FlexRadio Systems
Software Defined Radios

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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	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. Returns V00 (2M) and V01 (70cm) if VU installed.									

ZZBT Command

ZZBT	**Sets or reads the RX2 Band Switch**									
Get	ZZBT	;								
Set	ZZBT	P1	P1	P1	;					
Answer	ZZBT	P1	P1	P1	;					
Notes	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. Returns V00 (2M) and V01 (70cm) if VU installed.									

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	ZZBY 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 Compander (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 Compander 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	ZZD0	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
	P33	P33	P33	P33	P33					
Notes	P values:									

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P values:
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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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.

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									

ZZFx 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 Selected RX1 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	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 These are the default values for the receive filters. If you customize your filters, your custom values will be displayed.										

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 Selected RX1 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.									

ZZFR Command

ZZFR Sets or reads Selected RX2 DSP Filter Low									
Get	ZZFR	;							
Set	ZZFR	P1	P1	P1	P1	P1	;		
Answer	ZZFR	P1	P1	P1	P1	P1	;		
Notes	P1 = frequency in Hz -9999 to 09999.								

ZZFS Command

ZZFS Sets or reads Selected RX2 DSP Filter Low									
Get	ZZFS	;							
Set	ZZFS	P1	P1	P1	P1	P1	;		
Answer	ZZFS	P1	P1	P1	P1	P1	;		
Notes	P1 = frequency in Hz -9999 to 09999.								

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).										

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ZZIF Command

ZZIF	Reads the FlexRadio status								
Get	ZZIF	;							
Set									
Answer	ZZIF	P1	P1	P1	P1	P1	P1	P1	P1
	P1	P1	P2	P2	P2	P2	P3	P3	P3
	P3	P3	P4	P5	P6	P7	P7	P8	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								

ZZKV Command (add: PowerSDR ke9ns v2.8.0.267)

ZZKV	Sends "Voice Keyer" Macros 3-6 (Reply, CQCQ, VK1, VK2) in phone Sends "CWX" macros 3-6 (CWX 3, CWX 4, CWX 5, CWX 6) in CW mode								
Set	ZZKV	P1	;						
Notes	P1 = 1 to 10. ZZKV is write only P1 = 3 to 6: play macros (either Voice keyer or CWX) P1=4: Macro 4 will auto repeat if the repeat timer > 0.0 seconds Send command a 2nd time or key radio to Stop immediately P1=7: Send FM 1750 repeater tone (FM mode only) P1=8: Toggle Enable Quindar Tones P1=9: Move panafall separation UP P1=10: Move panafall separation down								

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		
		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	P1 Values: The two-digit mode code (See ZZMD) 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.									

ZZMO Command

ZZMO	**Sets or reads the Monitor (MON) status**									
Get	ZZMO	;								
Set	ZZMO	P1	;							
Answer	ZZMO	P1	;							
Notes	P1: 0 = OFF, 1=MONpr (hear audio coming into radio) , P1: 2= MONps (Flex-3000/5000 only hear what is sent to transmitter).									

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.									

ZZMWCommand

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	ZZ0B	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	ZZ0C	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	ZZ0D	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	ZZ0E	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	ZZ0F	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	ZZ0G	P1	P2	P3	;						
Notes	F5K P1 = TX1, P2 = TX2, P3 = TX3. 1 = Enabled, 0 = Disabled, all positions must be represented: ZZOG010 = TX2 enabled, TX1 and TX2 disabled. ZZOG111 = all enabled, ZZOG000 = all disabled. F1500 P1: FlexWire PTT Out Delay 0 = disabled, 1 = enabled. Command must be sent with three characters: ZZOG100 or ZZOG000.										

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	ZZ0H	P1	P2	P2	P2	P2	;				
Notes	F5K P1 = TX relay number, P2 = delay in milliseconds. Example: ZZOH20100 Sets relay 2 to 100 ms. Delay range must be 0000 to 9999. F1500 P1 = 1, P2 same as F5K.										

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	ZZ0S	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;
Answer	ZZ0T	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	ZZ0L	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	ZZ0U	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	ZZ0V	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 Preamplifier (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 = Pre1[1] 2 = +10 3 = High 3 = Pre2[1] 3 = +20 4 = +30 [1] If TRX board less than Rev G, both Pre1 and Pre2 available above 2 MHz, neither available below 2 MHz. If TRX board Rev G or higher, neither available below 7 MHZ, Pre1 available above 7 MHz but below 13 MHz, and both available above 13 MHz.									

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	ZZPZ	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	ZZSA	;							
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	;				
Answer	ZZTO	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	P3	P4	P4	P4	P4
	P4	P5	P5	P5	P5	P5	P6	P6	P6	P6
	P6	P7	P7	P7	P7	P7	P8	P8	P8	P8
	P8	P9	P9	P9	P9	P9	P10	P10	P10	P10
	P10	P11	P11	P11	P11	P11	P12	P12	P12	P12
	P12	P13	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

ZZVY   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

ZZYB 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.									

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 (ZZSW)								
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 (ZZGT)								
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 (To set use ZZID)								
Get	ID	;							
Set									
Answer	ID	P1	P1	P1	;				
Notes	P1 defaults to 019 (TS-2000). ID is read-only. 013(TS-50s), 900(SDR-1000) 020(TS-480)								

IF Command

IF	Reads the transceiver status (uses ZZFA or ZZFB)								
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	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. P9 will return a space if a non-Kenwood mode is selected on the FlexRadio.									

KS Command

KS Sets or reads CWX CW speed (ZZKS)										
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	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 (ZZMG)										
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	0S	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	Reads the Speech Compressor (COMP) status (Non-functional)									
Get	PR	;								
Answer	PR	P1	;							
Notes	P1 = 0 For HRD compatibility only, does not change radio.									

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	SSB Modes (USB, LSB, CWU, CWL) in Hz 　　00 = 1400 　　01 = 1600 　　02 = 1800 　　03 = 2000 　　04 = 2200 　　05 = 2400 　　06 = 2600 　　07 = 2800 　　08 = 3000 　　09 = 3400 　　10 = 4000 　　11 = 5000 DSB Modes (AM, DSB, FM, DRM, SAM, DIGU, DIGL) 　　00 = 2500 　　01 = 3000 　　02 = 4000 　　03 = 5000 SH has no effect in RTTY, PSK, or SPEC.									

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, DIGL, DIGU)
	    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 (ZZSB)								
Get									
Set	UP	;							
Answer									
Notes	UP is write-only								

XT Command

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