KX2 lightweight microphone

Setup and Tweaking quide

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As with the Elecraft MH3, inside the lightweight microphone is a Electret condenser microphone module than needs a phantom DC bias of around 1.5V to power the internal preamp FET.

If you have already used a MH3 microphone with your KX2 before purchasing the lightweight microphone, there should be very little you need to adjust. However, to ensure that the microphone is setup just as you like it, below are a few instructions on how to ensure everything is setup correctly and what to tweak to get things just right for yourself.

1. Enable MIC Bias

As explained above, the KX2 needs to supply a phantom DC voltage of about 1.5V to the Electret condenser microphone module inside the microphone. To ensure this is enabled you need to turn the microphone DC bias (MICBIAS) to “On” in the Menu. To do this press and hold the “DISP Menu 8” button which is located at the bottom right of the KX2.

You will need to press the “DISP Menu 8” button for about one second until you hear a beep, then rotate the knob above it until “MICBIAS” appears on the display.

There are a lot of options so keep rotating that knob until you get to “MICBIAS”

Above “MICBIAS” you should find “On” displayed, if it displays “Off” rotate the big VCO knob until it changes to “On” as shown to the left.

With the MICBIAS set to “On” press and hold the “DISP Menu 8” button for one second to exit the Menu.

The KX2 will now be supplying a DC Voltage to the lightweight microphone. As with the MH3, it will not work if this option is set to "Off".

2. Enable PTT, UP and Down

The lightweight microphone has two buttons on the top panel (above the microphone slot) for adjusting the VCO Up and Down; and a PTT button on the side. The PTT and Up, Down button functionality is usually tuned on by default on the KX2 (it was on with mine), but to ensure that it is please follow the procedure outlined below.

First press and hold the "Menu DISP 8" button on the bottom right-hand side of KX2 - for about 1 second until you hear a beep. Then rotate the knob above it until "MIC BIN" appears. As shown to the left, the "Ptt Up.db" should be displayed above this. If it is not, then rotate the big VCO knob until it does.

If at any time you wish to disable just the Up and Down buttons (but not the PTT) on the lightweight microphone, repeat the above procedure, rotating the VCO until just "Ptt" is displayed.

Finally press the "DISP Menu 8" button again to exit.

The KX2 will now respond to the three buttons "PTT, Up and Down".

3. Enable or Disable Speech Compression

To add that little bit extra of punch during SSB QSOs (increased average "talk power"), the KX2 comes with a built in speech compressor.

I believe this feature is disabled by default (it was on mine), so to enable it please follow the procedure outlined below.

Press and hold the "DISP Menu 8" button for one second, until you hear an audible beep. Next rotate the knob above it until "Tx CMP" is displayed; as shown in the picture left. To adjust this value, rotate the big VCO knob until the desired compression level is displayed.

The procedure to adjust the speech compression for SSB is outlined on page 20 of the KX2 user manual. It recommends that a value of between 15 and 25 is correct for the MH3, and as both microphones use a similar Electret condenser microphone module, I have found the recommended settings to be about right for the lightweight microphone. Below is a link to the KX2 user manual should you want to read the procedure for yourself, or tweak a little further.

https://ftp.elecraft.com/KX2/Manuals%20Downloads/E740282%20KX2%20Owner%27s%20Manual%20A7.pdf

Once the desired level of compression has been set, press the “DISP Menu 8” button to exit the Menu. The compression level is now set.

3. Set the Microphone gain level

As with the MH3, one of the most important settings to get right on the lightweight microphone is the microphone gain level. To be able to adjust this correctly one needs to enable the “Monitor” function – so you can hear yourself speak. Of course setting this too high will result in positive gain loop feedback, which could result in your KX2 squealing a little. My advice is to use a pair of headphones to adjust the microphone gain. Below is a summary of the procedure (based on the KX2 manual on page 20) to adjust the microphone level.

Begin by disabling speech compression (see 3 above), this can be tuned back on later. Next, with your headphones tightly clasped around your ears, and the TRS plug inserted into the KX2 “PHONES” socket, turn the “Monitor” level (so you can hear yourself) to about 3. The “Monitor” level is adjusted by pressing the “AF/Mon” knob quickly. When “MON” is displayed, rotate the same “AF/Mon” knob to adjust the level to about 3. If like me you’re a tad deaf, you might need to up this a tad.

Next press the PTT button on the lightweight microphone and speak into the microphone slots. Make sure the microphone is quite close to your mouth as there is layer of foam protecting the Electret condenser microphone module inside the microphone from the elements, wind noise and your spittle. Next adjust the microphone gain level by rotating the “KYR-SPT/MIC” knob while talking or whistling into the microphone, and watch the bar graphs. Tweak the knob until there are about 5 “ALC” bars showing (see the picture show on page 20 of the KX2 manual). The manual recommends the mic gain for the MH3 is set to between 15 and 25. On my KX2 with the lightweight microphone I have the mic gain set to 15.

If you now wish to enable speech compression, follow the procedure to adjust this as outlined on page 20 of the KX2 user manual.

73 Dave