

bhi

# CAT-MATE

## Electronic "Y" Splitter For Yaesu FT-817, FT-857 & FT-897 User Guide



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*Get the most out of your radio!*

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## Warning

The bhi CAT-MATE was designed to operate with a bhi Radio Mate or PC controller, and one other "CAT2" product. However, it is possible that two other accessories may be used instead. In this case it should be noted that non-data signals (ALC, Band info and TX inhibit) present on the CAT ports are not buffered in any way. The user should check when using the CAT-MATE in this way that the loading on these signals is not excessive. Some spurious readings may occur if the Radio Mate and PC software are used at the same time. The FT-817 has a max current rating of 60mA and **THIS SHOULD NOT BE EXCEEDED.**

## Introduction:

The bhi **CAT-MATE** is an electronic "Y" splitter that enables the bhi Radio Mate compact keypad to operate with other accessories for the Yaesu radio series, and also be used as a standalone product. The key benefit of the **CAT-MATE** is that it allows more than one accessory to be connected to the radio's CAT port at the same time, meaning that you don't need to dis-connect & re-connect your CAT port accessories each time they are used. The **CAT-MATE** is able to receive commands from either of its two CAT input ports and connect to a single radio, be it an FT-817, FT-857 and FT-897. The appropriate reply from the radio will then be directed to the port from which the command was issued. For greater flexibility the **CAT-MATE** has a built-in RS-232 (PC) to CAT interface that allows operation with PC control software programmes such as the FT817 Commander, Ham Radio Deluxe, SuperControl and FTBCAT etc. Other signals, such as the ALC, TX Inhibit and Band information are fed through the unit to both CAT ports. LED's are provided at the three CAT ports to provide an indication as to which ports are active or being utilised. As data appears at a port, the LED associated with that port and the Radio port will light while active. If the RS232 port is being used, the CAT 2 port will light. The CAT-MATE RS-232 interface has an integrated Null Modem built in so that a special Null Modem cable is **NOT** required (just a standard 9 way D-type serial cable is needed, available as an optional extra, order code: RS232cable). The unit operates from power provided by the radio set and distributes this to the other two CAT ports. **[WARNING: The FT-817 is limited to providing <60mA, so please ensure that you are aware of additional accessories that are powered by the radio]**

**Note:** The **CAT-MATE** is not currently suitable when using a tuner (such as the FC-30, FC-40 etc.) on the FT-857/D or FT-897/D that uses the radio's Tune function/button and the CAT port of the radio for control.

It is recommended that you only switch on one accessory to save on battery life (FT-817), plus the radio's cat port is only designed to cope with a single set of instructions at a time, and problems might occur if more than one accessory is switched on at the same time.

**Set Up:** Insert the mini DIN plug on CAT-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).

### Radio 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 the setting.

**FT-857** and **FT-897:** Press and hold function button (F) for one second (two beeps) to enter Menu and then set Menu 019 [CAT Rate] to 9600 baud. Press and hold function button (F) for one second to store the setting.

### Operation:

1. Insert the mini DIN plug on the CAT-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).
2. Ensure that the CAT-MATE "ON/OFF" switch is set to "OFF".  
Connect CAT devices to CAT 1 & CAT2 sockets (The Radio Mate connects to CAT 1 socket.). Alternatively connect your serial port lead to the port marked PC and any other item to CAT 1.
3. Switch the CAT-MATE "ON" using the switch on the side of the unit. The LEDs will light for approx 1 second and then go off.

Note: When using software programmes to control your radio via the CAT-MATE built-in RS232 port, ensure that you select the software program after step 2.

As data appears at a port the LED associated with that port and the Radio Port will light while active. The LED on CAT port 2 lights when the RS232 port is active.

### Specifications:

CAT1	This is a standard CAT controller/ancillary item port.
CAT2	Either a standard CAT controller/ancillary item can be connected to this port or a computer serial port may be connected to the PC port.
Data rate	This unit is designed to operate at the standard Radio Mate speed of 9600 Baud.
Controls	On/Off Switch. This isolates the power from the radio to all CAT ports and the CAT-MATE unit.
Power supply	10 to 16 Volts d.c. supplied via the CAT-MATE connector.
Current Draw	Less than 5 mA nominal for the CAT MATE under idle conditions. <b>Note: Max current consumption for the FT-817 is 60mA.</b>
Through Signals	The non-data signals are passed through to all CAT ports. These are ALC, TX Inhibit and Band information.

### Other bhi products:

#### Radio Mate Compact Keypad

The **Radio Mate** compact keyboard for the Yaesu FT-817, FT-857 and FT-897 enables many of the common functions to be used much more quickly. The keyboard does this with a number of fast, effective shortcuts. It is suitable for people who find some of the controls on their radio difficult to use. The Radio Mate is robust, requires no external power, and connects to the 8pin CAT interface on the radio or the **CAT-MATE**. An LED indicates the current mode, red for the memory mode, green for the direct frequency entry mode and yellow for the modulation mode. There is an on/off switch on the side of the unit. The following shortcuts can be initiated:

## Other bhi products cont'd:

Quick easy band change at touch of a button.

Quick and easy modulation selection in any mode to any mode by a single selection

Quick memory function (20 memories), press to recall, press and hold to store (Freq & mode)

Quick and easy intelligent direct frequency input

Swap VFO A/B using the (.) key - VFO A=B using a long press of the (.) key

Split VFO mode by pressing the Clr button

Tune function enabling up to a 10 second carrier to tune an ATU



**NEIM1031** Amplified noise eliminating in-line module - Fully adjustable - use in-line with a speaker or headphones.



### Features:

- Fully Adaptive noise cancelling 9 - 35dB
- Audio/line level in/out sockets .
- Headphone socket
- 8 filter levels
- Noise cancelling on/off switch with LED
- 12 – 24Vdc operation
- Input overload warning LED
- Optional extras available



Now with new improved rotary filter control knob

**NEDSP1061-KBD – Low level audio DSP board** – This small pre-wired DSP noise cancelling module retrofits into the low level audio path of many transceivers and receivers including Yaesu FT817, FT847, FT897 & FRG100 Kenwood TS50 & TS440, Alinco DX-77, Icom 706 MK IIG & 736/738, and Realistic DX-394. Supplied with excellent fitting instructions and installation kit.



### **NES10-2 Amplified DSP noise cancelling speaker**

Amplified DSP noise cancelling speaker - Simply connect to a 12-24V DC power supply, plug in the audio lead, and hear the difference! Up to 5Watts input and 2.5Watts output - Headphone socket – Filter on/off switch & power on/off audio bypass switch.

### **NEDSP1062-KBD Amplified DSP noise cancelling PCB module**

noise cancelling module. Retrofits into the high level audio path of many extension speakers like the Icom SP20/21, Yaesu SP8 & SP2000 and Kenwood SP31 etc. Easy 2 button microprocessor control. Easy to follow installation guides.



### **ANEM "Noise Away"** – Amplified in-line noise cancelling module

- Connects between the communications equipment and extension speaker. Functions are all microprocessor controlled, enabling simple operation via two pushbuttons

For more information on the bhi **CAT-MATE**, and any of bhi's other products, please go to the bhi website [www.bhi-ltd.co.uk](http://www.bhi-ltd.co.uk) for local dealer details, or contact us directly: