

REPORT OF MEASUREMENTS
PART 15C - INTENTIONAL RADIATOR

DEVICE: 902 – 928 MHz FREQUENCY
HOPPING TRANSMITTER

MODEL: PTZ 900-TX

MANUFACTURER: TRANGO SYSTEMS

ADDRESS: 9939 VIA PASAR
SAN DIEGO CA 92126

THE DATA CONTAINED IN THIS REPORT WAS COLLECTED
ON 12 NOVEMBER 1998 & 08 MARCH 1999 AND COMPILED BY:

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CHIEF EMC ENGINEER

12 Radiated Spurious Emissions

12.1 Regulation

15.247 (c) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

12.2 Test Equipment

Spectrum Analyzer: Hewlett-Packard 8566B, Serial Number 2410A-00168, Calibrated:
31 December 1997, Calibration due Date: 31 December 1998

RF Preselector: Hewlett-Packard 85685, Serial Number 2648A-00519, Calibrated:
31 December 1997, Calibration due Date: 31 December 1998

Quasi Peak Adapter: Hewlett-Packard 85650A, Serial Number 2043A-00327, Calibrated:
31 December 1997, Calibration due Date: 31 December 1998

Line Impedance Stabilization Network: Rhode & Schwarz ESH2-Z5, Calibrated: 4 June 1997,
Calibration due Date: 31 December 1998

Broadband Biconical Antenna (20 MHz to 200 MHz): EMCO 3110, Serial Number 1115,
Calibrated: 27 July 1997, Calibration due Date: 31 December 1998

Broadband Log Periodic Antenna (200 MHz to 1000 MHz): EMCO 3146, Serial Number
2853, Calibrated: 27 July 1997, Calibration due Date: 31 December 1998

EUT Turntable Position Controller: EMCO 1061-3M 9003-1441, No Calibration Required

Antenna Mast: EMCO 1051 9002-1457, No Calibration Required

2 GHz to 10 GHz Low Noise Preamplifier: Milliwave 593-2898, Serial Number 2494,
Calibrated: 19 June 1997, Calibration due Date: 31 December 1998

Double Ridge Guide Horn Antenna: EMCO 3115, Serial Number 5534, Calibrated: 21 July
1998, Calibration due Date: 21 November 1999

12.3 Test Procedures

For tabletop equipment, the EUT is placed on a 1 meter by 1.5 meters wide and 0.8 meter high nonconductive table that sits on a flush mounted metal turntable. Floor standing equipment is placed directly on the flush mounted metal turntable. The EUT is connected to its associated peripherals with any excess I/O cabling bundled to approximately 1 meter.

Preview tests are performed to determine the “worst case” mode of operation. With the EUT operating in “worst case” mode, emissions from the unit are maximized by adjusting the polarization and height of the receive antenna and rotating the EUT on the turntable. Manipulating the system cables also maximizes EUT emissions.

Radiated Emissions Test Characteristics

Frequency range	30 MHz – 10,000 MHz 15.205 RESTRICTED BANDS ONLY
Test distance	3 m
Test instrumentation resolution bandwidth	120 kHz (30 MHz - 1000 MHz) 1 MHz (1000 MHz - 10000 MHz)
Receive antenna scan height	1 m - 4 m
Receive antenna polarization	Vertical/Horizontal

12.4 Test Results

The EUT had no radiated emissions in any of the 15.205 bands.

1. The EUT was tested with the Patch Antenna on 12 November 1998 with no radiated emissions in any of the 15.205 bands.
2. The EUT was tested with the Omni Directional Antenna on 08 March 1999 with no radiated emissions in any of the 15.205 bands.

This page was revised and reissued on 8 March 1999