



MCT-73 Morse Code Trainer Kit

Introduction

Learn to send and receive Morse code anywhere with the MCT-73 Morse code trainer! Using the time-tested Koch/Farnsworth methods, the MCT-73 will efficiently walk you through the process of learning Morse code.

The MCT-73 is a rugged kit-built device that is housed in a beautiful aluminum alloy case. It's small ($4\frac{3}{4}$ " x $3\frac{3}{4}$ " x $1\frac{1}{2}$ ") and portable enough to take just about anywhere. With its long battery life (9 volt battery not included), onboard speaker and included earphones, you will be able to easily practice anywhere. Supply your own paddles or straight key and you'll be able to practice sending Morse code too. Since the MCT-73 uses a dedicated microcontroller, you will be able to send Morse code in a virtually lag-free environment unlike most web, computer, or smartphone training apps. An integrated red LED lamp gives visual feedback as you send and receive code as well.

The MCT-73 is an intermediate level kit designed to be built with a minimum of fuss. Built from all through-hole parts and using a custom-designed circuit board to give a little breathing room between components, it's meant to keep assembly as easy as possible.



Controls

POWER: Turn the MCT-73 on/off.

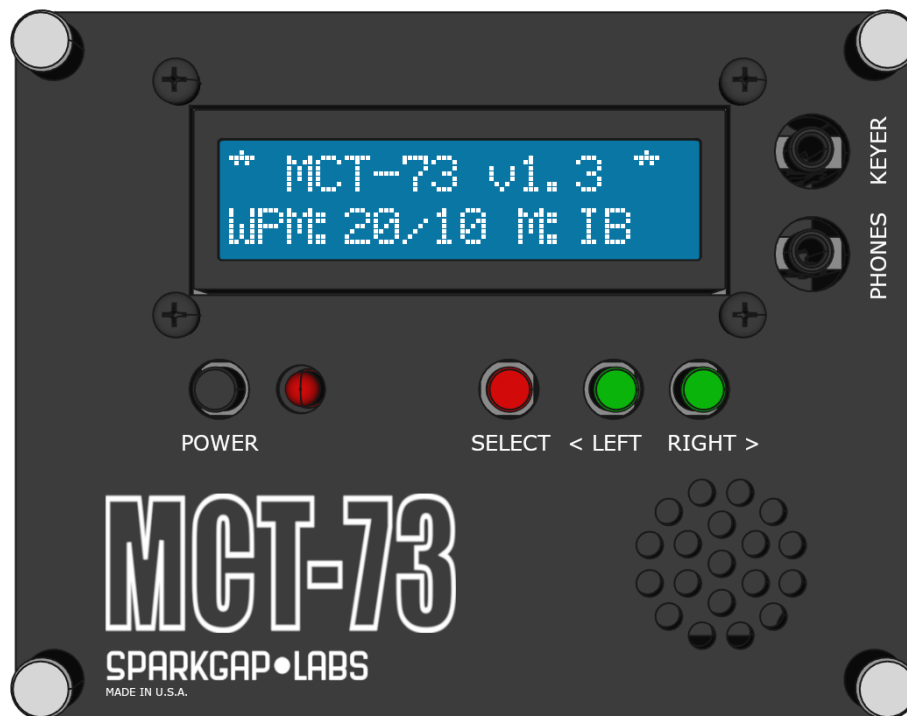
LEFT/RIGHT: Navigate menus.

SELECT: Select/set the current item.

PHONES: 1/8" (3.5mm) stereo headphone jack.

KEYER: 1/8" (3.5mm) jack for keyer (paddles or straight key).

Thumbscrews: Remove to open and replace the 9 volt battery.



Startup Screen

The above startup screen appears briefly when turning on the MCT-73. It displays the installed software version (v1.3), the raw words-per-minute (WPM) setting (20), the effective WPM due to additional inter-character delay (Farnsworth delay) (10), and the keyer mode (IB -> Iambic B).

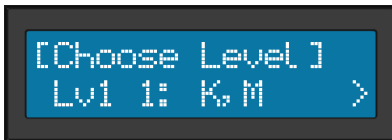
Training Mode Selection

There are several training modes. Each mode has 40 levels. Level 1 starts with 2 characters and each mode after that adds a new character to learn. When you are training, you will practice the newly added character as well as all the previous characters. When training, the MCT-73 will play characters at the speed set in your Words Per Minute and Additional Char Delay settings. The MCT-73 will also expect you to key characters at that same speed. Both of those settings can be customized to your liking in the Settings menu. See the Settings section of this manual for information about the ideal way to set your speeds.

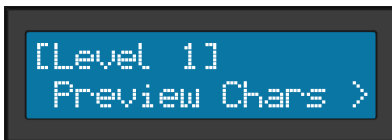
Press SELECT to enter the training modes.



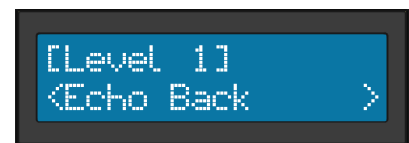
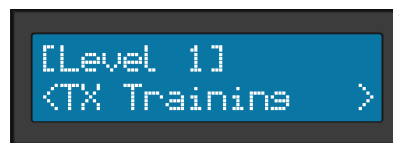
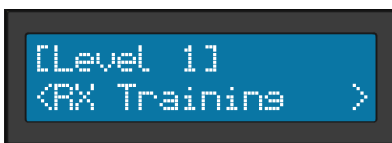
Press LEFT/RIGHT and then SELECT to select the training level (1-40).



Press SELECT to hear a preview of this level's characters.



Press LEFT/RIGHT and then SELECT to choose RX Training, TX Training, or Echo Back.



RX Training

After a countdown, groups of characters will be played. Without looking at the display, decode/copy/write-down the characters as you hear them. They will be revealed after each group of characters is played. When the characters have finished playing, note how accurately you copied the characters. Press RIGHT to continue or SELECT to exit.



TX Training

After a countdown, groups of characters will be displayed. Using your attached keyer, key in the displayed characters. When you are finished, you will get a percentage score on your accuracy. Press RIGHT to continue or SELECT to exit.



Echo Back

Echo Back is a combination of RX and TX Training. Groups of hidden characters will be played. Decode/copy/write-down the characters as you hear them. When the characters have finished playing, use your connected keyer to key in the characters as you heard them. When you are finished, you will get a percentage score on your accuracy. Press RIGHT to continue or SELECT to exit.

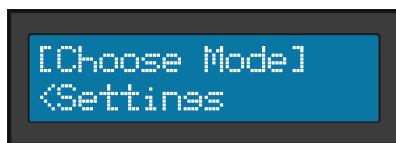
Free Play

Free Play is an open-ended mode where you can practice keying whatever you like. Unlike the training modes, there are no level-specific characters being taught nor is there scoring. It's a great way to really hone your keying skills and timing. Press SELECT on the Choose Mode screen to enter Free Play. Key as much as you like and press SELECT to exit when you're done.



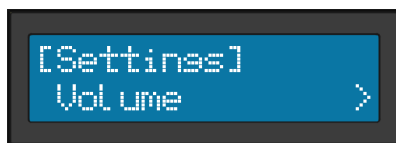
Settings

Press SELECT on this screen to enter Settings. This is where you can configure the settings for your MCT-73. Press LEFT/RIGHT to find the setting that you wish to configure.



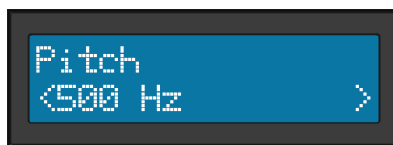
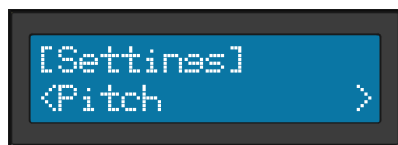
Volume Settings

Press SELECT on this screen to enter Volume settings. Press Left/Right to select the desired volume and then press SELECT.



Pitch Settings

Press SELECT on this screen to enter Pitch settings. Press Left/Right to select the desired pitch and then press SELECT.



Words Per Minute Settings

Press SELECT on this screen to enter Words Per Minute settings. Press Left/Right to select the desired WPM and then press SELECT. This is your "raw" WPM setting. If there is no additional inter-character delay, this is roughly how many words per minute will be processed. The common wisdom is to keep this value high enough that you don't consciously hear the dits and dahs (dots and dashes). Instead, you want to train yourself to hear each character as a sound. The default setting is 20 WPM. Most agree that is fast enough to avoid consciously hearing dits and dahs. However, a raw 20 WPM speed is almost always too fast for beginners. To slow things down, add additional inter-character delay (next setting) which puts delay between characters, not between dits and dahs.



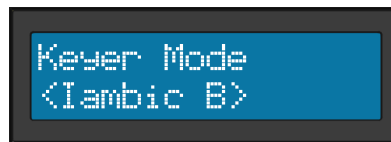
Additional Inter-Character Delay Settings

Press SELECT on this screen to enter Additional Inter-Character Delay settings. Press Left/Right to select the additional inter-character delay (in dits) that you desire. This is additional delay between characters, not between dits and dahs. Note that the number to the left of the arrow is this additional delay in dits. The number to the right of the arrow is your effective WPM taking into account your "raw" WPM and this additional delay. For example, if your WPM is set to 20 WPM and you set additional inter-character delay to 8 dits, your effective WPM will be 10 WPM. This delay is often referred to as Farnsworth timing.



Keyer Mode Settings

Press SELECT on this screen to enter Keyer Mode settings. Press Left/Right to select the desired mode and then press SELECT. Two paddle types (Iambic A and Iambic B) and straight keys are supported.



Paddle Setup Settings

Press SELECT on this screen to enter Paddle Setup settings. Press Left/Right to select the desired mode and then press SELECT. In most cases you can leave this set to default. Set it to Reverse if needed.



Sleep Delay Settings

Press SELECT on this screen to enter Sleep Delay settings. The MCT-73 enters a power-save mode after period of inactivity. This setting sets the duration of inactivity before sleep mode occurs.



Reset All Settings

Press SELECT on this screen to enter Reset All settings. Press RIGHT and then SELECT Yes to reset all MCT-73 settings to their factory default settings.

