



RFG-100 100 Watt RF Power Generator



The RFG-100 provides the HIFU researcher with a powerful tool to replace stacks of laboratory equipment such as signal generators, pulse generators, timing circuits, and power amplifiers.

- Each RFG-100 is customized to the appropriate frequency for the user's transducer.
- The USB interface allows the user to program the power level, duration, and any pulse strings desired. The frequency can also be set to any value $\pm 5\%$ of the default frequency. If pulse mode is desired, the user may enter values for pulse on and off times, and number of pulse repetitions. All information is broadcast from the unit back to a host computer for logging purposes.
- The RFG-100 may be combined with other JJ&A RF Power Generators to drive phased or annular arrays if desired.
- An emergency shutdown circuit detects if the transducer has been lifted off of the test object, failed, or otherwise lost its acoustic connection to the test material.
- The RFG-100 can be used as a stand-alone RF power generator for CW or Pulse operation, or it can work with other JJ&A HIFU products to provide a complete laboratory system.

RFG-100 Features:

- Adjustable power level between 1 and 100 watts output
- CW or Pulse modes
- Standard 50 ohm output impedance
- Built-in frequency generator
- Frequency ranges available from 700 KHz to 5 MHz
- Built-in pulse timing generator
- Small size: 1.8 x 4.1 x 8 inches (4.6 x 10.4 x 20.3 cm)
- Light weight: 2 pounds (0.9 kg)
- Replaces stacks of laboratory equipment
- Standard USB interface for all controls
- Emergency shutdown button and inputs
- Automatic safety shutdown in case of incorrect transducer match
- Available as an OEM module
- Multiple units can be combined for phased or annular arrays
- Continuous operation or can be triggered externally
- All JJ&A HIFU products network together for cohesive system control
- 120 volts AC, 2 amps maximum

Specifications subject to change without notice.

Additional JJ&A HIFU products include:

- **RFG-1000 RF Generator:** Same features as the RFG-100, except the maximum power output is 1000 watts.
- **TMN-100 Transducer Matching Network:** Automatically computes the proper impedance transformation between the power source and transducer without the need for additional inductors and capacitors.
- **PF-500 RF Power Fuse:** This module is a stand-alone RF power sentry used to protect transducers from accidental overpower damage. Placed in-line between the RF power generator and the transducer, it passes the signal unless the power level exceeds the desired limits.
- **PM-1 Power Meter:** Forward and reflected power monitoring module. Measures forward power and reflected power in either CW or Pulse modes. Very unique in that it will function properly with fast pulses. Information is sent back to the user via standard RS-232 interface. This information can be used to halt the power generator if power levels exceed values that are set by the user.
- **DC-1000 Directional Coupler:** Used to separate transmitted and reflected signals.
- **FS-1 Foot Switch:** Accessory for use during experiments to control when the power generators are on.
- **HWS-1 HIFU Work Station:** Wet-lab work area with adjustable arms and clamps for holding transducers, test gels, cameras, etc. Includes a high intensity illuminator, digital camera for still and video with USB interface, plus a stand-alone video screen on the workstation that is used to zoom in and adjust the experiment during setup. Work area is 18 x 24 inches (46 x 61 cm).