

PowerSDR™ 2.x CAT Command Reference Guide

Developed and Maintained by: BobT – K5KDN

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General Information

A CAT command consists of a prefix, a parameter list, and a terminator. Commands fall into one of three categories: **Get** (read) commands that request status information from the transceiver; **Set** (write) commands that change transceiver status; and **Answer** (response) commands that return information requested in a Get command or error codes. A correctly executed Set command does not return an Answer command.

The terminator for all CAT commands is the semicolon (;). CAT commands are not case sensitive. Get and Set commands must contain the correct number of parameter characters as shown in the accompanying tables. Most Get commands are simply the prefix followed by a termination, but there are special cases where a Get command will require parameters.

Verbose Error Messages

ZZEM1; enables verbose error messages, otherwise the standard Kenwood “?;” will be returned on an error. With verbose messaging enabled, the following errors are returned in the format: ZZEM:the command sent:error message;;

Prefix Length Error
Inactive Command
Unknown Command
Undefined Command Error
Illegal Suffix Format
Suffix Length Error
Feature Not Available
Form Must Be Open
Value Out of Bounds

Examples are:

ZZEM:AG:Suffix Length Error; AG s/b AG0; or AG0000 – AG0100;
ZZEM:ZZXX:Unknown Command ZZXX is not a valid CAT command.
ZZEM:ZZRS:Feature Not Available RX2 is not available

Verbose error messaging was developed to assist third party developers when troubleshooting, it is not advisable to enable it unless you know what you are doing.

FlexRadio PowerSDR Commands by Functional Group

RECEIVE AUDIO PROCESSING AND CONTROL

<u>ZZAG</u>	Sets or reads the Audio Gain	<u>AG</u>
<u>ZZBI</u>	Sets or reads the Binaural (BIN) status	
<u>ZZEA</u>	Sets or reads the RX EQ values	
<u>ZZER</u>	Sets or reads the RX EQ status	
<u>ZZLA</u>	Sets or reads the Main RX Gain (MultiRX Group)	
<u>ZZLB</u>	Sets or reads the Main RX Stereo Balance (MultiRX Group)	
<u>ZZLE</u>	Sets or reads the RX2 Gain (Flex5000 w/RX2 only)	
<u>ZZLF</u>	Sets or reads the RX2 Stereo Balance (Flex5000 w/RX2 only)	
<u>ZZLG</u>	Sets or reads the AutoMuteRX1onVFOBTX checkbox (F5K only)	
<u>ZZLH</u>	Sets or reads the AutoMuteRX2onVFOATX checkbox (F5K/RX2 only)	
<u>ZZMA</u>	Sets or reads the RX1 Mute (MUT) status	
<u>ZZMB</u>	Sets or reads the RX2 Mute status	
<u>ZZMO</u>	Sets or reads the Monitor (MON) status	<u>MO</u>

RECEIVE RF PROCESSING AND CONTROL

<u>ZZAR</u>	Sets or reads the RX1 AGC-T	
<u>ZZAS</u>	Sets or reads the RX2 AGC-T	
<u>ZZGT</u>	Sets or reads the AGC Mode Selector	
<u>ZZPA</u>	Sets or reads the Preamp Gain setting	
<u>ZZPB</u>	Sets or reads the RX2 Preamp status	
<u>ZZSO</u>	Sets or reads the RX1 Squelch on/off status	
<u>ZZSQ</u>	Sets or reads the RX1 Squelch level	<u>SQ</u>
<u>ZZSV</u>	Sets or reads the RX2 Squelch button	
<u>ZZSX</u>	Sets or reads the RX2 Squelch Threshold	

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VFO CONTROL

<u>ZZAC</u>	Sets or reads the Tune Step	
<u>ZZAD</u>	Moves VFO A down by a selected step	
<u>ZZAU</u>	Moves VFO A up by a selected step	
<u>ZZBM</u>	Moves VFO B down by a selected step	
<u>ZZBP</u>	Moves VFO B up by a selected step	
<u>ZZFA</u>	Sets or reads VFO A frequency	<u>FA</u>
<u>ZZFB</u>	Sets or reads VFO B frequency	<u>FB</u>
<u>ZZQM</u>	Reads the Quick Save Memory value	
<u>ZZQR</u>	Restores the Quick Save Memory value	
<u>ZZQS</u>	Saves Frequency A, Mode, and Band to Quick Memory	<u>QI</u>
<u>ZZRC</u>	Clears the RIT frequency	<u>RC</u>
<u>ZZRD</u>	Decrements the RIT frequency	<u>RD</u>
<u>ZZRF</u>	Sets or reads the RIT frequency	
<u>ZZRT</u>	Sets or reads the RIT button status	<u>RT</u>
<u>ZZRU</u>	Increments the RIT frequency	<u>RU</u>
<u>ZZSA</u>	Moves VFO A down one Tune Step	<u>DN</u>
<u>ZZSB</u>	Moves VFO A up one Tune Step	<u>UP</u>
<u>ZZSD</u>	Decrements the Tune Step	
<u>ZZSG</u>	Moves VFO B down one Tune Step	
<u>ZZSH</u>	Moves VFO B up one Tune Step	
<u>ZZSP</u>	Sets or reads the VFO Split button status	<u>FT</u>
<u>ZZST</u>	Reads the frequency step size (Deprecated)	
<u>ZZSU</u>	Increments the Tune Step	
<u>ZZSW</u>	Sets or reads VFO A TX/VFO B TX buttons	
<u>ZZSY</u>	Sets or reads the VFO Sync Button	
<u>ZZSZ</u>	Syncs VFO A or B to the current Tune Step	
<u>ZZTV</u>	Sets or reads the TX VFO frequency when RX2 enabled	
<u>ZZVL</u>	Sets or reads the VFO Lock status	
<u>ZZVS</u>	Sets the VFO Swap status	
<u>ZZXC</u>	Clears the XIT frequency	
<u>ZZXF</u>	Sets or reads the XIT frequency	
<u>ZZXS</u>	Sets or reads the XIT button status	
<u>ZZZB</u>	Sets the Zero Beat button	

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NOISE REJECTION

<u>ZZBR</u>	Sets or reads the BCI Rejection button	
<u>ZZNA</u>	Sets or reads RX1 Noise Blanker 1 (NB) status	<u>NB</u>
<u>ZZNB</u>	Sets or reads RX1 Noise Blanker 2 (NB2) status	
<u>ZZNC</u>	Sets or reads RX2 Noise Blanker 1 status	
<u>ZZND</u>	Sets or reads RX2 Noise Blanker 2 status	
<u>ZZNL</u>	Sets or reads Noise Blanker 1 threshold	
<u>ZZNM</u>	Sets or reads the Noise Blanker 2 threshold	
<u>ZZNR</u>	Sets or reads the Noise Reduction (NR) status	
<u>ZZNT</u>	Sets or reads the Auto Notch Filter (ANF) status	<u>NT</u>
<u>ZZSR</u>	Sets or reads the Spur Reduction (SR) status	

DSP RECEIVE FILTERS

<u>ZZFH</u>	Sets or reads the DSP High Filter	
<u>ZZFI</u>	Sets or reads the current RX1 DSP receive filter	
<u>ZZFJ</u>	Sets or reads the current RX2 DSP receive filter	
<u>ZZFL</u>	Sets or reads the DSP Low Filter	
<u>ZZHA</u>	Sets or reads the Audio Filter Size	
<u>ZZHR</u>	Sets or reads the DSP RX Filter Phone Size	
<u>ZZHU</u>	Sets or reads the DSP RX Filter CW Size	
<u>ZZHW</u>	Sets or reads the DSP RX Filter Digital Size	
<u>ZZIS</u>	Sets or reads the variable filter width slider	
<u>ZZIT</u>	Sets or reads the variable filter shift slider	
<u>ZZIU</u>	Resets the variable filter shift slider	
<u>ZZMN</u>	Sets or reads the DSP filter names and values	
<u>ZZSF</u>	Sets the variable filter width and center frequency	

MODULATION/DETECTION MODES

<u>ZZMD</u>	Sets or reads the current RX1 mode	<u>MD</u>
<u>ZZME</u>	Sets or reads the current RX2 mode	
<u>ZZML</u>	Returns a list of DSP modes and indexes	

BAND SWITCHING

<u>ZZBA</u>	Moves the RX2 bandswitch down one band	
<u>ZZBB</u>	Moves the RX2 bandswitch up one band	
<u>ZZBD</u>	Moves the RX1 bandswitch down one band	<u>BD</u>
<u>ZZBG</u>	Sets or reads the Band Group (HF/VHF)	
<u>ZZBS</u>	Sets or reads the RX1 Bandswitch	
<u>ZZBT</u>	Sets or reads the RX2 Bandswitch	
<u>ZZBU</u>	Moves the RX1 bandswitch up one band	<u>BU</u>
<u>ZZUA</u>	Reads the XVTR Band Button Names	

DISPLAY FUNCTIONS

[ZZCF](#) Sets or reads the Show CW TX Filter checkbox
[ZZCU](#) Reads the CPU usage
[ZZDA](#) Sets or reads the Display Average (AVG) status
[ZZDM](#) Sets or reads the Display Mode
[ZZDN](#) Sets or reads the Waterfall Lo Value
[ZZDO](#) Sets or reads the Waterfall Hi Value
[ZZDP](#) Sets or reads the Spectrum Grid Max Value
[ZZPQ](#) Sets or reads the Spectrum Grid Min Value
[ZZPR](#) Sets or reads the Spectrum Grid Step Value
[ZZPD](#) Sets the Display Pan Center button
[ZZPE](#) Sets or reads the Display Pan Position
[ZZPO](#) Sets or reads the Display Peak button
[ZZPY](#) Sets or reads the Display Zoom slider
[ZZPZ](#) Sets or reads the Display Zoom buttons
[ZZTF](#) Sets or reads the Show TX Filter checkbox

METERING

[ZZMR](#) Sets or reads the RX Meter mode
[ZZMT](#) Sets or reads the TX Meter mode
[ZZRM](#) Reads the RX Meter value
[ZZSM](#) Reads the S Meter [SM](#)

TRANSMIT AUDIO PROCESSING AND CONTROL

[ZZCP](#) Sets or reads the Comander (CPDR) status
[ZZCT](#) Sets or reads the Comander threshold
[ZZDX](#) Sets or reads the Phone DX button status
[ZZDY](#) Sets or reads the Phone DX Level
[ZZEB](#) Sets or reads the TX EQ values
[ZZET](#) Sets or reads the TX EQ button status
[ZZGE](#) Sets or reads the Noise Gate button status
[ZZGL](#) Sets or reads the Noise Gate threshold
[ZZHT](#) Sets or reads the DSP TX Filter Phone Size
[ZZHV](#) Sets or reads the DSP TX Filter CW Size
[ZZHX](#) Sets or reads the DSP TX Filter Digital Size
[ZZMG](#) Sets or reads the Mic Gain
~~[ZZPK](#) Sets or reads the Compressor (COMP) status~~ ————— Obsolete 2/15/2008
~~[ZZPL](#) Sets or reads the Compressor (COMP) threshold~~ ————— Obsolete 2/15/2008
[ZZTH](#) Sets or reads the TX Filter High setting
[ZZTI](#) Transmit Inhibit
[ZZTL](#) Sets or reads the TX Filter Low setting
[ZZTM](#) Sets or reads the TX AF Monitor
[ZZTO](#) Sets or reads the TUN Power Level
[ZZTP](#) Sets or reads the Transmit Profile

[ZZTU](#) Sets or reads the Tune (TUN) status

[ZZTX](#) Sets or reads the MOX button status

[RX/TX](#)

[ZZVA](#) Sets or reads the VAC button status

[ZZVE](#) Sets or reads the VOX button status

[ZZVG](#) Sets or reads the VOX gain

CW

[ZZCB](#) Sets or reads the Break-In checkbox status

[ZZCD](#) Sets or reads the Break-In Delay value

[ZZCI](#) Sets or reads the CW Iambic checkbox status

[ZZCL](#) Sets or reads the CW Pitch

[ZZCM](#) Sets or reads the CW Monitor checkbox status

[ZZCS](#) Sets or reads the CW Speed

[ZZKM](#) Sends a CWX macro

[ZZKO](#) Opens or closes the CWX form

[ZZKS](#) Sets or reads CWX CW speed

[KS](#)

[ZZKY](#) Sends text to CWX for conversion to Morse

[KY](#)

[ZZSS](#) Stops CWX sending (immediate)

CAT SPECIFIC

[ZZAI](#) Reads or sets the Auto Information function

[AI](#)

[ZZEM](#) Enables/Disables CAT verbose error messages

[ZZFM](#) Reads the FlexRadio Model Number

[ZZID](#) Sets or reads the transceiver ID number

[ZZIF](#) Reads the transceiver status word

[IF](#)

[ZZSN](#) Reads the radio serial number

[ZZVN](#) Reads the PowerSDR software version number

SUBRECEIVER

[ZZLC](#) Sets or reads RX1 (subreceiver) Gain

[ZZLD](#) Sets or reads RX1 (subreceiver) Stereo Balance

[ZZMS](#) Sets or reads the MultiRX Swap checkbox

[ZZMU](#) Sets or reads the MultiRX button status

MISCELLANEOUS

[ZZBY](#) Closes the console

[ZZDE](#) Sets or reads the Diversity Form Enable button

[ZZDF](#) Opens or closes the Diversity Form

[ZZDU](#) Status Word

[ZZFV](#) Reads FlexWire single byte data

[ZZFW](#) Reads FlexWire double byte data

[ZZFX](#) Sends FlexWire single data byte command

[ZZFY](#) Sends FlexWire double data byte command

[ZZIO](#) Reads the transceiver installed options

[ZZPC](#) Sets or reads the Drive Level
[ZZPS](#) Sets or reads the Start button status
[ZZRS](#) Sets or reads the RX2 button status
[ZZRV](#) Reads the primary input voltage
[ZZTS](#) Reads the Flex5000 Temperature Sensor
[ZZXT](#) Sets or reads the X2TR button status

[PC](#)

DIGITAL MODES

[ZZOL](#) Sets or reads the DigL Click Tune Offset
[ZZOU](#) Sets or reads the DigU Click Tune Offset
[ZZRA](#) Sets or reads the RTTY Offset Enable VFO A
[ZZRB](#) Sets or reads the RTTY Offset Enable VFO B
[ZZRH](#) Sets or reads the RTTY DIGH Offset Frequency
[ZZRL](#) Sets or reads the RTTY DIGL Offset Frequency

ANTENNAS

[ZZOA](#) Sets or reads the antenna connected to RX1
[ZZOB](#) Sets or reads the antenna connected to RX2
[ZZOC](#) Sets or reads the antenna connected to the transmitter
[ZZOD](#) Sets or reads the Antenna Mode (Simple/Complex)
[ZZOE](#) Sets or reads the RX1 Loop
[ZZOF](#) Sets or reads the RCA TX relay jacks
[ZZOG](#) Sets or reads the TX relay enables
[ZZOH](#) Sets or reads the TX relay delays
[ZZOJ](#) Sets or reads the Antenna Lock Checkbox
[ZZOV](#) Sets or reads the ATU Enable Button
[ZZOW](#) Sets or reads the ATU Bypass Button

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MIXER CONTROLS

[ZZWA](#) Sets or reads the F5K Mixer Mic Level
[ZZWB](#) Sets or reads the F5K Mixer Line In RCA Level
[ZZWC](#) Sets or reads the F5K Mixer Line In Phono Level
[ZZWD](#) Sets or reads the F5K Mixer Line In DB9 Level
[ZZWE](#) Sets or reads the F1500/F5K Mixer Mic Select Checkbox
[ZZWF](#) Sets or reads the F5K Mixer Line In RCA Select Checkbox
[ZZWG](#) Sets or reads the F5K Mixer Line In Phono Select Checkbox
[ZZWH](#) Sets or reads the F1500/F5K Mixer FlexWire/Line In DB9 Select Checkbox
[ZZWJ](#) Sets or reads the F1500/F5K Mixer Input Mute All Button
[ZZWK](#) Sets or reads the F5000C Mixer Internal Speaker Level
[ZZWL](#) Sets or reads the F5K Mixer External Speaker Level
[ZZWM](#) Sets or reads the F5K Mixer Headphone Level
[ZZWN](#) Sets or reads the F5K Mixer Line Out RCA Level
[ZZWO](#) Sets or reads the F5K Mixer Internal Speaker Select Checkbox
[ZZWP](#) Sets or reads the F5K Mixer External Speaker Select Checkbox
[ZZWQ](#) Sets or reads the F1500/F5K Mixer Headphone Select Checkbox
[ZZWR](#) Sets or reads the F1500/F5K Mixer FlexWire/Line Out RCA Select Checkbox
[ZZWS](#) Sets or reads the F1500/F5K Mixer Output Mute All Button
[ZZWT](#) Sets or reads the F1500 Mixer Mic Level
[ZZWU](#) Sets or reads the F1500 Mixer FlexWire Input Level
[ZZWV](#) Sets or reads the F1500 Mixer Phones Output Level
[ZZWW](#) Sets or reads the F1500 Mixer FlexWire Output Level

FM/REPEATER CONTROLS

[ZZFD](#) Sets or reads the FM Deviation Button
[ZZOS](#) Sets or reads the Repeater Offset Direction [OS](#)
[ZZOT](#) Sets or reads the Repeater Offset Frequency [OF](#)
[ZZTA](#) Sets or reads the CTCSS Enable Button [CT](#)
[ZZTB](#) Sets or reads the CTCSS Frequency [CN](#)
[ZZMV](#) Reads the number of memory channels
[ZZMW](#) Deletes a memory channel
[ZZMX](#) Restores a memory channel
[ZZMY](#) Save configuration to a new memory channel
[ZZMZ](#) Save configuration to an existing memory channel
[ZZYC](#) Sets or reads the FM Mic Gain

VAC CONTROLS

- [ZZVA](#) Sets or reads the VAC1 Enable Checkbox
- [ZZVB](#) Sets or reads the VAC1 RX Gain
- [ZZVC](#) Sets or reads the VAC1 TX Gain
- [ZZVD](#) Sets or reads the VAC1 Sample Rate
- [ZZVF](#) Sets or reads the VAC1 Stereo Checkbox
- [ZZVH](#) Sets or reads the I/Q to VAC1 Checkbox
- [ZZVI](#) Sets or reads the VAC1 Input Cable
- [ZZVJ](#) Sets or reads the I/Q to VAC1 use RX2 Checkbox
- [ZZVM](#) Sets or reads the VAC1 Driver
- [ZZVO](#) Sets or reads the VAC1 Output Cable
- [ZZVP](#) Sets or reads the VAC1 IQ Calibrate Checkbox
- [ZZVK](#) Sets or reads the VAC2 Enable Checkbox
- [ZZVQ](#) Sets or reads the VAC2 Driver
- [ZZVR](#) Sets or reads the VAC2 Input Cable
- [ZZVT](#) Sets or reads the VAC2 Output Cable
- [ZZVU](#) Sets or reads the VAC2 Sample Rate
- [ZZVV](#) Sets or reads the VAC2 Stereo Checkbox
- [ZZVW](#) Sets or reads the VAC2 RX Gain
- [ZZVX](#) Sets or reads the VAC2 TX Gain
- [ZZVY](#) Sets or reads the VAC1 Buffer Size
- [ZZVZ](#) Sets or reads the VAC2 Buffer Size
- [ZZYA](#) Sets or reads the VAC2 Direct IQ Enable Checkbox
- [ZZYB](#) Sets or reads the VAC2 IQ Calibrate Checkbox

FlexRadio PowerSDR 2.x CAT Command Syntax

ZZAx Commands

ZZAC Command

ZZAC Sets or reads the Step Size (replaces ZZST)									
Get	ZZAC	;							
Set	ZZAC	P1	P1	;					
Answer	ZZAC	P1	P1	;					
Notes	P1 = 00 to 14. 00 = 1 Hz 01 = 10 Hz 02 = 50 Hz 03 = 100 Hz 04 = 250 Hz 05 = 500 Hz 06 = 1 KHz 07 = 5 KHz 08 = 9 KHz 09 = 10 KHz 10 = 100 KHz 11 = 250 KHz 12 = 500 KHz 13 = 1 MHz 14 = 10 MHz If the Step Size is set to 50 Hz, ZZAC; will return ZZAC02; If you send ZZAC03; , the Step Size will be set to 100 Hz.								

ZZAD Command

ZZAD Moves VFO A Down By The Selected Step									
Set	ZZAD	P1	P1	;					
Notes	ZZAC is write-only P1 = 00 to 14. See ZZAC for parameter list. ZZAD does not change the Step Size.								

ZZAG Command

ZZAG Sets or reads the Audio Gain control										
Get	ZZAG	;								
Set	ZZAG	P1	P1	P1	;					
Answer	ZZAG	P1	P1	P1	;					
Notes	P1 = 000 to 100.									

ZZAI Command

ZZAI Sets or reads the Auto Information function										
Get	ZZAI	;								
Set	ZZAI	P1	;							
Answer	ZZAI	P1	:							
Notes	P1 = 0 for Off, 1 or more for On. When On, the radio will broadcast the VFO (A or B) frequency when changed. Option checkbox on the Setup/CAT tab must be checked to allow this command.									

ZZAR Command

ZZAR Sets or reads the RX1 AGC Threshold control										
Get	ZZAR	;								
Set	ZZAR	P1	P1	P1	P1	;				
Answer	ZZAR	P1	P1	P1	P1	;				
Notes	P1 = -20 to +120 (Must have + or – sign).									

ZZAS Command

ZZAS Sets or reads the RX2 AGC Threshold control										
Get	ZZAS	;								
Set	ZZAS	P1	P1	P1	P1	;				
Answer	ZZAS	P1	P1	P1	P1	;				
Notes	P1 = -20 to +120 (Must have + or – sign).									

ZZAU Command

ZZAU Moves VFO A Up By The Selected Step										
Set	ZZAU	P1	P1	;						
Notes	ZZAU is write-only P1 = 00 to 14. See ZZAC for parameter list. ZZAU does not change the Step Size.									

ZZBx Commands

ZZBA Command

ZZBA Moves the RX2 band switch down one band										
Set	ZZBA	;								
Notes	ZZBA is write-only									

ZZBB Command

ZZBB Moves the RX2 band switch down one band										
Set	ZZBB	;								
Notes	ZZBB is write-only									

ZZBD Command

ZZBD Moves the RX1 band switch down one band										
Set	ZZBD	;								
Notes	ZZBD is write-only									

ZZBG Command

ZZBG Sets or reads the Band Group (HF/VHF)										
Get	ZZBG	;								
Set	ZZBG	P1	;							
Answer	ZZBG	P1	;							
Notes	P1 = 0 for HF, 1 for VHF.									

ZZBI Command

ZZBI Sets or reads the Binaural (BIN) status										
Get	ZZBI	;								
Set	ZZBI	P1	;							
Answer	ZZBI	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZBM Command

ZZBM Moves VFO B Down By The Selected Step										
Set	ZZBM	P1	P1	;						
Notes	ZZBM is write-only P1 = 00 to 14. See ZZAC for parameter list. ZZBM does not change the Step Size.									

ZZBP Command

ZZBP Moves VFO B Up By The Selected Step										
Set	ZZBP	P1	P1	;						
Notes	ZZBP is write-only P1 = 00 to 14. See ZZAC for parameter list. ZZBP does not change the Step Size.									

ZZBR Command

ZZBR Sets or reads the BCI Rejection button status										
Get	ZZBR	;								
Set	ZZBR	P1	;							
Answer	ZZBR	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZBS Command

ZZBS Sets or reads the RX1 Band Switch										
Get	ZZBS	;								
Set	ZZBS	P1	P1	P1	;					
Answer	ZZBS	P1	P1	P1	;					
Notes	HF P1 values: 160, 080, 060, 040, 030, 020, 017, 015, 012, 010, 006, 002 (when 2 meter transverter is installed), 888 (GEN), and 999 (WWV). VHF P1 values: V01 thru V13.									

ZZBT Command

ZZBT Sets or reads the RX2 Band Switch										
Get	ZZBT	;								
Set	ZZBT	P1	P1	P1	;					
Answer	ZZBT	P1	P1	P1	;					
Notes	HF P1 values: 160, 080, 060, 040, 030, 020, 017, 015, 012, 010, 006, 002 (when 2 meter transverter is installed), 888 (GEN), and 999 (WWV). VHF P1 values: V001 thru V013.									

ZZBU Command

ZZBU Moves the RX1 band switch up one band										
Set	ZZBU	;								
Notes	ZZBU is write-only									

ZZBY Command

ZZBY Closes the console										
Set	ZZBY	;								
Notes	ZZBU is write-only									

ZZCx Commands

ZZCB Command

ZZCB Sets or reads the Break In Enable checkbox status										
Get	ZZCB	;								
Set	ZZCB	P1	;							
Answer	ZZCB	P1	;							
Notes	P1 = 0 for disabled, 1 for enabled.									

ZZCD Command

ZZCD Sets or reads the Break In Delay value										
Get	ZZCD	;								
Set	ZZCD	P1	P1	P1	P1	;				
Answer	ZZCD	P1	P1	P1	P1	;				
Notes	P1 = 0150 to 5000									

ZZCF Command

ZZCF Sets or reads the Show TX CW Frequency checkbox status										
Get	ZZCF	;								
Set	ZZCF	P1	;							
Answer	ZZCF	P1	;							
Notes	P1 = 0 for disabled, 1 for enabled.									

ZZCI Command

ZZCI Sets or reads the CW Iambic checkbox status										
Get	ZZCI	;								
Set	ZZCI	P1	;							
Answer	ZZCI	P1	;							
Notes	P1 = 0 for disabled, 1 for enabled.									

ZZCL Command

ZZCL Sets or reads the CW Pitch (Setup DSP)										
Get	ZZCL	;								
Set	ZZCL	P1	P1	P1	P1	;				
Answer	ZZCL	P1	P1	P1	P1	;				
Notes	P1 = 0200 to 1200.									

ZZCM Command

ZZCM Sets or reads the CW Monitor checkbox status										
Get	ZZCM	;								
Set	ZZCM	P1	;							
Answer	ZZCM	P1	;							
Notes	P1 = 0 for disabled, 1 for enabled.									

ZZCP Command

ZZCP Sets or reads the Comander (CMP) button status										
Get	ZZCP	;								
Set	ZZCP	P1	;							
Answer	ZZCP	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZCS Command

ZZCS Sets or reads the CW Speed										
Get	ZZCS	;								
Set	ZZCS	P1	P1	;						
Answer	ZZCS	P1	P1	;						
Notes	P1 = 01 to 60									

ZZCT Command

ZZCT Sets or reads the Comander Threshold value										
Get	ZZCT	;								
Set	ZZCT	P1	P1	;						
Answer	ZZCT	P1	P1	;						
Notes	P1 = 00 to 10.									

ZZCU Command

ZZCU Reads the CPU Usage										
Get	ZZCU	;								
Set										
Answer	ZZCU	P1	P1	P1	P1	P1	P1	;		
Notes	P1 = 000.00 to 100.00									

ZZDx Commands

ZZDA Command

ZZDA Sets or reads the Display Average (AVG) status										
Get	ZZDA	;								
Set	ZZDA	P1	;							
Answer	ZZDA	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZDE Command

ZZDE Sets or reads the Enhanced Signal Clarity Form Enable Button (F5K/RX2)										
Get	ZZDE	;								
Set	ZZDE	P1	;							
Answer	ZZDE	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZDF Command

ZZDF Opens or closes the Enhanced Signal Clarity Form (F5K/RX2 only)										
Get	ZZDF	;								
Set	ZZDF	P1	;							
Answer	ZZDF	P1	;							
Notes	P1 = 0 for close 1 for open.									

ZZDM Command

ZZDM Sets or reads the Display Mode										
Get	ZZDM	;								
Set	ZZDM	P1	;							
Answer	ZZDM	P1	;							
Notes	P1 values: 0 = Spectrum 1 = Panadapter 2 = Scope 3 = Phase 4 = Phase2 5 = Waterfall 6 = Histogram 7 = Panafall 8 = Panascope 9 = Off									

ZZDN Command

ZZDN Sets or reads the Waterfall Lo limit (Setup Form)										
Get	ZZDN	;								
Set	ZZDN	P1	P2	P2	P2	;				
Answer	ZZDN	P1	P2	P2	P2	;				
Notes	P1 = + or -, P2 = -200 to +200.									

ZZDO Command

ZZDN Sets or reads the Waterfall Hi limit (Setup Form)										
Get	ZZDO	;								
Set	ZZDO	P1	P2	P2	P2	;				
Answer	ZZDO	P1	P2	P2	P2	;				
Notes	P1 = + or -, P2 = -200 to +200.									

ZZDP Command

ZZDP Sets or reads the Spectrum Grid Maximum setting (Setup Form)										
Get	ZZDP	;								
Set	ZZDP	P1	P2	P2	P2	;				
Answer	ZZDP	P1	P2	P2	P2	;				
Notes	P1 = + or -, P2 = -200 to +200. Note: The Spectrum Grid Min and Max controls interact, you may not be able to set either to the extreme limits.									

ZZDQ Command

ZZDP Sets or reads the Spectrum Grid Minimum setting (Setup Form)										
Get	ZZDQ	;								
Set	ZZDQ	P1	P2	P2	P2	;				
Answer	ZZDQ	P1	P2	P2	P2	;				
Notes	P1 = + or -, P2 = -200 to +200. Note: The Spectrum Grid Min and Max controls interact, you may not be able to set either to the extreme limits.									

ZZDR Command

ZZDR Sets or reads the Spectrum Grid Step Size (Setup Form)										
Get	ZZDR	;								
Set	ZZDR	P1	P1	;						
Answer	ZZDR	P1	P1	;						
Notes	P1 = 01 TO 40.									

ZZDU Command

ZZDU Status Word																																																																																																													
Get	ZZDU	;																																																																																																											
Answer	ZZDU	P1	P2	P3	P4	P5	P6	P7	P8	P9																																																																																																			
	P1	P11	P12	P13	P14	P14	P15	P15	P16	P16																																																																																																			
	P17	P17	P18	P18	P19	P19	P19	P20	P20	P20																																																																																																			
	P21	P21	P21	P22	P22	P22	P23	P23	P23	P24																																																																																																			
	P24	P25	P25	P25	P26	P26	P26	P26	P27	P27																																																																																																			
	P27	P27	P28	P28	P28	P28	P28	P29	P29	P29																																																																																																			
	P29	P29	P30	P30	P30	P30	P30	P31	P31	P31																																																																																																			
	P31	P31	P31	P32	P32	P32	P32	P32	P32	P32																																																																																																			
	P32	P32	P32	P32	P33	P33	P33	P33	P33	P33																																																																																																			
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Notes	<p>P values:</p> <table style="width: 100%; border: none;"> <tr><td style="width: 15%;">P1</td><td style="width: 60%;">VFO A/B TX Button</td><td style="width: 25%;">ZZSW</td></tr> <tr><td>P2</td><td>VFO Split</td><td>ZZSP</td></tr> <tr><td>P3</td><td>TUN Button</td><td>ZZTU</td></tr> <tr><td>P4</td><td>MOX Button</td><td>ZZTX</td></tr> <tr><td>P5</td><td>RX1 Antenna</td><td>ZZOA (Note 1)</td></tr> <tr><td>P6</td><td>RX2 Antenna</td><td>ZZOB (Note 1)</td></tr> <tr><td>P7</td><td>TX Antenna</td><td>ZZOC (Note 1)</td></tr> <tr><td>P8</td><td>RX2 Enable</td><td>ZZRS (Note 1)</td></tr> <tr><td>P9</td><td>RIT Enable</td><td>ZZRT</td></tr> <tr><td>P10</td><td>Display Mode</td><td>ZZDM</td></tr> <tr><td>P11</td><td>AGC Select</td><td>ZZGT</td></tr> <tr><td>P12</td><td>MultiRX Enable</td><td>ZZMU</td></tr> <tr><td>P13</td><td>XIT Enable</td><td>ZZXS</td></tr> <tr><td>P14</td><td>Step Size</td><td>ZZAC</td></tr> <tr><td>P15</td><td>RX1 Mode</td><td>ZZMD</td></tr> <tr><td>P16</td><td>RX2 Mode</td><td>ZZME (Note 1)</td></tr> <tr><td>P17</td><td>RX2 DSP Filter</td><td>ZZFJ (Note 1)</td></tr> <tr><td>P18</td><td>RX1 DSP Filter</td><td>ZZFI</td></tr> <tr><td>P19</td><td>TX Relays</td><td>ZZOF</td></tr> <tr><td>P20</td><td>RX2 Band</td><td>ZZBT (Note 1)</td></tr> <tr><td>P21</td><td>Drive Level</td><td>ZZPC</td></tr> <tr><td>P22</td><td>RX1 Band</td><td>ZZBS</td></tr> <tr><td>P23</td><td>Audio Gain</td><td>ZZAG</td></tr> <tr><td>P24</td><td>CW Speed</td><td>ZZKS</td></tr> <tr><td>P25</td><td>Tune Power</td><td>ZZTO</td></tr> <tr><td>P26</td><td>Primary DC Volts</td><td>ZZRV (Note 2)</td></tr> <tr><td>P27</td><td>S-Meter Level</td><td>ZZSM</td></tr> <tr><td>P28</td><td>RIT Frequency</td><td>ZZRF</td></tr> <tr><td>P29</td><td>Temperature Sensor</td><td>ZZTS (Note 2)</td></tr> <tr><td>P30</td><td>XIT Frequency</td><td>ZZXF</td></tr> <tr><td>P31</td><td>CPU Usage</td><td>ZZCU</td></tr> <tr><td>P32</td><td>VFO A Frequency</td><td>ZZFA</td></tr> <tr><td>P33</td><td>VFO B Frequency</td><td>ZZFB</td></tr> </table> <p>ZZDU is read-only. Note 1: FLEX5000 only. Note 2: FLEX3000, FLEX5000 only Parameters are colon-separated. Parameters not applying to the radio model in use return zeros.</p>										P1	VFO A/B TX Button	ZZSW	P2	VFO Split	ZZSP	P3	TUN Button	ZZTU	P4	MOX Button	ZZTX	P5	RX1 Antenna	ZZOA (Note 1)	P6	RX2 Antenna	ZZOB (Note 1)	P7	TX Antenna	ZZOC (Note 1)	P8	RX2 Enable	ZZRS (Note 1)	P9	RIT Enable	ZZRT	P10	Display Mode	ZZDM	P11	AGC Select	ZZGT	P12	MultiRX Enable	ZZMU	P13	XIT Enable	ZZXS	P14	Step Size	ZZAC	P15	RX1 Mode	ZZMD	P16	RX2 Mode	ZZME (Note 1)	P17	RX2 DSP Filter	ZZFJ (Note 1)	P18	RX1 DSP Filter	ZZFI	P19	TX Relays	ZZOF	P20	RX2 Band	ZZBT (Note 1)	P21	Drive Level	ZZPC	P22	RX1 Band	ZZBS	P23	Audio Gain	ZZAG	P24	CW Speed	ZZKS	P25	Tune Power	ZZTO	P26	Primary DC Volts	ZZRV (Note 2)	P27	S-Meter Level	ZZSM	P28	RIT Frequency	ZZRF	P29	Temperature Sensor	ZZTS (Note 2)	P30	XIT Frequency	ZZXF	P31	CPU Usage	ZZCU	P32	VFO A Frequency	ZZFA	P33	VFO B Frequency	ZZFB
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ZZDX Command

ZZDX Sets or reads the Phone DX button status										
Get	ZZDX	;								
Set	ZZDX	P1	;							
Answer	ZZDX	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZDY Command

ZZDY Sets or reads the Phone DX level										
Get	ZZDY	;								
Set	ZZDY	P1	P1	;						
Answer	ZZDY	P1	P1	;		;				
Notes	P1 = 0 to 10.									

ZZEx Commands

ZZEA Command

ZZEA Sets or reads the RX EQ values										
Get	ZZEA	;								
Set	ZZEA	P1	P1	P1	P2	P2	P2	P3	P3	P3
		P4	P4	P4	P5	P5	P5	P6	P6	P6
		P7	P7	P7	P8	P8	P8	P9	P9	P9
		P10	P10	P10	P11	P11	P11	P12	P12	P12
		;								
Answer	ZZEA	P1	P1	P1	P2	P2	P2	P3	P3	P3
		P4	P4	P4	P5	P5	P5	P6	P6	P6
		P7	P7	P7	P8	P8	P8	P9	P9	P9
		P10	P10	P10	P11	P11	P11	P12	P12	P12
		;								
Notes	P1 = number of EQ bands (003 or 010); P2 = EQ preamp setting (-12 to 015); P3 thru P12 are the setting of each EQ band (-12 to 015). If the number of bands = 003, P6 thru P12 are all zeros.									

ZZEB Command

ZZEB Sets or reads the TX EQ values										
Get	ZZEA	;								
Set	ZZEA	P1	P1	P1	P2	P2	P2	P3	P3	P3
		P4	P4	P4	P5	P5	P5	P6	P6	P6
		P7	P7	P7	P8	P8	P8	P9	P9	P9
		P10	P10	P10	P11	P11	P11	P12	P12	P12
		;								
Answer	ZZEA	P1	P1	P1	P2	P2	P2	P3	P3	P3
		P4	P4	P4	P5	P5	P5	P6	P6	P6
		P7	P7	P7	P8	P8	P8	P9	P9	P9
		P10	P10	P10	P11	P11	P11	P12	P12	P12
		;								
Notes	P1 = number of EQ bands (003 or 010); P2 = EQ preamp setting (-12 to 015); P3 thru P12 are the setting of each EQ band (-12 to 015). If the number of bands = 003, P6 thru P12 are all zeros.									

ZZEM Command

ZZEM Enables or disables CAT verbose error messages										
Get	ZZEM	;								
Set	ZZEM	P1	;							
Answer	ZZEM	See note	;							
Notes	P1: 0 = OFF, 1 = ON. Not fixed length, varies with error message: Prefix Length Error Inactive Command Unknown Command Undefined Command Error Illegal Suffix Format Suffix Length Error Feature Not Available Form Must Be Open									

ZZER Command

ZZER Sets or reads the RX EQ button status										
Get	ZZER	;								
Set	ZZER	P1	;							
Answer	ZZER	P1	;							
Notes	P1: 0 = OFF, 1 = ON									

ZZET Command

ZZET Sets or reads the TX EQ button status										
Get	ZZET	;								
Set	ZZET	P1	;							
Answer	ZZET	P1	;							
Notes	P1: 0 = OFF, 1 = ON									

ZZF_x Commands

ZZFA Command

ZZFA Sets or reads VFO A frequency										
Get	ZZFA	;								
Set	ZZFA	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Answer	ZZFA	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Notes	P1 = frequency in Hz (11 digits). Blank digits must be 0. Example: 14,320.150 = 00014320150.									

ZZFB Command

ZZFB Sets or reads VFO B frequency										
Get	ZZFB	;								
Set	ZZFB	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Answer	ZZFB	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Notes	P1 = frequency in Hz (11 digits). Blank digits must be 0. Example: 14,320.150 = 00014320150.									

ZZFD Command

ZZFD Sets or reads FM Deviation Button										
Get	ZZFD	;								
Set	ZZFD	P1	;							
Answer	ZZFD	P1	;		P1		;			
Notes	P1: 0 = 2500 Hz, 1 = 5000 Hz									

ZZFH Command

ZZFH Sets or reads DSP Filter High										
Get	ZZFH	;								
Set	ZZFH	P1	P1	P1	P1	P1	;			
Answer	ZZFH	P1	P1	P1	P1	P1	;			
Notes	P1 = frequency in Hz -9999 to 09999.									

ZZFI Command

ZZFI Sets or reads the current RX1 DSP receive filter																																																																											
Get	ZZFI	;																																																																									
Set	ZZFI	P1	P1	;																																																																							
Answer	ZZFI	P1	P1	;																																																																							
Notes	<table border="0"> <thead> <tr> <th>P1 values:</th> <th>lsb/usb</th> <th>digl/digu</th> <th>am/sam/dsb</th> <th>cwl/cwu</th> </tr> </thead> <tbody> <tr><td>00</td><td>5.0K</td><td>3.0K</td><td>16K</td><td>1.0K</td></tr> <tr><td>01</td><td>4.4K</td><td>2.5K</td><td>12K</td><td>800</td></tr> <tr><td>02</td><td>3.8K</td><td>2.0K</td><td>10K</td><td>750</td></tr> <tr><td>03</td><td>3.3K</td><td>1.5K</td><td>8.0K</td><td>600</td></tr> <tr><td>04</td><td>2.9K</td><td>1.0K</td><td>6.6K</td><td>500</td></tr> <tr><td>05</td><td>2.7K</td><td>800</td><td>5.2K</td><td>400</td></tr> <tr><td>06</td><td>2.4K</td><td>600</td><td>4.0K</td><td>250</td></tr> <tr><td>07</td><td>2.1K</td><td>300</td><td>3.1K</td><td>100</td></tr> <tr><td>08</td><td>1.8K</td><td>150</td><td>2.9K</td><td>50</td></tr> <tr><td>09</td><td>1.0K</td><td>75</td><td>2.4K</td><td>25</td></tr> <tr><td>10</td><td>VAR1</td><td>VAR1</td><td>VAR1</td><td>VAR1</td></tr> <tr><td>11</td><td>VAR2</td><td>VAR2</td><td>VAR2</td><td>VAR2</td></tr> </tbody> </table> <p>These are the default values for the receive filters. If you customize your filters, your custom values will be displayed.</p>										P1 values:	lsb/usb	digl/digu	am/sam/dsb	cwl/cwu	00	5.0K	3.0K	16K	1.0K	01	4.4K	2.5K	12K	800	02	3.8K	2.0K	10K	750	03	3.3K	1.5K	8.0K	600	04	2.9K	1.0K	6.6K	500	05	2.7K	800	5.2K	400	06	2.4K	600	4.0K	250	07	2.1K	300	3.1K	100	08	1.8K	150	2.9K	50	09	1.0K	75	2.4K	25	10	VAR1	VAR1	VAR1	VAR1	11	VAR2	VAR2	VAR2	VAR2
P1 values:	lsb/usb	digl/digu	am/sam/dsb	cwl/cwu																																																																							
00	5.0K	3.0K	16K	1.0K																																																																							
01	4.4K	2.5K	12K	800																																																																							
02	3.8K	2.0K	10K	750																																																																							
03	3.3K	1.5K	8.0K	600																																																																							
04	2.9K	1.0K	6.6K	500																																																																							
05	2.7K	800	5.2K	400																																																																							
06	2.4K	600	4.0K	250																																																																							
07	2.1K	300	3.1K	100																																																																							
08	1.8K	150	2.9K	50																																																																							
09	1.0K	75	2.4K	25																																																																							
10	VAR1	VAR1	VAR1	VAR1																																																																							
11	VAR2	VAR2	VAR2	VAR2																																																																							

ZZFJ Command

ZZFJ Sets or reads the current RX2 DSP receive filter									
Get	ZZFJ	;							
Set	ZZFJ	P1	P1	;					
Answer	ZZFJ	P1	P1	;					
Notes	P1 values: lsb/usb digl/digu am/sam/dsb cwl/cwu 00 5.0K 3.0K 16K 1.0K 01 4.4K 2.5K 12K 800 02 3.8K 2.0K 10K 750 03 3.3K 1.5K 8.0K 600 04 2.9K 1.0K 6.6K 500 05 2.7K 800 5.2K 400 06 2.4K 600 4.0K 250 07 * * * * 08 * * * * 09 * * * * 10 VAR1 VAR1 VAR1 VAR1 11 VAR2 VAR2 VAR2 VAR2 These are the default values for the receive filters. If you customize your filters, your custom values will be displayed. * Not available.								

ZZFL Command

ZZFL Sets or reads DSP Filter Low									
Get	ZZFL	;							
Set	ZZFL	P1	P1	P1	P1	P1	;		
Answer	ZZFL	P1	P1	P1	P1	P1	;		
Notes	P1 = frequency in Hz -9999 to 09999.								

ZZFM Command

ZZFM Reads the FlexRadio Model Number									
Get	ZZFM	;							
Set									
Answer	ZZFM	P1	;						
Notes	Read only. P1: 0 = SDR1000, 1 = FLEX5000, 2 = FLEX3000, 3 = FLEX1500.								

ZZFV Command

ZZFV Reads single data byte FlexWire data										
Get	ZZFV	P1	P1	P2	P2	;				
	Write only. P1 = 00 – FF , address P2 = 00 – FF, data Case insensitive. Address is returned with data: ZZFV95: returns ZZFV95xx where xx is the data.									

ZZFW Command

ZZFW Reads double data byte FlexWire data										
Get	ZZFW	P1	P1	P2	P2	P3	P3	;		
Notes	Write only. P1 = 00 – FF, address P2 = 00 – FF, data byte 1 P3 = 00 – FF, data byte 2 Case insensitive. Address is returned with data: ZZFW95 returns ZZFW95xxxx; where xxxx is the data.									

ZZFX Command

ZZFX Sends single data byte FlexWire command										
Set	ZZFX	P1	P1	P2	P2	;				
	Write only. P1 = 00 – FF , address P2 = 00 – FF, data Case insensitive									

ZZFY Command

ZZFY Sends double data byte FlexWire command										
Set	ZZFY	P1	P1	P2	P2	P3	P3	;		
Notes	Write only. P1 = 00 – FF, address P2 = 00 – FF, data byte 1 P3 = 00 – FF, data byte 2 Case insensitive									

ZZGx Commands

ZZGE Command

ZZGE Sets or reads the Noise Gate Enable button status										
Get	ZZGE	;								
Set	ZZGE	P1	;							
Answer	ZZGE	P1	;							
Notes	P1 = 0 for disabled, 1 for enabled.									

ZZGL Command

ZZGL Sets or reads the Noise Gate Threshold value										
Get	ZZGL	;								
Set	ZZGL	P1	P1	P1	P1	;				
Answer	ZZGL	P1	P1	P1	P1	;				
Notes	P1 = -160 to 0 (- sign required except for 0000).									

ZZGT Command

ZZGT Sets or reads the AGC thumbwheel control										
Get	ZZGT	;								
Set	ZZGT	P1	;							
Answer	ZZGT	P1	;							
Notes	P1 values: 0 = Fixed 1 = Long 2 = Slow 3 = Med 4 = Fast 5 = Custom									

ZZHx Commands

ZZHA Command

ZZHA Sets or reads Audio Buffer Size										
Get	ZZHA	;								
Set	ZZHA	P1	;							
Answer	ZZHA	P1	;							
Notes	P1: 0 = 256, 1 = 512, 2 = 1024, 3 = 2048, 4 = 4096									

ZZHR Command

ZZHR Sets or reads DSP RX Buffer Phone Size										
Get	ZZHR	;								
Set	ZZHR	P1	;							
Answer	ZZHR	P1	;							
Notes	P1: 0 = 256, 1 = 512, 2 = 1024, 3 = 2048, 4 = 4096									

ZZHT Command

ZZHT Sets or reads DSP TX Buffer Phone Size										
Get	ZZHT	;								
Set	ZZHT	P1	;							
Answer	ZZHT	P1	;							
Notes	P1: 0 = 256, 1 = 512, 2 = 1024, 3 = 2048, 4 = 4096									

ZZHU Command

ZZHU Sets or reads DSP RX Buffer CW Size										
Get	ZZHU	;								
Set	ZZHU	P1	;							
Answer	ZZHU	P1	;							
Notes	P1: 0 = 256, 1 = 512, 2 = 1024, 3 = 2048, 4 = 4096									

ZZHV Command

ZZHV Sets or reads DSP TX Buffer CW Size										
Get	ZZHV	;								
Set	ZZHV	P1	;							
Answer	ZZHV	P1	;							
Notes	P1: 0 = 256, 1 = 512, 2 = 1024, 3 = 2048, 4 = 4096									

ZZHW Command

ZZHW Sets or reads DSP TX Buffer Digital Size										
Get	ZZHW	;								
Set	ZZHW	P1	;							
Answer	ZZHW	P1	;							
Notes	P1: 0 = 256, 1 = 512, 2 = 1024, 3 = 2048, 4 = 4096									

ZZHX Command

ZZHX Sets or reads DSP TX Buffer Digital Size										
Get	ZZHX	;								
Set	ZZHX	P1	;							
Answer	ZZHX	P1	;							
Notes	P1: 0 = 256, 1 = 512, 2 = 1024, 3 = 2048, 4 = 4096									

ZZIx Commands

ZZID Command

ZZID Sets the transceiver identification to FlexRadio										
Get										
Set	ZZID	;								
Answer										
Notes	ZZID is used to remotely force the transceiver id to 900 FlexRadio).									

The remainder of this page is intentionally blank.

ZZIF Command

ZZIF Reads the FlexRadio status										
Get	ZZIF	;								
Set										
Answer	ZZIF	P1	P1	P1	P1	P1	P1	P1	P1	P1
	P1	P1	P2	P2	P2	P2	P3	P3	P3	P3
	P3	P3	P4	P5	P6	P7	P7	P8	P9	P9
	P10	P11	P12	P13	P14	P14	P15	;		
Notes	P1 (11 characters) VFO A frequency in Hz. Same as FA; P2 (4 characters) Frequency step size expressed in powers of 10 (see ZZST). P3 (6 characters) RIT/XIT frequency (+nnnnn or -nnnnn). P4 (1 character) RIT status. 0 = off, 1 = on. P5 (1 character) XIT status. 0 = off, 1 = on. P6 (1 character) Channel bank number. Not used, defaulted to 0. P7 (2 characters) Channel bank number. Not used, defaulted to 00. P8 (1 character) MOX button status. 0 = off, 1 = on (transmitting). P9 (2 character) Operating mode. See ZZMD for settings. P10 (1 character) VFO Split status. Same as FR (always 0). P11 (1 character) Scan status. Not implemented, defaulted to 0. P12 (1 character) VFO Split status. Same as ZZSP. P13 (1 character) CTCSS tone. Not used, defaulted to 0. P14 (2 characters) More tone controls. Not used, defaulted to 00. P15 (1 character) Shift status. Not used, defaulted to 0.									

ZZIO Command

ZZIO Reads the installed options										
Get	ZZIO	;								
Answer	ZZIS	P1	P2	P3	;					
Notes	P1,2,3 1 = installed, 0 = not available P1 = ATU, P2 = RX2, P3 = VU									

ZZIS Command

ZZIS Sets or reads the variable filter width slider										
Get	ZZIS	;								
Set	ZZIS	P1	P1	P1	P1	P1	;			
Answer	ZZIS	P1	P1	P1	P1	P1	;			
Notes	P1 = 00000 to 10000.									

ZZIT Command

ZZIT Sets or reads the variable filter shift slider										
Get	ZZIT	;								
Set	ZZIT	P1	P2	P2	P2	P2	;			
Answer	ZZIT	P1	P2	P2	P2	P2	;			
Notes	P1 = "+" or "-" P2 = 0000 to 1000 (-1000 to +1000)									

ZZIU Command

ZZIU Resets the variable filter shift slider										
Get										
Set	ZZIU	;								
Answer							;			
Notes	Write only									

ZZKx Commands

ZZKM Command

ZZKM Sends CWX Macro										
Set	ZZKM	P1	;							
Notes	P1 = 1 to 9. ZZKM is write only									

ZZKO Command

ZZKO Opens or closes the CWX form										
Get	ZZKO	;								
Set	ZZKO	P1	;							
Answer	ZZKO	P1	;							
Notes	P1 : Open = 1, Close = 0									

ZZKS Command

ZZKS Sets or reads the CWX CW speed										
Get	ZZKS	;								
Set	ZZKS	P1	P1	P1	;					
Answer	ZZKS	P1	P1	P1	;					
Notes	P1 = 001 to 099 in WPM.									

ZZKY Command

ZZKY Sends text to CWX for conversion to Morse										
Get	ZZKY	;								
Set	ZZKY	P1	P2	P2	P2	P2	P2	P2	P2	P2
	P2	P2	P2	P2	P2	P2	P2	P2	P2	P2
	P2	P2	P2	P2	P2	P2	;			
Answer	ZZKY	P1	;							
Notes	Get: P1 0 = Character buffer available, 1 = Character buffer not available (>72 characters left in buffer), 2 = buffer is empty and all code has been sent. Set: P1 = space, P2 up to 24 ASCII printing characters. . Empty character positions in P2 must contain a space.									

ZZLx Commands

ZZLA Command

ZZLA Sets or reads the RX0 (main receiver) Gain (MultiRX Group Controls)										
Get	ZZLA	;								
Set	ZZLA	P1	P1	P1	;					
Answer	ZZLA	P1	P1	P1	;					
Notes	P1 = 000 to 100.									

ZZLB Command

ZZLB Sets or reads the RX0 Stereo Balance (MultiRX Group Controls)										
Get	ZZLB	;								
Set	ZZLB	P1	P1	P1	;					
Answer	ZZLB	P1	P1	P1	;					
Notes	P1 = 000 to 100 (50 = center).									

ZZLC Command

ZZLC Sets or reads the RX1 (subreceiver) Gain (MultiRX Group Controls)										
Get	ZZLC	;								
Set	ZZLC	P1	P1	P1	;					
Answer	ZZLC	P1	P1	P1	;					
Notes	P1 = 000 to 100.									

ZZLD Command

ZZLD Sets or reads the RX1 Stereo Balance (MultiRX Group Controls)										
Get	ZZLD	;								
Set	ZZLD	P1	P1	P1	;					
Answer	ZZLD	P1	P1	P1	;					
Notes	P1 = 000 to 100 (50 = center).									

ZZLE Command

ZZLE Sets or reads the RX2 Audio Gain										
Get	ZZLE	;								
Set	ZZLE	P1	P1	P1	;					
Answer	ZZLE	P1	P1	P1	;					
Notes	P1 = 000 to 100 (50 = center).									

ZZLF Command

ZZLF Sets or reads the RX2 Stereo Balance										
Get	ZZLF	;								
Set	ZZLF	P1	P1	P1	;					
Answer	ZZLF	P1	P1	P1	;					
Notes	P1 = 000 to 100 (50 = center).									

ZZLG Command

ZZLG Sets or reads the AutoMuteRX1onVFOBTX checkbox (F5K Only)										
Get	ZZLG	;								
Set	ZZLG	P1	;							
Answer	ZZLG	P1	;							
Notes	P1: 0 = OFF, 1 = ON									

ZZLH Command

ZZLH Sets or reads the AutoMuteRX2onVFOATX checkbox (F5K Only)										
Get	ZZLH	;								
Set	ZZLH	P1	;							
Answer	ZZLH	P1	;							
Notes	P1: 0 = OFF, 1 = ON									

ZZMx Commands

ZZMA Command

ZZMA Sets or reads the RX1 Mute (MUT) status										
Get	ZZMA	;								
Set	ZZMA	P1	;							
Answer	ZZMA	P1	;							
Notes	P1 = 0 for off, 1 for on. See ZZMB notes.									

ZZMB Command

ZZMB Sets or reads the RX2 Mute (MUT) status (FLEX5000/RX2 ONLY)										
Get	ZZMB	;								
Set	ZZMB	P1	;							
Answer	ZZMB	P1	;							
Notes	P1 = 0 for off, 1 for on. Note: When RX1 is muted, either with ZZMA or the MUT button, both RX1 and RX2 are muted. Under the current code version, you cannot mute RX1 and have RX2 audio output.									

ZZMD Command

ZZMD Sets or reads the RX1 Operating Mode										
Get	ZZMD	;								
Set	ZZMD	P1	P1	;						
Answer	ZZMD	P1	P1	;						
Notes	P1 values: 00 = LSB 01 = USB 02 = DSB 03 = CWL 04 = CWU 05 = FM 06 = AM 07 = DIGU 08 = SPEC 09 = DIGL 10 = SAM 11 = DRM									

ZZME Command

ZZME Sets or reads the RX2 Operating Mode										
Get	ZZME	;								
Set	ZZME	P1	P1	;						
Answer	ZZME	P1	P1	;						
Notes	P1 values: 00 = LSB 01 = USB 02 = DSB 03 = CWL 04 = CWU 05 = FM 06 = AM 07 = DIGU 08 = SPEC 09 = DIGL 10 = SAM 11 = DRM									

ZZMG Command

ZZMG Sets or reads the Mic gain										
Get	ZZMG	;								
Set	ZZMG	P1	P1	P1	;					
Answer	ZZMG	P1	P1	P1	;					
Notes	P1 = 000 to 070									

ZZML Command

ZZML Returns the list of DSP Modes and Indexes										
Get	ZZML	;								
Answer	ZZML	P1	P1	P1	P1	P2	P2	P3		
		P1	P1	P2	P1	P2	P2	P3		
		P1	P1	P1	P1	P2	P2	P3		
		P1	P1	P1	P1	P2	P2	P3		
		P1	P1	P1	P1	P2	P2	P3		
		P1	P1	P1	P1	P2	P2	P3		
		P1	P1	P1	P1	P2	P2	P3		
		P1	P1	P1	P1	P2	P2	P3		
		P1	P1	P1	P1	P2	P2	P3		
		P1	P1	P1	P1	P2	P2	P3		
		P1	P1	P1	P1	P2	P2	P3	;	
Notes	P1 = right justified mode name; P2 = mode index(00 to 12), P3 = colon as a separator. Example: ZZML LSB00: USB01:.....DIGL09:...etc.									

ZZMN Command

ZZMN Reads the DSP Filter names and values										
Get	ZZMN	P1	P1	;						
Answer	ZZMN	See below								
Notes	<p>P1 Values: The two-digit mode code (See ZZMD)</p> <p>The return string is 180 characters long, 12 groups of 15 characters each representing all the names and high/low values for each filter contained in the mode requested. The 15 character groups are broken down into subgroups of five characters: 1-5 are is name of the filter button, 6-10 is the high filter value, and 11-15 is the low filter value. Example: 5.0k 5150 -160 4.8k 4950 -160...;. Filter names are truncated to 5 characters.</p>									

ZZMO Command

ZZMO Sets or reads the Monitor (MON) status										
Get	ZZMO	;								
Set	ZZMO	P1	;							
Answer	ZZMO	P1	;							
Notes	P1: 0 = OFF, 1 = ON									

ZZMR Command

ZZMR Sets or reads the RX Meter mode										
Get	ZZMR	;								
Set	ZZMR	P1	;							
Answer	ZZMR	P1	;							
Notes	P1 Values: 0 = Signal Strength 1 = Signal Average 2 = ADC L 3 = ADC R 4 = Off									

ZZMS Command

ZZMS Sets or reads the MultiRX Swap checkbox										
Get	ZZMS	;								
Set	ZZMS	P1	;							
Answer	ZZMS	P1	;							
Notes	P1: 0 = OFF, 1 = ON									

ZZMT Command

ZZMT Sets or reads the TX Meter mode										
Get	ZZMT	;								
Set	ZZMT	P1	P1	;						
Answer	ZZMT	P1	P1	;						
Notes	P1 Values: 00 = Forward Power 01 = Reverse Power 02 = Mic 03 = EQ 04 = Leveler 05 = Lev Gain 06 = COMP 07 = CPDR 08 = ALC 09 = ALC COMP 10 = SWR 11 = Off									

ZZMU Command

ZZMU Sets or reads the MultiRX button status										
Get	ZZMU	;								
Set	ZZMU	P1	;							
Answer	ZZMU	P1	;							
Notes	P1: 0 = OFF, 1 = ON									

ZZMV Command

ZZMV Gets the count of memory channels programmed										
Get	ZZMV	;								
Notes	P1: 001 to 999; Read Only. See ZZMY for numbering scheme.									

ZZMW Command

ZZMW Deletes a memory channel by channel number										
Set	ZZMW	P1	P1	P1	;					
Notes	P1: 001 to 999; Write Only. No warning is given. See ZZMY for numbering scheme.									

ZZMX Command

ZZMX Restores a memory channel by channel number										
Set	ZZMX	P1	P1	P1	;					
Notes	P1: 001 to 999; Write Only. See ZZMY for numbering scheme.									

ZZMY Command

ZZMY Stores radio memory configuration to a new channel										
Set	ZZMY	;								
Notes	Write Only. Memory channel numbers are assigned sequentially from 001 to 999. Channel numbers are stored in the Comments cell as a three digit number followed by a colon, e.g. 003:. The user may add any text after the colon as comments. A deleted channel number is not reused unless it is the highest number assigned.									

ZZMZ Command

ZZMZ Stores radio memory configuration to an existing channel										
Set	ZZMZ	P1	P1	P1	;					
Notes	P1: 001 to 999; Write Only. An edit method. Typical use would be to recall a memory channel, change some parameters, and save the changes to the same channel number. Destroys the only record and write the new one without warning.									

ZZNx Commands

ZZNA Command

ZZNA Sets or reads the Noise Blanker (NB) status										
Get	ZZNA	;								
Set	ZZNA	P1	;							
Answer	ZZNA	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZNB Command

ZZNB Sets or reads the Noise Blanker 2 (NB2) status										
Get	ZZNB	;								
Set	ZZNB	P1	;							
Answer	ZZNB	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZNC Command

ZZNC Sets or reads RX2 Noise Blanker (1) (F5K/RX2 only)										
Get	ZZNC	;								
Set	ZZNC	P1	;							
Answer	ZZNC	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZND Command

ZZND Sets or reads RX2 Noise Blanker (2) (F5K/RX2 only)										
Get	ZZND	;								
Set	ZZND	P1	;							
Answer	ZZND	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZNL Command

ZZNL Sets or reads the Noise Blanker 1 threshold (Setup DSP tab)										
Get	ZZNL	;								
Set	ZZNL	P1	P1	P1	;					
Answer	ZZNL	P1	P1	P1	;					
Notes	P1 = 001 to 200.									

ZZNM Command

ZZNM Sets or reads the Noise Blanker 2 threshold										
Get	ZZNM	;								
Set	ZZNM	P1	P1	P1	P1	;				
Answer	ZZNM	P1	P1	P1	P1	;				
Notes	P1 = 0001 to 1000.									

ZZNR Command

ZZNR Sets or reads the Noise Reduction (NR) status										
Get	ZZNR	;								
Set	ZZNR	P1	;							
Answer	ZZNR	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZNT Command

ZZNT Sets or reads the Auto Notch Filter (ANF) status										
Get	ZZNT	;								
Set	ZZNT	P1	;							
Answer	ZZNT	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZOx Commands

ZZOA Command

ZZOA Sets or reads the antenna connected to RX1 (FLEX5000/FLEX1500 only)										
Get	ZZOA	;								
Set	ZZOA	P1	;							
Answer	ZZOA	P1	;							
Notes	P1 Values F5K: 0 = N/C, 1 = Ant1, 2 = Ant2, 3 = Ant3, 4 = RX1 In. P1 Values F1500: 0 = PA, 1 = XVTX_COM, 2 = XVRX.									

ZZOB Command

ZZOB Sets or reads the antenna connected to RX2 (FLEX5000 only)										
Get	ZZOB	;								
Set	ZZOB	P1	;							
Answer	ZZOB	P1	;							
Notes	P1 Values: 0 = N/C, 1 = Ant1, 5 = RX2In, 6 = RX1Tap									

ZZOC Command

ZZOC Sets or reads the transmitter antenna (FLEX5000/FLEX1500 only)										
Get	ZZOC	;								
Set	ZZOC	P1	;							
Answer	ZZOC	P1	;							
Notes	P1 Values F5K: 1 = Ant1, 2 = Ant2, 3 = Ant3. P1 Values F1500: 1 = PA, 2 = XVTX/COM.									

ZZOD Command

ZZOD Sets or reads the current antenna mode (FLEX5000/F1500 only)										
Get	ZZOD	;								
Set	ZZOD	P1	;							
Answer	ZZOD	P1	;							
Notes	P1 Values: 0 = Simple, 1 = Complex									

ZZOE Command

ZZOE Sets or reads the RX1 loop (FLEX5000 only)										
Get	ZZOE	;								
Set	ZZOE	P1	;							
Answer	ZZOE	P1	;							
Notes	P1 Values: 0 = Loop Disabled, 1 = Loop Enabled									

ZZOF Command

ZZOF Sets or reads the TX relays energized on transmit (FLEX5000/F1500 only)										
Get	ZZOF	;								
Set	ZZOF	P1	P2	P3	;					
Answer	ZZOF	P1	P2	P3	;					
Notes	F5K P1 = RCATX1, P2 = RCATX2, P3 = RCATX3. 1 = Enabled, 0 = Disabled, all positions must be represented: ZZOF010 = TX2 enabled, TX1 and TX2 disabled. ZZOF111 = all enabled, ZZOF000 = all disabled. F1500 P1: FlexWire PTT Out 0 = disabled, 1 = enabled. Command must be sent with three characters: ZZOF100 or ZZOF000.									

ZZOG Command

ZZOG Sets or reads the TX relay delays enabled on transmit (FLEX5000/F1500 only)										
Get	ZZOG	;								
Set	ZZOG	P1	P2	P3	;					
Answer	ZZOG	P1	P2	P3	;					
Notes	<p>F5K P1 = TX1, P2 = TX2, P3 = TX3. 1 = Enabled, 0 = Disabled, all positions must be represented: ZZOG010 = TX2 enabled, TX1 and TX3 disabled. ZZOG111 = all enabled, ZZOG000 = all disabled.</p> <p>F1500 P1: FlexWire PTT Out Delay 0 = disabled, 1 = enabled. Command must be sent with three characters: ZZOG100 or ZZOG000.</p>									

ZZOH Command

ZZOH Sets or reads the TX relay delay times (FLEX5000/F1500 only)										
Get	ZZOH	P1	;							
Set	ZZOH	P1	P2	P2	P2	P2	;			
Answer	ZZOH	P1	P2	P2	P2	P2	;			
Notes	<p>F5K P1 = TX relay number, P2 = delay in milliseconds. Example: ZZOH20100 Sets relay 2 to 100 ms. Delay range must be 0000 to 9999.</p> <p>F1500 P1 = 1, P2 same as F5K.</p>									

ZZOJ Command

ZZOJ Sets or reads the Antenna Lock Checkbox (FLEX5000/F1500 Only)										
Get	ZZOJ	;								
Set	ZZOJ	P1	;							
Answer	ZZOJ	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZOS Commands

ZZOS Sets or reads the FM Offset Direction										
Get	ZZOS	;								
Set	ZZOS	P1	;							
Answer	ZZOS	P1	;							
Notes	P1: 0 = Simplex, 1 = High, 2 = Low									

ZZOT Commands

ZZOT Sets or reads the FM Repeater Offset Frequency										
Get	ZZOT	;								
Set	ZZOT	P1	P1	P1	P1	P1	P1	P1	P1	P1;
Answer	ZZOT	P1	P1	P1	P1	P1	P1	P1	P1	P1;
Notes	P1 = 000000000 to 999999999 Hz. 001000000 = 1.0 MHz, 000600000 = 600 KHz. Must have leading zeros.									

ZZOL Commands

ZZOL Sets or reads the DigL Click Tune Offset										
Get	ZZOL	;								
Set	ZZOL	P1	P1	P1	P1	;				
Answer	ZZOL	P1	P1	P1	P1	;				
Notes	P1 = 0000 to 9999									

ZZOU Command

ZZOU Sets or reads the DigU Click Tune Offset										
Get	ZZOU	;								
Set	ZZOU	P1	P1	P1	P1	;				
Answer	ZZOU	P1	P1	P1	P1	;				
Notes	P1 = 0000 to 9999									

ZZOV Command

ZZOV Sets or reads ATU Enable Button (when ATU equipped)										
Get	ZZOV	;								
Set	ZZOV	P1	;							
Answer	ZZOV	P1	;							
Notes	P1: 0 = Off, 1 = On. Sending a "1" to ZZOV is the same as sending a "0" to ZZOW (ATU bypass).									

ZZOW Command

ZZOW Sets or reads ATU Bypass Button (when ATU equipped)										
Get	ZZOW	;								
Set	ZZOW	P1	;							
Answer	ZZOW	P1	;							
Notes	P1: 0 = Off, 1 = On. Sending a "0" to ZZOW is the same as sending a "1" to ZZOV (ATU Enabled and will cause the ATU to tune).									

ZZPx Commands

ZZPA Command

ZZPA Sets or reads the Preamp (Preamp) setting										
Get	ZZPA	;								
Set	ZZPA	P1	;							
Answer	ZZPA	P1	;							
Notes	P1 values; SDR-1000 FLEX5000x FLEX3000 FLEX1500 0 = Off 0 = Off 0 = Attn 0 = -10 1 = Low 1 = On 1 = Off 1 = 0 2 = Med 2 = Pre 2 = +10 3 = High 3 = +20 4 = +30									

ZZPB Command

ZZPB Sets or reads RX2 Preamp status (F5K/RX2 only)										
Get	ZZPB	;								
Set	ZZPB	P1	;							
Answer	ZZPB	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZPC Command

ZZPC Sets or reads the PA Drive level										
Get	ZZPC	;								
Set	ZZPC	P1	P1	P1	;					
Answer	ZZPC	P1	P1	P1	;					
Notes	P1 = 000 to 100									

ZZPD Command

ZZPD Sets the Display Pan Center button										
Set	ZZPD	;								
Notes	Write-only									

ZZPE Command

ZZPE Sets or reads the Display Pan Position										
Get	ZZPE	;								
Set	ZZPE	P1	P1	P1	P1	;				
Answer	ZZPE	P1	P1	P1	P1	;				
Notes	P1 = 0000 to 1000									

ZZPO Command

ZZPO Sets or reads the Display Peak button										
Get	ZZPO	;								
Set	ZZPO	P1	;							
Answer	ZZPO	P1	;							
Notes	P1 = 0 for Off, 1 for On									

ZZPS Command

ZZPS Sets or reads the Start button										
Get	ZZPS	;								
Set	ZZPS	P1	;							
Answer	ZZPS	P1	;							
Notes	P1 = 0 for Off, 1 for On									

ZZPY Command

ZZPY Sets or reads the Display Zoom slider										
Get	ZZPY	;								
Set	ZZPY	P1	P1	P1	;					
Answer	ZZPY	P1	P1	P1	;					
Notes	P1: 010 (minimum zoom) to 240 (maximum zoom)									

ZZPZ Command

ZZPZ Sets or reads the Display Zoom buttons										
Get	ZZPZ	;								
Set	ZZPZ	P1	;							
Answer	ZZPZ	P1	;							
Notes	P1: 0 = 0.5X, 1 = 1X, 2 = 2X, 3 = 4X									

ZZQx Commands

ZZQM Command

ZZQM Reads the Quick Save Memory value										
Get	ZZQM	;								
Set										
Answer	ZZQM	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Notes	P1 = frequency in Hz (11 digits). Example: 14,320.150 = 00014320150.									

ZZQR Command

ZZQR Restores the Quick Save Memory (QR)										
Get										
Set	ZZQR	;								
Answer										
Notes	ZZQR is write-only									

ZZQS Command

ZZQS Saves Frequency A, Band, and Mode to Quick Memory										
Set	ZZQS	;								
Notes	Write-only									

ZZRx Commands

ZZRA Command

ZZRA Sets or reads the RTTY Offset Enable VFO A status										
Get	ZZRA	;								
Set	ZZRA	P1	;							
Answer	ZZRA	P1	;							
Notes	P1 = 0 for Off, 1 for On									

ZZRB Command

ZZRB Sets or reads the RTTY Offset Enable VFO B status										
Get	ZZRB	;								
Set	ZZRB	P1	;							
Answer	ZZRB	P1	;							
Notes	P1 = 0 for Off, 1 for On									

ZZRC Command

ZZRC Clears the RIT frequency										
Set	ZZRC	;								
Notes	Write-only									

ZZRD Command

ZZRD Decrements the RIT Frequency										
Get	ZZRD	;								
Set	ZZRD	P1	P1	P1	P1	P1	;			
Answer										
Notes	ZZRD without parameters decrements the RIT frequency by 10 Hz in CW and 50 Hz in SSB. P1 (00000 – 99999) will set the RIT Frequency (also see ZZRF). Answer is always blank or an error message.									

ZZRF Command

ZZRF Sets or reads the RIT frequency										
Get	ZZRF;									
Set	ZZRF	P1	P2	P2	P2	P2	;			
Answer	ZZRF	P1	P2	P2	P2	P2	;			
Notes	P1 = polarity (+ or -) P2 = frequency in Hz.									

ZZRH Command

ZZRH Sets or reads the RTTY DIGH Offset Frequency										
Get	ZZRH;									
Set	ZZRH	P1	P2	P2	P2	P2	;			
Answer	ZZRH	P1	P2	P2	P2	P2	;			
Notes	P1 = polarity (+ or -) P2 = frequency in Hz.									

ZZRL Command

ZZRL Sets or reads the RTTY DIGL Offset Frequency										
Get	ZZRL;									
Set	ZZRL	P1	P2	P2	P2	P2	;			
Answer	ZZRL	P1	P2	P2	P2	P2	;			
Notes	P1 = polarity (+ or -) P2 = frequency in Hz.									

ZZRM Command

ZZRM Reads the Console meter values										
Get	ZZRM	P1	;							
Set										
Answer	ZZRM	P1	P2	P2	P2	P2	P2	P2	P2	P2
	P2	P2	P2	P2	P2	P2	P2	P2	P2	P2
	P2	P2	;							
Notes	P1 Values: 0 = Signal Strength 1 = Average Strength 2 = ADC_L 3 = ADC_R 4 = ALC 5 = Forward Power 6 = Peak Power no longer used, will return “?;” 7 = Reverse Power 8 = SWR P2 is padded left with spaces. ZZRM is read-only. SWR only works in TUN.									

ZZRS Command

ZZRS Sets or reads the RX2 enable button status										
Get	ZZRS	;								
Set	ZZRS	P1	;							
Answer	ZZRS	P1	;							
Notes	P1 = 0 for Off, 1 for On									

ZZRT Command

ZZRT Sets or reads the RIT enable button status										
Get	ZZRT	;								
Set	ZZRT	P1	;							
Answer	ZZRT	P1	;							
Notes	P1 = 0 for Off, 1 for On									

ZZRU Command

ZZRU Increments the RIT Frequency										
Get	ZZRU	;								
Set	ZZRU	P1	P1	P1	P1	P1	;			
Answer										
Notes	ZZRU without parameters increments the RIT frequency by 10 Hz in CW and 50 Hz in SSB. P1 (00000 – 99999) will set the RIT Frequency (also see ZZRF). Answer is always blank or an error message.									

ZZRV Command

ZZRV Reads the primary input voltage										
Get	ZZRV	;								
Answer	ZZRV	P1	P1	P1	P1					
Notes	Read-only; returns nn.n									

ZZSx Commands

ZZSA Command

ZZSA Moves VFO A down one Tune Step										
Set	ZZSB	;								
Notes	Write-only									

ZZSB Command

ZZSB Moves VFO A up one Tune Step										
Set	ZZSB	;								
Notes	Write-only									

ZZSD Command

ZZSD Decrements the Tune Step										
Set	ZZSD	;								
Notes	Write-only									

ZZSF Command

ZZSF Sets the variable filter width and center (KD5TFD filters)										
Get										
Set	ZZSF	P1	P1	P1	P1	P2	P2	P2	P2	;
Answer										
Notes	P1 = center frequency in Hz. P2 = width in Hz. ZZSF is write-only.									

ZZSG Command

ZZSG Moves VFO B down one Tune Step										
Set	ZZSG	;								
Notes	Write-only									

ZZSH Command

ZZSH Moves VFO B up one Tune Step										
Set	ZZSH	;								
Notes	Write-only									

ZZSM Command

ZZSM Reads the S-Meter										
Get	ZZSM	P1	;							
Set										
Answer	ZZSM	P1	P2	P2	P2	;				
Notes	P1: 0 = RX1, 1 = RX2 P2 = 000 to 260 ZZSM does not actually read the S Meter, it reads the signal strength in dBm. S9 = -73 dBm. Each increment of ZZSM is approximately equal to 0.5 dBm. The range of the reading is -140 dBm to -10 dBm, a 130 dBm range with a scale factor of 2 (P2 max = 260). Use ZZSM/2 – 140 to get the actual RX signal strength in dBm.									

ZZSN Command

ZZSN Reads the radio serial number										
Get	ZZSN	;								
Answer	ZZSN	P1	P1	P1	P2	P1	P1	P1	P1	P1
Notes	P1 Example: ZZSN2105-3456 ZZSN is read only.									

ZZSO Command

ZZSO Sets or reads the Squelch on/off status										
Get	ZZSO	;								
Set	ZZSO	P1	;							
Answer	ZZSO	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZSP Command

ZZSP Sets or reads the VFO Split (SPLT) status										
Get	ZZSP	;								
Set	ZZSP	P1	;							
Answer	ZZSP	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZSQ Command

ZZSQ Sets or reads the Squelch control										
Get	ZZSQ	;								
Set	ZZSQ	P1	P1	P1	;					
Answer	ZZSQ	P1	P1	P1	;					
Notes	P1: 000 to 160 except FM mode 000 to 100.									

ZZSR Command

ZZSR Sets or reads the Spur Reduction button status										
Get	ZZSR	;								
Set	ZZSR	P1	;							
Answer	ZZSR	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZSS Command

ZZSS Stops CWX sending (immediate)										
Set	ZZSS	;								
Notes	Write only									

ZZST Command

ZZST Reads the frequency step size (Deprecated, use ZZAC for new designs)										
Get	ZZST	;								
Set										
Answer	ZZST	P1	P1	P1	P1	;				
Notes	P1 values are expressed in BCD powers of 10 except for non-decade frequencies: 0000 = 10e0 = 1 Hz 0001 = 10e1 = 10 Hz 1000 = special default for 50 Hz 0010 = 10e2 = 100 Hz 1001 = special default for 250 Hz 1010 = special default for 500 Hz 0011 = 10e3 = 1 kHz 1011 = special default for 5 kHz 1100 = special default for 9 kHz 0100 = 10e4 = 10 kHz 0101 = 10e5 = 100 kHz 0110 = 10e6 = 1 MHz 0111 = 10e7 = 10 MHz ZZST is read-only.									

ZZSU Command

ZZSU Increments the Tune Step										
Set	ZZSU	;								
Notes	Write-only									

ZZSV Command

ZZSV Sets or reads the RX2 Squelch button										
Get	ZZSV	;								
Set	ZZSV	P1	;							
Answer	ZZSV	P1	;							
Notes	P1: 0 = Off, 1 = On.									

ZZSW Command

ZZSW Sets or reads the VFO A TX/VFO B TX Buttons										
Get	ZZSW	;								
Set	ZZSW	P1	;							
Answer	ZZSW	P1	;							
Notes	P1: 0 set VFO A to TX, 1 sets VFO B to TX. ZZSW transmits status if Kenwood AI enabled.									

ZZSY Command

ZZSY Sets or reads the VFO Sync Button										
Get	ZZSY	;								
Set	ZZSY	P1	;							
Answer	ZZSY	P1	;							
Notes	P1: 0 = VFO Sync off; 1 = VFO Sync on.									

ZZSX Command

ZZSX Sets or reads the RX2 Squelch Threshold										
Get	ZZSX	;								
Set	ZZSX	P1	P1	P1	;					
Answer	ZZSX	P1	P1	P1	;					
Notes	P1: 000 to 160 except FM mode 000 to 100.									

ZZSZ Command

ZZSZ Syncs VFO A or B to the current step size										
Set	ZZSZ	P1	;							
Notes	P1: 0 = VFO A, 1 = VFO B. Example: if VFO A frequency is 14,123.123 and the step size is 10 Hz, ZZSZ0; will set VFO A to 14,123.130.									

ZZTx Commands

ZZTA Command

ZZTA Sets or reads the CTCSS Enable Button										
Get	ZZTA	;								
Set	ZZTA	P1	;							
Answer	ZZTA	P1	;							
Notes	P1 = 0 for disabled, 1 for enabled.									

ZZTB Command

ZZTB Sets or reads the CTCSS Tone Frequency										
Get	ZZTB	;								
Set	ZZTB	P1	P1	;						
Answer	ZZTB	P1	P1	;						
Notes	P1: 01 = 67.0 21 = 131.8 41 = 206.5 02 = 69.3 22 = 136.5 42 = 210.7 03 = 71.9 23 = 141.3 43 = 218.1 04 = 74.4 24 = 146.2 44 = 225.7 05 = 77.0 25 = 151.4 45 = 229.1 06 = 79.7 26 = 156.7 46 = 233.6 07 = 82.5 27 = 159.8 47 = 241.8 08 = 85.4 28 = 162.2 48 = 250.3 09 = 88.5 29 = 165.5 49 = 254.1 10 = 91.5 30 = 167.9 11 = 94.8 31 = 171.3 12 = 97.4 32 = 173.8 13 = 100.0 33 = 177.3 14 = 103.5 34 = 179.9 15 = 107.2 35 = 183.5 16 = 110.9 36 = 186.2 17 = 114.8 37 = 189.9 18 = 118.8 38 = 192.8 19 = 123.0 39 = 199.5 20 = 127.3 40 = 203.5									

ZZTF Command

ZZTF Sets or reads the Show TX Filter checkbox status										
Get	ZZTF	;								
Set	ZZTF	P1	;							
Answer	ZZTF	P1	;							
Notes	P1 = 0 for disabled, 1 for enabled.									

ZZTH Command

ZZTH Sets or reads the TX Filter High setting										
Get	ZZTH	;								
Set	ZZTH	P1	P1	P1	P1	P1	;			
Answer	ZZTH	P1	P1	P1	P1	P1	;			
Notes	P1 = 00500 to 20000.									

ZZTI Command

ZZTI Transmit Inhibit										
Set	ZZTI	P1	;							
Notes	P1: 1 = Transmit Inhibited, 0 = Transmit Enabled. You must follow a ZZTI1 with a ZZTI0 to re-enable the transmitter.									

ZZTL Command

ZZTL Sets or reads the TX Filter Low setting										
Get	ZZTL	;								
Set	ZZTL	P1	P1	P1	P1	;				
Answer	ZZTL	P1	P1	P1	P1	;				
Notes	P1 = 0000 to 2000.									

ZZTM Command

ZZTM Sets or reads the TX AF Monitor										
Get	ZZTM	;								
Set	ZZTM	P1	P1	P1	;					
Answer	ZZTM	P1	P1	P1	;					
Notes	P1 = 000 to 100.									

ZZTO Command

ZZTO Sets or reads the TUN power setting										
Get	ZZTO	;								
Set	ZZTO	P1	P1	P1	P1	;				
Answer	ZZTO	P1	P1	P1	P1	;				
Notes	P1 = 000 to 100.									

ZZTP Command

ZZTP Sets or reads the Transmit Profile										
Get	ZZTP	;								
Set	ZZTP	P1	P1	;						
Answer	ZZTP	P1	P1	;						
Notes	P1: 00 = Conventional 01 = DX/Contest 02 = ESSB 03 = AM Above only correct if no custom profiles saved. P1 is equal to the index value of the profile name in the Transmit Profile drop down list.									

ZZTS Command

ZZTS Reads the FLEX5000 Temperature Sensor										
Get	ZZTS	;								
Answer	ZZTS	P1	P1	P1	P1	P1	;			
Notes	P1 = two places below 100 degrees, one place above 100 degrees: 28.92 or 103.1.									

ZZTU Command

ZZTU Sets or reads the Tune (TUN) status										
Get	ZZTU	;								
Set	ZZTU	P1	;							
Answer	ZZTU	P1	;							
Notes	P1 = 0 for off, 1 for on. Console power must be on for TUN to function.									

ZZTV Command

ZZTV Sets or reads the transmit VFO frequency when RX2 enabled										
Get	ZZTV	;								
Set	ZZTV	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Answer	ZZTV	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Notes	P1 = frequency in Hz (11 digits). Blank digits must be 0. Example: 14,320.150 = 00014320150. Only works when RX2 enabled and Split or MultiRX modes selected. F5K only.									

ZZTX Command

ZZTX Sets or reads the MOX button status										
Get	ZZTX	;								
Set	ZZTX	P1	;							
Answer	ZZTX	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZUx Commands

ZZUA Command

ZZUA Reads the XVTR Band Button Names										
Get	ZZUA	;								
Answer	ZZUA	P1	P1	P1	P1	P1	P2	P2	P2	P2
		P2	P3	P3	P3	P3	P4	P4	P4	P4
		P4	P5	P5	P5	P5	P6	P6	P6	P6
		P6	P7	P7	P7	P7	P8	P8	P8	P8
		P8	P9	P9	P9	P9	P10	P10	P10	P10
		P10	P11	P11	P11	P11	P12	P12	P12	P12
		P12	P13	P13	P13	P13	P14	P14	P14	P14
		P14	;							
Notes	P1 thru P14 equal exactly 70 character spaces and must contain either an ASCII character or a space. Each group of five characters contains the name of the corresponding n-1 XVTR button name: P1 = button 0.									

ZZVx Commands

ZZVA Command

ZZVA Sets or reads the VAC1 button status										
Get	ZZVA	;								
Set	ZZVA	P1	;							
Answer	ZZVA	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZVB Command

ZZVB Sets or reads the VAC1 RX Gain										
Get	ZZVB	;								
Set	ZZVB	P1	P1	P1	;					
Answer	ZZVB	P1	P1	P1	;					
Notes	P1 = -40 to +40 (positive values must lead with sign or "0")									

ZZVC Command

ZZVC Sets or reads the VAC1 TX Gain										
Get	ZZVC	;								
Set	ZZVC	P1	P1	P1	;					
Answer	ZZVC	P1	P1	P1	;					
Notes	P1 = -40 TO +40 (positive value must lead with sign or "0")									

ZZVD Command

ZZVD Sets or reads the VAC1 Sample Rate										
Get	ZZVD	;								
Set	ZZVD	P1	;							
Answer	ZZVD	P1	;							
Notes	P1 : 0 = 6000 1 = 8000 2 = 11025 3 = 12000 4 = 24000 5 = 22050 6 = 44100 7 = 48000 8 = 96000 9 = 192000									

ZZVE Command

ZZVE Sets or reads the VOX button status										
Get	ZZVE	;								
Set	ZZVE	P1	;							
Answer	ZZVE	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZVF Command

ZZVF Sets or reads the VAC1 Stereo button status										
Get	ZZVF	;								
Set	ZZVF	P1	;							
Answer	ZZVF	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZVG Command

ZZVG Sets or reads the VOX Gain value										
Get	ZZVG	;								
Set	ZZVG	P1	P1	P1	P1	;				
Answer	ZZVG	P1	P1	P1	P1	;				
Notes	P1 = 0000 to 1000.									

ZZVH Command

ZZVH Sets or reads the I/Q TO VAC1 Checkbox										
Get	ZZVH	;								
Set	ZZVH	P1	;							
Answer	ZZVH	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZVI Command

ZZVI Sets or reads the VAC1 Input Cable										
Get	ZZVI	;								
Set	ZZVI	P1	P1	;						
Answer	ZZVI	P1	P1	;						
Notes	P1 = 00 to 99, actual input cable depends on VAC driver selected									

ZZVJ Command

ZZVJ Sets or reads the IQ to VAC1 Use RX2 Checkbox										
Get	ZZVJ	;								
Set	ZZVJ	P1	;							
Answer	ZZVJ	P1	;							
Notes	P1 = 0 for OFF, 1 for ON. ZZVH must be set before ZZVJ will work.									

ZZVK Command

ZZVK Sets or reads the VAC2 enable status										
Get	ZZVK	;								
Set	ZZVK	P1	;							
Answer	ZZVK	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZVL Command

ZZVL Sets or reads the VFO Lock status										
Get	ZZVL	;								
Set	ZZVL	P1	;							
Answer	ZZVL	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZVM Command

ZZVM Sets or reads the VAC1 Driver										
Get	ZZVM	;								
Set	ZZVM	P1	P1	;						
Answer	ZZVM	P1	P1	;						
Notes	P1 = 00 to 99. When you change driver you must reset the I/O cables									

ZZVN Command

ZZVN Reads the PowerSDR software version number										
Get	ZZVN	;								
Set										
Answer	ZZVN	P1	;							
Notes	Returns ZZVN001.3.14.0; twelve total characters including decimal points.									

ZZVO Command

ZZVO Sets or reads the VAC1 Output Cable										
Get	ZZVO	;								
Set	ZZVO	P1	P1	;						
Answer	ZZVO	P1	P1	;						
Notes	P1 = 00 to 99, actual output cable depends on VAC driver selected									

ZZVP Command

ZZVP Sets or reads the VAC1 IQ Calibrate Checkbox										
Get	ZZVP	;								
Set	ZZVP	P1	;							
Answer	ZZVP	P1	;							
Notes	P1 = 0 for off, 1 for on.									

ZZVQ Command

ZZVQ Sets or reads the VAC2 Driver										
Get	ZZVQ	;								
Set	ZZVQ	P1	P1	;						
Answer	ZZVQ	P1	P1	;						
Notes	P1 = 00 to 99. When you change driver you must reset the I/O cables									

ZZVR Command

ZZVR Sets or reads the VAC2 Input Cable										
Get	ZZVR	;								
Set	ZZVR	P1	P1	;						
Answer	ZZVR	P1	P1	;						
Notes	P1 = 00 to 99, actual input cable depends on VAC driver selected									

ZZVS Command

ZZVS Sets the VFO Swap status										
Get										
Set	ZZVS	P1	;							
Answer										
Notes	P1 values: 0 = A>B 1 = A<B 2 = A<>B ZZVS is write-only.									

ZZVT Command

ZZVT Sets or reads the VAC2 Output Cable										
Get	ZZVT	;								
Set	ZZVT	P1	P1	;						
Answer	ZZVT	P1	P1	;						
Notes	P1 = 00 to 99, actual output cable depends on VAC driver selected									

ZZVU Command

ZZVU Sets or reads the VAC1 Sample Rate										
Get	ZZVU	;								
Set	ZZVU	P1	;							
Answer	ZZVU	P1	;							
Notes	P1 : 0 = 6000 1 = 8000 2 = 11025 3 = 12000 4 = 24000 5 = 22050 6 = 44100 7 = 48000 8 = 96000 9 = 192000									

ZZVV Command

ZZVV Sets or reads the VAC2 Stereo button status										
Get	ZZVV	;								
Set	ZZVV	P1	;							
Answer	ZZVV	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZVW Command

ZZVW Sets or reads the VAC2 RX Gain										
Get	ZZVW	;								
Set	ZZVW	P1	P1	P1	;					
Answer	ZZVW	P1	P1	P1	;					
Notes	P1 = -40 to +40 (positive values must lead with sign or "0")									

ZZVX Command

ZZVX Sets or reads the VAC2 TX Gain										
Get	ZZVX	;								
Set	ZZVX	P1	P1	P1	;					
Answer	ZZVX	P1	P1	P1	;					
Notes	P1 = -40 TO +40 (positive value must lead with sign or "0")									

ZZVY Command

ZZVY Sets or reads the VAC1 Buffer Size										
Get	ZZVY	;								
Set	ZZVY	P1	;							
Answer	ZZVY	P1	;							
Notes	P1 : 0 = 512 1 = 1024 2 = 2048									

ZZVZ Command

ZZVZ Sets or reads the VAC2 Buffer Size										
Get	ZZVZ	;								
Set	ZZVZ	P1	;							
Answer	ZZVZ	P1	;							
Notes	P1 : 0 = 512 1 = 1024 2 = 2048									

ZZWx Commands

ZZWA Command

ZZWA Sets or reads the F5K Mixer Mic Level										
Get	ZZWA	;								
Set	ZZWA	P1	P2	P2	P2	;				
Answer	ZZWA	P1	P2	P2	P2	;				
Notes	P1 = polarity (+ or -) P2 = +000 to -128									

ZZWB Command

ZZWB Sets or reads the F5K Mixer Line In RCA Level										
Get	ZZWB	;								
Set	ZZWB	P1	P2	P2	P2	;				
Answer	ZZWB	P1	P2	P2	P2	;				
Notes	P1 = polarity (+ or -) P2 = +000 to -128									

ZZWC Command

ZZWC Sets or reads the F5K Mixer Line In Phono Level										
Get	ZZWC	;								
Set	ZZWC	P1	P2	P2	P2	;				
Answer	ZZWC	P1	P2	P2	P2	;				
Notes	P1 = polarity (+ or -) P2 = +000 to -128									

ZZWD Command

ZZWD Sets or reads the F5K Mixer Line In DB9 Level										
Get	ZZWD	;								
Set	ZZWD	P1	P2	P2	P2	;				
Answer	ZZWD	P1	P2	P2	P2	;				
Notes	P1 = polarity (+ or -) P2 = +000 to -128									

ZZWE Command

ZZWE Sets or reads the F1500/F5K Mixer Mic Select Checkbox										
Get	ZZWE	;								
Set	ZZWE	P1	;							
Answer	ZZWE	P1	;							
Notes	P1: 0 = Off, 1 = On. Note: The F1500 Mic and FlexWire mixer inputs are mutually exclusive, i.e., only one can (and must) be enabled. Use only P1 = 1 for the F1500, P1 = 0 is not valid. See ZZWH. Set one or the other.									

ZZWF Command

ZZWF Sets or reads the F5K Mixer Line In RCA Select Checkbox										
Get	ZZWF	;								
Set	ZZWF	P1	;							
Answer	ZZWF	P1	;							
Notes	P1: 0 = Off, 1 = On.									

ZZWG Command

ZZWG Sets or reads the F5K Bal Line In Select Checkbox										
Get	ZZWG	;								
Set	ZZWG	P1	;							
Answer	ZZWG	P1	;							
Notes	P1: 0 = Off, 1 = On.									

ZZWH Command

ZZWH Sets or reads the F1500/F5K FlexWire/Mixer Line In DB9 Select Checkbox										
Get	ZZWH	;								
Set	ZZWH	P1	;							
Answer	ZZWH	P1	;							
Notes	P1: 0 = Off, 1 = On. The F1500 Mic and FlexWire mixer inputs are mutually exclusive, i.e., only one can (and must) be enabled. Use only P1 = 1 for the F1500, P1 = 0 is not valid. See ZZWE. Set one or the other.									

ZZWJ Command

ZZWJ Sets or reads the F1500/F5K Mixer Input Mute All Button										
Get	ZZWJ	;								
Set	ZZWJ	P1	;							
Answer	ZZWJ	P1	;							
Notes	P1: 0 = Off, 1 = On.									

ZZWK Command

ZZWK Sets or reads the F5000C Mixer Internal Speaker Level										
Get	ZZWK	;								
Set	ZZWK	P1	P1	P1	;					
Answer	ZZWK	P1	P1	P1	;					
Notes	P1 = 128 TO 255 Only valid with FLEX5000C +									

ZZWL Command

ZZWL Sets or reads the F5K Mixer External Speaker Level										
Get	ZZWL	;								
Set	ZZWL	P1	P1	P1	;					
Answer	ZZWL	P1	P1	P1	;					
Notes	P1 = 128 TO 255									

ZZWM Command

ZZWM Sets or reads the F5K Mixer Headphone Level										
Get	ZZWM	;								
Set	ZZWM	P1	P1	P1	;					
Answer	ZZWM	P1	P1	P1	;					
Notes	P1 = 128 TO 255									

ZZWN Command

ZZWN Sets or reads the F5K Mixer Line Out RCA Level										
Get	ZZWN	;								
Set	ZZWN	P1	P1	P1	;					
Answer	ZZWN	P1	P1	P1	;					
Notes	P1 = 128 TO 255									

ZZWO Command

ZZWO Sets or reads the F5K Mixer Internal Speaker Select Checkbox										
Get	ZZWO	;								
Set	ZZWO	P1	;							
Answer	ZZWO	P1	;							
Notes	P1: 0 = Off, 1 = On. Only valid with FLEX5000C +									

ZZWP Command

ZZWP Sets or reads the F5K Mixer External Speaker Select Checkbox										
Get	ZZWP	;								
Set	ZZWP	P1	;							
Answer	ZZWP	P1	;							
Notes	P1: 0 = Off, 1 = On.									

ZZWQ Command

ZZWQ Sets or reads the F1500/F5K Mixer Headphone Select Checkbox										
Get	ZZWQ	;								
Set	ZZWQ	P1	;							
Answer	ZZWQ	P1	;							
Notes	P1: 0 = Off, 1 = On.									

ZZWR Command

ZZWR Sets or reads the F1500/F5K Mixer FlexWire/Line Out RCA Select Checkbox										
Get	ZZWR	;								
Set	ZZWR	P1	;							
Answer	ZZWR	P1	;							
Notes	P1: 0 = Off, 1 = On.									

ZZWS Command

ZZWS Sets or reads the F1500/F5K Mixer Output Mute All Button										
Get	ZZWS	;								
Set	ZZWS	P1	;							
Answer	ZZWS	P1	;							
Notes	P1: 0 = Off, 1 = On.									

ZZWT Command

ZZWT Sets or reads the F1500 Mixer Mic Level										
Get	ZZWT	;								
Set	ZZWT	P1	P1	P1	;					
Answer	ZZWT	P1	P1	P1	;					
Notes	P1 = 000 to 119									

ZZWU Command

ZZWU Sets or reads the F1500 Mixer FlexWire Input Level										
Get	ZZWU	;								
Set	ZZWU	P1	P1	P1	;					
Answer	ZZWU	P1	P1	P1	;					
Notes	P1 = 000 to 119									

ZZWV Command

ZZWV Sets or reads the F1500 Phones Out Level										
Get	ZZWV	;								
Set	ZZWV	P1	P1	P1	;					
Answer	ZZWV	P1	P1	P1	/					
Notes	P1 = 000 to 127									

ZZWW Command

ZZWW Sets or reads the F1500 Mixer FlexWire Out Level										
Get	ZZWW	;								
Set	ZZWW	P1	P1	P1	;					
Answer	ZZWW	P1	P1	P1	/					
Notes	P1 = 000 to 127									

ZZXx Commands

ZZXC Command

ZZXC Clears the XIT frequency (XIT[0])										
Set	ZZXC	;								
Notes	ZZXC is write-only.									

ZZXF Command

ZZXF Sets or reads the XIT frequency										
Get	ZZXF	;								
Set	ZZXF	P1	P2	P2	P2	P2	;			
Answer	ZZXF	P1	P2	P2	P2	P2	;			
Notes	P1 = polarity (+ or -) P2 = frequency in Hz.									

ZZXS Command

ZZXS Sets or reads the XIT enable button										
Get	ZZXS	;								
Set	ZZXS	P1	;							
Answer	ZZXS	P1	;							
Notes	P1: 0 = Off, 1 = On.									

ZZXT Command

ZZXT Sets or reads the External Control (X2TR) button status										
Get	ZZXT	;								
Set	ZZXT	P1	;							
Answer	ZZXT	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZYx Commands

ZZYA Command

ZZYA Sets or reads the VAC2 Direct IQ Checkbox										
Get	ZZYA	;								
Set	ZZYA	P1	;							
Answer	ZZYA	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZYB Command

ZZYB Sets or reads the VAC2 IQ Calibrate Checkbox										
Get	ZZYB	;								
Set	ZZYB	P1	;							
Answer	ZZYB	P1	;							
Notes	P1 = 0 for OFF, 1 for ON.									

ZZYC Command

ZZYC Sets or reads the FM Mic Gain										
Get	ZZYC	;								
Set	ZZYB	P1	P1	;						
Answer	ZZYB	P1	P1	;						
Notes	P1 = 0 to 70									

ZZZx Commands

ZZZB Command

ZZZB Clicks the Zero Beat (0 Beat) button										
Set	ZZZB	;								
Notes	Write-only.									

Kenwood Compatible Command Syntax

AG Command

AG Sets or reads the AF Gain thumbwheel control										
Get	AG	P1	;							
Set	AG	P1	P2	P2	P2	;				
Answer	AG	P1	P2	P2	P2	;				
Notes	P1 = 0 for main transceiver, 1 for future sub receiver. P2 = 000 to 255 (scaled 0 to 100 in software). A Set value of 127 = 50 on the AF Gain thumbwheel. Also see ZZAG.									

AI Command

AI Sets or reads the Auto Information function										
Get	AI	;								
Set	AI	P1	;							
Answer	AI	P1	:							
Notes	P1 = 0 for Off, 1 or more for On. When On, the radio will broadcast the VFO (A or B) frequency when changed. Option checkbox on the Setup/CAT tab must be checked to allow this command.									

BD Command

BD Moves the transceiver down one band										
Get										
Set	BD	;								
Answer										
Notes	BD is write-only									

BU Command

BU Moves the transceiver up one band										
Get										
Set	BU	;								
Answer										
Notes	BU is write-only									

CN Command

CN Sets or reads the CTCSS Tone Frequency									
Get	CN	;							
Set	CN	P1	P1	;					
Answer	CN	P1	P1	;					
Notes	P1: 01 = 67.0 21 = 131.8 41 = 206.5 02 = 69.3 22 = 136.5 42 = 210.7 03 = 71.9 23 = 141.3 43 = 218.1 04 = 74.4 24 = 146.2 44 = 225.7 05 = 77.0 25 = 151.4 45 = 229.1 06 = 79.7 26 = 156.7 46 = 233.6 07 = 82.5 27 = 159.8 47 = 241.8 08 = 85.4 28 = 162.2 48 = 250.3 09 = 88.5 29 = 165.5 49 = 254.1 10 = 91.5 30 = 167.9 11 = 94.8 31 = 171.3 12 = 97.4 32 = 173.8 13 = 100.0 33 = 177.3 14 = 103.5 34 = 179.9 15 = 107.2 35 = 183.5 16 = 110.9 36 = 186.2 17 = 114.8 37 = 189.9 18 = 188.8 38 = 192.8 19 = 123.0 39 = 199.5 20 = 127.3 40 = 203.5								

CT Command

CT Sets or reads the CTCSS Enable Button									
Get	CT	;							
Set	CT	P1	;						
Answer	CT	P1	;						
Notes	P1 = 0 for disabled, 1 for enabled.								

DN Command

DN Moves VFO A down by the increment set in step size										
Get										
Set	DN	;								
Answer										
Notes	DN is write-only									

FA Command

FA Sets or reads VFO A frequency										
Get	FA	;								
Set	FA	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Answer	FA	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Notes	P1 = frequency in Hz (11 digits). Blank digits must be 0. Example: 14,320.150 = 00014320150.									

FB Command

FB Sets or reads VFO B frequency										
Get	FB	;								
Set	FB	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Answer	FB	P1	P1	P1	P1	P1	P1	P1	P1	P1
		P1	P1	;						
Notes	P1 = frequency in Hz (11 digits). Blank digits must be 0. Example: 14,320.150 = 00014320150.									

FR Command

FR Sets or reads the transceiver receive VFO										
Get	FR	;								
Set	FR	P1	;							
Answer	FR	P1	;							
Notes	Added for third-party compatibility. P1 = 0 since the FlexRadio VFO A is always the receive VFO.									

FT Command

FT Sets or reads the transceiver transmit VFO										
Get	FT	;								
Set	FT	P1	;							
Answer	FT	P1	;							
Notes	P1 = 0 for VFO A, 1 for VFO B.									

FW Command

FW Sets or reads the DSP receive filter width (obsolete 4/4/2007, not active)										
Get	FW	;								
Set	FW	P1	P1	P1	P1	;				
Answer	FW	P1	P1	P1	P1	;				
Notes	FW only accepts FlexRadio filter widths. See ZZFI for values.									

GT Command

GT Sets or reads the AGC time constant thumbwheel control										
Get	GT	;								
Set	GT	P1	P1	P1	;					
Answer	GT	P1	P1	P1	;					
Notes	P1: Fixed = 000, Long = 001, Slow = 002, Med = 003, 004 = Fast, 005 = Custom.									

ID Command

ID Reads the transceiver ID number										
Get	ID	;								
Set										
Answer	ID	P1	P1	P1	;					
Notes	P1 defaults to 019 (TS-2000). The FlexRadio id code (900) may be selected remotely using ZZID. ID is read-only.									

IF Command

IF Reads the transceiver status										
Get	IF	;								
Set										
Answer	IF	P1	P1	P1	P1	P1	P1	P1	P1	P1
	P1	P1	P2	P2	P2	P2	P3	P3	P3	P3
	P3	P3	P4	P5	P6	P7	P7	P8	P9	P10
	P11	P12	P13	P14	P14	P15	;			
Notes	<p>P1 (11 characters) VFO A frequency in Hz. Same as FA; P2 (4 characters) Frequency step size expressed in powers of 10 (see ZZST). P3 (6 characters) RIT/XIT frequency (+nnnnn or -nnnnn). P4 (1 character) RIT status. 0 = off, 1 = on. P5 (1 character) XIT status. 0 = off, 1 = on. P6 (1 character) Channel bank number. Not used, defaulted to 0. P7 (2 characters) Channel bank number. Not used, defaulted to 00. P8 (1 character) MOX button status. 0 = off, 1 = on (transmitting). P9 (1 character) Operating mode. See MD for settings. P10 (1 character) VFO Split status. Same as FR (always 0). P11 (1 character) Scan status. Not implemented, defaulted to 0. P12 (1 character) VFO Split status. Same as FT. P13 (1 character) CTCSS tone. Not used, defaulted to 0. P14 (2 characters) More tone controls. Not used, defaulted to 00. P15 (1 character) Shift status. Not used, defaulted to 0.</p> <p>P9 will return a space if a non-Kenwood mode is selected on the FlexRadio.</p>									

KS Command

KS Sets or reads CWX CW speed										
Get	KS	;								
Set	KS	P1	P1	P1	;					
Answer	KS	P1	P1	P1	1					
Notes	P1 010 – 060 in WPM									

KY Command

KY Sends text to CWX for conversion to Morse										
Get	KY	;								
Set	KY	P1	P2	P2	P2	P2	P2	P2	P2	P2
		P2	P2	P2	P2	P2	P2	P2	P2	P2
		P2	P2	P2	P2	P2	;			
Answer	KY	P1	;							
Notes	Get: P1 0 = Character buffer available, 1 = Character buffer not available (> 72 characters in the buffer). Set: P1 = space, P2 up to 24 ASCII printing characters. Empty character positions in P2 must contain a space.									

MD Command

MD Sets or reads the transceiver operating mode										
Get	MD	;								
Set	MD	P1	;							
Answer	MD	P1	;							
Notes	P1 values: 1 = LSB 2 = USB 3 = CWU 4 = FM 5 = AM 6 = RTTY (DIGL) 7 = CWL 9 = FSK-R (DIGU)									

MG Command

MG Sets or reads the Microphone Gain thumbwheel control										
Get	MG	;								
Set	MG	P1	P1	P1	;					
Answer	MG	P1	P1	P1	;					
Notes	P1 = 000 to 100.									

MO Command

MO Sets or reads the Monitor (MON) status										
Get	MO	;								
Set	MO	P1	;							
Answer	MO	P1	;							
Notes	P1 = 0 for off, 1 for on.									

NB Command

NB Sets or reads the Noise Blanker 1 (NB1) status										
Get	NB	;								
Set	NB	P1	;							
Answer	NB	P1	;							
Notes	P1 = 0 for off, 1 for on.									

NT Command

NT Sets or reads the Automatic Notch Filter (ANF) status										
Get	NT	;								
Set	NT	P1	;							
Answer	NT	P1	;							
Notes	P1 = 0 for off, 1 for on.									

OF Commands

OF Sets or reads the FM Repeater Offset Frequency										
Get	OF	;								
Set	OF	P1	P1	P1	P1	P1	P1	P1	P1	P1;
Answer	OF	P1	P1	P1	P1	P1	P1	P1	P1	P1;
Notes	P1 = 000000000 to 999999999 Hz. 001000000 = 1.0 MHz, 000600000 = 600 KHz. Must have leading zeros.									

OS Commands

OS Sets or reads the FM Offset Direction										
Get	OS	;								
Set	OS	P1	;							
Answer	OS	P1	;							
Notes	P1: 0 = Simplex, 1 = High, 2 = Low									

PC Command

PC Sets or reads the PA Power (PWR) status										
Get	PC	;								
Set	PC	P1	P1	P1	;					
Answer	PC	P1	P1	P1	;					
Notes	P1 = 000 to 100.									

PR Command

PR Sets or reads the Speech Compressor (COMP) status OBSOLETE 2/15/2008										
Get	PR	;								
Set	PR	P1	;							
Answer	PR	P1	;							
Notes	P1 = 0 for off, 1 for on.									

PS Command

PS Sets or reads the Power Button status										
Get	PS	;								
Set	PS	P1	;							
Answer	PS	P1	;							
Notes	P1: 0 = Standby, 1 = On.									

QI Command

QI Sets the Quick Save memory (QS)										
Get										
Set	QI	;								
Answer										
Notes	QI is write-only.									

RC Command

RC Clears the RIT frequency (RIT[0])										
Get										
Set	RC	;								
Answer										
Notes	RC is write-only.									

RD Command

RD Decrements the RIT Frequency										
Get	RD	;								
Set	RD	P1	P1	P1	P1	P1	;			
Answer										
Notes	RD without parameters decrements the RIT frequency by 10 Hz in CW and 50 Hz in SSB. P1 (00000 – 99999) will set the RIT Frequency (also see ZZRF). Answer is always blank or an error message.									

RT Command

RT Sets or reads the RIT button status										
Get	RT	;								
Set	RT	P1	;							
Answer	RT	P1	;							
Notes	P1 = 0 for off, 1 for on.									

RU Command

RU Increments the RIT Frequency										
Get	RU	;								
Set	RU	P1	P1	P1	P1	P1	;			
Answer										
Notes	RD without parameters increments the RIT frequency by 10 Hz in CW and 50 Hz in SSB. P1 (00000 – 99999) will set the RIT Frequency (also see ZZRF). Answer is always blank or an error message.									

RX Command

RX Sets the transceiver to Receive mode (MOX off)										
Get										
Set	RX	;								
Answer										
Notes	RX is write-only.									

SH Command

SH Sets or reads the variable DSP Filter high frequency										
Get	SH	;								
Set	SH	P1	P1	;						
Answer	SH	P1	P1	;						
Notes	<p>SSB Modes (USB, LSB, CWU and CWL) in Hz</p> <ul style="list-style-type: none"> 00 = 1400 01 = 1600 02 = 1800 03 = 2000 04 = 2200 05 = 2400 06 = 2600 07 = 2800 08 = 3000 09 = 3400 10 = 4000 11 = 5000 <p>DSB Modes (AM, DSB, FM, DRM, SAM)</p> <ul style="list-style-type: none"> 00 = 2500 01 = 3000 02 = 4000 03 = 5000 <p>SH has no effect in RTTY, PSK, or SPEC.</p>									

SL Command

SL Sets or reads the variable DSP filter low frequency										
Get	SL	;								
Set	SL	P1	P1	;						
Answer	SL	P1	P1	;						
Notes	SSB Modes (USB, LSB, CWU and CWL) in Hz 00 = 0 01 = 50 02 = 100 03 = 200 04 = 300 05 = 400 06 = 500 07 = 600 08 = 700 09 = 800 10 = 900 11 = 1000 DSB Modes (AM, DSB, FM, DRM, SAM) 00 = 0 01 = 100 02 = 200 03 = 500 SL has no effect in RTTY, PSK, or SPEC.									

SM Command

SM Reads the S-Meter										
Get	SM	P1	;							
Set										
Answer	SM	P1	P2	P2	P2	P2	;			
Notes	P1 = 0 for main transceiver. P2 = 0000 to 0030 where 0015 = S9. Current code needs improvement for readings above S9. SM is read-only.									

SQ Command

SQ Sets or reads the Squelch (SQL) thumbwheel control										
Get	SQ	P1	;							
Set	SQ	P1	P2	P2	P2	;				
Answer	SQ	P1	P2	P2	P2	;				
Notes	P1 = 0 for main transceiver. P2 = 000 to 255 (scaled in software to 0 – 160, SQ0127; = 80 on the control.									

TX Command

TX Sets the transceiver to Transmit mode (MOX on)										
Get										
Set	TX	;								
Answer										
Notes	TX is write-only. Not totally compatible with Kenwood but is modified to maintain compatibility with third-party software.									

UP Command

UP Moves VFO A up by the increment set in step size										
Get										
Set	UP	;								
Answer										
Notes	UP is write-only									

XT Command

XT Sets or reads the XIT status										
Get	XT	;								
Set	XT	P1	;							
Answer	XT	P1	;							
Notes	P1 = 0 for off, 1 for on.									

FlexRadio CAT Command Reference Guide Revision Record

Revisions for 2006

January 3, 2006 Revisions:

Corrected typo in MD.
Changed ZZMD to reflect DIGU and DIGL.
Added ZZTH and ZZTL commands.

Revisions for 2007

February 25, 2007 Revisions

Added DN and UP commands.
Added special codes in ZZST for new console step size frequencies.
Corrected various typos.

March 20, 2007 Revisions:

Added:	ZZAR	AGC RF GAIN
	ZZBR	BCI REJECTION
	ZZCB	BREAK IN ENABLE
	ZZCD	BREAK IN DELAY
	ZZCF	SHOW CW TX FREQ
	ZZCI	IAMBIC ON/OFF
	ZZCM	CW MONITOR ON/OFF
	ZZCT	COMPANDER THRESHOLD VALUE
	ZZGE	NOISE GATE ENABLE BUTTON
	ZZGL	NOISE GATE LEVEL VALUE
	ZZSR	SPUR REDUCTION ON/OFF
	ZZTF	SHOW TX FILTER
	ZZVA	VAC ON/OFF
	ZZVE	VOX ENABLE
	ZZVG	VOX GAIN VALUE
	ZZXT	X2TR ON/OFF

Updated: ZZFI (DSP Rx Filters) to reflect current console values.
(Dictionary update only, no change to CAT code).

April 4, 2007 Revisions:

Updated:	GT	AGC Gain
	ZZIU	Filter Slider
	ZZMT	TX Meter Functions
Obsolete:	FW	DSP Filter Width

August 25, 2007 Revisions:

Updated	MD	Added MD9 for DigU
Added	KY	Send Morse
	KS	Get/Set Morse speed

September 16, 2007 Changes:

Updated	GT	Added 005 for "Custom"
	ZZIF	Removed P1 to match IF
	ZZMT	Added new meter functions
	ZZPA	Added FLEX5000 values
	ZZVS	Added IF -> V

Added:

ZZBD	Moves the bandswitch down one band
ZZBU	Moves the bandswitch up one band
ZZER	Sets or reads the RXEQ button status
ZZET	Sets or reads the TXEQ button status
ZZFA	Sets or reads VFO A
ZZFB	Sets or reads VFO B
ZZKS	Sets or reads CWX CW speed
ZZKY	Sends text to CWX for conversion to Morse
ZZMG	Sets or reads the Mic gain
ZZMO	Sets or reads the Monitor (MON) button status
ZZMS	Sets or reads the MultiRX swap checkbox status
ZZMT	Sets or reads the TX Meter mode
ZZMU	Sets or reads the MultiRX button status
ZZNA	Sets or reads Noise Blanker 1 button status
ZZNT	Sets or reads the Auto Notch Filter button status
ZZPC	Sets or reads the Drive level
ZZPD	Sets the Display Pan Center button
ZZPK	Sets or reads the Compressor (COMP) button status

ZZPL	Sets or reads the Compressor Threshold
ZZPA	Sets or reads the Preamp gain
ZZPO	Sets or reads the Display Peak button status
ZZPS	Sets or reads the Power button status
ZZPZ	Sets or reads the Display Zoom buttons
ZZQS	Saves the quick save memory value
ZZRC	Clears the RIT frequency
ZZRT	Sets or reads the RIT button status
ZZSA	Moves VFO A down one Tune Step
ZZSB	Moves VFO A up one Tune Step
ZZSD	Moves the mouse wheel tuning step down
ZZSU	Moves the mouse wheel tuning step up
ZZTP	Sets or reads the TX Profile
ZZTX	Sets or reads the MOX button status
ZZXS	Sets or reads the XIT button status
ZZZB	Zero beats the current signal

September 26, 2007 Changes:

Added	ZZFH	Set TX Filter High
	ZZFL	Set TX Filter Low

Corrected minor typos.

October 18, 2007 Changes:

Added	ZZHA	Sets/reads Audio Buffer Size
	ZZHR	Sets/reads DSP RX Buffer Size
	ZZHT	Sets/reads DSP TX Buffer Size

October 20, 2007 Changes:

Added:	ZZFM	Reads the FlexRadio Model Number.
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October 23, 2007 Changes:

Added	ZZEA	Reads or sets the RX EQ
	ZZEB	Reads or sets the TX EQ

October 25, 2007 Changes:

Corrected duplicate. ZZFL/ZZFH now read DSP Filter Hi/Lo

ZZTL/ZZTH still read TX Filter Hi/Lo

October 31, 2007 Changes:

Added	ZZVB	Reads or sets the VAC RX Gain
	ZZVC	Reads or sets the VAC TX Gain
	ZZVD	Reads or sets the VAC Sample Rate
	ZZVF	Reads or sets the VAC Stereo button

November 21, 2007 Changes:

Added:	ZZUA	Reads the XVTR Band Button Names
Changed:	ZZBS	Added VHF XVTR band buttons to command.

November 29, 2007 Changes:

Added:	ZZOA	Reads or sets the antenna connected to RX1
	ZZOB	Reads or sets the antenna connected to RX2
	ZZOC	Reads or sets the antenna connected to the transmitter
	ZZOD	Reads or sets the current antenna mode
	ZZOE	Reads or sets the RX1 Loop
	ZZOF	Reads or sets the RCA TX relay jacks
	ZZMN	Reads the DSP filter names and values

December 4, 2007 Changes:

Added	AI	Reads or sets the Auto Information function
	ZZAI	Same as above

December 12, 2007 Changes:

Modified:	KY	KY1 represents >72 characters in the buffer
	ZZKY	Added KY2: buffer empty and all chars sent

Revisions for 2008

January 16, 2008 Changes:

Added ZZDX Sets or reads the Phone DX button status

February 13, 2008 Changes:

Added ZZWA Sets or reads the Mixer Mic Level
 ZZWB Sets or reads the Mixer Line In RCA Level
 ZZWC Sets or reads the Mixer Line In Phono Level
 ZZWD Sets or reads the Mixer Line In DB9 Level
 ZZWE Sets or reads the Mixer Mic Select Checkbox
 ZZWF Sets or reads the Mixer Line In RCA Select Checkbox
 ZZWG Sets or reads the Mixer Line In Phono Select Checkbox
 ZZWH Sets or reads the Mixer Line In DB9 Select Checkbox
 ZZWJ Sets or reads the Mixer Input Mute All Button
 ZZWK Sets or reads the Mixer Internal Speaker Level
 ZZWL Sets or reads the Mixer External Speaker Level
 ZZWM Sets or reads the Mixer Headphone Level
 ZZWN Sets or reads the Mixer Line Out RCA Level
 ZZWO Sets or reads the Mixer Internal Speaker Select Checkbox
 ZZWP Sets or reads the Mixer External Speaker Select Checkbox
 ZZWQ Sets or reads the Mixer Headphone Select Checkbox
 ZZWR Sets or reads the Mixer Line Out RCA Select Checkbox
 ZZWS Sets or reads the Mixer Output Mute All Button

February 15, 2008 Changes:

Obsolete: PR Sets or reads the Speech Compressor status
 ZZPK Sets or reads the Speech Compressor status
 ZZPL Sets or reads the Speech Compressor threshold

March 30, 2008 Changes:

Added: ZZTS Reads the Flex5000 Temperature Sensor
 ZZRA Sets or reads the RTTY Offset Enable VFO A
 ZZRB Sets or reads the RTTY Offset Enable VFO B
 ZZRH Sets or reads the RTTY DIGH Offset Frequency
 ZZRL Sets or reads the RTTY DIGL Offset Frequency

April 25, 2008 Changes:

Added: ZZTI Transmit Inhibit

April 28, 2008 Changes:

Corrected ZZWA, ZZWB, ZZWC, ZZWD Mixer Input Levels.

July 5, 2008 Changes:

Added: ZZHU Reads or sets the DSP Buffer CW RX Size
 ZZHV Reads or sets the DSP Buffer CW TX Size
 ZZHW Reads or sets the DSP Buffer Digital RX Size
 ZZHX Reads or sets the DSP Buffer Digital TX Size
 RD Decrements RIT
 RU Increments RIT
 ZZRD Decrements RIT
 ZZRU Increments RIT

Changed: ZZHR Reads or sets the DSP Buffer Phone RX Size
 ZZHT Reads or sets the DSP Buffer Phone TX Size

December 20, 2008 Changes

Corrected ZZFL Was: High, Is: Low

Changed: ZZOA Reads or sets RX1 Antenna
 ZZOB Reads or sets RX2 Antenna
 ZZOC Reads or sets TX Antenna

Added: ZZOG Reads or sets TX Relay Delay Enable
 ZZOH Reads or sets TX Relay Delays
 ZZRS Reads or sets the RX2 Button

January 30, 2008 Changes

Deleted: ZZPK Obsolete Speech Processor command
 ZZPL Obsolete Speech Processor command

Added: ZZFX Sends FlexWire single data byte command
 ZZFY Sends FlexWire double data byte command
 ZZOJ Reads or sets the Antenna Lock checkbox
 ZZTO Sets or reads TUN Power (missing in Dict. Only)
 ZZVH Sets or reads I/Q to VAC checkbox (missing Dict. Only)

Revisions for 2009

March 20, 2009 Changes

Added:	ZZFV	Reads FlexWire single data byte
	ZZFW	Reads FlexWire double data byte

June 19, 2009 Changes

Added:	ZZSS	Stops CWX sending
Modified:	ZZPA	Added FLEX3000

December 23, 2009 Changes

Added	ZZSW	Reads or sets VFO A TX/VFO B TX Buttons
Modified	ZZSM	Added index "1" for RX2 S-Meter

January 3, 2010 Changes

Added	ZZSM	Added note concerning AI command
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Revisions for 2010

January 11, 2010 Changes

Added	ZZSG	Move VFO B one tune step down
	ZZSH	Move VFO B one tune step up

February 3, 2010 Changes

Added	ZZVI	Set or read the VAC input cable
	ZZVM	Set or read the VAC driver
	ZZVO	Set or read the VAC output cable

February 24, 2010 Changes

Added	ZZRV	Reads the primary input voltage
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April 1, 2010 Changes

Added	ZZBY	Closes the console
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April 5, 2010 Changes

Added	ZZAC	Sets or reads the Step Size
	ZZAD	Moves VFO A down by a selected step size
	ZZAU	Moves VFO A up by a selected step size
	ZZBM	Moves VFO B down by a selected step size
	ZZBP	Moves VFO B up by a selected step size
Deprecated	ZZST	

April 11, 2010 Changes

Modified	ZZFM	Added FLEX3000 and FLEX1500 to models.
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April 22, 2010 Changes

Modified	ZZRM	Added FnK models, removed Peak Power.
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April 29, 2010 Changes

Added	ZZKM	Sends a CWX macro.
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August 20, 2010 Changes

Added	ZZDU	Status Word
	ZZBT	RX2 Band
	ZZFJ	RX2 DSP RX Filter
	ZZME	RX2 Mode

September 21, 2010 Changes

Added: ZZSN Reads the radio serial number
 ZZVJ Sets/Reads the IQ to VAC use RX2 checkbox
 ZZBA Moves the RX2 bandswitch down one band
 ZZBB Moves the RX2 bandswitch up one band
 ZZTV Sets/Reads the TX VFO frequency when RX2 enabled

Changed: Corrected several typos

October 1, 2010 Changes

Changed: ZZPA Added values for FLEX1500

October 17, 2010 Changes

Added: ZZTM Set/Read the AF TX Monitor
 Changed: ZZVN Extended length to 12 characters

December 7, 2010 Changes

Changed: ZZOA Extended to cover the FLEX1500
 ZZOC Extended to cover the FLEX1500 “
 ZZOD Extended to cover the FLEX1500
 ZZOF Extended to cover the FLEX1500
 ZZOG Extended to cover the FLEX1500
 ZZOH Extended to cover the FLEX1500
 ZZOJ Extended to cover the FLEX1500

December 26, 2010 Changes:

Changed: ZZWE Extended to cover the FLEX1500
 ZZWH Extended to cover the FLEX1500
 ZZWJ Extended to cover the FLEX1500
 ZZWQ Extended to cover the FLEX1500
 ZZWR Extended to cover the FLEX1500
 ZZWS Extended to cover the FLEX1500
 ZZWT Added for the FLEX1500 Mixer
 ZZWU Added for the FLEX1500 Mixer
 ZZWV Added for the FLEX1500 Mixer
 ZZWW Added for the FLEX1500 Mixer

Revisions for 2011

February 3, 2011 Changes:

Changed: ZZSM Clarified explanation

February 8, 2011 Changes:

Added: ZZOL Sets or reads the DigL Click Tune Offset
 ZZOU Sets or reads the DigU Click Tune Offset
 ZZSY Sets or reads the VFO Sync Button

February 16, 2011 Changes:

Changed ZZDU Fixed typo P8 should reference ZZTS

February 24, 2011 Changes:

Added: ZZDE Sets or reads the Diversity Form Enable Button
 ZZDF Opens or closes the Diversity Form
 ZZNC Sets or reads the RX2 NB Button
 ZZND Sets or reads the RX2 NB2 Button
 ZZPB Sets or reads the RX2 Preamp Button

February 27, 2011 Changes:

Added ZZAS Sets or reads the RX2 AGC-T control

March 6, 2011 Changes:

Added ZZPY Sets or reads the Display Zoom slider

April 12, 2011 Changes:

Added ZZDY Sets or reads the Phone DX Level
 ZZLA Sets or reads RX0 Gain
 ZZLB Sets or reads RX0 Stereo Balance
 ZZLC Sets or reads RX1 Gain
 ZZLC Sets or reads RX1 Stereo Balance
 Modified ZZDM Added 2.0 Panadapter modes
 ZZTM Corrected typo

May 1, 2011 Changes:

Added ZZPE Sets or reads the Display Pan Position

May 5, 2011 Changes:

Added ZZKO Opens or closes the CWX Form

June 26, 2011 Changes:

Added ZZLE Sets or reads RX2 Audio Gain
 ZZLF Sets or reads RX2 Stereo Balance

July 1, 2011 Changes:

Modified	ZZDE	Changed nomenclature to Enhanced Signal Clarity
	ZZDF	Changed nomenclature to Enhanced Signal Clarity

July 8, 2011 Changes:

Modified	ZZOA	Corrected typo
	ZZFI	Deleted FMN mode
	ZZFJ	Delete FMN mode, DSP filter selections removed from console
		Replaced all instances of FMN with FM

July 13, 2011 Changes:

Added	ZZEM	Enable/Disable CAT verbose error messages
	ZZIO	Read the installed options

Modified:

Added verbose error message code to ZZAS, ZZBA, ZZBB, ZZBT, ZZDE, ZZDF, ZZFJ, ZZLE, ZZME, ZZNC, ZZND, ZZOA, ZZOB, ZZOC, ZZOD, ZZOE, ZZOF, ZZOG, ZZOH, ZZOJ, ZZPB, ZZRS, ZZRV, ZZSN, ZZTS, ZZTV, ZZWA, ZZWB, ZZWC, ZZWD, ZZWE, ZZWF, ZZWG, ZZWH, ZZWJ, ZZWK, ZZWL, ZZWM, ZZWN, ZZWO, ZZWP, ZZWQ, ZZWR, ZZWS, ZZWT, ZZWU, ZZWV, ZZWW

July 16, 2011 Changes:

Added:	ZZOS	Sets or reads the Repeater Offset Direction
	ZZOT	Sets or reads the Repeater Offset Frequency
	ZZTA	Sets or reads the CTCSS Enable button
	ZZTB	Sets or reads the CTCSS Frequency
	ZZFD	Sets or reads the FM Deviation button

August 1, 2001 Changes:

Added:	ZZMV	Reads the number of memory channels programmed
	ZZMW	Deletes a memory channel
	ZZMX	Restores a memory channel
	ZZMY	Saves configuration to a new memory channel
	ZZMZ	Saves configuration to an existing memory channel

August 9, 2011 Changes:

Added:	ZZML	Gets the list of DSP modes and indexes
	ZZSV	Sets or reads the RX2 Squelch button
	ZZSZ	Sets or reads the RX2 Squelch Threshold

August 16, 2011 Changes:

Modified: Corrected typo in ZZKM
Corrected range in ZZKS
Corrected FM squelch range ZZSQ/ZZSX

August 23, 2011 Changes:

Modified: Fixed name length bug in ZZMN

August 26, 2011 Changes:

Modified Corrected typo in ZZQS
Corrected range in ZZVB and ZZVC

Added ZZDN Reads or sets the Waterfall Lo value
ZZDO Reads or sets the Waterfall Hi value
ZZDP Reads or sets the Spectrum Grid Max value
ZZDQ Reads or sets the Spectrum Grid Min value
ZZDR Reads or sets the Spectrum Grid Step value
ZZMB Reads or sets the RX2 mute status

August 31, 2011 Changes:

Modified ZZMX Corrected typos
ZZMY Corrected typo

September 1, 2011 Changes:

Modified Corrected typos in MO, NB, NT, PR, RT, XT

October 6, 2011 Changes:

Added ZZLG Reads or sets the AutoMuteRX1onVFOBTX checkbox
ZZLH Reads or sets the AutoMuteRX2onVFOATX checkbox

October 16 2011 Changes:

Added ZZOV Reads or sets the ATU Enable Button
ZZOW Reads or sets the ATU Bypass Button

Modified Corrected description for ZZWG

January 25, 2012 Changes:

Modified All VAC1 commands to reference Setup Form

Added: ZZVP, ZZVY Additional VAC1 controls

Added ZZVK, ZZVQ, ZZVR, ZZVT, ZZVU, ZZVV,
ZZVW, ZZVX, ZZVZ, ZZYA, and ZZYB for VAC2 control

Added: ZZYC, FM Mic Gain



May 10, 2012 Changes:

Modified ZZSZ should be ZZSX in Functional Groups and Command Ref

Added: ZZSZ Syncs VFO A or B to the current step size.