3.0 TEST SITE DESCRIPTION

This testing was performed at Rubicom Systems, Inc. 3-meter open area test site. The description of the measurement facility was found to be compliant with the requirements of Section 2.948 of the FCC Rules. A copy of the compliance letter is attached to this report as Appendix A.

3.1 Environmental Conditions

Environmental conditions during testing of the EUT were as follows:

Date: **October 26, 1999**	Date: **November 17, 1999**
Temperature: **78**°	Temperature: **72º**
Barometer: **29.60 inches**	Barometer: **29.60 inches**
Humidity: **59%**	Humidity: **59%**

4.0 TEST INSTRUMENTATION

The following test equipment was used to perform this testing.

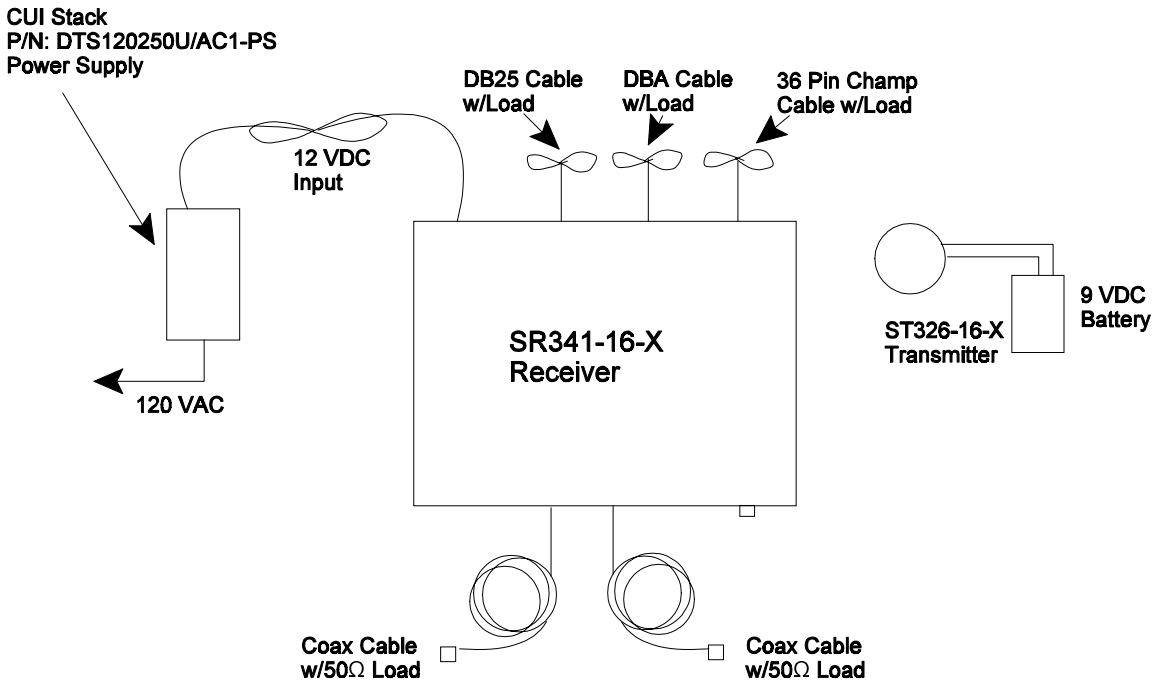
Qty.	Description	Manufacturer	Model No.	Cal. Due
1	Spectrum Analyzer	Advantest	R3271	08/02/00
1	Spectrum Analyzer	Advantest	R3261A	03/10/00
1	Bi-Log Antenna	Chase	CLB6111B	07/10/00
1	Power Line Stab. Network	Solar Elect.	8012-50-5-24-BNC	NCR
1	Plotter	Hewlett Packard	7440A	NCR

5.0 TEST SAMPLE SETUP AND CONFIGURATIONS

The Summation Research, Inc. Series 300 Digital Telemetry System was placed on the nonconductive 80cm high manual turntable. The unit was configured with an external AC/DC power supply and a 9 VDC battery. Cables were configured in a normal setup.

Setup for the Series 300 Digital Telemetry System is shown below.

The Series 300 Digital Telemetry System test setup is shown in Photos 1 and 2.



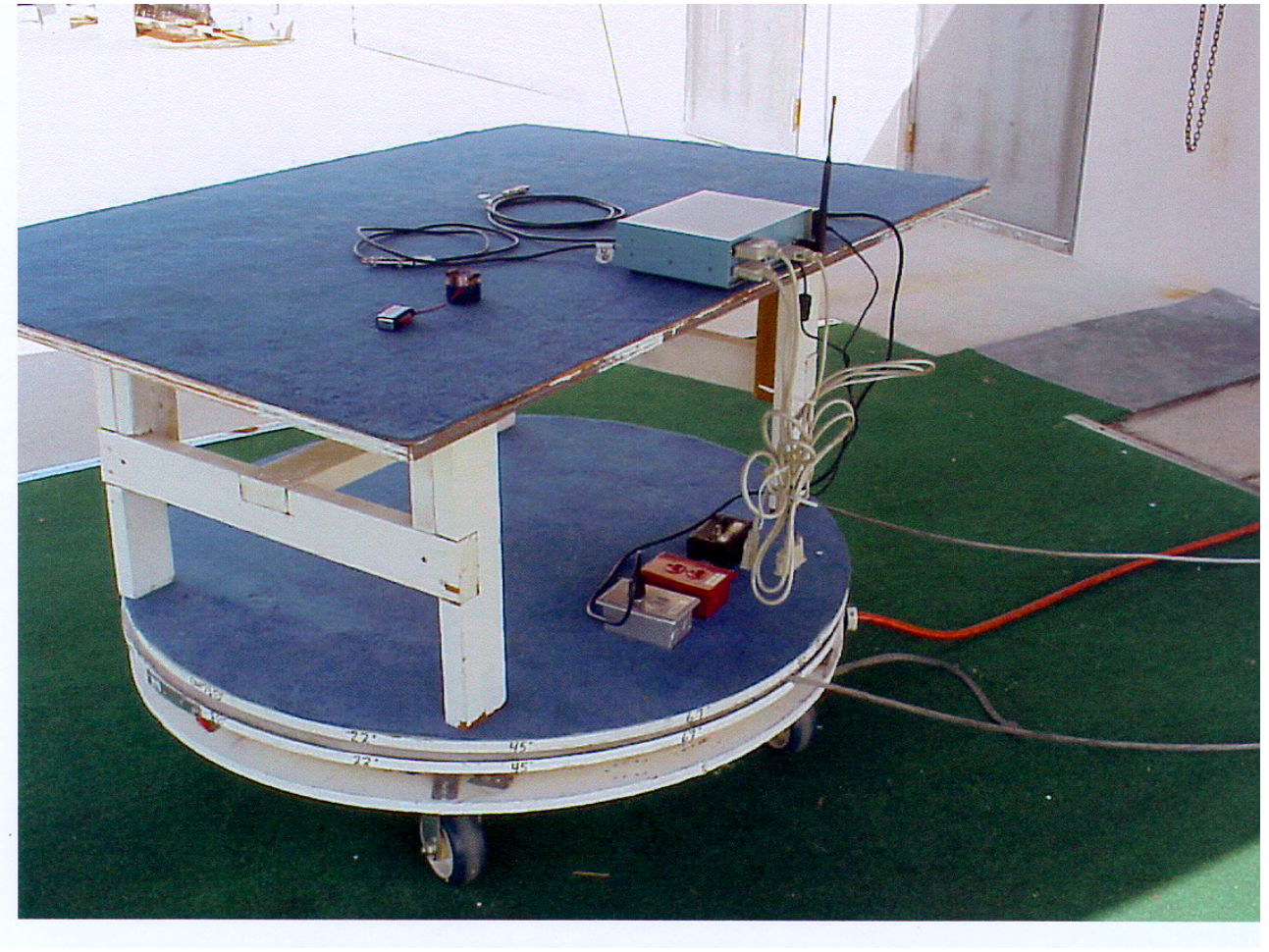


PHOTO 1

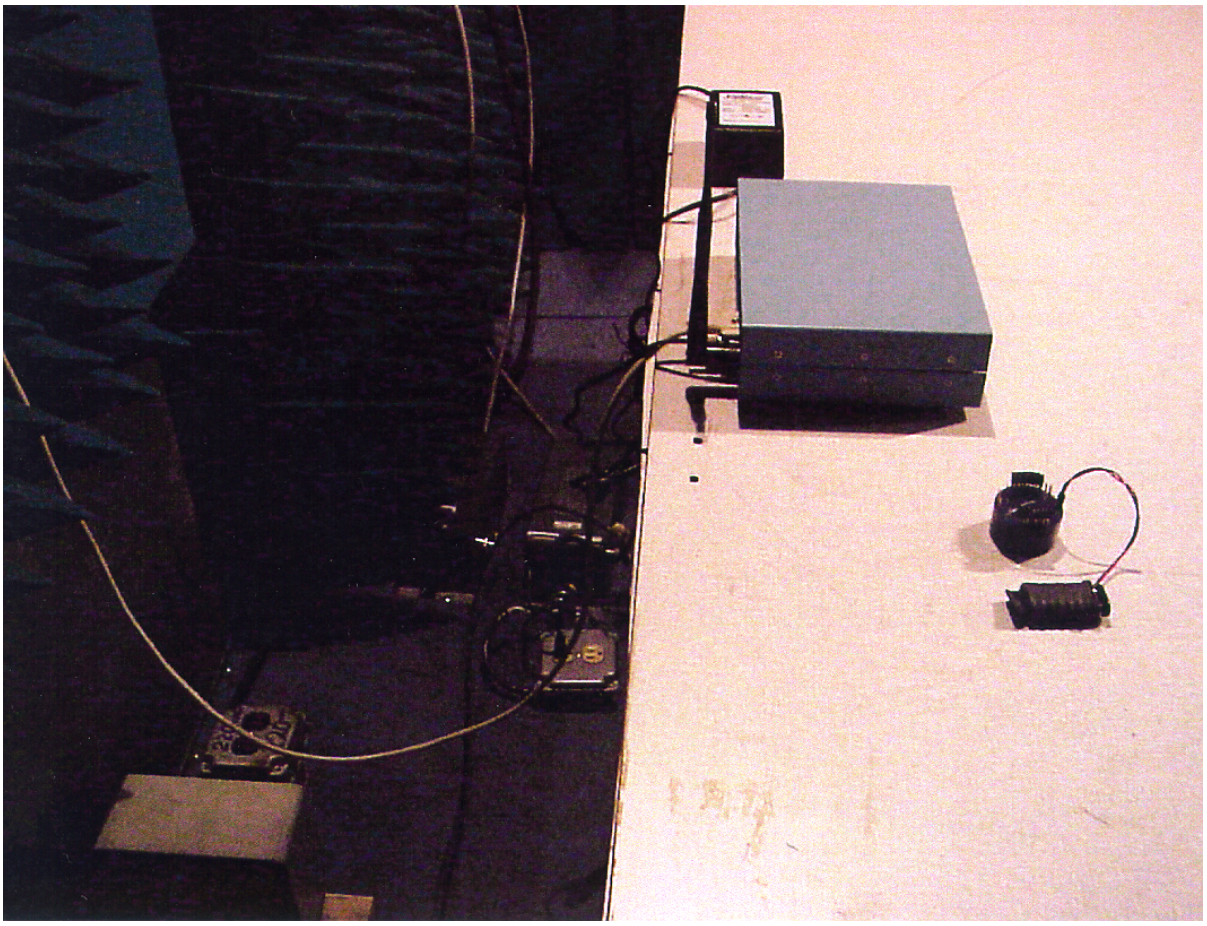


PHOTO 2

6.0 PROCEDURES AND RESULTS

6.1 Radiated Emissions

Prescans were done in a shielded enclosure and are on file at Rubicom Systems. There were no signals detected from the transmitter below 903.3MHz. Tabulated data for all signals detected are listed in this section. Table 6.1-1 presents receiver frequencies within 10dB of the requirement and Table 6.1-2 through 6.1-7 presents transmit harmonics. Tests for transmitter harmonics were done at low, mid and high frequencies (903.3MHz, 912.3MHz and 921.3MHz). All testing from 30MHz to 10GHz was performed on the 3 meter site.

An example of calculations are as follows:

Meter Reading	20	dBμV
Antenna Factor	+16	Conversion Factor
Cable Loss	$\underline{+2}$	Correction Factor
Result	+38	dBμV/m

The spectrum analyzer memory card contains the correction factors for calibrated cables and antenna factors. When external attenuation is required the reference level is offset during test.

Data Sheets 6.1-1 through 6.1-16 present plots of the radiated data over the range of 30MHz-10GHz. The exact levels of signals detected and maximized are presented in the tabulated tables mentioned above.

Data Sheets 6.1-17 through 6.1-32 are the ambient profiles for the 30MHz-10GHz radiated measurements.

6.2 Conducted Emissions

Power line conducted data is presented in Data Sheets 6.2-1 and 6.2-2. No failures were experienced during conducted testing. No modifications were needed to meet conducted emission requirements.

FCC RADIATED EMISSIONS TABULATED RESULTS

EUT MODEL: **Summation Research, Inc. Series 300 Wireless Link SR341-16-X Receiver**

S/N: **0002** DATE: **11/17/99** TESTER:

MEASURED (MHZ)	ANTENNA POL.	EVALUATION	AZIMUTH	MEASURED (dBμV/m)	Q.P. LIMIT (dBμV/M @ 3 METERS	MARGIN (dB)
196M	H	1.25M	157°	34	43.5	-9.5
248M	H	1.5M	157°	37	46	-9.0
256M	H	1.5M	180°	37.5	46	-8.5
260M	H	1.5M	157°	37	46	-9.0
284M	H	1.5M	180°	38	46	-8.0
296M	H	1.25M	157°	40	46	-6.0
300M	H	1.25M	157°	37	46	-9.0
308M	H	1.25M	157°	38	46	-8.0
312M	H	1.25M	135°	38	46	-8.0
316M	H	1.25M	135°	36	46	-10.0
320M	H	1.25M	135°	36	46	-10.0
324M	H	1.5M	135°	36	46	-10.0

TABLE 6.1-1

FCC RADIATED EMISSIONS TABULATED RESULTS

EUT MODEL: **Summation Research, Inc. Series 300 Wireless Link**
ST326-16-X Transmitter Harmonics

S/N: **0002** DATE: **11/17/99** FREQ: **Low 903.3MHz** TESTER:

FREQUENCY (MHZ)	ANTENNA POL.	EVALUATION	AZIMUTH	MEASURED (dBμV/m) PEAK	Q.P. LIMIT (dBμV/M @ 3 METERS	MARGIN (dB)
903.3M	H	1.25	157°	69	94	>-10dB
903.3M	V	1.25	157°	67	94	>-10dB
1.806M	H	1.25	157°	45	74	>-10dB
1.806M	V	1.25	157°	46	74	>-10dB
2.709M	H	1.0	180°	42	74	>-10dB
2.709M	V	1.0	157°	44	74	>-10dB
3613M	H	1.25	135°	53	74	>-10dB
3613M	V	1.25	180°	54.5	74	>-10dB
4516M	H	1.25	135°	51	74	>-10dB
4516M	V	1.0	202°	48	74	>-10dB
5419M	H/V		NOISE FLOOR LEVEL			
6323M	H/V		NOISE FLOOR LEVEL			
7226M	H/V		NOISE FLOOR LEVEL			
8129M	H/V		NOISE FLOOR LEVEL			
9033M	H/V		NOISE FLOOR LEVEL			

TABLE 6.1-2

FCC RADIATED EMISSIONS TABULATED RESULTS

EUT MODEL: **Summation Research, Inc. Series 300 Wireless Link**
ST326-16-X Transmitter Harmonics

S/N: **0002** DATE: **11/17/99** FREQ: **Low 903.3MHz** TESTER:

FREQUENCY (MHZ)	ANTENNA POL.	EVALUATION	AZIMUTH	MEASURED (dBμV/m) AVG	AVG. LIMIT (dBμV/M @ 3 METERS	MARGIN (dB)
1806M	H	1.25	157°	45	54	-9.0
1806M	V	1.25	157°	46	54	-8.0
2709M	H	1.0	180°	40	54	-14.0
2709M	V	1.0	157°	42	54	-12.0
3613M	H	1.25	135°	45	54	-9.0
3613M	V	1.25	150°	47.5	54	-6.5
4516M	H	1.25	135°	44	54	-10.0
4516M	V	1.0	202°	39	54	-15.0
5419M	H/V	NOISE FLOOR LEVEL				
6323M	H/V	NOISE FLOOR LEVEL				
7226M	H/V	NOISE FLOOR LEVEL				
8129M	H/V	NOISE FLOOR LEVEL				
9033M	H/V	NOISE FLOOR LEVEL				

TABLE 6.1-3