

Electro-Resales

Touch Sensitive Morse Paddles

A Little Background

This Morse key/paddle is a novelty/fun item designed to provide a touch sensitive platform for Morse keying with an Iambic style Morse keying unit such as those provided by ourselves or other suppliers like MFJ (e.g. MFJ 492 and similar).

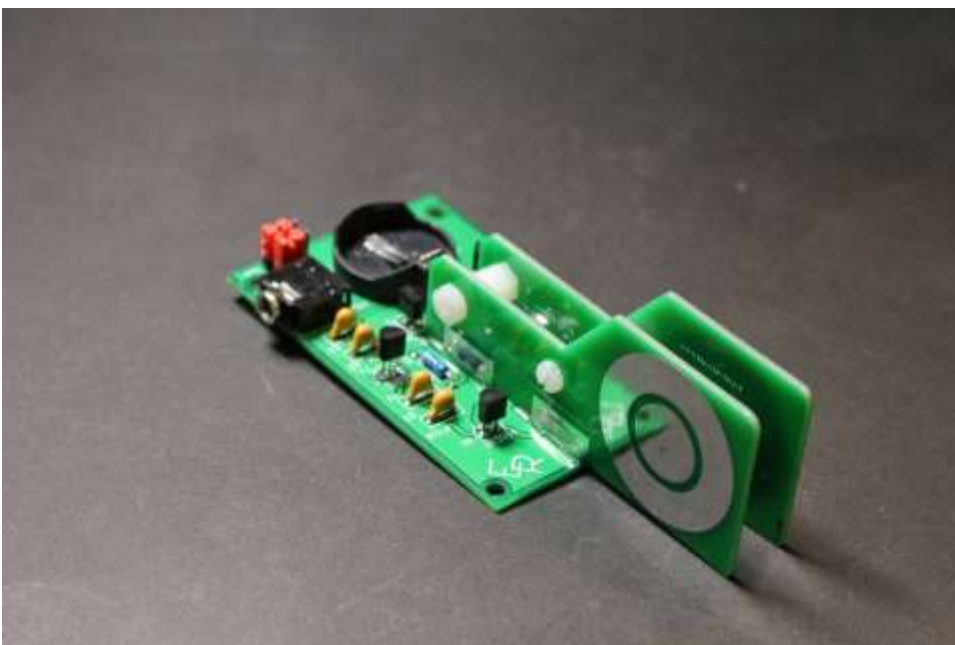
There is no doubt that fast accurate Morse code is best derived with a well-designed mechanical paddle and we are not suggesting that this touch key unit can or should replace a conventional Morse paddle, however, it does allow for fast agile Morse to be sent after a little practice.

While this Touch Key can be used as a straight key it is not recommended that the Touch Key be used to directly key a transmitter, always use this key with a keying unit to avoid damage to the Key or yourself!

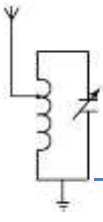
Operation and Usage

The key is based on resistive touch technology rather than hum pickup or capacitive touch techniques. As such the touch action relies on the operator bridging two contacts with a finger (preferred) and the body resistance completes the circuit causing a transistor switch to 'close'. The basic circuit is configured that a finger placed on a contact ring provides a bias to the base of the first transistor which turns it on, this in turn activates the second transistor that is the actual switch.

¾ View of the Touch Paddle Key - one set of 'Touch Rings' shown



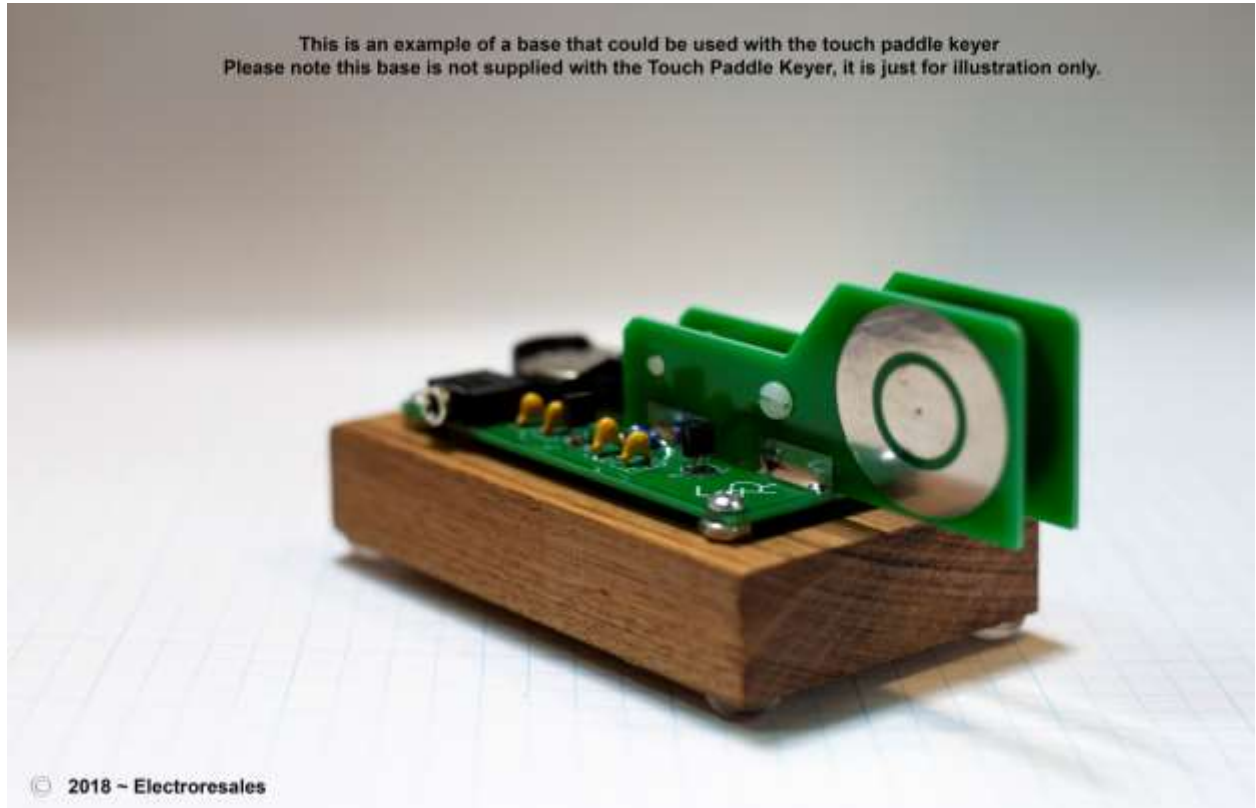
Touch Paddle - F19



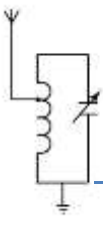
Electro-Resales

In use the key contacts need to be fully covered by skin to ensure the 'human resistor' acts to complete the circuit. The keying action is very different to a normal iambic paddle, getting used to the action will take a little practice. We recommend that you start using the key with the Keyer set to a slow speed (a few WPM slower than you are used to sending) and increase the speed once you are comfortable with the keys action.

As supplied the key is somewhat lightweight and prone to unwanted movement. A stable platform is almost essential and typically these can be made from metal (Steel is preferred) or a marble or synthetic equivalent. Hard woods may also be used and can be effective if non slip feet are also included in the design. This part is up to you and your imagination. A setup that has proven successful is shown on the photo below.



Connecting the touch paddle to your keying unit is via the 3.5mm Jack Socket. You will need to provide a cable that has a plug as shown in this image:

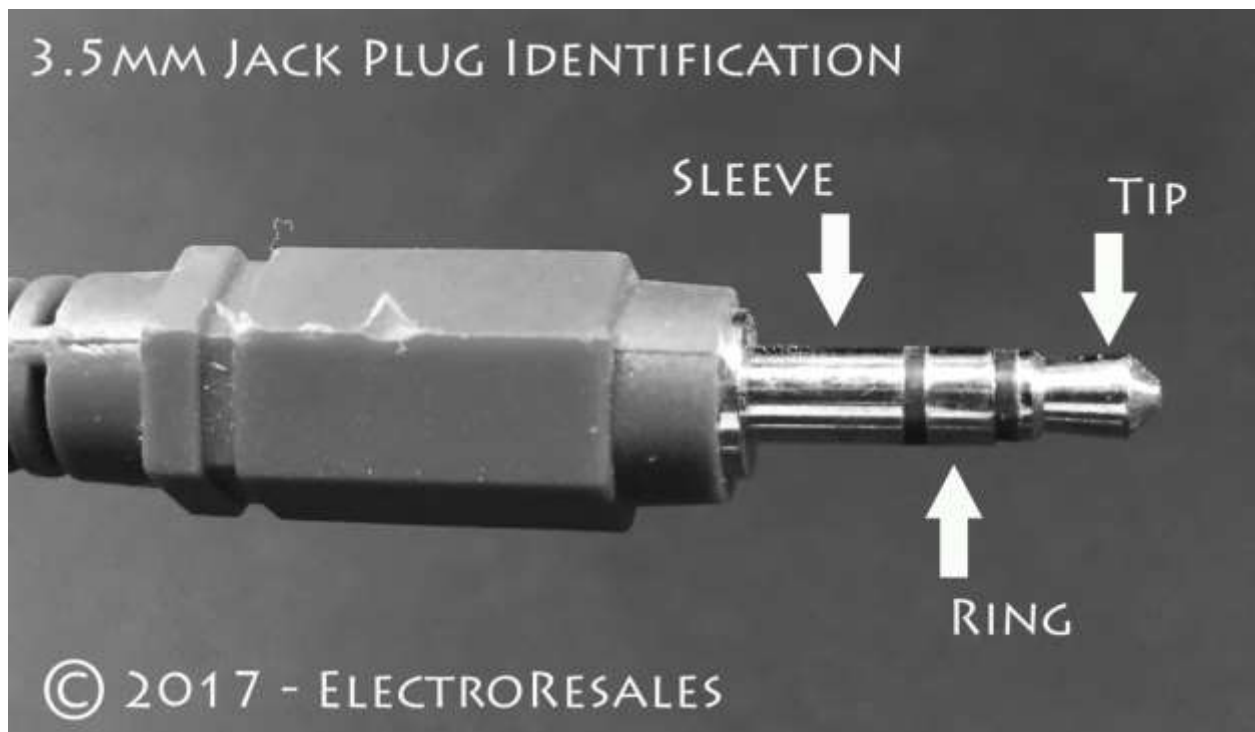


Electro-Resales

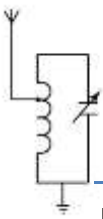
Typical Stereo Jack

The Dit & Dah contacts are connected to the Tip and Ring, while the common is attached to the sleeve. A stereo audio jack cable should work well, you may need to use an adapter plug on one end depending on your key unit, consult the keying unit's user manual.

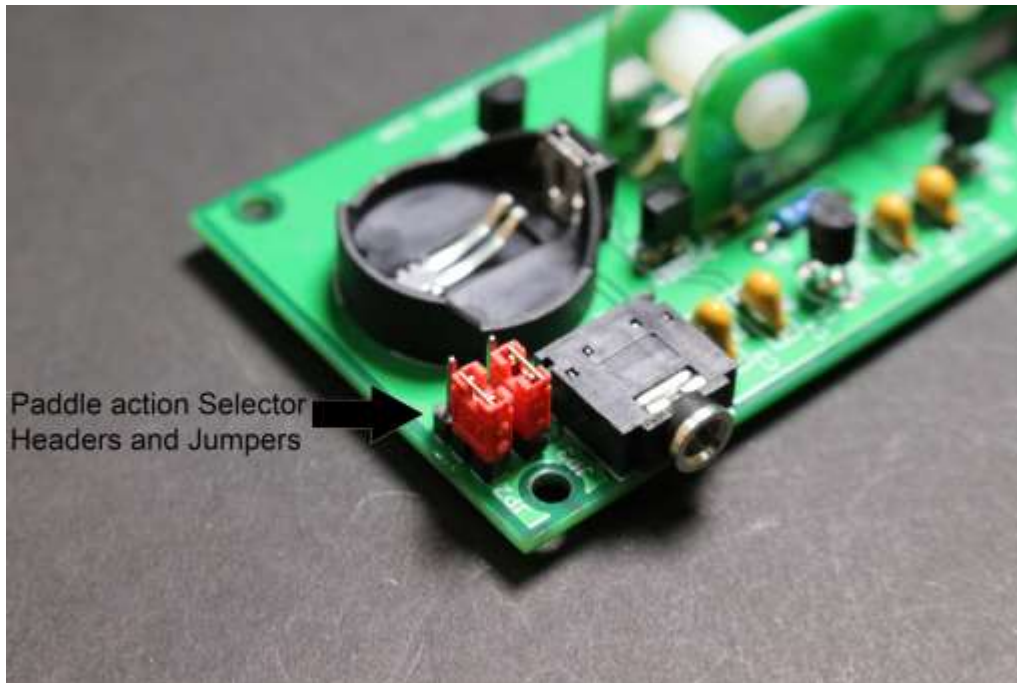
Most keying units allow the paddles to be swapped either in software or by physically moving a header or switch. Again consult your keying unit manual for help on this.



If your keying unit does not have the option to change the paddle configuration, the configuration maybe changed by altering the headers on the Touch Key itself. Located at the top or rear left hand side are two header blocks that allow the paddles to be set in so called 'Normal' lmbic or 'Reverse' lmbic. Move the header shorting blocks to suit your 'fist' – just make sure that the headers are in the same orientation and not opposing. See the next photo for the correct location of the header shorting blocks for one mode, move them both to the other header pins to change the paddle configuration.



Electro-Resales



Maintenance

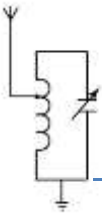
Over time the touch paddle may need some maintenance, the following is provided as a guide to what may need to be done and how to complete the maintenance.

1. **Touch contacts** – The contacts may get soiled with time and use, if the contacts get soiled, they can be cleaned by using 91% alcohol such as that sold by CVS/Walgreens etc. as a topical antiseptic. Wet a clean paper towel with alcohol and gently clean the contacts. Do not rub hard, use a gentle circular motion. The alcohol should evaporate and leave the contacts clean.
2. **Replacing the battery** – As supplied no battery is installed and a CR2032 battery has to be installed in the holder located at the top/rear of the board, positive (+) side facing up. The Touch Key uses little power in use and the battery should last a long time

Troubleshooting

The Touch key has been designed and built to ensure a long useful life, however, issues can occur. The commonest issue is the key not responding properly (not activating the keying unit). This can be due to a number of reasons, notably;

1. Finger not providing the correct resistance to activate the transistor switch
2. Finger not fully covering touch rings
3. Battery needs replacing.



Electro-Resales

All of these possible issues can be tested for by using a short jumper wire to bridge the inner and outer contacts. If the key activates with this test, it shows the issue is finger resistance, if nothing happens; replacing the battery is the next step. If replacing the battery fails to solve the issue contact us for help: resalese@gmail.com

If the Keyer activates/sounds with the wire bridge the battery is good and it suggests the issue is with the finger resistance. We tested with many types of skin from very dry to moist, and did not run into any issues, however, we are human and all different, and we cannot test all possibilities. Please contact us at the email above for additional options.

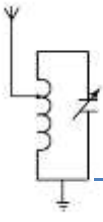
The small Print

DISCLAIMER

Any person who constructs or works on electronic equipment may be exposed to hazards, including physical injury, the risk of electric shock or electrocution.. These hazards can result in health problems, injury, or death. Only qualified persons who understand and are willing to bear these risks themselves should attempt the construction of electronic equipment. By purchasing this item, the buyer acknowledges these risks.

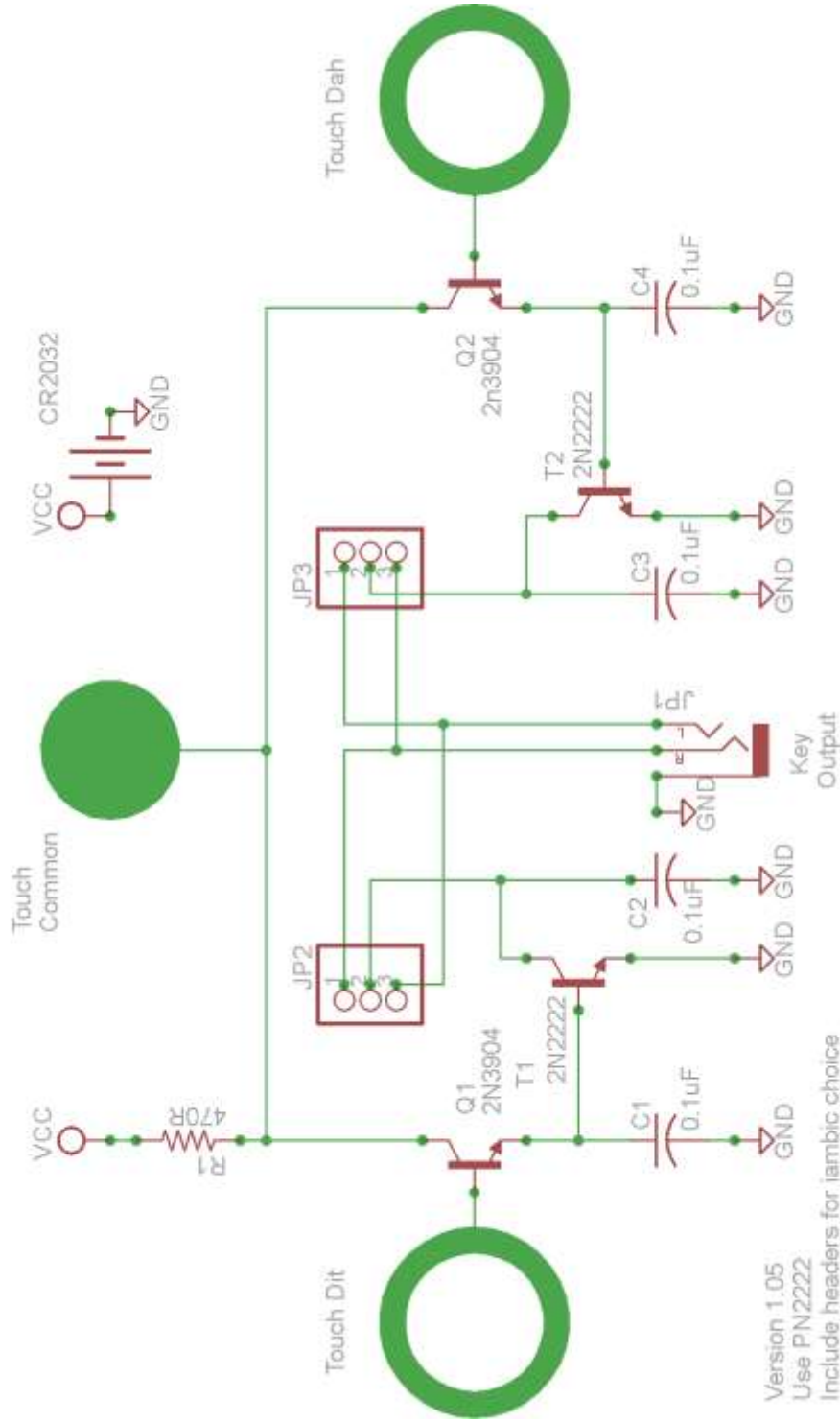
There is a risk of electric shock, electrocution, burns, or fires that is inherent in the construction and use of electronic equipment. By purchasing this item, the buyer acknowledges these risks.

IN NO EVENT SHALL THE SELLER BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE including, but not limited to, property damage, personal injury, death or legal expenses. Buyer's recovery from Seller for any claim shall not exceed the purchase price paid by Buyer for the goods, irrespective of the nature of the claim, whether in warrant, contract or otherwise. By purchasing this item, BUYER AGREES TO INDEMNIFY, DEFEND AND HOLD SELLER HARMLESS FROM ANY CLAIMS BROUGHT BY ANY PARTY REGARDING ITEMS SUPPLIED BY SELLER AND INCORPORATED INTO THE BUYER'S PRODUCT.



Electro-Resales

JP2 & JP3 Allow the paddle outputs to be switched to allow 'Normal' or 'Reverse' latching capability. Jumper shunts are placed on appropriate header pins to achieve the desired selection.



Version 1.05
 Use PN2222
 Include headers for latching choice
 Drawn Dec. 5th 2018