



# NT 250/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 5 to 300 W with automatic power control
- Remote control features (optional) include: power on/off, fwd & ref power metering, a ability to change frequency and Internal temperature metering
- Telemetry Output and FSK-ID Keyer (optional)
- FCC and IC Certified

## TECHNICAL SPECIFICATIONS

|                                       |   |
|---------------------------------------|---|
| Rated Output Power:                   | 5-300 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. 600 W from AC   |
| Panel Size:                           | 483 mm (19") W x 88 mm (3") H (2 standard rack spaces high)   |
| Overall Depth:                        | 410 mm (16")  |
| Weight:                               | 11 Kg (24 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 $\pm$ 75 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  |