

*The New Horizon*

*NEW WIDE BAND ALL MODE RECEIVER*

# AR5000

RS-232C Command List



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## RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting ... [CR·LF]	NOTE
	CMD/HEADER	R/W		
-Rx-FREQ	Vn	W	Vxnnnnnnnn(Hz)···Vx=VA/VB/VC/VD/VE	-kHz indicated below 30MHz. -FREQSETTING
	RF...	W	Vxnn.nn(MHz) RFnnnnnnnn(Hz) RFnn.nn(MHz)	
	RX [CR]	R	The present receiving mode is shown.	
		R	MS MXnnn MPn GAn RFnnnnnnnnn STnnnnn AUn MDn ATn TMxxxxxxx	-M-SCAN MODE
		R	SM MXnnn MPn GAn RFnnnnnnnnn STnnnnn AUn MDn ATn TMxxxxxxx	-MSEL MODE
		R	MR MXnnn MPn GAn RFnnnnnnnnn STnnnnn AUn MDn ATn TMxxxxxxx	-MEM MANUAL MODE
	R	SSn RFnnnnnnnnn STnnnnn AUn MDn ATn TTxxxxxxx	-SEARCH MODE	
	R	VS Vn RFnnnnnnnnn STnnnnn AUn MDn ATn TTxxxxxxx	-VFO-SEARCH MODE	
	R	Vn RFnnnnnnnnn STnnnnn AUn MDn ATn(Vn···n=A/B/C/D/E)	-VFO-MODE	
	MSn [CR]	W	n=0-9···DEFAULT=CURRENT MEM-BANK	-M-SCAN MODE
	SM [CR]	W		-MSEL MODE
	MRnn [CR]	W	m=0-9/nn=00-99···DEFAULT=CURRENT MEM CH #	-MEM MANUAL MODE
	SSnn [CR]	W	n=00-19···DEFAULT=CURRENT SEARCH-BANK	-SEARCH MODE
	VSx [CR]	W	x=A,B,C,D,E···DEFAULT=CURRENT VFO	-VFO-SEARCH MODE
	Vx [CR]	W	x=A,B,C,D,E	-VFO-MODE

-AGC-LEVEL	LM...	R	LMnn···nn=00-FF(AGC-LEVEL is transmitted(256 steps). SQ-ON) LM%nn···nn=00-FF(AGC-LEVEL is transmitted(256 steps). SQ-OFF)	←When SQ is open. ←When SQ is close(w/%)
-AGC-LEVEL	LC...	W	LCn··· AGC-LEVEL SEND=OFF···n=0 AGC-LEVEL SEND=ON···n=1	-n=1 -AGC-LEVEL is transmitted when SQ-ON.
	LC...	R	LCnn···nn=00-FF(AGC-LEVEL is transmitted(256 steps). SQ-ON) LCnn RFnnnnnnnnn	-BANK#(MXn/SRn)

I

## RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting. ...[CR·LF]	NOTE
	CMD/HEADER	R/W		
-Δ(1EH)		W	UP...FREQ or CH-UP	
-▽(1FH)		W	DOWN...FREQ or CH-DOWN	
-EXIT	EX [CR]	W	EX...OFF RS-232C	
-POWER OFF	QP [CR]	W	QP...POWER OFF	
-VERSION INFO	VR	R	VER-nn...VERSION INFORMATION	-EEPROM ADDRESS=0EFF0-0EFF1···nn.nn
-X	X	W	X...POWER-ON	-With either key, turn on.
-REMOTE SQ-DATA	RQ...	W	RQnnn···nnn=0-255	
	RQ [CR]	R	RQ nnn or RQ+nnn(+...SQ-ON)	
VL... VL [CR]	VL...	W	VLnnn···nnn=0-255	
	VL [CR]	R	VLnnn	
-CW-PITCH	CW...	W	CWn···n=0-7 400Hz···n=0 500···n=1 600···n=2 700···n=3 800···n=4 900···n=5 1000···n=6 1100···n=7	
		R	CWn	

## RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING	NOTE
	CMD/HEADER	R/W		
-CYBER-SCAN ON/OFF	DS...	W	DSn... CYBER-SCAN OFF...n=0 CYBER-SCAN ON...n=1	
	DS [CR]	R	DSn	
-AUTO ON/OFF	AU...	W	AUn AUTO-OFF...n=0 AUTO-ON...n=1	- The following item is set up automatically when AUTO-ON. STEP, MODE, BW, LPF, HPF, DE-EMPHASIS
	AU [CR]	R	AUn	
-MODE	MD...	W	MDn FM...n=0 AM...n=1 LSB...n=2 USB...n=3 CW...n=4	-LPF, HPF, DE-EMPHASIS matched to BW is set up automatically. -AUTO-MODE is cleared automatically. -AGC-CONTROL is set up automatically.
	MD [CR]	R	AUn MDn	
-STEP-FREQ	ST...	W	STnnnnnn / + (Hz)...[+] ==>STEP-ADJ ON STnn.nn / + (KHz)...[+] ==>STEP-ADJ ON ST + ...[+] ==>STEP-ADJ ON/OFF	-AUTO-MODE is cleared automatically. -STP-ADJ ON...[+]
	ST [CR]	R	STnnnnnx(Hz)...X=+(STEP-ADJ ON)	

3

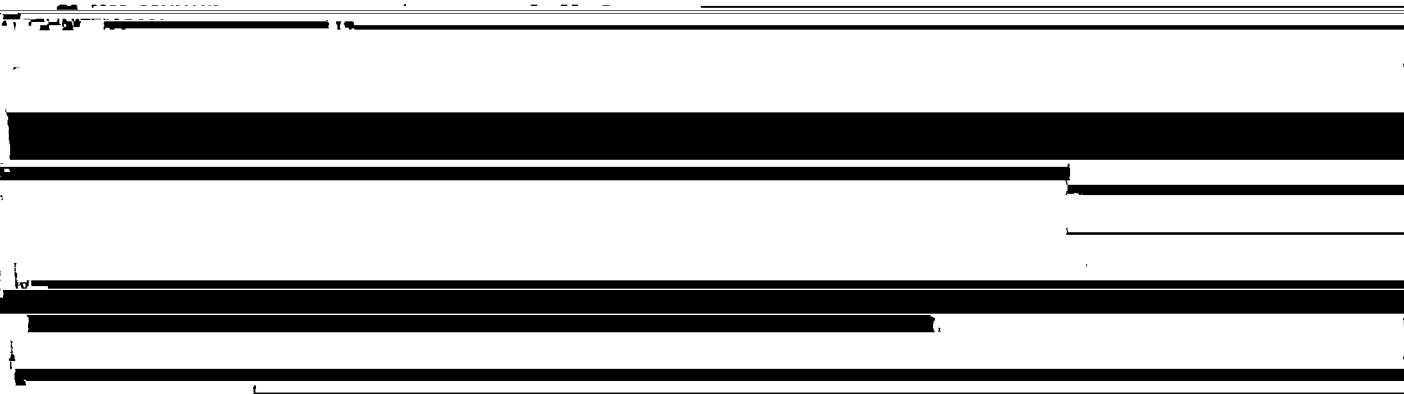
## RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING	NOTE
	CMD/HEADER	R/W		
-STEP-ADJ	SH...	W	SHnnnnnn(Hz)...nn...n=0.00==>STEP-ADJ OFF SHnn.nn(KHz) SH + ...[+] ==>STEP-ADJ ON/OFF	-AUTO-MODE is added after setting. -STP-ADJ ON...[+]
	SH [CR]	R	SHnnnnnx(Hz)	
-SUB-STEP	SJ...	W	SJn...n=0-A MAIN...n=0 x 10...n=1 100 Hz...n=2 500...n=3 1 KHz...n=4 5 KHz...n=5 10 KHz...n=6 50 KHz...n=7 100 KHz...n=8 500 KHz...n=9 1000 KHz...n=A	
	SJ [CR]	R	SJn	
-ATT	AT...	W	ATn ATT 0dB...n=0(AUTO-ATT=OFF) ATT 10dB...n=1(//) ATT 20dB...n=2(//) ATT AUTO...n=F(AUTO-ATT=ON)	0dB/10dB/20dB...RX=0.095-230.0M 0dB/10dB...RX=230M-1000.0M 0dB...RX=1000M-2600M
	AT... [CR]	R	AT0n...n=0or1or2...AUTO-ATT=OFF AT1n...n=0or1or2...AUTO-ATT=ON	

4

ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting ...[CR·LF]	NOTE
	CMD/HEADER	R/W		
-ANTENNA	AN AN [CR]	W	ANn...n=0-4(0=AUTO)	
		R	ANn or AND n...AUTO-ANT==>ANO n	
-BAND WIDTH	BW... BW [CR]	W	BWn 0.5 K...n=0 3 K...n=1 6 K...n=2 15 K...n=3 40 K...n=4 110 k...n=5 220 k...n=6	-AUTO-MODE is cleared automatically. -LPF,HPF,DE-EMPHASIS matched to MODE is set up automatically.
		R	BWn	
-LPF	LP... LP [CR]	W	LPn 3 K...n=0 4 K...n=1 6 K...n=2 12 K...n=3	-AUTO-MODE is cleared automatically. -Set up automatically by MODE & BW setting.
		R	LPn	
-HPF	HP... HP [CR]	W	HPn 0.05 K...n=0 0.2 K...n=1 0.3 K...n=2 0.4 K...n=3	-AUTO-MODE is cleared automatically. -Set up automatically by MODE & BW setting.
		R	HPn	



ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting. ...[CR·LF]	NOTE
	CMD/HEADER	R/W		
-DE-ENPHASIS	EN... EN [CR]	W	ENn 25 us...n=0 50 ...n=1 75 ...n=2 750 ...n=3 THRU ...n=4	-AUTO-MODE is cleared automatically. -Set up automatically by MODE & BW setting.
		R	ENn	
-AGC CONTROL	AC... AC [CR]	W	ACn FAST...n=0 MIDDLE...n=1 SLOW...n=2 OFF...n=F	-Automatic setting when AUTO-MODE.
		R	ACn	
-EEPROM	BN...	W	BNn	-When BANK is changed, system is initialized

## RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		R/W	SETTING DELIMITER is added after setting. ...[CR·LF]	NOTE
	CMD/HEADER				
-CTCSS-FREQ	CN... CN [CR]	W	CNnn...nn=06-37 (BINARY) CTCSS OFF...nn=00 CTCSS ON WITH SEARCH...nn=01		
		R	CNnn...nn=00=>CTCSS-OFF/nn=01=>CTCSS-OFF		
-DTMF ON/OFF	QM... QM [CR]	W	QMn DTMF OFF...n=0 DTMF ON...n=1	-DTMF data is transmitted one after another.	
		R	QMn		
-TONE ELIMINATE FREQ	LS... LS [CR]	W	LSnnn...nnn=0-255 (000=OFF)		
		R	LSnnn or LS+nnn (+...MUTE-ON)		
-SCRAMBLE DATA	SC... SC [CR]	W	SCnnn...nnn=000-127 (BINARY) DE-SCRAMBLE OFF...nnn=000 DE-SCRAMBLE ON...nnn=1-127		
		R	SCnnn		
-EXIT-IF	AI... AI [CR]	W	AI n EXIT-IF OFF...n=0 EXIT-IF 1 ON...n=1 EXIT-IF 2 ON...n=2		
		R	AI n		

7

## RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		R/W	SETTING DELIMITER is added after setting. ...[CR·LF]	NOTE
	CMD/HEADER				
-MANUAL -TUNE or AUTO-TUNE	MT... MT [CR]	W	MTn... MANUAL-TUNE OFF...n=0 (AUTO-TUNE) MANUAL-TUNE ON...n=1		
		R	MTn TUnnn	-MANU-TUNE	
-TUNE SELECT	TU... TU [CR]	W	TUnnn...nnn=000-255		
		R	TUnnn		
-VFO LEVEL-SQ	DB... DB [CR]	W	DBnnn...nnn=000-255 L-SQ OFF...nnn=000		
		R	DB nnn or DB+nnn (+...CURRENT AGC-LEVEL $\geq$ n)		
-VFO VOICE-LEVEL	DA... DA [CR]	W	DA nnn VOICE OFF...nnn=000		
		R	DA nnn or DA+nnn (+...CURRENT VOICE-LEVEL $\geq$ n)		
-VFO DELAY -TIME	DD... DD [CR]	W	DDnn...nn=0.0-9.9(sec)...No need for decimal point DELAY OFF...nn=00		
		R	DDn.n		

RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting. ...[CR·LF]	NOTE
	CMD/HEADER	R/W		
-SEARCH SETTING	SE...	W	SEnn...nn=00-19(nn=BANK #) SLnnnnnnnnn(START-FREQ) SUnnnnnnnnn(STOP-FREQ) AUn STnnnnnn/SHnnnnnn...Set up if necessary. MDn,BWn,LPn,HPn,ENn...Set up if necessary. ATn,AHn,ACn...Set up if necessary. TTxxxxxxx(TITLE)...Set up if necessary.	-Divided with SP(space). -LC-CMD...RESET ☉
	TT...	W	TTxxxxxxx...(X=20-5F...ASCII-CODE)	-SP is effective as BLANK.
-SEARCH LISTING	SRnn...	R	SRnn...n=00-19(nn=BANK #) SRnn SLnnnnnnnnnn SUnnnnnnnnnn STnnnnnn AUn MDn ATn TTxxxxxxx SR%%...ALL-BANK	
-DELETE SEARCH WITH PASS-FREQ	QS...	W	QSnn...nn=00-19 or BLANK(nn=BANK #)	
-SEARCH-LINK GROUP #	GS...	W	GSn...n=0-9	
	GS [CR] GS%% [CR]	R	GSn SDn n SB+n SA+nnn SPnn ASn BQn BS n n...n n...n n...n n(n=0-9 or -) GS%%...10 groups from the next is indicated.	-BANK #...00-19(TOTAL 20-BANKS)
-SEARCH-LINK ON/OFF	BQ...	W	BQn LINK OFF...n=0 LINK ON...n=1	
	BQ [CR]	R	BQn	

9

RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting. ...[CR·LF]	NOTE
	CMD/HEADER	R/W		
-SEARCH-LINK BANK # SETTING	BS...	W	BSnn...nn=00-19(nn=BANK #) or %% (RESET CURRENT-BANK #) BS %% nn nn...	
	BS [CR]	R	BS n n...n n...n n...n n(n=0-9 or -)	-BANK #...00-19(TOTAL 20-BANKS)
-AUTO-STORE ON/OFF	AS...	W	ASn AUTO-STORE OFF...n=0 AUTO-STORE ON...n=1 (BANK #=0) AUTO-STORE ON & DELETE MEN...n=2 (BANK #=0)	
	AS [CR]	R	ASn...n=0 or 1	
-LEVEL-SCAN	SB...	W	SBnnn...nnn=000-255 L-SQ OFF...n=000	
	SB [CR]	R	SB nnn or SB+nnn(+...CURRENT AGC-LEVEL ≥ n)	
-VOICE-SCAN	SA...	W	SAnnn...nnn=000-255 VOICE OFF...nnn=000	
	SA [CR]	R	SA nnn or SA+nnn(+...CURRENT VOICE-LEVEL ≥ nnn)	
-SEARCH DELAY-TIME SETTING	SD...	W	SDnn...nn=0.0-9.9(sec) or FF (HOLD)...No need for decimal point DELAY OFF...nn=00 HOLD...nn=FF	
	SD [CR]	R	SDn.n	

RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting. ...[CR+LF]	NOTE
	CMD/HEADER	R/W		
-SEARCH PAUSE-TIME SETTING	SP... SP [CR]	W	SPnn...nn=00-60(sec)...00=PAUSE-OFF	
		R	Spn	
-START SEARCH	SS...	W	SSnn...nn=00-19 or BLANK(nn=BANK #)	
-START VFO SEARCH	VS [CR]	W	VSx...x=A,B,C,D,E DEFAULT=CURRENT VFO	
-PASS-FREQ SETTING	PS	W	PSnnnnnnnnn(Hz) PSnn.nn(MHz)	-Set up present BANK
-PASS-FREQ SETTING	PW	W	PW...Present receiving FREQ is set up as PASS-FREQ.	
-PASS-FREQ DELETE	PD	W	PDnnmm...nn=00-20(BANK #) mm=00-99(mm=PASS-CH #) PD%%nn...nn=00-20(CURRENT BANK or nn BANK)	-nn=20...VFO
-PASS-FREQ LISTING	PR	R	PRnn...nn=00-20(nn=BANK # or VFO) PRnn mm nnnnnnnnnn PRV mm nnnnnnnnnn	-nn=20...VFO

11

RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting. ...[CR+LF]	NOTE
	CMD/HEADER	R/W		
-MEM SETTING	MX... TM...	W	MXnnmm...n=0-9(BANK #) mm=00-99(mm=CH #) RFnnnnnnnnn(Hz) or RFnn.nn AUn STnnnnn/SHnnnnn...Set up if necessary. MDn,BWn,LPn,HPn,ENn,MPn...Set up if necessary. ATn,AHn,ACn,...Set up if necessary. TMxxxxxxx(TITLE)...Set up if necessary.	-Divided with SP(space). -MEM FREQ SETTING -LC-CMD...RESET ©
		W	TMxxxxxxx...(X=20-5F...ASCII-CODE)	-SP is effective as BLANK.
-MEM LIST	MA...	R	MA...n=0-9(n=BANK # & CH # =00)... LIST of 10 CH n...DEFAULT=>CURRENT BANK & CH... LIST of 10 CH MXnnn MPn GAn RFnnnnnnnnn STnnnnn AUn MDn ATn TMxxxxxxx	
-MEM-PASS ON/OFF	MP... MP... MP [CR]	W	MPn PASS OFF...n=0 PASS ON...n=1	-When setting of MEM-DATA or Memory recall
		W	MP%%...PASS-OFF of ALL-MEM(1000-CH)	
		R	MPn	
-MEM-SEL ON/OFF	GA... GA... GA [CR]	W	GAn SELECT OFF...n=0 SELECT ON...n=1	-When setting of MEM-DATA or Memory recall
		W	GA%%...SELECT OFF of ALL-MEM	
		R	GAn	
-M-SEL LISTING	GR...	W	GRnn MXnmm RFnnnnnnnnn TMxxxxxxx	

RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting. ...[CR·LF]	NOTE
	CMD/HEADER	R/W		
-MEM-DEL ON/OFF	MQ...	W	MQ...DELETE CURRENT MEM # MQnn...DELETE SETTING CH #(n=00-99) MQ%%n...DELETE ALL-MEM(CURRENT BANK or n BANK)	
-MEM-LINK GROUP #	GM...	W	GWn...n=0-9	
	GM [CR] GM%% [CR]	R	GMn XDn.n XB+n XA+nnn XPnn XMn MLn BM n n n n n n n n n n(n=0-9 or -) GM%%...List of 10 groups	
-MEM-LINK ON/OFF	ML...	W	MLn LINK OFF...n=0 LINK ON...n=1	
	ML [CR]	R	MLn	
-MEM-SCAN LINK BANK # SETTING	BM...	W	BMn...n=0-9(n=BANK #) or %% (RESET CURRENT-BANK #) BM %% n n	
	BM [CR]	R	BM n n...n(n=0-9)	
-MODE-SCAN ON/OFF	XM...	W	XMn...0-7&F FM...n=0 AM...n=1 LSB...n=2 USB...n=3 CW...n=4 ALL...n=F (ALL-MODE)	
	XM [CR]	R	XMn	

RS-232C COMMAND LIST

(DELIMITER...[CR][LF])

ITEM	REQUEST COMMAND		SETTING DELIMITER is added after setting. ...[CR·LF]	NOTE
	CMD/HEADER	R/W		
-LEVEL-SCAN	XB...	W	XBnnn...nnn=000-255 L-SQ OFF...nnn=000	
	XB [CR]	R	XB n or XB+n(+...CURRENT AGC-LEVEL ≥ n)	
-VOICE-SCAN	XA...	W	XAnnn VOICE OFF...nnn=000	
	XA [CR]	R	XA nnn or XA+nnn(+...CURRENT VOICE-LEVEL ≥ n)	
-M-SCAN DELAY-TIME SETTING	XD...	W	XDnn...nn=0.0-9.9(sec)...No need for decimal point DELAY OFF...nn=00	
	XD [CR]	R	XDn.n	
-M-SCAN PAUSE-TIME SETTING	XP...	W	XPnn...nn=00-60(sec)...00=PAUSE-OFF	
	XP [CR]	R	XPnn	
-START M-SCAN	MS...	W	MSn...n=0-9 or BLANK(n=BANK #)	
-START SEL-SCAN	SM...	W	SM	
-M-CH MODE	MR...	W	MRmmm...n=0-9(BANK #) mm=00-99(mm=CH #)	

-Communication parameters

- ①Baud rate: 4800,9600,19200 selectable
- ②Data bits: 8 BIT
- ③Stop bit: 2 BIT
- ④Parity check None
- ⑤Flow control Xon

-Change mode from REMOTE to LOCAL

- ①"EX"command: to LOCAL mode
- ②"QP"command: to POWER-OFF mode
- ③[ENT]key: to LOCAL mode
- ④[POWER]key: to POWER-OFF mode

-Change mode from LOCAL to REMOTE

AR5000 becomes REMOTE mode when either command is sent.

15

-AC	.....	AGC CONTROL	.....
-AI	.....	EXIT-IF ON/OFF	.....
-AN	.....	ANT SELECT	.....
-AS	SEARCH	AUTO-STORE ON/OFF	(GS-CMD)
-AT	.....	ATT ON/OFF	.....
-AU	.....	AUTO ON/OFF	.....
-BN	.....	BANK SELECT	.....
-BM	M-SCAN	BANK # SETTING of LINK	(GM-CMD)
-BQ	SEARCH	SEARCH LINK ON/OFF	(GS-CMD)
-BS	SEARCH	BANK # SETTING of LINK	(GS-CMD)
-BW	.....	BW SELECT	.....
-AF	.....	AFC ON/OFF	.....
-DM	(PROM)	LISTING PROM-DATA	.....
-EN	.....	DE-ENPHASIS	.....
-EX	.....	EXIT(END of REMOTE)	.....
-GA	M-SEL	SELECT-CH	.....
-GM	M-SCAN	M-SCAN GROUP #	.....
-GR	M-SEL	LISTING of SELECT-CH	.....
-GS	SEARCH	SEARCH GROUP #	.....
-HP	.....	HPF SELECT	.....
-DS	.....	CYBER-SCAN ON/OFF	.....
-LC	.....	CONT., SEND AGC-LEVEL	.....
-LM	.....	SEND AGC-LEVEL	.....
-LP	.....	LPF SELECT	.....
-LS	.....	SPE-SIG FREQ	.....
-MA	MEM	READ ALL MEMORY-DATA	.....
-MD	.....	MODE SETTING	.....
-ML	M-SCAN	M-SCAN LINK ON/OFF	(GM-CMD)
-MP	MEM	MEM PASS ON/OFF	.....
-MQ	MEM	MEM DELETE	.....

-MR ..... MEM ..... MEM-READ .....  
 -MS ..... M-SCAN ..... M-SCAN START .....  
 -MT ..... ..... MANU-TUNE ON/OFF .....  
 -MX ..... MEM ..... WRITE-MEMORY .....  
 -PD ..... SRCH/VFO ..... DELETE PASS-FREQ .....  
 -PR ..... SRCH/VFO ..... SEND ALL PASS-FREQ .....  
 -PS ..... SRCH/VFO ..... PASS-FREQ SETTING .....  
 -PW ..... SRCH/VFO ..... PASS-FREQ AUTO SETTING .....  
 -QM ..... ..... DTMF ON/OFF .....  
 -QS ..... SEARCH ..... DELETE SEARCH-DATA .....  
 -RF ..... VFO ..... RX-FREQ SETTING .....  
 -RX ..... ..... SEND RX-DATA .....  
 -RQ ..... ..... REMOTE SQ-DATA .....  
 -SH ..... ..... HALF-STEP FREQ .....  
 -DA ..... VFO ..... VOICE ON/OFF .....  
 -DB ..... VFO ..... SQ-LEVEL ON/OFF .....  
 -DD ..... VFO ..... DELAY-TIME .....  
 -SA ..... SEARCH ..... VOICE ON/OFF ..... (GS-CMD) .....  
 -SB ..... SEARCH ..... SQ-LEVEL ON/OFF ..... (GS-CMD) .....  
 -SC ..... ..... SCRAMBLE DATA .....  
 -SD ..... SEARCH ..... DELAY-TIME/HOLD ..... (GS-CMD) .....  
 -SE ..... SEARCH ..... SEARCH-DATA SETTING .....  
 -SL ..... SEARCH ..... LOWER FREQ SETTING ..... (SE-CMD) .....  
 -SM ..... M-SEL ..... SELECT-SCAN START .....  
 -SP ..... SEARCH ..... PAUSE-TIME & ON/OFF ..... (GS-CMD) .....  
 -SR ..... SEARCH ..... SEARCH-DATA LISTING .....  
 -SS ..... SEARCH ..... SEARCH-SEARCH START .....  
 -ST ..... ..... STEP-FREQ .....  
 -SU ..... SEARCH ..... UPPER FREQ SETTING ..... (SE-CMD) .....  
 -SJ ..... ..... SUB-STEP FREQ SETTING .....

17

-TM ..... MEM ..... MEMORY-TEXT .....  
 -TT ..... SEARCH ..... SEARCH-TEXT .....  
 -TU ..... ..... MANUAL/AUTO-TUNING .....  
 -VA ..... VFO ..... VFO-A FREQ SETTING .....  
 -VB ..... VFO ..... VFO-B FREQ SETTING .....  
 -VC ..... VFO ..... VFO-C FREQ SETTING .....  
 -VD ..... VFO ..... VFO-D FREQ SETTING .....  
 -VE ..... VFO ..... VFO-E FREQ SETTING .....  
 -VL ..... ..... BEEP-VOLUME SETTING .....  
 -VR ..... ..... CPU VERSION .....  
 -VS ..... VFO ..... VFO-SEARCH START .....  
 -XA ..... M-SCAN ..... VOICE ON/OFF ..... (GM-CMD) .....  
 -XB ..... M-SCAN ..... SQ-LEVEL ON/OFF ..... (GM-CMD) .....  
 -XD ..... M-SCAN ..... DELAY-TIME ..... (GM-CMD) .....  
 -XM ..... M-SCAN ..... MODE-SCAN & ON/OFF ..... (GM-CMD) .....  
 -XP ..... M-SCAN ..... PAUSE-TIME & ON/OFF ..... (GM-CMD) .....  
 -QP ..... ..... POWER OFF .....