

## American Morse Equipment

### KK2 Precision Iambic Paddle Kit



Thank you for purchasing an American Morse Equipment KK2 Paddle Kit. You will find this an easy kit to assemble, but please do take a few minutes to read these instructions, and **PLEASE OPEN PARTS PACKAGES CAREFULLY OVER A CONTAINER! (box, bowl, pan) VERY SMALL PARTS ARE JUST WAITING TO GET LOST!** Some of the very small parts are sealed in a small bag you can inventory without opening, so you can leave it sealed until ready to install. **Please also note masking instructions before painting the base.**

Tools needed are:

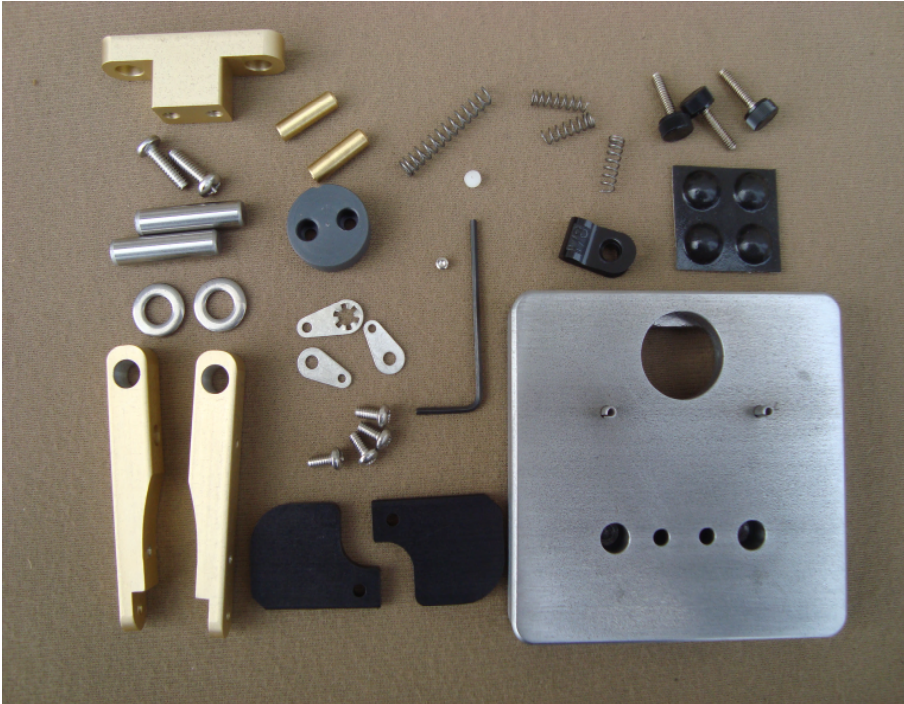
#1 & #2 Philips screwdriver

Needle nose pliers

320 grit wet-or-dry paper or Scotchbrite pad

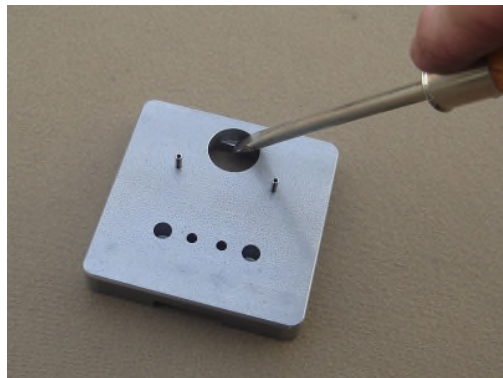
Parts List:

Item	Quantity
Base	1
Pin Retainer	1
Lever, Right	1
Lever, Left	1
Paddle	2
Insulator	1
Contact Post	2
Dowel Pin	2
Stainless Steel Washer	2
Spring, operating	1
Thumbscrew, 4-40 x 1/2	3
Spring, thumbscrew	3
Set Screw, 6-32 x 1/8	1
Delrin disc	1
Terminal lug, #4	2
Terminal lug, #6	1
Screw, 6-32 x 1/2	2
Screw, 4-40 x 1/4	4
Rubber Foot	4
Cable Stay, 1/8	1
Allen Wrench, 1/16	1



## ASSEMBLY PREPARATION

Once you have inventoried the parts, there is a little prep before assembly. All machining is completed, but there are a few edges that are somewhat sharp and should be broken. Abrasive paper or Scotchbrite is all that is need to smooth some edges on the base, around the bottom channel and the insulator pocket in the top of the base. Remove any burr on the shelf in the bottom of the insulator bore; a straight slot screwdriver works well here. **CAUTION: WEAR SAFETY GLASSES.** Lever the screwdriver against the edge of the bore to get a solid push on the burr. It's steel, so it's a little tough. The edges of the insulator may also want to be smoothed to fit easily in the bore.



From here it is up to you, you can assemble the paddle as machined and it will function perfectly, but you may want to customize your paddle. A coat of paint on

the base and a polish on the brass will transform your paddle.

For the brass, a little rubbing with Scotchbrite followed by polish will achieve a high polish. Mag wheel polish sold at auto stores works well with no stink. The aluminum will also respond in similar fashion.

Before painting the base, you must mask the ¼ inch dowel pin holes and the center insulator bore. Also, mask the area around the 6-32 screw holes in the bottom of the base. This promotes grounding, and the fit between the pins and reamed holes is held to a few ten-thousandths of an inch; no way will you get the pins in the holes with paint in the holes.

### **ASSEMBLY**

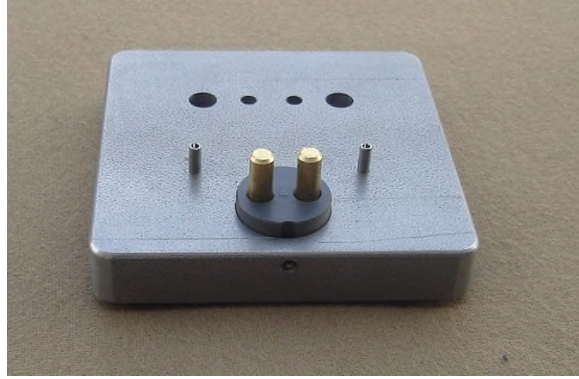
First, locate the two brass contact posts and insert them into the insulator, until they bottom in the holes. Note the notch in the insulator edge.



Now turn the insulator over & insert the two 4-40 x 3/16 screws with the #4 terminal lugs into the holes in the bottom of the insulator and thread them into the contact posts. Tuck the contacts together and snug the screws enough to hold the terminals in place. The contacts are pointing away from the notch milled into the edge of the insulator.



Start the insulator assembly into the bore in the base, with the notch aligned towards the edge of the base and the set screw hole.



Drop the Delrin disc into the bore in the right lever, and put the closed end of the spring into the bore on top of the washer. With the contact screw fully retracted into the lever, slide the assembly over the right hand dowel pin, making sure the lever is INSIDE the spring pin lever stop. (The lever is between the pin and contact post.)



Place the left lever over the left dowel pin so that the lever rests on TOP of the spring pin. Guide the end of the spring into the bore in the lever.



With the spring in place, rotate the lever to the right until it drops in between the spring pin & contact post.

Prepare two of the 4-40 thumb screws by cleaning up the screw ends. These are the lever contacts, so a smooth surface is desired. Hold the screw vertically and rub it on a piece of 320 grit paper on a flat surface (counter top, drill press table, mirror, etc) a few strokes. It doesn't take much to remove the rough mill surface.



Screw the thumb screws into the sides of the levers, just a few turns. The screw without a ground end goes in the hole in the right lever next to the dowel pin hole.

Fasten the black anodized paddles to the levers with the 4-40 x 1/4 screws.



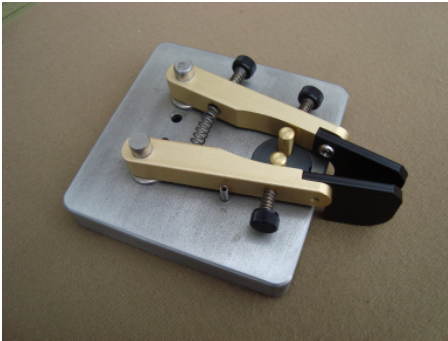
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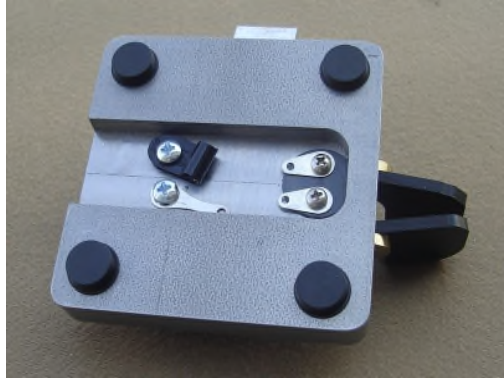
With the spring in place, rotate the lever to the right until it drops in between the spring pin & contact post.



The pin retainer will fit snugly over the tops of the dowel pins. Making sure it is perpendicular to the base, push the retainer down until it bottoms on the base.



Turn the base over & screw the 6-32 x 1/2 screws into the pin retainer thru the base. The ground lug goes under one screw & the cable clamp under the other. Press the sticky-back rubber feet onto the bottom of the base - that's it!



Adjust the spring force & contact gap to your preference.

