

# MULTIPLE WORD TRANSMISSION

Horizontal:

10 milliseconds/Div

Vertical:

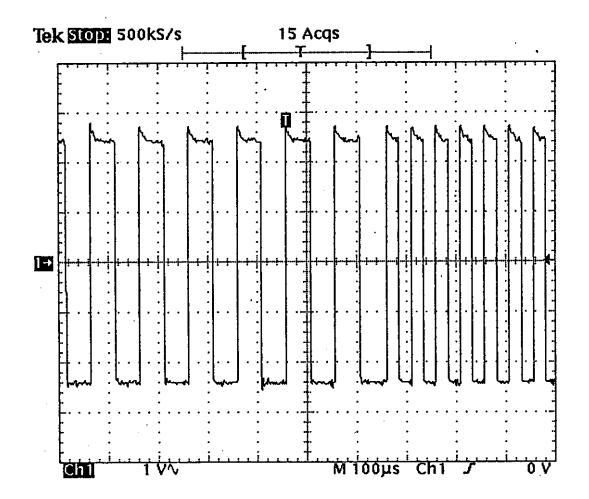
1 V/Div.

(TEK TDS-360)

(Time domain)

PULSE CHARACTERISTICS FCC ID: OHRTX323

FIGURE 1



# BIT DETAIL

Horizontal: Vertical:

100 uS/Div. 1 V/Div.

(TEK TDS-360)

(Time domain)

PULSE CHARACTERISTICS FCC ID: OHRTX323

FIGURE 2

## SAMPLE COMPUTATIONS

Using the time domain plots of Figures 1 through 3, maximum "on" time over any 100 mS interval is:

# "On" Pulses:

Short (30 us) x 28 = 0.84 ms Medium (50 us) x 4 = 0.20 ms Long (5 ms) x 5 = 25.0 ms

Total 26.04

Duty Cycle: 26.04/100 = 0.26

20 Log 0.26 = -12 dB

SAMPLE COMPUTATIONS FCC ID: OHRTX323

FCC ID: OHRTX323

TABLE 1

RADIATED FIELD INTENSITY
Measured at 3 meters
15.231(b)

Frequency (MHz)	Meter <sup>1</sup> Reading (dBm)	Antenna Factor (dB)	Field <sup>2</sup> Intensity uV/m @ 3m	Calc. Field <sup>3</sup> Intensity uV/m @ 3m	FCC Limit	dB to Limit
389.879	-42.8	15.2	9332.5	2344.2	9161.6	-11.8
779.798	-91.2	20.9	68.4	17.2	916.2	-34.5
1169.857	-84.0	22.3	184.1	46.2	500.0*	-20.7
1559.856	-82.0	23.5	266.1	66.8	500.0*	-17.5
1949.855	-86.0	24.8	195.0	49.0	916.2	-25.4
2339.994	-87.2	23.4	144.5	36.3	500.0*	-22.8
2730.073	-86.0	24.3	184.1	46.2	500.0*	-20.7
3120.092	-88.0	25.0	158.5	39.8	916.2	-27.2
3510.051	-90.4	25.4	125.9	31.6	916.2	-29.2
3898.790	-93.2	25.6	93.3	23.4	500.0*	-26.6

Note 1: Peak detector reading without averaging.

Note 2:  $uV/m = Log^{-1}\frac{dBu/m}{20}$ 

dBu = dBm + antenna factor + 107

Note 3: Field Intensity calculated from peak value and -12 dB peak/average factor.

# \*Forbidden Band

All other emissions to the tenth harmonic were below FCC limits. (Unit was measured on 3 major planes)

RADIATED FIELD INTENSITY FCC ID: OHRTX323

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## D. REPORT OF RADIATED MEASUREMENTS

Table 1 lists the frequency and amplitude of all signals observed from 30 to the 10th harmonic that were within 20 dB of the limits of FCC Rules. The averaging factor is included as noted.

#### E. FORBIDDEN BAND MEASUREMENTS

Any spurious signals from the transmitter that fell in a forbidden band are identified in Table 1. All forbidden bands, per Paragraph 15.205, from 73 MHz to 3.9 GHz were searched and any applicable emissions above noise or interference levels are shown in Table 1.

# F. OCCUPIED BANDWIDTH

A plot of occupied bandwidth is shown in Figure 4. The device meets bandwidth restriction of Paragraph 15.231(c); 20 dB points are less than 800 kHz with worst-case modulation. (Limit is 0.25% of 389.9 MHz or 0.97 MHz).

# G. POWER LINE CONDUCTED MEASUREMENTS

AC line conducted spurious measurements were not made since the device does not use the public power supply system.

## H. EXHIBITS

Label; Exhibit 1.
Photographs; Exhibit 2.
Schematic Diagrams; Exhibit 3.
User Instructions; Exhibit 4.
Block Diagram; Exhibit 5.
Circuit Description; Exhibit 6.

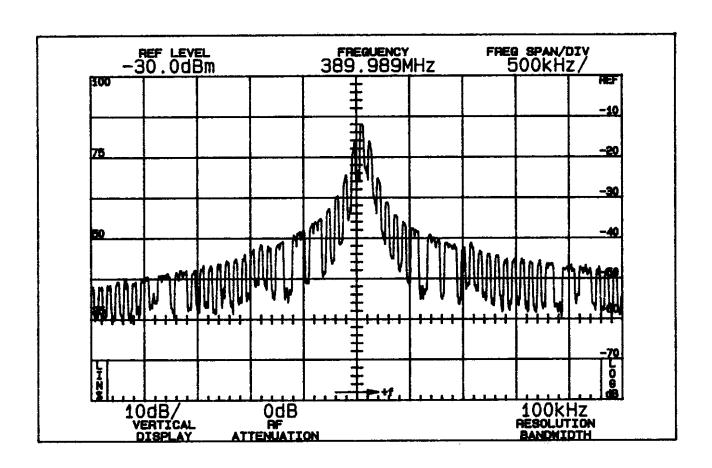
## I. STATEMENT

Technical test data are from tests performed by me or under my supervision. My qualifications are a matter of record with the Federal Communications Commission. I personally attest to the accuracy of the test data submitted as a part of this engineering statement.

Rowland S. Johnson

Dated: March 8, 1999

FCC ID: OHRTX323



# Center Frequency 389.9 MHz

Horizontal:

500 kHz

Vertical:

10 dB/Div.

Resolution:

100 kHz

No video filtering.

OCCUPIED BANDWIDTH FCC ID: OHRTX323

FIGURE 4