

8410 Keyboard Commands
 1/15/2012 - Michael Seedman

These commands are used from a terminal connected to the 8400
 Terminal and Amplifier Baud Rate is 115,200 bps, no parity, 8 bits, 1 stop bit (115200,N,8,1)
 You can hit the "ENTER" key a few times to make sure you're speaking to the amplifier

These are NOT used in normal operation, but if you're writing code to interface with the 9500, these are the commands and responses

MAIN PARSER COMMANDS AND RESULTS

Command Result

Format is #,0,cmd
 20 Return the SAPA20 Result String
 21 Return the SAPA21 Result String
 22 Return the SAPA22 Result String
 23 Return the SAPA23 Result String
 24 Return the SAPA24 Result String
 25 Return the SAPA25 Result String
 26 Return the SAPA26 Result String

#	Start a new command	Output	PW Required?
a	Change Amp Type	showConfig	
b	Fan Status Temp and Speed		
c	ShowConfig		
e	Display Gain, Eff, Heat	showConfig	Yes
f	Change fan type	showConfig	Yes
m	Change Front Panel Type marking (gain, eff)	showConfig	Yes
n	Toggle CE mode		Yes
s	Toggle switchCal for bandswitch - shows A/D reading		
t	Toggle Muffin fan on andoff		
v	Toggle P3		
B	Reduce WarmTime 10 seconds		
C	Write Config to EEPROM		Yes
K	Set Tube Bias		
M	Enter/Leave Cal mode		
O	Get Common cal Coefficients		
S	Display banner		
X	Write Band cal Coefficients for present band		
~	Warm Boot		

RETURN STRINGS and VARIABLES

Definition of String

	Preamble	number	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	Data	
Amp SN	SAPA	20	Serial Numbe	RomID0	RomID1	RomID2	RomID3	RomID4	RomID5	RomID6	RomID7	Version	ampState	*	Checksum	CRLF									
Basic Op Parameters	SAPA	21	PFwd	PEP	Pref	Pin	ampGain	Vp	Ip	Vg	Ig	ampTemp	ampState	fault	fanSpeed	Band	amp Eff	iKeySense	*	Checksum	CRLF				
Non-Band Specific Cal Coefficients	SAPA	22	RomID0	RomID1	RomID2	RomID3	RomID4	RomID5	RomID6	RomID7	VpM	IpM	IpR	VgM	IgM	IgR	PEBS	G2	G3	LED2	LED2	hiBand	*	Checksum	CRLF
Band 1-3 Cal Coefficients	SAPA	23	RomID0	RomID1	RomID2	RomID3	RomID4	RomID5	RomID6	RomID7	band1	IpSlope	Fp Slope	RpSlope	band2	IpSlope	Fp Slope	RpSlope	band3	IpSlope	Fp Slope	RpSlope	*	Checksum	CRLF
Band 4-6 Cal Coefficients	SAPA	24	RomID0	RomID1	RomID2	RomID3	RomID4	RomID5	RomID6	RomID7	band4	IpSlope	Fp Slope	RpSlope	band5	IpSlope	Fp Slope	RpSlope	band6	IpSlope	Fp Slope	RpSlope	*	Checksum	CRLF
Band 7-9 Cal Coefficients	SAPA	25	RomID0	RomID1	RomID2	RomID3	RomID4	RomID5	RomID6	RomID7	band7	IpSlope	Fp Slope	RpSlope	band8	IpSlope	Fp Slope	RpSlope	band9	IpSlope	Fp Slope	RpSlope	*	Checksum	CRLF
Amp serial #, Config	SAPA	26	Serial Numbe	ampType	boardRev	fanType	minFan	miscFlags	CRLF																

Examples: SAPA21, Forward power, PEP, Reflected power, Input power, amp gain, Plate voltage, Plate current, Grid voltage, Grid current, amp temperature, amp State, fault code, fan state *FCS
 Where forward, PEP and reflected powers are in W, Input power in tenths of W, Plate and Grid voltage are in V, plate current is in mA and grid current in tenths of mA, amp temperature is in C.
 Amplifier State: 0 = off, 1 = warming up, 2 = warmed up in standby, 3 = warmed up in operate
 Fault codes: 1 = Gain, 2 = Soft Ip, 3 = Reflected power, 4 = Hard Ip

SAPA22, ESN, plate V slope, plate I slope, Plate I offset, Grid V slope, Grid I offset, EBS threshold (.1W), Back-off bias DAC counts, Full bias DAC counts, green LED trip (.1 mA), red LED trip (.1 mA), band below hi-matching switch *FCS
 ESN = electronic serial number

SAPA23, ESN, band, input power slope, forward power slope, reflected power slope, band, input power slope, forward power slope, reflected power slope, band, input power slope, forward power slope, reflected power slope *FCS