The Model 800A3A is a self-contained, air-cooled, broadband, solid-state amplifier designed for applications where instantaneous bandwidth and high gain are required. The Model 800A3A, when used with an RF sweep generator, will provide a minimum of 800 watts of swept power.

A digital control panel provides both local and remote control of the amplifier. The display provides operational presentation of forward power and reflected power, plus control status and reports of internal amplifier status. Special features include a gain control, RF output level protection, and a transformer with selectable taps for matching to different load impedances.

All amplifier control functions and status indications are available remotely in IEEE-488, RS-232 and USB. The buss interface connectors are located on the back panel and positive control of local or remote operation is assured by a keylock on the front panel of the amplifier.

The 800A3A amplifier is intended for applications where the load impedance is not necessarily 50 ohms. The selectable output impedance provides the capability to drive loads that would otherwise cause a high SWR and limit the delivered power. The impedance matching transformer uses high-voltage/high-current vacuum relays so the user can “hot switch” between impedances without damage.

The Model 800A3A is housed in a cabinet and designed to provide complete standalone performance for RF testing. It is also configured to be used as a sub-amplifier in a 1500 watt or 5000 watt higher power amplifier. It can be added in an incremental fashion to become a part of these higher power units yet still be used as a standalone 800 watt amplifier.

800A3A TYPICAL POWER OUTPUT

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160 School House Road Souderton, PA 18964-9990 • 215-723-8181 • www.ar-worldwide.com
MODEL 800A3A SPECIFICATIONS

RATED POWER OUTPUT ........................................... 800 watts minimum

INPUT FOR RATED OUTPUT ................................... 1.0 milliwatt maximum

POWER OUTPUT @ 3 dB compression
   Nominal .................................................. 800 watts
   Minimum ................................................ 700 watts, 10 kHz–2 MHz
                       600 watts, 2 MHz–3 MHz

POWER OUTPUT @ 1 dB compression
   Nominal .................................................. 500 watts
   Minimum ................................................ 400 watts

FLATNESS ...................................................... +1.0 dB maximum

FREQUENCY RESPONSE ..................................... 10 kHz–3 MHz instantaneously

GAIN (at maximum setting) ................................. 60 dB minimum

GAIN ADJUSTMENT (continuous range) ................. 23 dB minimum

INPUT IMPEDANCE ........................................... 50 ohms nominal

OUTPUT IMPEDANCE (switch select; manual) .......... 12.5, 25, 50, 100, 150, 200, 400 ohms nominal (10kHz-3MHz) on front panel

MISMATCH TOLERANCE ...................................... 100% rated power without foldback up to 6.0:1 mismatch above which may limit to 400 watts reflected power. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

HARMONIC DISTORTION .................................... Minus 20 dBc maximum at 400 watts power output.

MODULATION CAPABILITY ................................. Will faithfully reproduce AM (within the linear power spec), FM, or pulse modulation appearing on the input signal.

OUTPUT CONNECTOR ....................................... See Model configurations

INPUT CONNECTOR .......................................... See Model configurations

REMOTE CONTROL ......................................... IEEE-488/RS-232/USB, ability to remote control and power an external impedance transformer.

RF POWER DISPLAY ....................................... 0–1000 Watts full scale. Directional power monitor allows separate display of forward and reflected power.

POWER MONITOR .......................................... BNC: 0–10V forward and reverse power

COOLING ...................................................... Forced-air (self-contained fans)

PRIMARY POWER .......................................... Universal, 85–137/180–300VAC, 47–63 Hz, 2500 watts maximum.

WEIGHT ....................................................... See Model configurations

DIMENSIONS (W x H x D) ................................. See Model configurations

NOTE: For external impedance transformer options, see Specification Sheet for IT2000 Series Impedance Transformers.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>RF Input</th>
<th>Model Configurations</th>
<th>Weight</th>
<th>Size (W x H x D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>800A3A</td>
<td>Type N female, front</td>
<td>Type N female, front</td>
<td>36.4 Kg (80 lb)</td>
<td>50.3 x 34.0 x 55.1 cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>19.8 x 13.4 x 21.7 in</td>
<td></td>
</tr>
<tr>
<td>800A3AM1</td>
<td>Type N female, rear</td>
<td>Type N female, rear</td>
<td>36.4 Kg (80 lb)</td>
<td>50.3 x 34.0 x 55.1 cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>19.8 x 13.4 x 21.7 in</td>
<td></td>
</tr>
<tr>
<td>800A3AM2</td>
<td>Same as 800A3A with cabinet removed</td>
<td>Same as 800A3A with cabinet removed</td>
<td>29.4 Kg (65 lb)</td>
<td>48.3 x 30.5 x 54.4 cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>19.0 x 12.0 x 21.4 in</td>
<td></td>
</tr>
<tr>
<td>800A3AM3</td>
<td>Same as 800A3AM1 with cabinet removed</td>
<td>Same as 800A3AM1 with cabinet removed</td>
<td>29.4 Kg (65 lb)</td>
<td>48.3 x 30.5 x 54.4 cm</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>19.0 x 12.0 x 21.4 in</td>
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</table>