

# TRANSMITTER CONVENIENCE FEATURES

## VOICE MEMORY (SSB/AM/FM MODES: REQUIRES OPTIONAL DVS-6 VOICE MEMORY UNIT)

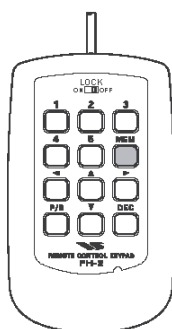
You may utilize the Voice Memory capability of the **FT dx 3000** for repetitive messages. The Voice Memory system includes five memories capable of storing up to 20 seconds of voice audio each. The maximum that any memory can hold is 20 seconds.

### Voice Memory Operation from the optional FH-2 Remote Control Keypad

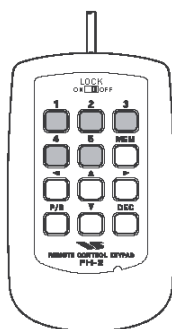
You may also utilize the Voice Memory capability of the **FT dx 3000** from the optional **FH-2** Remote Control Keypad, which plugs into the rear panel's **REM** jack.

#### Recording Your Own Voice in Memory

1. Select the LSB, USB, AM, or FM mode using the front panel **[MODE]** buttons.
2. Adjust the **[MIC GAIN]** knob, as described on page 56.
3. Press the **[MEM]** key on the **FH-2**. A blinking "**REC**" icon will appear in the display.



4. Press any of the **FH-2**'s keys numbered **[1]** through **[5]** to select that memory storage register.

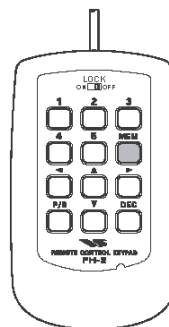


#### ADVICE:

If you do not press the **PTT** key (see next step) within five seconds, the memory storage process will be cancelled.

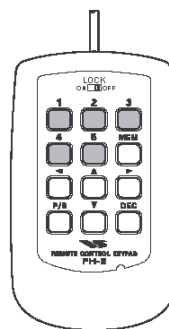
5. Press the microphone's **PTT** switch momentarily. The "**REC**" icon will glow steadily and recording will begin.
6. Speak into the microphone in a normal voice level to record the message (such as "CQ DX, CQ DX, this is W 6 Delta X-Ray Charlie, W 6 Delta X-Ray Charlie, Over"). Remember that the time limit for recording any message is 20 seconds.

7. Press the **FH-2**'s **[MEM]** key to terminate the message storage process.



#### Checking Your Recording

1. Be sure that the front panel **[MOX]**, **[VOX]**, and **[BK-IN]** button are "Off" (the LED imbedded in the button must be off).
2. Press the **FH-2**'s **[1]** ~ **[5]** key (whichever one you just recorded in). The "**PLAY**" icon will appear in the display and you will hear the contents of the Voice Memory you just recorded.



#### ADVICE:

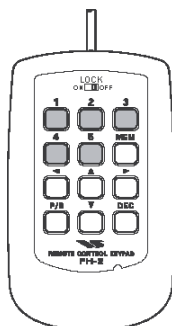
You may adjust the playback level of the recording via Menu item "016 RX OUT LEVEL".

# TRANSMITTER CONVENIENCE FEATURES

## VOICE MEMORY (SSB/AM/FM MODES: REQUIRES OPTIONAL DVS-6 VOICE MEMORY UNIT)

### Transmitting the Recorded Message

1. Select the LSB, USB, AM, or FM mode using the front panel **[MODE]** buttons.
2. Press the front panel **[BK-IN]** button. The “**BK-IN**” icon will appear in the display.
3. Press the **FH-2**'s **[1] ~ [5]** key (whichever one you just recorded in). A “**PLAY**” icon will appear in the display and the message will be transmitted.



### ADVICE:

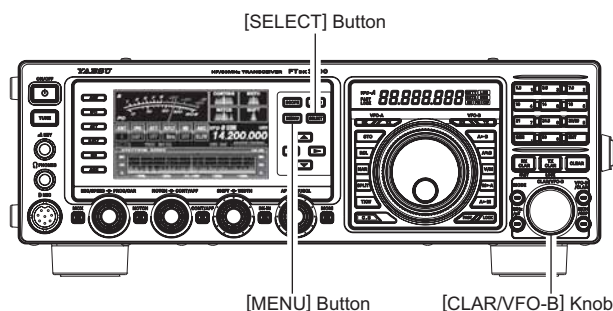
You may adjust the transmit (audio) level of the recording via Menu item “017 TX OUT LEVEL”.

# TRANSMITTER CONVENIENCE FEATURES

## VOX (SSB/AM/FM MODES: AUTOMATIC TX/RX SWITCHING USING VOICE CONTROL)

Instead of using the microphone's **PTT** switch or the front panel **[MOX]** switch to activate the transmitter, the VOX (Voice Operated TX/RX Control) system provides hands-free, automatic activation of the transmitter, based on voice input into the microphone.

1. Press the **[▲/▼/◀/▶]** button to select the “**VOX**”, then press the **[SELECT]** button to select “ON”. The “**VOX**” will appear in the display.
2. Without pressing the **PTT** switch, speak into the microphone in a normal voice level. When you start speaking, the transmitter should be activated automatically. When you finish speaking, the transceiver should return to the receive mode (after a short delay).
3. To cancel VOX and return to **PTT** operation, press the **[SELECT]** button once more. The “**VOX**” will turn off, signifying that the VOX circuitry has been turned off.



### ADVICE:

- ❑ The VOX Gain may be adjusted to prevent accidental transmitter activation in a noisy environment. To adjust the VOX Gain:
  - 1) Press the **[VOX]** button to activate the VOX circuitry, if necessary.
  - 2) Press and hold in the **[MENU]** button for one second to engage the Menu mode.
  - 3) Rotate the **[CLAR/VFO-B]** knob or press the **▲/▼** button to select Menu item “180 VOX GAIN”, then press the **[SELECT]** button.
  - 4) While speaking into the microphone, rotate the **[CLAR/VFO-B]** knob or press the **▲/▼** button to the point where the transmitter is quickly activated by your voice, without background noise causing the transmitter to activate.
  - 5) When you satisfied with the setting, press and hold in the **[MENU]** button for one second to save the new setting and exit to normal operation.
- ❑ The “Hang-Time” of the VOX system (the transmit/receive delay after the cessation of speech) may also be adjusted via the Menu mode. The default delay is 500 msec. To set a different delay time:
  - 1) Press the **[VOX]** button to activate the VOX circuitry, if necessary.
  - 2) Press and hold in the **[MENU]** button for one second to engage the Menu mode.
  - 3) Rotate the **[CLAR/VFO-B]** knob or press the **▲/▼** button to select Menu item “181 VOX DELAY”, then press the **[SELECT]** button.
  - 4) Rotate the **[CLAR/VFO-B]** knob while saying a brief syllable like “Ah” and listening to the hang time for the desired delay.
  - 5) When your adjustments are complete, press and hold in the **[MENU]** button for one second to save the new setting and exit to normal operation.
- ❑ The Anti-Trip setting adjusts the level of negative receiver audio feedback to the microphone, to prevent receiver audio from activating the transmitter (via the microphone). This setting can also be adjusted via Menu item “182 ANTI VOX GAIN”.
- ❑ VOX operation may be engaged on either Voice modes (SSB/AM/FM) or on AFSK-based Data modes. Use Menu item “179 VOX SELECT” (the selections are “MIC” and “DATA”).

# TRANSMITTER CONVENIENCE FEATURES

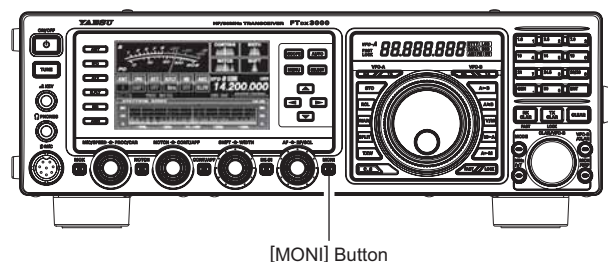
## MONITOR (SSB/AM/FM MODES)

You may listen to the quality of your transmitted signal using the Monitor feature.

1. Press the **[MONI]** button. The LED inside the **[MONI]** button glows orange.
2. During transmission, rotate the **[MONI]** knob to adjust the audio level in the Headphones or speaker. Clockwise rotation of this knob will increase the volume level.
3. To switch the Monitor off again, press the **[MONI]** button once more. Confirming that the Monitor is now disengaged.

### ADVICE:

- Because the Monitor feature samples the transmitter IF signal, it can be very useful for checking the adjustment of the Speech Processor or Parametric Equalizer on SSB, and for checking the general signal quality on AM and FM.



[MONI] Button

# TRANSMITTER CONVENIENCE FEATURES

## SPLIT OPERATION USING THE TX CLARIFIER

For split TX/RX operation in “casual” pile-ups, where the split is less than 10 kHz, the TX Clarifier (Offset Tuning) feature may be utilized.

1. Press the **[TX CLAR]** button. The “TX” icon will appear in the display.

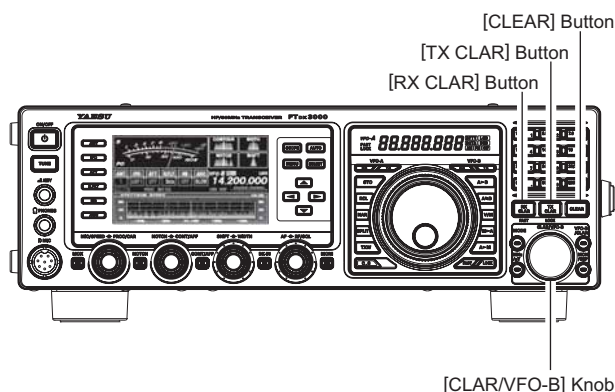
### QUICK POINT:

The Clarifier is frequently used for receiver offset tuning. However, for DX pile-ups where the DX station is using a split of less than 10 kHz, the TX Clarifier function is usually the quickest way to set the transmitter to the desired offset frequency.

2. Rotate the **[CLAR/VFO-B]** knob to set the desired transmitter offset. A maximum split of  $\pm 9.999$  kHz may be set.
3. To exit from TX Clarifier operation, press the **[TX CLAR]** button once more. The “TX” icon will disappear from the Multi-Display Window.

### ADVICE:

- When listening to a “pile-up” calling a DX station, in order to find the station currently being worked, you may press the **[RX CLAR]** button. Then, use the **[CLAR/VFO-B]** knob to zero in on the station calling the DX (use the SPOT function on CW for precise alignment of your frequency). You may then press the **[RX CLAR]** button again to cancel the RX Clarifier, and return to reception on the DX station’s frequency.
- Just as with receiver Clarifier operation, the amount of offset from the original VFO frequency will appear in the small display window.
- As with receiver Clarifier operation, when you turn the TX Clarifier off the last-used offset is remembered, and will be available if you turn the TX Clarifier back on. To clear the Clarifier offset, press the **[CLEAR]** button.



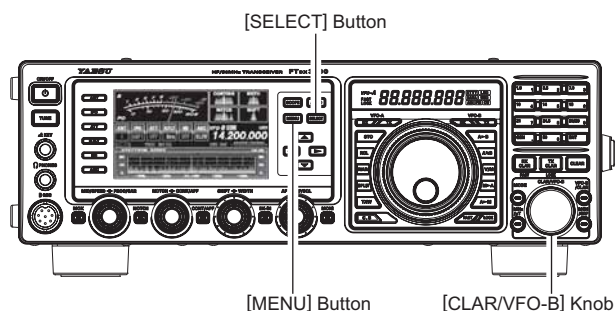
### QUICK POINT:

When attempting to work a DX station on CW in a split frequency pile-up, remember that a large number of other stations may also be using Yaesu transceivers with capability similar to that of your **FT dx 3000**. On the DX side of the pile-up, everyone calling precisely on the same CW frequency will sound like a single tone! So you may have more success if you use the RX Clarifier to find a *hole* in the pile-up, instead of trying to zero-beat the last station worked by the DX station.

### Clarifier Offset Bar Indicator

A visual depiction of the relative offset of the Clarifier may be displayed, using the Bar Indicator.

1. Press and hold in the **[MENU]** button for one second to engage the Menu mode.
2. Rotate the **[CLAR/VFO-B]** knob or press the **▲/▼** button to select Menu item “O11 BAR DISPLAY SELECT”.
3. Press the **[SELECT]** button, then rotate the **[CLAR/VFO-B]** knob or press the **▲/▼** button to select “CLAR” from the available choices; the factory default is “CW TUNE”.
4. Press the **[SELECT]** button, then press the **[MENU]** button to save the new setting and exit to normal operation.

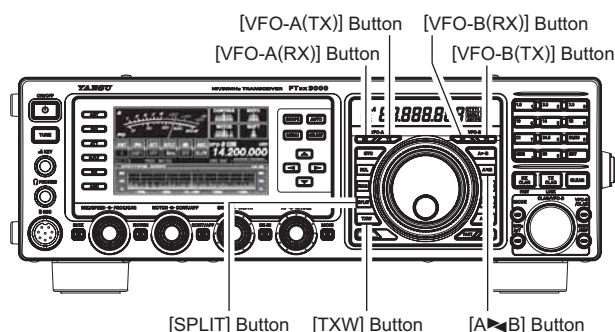


# TRANSMITTER CONVENIENCE FEATURES

## SPLIT-FREQUENCY OPERATION

A powerful capability of the **FT DX 3000** is its flexibility in Split Frequency operation using the VFO-A and VFO-B frequency registers. This makes the **FT DX 3000** especially useful for high-level DX-peditions. The Split operation capability is very advanced and easy to use.

1. Press the **[VFO-B(RX)]** Indicator/Switch, then rotate the **[CLAR/VFO-B]** knob to set the desired VFO-B frequency.
2. Press the **[VFO-A(RX)]** Indicator/Switch, then rotate the Main Tuning Dial knob to set the desired VFO-A frequency.
3. Now press the **[SPLIT]** button. The front panel Indicator/Switch LEDs will look like this:  
**[VFO-A(RX)]** Indicator/Switch: "ON" (LED glows Green)  
**[VFO-A(TX)]** Indicator/Switch: "OFF" (LED Off)  
**[VFO-B(RX)]** Indicator/Switch: "OFF" (LED Off)  
**[VFO-B(TX)]** Indicator/Switch: "ON" (LED glows Red)



During Split operation, the VFO-A register will be used for reception, while the VFO-B register will be used for transmission. If you press the **[SPLIT]** button once more, Split operation will be cancelled.

You may also press the **[VFO-A(TX)]** Indicator/Switch to return transmit frequency control to the VFO-A register, thereby canceling Split operation.

### ADVICE:

- During normal (non-split) VFO-A operation, you may simply press the **[VFO-B(TX)]** Indicator/Switch (located on the upper right of the **[CLAR/VFO-B]** knob) to engage Split operation. The **[VFO-B(TX)]** Indicator/Switch will glow Red when you press the **[VFO-B(TX)]** Indicator/Switch.
- During Split operation, pressing the **[A<B]** button will reverse the contents of the VFO-A and VFO-B. Press the **[A<B]** button once more to return to the original frequency alignment.
- During Split operation you may listen to the TX frequency temporarily while pressing the **[TXW]** button located on the bottom left of the Main Tuning Dial knob.
- It is possible to set different operating modes (for example, LSB and USB) on the two VFOs used during Split operation.
- During Split operation it is also possible to set the VFO-A and VFO-B to different Amateur bands if you use a multi band antenna.

### Quick Split Operation

The Quick Split feature allows you to set a one-touch offset of +5 kHz to be applied to your radio's VFO-B (transmit) frequency, compared to the VFO-A frequency.

1. Start with regular transceiver operation on the VFO-A.  
**[VFO-A(RX)]** Indicator/Switch: "ON" (LED glows Green)  
**[VFO-A(TX)]** Indicator/Switch: "ON" (LED glows Red)  
**[VFO-B(RX)]** Indicator/Switch: "OFF" (LED Off)  
**[VFO-B(TX)]** Indicator/Switch: "OFF" (LED Off)
2. Press and hold in the **[SPLIT]** button for one second to engage the Quick Split feature, and apply a frequency 5 kHz above the VFO-A frequency to the VFO-B frequency register.  
 The VFO configuration will then be:  
**[VFO-A(RX)]** Indicator/Switch: "ON" (LED glows Green)  
**[VFO-A(TX)]** Indicator/Switch: "OFF" (LED Off)  
**[VFO-B(RX)]** Indicator/Switch: "OFF" (LED Off)  
**[VFO-B(TX)]** Indicator/Switch: "ON" (LED glows Red)
3. Press and hold in the **[SPLIT]** switch for two seconds to increment the Sub (VFO-B) frequency another +5 kHz.

### QUICK POINTS:

- The operating mode applied to the VFO-B register will be the same as that in use on the VFO-A register.
- The offset of VFO-B from the VFO-A is programmed via the Menu and is set to +5 kHz at the factory. However, other offsets may be selected using the following procedure:

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1. Press and hold in the **[MENU]** button for one second to engage the Menu mode.
2. Rotate the **[CLAR/VFO-B]** knob or press the **▲/▼** button to select Menu item "043 QUICK SPLIT FREQ".
3. Rotate the **[CLAR/VFO-B]** knob or press the **▲/▼** button to select the desired offset. The available selections are -20kHz ~ +20kHz (factory default: +5 kHz).
4. Press the **[SELECT]** button, then press the **[MENU]** button to save the new setting and exit to normal operation.

# CW MODE OPERATION

The powerful CW operating capabilities of the **FT DX 3000** permit operation using an electronic keyer paddle, a “straight key”, or a computer-based keying device.

## SETUP FOR STRAIGHT KEY (AND STRAIGHT KEY EMULATION) OPERATION

Before starting, connect your key line(s) to the front and/or rear panel **KEY** jack(s). Be sure the **[BK-IN]** button is turned off for now.

1. Press the **[MODE]** button to engage CW operation. The “**CW**” and “**USB**” icons will appear in the display. The LED inside the **[MONI]** button glows orange; and the CW monitor is activated.

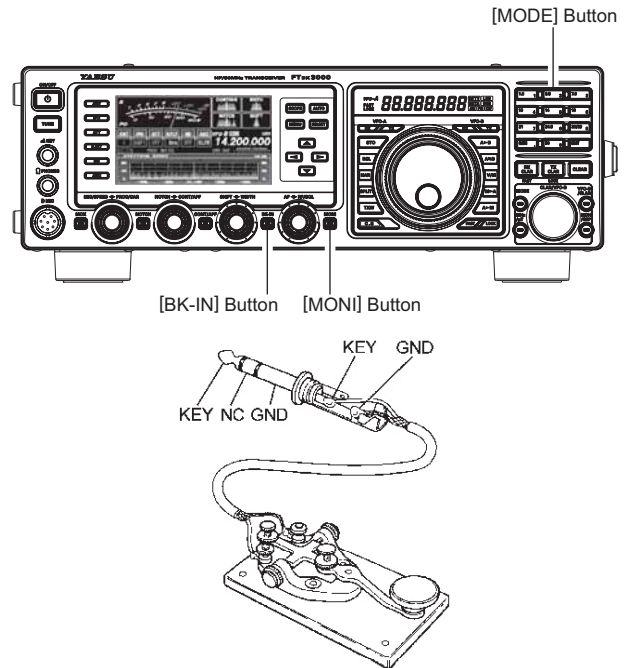
### ADVICE:

If you select the “CW” mode, you will engage the “CW Reverse” mode, whereby the “opposite” side-band injection is used, compared to the “normal” sideband. The “**CW**” and “**LSB**” icons will appear in the display if you select CW Reverse.

2. Rotate the Main Tuning Dial knob to select the desired operating frequency.
3. Press the **[BK-IN]** button to engage automatic activation of the transmitter when you close the CW key. The LED inside the **[BK-IN]** button glows orange.

### ADVICE:

- When you close your CW key, the transmitter will automatically be activated, and the CW carrier will be transmitted. When you release the key, transmission will cease, and after a brief delay, receive will be restored. The delay time is user-programmable per the discussion on page 76.
  - As shipped from the factory, the **FT DX 3000** TX/RX system for CW is configured for “Semi-break-in” operation. However, using Menu item “062 CW BK-IN”, you may change this setup for full break-in (QSK) operation, whereby the switching is quick enough to hear incoming signals in the spaces between the dots and dashes of your transmission. This may prove very useful during contest and traffic handling operations.
4. Operation using your CW key may now proceed.



### ADVICE:

- You may adjust the CW sidetone audio level with the **[MONI]** knob. Rotate the **[MONI]** knob for a comfortable listening level of the CW sidetone. To disable the CW monitor, press the **[MONI]** button (the LED inside the **[MONI]** button glows orange).
- If you set the **[BK-IN]** button to Off, you may practice sending CW with the sidetone only, without having the signal go out over the air.
- If you reduce power via the Menu item “175 TX MAX POWER”, the ALC meter reading will increase; this is normal and does not indicate any problem whatsoever (because increased ALC voltage is being used to lower the power).

### TERMINOLOGY:

#### Semi-break-in

This is a pseudo-“VOX” mode used on CW, whereby the closure of the CW key will engage the transmitter, and release of the key will allow the receiver to recover after a short delay. No signals will be heard during the spaces between dots and dashes (unless the sending speed is extremely slow).

#### Full break-in

Full break-in (also known as “Full QSK”) involves very fast switching between transmit and receive, incoming signals may be heard between the dots and dashes as you send them. This allows you to hear a station that suddenly starts transmitting on your frequency, while you are in the midst of a transmission.

# CW MODE OPERATION

## USING THE BUILT-IN ELECTRONIC KEYS

Connect the cable from your keyer paddle to the front or rear panel **KEY** jack.

1. Press the **[CW]** mode button to engage CW operation. The “**CW**” and “**USB**” icons will appear in the display. The LED inside the **[MONI]** button glows orange; and the CW monitor is activated.

**ADVICE:**

If you press the “CW” mode, you will engage the “CW Reverse” mode, whereby the “opposite” side-band injection is used, compared to the “normal” sideband. The “**CW**” and “**LSB**” icons will appear in the display if you select CW Reverse.

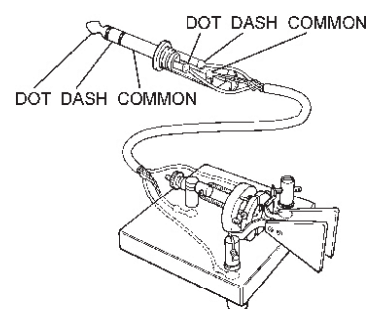
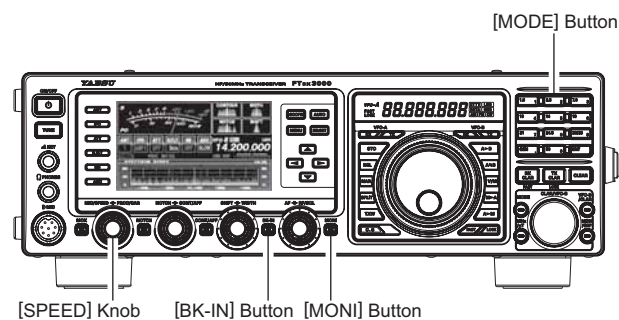
2. Rotate the Main Tuning Dial knob to select the desired operating frequency.
3. Press the **[▲/▼/◀/▶]** button to select the “**KEYER**”, then press the **[SELECT]** button to select “**ON**”. The “**KEYER**” will appear in the display, confirming that the built-in Electronic Keyer is now active.
4. Rotate the **[MIC/SPEED]** knob to set the desired sending speed (4 ~ 60 WPM). Clockwise rotation of the **[MIC/SPEED]** knob will increase the keying speed.

**ADVICE:**

- The frequency display will show the keying speed for 3 seconds whenever the **[SPEED]** knob is turned.
  - When you press either the “Dot” or “Dash” side of your paddle, the CW keying tone will automatically be generated.
5. Press the **[BK-IN]** button to engage automatic activation of the transmitter when you press either the “Dot” or “Dash” side of your paddle. The LED inside the **[BK-IN]** button glows orange.
  6. CW operation utilizing your paddle may now commence.

**ADVICE:**

When you utilize your keyer paddle, the transmitter will automatically be activated, and the CW characters (or a string of dots and dashes) will be transmitted. When you release the keyer paddle contacts, transmission will cease, and reception will be restored after a brief delay. The delay time is user-programmable, per the discussion on page ??.

**ADVICE:**

- You may adjust the CW sidetone audio level with the **[MONI]** knob. Rotate the **[MONI]** knob for a comfortable listening level of the CW sidetone. To disable the CW monitor, press the **[MONI]** button (the LED inside the **[MONI]** button glows orange).
- If you set the **[BK-IN]** button to Off, you may practice sending CW with the sidetone only, without having the signal go out over the air.
- If you reduce power via the Menu item “175 TX MAX POWER”, the ALC meter reading will increase; this is normal and does not indicate any problem whatsoever (because increased ALC voltage is being used to lower the power).