The Parkwood PaddleBugs

by

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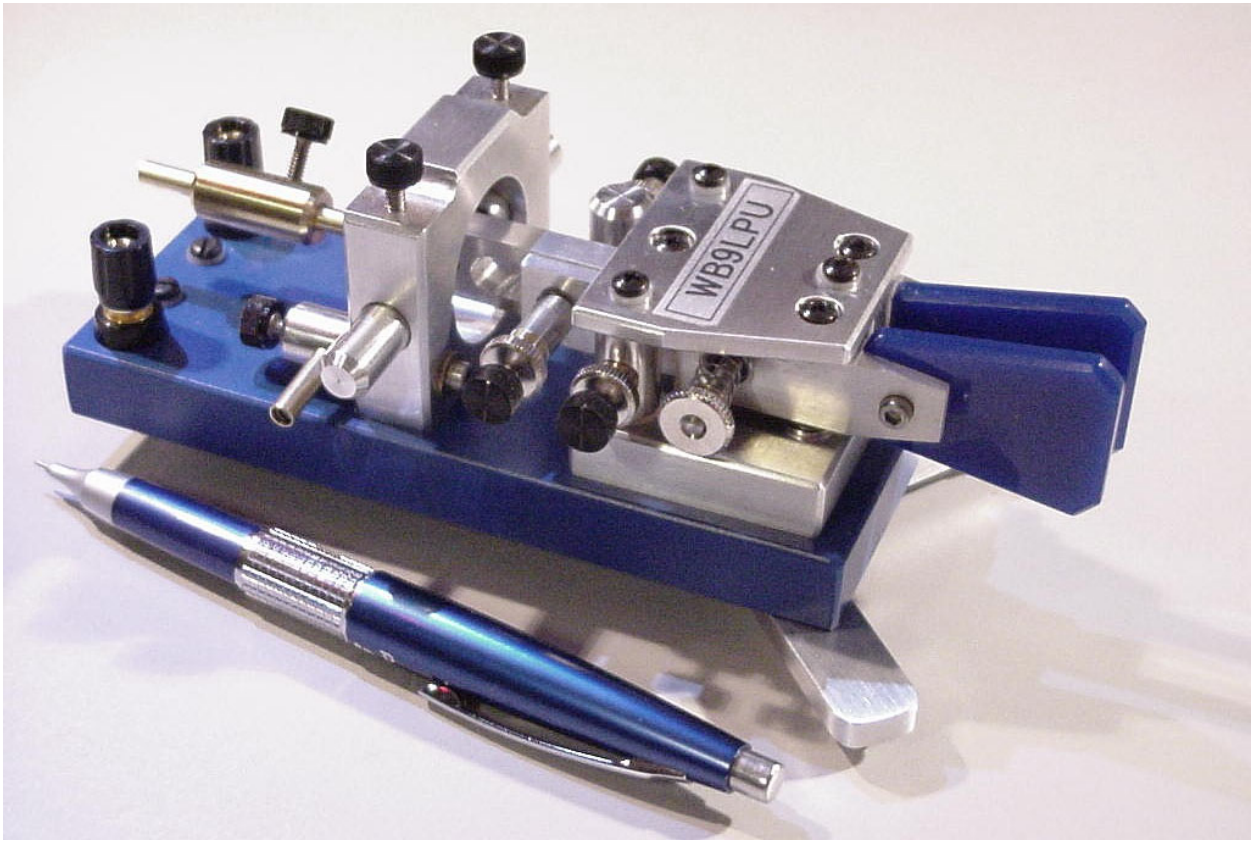
The five bugs shown here are the result of a long design process that has produced a family of CW instruments that I call PaddleBugs. This name comes from the fact that they can be used as either semi-automatic keys (bugs) or as iambic paddles.

These bugs have some unique design features not found in conventional bugs –

- The pendulum mechanism is controlled magnetically, not with a metallic spring. This allows a very wide range of adjustment of speed, with smooth operation at speeds as low as 10 words per minute.
- The dot contact is a sealed magnetic reed switch, and the contacts can not get corroded or dirty. There is no “scratchiness” or bounce.
- The dot reed switch mechanism allows a very wide control of the dot-to-space ratio (also called “dot weight”).
- Changing speed with the pendulum weight does not affect the dot weight.
- A “logical-and” arrangement, with the dot magnet and the dot paddle wired in series, eliminates the need for a mechanical damper. Operation is smooth ane quiet. Contacts are made of stainless steel and brass.
- Dots and dashes are made with separate paddles – usually called a “double-lever” design.
- The paddle tension is provided by springs (standard) or permanent magents (optional).
- The stream of dots is initiated by releasing the pendulum, not forcing it into motion. This makes for a light and responsive touch.
- There is a choice of base materials (brass, steel, exotic hardwood) and fingerpiece materials.

There are presently five versions that have been worked out. Because the design concepts are relatively new, there may be engineering changes as more units are made. The illustrations in this brochure are of prototypes, and improvements will be made as the comments of users are considered and development continues.

The Standard PaddleBug –

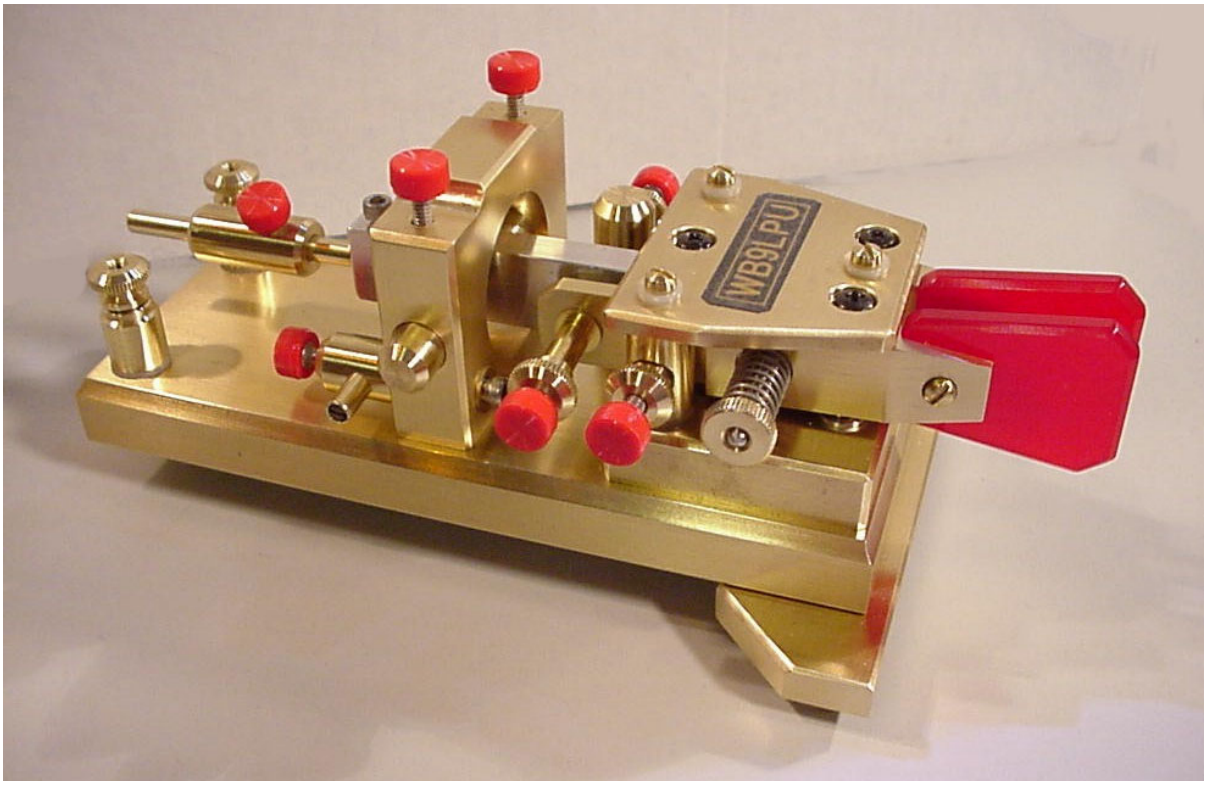


- This model is built on a powder-coated steel base, which is available in red, blue, or gray at the present time.
- Fingerpieces are made of colored acrylic plastic – red, blue, black, and smoky gray are currently available.
- Major machined parts are made of aircraft-grade aluminum (2024-T4) with a satin finish. The pendulum weight is made of brass.
- Paddle tension is provided by coil springs, separately adjustable.
- Critical adjustments are provided with locking nuts, and carbon steel spring washers are used to provide tension during adjustment.
- Adjustable swing-out legs provide for extra stability.
- Paddle arms and pendulum use instrument-grade ball bearings for smooth operation. Other bearing schemes are under development.

The PaddleBug Junior –

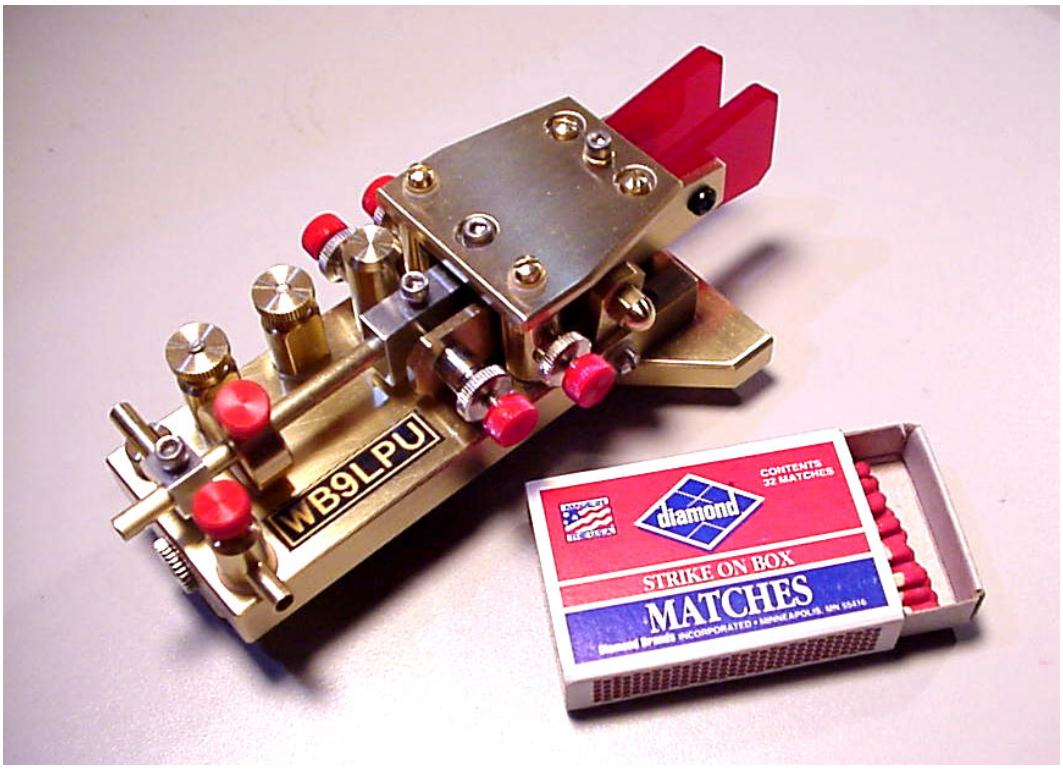
- Smaller version of standard PaddleBug, but with the same operating touch
- Pendulum magnets are located within the paddle mechanism
- Paddle tension is magnetically determined – spring tension is not available because of the pendulum magnet design.
- Major mechanical parts are machined of C-360 alloy brass, satin finished and lacquered to prevent tarnish.
- Exotic hardwood base (choice of woods, depending on individual taste and material availability). The woods usually available are cocobolo, ebony, Brazilian tulip, purpleheart, teak, rosewood, and several others.
- Choice of matching or contrasting fingerpieces of wood or plastic.
- Adjustable swing-out legs for greater stability.

The PaddleBug Deluxe –



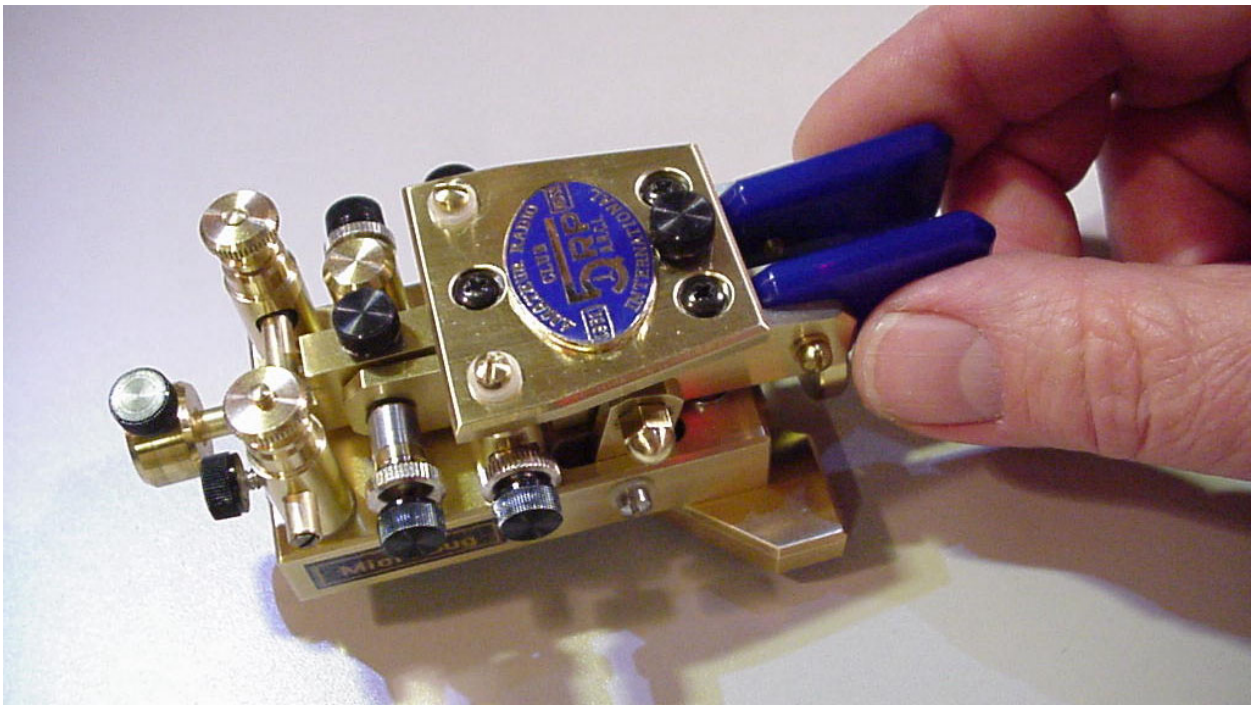
- This model is similar in overall size to the Standard PaddleBug.
- Double lever construction with magnetic dot pickup.
- Construction is of C-360 alloy brass, satin finished and lacquered to prevent tarnish. Part of the pendulum mechanism is of aircraft aluminum to reduce its mass.
- Paddle tension is provided by coil springs, separately adjustable. Magnetic tensioning is optional.
- Critical adjustments are provided with locking nuts, and carbon steel spring washers are used to provide tension during adjustment.
- A rear stabilized bar is provided for extra stability.
- Paddle arms and pendulum use instrument-grade ball bearings for smooth operation.
- Choice of red or black adjustment knobs.
- Choice of fingerpiece material – red, blue, gray, or black acrylic plastic, or exotic hardwood.

The Parkwood TinyBug –



- Approximately one-half the size of the Standard PaddleBug
- Made from C-360 alloy brass, lacquered to prevent tarnish. Because of the needed weight, an aluminum model of this small size is not practical.
- Double lever design, with pendulum magnets located within the paddle mechanism.
- Choice of fingerpiece material as before.
- Choice of red or black adjustment knobs.

The Parkwood MicroBug –



- Probably the world's smallest semiautomatic key – at least I haven't seen one smaller.
- All brass construction except for aluminum pendulum parts.
- Magnetic pendulum tension, adjustable for a wide range of speeds.
- Magnetic paddle tension (standard – required by the design of the pendulum mechanism).
- Reed switch dot pickup, bounce lock-out circuitry.
- Like the bigger models, this can be used as an iambic paddle.

The feel and operation of a PaddleBug is unique. Each one is custom made; all models are quiet in operation and can produce clean CW with less effort than with a conventional bug. Over- the-air reports have indicated surprise that a bug was in use. With a PaddleBug and a little practice, you can produce code that is hard to distinguish from a well-handled straight key, or you can make your CW sound as "bug-like" as you desire.

Pricing of Parkwood PaddleBugs –

All prices include UPS shipping and insurance within the United States and Canada. Prices are in US Dollars.

Standard PaddleBug	$225
PaddleBug Junior	$250
PaddleBug Deluxe	$300
TinyBug	$250
MicroBug	$275

For the Standard and Deluxe PaddleBugs, spring paddle tension is standard. Magnetic tension is $25 extra. Because of their compact design, spring paddle tension is not available on the Junior, TinyBug, and MicroBug.

On all models there is a choice of fingerpiece material, and the Deluxe model can be built on a base of exotic hardwood instead of brass (deduct $25 from the listed price).

Availability –

Because I have a full-time job, and because the instruments are individually made (a MicroBug takes about 2 weeks of spare time from start to finish), waiting times are long. For this reason, I have a “waiting list” for definite orders and an “interested list” for those who have made an inquiry and expressed interest. People on both lists should feel free to inquire from time to time as to the progress.

Terms –

I do not accept any payment until I have actually finished an instrument. Since my work schedule is variable and full, and this is still a hobby, I can’t make long-term promises about completion dates, and I don’t want to tie up anyone’s money.

Shipping and insurance are included in the prices. I guarantee satisfaction, and if a problem cannot be worked out, I will take back the instrument and refund its purchase price.

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