

TW1000D **1000W HF Power Amplifier**



- **The Perfect Amplifier for High-Power Data Systems**
- **1.6 to 30 MHz**
- **1000W Continuous Duty Operation – Voice and Data**
- **Internal 220Vac Power Supply**
- **Full Antenna VSWR Protection**
- **Fwd/ref RF Power Metering**
- **Over Temperature/Current Protection**
- **Over-Drive/Imbalance Protection**
- **Front Panel Status Indicators**
- **19" Rack-Mount Package**

The TW1000D is a 1000W HF Linear RF Amplifier designed for use with an exciter unit operating in the 1.6 to 30 MHz frequency band to form a high-power HF communication system. The TW1000D interfaces seamlessly with Datron's 7000-series of synthesized HF transceivers; however, it can also be used with any transmitter or transceiver having a power output of at least 50W and a compatible control interface. The amplifier's linearity and continuous duty rating makes it ideal for all HF voice and data applications.

The TW1000D is by far the best-value high power RF amplifier on the market today - its combination of state-of-the-art functionality, reliability, and affordability is unsurpassed. The amplifier is entirely solid state, broadband, and features a built-in ac/dc power supply that allows operation from 220Vac. No additional outboard power supplies are needed. It is a completely self-contained unit, integrating RF amplifiers, harmonic filters, protective circuitry, and power supplies in a single chassis. The TW1000D is housed in an anodized-aluminum 7u rack-mount package suitable for standard 19" racks.

The TW1000D is designed for continuous-duty applications where high performance and reliability are essential. Full 1.6 to 30 MHz frequency coverage of the HF spectrum is provided, as is continuous duty 1000W output power to facilitate use in today's demanding high-speed HF data systems.

The TW1000D generates a maximum amount of RF power into even marginal antenna VSWRs, and will tolerate open and short circuit conditions at the antenna port without suffering damage. The amplifier's full range of protective circuitry makes it essentially "bulletproof," as it contains protection against excessive temperature, over-voltage and over-current. Under severely stressed situations, the amplifier automatically reverts to a "bypass" condition whereby exciter power is delivered directly to the antenna. Front panel indicators, including forward and reverse RF power meters, are available to display amplifier status at all times.

SPECIFICATIONS

GENERAL

| | |
|----------------------------|------------------------------------|
| RF Power Output | 1000W, PEP or average, +/- 1 dB |
| Frequency Range | 1.6 to 30 MHz |
| Harmonics | -50 dB (2 to 30 MHz) |
| Intermodulation Distortion | -30 dB |
| Duty cycle | Continuous service, all modes |
| RF Drive level | 50W, nominal |
| Input/output Impedance | 50 Ohms |
| Power Requirements | 220Vac, 20A, (180-264V), 47-440 Hz |
| R/T Switching | 15 msec |

Mechanical

| | |
|---------|-----------------------------------------|
| Size | 26.7 cm x 48.3 cm x 38.9 cm (H x W x D) |
| Weight | 31.5 kg |
| Cooling | Forced air |

Controls and Indicators

| | |
|--------------------|------------------------------------------------------------------------------------------------|
| Controls | Amplifier ON/OFF |
| Metering | Forward RF power, Reflected RF power |
| Connectors | RF input, RF output, Control, fault, tuner |
| Indicators (LED's) | AC present, DC present, PTT, high VSWR, High DC current, high temperature, fault (bypass mode) |

Note: all specifications subject to change without notice

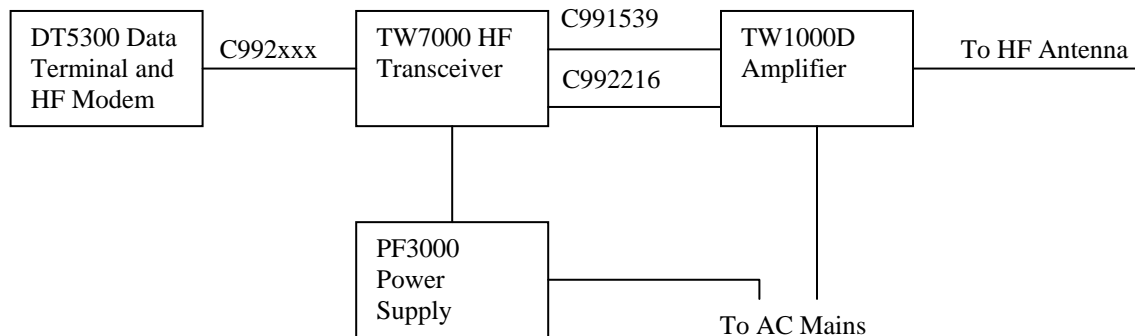


Figure 1. TW7000/TW1000D Interconnect Diagram (Note: The 1000D amplifier also comes in OD [RA1000D] and can be used with the RT7000 transceivers. Contact the factory for proper cabling and more information.

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