

# CHTT-3 “Dandy” Setup and Operation

**Thank you for purchasing one of our CHTT-3 “Dandy” paranormal communications testers! We hope it brings you many hours of enjoyment while pursuing evidence of paranormal activity.**

## **Let’s start with some important notes.**

**First, and VERY important** the Crystal at the top of the unit is there to hold the pendulums. It is **NOT** a handle. Since it is a natural Selenite crystal it is very easily damaged, i.e. broken clean in half. If you break it you have to replace it and that’s not free. Although if you do it yourself it’s not horribly expensive.

**Second**, the CHTT-3 “Dandy” is a very sensitive piece of test equipment. It is not a toy and should not be considered as one. It is not a decoration either (although we think it looks good). It is designed to communicate with entities using the motion of the pendants to trigger musical notes. There are electronic circuits inside that can be broken by rough treatment. Unless you know exactly what your doing just don’t open it.

**Finally**, the circuitry inside the CHTT-3 runs at 5 volts or less but it should still be considered dangerous to both you and the unit itself to open the box with power attached. The wall adapter provided with the unit plugs into 115 VAC outlets and that voltage can definitely kill so don’t mess with it.

## **Cautions for use.**

There are two important considerations when setting up the CHTT-3.

- 1.) **Gravity.** The pendants hang from the supporting crystal because of gravity. When level, the pendants should more or less be over the holes. If the table you put it on is not level they may not cover the holes enough to be functional. To fix this simply place a bit of paper or something like it under the appropriate foot to make sure the pendants are covering the holes. When we build the unit we set it up on a leveled granite plate but the rest of the world is probably not as level.
- 2.) **Infrared Light.** The sensors under the pendants emit Infrared light from a diode that then bounces back to a transistor receiver. The amount of light that bounces back from the pendant tells the unit the pendant is still there. When the pendant moves the light goes off into space and doesn’t reflect back triggering a tone. In a highly infrared polluted environment the background infrared can fool the sensor into thinking the pendant is still there. The best example of this is the sun. The CHTT-3 will NOT work in sunlight since the rays of the sun include LOTS of infrared radiation. Other sources of infrared light could pose a similar problem.

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## Theory of Operation:

Operation of the CHTT-3 is pretty straight forward. Plug it in, turn it on and the OLED screen will show the following – “Resetting Pendant Triggers” and the software version number. During the Resetting process, the software is reading the zero state of the pendants to determine what a stationary state is. It is important the pendants are stationary during the power on process. This is necessary to calibrate the system due to uneven level or variables in pendant position. The result is a more accurate triggering level. Once done the three tones are played followed by the statement “Ready”. At this point it’s ready to go! When a pendant is moved far enough to uncover the infrared transmitter/receiver pair the programmed tone is played. These tones can be set by you via parameter settings.

## Setup:

Setup is very simple.

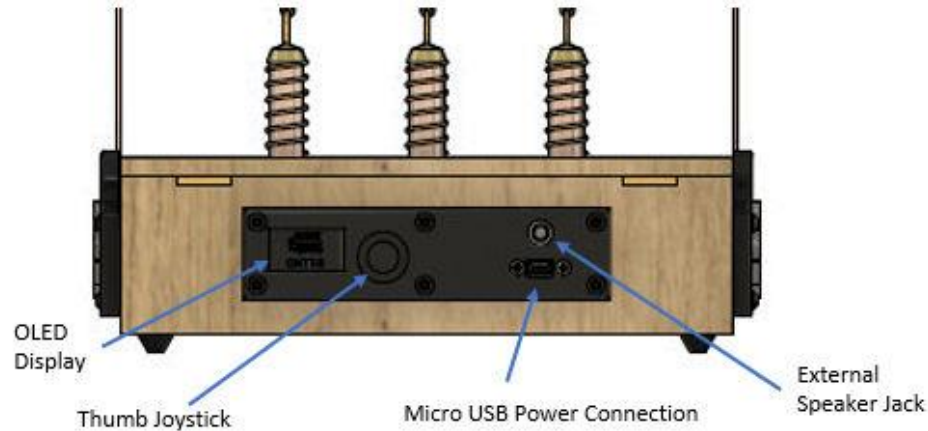
- 1.) Attach the pendants to the eyelets in the crystal.
- 2.) Place the CHTT-3 on a flat surface, leveling it to make sure the pendants more or less cover the holes in the top. It has a fair amount of tolerance, it doesn’t have to be perfect.
- 3.) Plug the USB cable in to either the provided wall adapter.
- 4.) When the pendants are not moving. Turn the unit on with the pushbutton switch on the provided cable. It’s important for the pendants to not be moving because the system goes through a calibration process during power on. This process sets what is considered “Normal” or stationary state of the pendant. This compensates for slight irregularities in background lighting or pendant positioning.
- 5.) Wait for the intro to finish and it’s ready for use.

## Adjustment.

The uprights attached to the CHTT-3 are made of copper flat bar. The reason we used copper is for its metaphysical properties. The reason we used flat bar instead of round is because it’s strong enough to support the crystal and pendants but can still be bent slightly to improve alignment. Don’t be afraid to **CAREFULLY** bend it around to align the pendants as necessary. **BUT** do **NOT** get rough with the crystal or put any pressure on it. It **WILL** break. The crystal is mounted into 3D printed copper supports using silicone sealant to give it a flexible attachment point so it won’t be so stiff it’s easy to break. But, it **CAN** be broken.

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## Using the Control panel.



### External Speaker Jack:

The internal speaker is small and limited in volume. Use the external speaker jack to connect to a more capable powered external speaker. This output is designed for headphone level output so you need a powered speaker or headphones to connect to this.

### Micro USB power connection:

This is a USB Micro-B connection for power and later software updates. Do NOT power this unit with a computer use the included wall adapter or some other source of USB 5 Volt power. We like to use 12-volt batteries with a USB power adapter when a wall outlet is not available.

### Thumb Joystick:

Use this joystick to select or adjust parameters.

### OLED Display:

Displays parameter and status messages.

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## Parameters:

To activate the OLED screen and view the parameters move the Joystick either up or down. The screen will turn on allowing you to select and change the desired parameter.

## Pendant notes:

You can change the note played on any or all the pendants. To do so move the joystick up or down to the desired pendant then right or left to the desired note. Available notes start at middle C and move up the scale just over one octave to the next C#. Because there are three notes that could play at the same time we suggest you use some musical theory to choose your notes. The default three notes are C, E and G these make up the C chord on a guitar so if they all sound at once it musically fits. Choosing badly mixed notes sounds awful when all are playing.

## Volume:

Volume level can be set from .1 to 5.0 in increments of .1. Moving the joystick left or right while volume is displayed raises or lowers the volume. Note that the internal speaker may need more volume than an external speaker so turn it down before attaching an external amplified speaker. The Default setting for volume is 3.5.

## Time settings:

You can individually control how long a note is played for each pendant. The default setting of 0 (zero) causes the note to play constantly whenever the pendant is not over the sensor. Time setting of 0.0 to 5.0 seconds are available. We find .5 seconds to 1.0 seconds to be a good value. Setting a time value will cause the note to pulse based on that time setting. Experimenting with this can lead to some interesting results and sometimes a timed pulse works better than a constant tone.

## Trigger Gap setting:

The trigger gap is a measure of how far the pendant must move from it's still position before the note is sounded. Each pendant has it's own individual setting The values are a measure of the reflectivity of the signal. The default value is 100 and setting of 10.0 to 300.0 in increments of 10 are available. Smaller values are more sensitive than larger values.

## Run Intro:

This setting allows you to stop the three-note chime and the statement “Ready” from playing when the unit is powered on or you exit the parameter setting screens. The three notes played are exactly what is programmed for each pendant. The “Ready” statement is read from a file on the included micro SD card labeled “INTRO.WAV”. This file is a 16bit Mono 44.1KHZ audio .WAV file placed on the SD card. If you want to customize your CHTT-3 a bit you can replace our file with one of your own that says whatever you want but it MUST be a 16bit Mono 44.1KHZ file to be played. As a side note, if you wish to hear just the three notes played but not the “Ready” statement just disconnect power, open the box and pull the Micro SD card out.

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## **Restore Defaults:**

As it's name implies selecting YES will restore all settings to factory originals. Once selected you must confirm Save Settings by selecting YES again to make the changes permanent.

## **Quit:**

Yep this will exit parameter settings. If you have changed settings you will be prompted to Save Changes. If you select Yes for save changes the changes are made permanent and saved to ROM until you change them the next time. No battery is needed and the parameters will be saved even if you unplug the unit.

## **Contacting Us for support:**

You can go to our WEB Site at – CAVEPE.COM

You can write us at: Cave Paranormal Engineering

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