

# NT 30/NT 30H

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 0 to 30 W (NT 30) and 0 to 70 W (NT 30H) with automatic power control
- Remote control features (optional) include: power on/off, fwd & ref power metering, ability to change frequency and Internal temperature metering
- 24 Volts power capability
- FCC and IC Certified
- Telemetry Output and FSK-ID Keyer (optional)

## TECHNICAL SPECIFICATIONS

Rated Output Power:	0-30 (NT30) and 0-70 (NT 30H) 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
Emission class	F3E
Spurious & Harmonic Suppression:	< - 80 dB or better
Stereo Separation	55 dB @ 1 Khz
Distortion	< 0.1 % (typ. 0.05 %)
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. 150 W from AC(NT30), 300W from AC (NT30H)
DC Power Requirement:	24 VDC, 3A(NT30), 6A (NT30H)
Panel Size:	483 mm (19") W x 88 mm (3.5") H (2 standard rack spaces high)
Overall Depth:	327 mm (13")
Weight:	5 Kg (11 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