

READ THIS BEFORE APPLYING POWER TO YOUR SPA5

Important Startup Procedure

WARNING – Applying high voltage DC power to the SPA5 amplifier without a plasma tube or a suitable dummy load connected to the RF output terminals of the SPA5 will cause the STW20NK50Z MOSFET to fail. This is NOT covered under the warranty.

First, check to be sure that the following wiring is connected properly.

- 19 volt logic power supply wires to SPA5.
- HV power supply wires to SPA5.
- Coaxial cable from the SPA5 RF output terminals to the LC31 coupler RF input terminals.
- Wires from the LC31 coupler output terminals to the plasma tube electrodes.
- Audio signal wires from the computer or other signal generator, or;
- Square wave signal wires from an external frequency or function generator.
- Is the cooling fan (if installed) for the LC31 coupler running? This is important to prevent burning out the LC31 coupler – please see the LC31 manual for details.

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Next, after ensuring that all the wiring is complete, you may begin system power-up.

- Check that the audio or square wave input to the SPA5 is OFF.

- **IMPORTANT!** Check that the HV power is OFF.

- Turn the 19 volt logic power to the SPA5 ON.

- **IMPORTANT!** Wait 10 seconds for the circuits in the SPA5 to stabilize. During this time, the diagnostic LED's may illuminate briefly, and then they will turn off. This is normal.

- Turn the audio or square wave input to the SPA5 ON.

If you are using the "A" Input then the level of the computer audio should be between 1.5 to 3.0 volts.

If you are using the "B" Input, the level of the square wave signal should be 5 volts peak to peak.

NOTE – If the signal from the computer is too low, the BLUE AUDIO OK LED will be very dim or even off. Some fluttering or blinking of the blue LED is normal when using multi-frequency input signals, however, when a single frequency is being used, all of the LED's should be illuminated steadily.

- Adjust the HV power to about 75 volts.

- After about two seconds, the diagnostic LED's on the SPA5 will illuminate, and the plasma tube should light.

- If the plasma tube appears normal, you may increase the HV power to the normal operating voltage for your plasma tube.

System power-down.

- Turn the HV power OFF.

- Turn the 19 volt logic power OFF.

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