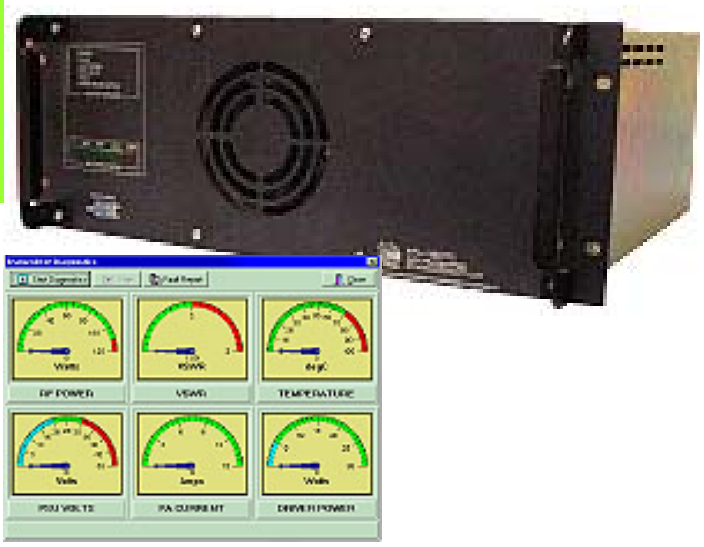
RF148-100
High Speed Data Transmitter

The RF-148-100 is a high performance paging transmitter with true digital DPS frequency generation that enables precise control and flexibility for a wide range of data transmission applications

The transmitter is particularly suitable for large simulcast POCSAG, ERMES and FLEX paging network



Features

- Economical
- Built in diagnostics
- Full VHF band coverage
- DSP precision modulation
- Extensive built in test software
- Seamlessly transmits all formats
- Internal TXCO or external reference
- Rugged design for harsh environments
- Software selectable offsets in 1Hz steps
- Adjustable interval absolute delay correction
- Front panel indicators for power and diagnostics
- Superior adjacent channel and spuri performance
- Can be installed and commissioned without test equipment

Applications

DDS & DSP Technology

The DDSPatch series of Data Transmitters are state of the art combination DDS (Direct Signal Synthesis) and DSP (Digital Signal Processing) devices that provide a high level of versatility unequalled by other transmitters. Careful design has resulted in a low implementation cost, making the DDSPatch series particularly suitable for expanding coverage in POCSAG, ERMES or FLEX networks.

High Frequency Stability

The built in TXCO provides +/-1ppm stability as standard the external input which can be used when a higher stability is required.

2 & 4 Level Modulation

For two-level applications the incoming data can be used for controlling the transmitter if external PPT is not an option. Transmitter hang time is adjustable in software. For four-level networks, data input is controlled by an external encoder that can produce any four-level sequence required. Channel selection can also select any one of the 16 pre-programmed channels in software.

Diagnostics Functions

The transmitter in conjunction with the RDK software can be used for enhanced diagnostics and control. This software can be operated from a remote location for long term trending or fault diagnostics.

SPECIFICATIONS

Multiple Paging Protocols
The Transmitter can be used with the industry standard paging formats POCSAG, ERMES and FLEX

Legacy Support
The transmitter has many connection options to suit current and legacy terminal systems

Absolute Delay Correction
The transmitter absolute delay setting can be configured for multisite networks to account for different upstream paths from the paging terminal to the transmitter sites

Frequency Offset
Configurable frequency offset allows for multi-site frequency planning to eliminate ‘zero beating’ and RF nulls

Remote Diagnostics
Configuration and diagnostics software allows remote connection to the transmitter sites for the purpose of diagnostics and network fault finding.

PHYSICAL
Dimensions: 19” Rack mount, 4RU high 395mm deep
Weight: 18kg
Construction: Welded and passivated mild steel, aluminium powder coated front panel

GENERAL
Operating Voltage:
AC: 85 to 132 VAC or 170 to 264 VAC autoselect 47 to 400Hz
DC: +20 to +30 VDC
Operating Current:

- Transmit 100W	12 A@24VDC
- Transmit 75W	11.5 A@24VDC
- Transmit 50W	7.8 A@24VDC
- Transmit 75W	5.1 A@24VDC
- Standby	400mA @24VDC

Operating Temp: -10 to +60C
Operating Humidity: Up to 90% non condensing relative humidity

TRANSMITTER
Frequency Range: 138 MHz to 174 MHz
Duty Cycle: Up up 100%
Transmit Power: 25 W to 100 W software selectable
Mode of Operation: Time Division Duplex (Pseudo full duplex)
Channel Bandwidth: 25 kHz AS4295:1995
Frequency Raster: 10 kHz, 6.25kHz
Frequency Stability: 1ppm standard (external reference input available)
Compliance: AS/NZS 4769.1 2000, AS4295:1995

DATA SYSTEM
Data Interface: Asynchronous POCSAG, Synchronous ERMES / FLEX
Modulation:
POCSAG: 512/1200/2400 (2-FSK)
ERMES: 6250bps (4-FSK)
FLEX: 1600/3200/6400 (2/4-FSK)

STIMULCAST SUPPORT
Frequency Reference: Internal (TCXO) or external (GPS) with automatic switch-over
Carrier Offset: Up to 3000 Hz (1 Hz steps)
Absolute Delay: 0 to 40ms (5 us steps)

DIAGNOSTICS
Windows management application for local configuration and diagnostics. Remote diagnostics via connection-based serial link.

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