Biasing and testing of the MRI amplifier

- Before connecting the Lascar power supply adjust its voltages to 8V, -5V and +5V
- Turn the Phoenix voltage adjustment potentiometer to its lowest setting
- Connect a 50Ω/100W..1kW load to the output of the amplifier.
- Turn VR1 and VR2 counter clockwise until it clicks
- Connect P1 and switch on the power, the LOW voltage indicator LED will be on
- Increase the voltage of the Phoenix power supply to about 34V
- Increase the voltage at VR1,2 to 2.0V. This can be measured at R14 and R17.
- Press the Output ON button on the front of the amplifier to enable the amplifier.
- Apply a 10mV signal of 1MHz at the RF In input.
- Apply a single pulse with a pulse time of 10µs and a level of 1.5..5V at the Enable input and check if a signal is present at the load resistor and see if the voltage at J3 switches on and off.
- Increase the voltage out of the phoenix power supply to 56V and the bias voltage potentiometers to 2.5V.
- Test with 250mV amplitude input signal while checking the sine wave at the load with single enable pulses.
- Slowly increase the input signal amplitude and see if the peaks of the sine wave become distorted. The maximum output signal is 632Vpp at 1.1Vpp input signal. Increase the bias voltage to just the value at which the signal looks undistorted at full power (1kW). This takes a bias voltage of around 2.7V. Make sure that both potentiometers are set to the same voltage while tuning before applying an enable pulse.