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Capacitive Straight Key

AUDIO

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Morse Maker Manual

Thanks for buying a Morse Maker, here's what you need to know to get started:

Unboxing

When it arrives, it will look something like this. Included in each box are:

1. Morse Maker in shipping configuration (the blue supports are just for protecting the knobs during shipping, they can be removed and discarded).
2. 2 dial covers
3. 5 screws (4 needed + 1 extra)
4. 1 USB-A to USB-C charging cable

Assembly

1. Unscrew the 4 blue supports, there are 4 phillips screws on the bottom of the Morse Maker that should be unscrewed. Save these screws for later.
2. Once the blue supports are unscrewed, they should also pop off of the top cover with a little force (they are just press-fit)
3. You can discard the blue supports, they are just for protecting the dials during shipping.
4. Ensure all connectors are plugged in. See the image below for a description of each connector
5. Ensure all wires are nicely tucked and put the top on. This may take some finessing, particularly ensuring the capacitive touch sensor wire nicely avoids the center post by wrapping around it. (The center post is designed to prove additional support when pressing hard on the capacitive touch sensor). Once all wires are nicely tucked, the enclosure will close easily with no force and no bending, make sure it is not caught on any wire.
6. Screw the top and bottom together using the 4 screw holes on the bottom of the enclosure.
7. Finally, firmly press the provided dials onto both the rotary encoder and the volume knob. You should leave some clearance (a few mm) on the right dial (the rotary encoder) so that the button can still be pressed down

Remove blue supports

Screw in PCB

display
battery
touch sensor
speaker
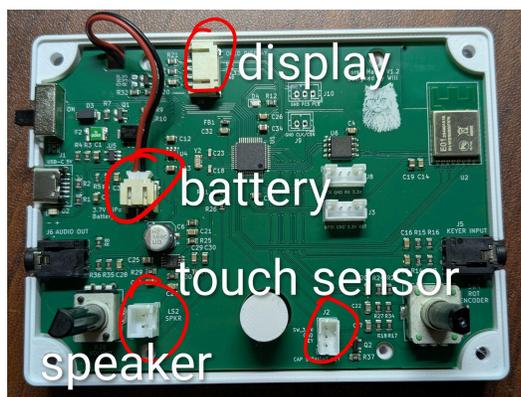
Getting Started

1. Hit the power switch on the left side to turn the device on (it should arrive charged, but in rare cases you may need to charge it with the USB-C charging port).
2. You should immediately see a menu on the screen. Use the rotary encoder to select "Send Practice" and then press down on the rotary encoder to click
3. Now in the send practice page, tap on the straight key (the black board that says "Capacitive straight key"). It has a capacitive sensor so it should respond to even a very light touch.
4. You should see the decoded morse and hear the beeps. If you cannot hear it, adjust the volume knob on the left hand side.
5. If the decoded morse code looks wrong, you likely need to adjust your WPM in the settings page. Common WPMs: 10 (brand new beginner), 15 (learning), 20 (learning), 25+ (advanced, usually too fast for a straight key, you need an external paddle plugged into the keyer input)

Demo:

To see all features, watch the youtube demo: https://www.youtube.com/shorts/lFuRP-g1od0

Settings:

1. **WPM -** This is the speed in WPM that we use to decode your morse code. If you are using an external keyer it also determines the length of the dits, dahs, and spaces. **It is very important to adjust this setting if the decoding is wrong. You need to match the WPM setting to roughly the speed you are sending! Try 10, 15, and 20 WPM.**
2. **Key -** This is either straight (for a straight key) or IAM-A or IAM-B for Iambic A and Iambic B paddles. See here for more details on the difference between Iambic A and B modes:
   https://ham.stackexchange.com/questions/9171/difference-between-iambic-keyer-modes
3. **Tone -** This is the frequency of the tone you hear when keying. You can adjust it from 400Hz to 1000Hz. Very low frequencies ~400Hz may be quieter due to the physical construction of the speaker, turn up the volume to compensate.
4. **Disp Delay -** In listen practice this is the delay between when the morse code is finished sending to when the correct answer is shown
5. **Speak Word -** In listen practice, this determines whether the MorseMaker will say the word at the same time it shows the correct answer. If set to Off then the correct answer will only be shown on the screen (not spoken).
6. **Auto next -** In listen practice, this determines whether the MorseMaker will automatically go to the next word / character after showing the correct answer. You can use this to continually play words without stopping.
7. **RF channel -** If you have two MorseMakers they can send Morse to one-another in the local radio mode. This setting determines the channel your MorseMaker sends and listens on. The channel and WPM settings must match on both MorseMakers. If you do not have two MorseMakers this setting does not affect you.
8. **Decode TX -** In local radio mode this determines whether or not to auto-decode your Morse as you are sending it
9. **Decode RX -** In local radio mode this determines whether or not to auto-decode the incoming Morse code as you receive it

Listen Practice:

The listen practice mode is the bread and butter of the Morse Maker, I want to highlight a couple features.

1. **Lesson -** This can be set to 1 of 40+ lessons, following the Koch method. For example, if you set it to lesson "0-K,M" we will only show you letters K and M. No other letters will be present. If you then bump the lesson to "1-U" you will now get the letters K,M, and U. If you bump the lesson to "2-R" you will then get the letters K,M,U,R. Each lesson builds on the previous. There are also 3 special lessons: "LTR", "NUM", and "SPEC" for all letters, all numbers, and all special characters.

2. **Type -** You can listen to 1 character, 3 characters, 5 characters, or words. These characters or words will only use the letters from the lesson, and the words are chosen to emphasize the letter you are currently learning in the current lesson. For example, if you are in lesson "4-S" you will get words using the letters K,M,U,R,S and emphasizing the letter S (all words in the lesson will include that letter).

3. **Eff WPM -** Effective WPM sets the [farnsworth WPM](#). This is the number one tool you should be using if the morse code feels too fast. This keeps the character speed the same (so you learn the right sound), but increases the time between characters (so you have time to recall the letter before being hit with the next one).

Local Radio:

Local radio allows you to send and receive Morse code with a nearby friend or family member. This requires 2 MorseMakers that should be set to the same channel and same WPM in the settings. You can watch a video of this here: https://www.youtube.com/shorts/ZX7hM1Olckc

The range is up to 100m in ideal conditions (outdoors, no interference, clear line of sight) but is most reliable under 50ft. You may not be able to transmit between thick walls or concrete.

Questions, feedback, support:

Please email me at contact@katnisslabs.com with any questions.