One Hams Experience Adjusting the Begali Intrepid Bug

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I have recently become the proud owner of a Begali Intrepid bug that I find a wonderful match to my sending style; light forces, small movements, and smooth.

It took me a day or two of fiddling mixed with sending to make friends with and to adjust the Intrepid to my taste. The adjustments are similar to those used with a more conventional bug with the addition of the dot weight fine tuning magnet on the Intrepid. I also find that some of the adjustments are rather sensitive and respond well to small changes.

Adjusting the Intrepid is much easier the second time around. It is my hope that this guide will help new owners with their first adjustments. Note that the discussion below is for a right-handed bug. Sides reverse for the left-handed version.

My thanks to the authors of multiple sources that I found on the web over the last few months while considered purchase of the Intrepid. Thanks also to friends in the Long Island CW Club who shared their experience with and appreciation of the Intrepid.

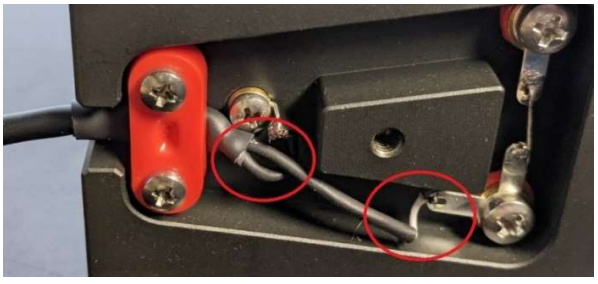
As always, MANY thanks to the fine folks at Begali. They are always a pleasure to deal with and I consider them my friends as well as the makers of fine CW instruments.

Wiring the Intrepid:

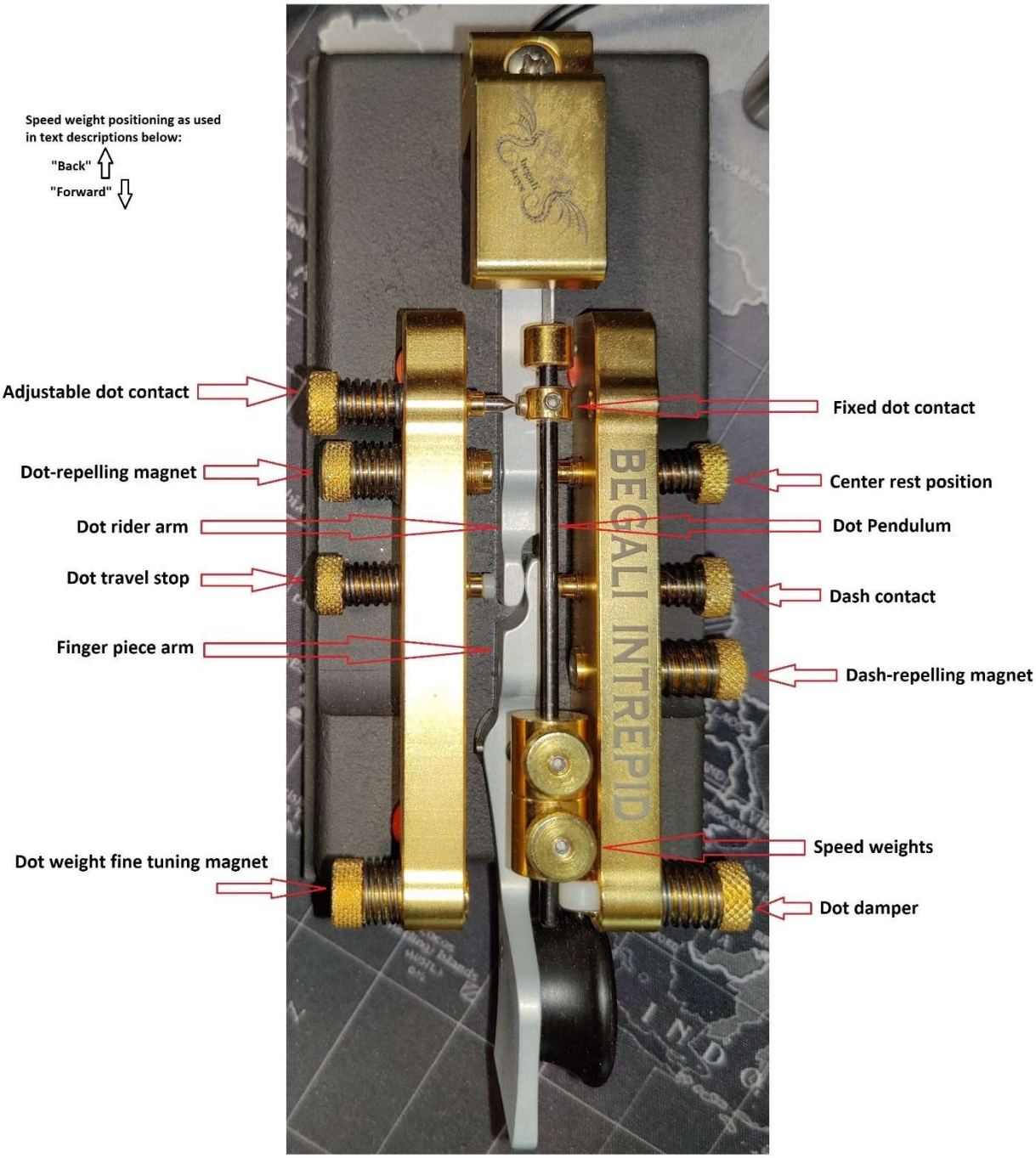
I use cut commercial stereo cables (Tip/Ring/Shell) for my bug and keys with the key closing tip to shell, ring unconnected. These connections are compatible with my transceivers that also accept paddles.

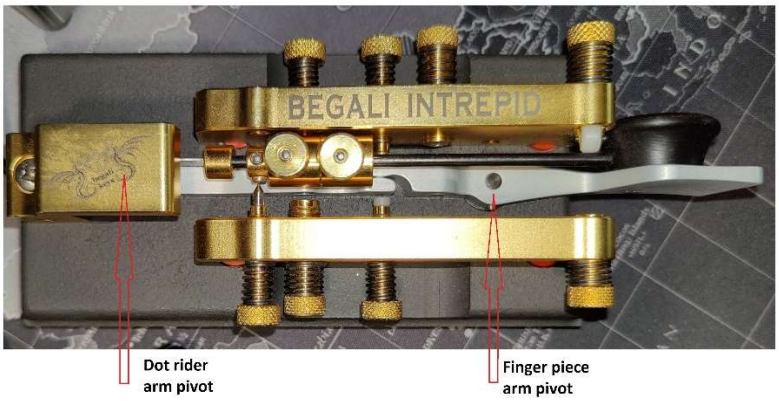
One caution, the Intrepid can be safely placed on its side to access the connections on the bottom. **Do not put the Intrepid fully upside down**; this would put weight on the dot pendulum.

Connect the tip wire (usually white) to the combined dot and dash contact lug shown on the right below. Connect the shell to the body contact lug on the left. I use heat shrink tubing to add protection to the wires with a quarter inch or so of slack left in the shield and tip wires to avoid stress on these connections. Additional heat shrink tubing over the cable jacket where gripped by the red clamp provides additional protection for the cable.



Parts and Adjustment Screws on the Intrepid:





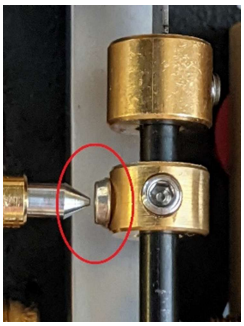
Adjustments:

Center the arms and check contact alignment:

1. Adjust the ***center rest position*** such that the ***finger piece arm*** and ***dot rider arm*** are aligned and centered between the sidewalls as shown on the right below. Back off adjustment screws if needed to allowing centering of the ***finger piece arm*** and ***dot rider arm***.

   The example on the left is <u>way</u> off center to make it obvious. The bug on the right is properly adjusted with the **center rest position** adjustment screw circled.

2. Check that the ***adjustable dot contact*** and ***fixed dot contact*** are aligned as shown. The adjustable dot contact should meet the fixed dot contact close to the center of the round fixed contact. It is very unlikely that this adjustment will ever be necessary.



Adjust Dots:

3. Adjust the ***dot travel stop*** for desired travel. I use light and small movements with just under 2 mm of dot travel measured at the tip of the **finger piece arm**. You will need enough movement to put energy into the **dot pendulum**. Too small a movement and the **dot pndulum** will not have enough energy to make a string of dots. To light a touch when keying will also cause problems.

Dot contacts open – paddle centered

Dot contacts closed – paddle full right

4. Set the ***adjustable dot contact*** to just make clean contact when the finger piece is held to the right and the **dot pendulum** has come to rest at the end of the short travel for dots.

   Make **small** adjustments of the ***adjustable dot contact*** so that you get a sufficient number of dots before the dot contacts come to rest closed. You may need to adjust the ***dot travel stop*** in order to get the desired number of dots. I get about 18 dots on my Intrepid. You need at the very minimum 8 to 10 dots.

   Adjustments to these two controls are quite sensitive… **Adjust with small moves! It is easy to go too far.**

5. Set the ***dot weight fine tuning magnet*** to just clear the edge of the side wall as shown below. This seems to be a good starting place. Fine-tuning of the dot to space ratio may be done later in the setup process.

6. Adjust the ***dot-repelling magnet*** for the force needed on the finger piece to make dots. I use about 40 g.

7. Adjust the ***dot damper*** well out from the center and then bring it in closer to the **dot pendulum** while starting and stopping dots. Set the damper to just stop dots when the paddle is released. Too close in and it will interfere with the free movement needed for proper dot formation, too far out and it will allow the **dot pendulum** excessive vibration after release.

Adjust Dashes:

8. Set the ***dash contact*** for your desired dash paddle travel. I keep this spacing very close with just about a half mm travel at the tip of the finger piece. Set this as you like.

9. Adjust the ***dash-repelling magnet*** for a comfortable force on the finger piece when sending dashes. I use about 40 g.

Fine-tune the dot – space timing:

10. If needed, adjust the ***dot weight fine tuning magnet*** for the desired dot to space ratio. My Intrepid is very close to 1:1 dots to spaces as set above. A very small adjustment of the ***adjustable dot contact*** may also help**. Once again, small moves!**

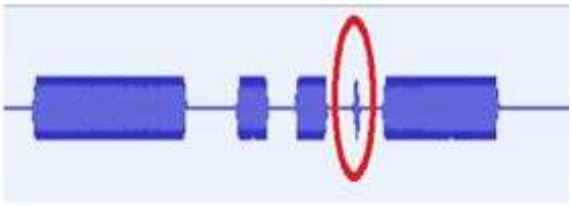
    While the dot to space ratio can be set by ear, I use Audacity to record a string of dots when I want to measure and set the ratio with more precision.

I'm using both weights on the **dot pendulum** with one left in place all the way back and the other set as needed from full forward (~18 WPM) to full back (~29 WPM). A top speed of about 33 WPM is available by removing one of the two weights. Both weights full forward will drop the speed to 15.5 WPM on my Intrepid. In summary, using one weight the range is about 17 – 33 WPM, using two weights about 15 to 29 WPM.

My good friend KT9X has a video on YouTube showing adding or removing a weight: "Intrepid one weight slow speed test": https://www.youtube.com/watch?app=desktop&v=alIBP-0U0JI

I am very pleased with my Intrepid adjusted as described above. The bug responds to a very light touch and needs just small movements of my arm rocking side to side to key. The occasional scratch I still notice while keying is not a contact scratch at all… these non-scratches happen when I am too slow getting off the dots or miss my timing moving between dots and dashes. In my case, pure pilot error.

Here is an example of a non-scratch pilot error recorded at 29 WPM. The image shows my transceiver side tone recorded with Audacity on a PC. The non-scratch is circled. The dot to space ratio can also be seen and measured if needed.



Many thanks for reading and I hope some of you find this note useful!