The Model 900S1G4 is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. The Model 900S1G4, when used with a sweep generator, will provide a minimum of 900 watts of RF power instantaneously from 0.8 to 4.2 GHz.

The Model 900S1G4 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a graphic Liquid Crystal Display, menu assigned softkeys, a single rotary knob, and a dedicated power on/off switch to offer extensive control and status reporting capability. 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 and RF output level protection.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS-232 hardwire and fiber optic, USB, and Ethernet. The buss interface connector is 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 Model 900S1G4 is designed to have low spurious signals, linearity and is extremely load tolerant which enables it to be used in many RF applications such as: RF susceptibility testing, antenna/component testing, and communication technology testing. It can be used as a test instrument covering multiple frequency bands and is suitable for a variety of communication technologies such as CDMA, W-CDMA, TDMA, GSM, UWB, WiMAX etc.

The 900S1G4 is part of AR’s Expandable Power concept, which gives the amplifier much more versatility. The 900S1G4 consists of three 350S1G4 sub-amplifiers housed in a single equipment rack with a controller. The 900S1G4 can function as one amplifier or be separated and operate as three separate 350S1G4 amplifiers which can be used independently. The 900S1G4 can be upgraded in the future to an 1200S1G4 by simply adding one more 350S1G4 sub-amplifier, upgrading the controller and performing minor tuning.
SPECIFICATIONS, MODEL 900S1G4

RATED OUTPUT POWER ........................................... 0.8–4.2 GHz: 900 watts minimum
INPUT FOR RATED OUTPUT ...................................... 1.0 milliwatt maximum

POWER OUTPUT @ 3 dB COMPRESSION
   Nominal ...................................................... 1000 watts
   Minimum .................................................. 875 watts

POWER OUTPUT @ 1dB COMPRESSION
   Nominal ...................................................... 850 watts
   Minimum .................................................. 725 watts

FLATNESS ...................................................... ±2.5 dB maximum

FREQUENCY RESPONSE ................................. 0.8 – 4.2 GHz instantaneously

GAIN (at maximum setting) ......................... 59.6 dB minimum
GAIN ADJUSTMENT ........................................... 20 dB minimum

INPUT IMPEDANCE ........................................... 50 ohms, VSWR 2.0:1 maximum
OUTPUT IMPEDANCE .......................................... 50 ohms nominal

MISMATCH TOLERANCE* .................................. 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
*See Application Note #27

MODULATION CAPABILITY ................................. Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal

HARMONIC DISTORTION ................................. Minus 20 dBc maximum at 900 watts

THIRD ORDER INTERCEPT POINT .................. 68 dBm typical

RF POWER DISPLAY ........................................... Digital, forward and reflected

PRIMARY POWER .............................................. 100-240 VAC
   50/60 Hz, single phase
   6300 watts

CONNECTORS
   RF input .................................................. Type N female on front panel
   RF output ............................................... Type 7/8 EIA on rear panel
   Remote Interfaces
      IEEE-488 .............................................. 24 pin
      RS-232 ............................................... 9-pin sub-D
      RS-232 (fiber-optic) ................................ Type ST
      USB 2.0 ............................................... Type B
      Ethernet .............................................. RJ-45
   Safety Interlock ........................................ 15 pin female subminiature D on rear panel

COOLING ..................................................... Forced air (self contained fans) enters front and bottom

WEIGHT (approximate) ................................. 340.2 kg (750 lbs)

SIZE (W x H x D) (2 cabinets) ....................... 56.1 x 173 x 82.3 cm (22.1 x 68.0 x 32.4 in)