

## **Manual Impedance Tuning for RF power supply in AJA Sputterer**

1. Locally change from REM to LOC.
2. Set the power level setpoint on the RF power supply to 30 Watts only
  - Rotate the EDITOR encoder to move the cursor on the display.
  - Push in the encoder to select “SET PT FP”. The cursor will flash when selected.
  - Rotate the encoder to change the parameter to 30.
  - Push in the encoder to set power to 30 W.

**WARNING: Do not run more than 30 Watts RF without having a plasma for more than 2 minutes, as it might damage source components.**

3. Set to auto-matching network (AM)
  - Rotate the EDITOR encoder to move the cursor on the display.
  - Push in the encoder to select “AU”. The cursor will flash when selected.
  - Rotate the encoder to change to “AM”
4. Manually set the LOAD and TUNE capacitors into 50% and 50%.
  - Select either LOAD or TUNE by pushing the button labelled “LOAD TUNE”
  - Use the - / + buttons to increase or decrease the capacitor position (percentage).



5. Push the RF ON button on the RF power supply and attempt to minimize the reflected power ( $RP \leq 10\% FP$ ) by alternately changing the LOAD and TUNE values.

6. If the plasma is now ignited, switch the auto-matching network (AM) back to automatic mode (AU).

- Rotate the EDITOR encoder to move the cursor on the display.
- Push in the encoder to select “AM”. The cursor will flash when selected.
- Rotate the encoder to change to “AU”

7. Change LOC to REM.

NOTE: the transmission might be stuck in the highest or lowest gear, constantly struggling to find the right ratio. This is what's happening when your tune or load capacitors are pushed to their limits (less than 10% or more than 90%). If the capacitors are at these extremes, the system can't make the necessary adjustments to handle changes in the plasma.