XIEGU RADIO CI-V REFERENCE

Table 1

CMD	Sub-CMD	DATA	DESCRIPTION	RIGS(*Note 1*)
0x00	-	See *Table 2-1*	Set acvive VFO frequency	
0x01	-	See *Table 2-2*	Set acvive VFO mode	
0x02	-	See *Table 2-3*	Get frequency edge	
0x03	-	See *Table 2-1*	Get active VFO frequency	
0x04	-	See *Table 2-2*	Get active VFO mode	
0x05	-	See *Table 2-1*	Set acvive VFO frequency	
0x06	-	See *Table 2-2*	Set acvive VFO mode	
0x07	-	-	Select the VFO mode	
	0x00	-	Select VFO-A	
	0x01	-	Select VFO-B	
	0xb0	-	Swap VFO-A/B	
0x0F	0x00	-	SPLT OFF	
	0x01	-	SPLT ON	
0x11	X	-	Toggle ATT(X=don't care)	
	-	-	Get ATT	
0x14	0x01	-	Get AF level(Rx volum,return values are in BCD code form, 0~100% map to 0000~0255,same below)	X6100,G90
	0x02	-	Get RF gain	X6100,G90
	0x03	-	Get SQL level	X6100
	0x06	-	Get NR level	X6100,G90
	0x09	-	Get CW sidetone frequency	X6100,G90
	0x0A	-	Get Tx power	X6100,G90
	0x0B	-	Get Mic gain	X6100,G90
	0x0C	-	Get CW key speed	X6100,G90
	0x0D	-	Get DNF center frequency	X6100
	0x0E	-	Get COMP level	X6100
	0x0F	-	Get QSK time	X6100,G90
	0x12	-	Get NB level	X6100,G90
	0x15	-	Get MONI level	X6100,G90
	0x16	-	Get VOX gain	X6100
	0x17	-	Get ANTI-VOX gain	X6100,G90
	0x19	-	Get LCD backlight level	X6100,G90
	Others	-	Always return 0000(in BCD code)	
	0x01	BCD code	Set AF level(0000~0255 map to 0~100%,same below)	X6100,G90
	0x02	BCD code	Set RF gain	X6100
	0x03	BCD code	Set SQL level	X6100
	0x06	BCD code	Set NR level	X6100
	0x09	BCD code	Set CW sidetone frequency	X6100,G90
	0x0A	BCD code	Set Tx power	X6100,G90
	0x0B	BCD code	Set Mic gain	X6100,G90
	0x0C	BCD code	Set CW key speed	X6100,G90
	0x0D	BCD code	Set DNF center frequency	X6100
	0x0E	BCD code	Set COMP level	X6100
	0x0F	BCD code	Set QSK time	X6100,G90
	0x12	BCD code	Set NB level	X6100,G90
	0x15	BCD code	Set MONI level	X6100
	0x16	BCD code	Set VOX gain	X6100,G90
	0x17	BCD code	Set ANTI-VOX gain	X6100,G90
	0x19	BCD code	Set LCD backlight level	X6100
0x15	0x01	-	Get SQL Gate,00=Close,01=Open	
	0x02	-	Get S-Meter, 0000~0255 BCD code	
	0x11	-	Get Power-Meter, 0000~0255 BCD code	
	0x12	-	Get SWR-Meter, 0000~0255 BCD code	
	0x13	-	Get ALC-Meter, 0000~0255 BCD code	
	0x15	-	Get VOLT-Meter, 0000~0255 BCD code	
0x16	0x02	-	Get PRE switch	
	0x12	-	Get AGC mode	
	0x22	-	Get NB switch	
	0x40	-	Get NR switch	X6100
	0x41	-	Get DNF switch	X6100
	0x44	-	Get COMP switch	X6100
	0x46	-	Get VOX switch	X6100
	0x50	-	Get dail encoder lock status	
	0x02	0x00	PRE OFF	
		0x01 or 0x02	PRE ON	
	0x12	0x00	AGC OFF	
		0x01	AGC Fast	
		0x02	AGC middle	
		0x03	AGC slow	
	0x22	0x00	NB OFF	X6100,G90
		0x01	NB ON	X6100,G90
	0x40	0x00	NR OFF	X6100
		0x01	NR ON	
	0x41	0x00	DNF OFF	X6100

		0x01	DNF ON	
	0x44	0x00	COMP OFF	X6100,G90
		0x01	COMP ON	X6100,G90
	0x46	0x00	VOX OFF	X6100
		0x01	VOX ON	
	0x50	0x00	Dail encoder unlock	X6100
		0x01	Dail encoder lock	X6100
0x19	0x00	-	Read Transceiver ID	
0x1A	0x01	-	Get band stacking register, See *Table 2-4*	X6100
	0x03	-	Get IF filter width, See *Table 2-5*	
	0x05	0x00,0x62 (2 bytes)	Get LOCK status	X6100
	0x06	-	Get data mode switch and filter group	*Note 3*
	0x01		Set band stacking register, respond data format see *Table 2-4*	X6100
		D0,D1 (2 bytes)		
		D0	1~10, 160m~6m band, other: invalid	
		D1	Not use	
	0x03	D0 (1 byte)	Set IF filter, Not use (D0 could be any value)	
	0x05	0x00,0x62,D0 (3 bytes)	Set LOCK status	X6100
		D0=0x00	Unlock	
		D0=others	Lock	
	0x06	D0,D1 (2 bytes)	Set data mode switch and filter group	
		D0	data mode switch, see *Data mode & Filter Group Tips*	
		D1	filter group, see *Data mode & Filter Group Tips*	
0x1C	-	-	Get PTT switch (Actually get the T/RX status)	*Note 4*
	0x00	0x00	Release PTT	
		0x01	Press PTT	
	0x01	0x00	ATU OFF	
		0x01	ATU ON	
		0x02	ATU start tuning	
0x1d	0x19	-	Get XIEGU radio ID, See *Table 2-7*	
0x21	0x00	See *Table 2-6*	Set/Get RIT frequency	X6100,G90
	0x01	0x00/0x01	Set/Get RIT setting	X6100,G90
	0x02	0x00/0x01	Set/Get XIT setting	X6100,G90
0x25	-	-	Get VFO frequency	
	-	D0~D5 (6 bytes)	Set foreground/background VFO frequency	
		D0	0x00: Foreground VFO	
			0x01: Background VFO	
		D1~D5	VFO frequency, See *Table 2-1*	
0x26	-	D0~D3 (4 bytes)	Set/Get VFO mode and filter	
		D0	VFO index	
			0: Foreground VFO	
			other: Background VFO	
		D1	Operating mode, See *Table 2-2*	
		D2	Data mode switch	
			0: OFF	
			other: ON	
		D3	filter group, see *Data mode & Filter Group Tips*	

Table 2

Table 2-1

BCD frequency		
Byte0	D[7:4]	10Hz
	D[3:0]	1Hz
Byte1	D[7:4]	1kHz
	D[3:0]	100Hz
Byte2	D[7:4]	100kHz
	D[3:0]	10kHz
Byte3	D[7:4]	10MHz
	D[3:0]	1MHz
Byte4	D[7:4]	1GHz
	D[3:0]	100MHz

Table 2-2

Mode	
DATA	MODE
0x00	LSB
0x01	USB
0x02	AM
0x03	CW
0x05	NFM
0x07	CWR

Table 2-3

BDC frequency edge		
Lower edge	Separator	Higher edge

BCD frequency	'-'	BCD frequency

Table 2-4

Get band stacking register data format, D0~D1 (2 bytes)		

D0: Band index

Value	HAM Band	Description
0	NO	
1	YES	160m
2	NO	
3	YES	80/75m
4	NO	
5	YES	60m
6	NO	
7	YES	40m
8	NO	
9	YES	30m
10	NO	
11	YES	20m
12	NO	
13	YES	17m
14	NO	
15	YES	15m
16	NO	
17	YES	12m
18	NO	
19	YES	10m
20	NO	
21	YES	6m
22	NO	

D1: Spectrum Display Format

Value	Description
0x02	Center mode
others	Don't care

Set band stacking register respond data format, D0~D39 (40 bytes)		
OFFSET	BYTE	Description
0	1	Data mode switch
1	1	Duplex and Tone setting
2	1	Digital squelch setting
3	3	Repeater tone frequency setting
6	3	Repeater tone frequency setting
9	3	DTCS code setting
12	1	DV Digital code squelch setting
13	3	Duplex offset frequency setting
16	8	UR (Destination) call sign setting (always X6100)
24	8	R1 (Access repeater) call sign setting (always empty)
32	8	R2 (Gateway/Link repeater) call sign setting (always empty)

Table 2-5

IF Filter bandwidth			
MODE	VALUE	BANDWIDTH(Hz)	STEP(Hz)
SSB/CW	0~9	50~500	50
SSB/CW	10~40	600~3600	100
RTTY	10~31	600~2700	100
AM/NFM	0~49	200~10000	200

Table 2-6

RIT frequency		
Byte0	D[7:4]	10Hz
	D[3:0]	1Hz
Byte1	D[7:4]	1kHz
	D[3:0]	100Hz
Byte2	0x00	+ (plus)
	0x01	- (minus)

Table 2-7

XIEGU Radio ID	
ID CODE	RADIO
0x0090	G90/G90S
0x0106	G106/G106C
0x6100	X6100
Others	To be done

Note: Old version of FW may not support

Note & Tips

Note1: Blank for all XIEGU radios

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Note2: Some command need higher version of FW, make sure FW is up to date
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Note3: G90/G106C responds 2 bytes of data, D0=data mode switch, D1 always 0
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Note4: Command 0x1C (1 byte, get T/RX status)
        radio respond 1 byte data, 0=RX status, others=TX status
        G90 (FW<=1.79b03) does not support this 1 byte command!!
        -------------------------------------------------------------
        Command 0x1C 0x00 0x00/0x01 (3 bytes, set T/RX)
        radio respond ACK (not the T/RX status!)
        -------------------------------------------------------------
        Command 0x1C 0x00 (2 bytes, get T/RX status)
        radio respond the T/RX status
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Data mode & Filter Group Tips
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Use command 0x26 to turn ON/OFF data mode
Example: Set selected VFO to LSB, Digital mode, filter1
26 00 00 01 01
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