

## NC2210 NavCom Ramp Tester

The NC 2210 Tester is optimized for ramp testing of navigation and communication equipment. The unit provides test signals for marker beacon, communication, localizer, glide slope, and VOR. Also included, is a wide band comm receiver to permit evaluation of comm transmitter AM fidelity.

The TKM NC 2210 is a NAV-COMM Ramp Tester. The unit has improvements over the 2200, which it replaces. The improvements include the following:

- Higher RF power
- Precise localizer and glide slope deflection
- Calibrated VOR bearings at 10 degree increments
- Crystal controlled modulation frequencies
- Longer battery life
- Internal antenna with adjustable length
- Smaller size

**P/N NC2210**



## 3300 Transponder Test Set

The 3300 is designed to test ATC transponders on the bench as well as when they are installed in the aircraft. The 3300 contains an interrogation transmitter. The intended range of the interrogation is less than 100'.

When used for Ramp testing the interrogation signal is comprised of pulse groups (PG) transmitted at a PRF of 235 PG/S.

A pulse group consists of 3 or 4 pulses with a nominal width of 0.80 mS.  
**P/N 3300**



### Specifications

|                  |   |
|------------------|---|
| Localizer        | 108.1 MHz ± .003%<br>-3 ±3 dBm @ base of antenna  |
| Deviation        | Centered, ± .047 DDM, ± .094 DDM, ± .15 DDM<br>Tone delete: 90 and 150 Hz with undeleted tone @ 20% |
| Accuracy         | ± .005 DDM  |
| Glide Slope      | 334.7 MHz ± .003%<br>-6 ±3 dBm @ base of antenna  |
| Deviation        | Centered, ± .094 DDM, ± .188 DDM, ± .30 DDM   |
| Tone Delete      | 90 and 150 Hz with undeleted tone @ 40%   |
| Accuracy         | ± .01 DDM   |
| ILS              | Both the Localizer and Glide Slope signals as above   |
| Deviation        | Both signals deviated simultaneously  |
| VOR              | 108.0 MHz ± .003%<br>-3 ±3 dBm @ base of antenna  |
| Bearing          | Selectable in 10° increments  |
| Accuracy         | ±1.5°   |
| Marker           | 75.0 MHz ± .003%  |
| Modulation       | 400, 1300, 3000, 1020 Hz @ 95%—CW or pulsed<br>-3 ±3 dBm @ base of antenna                          |
| Communication    | 118.0 MHz ± .003%   |
| Modulation       | 400, 1300, 3000, 1020 Hz @ 30%—CW or pulsed   |
| Transmitter test | -10 to +10 dBm Go-Nogo<br>Phones to check modulation  |
| Size             | 3.8 x 7.4 x 2.3"  |
| Weight           | 1.3 lbs.  |
| Power            | Internal battery with over 2 hours running time (110VAC charger included)                           |
| Warranty         | 2-year from date of purchase  |

### Specifications

#### Interrogation Specs

| Function             | Range            | Resolution | Tolerance |
|----------------------|------------------|------------|-----------|
| PRF                  | 235 to 1700 I/S  | 100 I/S    | ±2%       |
| P1 Level             | -10 to -80 dBm   | 1 dB       | ±1.5 dB   |
| P2 Level (ref P1)    | +3 to -12 dB     | 1 dB       | ±.5 dB    |
| P3 Level (ref P1)    | +3 to -12 dB     | 1 dB       | ±.5 dB    |
| P2 Position          | -.35 to +.35     | .05 mSec   | ±.03 dB   |
| P3 Position          | -.7 to +.7 mSec  | .1 mSec    | ±.03 dB   |
| Pulse Width          | .3 to 1.7 mSec   | .1 mSec    | ±.03 dB   |
| Frequency            | 1024 to 1038 MHz | 1 MHz      | ±1 MHz    |
| P4 Position (ref P1) | 2 to 17 mSec     | 1.0 mSec   | ±.03 mSec |
| P4 Level             | -10 to -80 dBm   | 1 dB       | ±1.5 dB   |

#### Reply Specs

|                  |                 |          |          |
|------------------|-----------------|----------|----------|
| Frequency        | -10 to +10 MHz  | .1 MHz   | ±.2 MHz  |
| Power            | 0 to 54 dBm     | .5 dB    | 1 dB*    |
| % Reply          | 0 to 100        | 1        | ±2%      |
| Delay (P3 to F1) | 2 to 5 mSec     | .1 mSec  | ±.1 mSec |
| 1D               | 0 to 4096       | 1        | N/A      |
| ALT              | -1.0 to 50,000' | 100'     | N/A      |
| Pulse Width      | .3 to .7 mSec   | .02 mSec | .04 mSec |