

# ELECRAFT KX2 Errata to Owner's Manual

## New Features for Hands Off Operating with the KX2

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### Overview

The MH3 can now control the most essential radio features in both SSB and CW modes while the KX2 itself is in a backpack. We hope this aids "HF Pack Lite" operation, a "stealth" alternative to conventional, "heavy" HF Pack. These new MH3 controls can be used eyes-free, making them useful during mobile operation as well.

These features are available at Firmware Level: MCU 2.81 or greater

### MH3 UP / DN Normal Functions

On power-up, the MH3's UP and DN buttons will function as they always have (VFO up/down), with two improvements:

1. The tuning is now mildly "ballistic," i.e. it gets faster the longer you hold a button down.
2. Tapping PTT twice reports your operating frequency as 3 kHz digits. For example, if you're on 14.285 in USB mode, you'll hear "U 285". NOTE: The number 0 is sent as a letter 'T' to save time.

All other radio controls will function normally, until you engage extended functions (see below).

### MH3 Extended Control Mode

Pressing the mic's DN and UP buttons at the same time engages MH3 Extended Control mode. The radio remains in this mode until it is powered off. In this mode all of the front panel rotary controls are locked out, as is the keyer paddle. Switches are still useable, since you may want to turn the radio off in the normal way (RATE + A/B) when you take it out of the backpack.

Each time you hold DN + UP, you move to the next Extended Control level, as listed below. Lower levels correspond to functions used most often. You can immediately return to the default (VFO up/down control) by tapping PTT. Functions are announced in Morse audio as shown.

Level	Announcement	Button Functions
VFO UP/DOWN	(none)	DN & UP: VFO A movement. Tap PTT twice to report frequency.
CW & MSG/DVR PLAY	"C"	DN: Tap/hold = play/repeat MSG 1 (CW or DVR) UP: CW hand key (aborts any message play)
AF Gain	"AF"	DN & UP: AF gain control

FILTER BW	"FL"	DN & UP: Filter bandwidth control (for present mode)
ATU TUNE/PWR OUT	"AT PO"	DN: ATU tune; UP: Select 1W/5W/10W
VFO A/B, MODE	"AB MD"	DN: VFO A/B swap; UP: change modes (CW and SSB only)
BAND	"BND"	DN & UP: Change bands; mode/band reported in CW, e.g. "C 21R0"
BATTERY VOLTAGE	"BAT"	DN or UP: Reports battery voltage, e.g. "11R5" (11.5 V)
POWER OFF	"OFF"	DN or UP: Turns off the KX2 (turn on using panel switches)

NOTE 1: Tap PTT at any time to return to the VFO UP/DOWN level.

NOTE 2: Morse audio feedback is automatically turned on and set to 20 WPM when MH3 Extended Control mode is used. Alternatively, you can set MENU:SW TONE to the desired speed ahead of time.

With a bit of practice the various levels become quite easy to use. Sending CW with the "UP" button (in level "C") is a bit tedious due to the button mechanics.

## Radio Preparation for Mic Remote Control

Since only a subset of radio controls is available through the mic, a bit of pre-configuration is suggested to optimize for reduced-complexity operation. Here's what we recommend:

1. Set up VFOs A and B to the mode or modes of operation planned (both CW, both SSB, or one CW and one SSB).
2. If you don't want to use the Extended Mode default Morse audio reporting speed of 20 WPM, change it using MENU:SW TONE.
3. Using MENU:VOX MD, turn on VOX in CW mode, but set it to PTT in SSB mode.
4. Set MENU:MIC BTN to PTT UPDN.
5. Set MENU:MIC BIAS to ON.
6. Program MSG 1 as a CQ or "DE CALL" message in both CW and SSB modes. (In SSB mode, this uses the DVR function.)
7. Set MENU:MSG RPT for the desired message repeat time if you plan to do a repeating CQ.
8. Set up the desired MONitor levels for both CW (sidetone) and SSB (voice monitor) operation.

9. Make sure CW-in-SSB is enabled. To do this, locate the CW WGHT menu entry and tap '1' (PRE) until you see "SSB+CW" on VFO B.

## Suggested Equipment for "HF Pack Lite" Operation

The lightest weight pack we've found is a [Patagonia Atom 8L](#) sling pack. You'll probably want to put a large grommet inside the interior pocket to provide egress through the lower front of the pack for mic, earbud, and counterpoise wires.

In addition to the KX2, earbuds, and an MH3 mic, you'll need a battery such as the KXBT2 (internal) or your own battery outside the radio.

As for an antenna, any type of lightweight whip resonant on or near the band(s) of interest will do. Antennas such as the MFJ1820 are resonant **\*near\*** the 20 meter band, but to get a low SWR, you'll either need to fuss with the whip length or use the radio's built-in ATU (KXAT2). The latter is highly recommended since it allows the antenna system to adapt to ad-hoc counterpoise wires and even use a given antenna on more than one band.

If you intend to transmit you **\*must\*** use a trailing counterpoise wire or your signal will be 15-20 dB weaker due to very high ground resistance. Sturdy, stranded/insulated wire is recommended. Black will be least visible. For 20 m, 13' is a good length. This is less than a 1/4 wavelength because of ground and capacitive effects. (The KX2 has a jack for a mini-banana plug ([KX2GNDPLUG available here](#)) on the left side panel.)