



## Menu 1

Push MENU. Rotate the small tuning knob to select a page, then the large tuning knob to select an item, then rotate the small tuning knob to change its value.



Default values are shown in **Bold Italic** and with larger font.

Mode: ***CW(USB)***, CW(LSB), USB, LSB, AM, FM, DIG(USB), DIG(LSB). Available on all menu pages.

*Note: the mode can also be changed by pressing PAGE/MODE when not in MENU mode and rotating the small tuning knob.*

AGC: ***Auto***, Slow, Fast, Off. Auto sets the AGC decay time based on mode: FM: Off; CW: Fast; USB, LSB, Digital, AM: Slow. Available on all menu pages.

NB: Noise Blanker on/***off***. Available on all menu pages

PTT: ***PTT***, VOX, PTTC, VOXC. Push-to-talk, Voice operated transmit. Without the "C" suffix, a key closure in CW mode activates the transmitter. PTTC enables PTT in voice and CW modes. VOXC enables VOX in phone modes, PTT in CW mode. PTTC and VOXC in CW mode requires the PTT line to be activated before the transmitter is enabled. Available on all menu pages.

Rx: Receive antenna: ***Rx-T*** = same as transmit antenna (A or B); Rx-R = receive antenna input. Available on all menu pages.

Tx: Transceive antenna: ***Tx-A*** = antenna A; Tx-B = antenna B. Available on all menu pages.

*Note: "P-xxx.xx" is the RF power setting and is updated by the RF Power control on the front panel.*

Meter: ***SWR***, Fwd Pwr, Refl Pwr, PA Curr, Dvr Curr, PA Volts, RF Comp, ALC. Selects value shown on Tx Meter. If you only have one meter, this is the value shown during transmit.

Meter light: ***Off***, Low1, Low2, Low3, Med1, Med2, Med3, High. Selects meter backlight brightness.

PSB: ***Off***, On. Passive Signal Boost™. When on, bypasses RF band-pass filters to provide about 5dB more sensitivity in the RF path.

Disp res (Hz): 1, ***10***. Selects displayed frequency resolution to 1 or 10Hz. Displayed resolution may not actually change until you adjust the frequency.

NB PW: ***Short***, Medium Long. Determines length of blanking pulse if NB is enabled.



## Menu 2

```
PTT-RF (ms): 1
PC Audio: Enable
Tx Audio: Mic
Lock timer: Off
Power save: Off
```

PTT-RF (ms): **0**-255. Sets time delay between activation of the transmitter and generation of actual RF signal. Useful if delays are needed when connecting external power amplifiers.

PC Audio: **Disable**, Enable: Disables or enables PC and External Line-in from receiver audio mixer. (Automatically disabled at power-on for 60 seconds to give PC time to boot)

Tx Audio: **Mic**, Line: Enables mic input from front or back panel.  
Line: Enables line input from PC (automatically selected when mode is set to Digital)

Lock Timer: **Off**, 10s, 30s, 60s. When FAST button is on, time delay before tuning knobs are locked if they are not touched during that time.

Power save: **Off**, 15min, 30min, 60min. When active, reduces power consumption when you want to leave the radio on but are not planning to use it for an extended period. If no controls are touched for this period of time, the radio will go into power save mode. All controllable devices will be turned off, including the oscillators and display.

## Menu 3

```
Pitch (Hz): 395
Speed (wpm): 23
Enhanced SSB: Off
FM Dev (kHz): 5.0
License class: E
```

Pitch (Hz): Sidetone Pitch value in Hz.

Speed (wpm): Keyer speed value in words per minute.

Enhanced SSB: **Off**, On. If enabled, the transmitter's wide bandwidth filter is used in SSB mode. Receiver bandwidth is unaffected and must be selected manually with the filter controls.

FM Dev (kHz): 2.0, 4.0, **5.0**. Selects frequency deviation magnitude of carrier in FM mode.

License Class: E, A, **G**, T, N. Entering your license class allows the control firmware to disable the transmitter if you attempt to operate outside your operating privileges. The message "Out of Band!" appears in the display when the transmitter is turned on. This message appears for all license classes if transmission is attempted outside of legal amateur bands. Customizable for different services and countries via firmware download.



## Menu 4

```
VPA (V): 14.2
IPA (A): 5.5
IDV (A): 5.5
Cmp (dB): 5.5
ALC (V): 5.5
```

VPA (V): Power Amplifier Voltage reading in Volts. Also output to analog meter when PA Volts function is selected.

IPA (A): 100W Power Amp current reading in Amps. Also output to analog meter when PACurr function is selected.

IDV (A): 10W transmitter current reading in Amps. Also output to analog meter when Dvr Curr function is selected.

Cmp (dB): RF Speech compression in decibels. Also output to analog meter when RF Comp function is selected.

ALC (V): ALC reading in Volts. Also output to analog meter when ALC function is selected. When external amp provides the ALC, this is the negative of that input voltage. When transmitting in SSB, keep the meter in the green zone to reduce distortion.

## Menu 5

```
SWR: 0.0
Fwd (W): 0.0
Ref (W): 0.0
```

SWR: SWR reading. Also output to analog meter when SWR function is selected.

Fwd (W): Forward power reading in Watts. Also output to analog meter when Fwd Pwr function is selected.

Ref (W): Reflected power reading in Watts. Also output to analog meter when Refl Pwr function is selected.



## Menu 6

```
VOX gain:      40
VOX sens:     100
AntiVOX gain:  40
VOX dly(10ms):100
Mic Bias: Off
```

VOX Gain: 0-255. **Default: 40**. Adjusts level at which VOX trips. This is a calculated value based on sampled audio.

VOX sens: 0-255. **Default 100**. This is a hardware gain setting on the transmitter board. The level of signal reaching the audio sampling software is affected by this control.

AntiVOX Gain: 0-255. **Default: 40**. Adjusts level at which noise from speakers causes VOX trip.

VOX Dly (10 ms): 0-255. **Default: 250**. Time delay after VOX trips before transmitter turns off. Because the increments are 10 ms, the range is 0 to 2.55 seconds.

Mic Bias: **Off**, On. Turning this on places 5V (low current) on one of the microphone connector pins to allow use of electret or other powered microphones.

## Menu 7

```
Amp: Int 10W
Keyer Mode: IambB
Farnsworth: Off
SBI dly(10ms):100
FBI dly(ms): 5
```

Amp:

**None**: No amp or Tx

Int 10W: Tx installed

Int 100W: Tx & amp installed

Int 100W+Ext: Tx and 100W amp installed AND external linear is in use. This item enables the external ALC input from the Linear connector on the back panel.

Keyer Mode:

**IambA**: Iambic mode A

IambB: Iambic mode B

Ultim: Ultimatic mode

Iambic modes mean that when both paddles are depressed, dits and dahs alternate automatically. There are slight timing differences with A and B modes. Ultimatic mode means that whichever paddle is pressed last dominates.

SBI Dly (10ms): 0-255. **Default: 100** (1 second). Time delay after keying signal is removed before transmitter turns off (CW mode only).

FBI Dly (ms): 0-255. **Default: 10**. Time delay after keying signal is removed before transmitter turns off when *Full Break-in button* is on (CW mode only).



## Menu 8

```
Xverter Freq: off
DTR=PTT: No
Baud rate: 9600
Handshake: None
Turnon disp: Off
```

Xverter Freq:

**Off**: Display is normal  
50: Display adds 50 MHz  
144: Display adds 144 MHz  
432: Display adds 432 MHz

Rig must be set to 10M band for this selection to be enabled.

DTR=PTT: **No**, Yes. When on, allows Data Terminal Ready (DTR) signal on RS-232C port to act as a PTT signal.

Baud rate: **9600**, 14400, 19200, 28800, 57600, 115200. Sets RS-232C baud rate. 8-bits, no parity.

Handshake: **None**, CTS/RTS. Set this to agree with the terminal emulator settings in the PC you have connected. CTS/RTS is a hardware handshake using RS-232 control lines. It is used to prevent buffer overflows when exchanging data with the PC. If you use handshaking, you will not be able to use the RTS line as a keying signal for CW.

Turnon disp: **Off**, Msg1. If set to Msg1, the first CW buffer will be displayed for 5 seconds when the rig is turned on.

## Menu 9

```
Scan trip: S5
Scan start: 0
Scan stop: 0
Freq inc(Hz): chn
Dwell (ms): 100
```

Scan trip: **S5**, S6, S7, S8, S9. Sets the trip threshold for scan to stop. Any detected signal above this S-meter level will stop a scan.

Scan start: **0**-84. Memory number to use as a scan starting point.

Scan stop: **0**-84. Memory number to use as a scan stopping point. Scan continues at "Scan start" memory once this one is reached.

Freq inc(Hz): **chn**, 10, 100, 1k, 10k, 15k, 20k, 25k, 50k. If set to "chn", the memory channels defined by "Scan start" and "Scan stop" are used. If set to a numeric value, the scan starts at the current VFO setting and increments by the value specified.

Dwell (ms): **100**, 250, 500, 1000, 5000. Length of time the scan pauses at each frequency to look for a signal.



## Menu 10

```
Roof: 70.455MHz
9MHz-1: 6000
9MHz-2: 2400
9MHz-3: 1800
9MHz-4: 400
```

Roof: **70.000MHz**, 70.455MHz. Defines the filter bandwidth for the roofing filter that is soldered into the receiver board.

9MHz-1: **6000**. This filter is not changeable. If installed, it must be the 6kHz AM filter (Inrad 2311) in slot 1. The filter adjust knob allows you to select this filter even if it is not installed, but no receiver audio will be heard.

9MHz-2: 6000, 2800, 2400, 2100, 1800, 1000, 400, 250, **none**. Defines filter bandwidth for the filter installed in removable slot #2 of the 2nd IF filter group.

9MHz-3: 6000, 2800, 2400, 2100, 1800, 1000, 400, 250, **none**. Defines filter bandwidth for the filter installed in removable slot #3 of the 2nd IF filter group.

9MHz-4: 6000, 2800, 2400, 2100, 1800, 1000, 400, 250, **none**. Defines filter bandwidth for the filter installed in removable slot #4 of the 2nd IF filter group.

## Menu 11

```
455kHz-1: 20K
455kHz-2: 2600
455kHz-3: 2800
455kHz-4: 400
Full Duplex: Off
```

455kHz-1: **20K**, 5800. Defines the filter bandwidth for the filter soldered into non-removable slot #1 of the 3rd IF filter group.

455kHz-2: 20K, 5800, 2800, 2600, 2100, 2000, 1800, 1000, 500, 400, 300, 250, 125, **none**. Defines filter bandwidth for the filter installed in removable slot #2 of the 3rd IF filter group.

455kHz-3: 20K, 5800, 2800, 2600, 2100, 2000, 1800, 1000, 500, 400, 300, 250, 125, **none**. Defines filter bandwidth for the filter installed in removable slot #3 of the 3rd IF filter group.

455kHz-4: 20K, 5800, 2800, 2600, 2100, 2000, 1800, 1000, 500, 400, 300, 250, 125, **none**. Defines filter bandwidth for the filter installed in removable slot #4 of the 3rd IF filter group.

Full Duplex: **Off**, On. When turned on, receiver is not muted during transmission. This is especially useful when operating satellites.



## Menu 12

```
RFG cal: 20
AGC CW/SSB: 150
AGC AM: 180
Tx ALC: On
TxBW cal SSB: 82
```

RFG Cal: 0-255. **Default: 20.**  
This is a calibration function. It sets the AGC voltage on the receiver's final IF stage. When set correctly, the S-meter reads between the edge of the dial and S=1 with no signal present.

AGC CW/SSB: 0-255. **Default: 150.** This is a calibration function. It sets the gain of the AGC loop for CW and SSB modes.

AGC AM: 0-255. **Default: 180.**  
This is a calibration function. It sets the gain of the AGC loop for AM mode.

Tx ALC: **Off**, On. Disables or enables the transmitter's automatic level control algorithm. When off, the RF Power control is used to set power level approximately, and the power meter should be used to verify actual power level. It is very easy to overdrive the transmitter on SSB when ALC is off.

TxBW cal SSB: 0-255. **Default: 82.** Sets the bandwidth of the transmitter's variable bandwidth filter. Adjust for best sounding audio in SSB modes.

## Menu 13

```
FM/IF test: Off
S/Pwr cal: Off
Tx Shf(USB): 125
Tx Shf(LSB): 190
TCX0 Tweak: 128
```

FM/IF test: **Off**, On. Disables or enables test modes for testing the IF filter board and also generates an FM signal on the TXBFO oscillator for calibration of FM receive circuits.

S/Pwr cal: **Off**, On. Disables or enables cal mode for the S-meter. Also allows the Proc Level and RF Power controls to be used to set power level so that RF power can be calibrated using an external wattmeter.

Tx Shf (USB): 0-255. **Default: 125.** Sets the amount of offset in the transmitter's TXBFO oscillator to optimize audio bandwidth for USB mode. (125 represents "0", and the value given is plus or minus 16Hz per increment above or below this).

Tx Shf (LSB): 0-255. **Default: 190.** Optimizes audio bandwidth for LSB mode. (125 represents "0", and the value given is plus or minus 16Hz per increment above or below this). 190 = 1040 Hz

TCX0 Tweak: 0-255. **Default: 128.** Adjusts TCX0 frequency +/- 16 Hz per increment. Should be used as a coarse adjustment, with the pot on the control board used for fine adjustment.



## Menu 14

```
Msg1:DZKit Sienna  
Msg2:CQ CQ CQ <  
Msg3:DE <  
Msg4:599<  
Msg5:QTH<
```

## Menu 15

```
Msg6:QSL TU QRZ K  
Msg7:WX sunny<  
Msg8:WX cloudy<  
Msg9:Name is <  
Msg10:Rig hr is <
```

## Msg1-Msg10: CW Buffers

The text shown in the displays above are the default messages that are stored in the ten CW buffers built-in to the Sienna. They are activated by setting the multi-function switch to CWBuf, then rotating the Adjust knob until the desired message appears in the display. Push the Adjust knob in to start the selected message.

The buffers are 12 characters long. The end of a buffer is shown as a "<" symbol. This allows you to end the buffer in a space, so that when buffers are strung together, they do not run together.

To edit a buffer, select the desired buffer with the large knob, then rotate the small knob to change the first character. Push the Adjust knob to advance to the next position. When you have entered all the characters you want to be in the buffer, make the last character the "<" symbol.

The first buffer, Msg1, can be enabled to be displayed for a few seconds when the rig is first turned on (Turnon disp, Menu 8).



## Menu 16

```
Clr tuner mem: No
C (pF): 0
C side: Ant
L (nH): 0
Force retune: No
```

When you enable the antenna tuner and then press the key, the power level is reduced to about 5 watts and the tuner attempts to find a match by minimizing the SWR. When done, it saves the settings in memory. The current settings for the band and frequency you are on are visible in Menu 16.

The tuner consists of 7 toroid inductors (coils) in series, with relays across each one. A bank of capacitors can be attached to either the antenna side or the transmitter side of the coils. The value of the inductance in microHenries and the value of the capacitance in picoFarads, as well as the side (Ant or Tx) that achieved the best match is shown in this menu.

As you change frequency, if the Tuner is enabled (Tuner button LED on) and you press the key or the PTT, if the new frequency is more than 10kHz away from the previous one and there is no stored value for that memory segment, the tuner will automatically re-match the antenna. You can force it to re-tune by selecting Yes on the "Force Retune" item in the menu. You can clear all tuner memories by selecting Yes to the "Clr tuner mem" item in the menu.

## Menu 17

```
Prc1 Rev A.01.24
Prc2 Rev 32
Re-program uP: No
```

Prc1: This is the current revision of installed firmware (software that is programmed into the non-volatile microprocessor memory) in the main microprocessor. When calling for support, we will ask you for this value. Check [www.dzkit.com](http://www.dzkit.com) periodically for downloadable updates.

Prc2: This is the current revision of installed firmware in the Keyer/Mic/Keypad microprocessor. When calling for support, we will ask you for this value. Check [www.dzkit.com](http://www.dzkit.com) periodically for downloadable updates. Note: the displayed value can be converted to the same form as Prc1 as follows: yyyyxxww where ww = A-D, xx = 0-3 (+1), yyyy = 0-15, converted to form "A.0x.yy". For example, 32 = 00010100 = A.01.02.

Re-program uP: **No**, Yes. Selecting Yes on this option will cause the microprocessor to enter a mode in which it expects data to be downloaded into it over the RS-232C port. Once selected, you must either download new data using the utility software provided on the PC or you must turn off power. The radio will not respond to controls until power is cycled. If you select this by accident, simply turn the radio off and then back on. No harm will have been done.



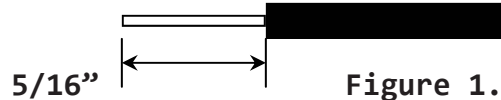




# Appendix A: Anderson Power Pole Connectors

## ASSEMBLY INSTRUCTIONS

1. Strip wire to 5/16" (Figure 1) taking care to avoid nicking or cutting of wire strands. Do not bend or twist strands too sharply.



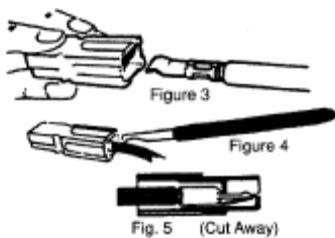
## TERMINATION

Melt rosin flux tin solder into contact well, do not solder-dip contacts or overload the joint with solder. Solder flow should not extend beyond contact wall. On all models, care should be taken that no solder adheres to contact surfaces. See Figure 2.



## CONTACT INSERTION

Insert contact and wire into the housing from the rear (See Figure 3). Position contact as shown (See Figure 4) and push forward so that contact slips under the barrier and snaps over the end of the retaining spring (See Figure 5). Tug slightly to make sure contact is locked in place.



## CONTACT REMOVAL

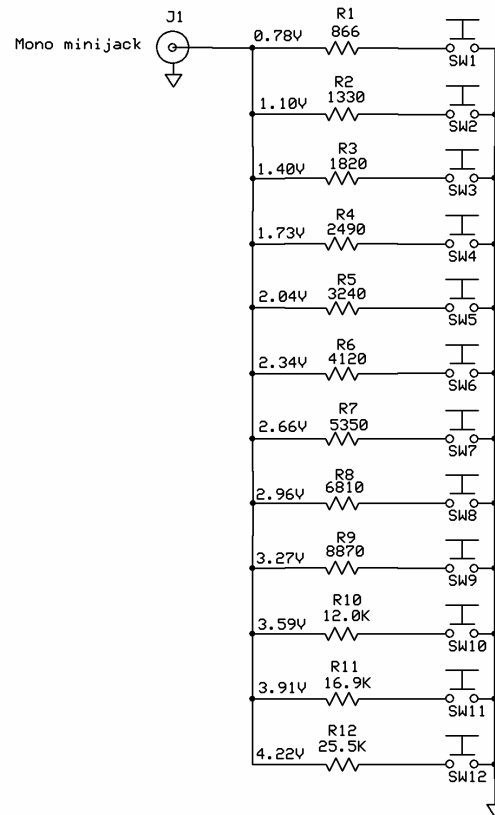
Switch off power first. Select a screwdriver of appropriate size. Depress spring at front of housing and pull wire out. Place one of the forward prongs of the tool between the contact and spring using a rotary motion. Continue rotation while pulling on the wire until the prong causes disengagement of contact from the spring. Withdraw contact from rear of housing (See Figure 6)





## Appendix B: External Keypad Wiring

External Keypad Wiring



### Notes:

1. Nominal resistor values shown. Closest 5% value is OK.
2. Voltages are values at the output when noted button is pushed, and while connected to the rig, which pulls up to 5V through a 4.7K resistor.
3. Do not push more than one button at a time.
4. This is identical to the Yaesu FH-1 remote keypad.



## Appendix C: RS-232 Commands

If the internal PC is installed, COM2 is connected internally to Sienna's control processor and no other connections need to be made. If the internal PC is NOT installed and you are running the rig from an external PC connected to the female DB-9 connector on the back panel, here is the pinout:

DB-9 pin	Signal Name (DTE)
1	NC
2	RXD Receive data (from Sienna to PC)
3	TXD Transmit data (from PC to Sienna)
4	DTR Data Terminal Ready [ PTT ] (from PC)
5	GND Ground
6	NC
7	RTS Request to Send [ Key ] (from PC)
8	CTS Clear to Send (to PC)
9	NC

The baud rate defaults to 9600, although menu settings go up to 115200. The data format is 8-bits, no parity, and is fixed and unchangeable. The RTS/CTS lines form EITHER a hardware handshake OR RTS can be used as a CW keying line controlled by the PC and DTR can be set up as a PTT. Default is no hardware handshake, DTR does not control PTT, and RTS does not control the CW key.

Problems with RS-232C are almost always related to getting pins 2 and 3 backwards, setting the baud rate incorrectly or using a null modem adapter when none is called for. When you use the internal PC, you do not have to worry about this, because we have taken care of the correct cabling for you.

Command syntax follows this convention:

1. All control commands are two characters long followed by variable length parameters followed by a ';'.
2. There are two types of commands: SET and READ. Set commands are usually echoed back by Sienna. Read commands echo back the 2-letter command followed by requested data in various formats, followed by a ';'.
3. An unrecognized command is returned as '?;'
4. Although the syntax follows that defined by the Kenwood TS-570 command set, there are a number of commands that are used differently if "Sienna Enhanced Mode" is on. This mode is turned on and off by using the special command "SE1" (on) or "SE0" off (default).



The following commands are recognized by Sienna:

**ANTENNA TUNER CONTROL:**

Set: AC xy;            x = 0: Antenna tuner thru  
                         x = 1: Antenna tuner in-line  
                         y = 0: Antenna tuner off  
                         y = 1: Antenna tuner on

Read: AC;  
Response: AC0xy;

---

**AUDIO GAIN (Speaker volume)**

Set: AGxxx;            xxx = 000 to 255  
Read: AG;  
Response: AGxxx;

---

**AUDIO GAIN (Headphone volume)**

Set: AHxxx;            xxx = 000 to 255  
Read: AH;  
Response: AHxxx;

---

**TXALC**

Set: ALx;            x = 0: Disables transmit ALC  
                         x = 1: Enables transmit ALC  
Read: AL;  
Response: ALx;

---

**ANTENNA NUMBER**

Set: ANx;            x = 1: Selects main antenna A  
                         x = 2: Selects main antenna B  
Read: AN;  
Response: ANx;

---

**PC AUDIO**

Set: APx;            x = 0: Disables audio from PC and LineIn  
                         x = 1: Enables audio from PC and LineIn  
Read: AP;  
Response: APx;

---

**RECEIVE ANTENNA**

Set: ARx;            x = 1: Selects transmit antenna  
                         x = 2: Selects receive antenna  
Read: AR;  
Response: ARx;

**TX AUDIO**

Set: ATx;            x = 0: Transmitter uses Mic input  
                      x = 1: Transmitter uses Line input

Read: AT;

Response: ATx;

Note: Valid in AM, SSB and digital modes. Overridden in FM/CW. Response indicates the actual state.

---

**BAUD RATE**

Set: BRx            x = 0: 9600            1: 19200            2: 38400  
                      3: 57600            4: 115200

Read: BR;

Response: BRx;

Note: Baud rate defaults to 9600. Changes will not take effect until the next power-on. Be sure to wait 10 seconds before turning power off to be sure the new value is saved in internal memory.

---

**CAL TX BANDWIDTH** (Adjusts transmitter's SSB crystal filter bandwidth)

Set: CTyyy;        xxx = 0-255        (default value = 252)

Read: CT;

Response: CBxxx;

---

**CAL FM/IF** (When PTT is on, modulates Tx at 2.4kHz deviation, 1kHz freq; with PTT off, sets TXVFO to display frequency to allow test of IF Filter and RxBPF boards)

Set: CFx;            x = 0: Off  
                      x = 1: On

Read: CF;

Response: CFx;

---

**CAL AGC** (Sets cal constants to adjust S-meter level)

Set: Cxyyy;        x = A: AM (default value = 180)  
                      x = B: SSB/CW (default value = 150)  
                      yyy = 0-255

Read: Cx;

Response: Cxyyy;

---

**CAL TX IF SHIFT** (Moves Tx IF up or down for best audio response)

Set: CUxxx;        xxx = 0-255 (USB)  
                      (Default = 125; higher == shift up xx Hz)

Set: CLxxx;        xxx = 0-255 (LSB)  
                      (Default = 190; higher == shift up xx Hz)

Read: CU; or CL;

Response: CUxxx; or CLxxx;



---

**CAL RF GAIN** (Adjust S-meter for 0 with no signal)  
Set: CRxxx; x = 0-255 (default value = 20)

Read: CR;  
Response: CRxxx;

---

**CAL S-METER/RF-POWER**

Set: CSx; x = 0: Off  
x = 1: On

Read: CS;  
Response: CSx;

---

Note: This command allows the Transmit oscillators to stay on even when the display frequency is outside ham bands. It is used to allow the S-meter to be calibrated using by feeding a Tx BFO signal (at 10.7MHz) into the receiver at an S9 level. It also changes the function of the RF Power/Proc controls to allow calibration of Tx power.

---

**CAL TCXO** (Default = 128; higher == frequency increase in Hz)  
Set: CXyyy; xxx = 0-255

Read: CX;  
Response: CXxxx;

---

**FULL BREAK-IN DELAY**

Set: DFxxx; xxx = 000-255 ms (000 and 001 both cause 1ms delay)

Read: DF;  
Response: DFxxx;

---

**MIC DOWN** (Same as pushing microphone Down button)

Set: DN;  
(No Read commands, no responses)

---

**DTR=PTT**

Set: DTx; x = 0: DTR does not trigger PTT  
x = 1: DTR triggers PTT

Read: DT;  
Response: DTx;

---

**FM DEVIATION**

Set: DVx; x = 0: +/-2.0kHz  
x = 1: +/-4.0kHz  
x = 2: +/-5.0kHz

Read: DV;  
Response: DVx;

**ENHANCED SSB** (Transmit filter set to 6kHz)

Set: ESx;           x = 0: ESSB Off  
                  x = 1: ESSB On

Read: ES;  
Response: ESx;

---

**VFO A**

Set: FAxxxxxxxxxxx;   xxxxxxxxxxx = Frequency in Hz (11 characters)

Read: FA;  
Response: FAxxxxxxxxxxx;

---

**VFO B**

Set: FBxxxxxxxxxxx;   xxxxxxxxxxx = Frequency in Hz (11 characters)

Read: FB;  
Response: FBxxxxxxxxxxx;

---

**FULL DUPLEX** (receiver not silenced during transmissions)

Set: FDx;           x = 0: Normal mode (Full Duplex off)  
                  x = 1: Full duplex on

Read: FD;  
Response: FDx;

---

**FARNSWORTH CW MODE**

Set: FNxx           xx = 00: Off  
                  xx = 01-05 - 5wpm spacing  
                  xx = 06-20 - 6-20wpm spacing

Read: FN;  
Response: FNxx;

---

**SELECT RECEIVE VFO** (also cancels full duplex)

Set: FRx;   x = 0: VFO A  
            x = 1: VFO B ( swaps A & B, but does not force split mode)  
            x = 2: Memory channel (performs M > A)

Read: FR;  
Response: FR0; (VFO A is always active)

---

**SELECT TRANSMIT VFO**

Set: FTx;           x = 0: VFO A  
                  x = 1: VFO B       (forces SPLIT mode)

Read: FT;  
Response: FTx;

**FINE STEP**

Set: FSx;            x = 0: Off            (turns on FAST mode)  
                         x = 1: On            (turns off FAST mode, default)

Read: FS;  
Response: FSx;

---

**FILTER WIDTH**

Set: FWxxxx;

Sienna returns/sets only the 9MHz filters unless extended mode ("SE1") is enabled.

In normal mode (default or "SE0"), The settings are as follows:

SSB/AM/FM: 0000 = 2.4kHz [SET slot 2, RSP if slot 2,3 or 4], 0001 = 6kHz [slot 1] (Note that in FM mode, the value is meaningless because fixed +/-10kHz FM filters are used, which do not occupy any "slots".)

CW/DIG: 04xx = 400Hz [slot 4], 1xxx = 1800Hz [slot 3], 2xxx = 2.4kHz [SET slot 2, RSP if slot 2 or 1]

Extended Sienna format:

SET/RSP fmt: kkMM, where kk is the desired slot of the 455kHz filter (0-3) and MM is the slot of the 9MHz filter (0-3)

Example: FW0100 selects slot 2 (01) of the 455 and slot 1 (00) of the 9M filters

"FW;" returns FW0100 if slot 2 of the 455 and slot 1 of the 9M filters are selected

Read: FW;  
Response: FWxxxx;

*Note: FW is maintained for compatibility with Kenwood radios. However, it is far easier to use the following two commands to select a slot for each IF. New implementations of rig control software should use FX and FY instead of FW. See IX and IY for information on what is installed in slots 1-4 for each IF.*

**FILTER WIDTH, 455kHz IF**

Set: FXx;            x = Slot number (1, 2, 3, 4)

Read: FX;

Response: FXx;

---

**FILTER WIDTH, 9MHz IF**

Set: FYx;            x = Slot number (1, 2, 3, 4)

Read: FY;

Response: FYx;

---

**AGC TIME CONSTANT**

Set: GTxxx;        xxx = 000: Auto  
                     xxx = 002: Fast  
                     xxx = 004: Slow  
                     xxx = 006: Off

Read: GT;

Response: GTxxx;

---

**RS232 HANDSHAKE**

Set: HSx;            x = 0: Off (RTS can be used as a key input)  
                     x = 1: CTS/RTS (Disables RTS as key input)

Read: HS;

Response: HSx;

---

**IDENTIFICATION**

Read: ID;

Response: ID710;        The Sienna ID is 710

---

**INFORMATION**

Read: IF;

Response: IFfffffffffheeeegiirx mmtMFs000 ;

where:        f = 11 characters of frequency in Hz  
              heeee = "        " [SE0 mode]  
              heeee = XIT offset in Hz (h = '+' or '-') [SE1 mode]  
              giiii = RIT offset in Hz (g = '+' or '-')  
              r = 0: RIT off; r = 1: RIT on  
              x = 0: XIT off; x = 1: XIT on  
              mm = current memory channel (1-85)  
              M = mode ( 1: LSB, 2: USB, 3: CWLSB,  
                      4: FM, 5: AM, 6: DIGLSB,  
                      7: CWUSB, 9: DIGUSB)  
              F = 0: VFO A; 1 = VFO B; 2 = MEM  
              s = 0: Scan off; 1 = Scan on  
              S = 0: Split off; 1 = Split on

Note: if RIT and XIT are both on, only RIT is returned in iiii

**FILTER INSTALLATION**

Set:

## ROOFING FILTER

IRx; x = 0: 70.000MHz, 1 = 70.455MHz

Note: The standard roofing filter is 20kHz, centered at 70.000MHz. The optional Inrad filter is 4.5kHz, centered at 70.455MHz.

## 455kHz FILTERS:

IXxbbb; b = 0,1,2,3,4,5,6,7,8,9,a,b,c,d (see below)

Params are in slot order, 1,2,3,4

x must be 0 or 1; other slots can be any value

## 9MHz FILTERS:

IYyccc; c = 0,1,2,3,4,5,6,7,8 (see below)

Params are in slot order, 1,2,3,4

y must be 0. Other slots can be any value

Params b and c represent bandwidths of available crystal and mechanical filters.

b: 0=20k, 1=5800, 2=2800, 3=2600, 4=2100, 5=2000, 6=1800, 7=1000  
8=500, 9=400, a=300, b=250, c=125, d=none

c: 0 = 6000, 1=2800, 2=2400, 3=2100, 4=1800, 5=1000, 6=400, 7=250,  
8 = none

Read: IR; or IX; or IY;

Response: IRx; or IXxbbb; or IYyccc

*Example:*

IR1;IX0268;IY0246 Means:

	Roofing filter = 70.455MHz	
	455kHz filters	9MHz filters
Slot 1:	20kHz	6000Hz
Slot 2:	2800Hz	2400Hz
Slot 3:	1800Hz	1800Hz
Slot 4:	Empty	400Hz

**IF SHIFT**

Set: ISpxxxx;     xxx = selected IF shift frequency in Hz  
                  p: If positive, can be + or ' ' (space), else '-'

SE0 mode: Shifts the selected 9MHz IF filter.

SE1 mode: Shifts the selected 455kHz IF filter.

Read: IS;

Response: ISpxxxx;

---

**KEYER MODE**

Set: KMx;           x = 0: Iambic A  
                      x = 1: Iambic B  
                      x = 2: Ultimatic

Read: KM;

Response: KMx;

Note: Iambic keying means that when both paddles are pressed, the output alternates between dits and dahs. Ultimatic keying means that when both paddles are pressed, the last one to be pressed takes over.

---

**KEYER SPEED**

Set: KSxxx;                 xxx = 005 to 065 (words per minute)

Read: KS;

Response: KSxxx;

Note: If a front panel is present, the value displayed in the "Speed" menu setting is the value set by the front panel control. When the KS command is issued, it assumes control of the speed until the speed control knob is changed, but the displayed value remains the same.

**CW KEYING**

Set: KY <24 chars>;

Read: KY;

Response: KYx;    x = 0: Keyer ready  
                  x = 1: Keyer not ready

You must wait until you read a “KY0;” response before sending a new buffer. There is a space after the KY in the set command. This space is not transmitted.

Note: Sienna’s 10 CW buffers are 12 chars long, so the message is placed in buffers 1 and 2 if it is longer than 12 characters, and they are concatenated. If the buffer is less than 12 characters OR greater than 12 but less than 24, use a ‘<’ to signify the end of the buffer, which allows trailing spaces (which will be transmitted) to be inserted. Leading spaces are ignored.

Note: Message buffer 1 can be enabled in a menu option to be displayed when power is first turned on. If this option is on, whatever message was last output to CW buffer 1 will be displayed. This allows you to use the KY command to initialize this turn-on display buffer.

Recognized punctuation:

? , . / - = + ( : ; ! @ ) \$ ' \_

Special standardized characters that can be used:

+ = AR (end of message)  
( = KN (invitation to transmit, only to station being worked)  
& = AS (wait)

The following are not defined by any standards but are allowed:

# = SK (end of work)  
% = SN (understood)  
\* = KA (starting signal)

---

**LICENSE CLASS (U.S. users only)**

Set: LCx;            x = 0: Extra (full U.S. privileges)  
                      x = 1: Advanced  
                      x = 2: General  
                      x = 3: Technician  
                      x = 4: Novice

Read: LC;

Response: LCx;

Note: For non-U.S. users, a different frequency table must be downloaded. Please contact DZKit for information on how to do this.



---

**FREQUENCY LOCK**

Set: LKx;            x = 0: Dial is not locked  
                      x = 1: Dial is locked

Read: LK;  
Response: LKx;

Note: Sienna's built-in timer is ignored when you issue a SET command, and the dial is locked or unlocked immediately.

---

**FREQUENCY LOCK TIMER** (time until dial locked if no commands received)

Set: LTx;            x = 0: Off  
                      x = 1: 10 sec  
                      x = 2: 30 sec  
                      x = 3: 60 sec

Read: LT;  
Response: LTx;

---

**MEMORY CHANNEL**

Set: MC xx;            xx = 01 to 85 (leading space must be present)  
Read: MC;  
Response: MC xx;

---

**MODE**

Set: MDx;            x = mode ( 1: LSB, 2: USB, 3: CWUSB,  
  4: FM, 5: AM, 6: DIGUSB,  
  7: CWLSB, 9: DIGLSB) [ 0, 8 not used ]

Read: MD;  
Response: MDx;

Note: If SPLIT \*is not\* enabled, this command returns or sets the RECEIVE \*and\* TRANSMIT modes. If SPLIT \*is\* enabled, the transmit mode is unaffected.

---

**MIC BIAS**

Set: MBx;            x = 0: Mic Bias off  
                      x = 1: Mic Bias on (9V)

Read: MB;  
Response: MBx;

---

**MIC GAIN**

Set: MGxxx;            xxx = 000 to 255  
Read: MG;  
Response: MGxxx;

**MEMORY READ (Read only)**

Read: MRxyy;           xx = ignored  
                          yy = Memory Channel (00-84)

Response: MRx yyfffffffffffm0000 ;  
                          note trailing space before ';' ;  
                          f = frequency in Hz  
                          m = mode (see MD command)

---

**MEMORY WRITE (Write only)**

Set: MWx yyfffffffffffm0000 ;

Same format as MR

Note: The memory function works differently than for the Kenwood TS-570. In the TS-570, writing and reading memory allow you to create and read start and stop numbers for the memory scanning function. In the Sienna, scans are handled separately by the SC, SI, SP, SS, ST and SV commands. The memory can be used simply to access common frequencies, or it can be used with the scanning function as start/stop numbers as well as allowing a start on one memory and a frequency increment instead of a stop number.

**NOISE BLANKER**

Set: NBx;            x = 0: NB off  
                      x = 1: NB on

Read: NB;  
Response: NBx;

---

**NOISE BLANKER THRESHOLD**

Set: NTxxx;        x = 000-255

Read: NT;  
Response: NTxxx;

---

**NOISE BLANKER PULSE WIDTH**

Set: NWx;            x = 0: 29us blanking time  
                      x = 1: 66us  
                      x = 2: 2ms

Read: NW;  
Response: NWx;

---

**PREAMPS**

Set: PAx;    x = 0: Preamp 1 and 2 off, SET does not affect attenuator  
                  x = 1: Preamp 1 on, SET turns off attenuator  
                  x = 2: Preamp 1 and 2 on, SET turns off attenuator

Read: PA;  
Response: PAx;

---

**RF POWER**

Set: PCxxx;        xxx = 000 to 100 Watts

Read: PC;  
Response: PCxxx;

---

Note: If the internal 100W amplifier is not installed, this value is limited to 12 Watts. Higher values will return an error.

---

**POWER SAVE DELAY TIMER**        (time to power-save mode  
  if no commands received)

Set: PD;            x = 0: Off  
                      x = 1: 15 min  
                      x = 2: 30 min  
                      x = 3: 60 min

Read: PD;  
Response: PDx;

**RF SPEECH PROCESSOR LEVEL**

Set: PLxxx;        xxx = 000 to 255

Read: PL;

Response: PLxxx;

---

**TURNON DISPLAY**

Set: PMx;        x = 0: no turnon message

                  x = 1: turnon message = CW Message buffer #1

Read: PM;

Response: PMx;

---

**RF SPEECH PROCESSOR/CW SPOT**

Set: PRx;        x = 0: Processor/CW Spot off

                  x = 1: Processor/CW Spot on

Read: PR;

Response: PRx;

---

Note: In CW mode, this command turns the SPOT function on or off. If SPOT is on, keying the rig outputs the Sidetone without transmitting.

---

**POWER SWITCH**

Set: PSx;        x = 0: Power Off

                  x = 1: Power On

This is actually a "Power Save" mode. When PS0 is received, the display is turned off, DDS chips are placed in a power-save mode, all relays are de-energized, speakers are disabled, and the PTT line is disabled to prevent accidental activation of the transmitter or amplifier. However, the PC, if present, is left on, and some other monitoring functions are also enabled. The fans also continue to run. This saves about 2 Amps of DC input current. Pressing any button on the front panel or sending the PS1 command reactivates the unit.

---

**CW PITCH**

Set: PTxx;        xx = 00 (400 Hz) to

                  xx = 12 (1000 Hz) (50 Hz steps)

Read: PT;

Response: PTxx;

---

Note: These are approximate numbers and should not be used for precise calculations. Sienna's pitch control actually has finer granularity than what is available through this command.

**TRANSMITTER/AMPLIFIER SELECTION**

Set: PWx;           x = 0: No transmitter or amplifier present  
                  x = 1: 10W transmitter only  
                  x = 2: 10W Tx, internal 100W amp  
                  x = 3: 10W Tx, internal 100W amp and external amp

Read: PW;  
Response: PWx;

**Notes:**

1. PW0 can be used even if the transmitter and amplifier are present and will disallow all attempts to transmit.
2. PW1 can be used even if the 100W amp is installed to limit power to 10W. In this state, the 10W transmitter is routed to the amplifier, but is switched directly to the amplifier's output filters.
3. PW3 instructs the unit to enable ALC input from an external amplifier.

---

**RF ATTENUATOR**

Set: RAXx;           xx = 00: off, SET does not affect preamps  
                  xx = 01: attenuator on, SET turns off preamps

Read: RA;  
Response: RAXx;

---

**RIT CLEAR**

Set: RC;   (resets only RIT to 0)  
(No Read or Response)

---

**RIT DOWN 10Hz**

Set: RD;  
(No Read or Response)

---

**FIRMWARE MAIN uP REVISION (Read Only)**

Read: RF;  
Response: RFx.yy.zz   Main uP firmware revision code, e.g. "A.01.21"

---

**RF GAIN**

Set: RGxxx;       xxx = 000 to 255 (higher number = more rf gain)  
Read: RG;  
Response: RGxxx;



---

**FIRMWARE KEYER uP REVISION (Read Only)**

Read: RK;

Response: RKx.yy.zz    Keyer firmware revision code, e.g. "A.01.00"

---

**PROGRAM MAIN uP (Set only)**

Set: RP;                (Jump to boot code; download expected)

(No Read or Response)

---

**RIT UP 10Hz**

Set: RU;

(No Read or Response)

---

**READ METER**Set: RMx;                x = 1: SWR (scale yyyy: 0000 = 1:1, 0008 = 5:1  
                          x = 2: COMP (scale yyyy: 0000 = 0dB, 0008 = 15dB)  
                          x = 3: ALC (scale yyyy: 0000 = 0V, 0008 = 4.1V)  
                          x = 4: VPA (scale yyyy: 0000 = 0V, 0200 = 20.0V)  
                          x = 5: IPA (scale yyyy: 0000 = 0A, 0030 = 30.0A)  
                          x = 6: IDV (scale yyyy: 0000 = 0A, 0030 = 3.0A)  
                          x = 7: FWD (scale yyyy: 0000 = 1.0:1, 0050 = 5.0:1)  
                          x = 8: REV (scale yyyy: 0000 = 1.0:1, 0050 = 5.0:1)

Read: RM;

Response: RMxyyyy;    yyyy = 0000 to 0200

---

**RIT**Set: RTx;                x = 0: RIT off  
                          x = 1: RIT on

Read: RT;

Response: RTx;

---

**RECEIVE MODE**

Set: RX;

Response: RX;

Note: This command releases the internal forced override of the transmit control line. If the mic PTT or CW key are on, the transmitter is still allowed to transmit.

**PASSIVE SIGNAL BOOST** (bypasses receive bandpass filters)

Set: SBx;           x = 0: PSB off  
                  x = 1: PSB on

Read: SB;  
Response: SBx;

---

**SCAN**

Set: SCx;           x = 0: Scan off  
                  x = 1: Scan on

Read: SC;  
Response: SCx;

---

**SCAN INCREMENT**

Set: SIx;           x = 0: Next memory channel  
                  x = 1: 10Hz  
                  x = 2: 100Hz  
                  x = 3: 1kHz  
                  x = 4: 10kHz  
                  x = 5: 15kHz  
                  x = 6: 20kHz  
                  x = 7: 25kHz

Read: SI;  
Response: SIx;

---

**SEMI BREAK-IN DELAY TIME**

Set: SDxxxx;           xxxx = 0001 to 2550 ms (2.55 seconds)  
Read: SD;  
Response: SDxxxx;

---

**SIENNA EXTENDED COMMAND MODE**

Set: SEn;            n = 0: Off (default)  
                  n = 1: On

Read: SE;  
Response: SEn;

---

**TRANSMIT MODE**

Set: TX;  
Response: TX;

Note: This command forces the PTT and key lines to be overridden internally, turning on the transmitter.

**S-METER READING**

Read: SM;

Response: SMxxxx;      xxx = 0000 to 0015

Note: Relative values. 0008 = S9, 0015 = 60dB over S9

---

**SCAN STOP FREQUENCY**

Set: SPxx;      x = 00-84 (memory number)

Read: SP;

Response: SPxx;

---

**FM SQUELCH LEVEL**

Set: SQxxx;      xxx = 000 to 255

Read: SQ;

Response: SQxxx;

---

**SCAN START FREQUENCY**

Set: SSxx;      x = 00-84 (memory number)

Read: SS;

Response: SSxx;

---

**SCAN DWELL TIME**

Set: STx;      x = 0: 100 ms

x = 1: 250 ms

x = 2: 500 ms

x = 3: 1 sec

x = 4: 5 sec

Read: ST;

Response: STx;

---

**SCAN TRIP LEVEL**

Set: SVx;      x = 0: S5

x = 1: S6

x = 2: S7

x = 3: S8

x = 4: S9

Read: SV;

Response: SVx;



---

**TUNER CAPACITANCE (Read only)**

Read: TC;

Response: TCsxxxx;     s = 0: Tx side  
                              s = 1: Antenna side  
                              xxxx = 0000 to 9999 pF

---

**TUNER FORCE RETUNE ON CURRENT MEMORY**Set: TFx;             x = 0: Off  
                          x = 1: Retune

(No Responses)

---

**TUNER INDUCTANCE (Read only)**

Read: TL;

Response: TLxxxx;     xxxx = 0000 to 9999 nH

---

**TUNER MEMORY CLEAR**Set: TMx;             x = 0: Off  
                          x = 1: Clear Tuner Memory

(No Responses)

---

**PTT-RF DELAY     (time from PTT to RF out)**

Set: TRxxx;           xxx = 000 to 255 ms

Read: TR;

Response: TRxxx;

---

**MIC UP**

Set: UP;             Same as pushing microphone Up button

(No responses)

---

**ANTIVOX GAIN**

Set: VAxxx;           xxx = 001 to 255

Read: VA;

Response: VAxxx;

---

**VOX DELAY TIME**

Set: VDxxxx;           xxxx = 0001 to 2550 ms (2.55 seconds)

Read: VD;

Response: VDxxxx;

---

**VOX GAIN**

Set: VGxxx;           xxx = 000 to 255

Read: VG;

Response: VGxxx;

**VOX FUNCTION**

Set: VXx;                    x = 0 = PTT PHONE, NORMAL CW  
                                  x = 1 = VOX PHONE, NORMAL CW  
                                  x = 2 = PTT PHONE, CWPTT  
                                  x = 3 = VOX PHONE, CWPTT

Read: VX;

Response: VXx;

Note: CWPTT means that in addition to an input from the key, the PTT line must be activated before CW transmission can occur.

---

**XIT**

Set: XTx;                    x = 0: XIT off  
                                  x = 1: XIT on

Read: XT;

Response: XTx;

---

**XIT CLEAR**

Set: XC;    (resets only XIT to 0)  
(No Read or Response)

---

**XIT DOWN 10Hz**

Set: XD;  
(No Read or Response)

---

**XIT UP 10Hz**

Set: XU;

(No Read or Response)

---

**TRANSVERTER DISPLAY – Changes first 3 digits of VFOA frequency**

Set: XVxx;    xx = 00: off   01: 50   02: 52   03: 54   04: 144   05: 146  
                                  06: 222   07: 224   08: 420   09: 422   10: 424   11: 426  
                                  12: 428   13: 430   14: 432   15: 434   16: 436   17: 438  
                                  18: 440   19: 442   20: 444   21: 446   22: 448

Read: XV;

Response: XVxx;

Note: VFO A Frequency must be between 28MHz and 30MHz.



## RS-232 COMMAND QUICK REFERENCE

### RECEIVER-SPECIFIC COMMANDS

AG AUDIO GAIN  
AH HEADPHONE GAIN  
AR RECEIVE ANTENNA  
FW FILTER WIDTH  
FX 455kHz FILTER SLOT  
FY 9MHz FILTER SLOT  
GT AGC TIME CONSTANT  
IS IF SHIFT  
NB NOISE BLANKER ON/OFF  
NT NOISE BLANKER THRESHOLD  
NW NOISE BLANKER PULSE WIDTH  
PA PREAMPS  
RA RF ATTENUATOR  
RC RIT CLEAR  
RD RIT DOWN 10 HZ  
RG RF GAIN  
RT RIT ON/OFF  
RU RIT UP 10 HZ  
SB PASSIVE SIGNAL BOOST™  
SM S-METER  
SQ FM SQUELCH LEVEL

### TRANSMITTER-SPECIFIC COMMANDS

AL TXALC  
AT TX AUDIO (MIC/LINE)  
DF FULL BREAK-IN DELAY  
DV FM DEVIATION  
ES ENHANCED SSB TRANSMISSION  
FN FARNSWORTH CW MODE  
KM KEYSER MODE  
KS KEYSER SPEED  
KY CW KEYING  
LC LICENSE CLASS  
MB MIC BIAS  
MG MIC GAIN  
PC TRANSMITTER RF POWER CONTROL  
PL RF SPEECH PROCESSOR LEVEL  
PR RF SPEECH PROCESSOR/CW SPOT  
PT CW PITCH  
PW POWER SELECTOR (TX/AMP/EXT)  
SD SEMI BREAK-IN DELAY



TR PTT-RF DELAY  
VA ANTIVOX GAIN  
VD VOX DELAY TIME  
VG VOX GAIN  
VX VOX FUNCTION  
XC XIT CLEAR  
XD XIT DN 10 HZ  
XT XIT ON/OFF  
XU XIT UP 10 HZ

#### **ANTENNA TUNER COMMANDS**

AC ANTENNA TUNER CONTROL  
TC TUNER CAPACITANCE  
TF TUNER FORCE RETUNE  
TL TUNER INDUCTANCE  
TM TUNER MEMORY CLEAR

#### **TRANSCEIVER COMMANDS**

AN ANTENNA NUMBER  
AP PC AUDIO  
DN MIC DOWN  
FA VFO A FREQUENCY  
FB VFO B FREQUENCY  
FD FULL DUPLEX  
FT TRANSMIT  
FR RECEIVE  
FS FINE FREQUENCY TUNING STEP  
LK FREQUENCY LOCK  
LT FREQUENCY LOCK TIMER  
MD MODE  
PD POWER SAVE DELAY TIMER  
PS POWER SWITCH  
RM READ METER  
RX RECEIVE  
TX TRANSMIT  
UP MIC UP  
XV TRANSVERTER FREQUENCY PREFIX

#### **MEMORY AND SCANNING COMMANDS**

MC MEMORY CHANNEL  
MR MEMORY READ  
MW MEMORY WRITE  
SC SCAN ON/OFF  
SI SCAN INCREMENT



SP SCAN STOP MEMORY NUMBER  
SS SCAN START MEMORY NUMBER  
ST SCAN DWELL TIME  
SV SCAN TRIP VALUE

**CALIBRATION COMMANDS**

CA CAL AGC-AM  
CB CAL AGC-SSB/CW  
CF CAL FM/TEST RX  
CL CAL TX IF SHIFT FOR LSB  
CR CAL RF GAIN  
CS CAL S-METER and RF POWER  
CT CAL TX BANDWIDTH  
CU CAL TX IF SHIFT FOR USB  
CX CAL TCXO

**INFORMATION COMMANDS**

ID IDENTIFICATION  
IF INFORMATION  
PM POWER-ON MESSAGE  
RF FIRMWARE REVISION—MAIN uP  
RK FIRMWARE REVISION—KEYER uP

**SETUP COMMANDS**

BR BAUD RATE  
DT DTR=PTT  
HS RS232 HANDSHAKE  
IR ROOFING FILTER INSTALL  
IX 455kHz FILTER INSTALL  
IY 9MHz FILTER INSTALL  
RP PROGRAM MAIN uP  
SE SIENNA EXTENDED MODE

**ALPHABETICAL COMMAND LIST**

AC ANTENNA TUNER CONTROL  
AG AUDIO GAIN-SPKR  
AH AUDIO GAIN-HEADPHONES  
AL TXALC  
AN ANTENNA NUMBER  
AP PC AUDIO  
AR RECEIVE ANTENNA  
AT TX AUDIO  
BR BAUD RATE  
CA CAL AGC AM  
CB CAL AGC SSB/CW  
CF CAL FM  
CL CAL LSB TX IF SHIFT  
CR CAL RF GAIN  
CS CAL S-METER and RF POWER  
CT CAL TX BANDWIDTH  
CU CAL USB TX IF SHIFT  
CX CAL TCXO  
DF FULL BREAK-IN DELAY  
DN MIC DOWN  
DT DTR=PTT  
DV FM DEVIATION  
ES ENHANCED SSB TRANSMISSION  
FA VFO A FREQUENCY  
FB VFO B FREQUENCY  
FD FULL DUPLEX  
FN FARNSWORTH CW MODE  
FR RECEIVE  
FS FINE FREQUENCY TUNING STEP  
FT TRANSMIT  
FW FILTER WIDTH  
FX 455kHz SLOT SELECTION  
FY 9MHz SLOT SELECTION  
GT AGC TIME CONSTANT  
HS RS232 HANDSHAKE  
ID IDENTIFICATION  
IF INFORMATION



IR	ROOFING FILTER INSTALL	RK	FIRMWARE REVISION—KEYER uP
IS	IF SHIFT (RECEIVER)	RM	READ METER
IX	455KHZ FILTER INSTALL	RP	PROGRAM MAIN uP
IY	9MHZ FILTER INSTALL	RT	RIT ON/OFF
KM	KEYER MODE	RU	RIT UP 10 HZ
KS	KEYER SPEED	RX	RECEIVE MODE
KY	CW KEYING	SB	PASSIVE SIGNAL BOOST™
LC	LICENSE CLASS	SC	SCAN ON/OFF
LK	FREQUENCY LOCK	SI	SCAN INCREMENT
LT	FREQUENCY LOCK TIMER	SD	SEMI BREAK-IN DELAY
MB	MIC BIAS ON/OFF	SE	SIENNA EXTENDED MODE
MC	MEMORY CHANNEL	SM	S-METER
MD	MODE	SP	SCAN STOP MEMORY NUMBER
MG	MIC GAIN	SQ	FM SQUELCH LEVEL
MR	MEMORY READ	SS	SCAN START MEMORY NUMBER
MW	MEMORY WRITE	ST	SCAN DWELL TIME
NB	NOISE BLANKER ON/OFF	SV	SCAN TRIP VALUE
NT	NOISE BLANKER THRESHOLD	TC	TUNER CAPACITANCE
NW	NOISE BLANKER PULSE WIDTH	TF	TUNER FORCE RETUNE
PA	PREAMPS	TL	TUNER INDUCTANCE
PC	RF POWER CONTROL	TM	TUNER MEMORY CLEAR
PD	POWER SAVE DELAY TIMER	TR	PTT-RF DELAY
PL	RF SPEECH PROCESSOR LEVEL	TX	TRANSMIT
PM	POWER-ON MESSAGE	UP	MIC UP
PR	RF SPEECH PROC/CW SPOT	VA	ANTIVOX GAIN
PS	POWER SWITCH	VD	VOX DELAY TIME
PT	CW PITCH	VG	VOX GAIN
PW	POWER SELECT (TX/AMP/EXT)	VX	VOX FUNCTION
RA	RF ATTENUATOR	XC	XIT CLEAR
RC	RIT CLEAR	XD	XIT DOWN 10 HZ
RD	RIT DOWN 10 HZ	XT	XIT ON/OFF
RF	FIRMWARE REVISION—MAIN uP	XU	XIT UP 10 HZ
RG	RF GAIN	XV	TRANSVERTER FREQUENCY PREFIX