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# HUB-MOUNT AMP DELIVERS 300 W FROM 6 TO 18 GHz

*By installing this amplifier on the antenna mount, a costly rotary joint is eliminated.*

**P**OWER can be easily wasted through cables, rotary joints, and connections before reaching a transmitting antenna. The dB-4300-618H amplifier avoids such waste by mounting directly on the movable mast or hub of a transmitter antenna, shortening the connecting lines, and decreasing lost power. The rugged hub-mount antenna uses traveling-wave-tube (TWT) technology to produce at least 300-W continuous-wave (CW) output power from 6 to 18 GHz, making it ideal for ground-based threat-emitter applications as well as in commercial satellite-communications transmitters.

The dB-4300-618H amplifier only weighs 88 lbs. (40 kg) and measures  $7.0 \times 14 \times 27$  in. ( $17.78 \times 35.56 \times 68.58$  cm), allowing it to mount on an antenna tower and to rotate with the antenna. In this way, the amplifier can be connected directly to the antenna feed horn without going through an expensive microwave rotary joint. The dB-4300-618H amplifier is housed in a weatherproof enclosure and can be supplied with an optional rack-mountable remote-control unit (see figure). The company also offers environmentally-sealed cables that can be used with the hub-mount amplifier and remote-control unit.

## RELIABLE TUBE

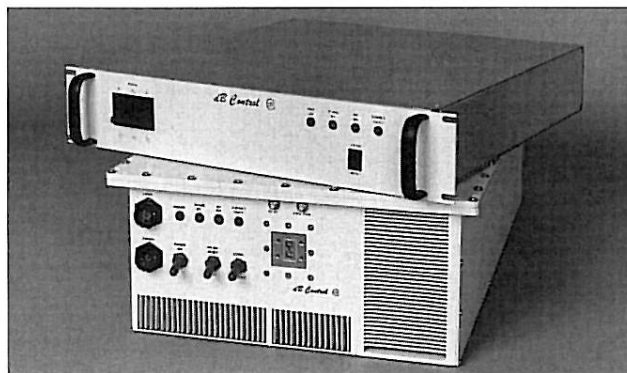
The rugged amplifier incorporates a special TWT manufactured by Teledyne Electronic Technologies (Rancho Cordova, CA), evolving from a design that has been in production for more than nine years. The TWT amplifier offers at least 40-

dB gain at its rated output-power level, with minimum noise-power density of  $-5$  dBm/MHz. Optionally, the dB-4300-618H can be equipped with a higher-gain TWT that provides at least 65-dB gain across the frequency range.

The input VSWR is nominally 2.50:1 while the output VSWR is nominally 2.00:1. The dB-4300-618H is supplied with SMA female input connectors and WRD-650 waveguide output connectors. The amplifier features forced-air cooling to dissipate excess heat generated by the TWT (with nominal power consumption of 1875 W).

The dB-4300-618H amplifier is the first in a series of hub-mountable designs intended for applications ranging from military threat emitters to commercial satellite-communications terminals. The hub-mount amplifier is designed for operating temperatures from  $-40$  to  $+60^\circ\text{C}$  and relative humidity to 100 percent.

The hub-mount component is protected against over-temperature and phase-loss conditions. It will run on 120-VAC three-phase, 208-VAC three-phase, or 230-VAC single-phase supplies. In addition to optional monitors for forward and reverse power readings, the amplifier incorporates various status indicators for monitoring power-on, high-voltage-on, and fault states. P&A: 12 wks. **dB Control, 1120 Auburn St., Fremont, CA 94538; (510) 656-2325, FAX: (510) 656-3214.**



■ The hub-mountable dB-4300-618H amplifier provides 300-W CW power from 6 to 18 GHz and can be provided with a rack-mountable remote control. ■