

HB-1B 4-BAND QRP CW TRANSCEIVER (YOUKITS)

PETER G4NKX

24 June 2024



HB-1B

I really liked the look and sound of this radio as soon as I saw it, having been introduced to it by Mick (M0GWD), so I just had to have one. My first impressions were just how small it was (it fits the palm of the hand) and it weighs in at 538g (with the optional internal Li-ion rechargeable battery pack).

SMALL AND COMPACT 152X85X35CM.
NICE, CLEAR BLUE DIGITAL DISPLAY.
INTERNAL KEYS (ADJUSTABLE SPEED).
AUTO CQ CALLING.
30 MEMORIES.
TUNE FUNCTION.
ADJUSTABLE TUNING RATES.
RIT CONTROL.
ATTENUATOR FOR STRONG SIGNALS.
INTERNAL 12V LITHIUM ION POWER (OPTIONAL).
CHARGING FACILITY (OPTIONAL).

When switching on, you're presented with a very attractive bright blue display and white characters, a change from some of the dull displays of much more expensive rigs. Bear in mind this is a portable radio and not to be compared to the likes of a more complex radio such as an Elecraft KX3 or similar, and frankly, I'd be very uncomfortable taking a £1,000 radio out portable anyway, but you get quite a lot for your money, I think.

HB-1B SPECIFICATION

TX: 3.5 - 4.0 Mhz 7.0 - 7.3Mhz 10.1 - 10.15Mhz
14.0 - 14.35Mhz.

GEN RX: 3.2 - 16Mhz.

OUTPUT POWER: 3-4w @12v, 4-5w @13.8v.

SIDE TONE: 700Hz.

EXTERNAL POWER: 9-14v DC.

CURRENT DRAW: Rx 60ma, Tx 800ma.

AUTO ELE-KEYER: speed adjustable.

MEMORY: 1-30.

SELECTIVITY: 400-3Khz adjustable 4 pole xtal filters.

AUDIO OUT: 8ohm - 0.1w (better with small external amp).

HB-1B REVIEW

Audio output is good enough to drive a pair of headphones; however, I fed the output into a small amp & speaker, and the sounds coming out are nice, sharp, crystal clear tones (CW), but you can listen to upper and lower sidebands too if required.

You can receive signals from 3.2 - 16Mhz, but TX is

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primarily aimed at the lower (CW) portions of the 80 - 40 - 30 - 20 Meter Amateur Bands. Selection of the bands is by using the memories, and you can tune around and select any of the memories and save them for future use, which is more than adequate for a radio this size. If you have a good ear you can zero beat using the 700Hz side-tone (which may be adjustable from inside). The tuning rates can be selected by successive presses of the tuning knob and will change by 1Hz 1Khz and 100Khz. Whilst tuning around, I used all three tuning rates to get me where I needed to be in the band.

Selectivity ranges from 400Hz (Narrow) to 3Khz (Wide), so narrowing down to 4-500Hz is fine for cw with careful tuning. Strong adjacent signals can be attenuated, but it takes the edge off the station your tuned to a bit too much 30 - 40db ?! The RIT works well and is shown on the main display, and modes of operation/listening are selectable by pressing and holding the RIT/MOD button.

For those of us who prefer using a 'Paddle' as their weapon of choice, we have a keyer built in and I for one was very dubious about how it might fare, especially having used 'internal rig' keyers on a number of occasions, especially Yaesu ones, where I suspect they use identical modules in their radios ranging from the FT817 through to the FTDX5000 and they all perform very poorly in my opinion. Whereas the keyer in my Kenwood TS590S fares much better, there is a slight but acceptable 'weighting issue'. The Yaesu's have timing problems and even after much use and off air practicing, I cannot seem to prevent continual errors and extra dits being sent where they shouldn't be. Oddly enough my IC7100 is rather better!

So, how is the keyer in the HB-1B ? Well I was very surprised. It sent well timed and weighted CW, so looks like I can use this rig /p without having to carry an external keyer, a BIG plus. For those with 'up and downers' you can just plug and go. Interestingly when you plug your key in and switch on the rig it detects which one your using and sends in CW the character 'A' if your using a Paddle - or the character 'M' if your using a straight key.

Keyer speed is variable. by pressing the CQ/Set button for 2 seconds and the radio will send the character S, speed up, or slow down speed by hitting either the dots, or dashes with the paddles within 10 seconds, then quickly press the CQ/Set button again, it will send in Morse the character "E", and exit!

Memory and VFO modes are changed by pressing the V/M/SAV button and is used for setting up your memories by selecting your preferred frequencies and then saving. The manufacturers recommend 'Resonant' antennas, - fine if your using single-banders or a fan dipole array but if you want to band skip, I'd recommend a doublet of some sort fed using open wire or ladder line into a Balanced Tuner.

My first contact was in fact on 40m during the evening, and I had expected it to be with a DL, but no; it was with LA and my 4w was received well, rewarded with a nice 579, using a vertical; he was running 100W!!

So why not try a little 'Low Power' working? I have been advocating low power usage for many years now. It needs a little patience though; there are many unanswered calls, especially lower down the bands, so best stick to the QRP frequencies.

This is not intended as a Technical Review, but purely one of usability. I like this little radio; it's sensitive and has most of the basic features you need for CW, and for the price, it's a good all-round fun radio; there are plenty of plusses. The only negative I found was night-time operation, especially on 40m where there is strong adjacent channel interference but contacts can still be had, even at this level.

TAKE UP THE CHALLENGE, GET OUT IN THE FRESH AIR, GO QRP!