

bhi

Radio Mate

Compact Keypad for
Yaesu FT-817, FT-857 and FT-897

Operating Instructions



1090-107D
Issue K

Important Information

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1. Set up.

Connecting and setting up the Radio Mate. (See your radio user manual for more information on setting up the CAT interface).

- Turn radio OFF.
- Turn the Radio Mate OFF using the switch located on right-hand side of case.
- Insert DIN plug on Radio Mate cable into ACC jack on FT-817 or the CAT/LINEAR jack on the FT-857/897 (Be very careful not to bend the pins).
- Turn the radio ON.

Radio-specific settings.

FT-817

Press and hold function button (F) for one second (two beeps) to enter the Menu and then set Menu 14 [CAT Rate] to 9600 baud.

Press and hold function button (F) for one second to store this setting.

FT-857 and FT-897

Press and hold function button (F) for one second (two beeps) to enter Menu and then set Menu 020 to CAT, then set 019 [CAT Rate] to 9600 baud.

Press and hold function button (F) for one second to store this setting.

Turn ON the Radio Mate.

The LED on the Radio Mate will glow RED and a beep should be heard approximately 3 seconds after power up.

The LED glowing RED indicates the Radio Mate is in Memory Function mode. (See Section 2.)

Note:

To aid partially sighted and blind users, a small self adhesive rubber bump is included and can be easily fixed between keys 5,6,8,9.

The CAT port remains powered on the FT-817, even when the radio is switched off. It is advisable to switch the keypad off when the Radio Mate or Radio is not in use.

2. Memory Function

Memory Bank Selection:

Forty (40) memory locations are available to use as 4 Memory Banks, each containing ten (10) memories numbered 0 through 9. The first 20 are pre-programmed as per the table on page 6. The next 20 memories have 1Mhz - 20Mhz programmed into them. When the **Mem** key is pressed the LED illuminates RED. To select the First Bank, simply press the **Mem** key and release it when you hear a single beep. To select the Second Bank, simply press the **Mem** key and release it when you hear two beeps. To select the Third Bank, simply press the **Mem** key and release it when you hear three beeps. To select the Fourth Bank, simply press the **Mem** key and release it when you hear four beeps. The Memory Bank selected will remain as the selected Bank until you specifically change it; however, it defaults to Memory Bank 1 on Power Up.

Storing a Memory:

Once you have selected a memory location into which you to store the frequency and mode, simply press the selected number key (**0-9**) until a single beep is heard and then immediately release your finger from the key. The LED will also flash once to indicate that the current frequency and mode has been stored in the selected memory. Be sure you have the desired Memory Bank selected.

Recalling a Memory:

Simply press the selected number key (**0-9**) and then quickly release your finger from the key to recall the stored frequency and mode.

The Radio Mate memories can be reset to the generic frequencies in the table by switching off the Radio Mate power, then switching it back on again, holding the “0” key down whilst the LED is green, until a beep is heard.

Memory	Bank 1		Bank 2	
	Frequency (MHz)	Modulation	Frequency (MHz)	Modulation
1	1.850	CW	144.030	CW
2	3.530	CW	144.300	CW
3	3.600	LSB	144.750	FM
4	7.030	CW	145.450	FM
5	7.080	LSB	145.475	FM
6	14.030	CW	145.500	FM
7	14.200	USB	145.525	FM
8	18.040	USB	145.550	FM
9	21.010	USB	145.575	FM
0	28.500	USB	145.750	FM

There are blank forms in Appendix A to record your own frequencies and modes.

3. Modulation.

In this mode the keypad will select an operating mode at the single press of a button.

Press the **Mod** for **Modulation** mode. The LED will illuminate **YELLOW**.

Pressing the appropriate button i.e. USB, AM, FM etc. will change the radio over to that mode.

Press: **1** for **USB**
 4 for **LSB**
 7 for **AM**
 2 for **FM**
 5&0 for **FMN**
 (not on FT817 it will lock up - battery removal required)
 8 for **PKT**
 3 for **CW**
 6 for **CWR**
 9 for **DIG**

4. Direct frequency input.

The operating frequency can be entered directly using the numeric keypad. To enter the direct frequency input mode - press **Dir**, the LED will illuminate GREEN.

To illustrate the use of the mode is illustrated by the examples below.

For example with the radio reading *145.500*
to change to 145.400 press **.4 Ent** new reading is *145.400*

Alternatively entering *.400* would also give same result.

Note:

When entering 3 digits after the decimal point there is no need to press the enter button on pressing the third digit a double beep is heard and radio is automatically updated.

To change to 144.300
press **4.3 Ent** new reading *144.300*

(entering *4.300* would also give same result)

For example with radio reading *144.300*
press **5.5 Ent** and you are back to *145.500*

entering *.525* new reading *145.525*

To go to HF

press **007 Ent** new reading *7.525*

press **.010** new reading *7.010*

entering **14 Ent** new reading *14.010*

To change from 14.010 to 3.500 you need to remove the 10 from the 14 this is done by using a leading zero.

enter **03.500** new reading *3.500*

4a. Direct Frequency Nudge Function.

Pressing and holding the **Dir** key until it beeps puts the Radio Mate into nudge mode. When in this mode you can increase or decrease the frequency in 10Hz, 100Hz, 1KHz, 10KHz , 100KHz and 1MHz steps by pressing the following keys on the keypad:

Key 1 = +1KHz	Key 2 = +100Hz	Key 3 = +10Hz
Key 4 = -1KHz	Key 5 = -100Hz	Key 6 = -10Hz

To obtain the 10KHz , 100KHz and 1MHz steps, press the zero (shift) key whilst pressing the relevant key below:

Key 1 = +1MHz	Key 2 = +100KHz	Key 3 = +10KHz
Key 4 = -1MHz	Key 5 = -100KHz	Key 6 = -10KHz

Press the **Dir**, **Mod** or **Mem** buttons momentarily to exit the nudge mode (no beep will be heard). If you press **Dir** you will be back in direct frequency entry mode.

5. VFO operation.

- VFO operation can be set as follows:
- To swap VFOs A & B, A/B press the “.” (decimal) key
- VFO A=B long press of the “.”(decimal) key
- Split VFO mode by pressing the **CLR** key.

6. Tune function.

Pressing and holding the **Ent** key puts the Radio Mate into the tune mode. When in this mode, all the current modes of operation are read from the radio and stored in the keypad. The radio is then put into transmit mode for 10 seconds to tune an ATU. After the tune is complete the radio is returned to its previous settings. If the tuning operation completes after a few seconds, press the **Ent** key again and the tune function will be stopped and the radio returned to its previous settings.

7. Other bhi Products.

bhi design and manufacture a range of Digital Signal Processing (DSP) products to remove unwanted noise and interference leaving only the speech.

NES10-2 MKII Noise Eliminating speaker.

Amplified DSP noise cancellation built into a compact speaker unit. The unit provides an easy to install solution to noise reduction and easily connects to the extension speaker socket or headphone socket of your equipment. Supplied with a DC fused power lead with bare ends.



NEIM1031 MKII In-line module.



The **NEIM1031MKII** provides a flexible solution to noise reduction and easily fits between your equipment and speaker.

The unit is also equipped with line level inputs and outputs, and a 3.5mm mono headphone socket. Supplied with a fused DC power and 3.5mm plug to plug audio lead.

CAT-MATE - Electronic “Y” Splitter for Yaesu FT-817, FT-857 & FT-897

The bhi CAT-MATE is an Electronic “Y” splitter for the FT-817, FT-857 & FT-897 that enables more than one accessory to be used via the CAT port on the Yaesu radio series. Primarily designed to be used with the bhi Radio Mate compact keypad, it can also be used as a standalone product, allowing more than one accessory to be used with the radios CAT port at the same time.



ANEM “Noise Away” MKII

Easy to use, simply fits between your equipment and extension speaker/headphone. Audio bypasses module when the power is switched or removed. All the DSP functions are controlled by a single button. The unit is compact and can be mounted out of the way. Supplied with hook and loop fastener, fused power cable and audio lead.



DSPKR

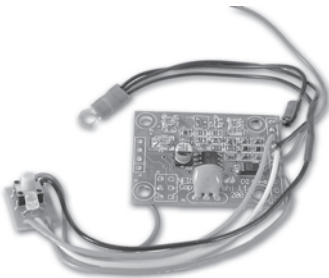
A quality amplified DSP noise cancellation speaker from bhi that really lets you hear that signal!

Features:

- 10 Watts RMS audio output power
- Fully Adaptive noise cancelling 9 - 35dB
- Up to 8 filter levels
- Simple control of DSP functions
- Audio level indicator
- Filter level store function
- Sleep mode
- Easy to install with adjustable mounting bracket
- 10 – 18Vdc operation
- Auxillary output socket
- Up to 6 Watts input
- Separate volume control
- Dims: 135(W) x 130(H) x 85 (D)mm



NEDSP1061- KBD



Fit the bhi DSP noise cancellation in your Transceiver. Features 4 filter levels with visual and audio indication
Single button operation
labels and mounting hardware

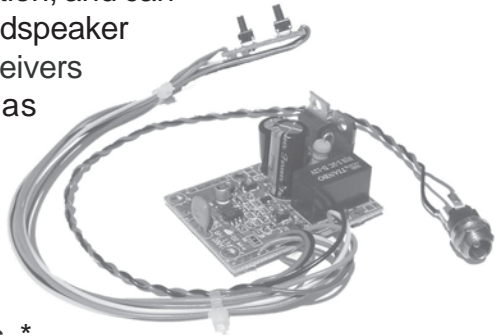
Generic module to fit most transceivers/receivers. Specific instructions cover installation into the following:

- Yaesu FT817, FRG-100, FT-897, FT-847
- Icom 706 MKII G
- Icom 736/738
- Kenwood TS50, TS440
- Alinco DX-77
- Realistic DX-934

NEDSP1062- KBD

Revive that old rig or extension speaker with this easy to fit DSP noise cancellation module. The module comes pre-wired with all the connections needed for operation, and can be easily retrofitted into the loudspeaker path of many transceivers, receivers & extension speakers. It has

simple user controls via two pushbuttons. Features: 4 or 8 filter levels with LED & audio indication * Power on/off with audio bypass * 2 Watts output * Power connector * Labels *



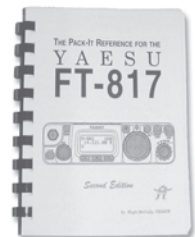
Fused DC power lead & full fitting instructions supplied, including guides for the Kenwood SP31 & Yaesu SP8 extension speakers

Packit Reference Book for the FT817

Wherever you are, this pocket guide lets you can have all the information you need at your finger tips to use the many FT-817 features.

Other reference books.

- Yellow book for VX7R
- Yellow book for VX6R
- Yellow book for VX5R
- Yellow book for VX2R
- Yellow book for VX8R



FT817 cables.

6 pin Mini DIN - Data cable

Order code: 6pin

8 pin Mini DIN - Accessory cable

Order code: 8pin

Cigar lighter power lead

Order code: FT817VEPL

Fused power lead

Order code: FT817FPL

1042 Switch Box



Allows connection of up to 6 pieces of equipment to one bhi noise elimination speaker or any other extension speaker.

(Includes 2 free ALD001 3.5mm audio leads)

Audio Adapters and Accessories.

Power adapters:

1030-UKPA 12V DC UK power adapter

1030-EUPA 12 VDC European adapter

1030-VEPL Fused vehicle power adapter

Audio leads:

ALD-001 1.2m 3.5mm - 3.5mm mono lead

ALD-002 2.5m 3.5mm - 3.5mm mono lead

ALD-003 phono -phono plug

ALD-004 3.5mm stereo plug - phono plug

ALD-005 3.5mm mono plug - phono plug

Audio adapters:

ADP-P001 6.35mm plug - 3.5mm mono socket

ADP-P002 6.35mm plug - 3.5mm mono socket

ADP-P003 3.5mm stereo plug - 3.5mm mono socket

ADP-P004 Phono plug - 3.5mm mono socket

ADP-P007 6.35mm stereo plug - 3.5mm stereo socket

ADP-S001 3.5mm mono socket - 3.5mm mono plug

ADP-S002 6.35mm socket - 3.5mm mono plug

ADP-S003 6.35mm stereo socket - 3.5mm mono plug

NCH Noise Cancelling Headphones



These headphones feed an inverted copy of the ambient noise to cancel it out.

The headphones effectively remove noise such as blower noise, ambient noise, jet engine noise or music from another room.

The headphones are supplied with an aircraft adapter, so you can now listen to the film, or CD player without all the jet engine noise. Also supplied with carry bag.



BBRP Banner Badge



Get the message across

Easy to program using push buttons on back: no cords, no wires, no software needed. Enter your message and watch it scroll across.

BBRP (Includes 2 CR2032 coin cells)

BBAT replacement CR2032 coin cell



Applications

- ID badge
- Club badge
- Restaurants
- Receptions
- Gifts
- Stag and Hen nights
- DJs
- etc...

What will yours say?

Appendix A - Blank frequency tables

	Bank 1		Bank 2	
Memory	Frequency (MHz)	Modulation	Frequency (MHz)	Modulation
1				
2				
3				
4				
5				
6				
7				
8				
9				
0				

	Bank 1		Bank 2	
Memory	Frequency (MHz)	Modulation	Frequency (MHz)	Modulation
1				
2				
3				
4				
5				
6				
7				
8				
9				
0				

	Bank 1		Bank 2	
Memory	Frequency (MHz)	Modulation	Frequency (MHz)	Modulation
1				
2				
3				
4				
5				
6				
7				
8				
9				
0				

	Bank 1		Bank 2	
Memory	Frequency (MHz)	Modulation	Frequency (MHz)	Modulation
1				
2				
3				
4				
5				
6				
7				
8				
9				
0				

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