairment, consult an eye doctor before use.*

**IMPORTANT:**

***Strobing is not for everyone!  If appropriate, introduce strobing slowly & at low intensity.***

*We are committed to a positive experience, be sure viewers are always comfortable and at ease.*

*If you experience discomfort or light sensitivity, close/cover your eyes, or leave the presentation.*

*We do not recommend strobing for those who have epilepsy, history of seizures, or heart issues.*

*We also do not recommend the use of strobing for frail patients or young children.*

The Light Labyrinth programs and features are designed to create a completely unique experience every time you view it.  When you start, we recommend that you try out features one at a time, and learn slowly as you go, for maximum enjoyment.

## Initial Setup

1. Make sure to place your Light Labyrinth on a hard, flat surface so that there is room for air to circulate underneath! *Warning: <u>direct sunlight</u> refracted through the crystal can fade surface.*

2. Plug the power cord into the back of the Light Labyrinth Box, then plug into wall socket.

3. Wait about 10 seconds for the start-up and self-test sequences to complete. You'll see two sets of flashing lights. Now your Light Labyrinth is ready for use.

4. Find the IR (Infrared) sensor on the front of the box, you'll see a small round hole with a tiny sensor. Point the top of the remote toward that hole and press the Power button (at top right).

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## Remote Control Buttons

(Refer to Quick Start Remote Guide on pages 16-17)

**Power: Power On/Power Off**

The Power button initiates the first "Dream" sequence (non-strobing Dream program).  This sequence will remain active, and loops until another has been selected. "Serenity" repeats every 3-6 minutes, each time in a different variation, until you activate another sequence.

*NOTE: Turning the equipment off will restore defaults and will start with Dream program.*

**Program**

When in Music Visualizer or MIDI modes, the Program button resets command functioning back to the remote control and automatically starts the first "Dream" sequence.

**MusicViz** (Light Labyrinth only)

Use this button to animate vocal or instrumental sounds or pre-recorded music into colored light. For detailed description of how to use this feature, refer to pages 12 - 15.  Press the Program button to exit Music Visualizer mode and equipment returns to the first "Dream" sequence.

**White/Smooth** (Light Labyrinth only)

In the Dream/Journey/Light Forms programs this button mixes white light into the sequence. (In Music Visualizer mode, this controls visual smoothness of the light to music rendering.)

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**Brightness/Gain***

This button controls brightness in the Dream/Journey/Light Forms/Chakras programs.
(In Music Visualizer mode, this controls the sensitivity of the light to music rendering.)

**Single Colors - Basic**

Press this button to start basic Single Colors, then use the color-coded buttons to choose a color
(default is red). This allows you to work with 1 color at a time, while strobing or non-strobing.
Press "Strobe Single Colors" button to activate/de-activate strobing while in single color mode.

To mix two colors in Single Colors, press the color you want to start with, wait for it to fade in.
Next, press the color you want to mix in (will start fading in), then press Pause button as the new
color fades in to capture a blend of two colors. Press Pause again to complete the cross fade.

*NOTE: The transition between two colors must complete before you can activate a new color.*

**Single Colors - Complex Color Combining "Mix-a-licious"**

If you're already in Single Colors, press "8" to start Complex Color Combining.
If another feature is currently active (like the Dream/Journey/Light Forms/Chakras), simply
press Single Colors followed by number button "8" to begin Complex Color Combining.

1. You'll see a single pulse of green, verifying that the feature is activated.

2. Use the color-coded buttons to select a specific color.

3. Use the **Brightness/Gain** button to fade the selected color in and out. You can press
   repeatedly for small changes, or hold the button down for bigger adjustments.

4. Then select another color. It will be assigned the "new" color. You can then use the
   Brightness/Gain button to fade the second color in and out.

5. The **White/Smooth** button will now be assigned to the "previous" color, so you can play
   around with fading it in and out as well.

6. You can add multiple colors to create a really beautiful combination.

7. Press "9" to return to basic single colors.

**Pause**

Pause will freeze the active program. Press again to toggle Pause On and Off. This is useful for
capturing particularly beautiful color combinations. If a strobing program is active, the Pause
button will not stop the strobing, it will only halt the cross fading of the colors. Also, press Pause
to "freeze" transitions when cross fading colors in Single Colors.

**Numbered/Colored Buttons 1 through 9**

These buttons perform more than one function depending on the program that is currently activated.  In Single Color mode, buttons 1-7 represent the individual LED colors as shown:

(1) Red, (2) Orange, (3) Yellow, (4) Green, (5) Blue, (6) Violet, (7) White, (8) Mixing, (9) Exit

These buttons also contain preset sequences for the lighting programs called Dream, Journey, Light Forms, and Chakras.  Select one of these programs and then use these nine buttons to choose individual sequences within that program set. (Refer to Remote Control Light Programs)

*NOTE: If you select the Dream or Light Forms program which expects further 1-9 button instructions and you don't press a following command button for 5 seconds, the first sequence is chosen and that sequence will begin automatically and loop continuously.*

**Next (Color or Program)**

This button advances to the next color, or program option, or sequence of effects (Journey only); depending on what single color setting or pre-composed light programs you are currently running.  (For the Dream/Journey/Light Forms/Chakras programs and Single Colors only)

**Dream, Journey, Light Forms, and Chakras**

These precomposed light programs are more fully described in detail on pages 7 - 9.

**Save/Recall - Saving and Recalling Favorites**

***For Dream, Journey, Light Forms, and Single Colors custom color mixes***

A "Favorite" is a way of storing a collection of lighting effects that can then be recalled quickly.  For example, if you have been working with a program and have found a compelling combo of color cross-fade speed, strobing depth, frequency, etc. You can store this combination of settings as a Favorite that can be recalled with a single button.  Up to 9 Favorites can be stored, and they will not be lost if you turn off power or unplug the unit.

1.  To save a Favorite, press Save button followed by the number where you want to save it.
    *NOTE: A green light will flash when saving.*

2.  You may want to keep a list of the Favorites you have saved and their numbers.

3.  To recall a Favorite, press the Recall button followed by the number where you saved it.
    *NOTE: A red light will flash if you try to recall a preset number that has never been saved. When you press Save or Recall, the current program stops and fades out.*

4.  To erase all Favorites, press Save, and then press Stop.  It will take several seconds for all nine to be erased.  A green light will flash when erasing is complete.

**Motor Control**

For Light Labyrinth boxes that include a motorized turntable, the Slower/Stop/Faster buttons allow you to change the turntable's rotation speed.  With this feature you can experiment with different kinds of meditative experiences, or ambient effects on the room.  When the crystal remains still, or turns slower/faster, it creates different moods.  *Feature is no longer available.*

## Program Speed Control

The Program Speed Faster and Program Speed Slower buttons allow you to manually control the speed of cross fading colors. This provides a way to select among 10 fixed color-fading speeds. Pressing the Fast or Slow button repeatedly will step through the 10 variable speeds. The slowest speed is extremely slow, you may even think the program is paused, but in fact fading is continuing… watch carefully, or come back later to see a different color mixture.

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## Strobe Depth

The Strobe Depth button controls the intensity of the strobing light. 100% depth is the most intense, while 25% depth is much milder.

When a strobing program is first activated, it begins at 25% depth.
If you wish to increase the intensity of the strobing:
Press the Strobe Depth button to get 50% depth. Press again for 75% depth.
Press again for 100% depth. Pressing again reverses the order: 75%, to 50%, to 25%.

## Strobe Frequency

The Strobe Frequency button controls the strobe rate for strobing programs. There are two types of strobing: <u>Variable Frequency</u> (the rate of strobing varies as the program runs) and <u>Fixed Frequency</u> (the strobe rate remains the same). Pressing the Strobe Frequency button begins with Variable Strobing (30-8-30 Hz). Pressing multiple times changes the strobing frequency to Alpha (14 Hz), then Theta (7 Hz), then Delta (3.5 Hz), and then reverses order back to Variable.

### Variable

By default, the strobing programs use variable frequency, beginning at 30 Hertz (abbreviated as "Hz"; also known as cycles per second) and gradually slowing to 8 Hertz by mid-program, then returning to 30 Hertz at the end of the program.

### Fixed

Fixed frequencies are timed to assist in entraining brainwave frequencies:
Alpha, Theta, and Delta.

Light form programs are set at Variable (8-30 Hz) frequency.
Press this button repeatedly to sequence the other settings:
Alpha (14 Hz)
Theta (7 Hz)
Delta (3.5 Hz)

### Depth Shifting

This button turns strobe depth shifting on and off, which changes the intensity of the strobing as the program advances. Depth Shifting brings a kind of wave motion to strobing programs wherein the intensity of the program peaks and releases in shifting rhythms. At first this effect can be subtle; after a little experimentation you will find it is a very distinct effect when compared to the fixed strobing depth modes.

### Duty Cycle Shifting

The Duty Cycle button changes the duty cycle of the strobing light. Duty Cycle refers to the relative proportion of light and dark time in each cycle of a strobing program. Duty Cycle is typically expressed as a percentage of light time. For example, each time the strobe flashes, there may be a long pulse of light followed by a short period of darkness (90% duty cycle), or a short pulse of light followed by a long period of darkness (10% duty cycle). The frequency is the same in both cases, only the proportion of light to dark changed. When a Light Form program is active, the Duty Cycle Shifting button causes the duty cycle of the strobing light to change as the program progresses. When you press this button once, the program will begin at 90% duty cycle, shift slowly to 10% by mid-program, and then shift back to 90% at the end of the program. Press the button a second time to invert the effect: 10% to >90% to >10%. Press again to exit.

*NOTE: When you press Strobe Frequency to choose a fixed frequency (Alpha, Theta, Delta). The Duty Cycle Shifting button changes from 50/50%, to 25/75%, to 75/25%.*

### MIDI

This function is useful for synchronizing multiple Light Labyrinth boxes and Holotope projectors. The MIDI function can also prepare the equipment to be played as a MIDI instrument. To exit, press the Program button to disengage the MIDI connection. Equipment resets and restarts the first "Dream" sequence. (Refer to synchronizing instructions on page 10)

### Program Repeat (For Light Forms program only, options listed on page 8)

Light Forms series repeats by default. When Light Forms is active, press this button and the equipment will run through all of the strobing effects in series. Press again to repeat the individual sequence that is currently active.

### All Colors On

Press the All Colors On button to activate all 7 colors at once. Don't leave lights constantly on at max brightness in order to preserve the LEDs. To exit, choose another program type. The All Colors On program will turn off automatically after 1 hour. Next time you turn on the equipment it will start again with the first "Dream" sequence.

### Strobe Single Colors

After you've pressed the Single Colors button, the Strobe Single Colors button turns strobing on and off. When strobing is on, the Strobe Depth, Strobe Frequency, and Duty Cycle Shifting buttons are also enabled.

# Remote Control Light Programs

## Dream (Non-Strobing)

Press "Dream" for a selection of non-strobing programs, and then press the number of the specific Dream program you want. The first sequence that starts automatically is "Serenity" on button 1. The preset Dream sequence options are:

1. **"SERENITY"**
   A beautiful, continually evolving blend of colors. Three colors are always on and will cross face into a myriad of combinations that create a lovely, peaceful experience. When you first turn the Light Labyrinth on "Serenity" is active until another light program has been selected.

2. **"TIMELESS"**
   A lovely set of cross fading colors evoking a suspended sense of time. One, two, or three colors may be on at any given time as the sequence plays.

3. **"TWILIGHT"**
   A subtle sequence wherein one, two, or three colors may be on at any given time. In this program colors will rarely fade up to full brightness, which creates a slightly subdued effect.

4. **"BREATH"**
   This sequence is like breathing color. Each cycle begins in darkness with a unique combination of colors that slowly fade in and back out again. The timing of a complete cycle mimics a long relaxed breath. Using the White/Gain button, you can create a whiter background so that the sets of colors emerge from and return to white.

5. **"FANTASY"**
   This sequence is a constant flow of color that dynamically cascade in and out - up to six at any given time, in a free-form relationship for a fantastical journey.

6. **"FIREWORKS"**
   This sequence is like brilliant fireworks. Up to seven colors (including white) appear instantly in unique patterns and then fade out. This program is unique from other programs in the Dream set.

7. **"COLORWAVE"**
   In this dynamic sequence, all seven colors fade in and out in an overlapping wave form like a musical canon. Each wave cycle starts with a different color, advancing in chakra order.

8. **"MASTERWAVE"**
   This is fun, playful, non-strobing sequence. All six colors crossfade while the brightness rises up and down automatically. You can control the master brightness fade speed using the Brightness/Gain button.

## Journey (Non-Strobing)

Press "Journey" followed by button 1 for a pre-composed sequence that loops indefinitely.

### 1. "JOURNEY-1"

This pre-composed non-strobing sequence of lighting effects will take you on a fascinating journey with ambient color mixing and phasing, providing a serene meditation.  Subtle blending and continuous color shifting softens the mind and opens the heart for a relaxed state of being. You may slow the speed even further by adjusting the Program Speed Control.

## Light Forms (Strobing)

Press Light Forms (for strobing sequences), and then press the number of the specific Light Form sequence you wish to play.  The preset Light Forms sequence options are:

### 1. "INITIATION" (alternating colors with fade in/out)

Two colors alternate while a third fades slowly in and out.  This sequence provides a gentle transition from the "Serenity" style constant color sequence into the subtleties of strobing.

### 2. "TRANSCEND" (alternating colors)

Two colors alternate while cross fading.  This sequence is more intense than the previous one, there is no constant color juxtaposed with the two alternating colors.

### 3. "NOVA" (pulsating)

Three colors pulse in unison while cross fading.  This sequence is the first to include darkness.

### 4. "LUMINOUS" (alternating colors with darkness)

A four-phase sequence in which two colors alternate with a beat of darkness in between.

### 5. "RADIANCE" (alternating colors without darkness)

A six-phase sequence in which two colors alternate while a third punctuates at intervals.

### 6. "POLYRHYTHM" (six-phase pulsing)

Another six-phase sequence in which colors one and two describe a 2/3 polyrhythm, while a third color punctuates the start of the repeating sequence.

### 7. "LIGHTNING" (alternating with random color)

A four-phase sequence in which two colors alternate with a randomized color in between at a reduced brightness level for dynamic contrast.

### 8. "SPIRALS" (color cycling)

Six colors chase each other around in alternating spectral and reverse-spectral order, with a flash of white to mark the changes in direction, a useful program for chakra cleansing and balancing.

### 9. "HELIX" (complementary color cycles)

Seven complementary pairs of colors cycle through the spectrum and in the following order: red/green, orange/blue, yellow/violet, green/white, blue/red, violet/orange, white/yellow.

## Chakras (Non-Strobing)

Press this button for the "Chakra" Meditation, and then press the number of the sequence you want. Finally, press a number button for the "duration" in minutes per individual color. For example, pressing "2" will activate each color for a length of 2 minutes (times 7 colors), yielding a 14 minute meditation. Pressing "4" will yield a 28 minute meditation, and so on.

### 1. "ASCENDING"

An ascending color sequence: red, orange, yellow, green, blue, indigo, violet, white.

### 2. "INTEGRATED ASCENDING"

An ascending color sequence from root chakra to crown chakra with blending between colors, specifically: red, red/orange, orange, orange/yellow, yellow, yellow/green, green, green/blue, blue, blue/indigo, indigo, indigo/violet, violet, violet/white, and white.

### 3. "MANIFESTING"

A descending color sequence, from crown chakra to root chakra. The sequence is specifically: white, violet, indigo, blue, green, yellow, orange, and red.

### 4. "INTEGRATED MANIFESTING"

A descending color sequence from crown chakra to root chakra with blending between colors, specifically: white, white/violet, violet, violet/blue, blue, blue/green, green, green/yellow, yellow, yellow/orange, orange, orange/red, and red.

### 5. "HEART CENTERING"

An inner journey color sequence for centering energy from the root and crown chakras to flow into the heart. The sequence is: white, white/red, red/violet, violet/orange, orange/indigo, indigo/yellow, yellow/blue, blue/green, and green.

### 6. "HEART EXPANDING"

An outward moving color sequence for expanding energy from the heart toward the root and crown chakras and beyond. The sequence is: green, green/yellow, yellow/blue, blue/orange, orange/indigo, indigo/red, red/violet, violet/white, and white.

When Chakra Meditation programs end, the Light Labyrinth boxes and Holotope projectors will remain on the last color until you select another sequence.

*NOTE: During Chakras, most buttons are disabled. Next and Pause buttons continue to operate. Single Color modes exits the Chakra program.*

## Default Settings

When you first turn your Holotope or Light Labyrinth equipment on, or when you press the Program button, these are the default settings that the equipment will return to:

| | |
|---|---|
| **Program Type** | **Dream (non-strobing) with "Serenity" running** |
| **Dream/Light Forms** | **Sequence 1 plays and loops continuously** |
| **Brightness Control** | **70% of Maximum LED Intensity** |
| **White Control** | **Off** |
| **Pause** | **Off** |
| **Program Repeat** | **On – repeats whatever program you activate** |
| **Depth Shifting** | **Off** |
| **Duty Cycle** | **Fixed 50/50 Duty Cycle** |
| **Duty Cycle Shifting** | **Off** |
| **Strobe Depth** | **25% depth** |
| **Strobe Frequency** | **Variable (30-8-30 Hz)** |

# Synchronizing Multiple Boxes or Projectors

(a)  See initial setup instructions for each Light Labyrinth box (refer to page 2).

(b)  With two or more light boxes, connect the **2**nd box using a 5-pin MIDI cable from the MIDI OUT slot of box **1** (or Lead Light Box) into the MIDI IN slot for box **2**. Repeat with multiple light boxes.

(c)  Pointing the remote at the IR sensor of the **2**nd light box, press **Power** to turn **ON**. Lights should turn on.  Then press the **MIDI** button on the remote control. After this sequence the **2**nd box lights will turn off, this box is now synchronized with the Lead Light Box and awaiting instruction.

(d)  Pointing the remote at the IR sensor of the **1**st Lead Projector, press **Power** to turn the light boxes **ON**.  Both light boxes will turn on together and begin running the default program on startup which is the first non-strobing "Dream" sequence.

(e)  Any programs, light compositions and editing functions selected from the remote control will now activate both boxes simultaneously.

(f)  Additionally, connecting MIDI cables to Holotope projectors will synchronize according to this procedure in the same way.

(g)  Try slowing the speed of the "Dream" sequence for a softer experience, and toggle the brightness to maximize the levels for the crystals. Full brightness might be challenging for cameras that are streaming or capturing film.

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# Music Visualizer Inputs

To activate the Music Visualizer, press the Music Visualizer button on the remote control. Use the numbered buttons to choose settings appropriate for various instrumentation and genres (see Instrument Selection chart on next page). Press the Program button to exit the Music Visualizer mode and the equipment returns to the first "Dream" sequence.

**There are 3 ways to enjoy your Music Visualizer:**

**1) Built-in Microphone**

The built in microphone on top of the unit will receive input from music playing in the room or your voice, as long as there is nothing plugged into the Music Visualizer jack. Sing or tone and watch the color unfold. *The microphone is extremely sensitive!* If there are background noises in the room, the Light Labyrinth will "hear" them and translate them into colors as well. Use the Brightness/Gain control to turn up the sensitivity of the Music Visualizer for greater rendering of the sounds, and more vibrant and "ambient" colors will appear.

**2) Plug in a Source of Music**

For this feature you will need a source of music and a cable splitter (included with your Light Labyrinth). After you connect the splitter to the music source, one cable should connect to the Light Labyrinth, and the other cable to your stereo or amplifier. When the music starts, the Light Labyrinth will transform it into stunning patterns of color!

Possible sources of music are:
   a. CD Player
   b. iPod
   c. Computer
   d. "Boom Box" with line level output

**3) Plug in an Instrument or Microphone**

The Music Visualizer can render your live performance into a visual feast of color and light!
   a. Plug your instrument or microphone into the Music Visualizer jack,
   b. Press the number of the desired setting and play, chant or sing!

*NOTE: Microphone requires a pre-amp compatible with the Light Labyrinth's line level input.*

# Music Visualizer Controls

## Gain Control (Brightness/Gain Button)

The Gain setting changes the sensitivity of the Music Visualizer program to the loudness of incoming audio. The Gain has been preset to be compatible with most sound levels of music. For especially soft music, turn up the Gain to get a brighter visualization. For extremely loud music, turning down the Gain allows The Music Visualizer to more easily render the music into color.

## Smoothing Control (White/Smooth Button)

Smoothing setting changes the rate the Music Visualizer program analyzes and renders music into color with respect to time. Less smoothing allows the program to capture more rhythmic detail faster, but can feel too "jittery" with certain types of music. More smoothing will slow & soften visualization, which can work well for a capella or drone-based music, but the analyzer will miss some temporal details. The smoothing setting has been preset to work well with a wide variety of musical styles, but you may want to experiment with it to fine tune the Visualizer for your particular taste or mood.

## MIDI

Prepares the Light Labyrinth to be played as a MIDI instrument. See instructions on next page. Multiple boxes and projectors can also be synchronized using the MIDI button.

## Instrument Selection

The Music Visualizer is configured to work with live or recorded music. This feature maps the entire range of human hearing (20 Hz - 20 kHz) to the seven colors of the Light Labyrinth.

Three additional settings are available specifically for rendering tones from piano, guitar, and voice. When the Music Visualizer is active, select any of the four settings using the numbered buttons on the remote.

*NOTE: The Labyrinth will Flash all the colors in sequence to let you know you have successfully entered a Music Visualizer Instrument Setting.*

| | | |
|---|---|---|
| Button 1 | Music | 11 Octaves, centered over Middle C<br>Appropriate for live and recorded music |
| Button 2 | Piano | 8 Octaves, centered over Middle C<br>Works well with limited quality recordings<br>(Classic Jazz from the 1920's, for example) |
| Button 3 | Guitar | 5 Octaves, centered over Middle C<br>Appropriate for most instrumental music |
| Button 4 | Voice | 3 Octaves, centered over Middle C<br>Appropriate for vocals and singing |

## MIDI Instrument Features

You can use your Light Labyrinth as a MIDI instrument; such as a MIDI keyboard, percussion, or software controller. Simply connect a MIDI controller to the MIDI In jack of the Light Labyrinth. To enable MIDI input, press the MIDI button; the current program will stop and the Light Labyrinth will go dark. If you've been using the Music Visualizer, you must first activate the Program button, then press the MIDI button to enter MIDI input mode.

The Light Labyrinth responds to several different types of MIDI messages: Note On/Off messages, Continuous Controller Messages, and Extended Pitch Bend Messages.

## Note On/OFF Messages

These messages are interpreted in the same way that a standard MIDI sound module would interpret them. A Note On message activates a color, note velocity controls the brightness of the color, and a Note Off message allows the color to fade out. The speed of the color's decay is adjustable using MIDI Continuous Controller number 110. The higher the controller's value, the faster the colors fade to darkness. Note On/Off messages are interpreted on all 16 MIDI channels.

Individual MIDI notes are assigned to colors using "Note To Color" translation maps stored inside the Light Labyrinth. There are two maps that come preset from the factory. Map number one (the default) assigns colors to notes as follows:

$$
\begin{array}{ll}
\text{C and C\#} & = \text{Red} \\
\text{D and D\#} & = \text{Orange} \\
\text{E} & = \text{Yellow} \\
\text{F and F\#} & = \text{Green} \\
\text{G and G\#} & = \text{Blue} \\
\text{A} & = \text{Violet} \\
\text{B} & = \text{White}
\end{array}
$$

There is an alternate map that is selectable using MIDI Continuous Controller number 111. (Value < 64 = Map 1; value > 64 = Map 2): A = Red, B = Orange, C and C# = Yellow, D and D# = Green, E = Blue, F and F# = Violet, G and G# = White.
 *NOTE: Alternate and/or additional maps may be requested when you place your order.*

## Continuous Controller Messages

MIDI Continuous Controller messages 100-106 can be used to manually control the brightness of the seven colors. (As with Note On/Off messages, MIDI CC messages are interpreted on all 16 MIDI channels.) This feature not only allows you to manually mix colors, but also enables the use of a MIDI sequencer to record and play back "Light Compositions" for the Light Labyrinth. Using a combination of Note On/Off messages and continuous controllers you can create custom light shows synchronized to music.

As mentioned above, CC#110 is used to control decay rate of colors triggered using Note On messages, and CC#111 is used to change "Note to Color" maps.

Because standard MIDI CC messages are only 8 bit (values 0-127), they only allow you to control the brightness of colors in 127 discreet steps. Internally, the Light Labyrinth uses 512 discreet brightness steps. In order to provide access to this much more fine-grained control over color brightness, the Light Labyrinth supports the Doepfer "Inc/Dec" message scheme. The Doepfer "Pocket Dial" for example can be used with the Light Labyrinth when the Pocket Dial is configured to use preset number 89.

The Pocket Dial can then be used to control the following Light Labyrinth Features:

| | |
|---|---|
| Dial # 1 | Red Brightness |
| Dial #2 | Orange Brightness |
| Dial #3 | Yellow Brightness |
| Dial #4 | Green Brightness |
| Dial #5 | Blue Brightness |
| Dial #6 | Violet Brightness |
| Dial #7 | White Brightness |
| Dial #8 | n/a |
| Dial #9 | Program Speed (Similar to Manual Speed Control) |
| Dial #10 | Strobe Frequency |
| Dial #11 | Strobe Depth |
| Dial #12 | Strobe Duty Cycle |
| Dial #13 | n/a |
| Dial #14 | n/a |
| Dial #15 | n/a |
| Dial #16 | Activate/Deactivate built-in programs |

As suggested by the parameters listed above, Light Labyrinth will respond to MIDI while the built-in programs are active, enabling fine-tuning manual control of several program settings.

**Extended Pitch Bend Messages**

The Light Labyrinth allows you to control the brightness of the seven colors at full resolution using 14 bit MIDI extended pitch bend messages. Messages sent on the first seven MIDI channels control the brightness of the seven colors. Although 14 bits are received, only the values 0-512 are interpreted as brightness commands. While most MIDI sequencers make it unwieldy to use pitch bend in this way, other software (for example, MaxMSP) can easily transmit pitch bend values 0-512 enabling you to create algorithmically generated color patterns of your own devising.

# Quick Start Remote Guide

## Power
Powering ON initiates Dream Sequence 1. OFF returns all setting to their default values.

## Single Colors
Press for SINGLE COLORS, using the color-coded buttons to select specific colors. Press 8 to start complex color blending. Select a color using the color-coded buttons, then fade in/out manually using Brightness. Press 9 to exit color blending.

## Pause
Press this button to pause the current program. Press again to resume program. Press Pause to freeze transtitions when cross fading in SINGLE COLOR mode.

## White/Smooth
Hold this button to mix white light into a program. In MUSIC VIZ mode, use this to adjust the visual smoothness with which the music is rendered into light.

## Duty Cycle Shifting
Changes duty cycle (light/dark ratio) of strobing light. There are (3) settings. Press once for 90%/10% ratio, 2x for 10%/90%, and 3x returns to 50%/50%.

## Depth Shifting
Turns depth shifting On, and returns to Off, which changes the intensity of the strobing.

## Strobe Single Colors
After Single Colors (or while custom color mixing), Strobe Single Colors button turns strobing On/Off.

## Program
When in the MUSIC VIZ or MIDI modes, this button returns to the preset programs.

## MusicViz
Activates the Music Visualizer. Use the numbered buttons to choose settings for instrumental range.

## Brightness/Gain
When the LIGHT FORMS mode is active, B/G controls the overall brightness. When the MUSIC VIZ is active, B/G controls the sensitivity of visualizer to the audio input.

## Strobing Depth
Press repeatedly for: 50%, 75%, 100%, 75%, 50%, and back to default at 25%.

## Strobing Frequency
Press repeatedly: Alpha (14 Hz), Theta (7 Hz), Delta (3.5 Hz), Theta, Alpha and back to default Variable (8-30 Hz).
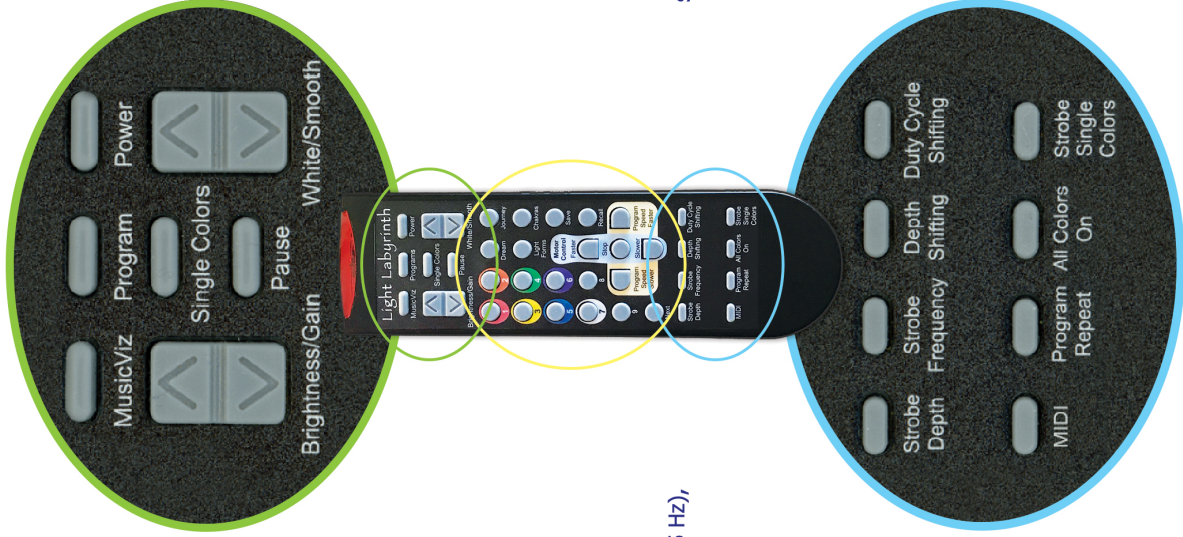
## MIDI
Prepares the equipment to be played as a MIDI instrument. Multiple Light Boxes/Projectors may also be synchronized via MIDI. See instructions.

## Program Repeat
Program modes repeat by default. Press this button to run through all the program presets 1-9 in sequence. Press again to resume repeating.

## All Colors On
Halts the running program and turns all colors on at FULL brightness.

# Quick Start Remote Guide

## Dream

Powering ON initiates Dream Sequence 1 "Serenity". This feature cycles thru (9) non-strobing compositions. Select compositions 1-9 or forward using NEXT.

## Journey

Currently one composition combining chakras, non-strobing, and (3) light strobing sequences blended into a 25 minute meditation.
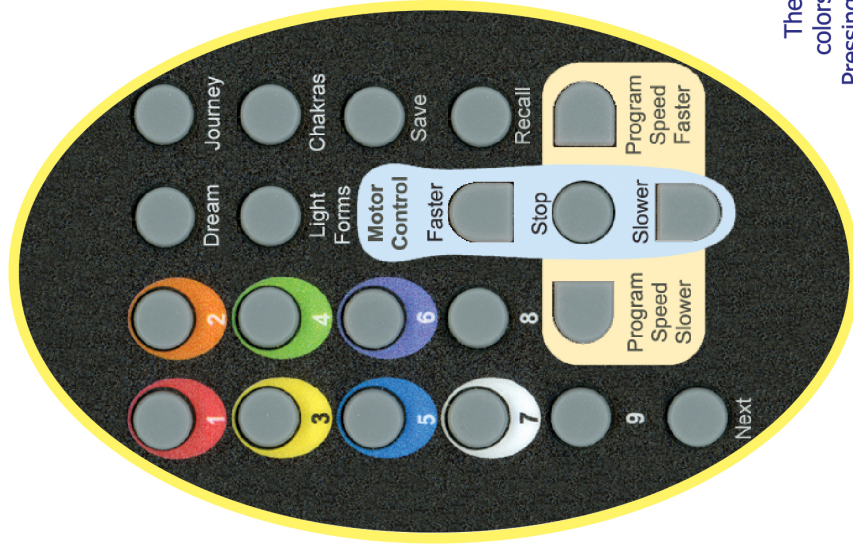
## Light Forms

This button initiates Light Forms Sequence 1. Select comositions 1-9 or forward using NEXT.

## Chakras

This button initiates Chakras Sequence 1. Press Chakras, choose from (6) compositions, then set the number of minutes for each color.

## Save/Recall

To save a favorite (combination of strobing or program features, or a custom color mix), Press SAVE followed by the number 1-9 where you want to save it. To recall a favorite, press RECALL followed by 1-9 to activate favorite.

## Program Speed

These buttons allow you to change the rate at which the colors crossfade (both strobing & non-strobing programs). Pressing the beige SLOWER/FASTER buttons will step up and down 10-tiered levels. The slowest speed is extremely slow.

## Motor Control

Turntable feature for these buttons are no longer available.

## 1-9/Color Buttons

This button performs different functions depending upon the currently active feature. In addition to representing Single Colors, buttons 1-9 also contain program presets for Dream, Journey, Light Forms, and Chakras.

If DREAM mode is active, you may choose among the (9) preset *non-strobing* light forms.

If LIGHT FORMS mode is active, you may choose among the (9) preset *strobing* light forms.

If CHAKRAS mode is active, you may choose among the (6) preset sequences.

If JOURNEY is active, preset (1) is a looping sequence of non-strobing lighting effects, a fascinating journey with ambient color mixing that provides a serene meditation.

If SINGLE COLORS or color blending is active, the color-coded buttons allow you to select among each of the (7) individual colors. Press 8 for color blending, press 9 to exit color blending.

If SAVE or RECALL are active, you may set or choose among your (9) favorites.

If the MUSIC VIZ is active, you may choose visualizer settings appropriate for the range of input: 1-music, 2-piano, 3-guitar, 4-voice.

## Next

This button performs different functions depending upon the currently active feature:

If DREAM or LIGHT FORMS is active, advance to the next preset.
If CHAKRAS is active, skip to the next color/chakra.
If SINGLE COLORS is active, advance to the next color.

## Release of Liability for Participants

When you are conducting meditations for small or large groups using your Light Labyrinth and/or Holotope equipment, according to the Ancient Technologies User Agreement that you signed upon purchase, you are obligated to ask each participant to fill out a waiver and release of liability form.  You may download a digital PDF from the ancient-tech.com website, or simply copy the following page and keep these for your records.  Given the nature of the activity, it is unlikely that you would need to protect yourself or your assets from legal action.  Nevertheless, it is always sound business practice to take precautionary measures.

The Ancient Technologies team, in the development of these products, have taken every possible foreseeable measure to ensure that our products are both harmless and helpful tools for personal exploration and spiritual growth.  Our team is dedicated to creating modern tools of technology based on ancient principles of healing that are designed, with the highest intentions and integrity, to assist group process and personal development.  We appreciate your business, and hope that these products will  support you in your personal journey as well as the expansion of human consciousness.