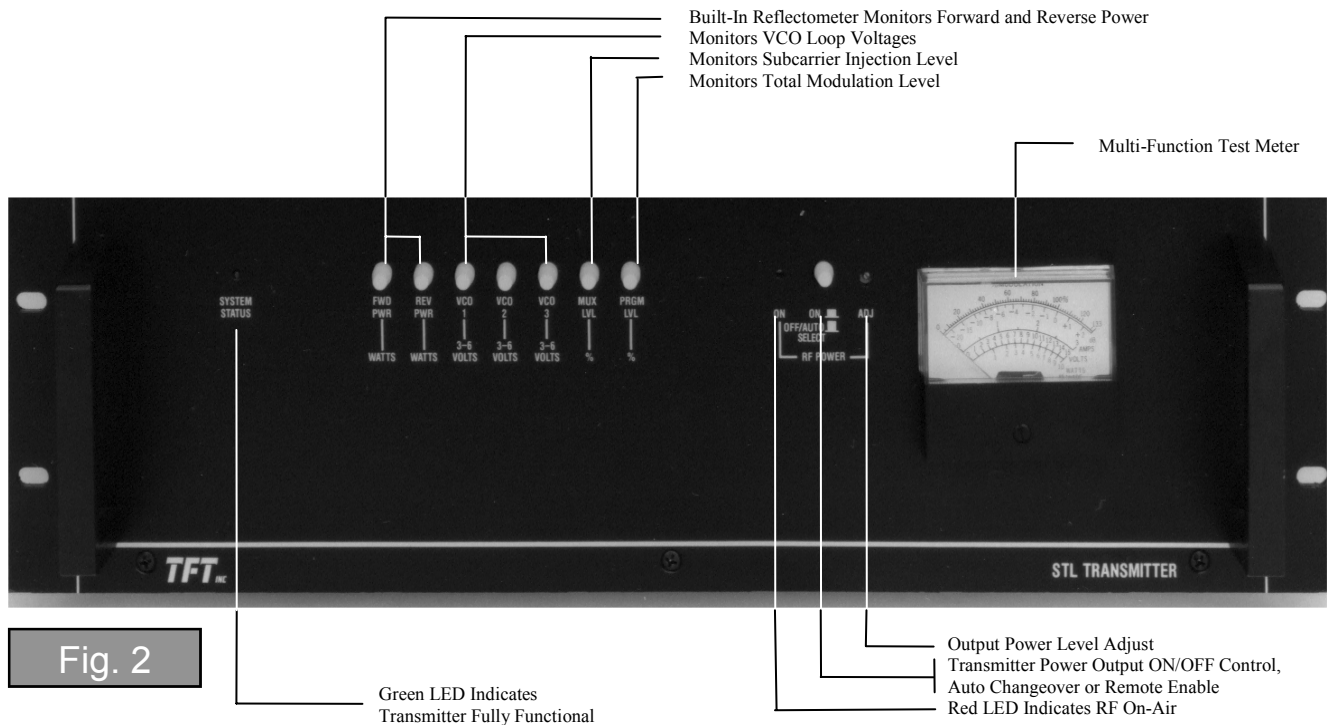
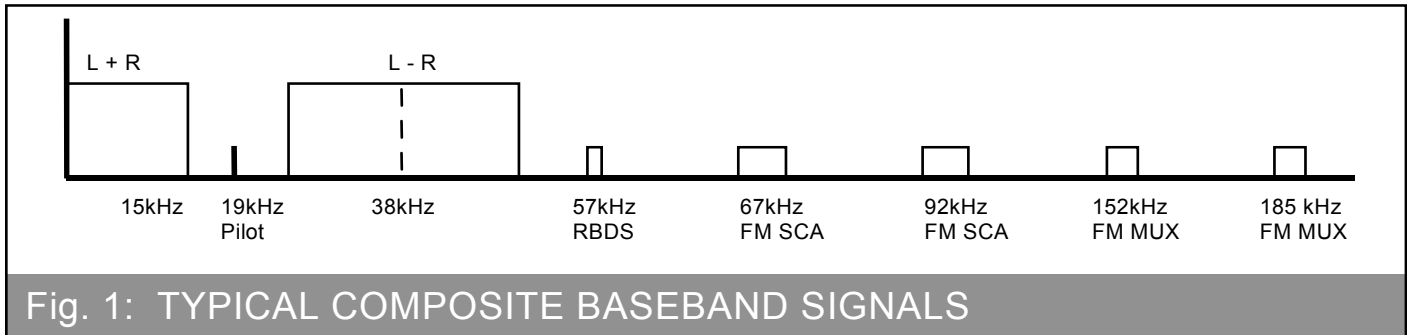


Composite Baseband Signals

The entire composite signal shown in Fig. 1, can be trans-

mitted in the baseband of the 4140 to provide stereo channels, RDS or DART, MUX and additional FM multiplex subcar-

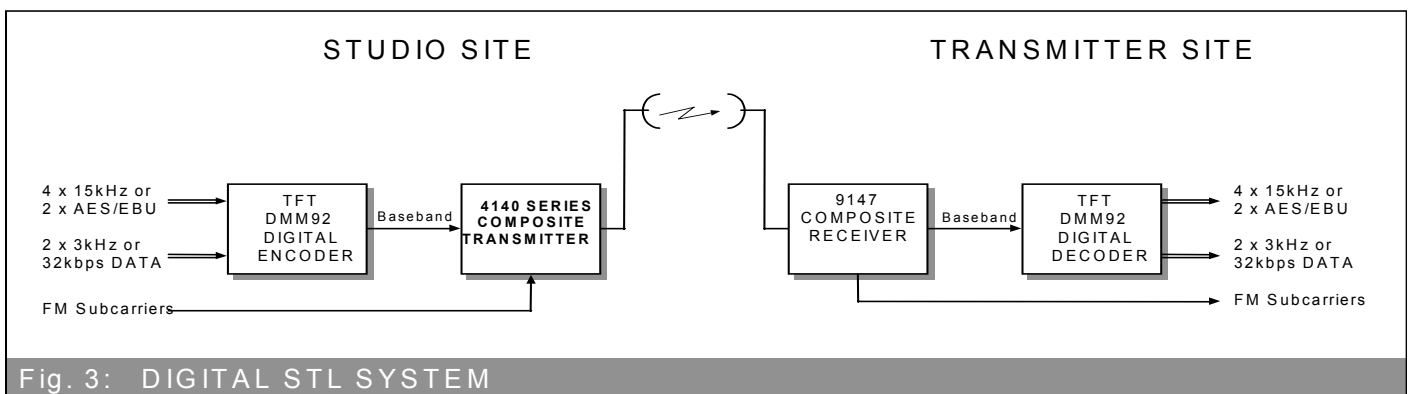
riers for supervisory, data transmission and many other applications.



Digital STL Application

The 4140 is upgradeable to a hybrid digital STL system with the addition of DMM92 series Digital Modems and

Multiplexers (See Fig. 3). In addition to 20dB improvement in fade margin, 3kHz voice channels. The digital system can also provide up to four 15kHz program channels of either analog or AES/EBU audio and an optional 32 kbps data channel or two FM multiplex subcarriers placed above 152kHz in the composite baseband.



Accessories and Options

Plug-in FM Subcarrier (SCA) Generator Option (Part No. 7100-4227) - An optional plug-in SCA generator sub-assembly is available for generation of an FM subcarrier at a user specified frequency

between 29 kHz and 185 kHz for supervisory or remote control function.

Model 7770 Automatic Transmitter Changeover - An optional 1- 3/4" high rack mount unit which monitors critical pa-

rameters of the on-air STL transmitter and automatically switches to a hot standby transmitter upon detection of any malfunction. The Model 7770 is self-powered and has a built-in RF coaxial relay with a 1kW rating.

SPECIFICATIONS

Model	4140	4140HP
Power Output	30 W (nominal)	45 W (minimum)

Frequency Range.....400-470 MHz

Frequency synthesized, field programmable in 12.5 kHz steps.

Output Connector.....50 ohm, Type N female

Frequency Stability..... $\pm 0.0005\%$, 0°C to + 50°C

Spurious Signal Emission.....60 dB below maximum carrier power

Baseband Frequency Response: ± 0.1 dB or better, 50 Hz to 53 kHz. ± 0.3 dB or better, 30 Hz to 100 kHz, the 3 dB roll off is approximately 220 kHz.

Stereo Separation.....> 55 dB at 1 kHz modulating frequency

Total Harmonic Distortion.....75 μ sec de-emphasis

Signal-to-Noise Ratio.....80 dB below ± 75 kHz deviation, 75 μ sec de-emphasis

Nonlinear Crosstalk.....50 dB or better

Subchannel-to-Main Crosstalk.....60 dB or better

Modulation Capability.....Stereo channel and MUX input for RDS or DARC, SCA or FM multiplex

Modulation Input Levels.....Composite: 3 Vp-p into 2k ohms for ± 50 kHz deviation. MUX 1: 1.2 Vp-p into 2 k ohms for ± 12 kHz deviation

Input Connectors.....BNC

AC Line Power.....150 VA (maximum) for 45 Watts RF output
80 watts for 30 Watts RF output
(85 to 240 VAC, 50/60 Hz)

Operating Temperature Range.....0°C to + 50°C

Dimensions.....5.25" (13.3 cm) H x
19" (48.3 cm) W x
14" (35.6 cm) D

Weight.....13 lbs. (5.9 kg) net;
27lbs. (12.3 kg) shipping



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