

Alpha 9500 Fault Codes and Troubleshooting Guide

Fault	Description	Explanation	Resolution
1	Gain Fault	Output power is lower than expected with given input power	Re-tune amp or reduce drive power
2	Mains Board could not find a tap to match line voltage	AC mains are Fluctuating too much or amp was not given 30 seconds for the detection circuit to stabilize	Allow amp mains circuit to stabilize before powering back on. Or, force amp to use a fixed tap.
3	Soft Ip fault trip	Plate current above 1.5 amps.	Reduce drive or re-tune
4	Hard Ip fault trip	Plate current above 2 amps.	Reduce drive or re-tune
5	Vp did not reach specified value in specified time	High Voltage did not reach 3500 volts in specified time.	Check transformer connections and AC mains connections. Check that auto tap selection is enabled or that amp is correctly reading ac line voltage.
6	Output relay did not close in time	Output T/R relay did not close, or relay sensing circuit has been damaged by overload or transmitting into an open.	Amplifier is in operate and no key line detected. Check Key line by shorting center conductor to screw on amp. Check RF choke or 100 ohm resistor on Master Controller board. V at PIC must be 4.85 vdc.
7	Output relay apparently stuck on	Amplifier is keyed with no key line connected.	You should not see this fault in the field.
8	Bandswitch failed to reach target setting	Bandswitch failed to move during power up.	Turn amp off and back on. If fault does not clear. turn amp off and unplug it from AC Mains. Plug amp back in and power up. If fault still does not clear. while amp is on press a bandswitch on the front of the amp and fault should clear.
9	Tune cap could not locate zero	Cap needs to be re-initialized	Turn the amp off and back on.
10	Load cap could not locate zero	Cap needs to be re-initialized	Turn the amp off and back on.
11	Temperature fault	Tube deck reached a temp of 45 deg C.	Check air flow from behind and over the amplifier. Check tube for blockage. fault will clear when amp temp is within limits.
12	Reflected power trip	SWR above 3:1	Check antennas and other equipment installed after amp.
13	Clear temperature fault	Amp had faulted for a fault 11 and recovered.	See fault 11
14	Plate voltage too high	Plate voltage above 3800 Vdc.	Check AC mains voltage. Unplug amp, wait 30 seconds, plug back in, wait 30 seconds before turning on. Check that auto tap selection is enabled or that correct fixed tap has been forced.
15	Grid current trip	Grid current above 150 mA	Reduce drive or retune
16	Auto-tune algorithm failed to resolve	Auto tune was unable to find a good tune point given the input power.	Reduce drive and re-start the auto tune.
17	Plate current too high with amp unkeyed	Amplifier has been turned on and the plate current in idle is too high with no RF drive and amp unkeyed	Tube may be shorted or HV Circuit is not functioning correctly
18	Input power greater than 100W	Enough said!	
19	Transmit Frequency out of range	Radio too far out of Amateur bands	Change frequency to be inside Amateur bands
20	AC Input Voltage out of range for AC tap setting	Microprocessor not able to resolve AC Input voltage setting.	Missing one leg of AC, blown primary fuse, loose wire in power plug, or amp is in Forced Tap setting and voltage is now out of that range. Use 9500 Remote software to put amp in AUTO TAP mode, unplug from AC, plug back in.
21	Cathode bias (+40vdc) did not come up	Cathode bias cutoff voltage not detected after amp turned on.	Tube may be shorted, check 40v Fuse on HV Board
During amp warmup, if STBY and ON are blinking in sync then amp is in AUTO TAP. If alternating blinking, then amp is in FORCE TAP mode.			
Fast Warmup: Press RCL then DIM button, amplifier will sample Ip and once tube emissions are detected will switch to 30 seconds remaining.			
Frequency counter ignore in bypass: Press RCL button followed by SND, amplifier will ignore the frequency counter in Standby.			
This is a sticky control, once enabled it will remain in that mode (through multiple on/off cycles) until you toggle it back on again with the same key sequence.			
Display waste heat on Vp LED bargraph. Push RCL then Vp, plate voltage LED's will now display waste heat in watts.			
Use this to get amp properly tuned with key down output, switch back to the Vp display by pushing RCL then Vp again.			