



## NT 500/LCD

Phase Locked Loop Programmable  
FM Exciter/Transmitter 87.5 - 108 MHz Range



- Includes low pass/harmonic filter and can be used as a stand-alone transmitter.
- Instant front panel programmability in 10 kHz increments.
- All functions via LCD password protected.
- Adjustable power output from 10 to 500 W with automatic power control.
- Remote control features (optional) include: power on/off, fwd & ref power metering, ability to change frequency and Internal temperature metering.
- Telemetry Output (optional).
- Meets or exceeds all FCC and CCIR requirements.

### TECHNICAL SPECIFICATIONS

Rated Output Power:	10-500 W continuously variable (ALC)
RF Output Connector:	"N" type female
RF Output Impedance:	50 ohm
Frequency Range:	87.5 MHz to 108 MHz
Frequency Programmability:	direct from front panel in 10 kHz increments
Frequency Stability:	better than 5 ppm ( $\pm$ 500 Hz)
Modulation Type:	direct carrier frequency modulation
Spurious & Harmonic Suppression:	< - 80 dB or better
Stereo Separation	55 dB @ 1 KHz
Distortion	< 0.1 % (typ. 0.06 %) @ 1 KHz
Asynchronous AM S/N Ratio:	65 dB below reference carrier with 100% amplitude modulation at 400 Hz without de-emphasis, no FM modulation present
Synchronous AM S/N Ratio:	60 dB or better below reference carrier with 100% amplitude modulation at 400 Hz, without de-emphasis, FM modulation = $\pm$ 75 kHz at 400 Hz
AC Power Requirement:	117 or 230 V, $\pm$ 10%, 50-60 Hz, single phase
Power Consumption:	approx. 1000 W from AC
Panel Size:	483 mm (19") W x 132 mm (5") H (2 standard rack spaces high)
Overall Depth:	410 mm (16")
Weight:	17 Kg (35 Lbs)
Ambient Temperature Range:	0° to 50° C (32° to 122° F)
Pre-emphasis:	for FCC 75 $\mu$ sec; for CCIR 50 $\mu$ sec internally selectable
<b>Composite Operation</b>	
Composite Inputs:	four total, 1 for MPX and 3 for SCA
MPX Input:	1 unbalanced BNC connector
MPX Input Impedance:	2k ohm
MPX Input Level:	3.5 Vp-p (1.237 Vrms/3.64 dBm)
Composite FM unweighed S/N ratio:	>68 dB below $\pm$ 75 kHz deviation at 400 Hz measured in a 30 Hz to 100 kHz bandwidth with 75 $\mu$ sec de-emphasis (RMS)
Composite Total Harmonic Distortion:	0.05% typical
Composite Intermodulation Distortion:	0.05%, measured with a 1 kHz and a 1.3 kHz tone, 1:1 ratio, at 100% modulation
Baseband:	30 Hz - 60 KHz within 0.15 dB
Crosstalk:	main to stereo subchannel and stereo subchannel to main >55 dB (60 dB typical)
SCA Inputs:	3 unbalanced BNC connectors
SCA Input Impedance:	10k ohm
SCA Input Levels:	0 dBm (775 mVrms/2.2 Vp-p) nominal for $\pm$ 7.5 kHz deviation, adjustable
SCA Amplitude Response:	$\pm$ 0.8 dB, 40 kHz to 100 kHz
Crosstalk:	67 kHz SCA to main or to stereo subchannel >65 dB
Crosstalk:	92 kHz SCA to main or to stereo subchannel >70 dB
<b>Monaural Operation</b>	
Audio Input Impedance:	600 ohm balanced or unbalanced; 50 dB common mode suppression
Audio Input Level:	0 dBm (775 mVrms/2.2 Vp-p) for $\pm$ 7.5 kHz, adjustable
FM S/N Ratio:	>70 dB below $\pm$ 75 kHz, deviation at 400 Hz measured in a 30 Hz to 20 kHz bandwidth with 75 $\mu$ sec de-emphasis (RMS)
Audio Frequency Response:	$\pm$ 0.8 dB, 30 Hz to 15 kHz
Intermodulation Distortion:	0.05% or less, measured with a 1 kHz and a 1.3 kHz tone, 1:1 ratio, at 100% modulation