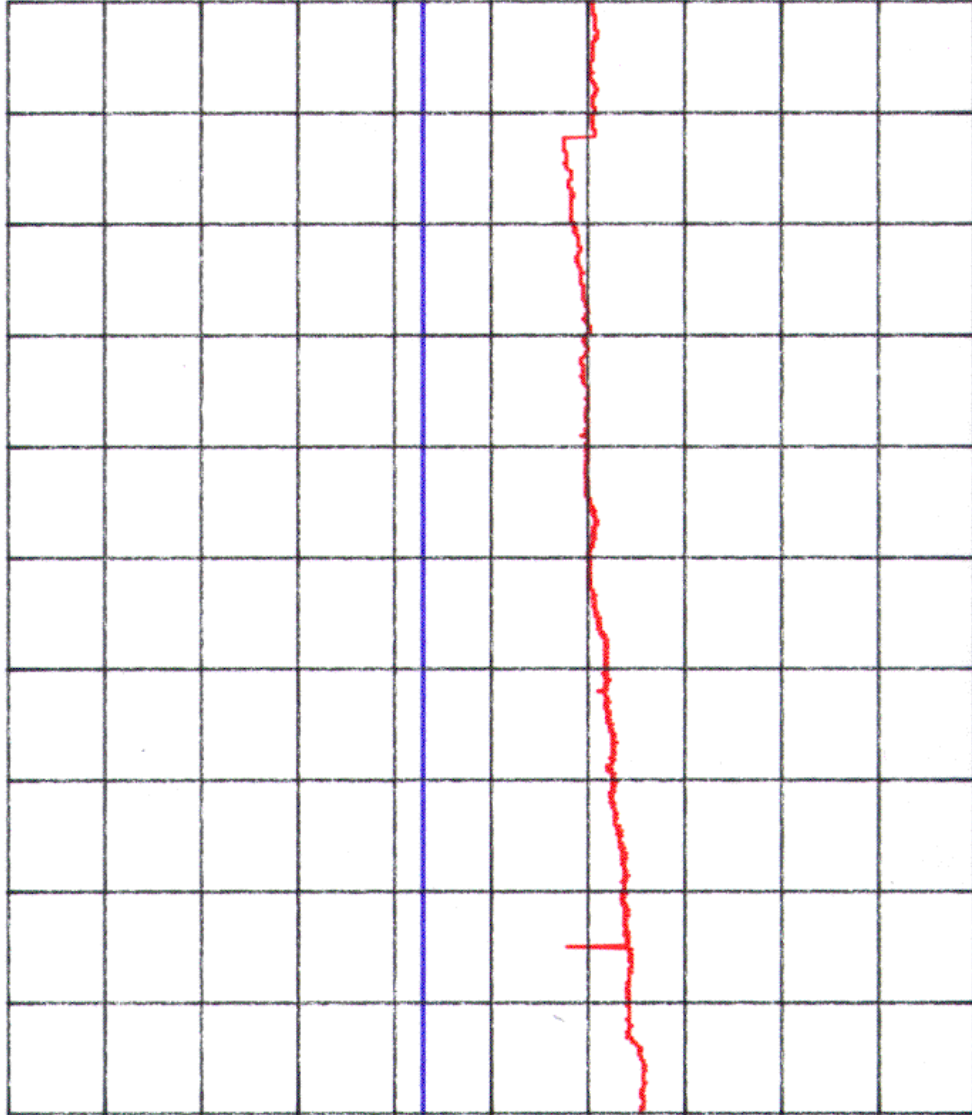




TEST: FCC RADIATED EUT: SERIES 300 WIRELESS LINK S/N: 0002  
FREQ: 4G-8GHz SPEC: PARAGRAPH 15.249 INT. RAD. ANT.HT/POL: 1.0m H  
DETECT: AVG. AMBIENT ANTENNA: N/A EUT POSITION: -  
DATE: 10-27-99 TEST SITE: 3 METER TESTER: *AB*

JA-1679

REF 97.0 dB $\mu$ V/m ATT 0 dB A\_write B\_blank  
10dB/



RBW 1 MHz  
VBW 10 Hz  
SWP 800 s

START 4.000 GHz STOP 8.000 GHz

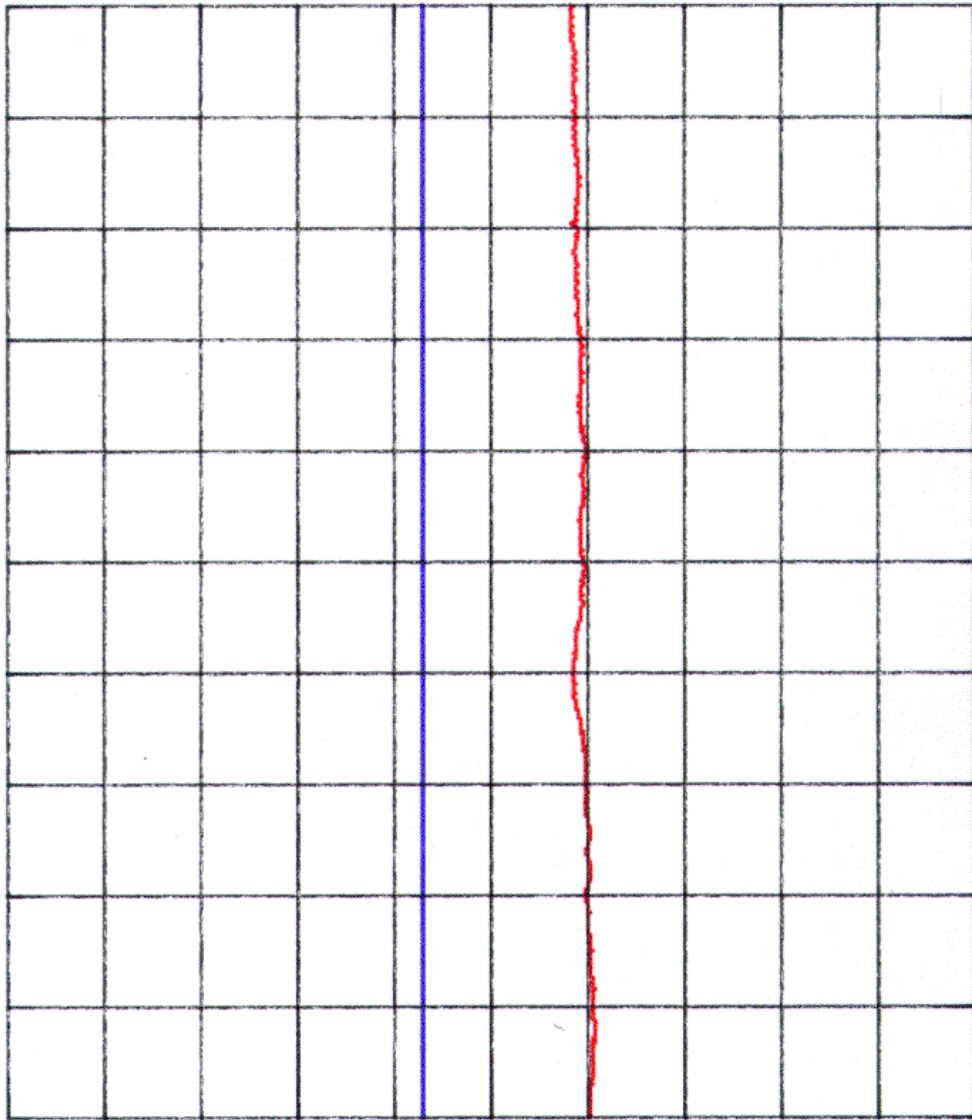
DATA SHEET 6.1-30



TEST: FCC RADIATED EUT: SERIES 300 WIRELESS LINK S/N: 0002  
FREQ: 8G-10GHz SPEC: PARAGRAPH 15.249 INT. RAD. ANT.HT/POL: 1.0M H  
DETECT: AVG. AMBIENT ANTENNA: N/A EUT POSITION: -  
DATE: 10-27-97 TEST SITE: 1 METER TESTER: *[Signature]*

JA-1679

REF 97.0 dB $\mu$ V/m ATT 0 dB A\_write B\_blank  
10dB/



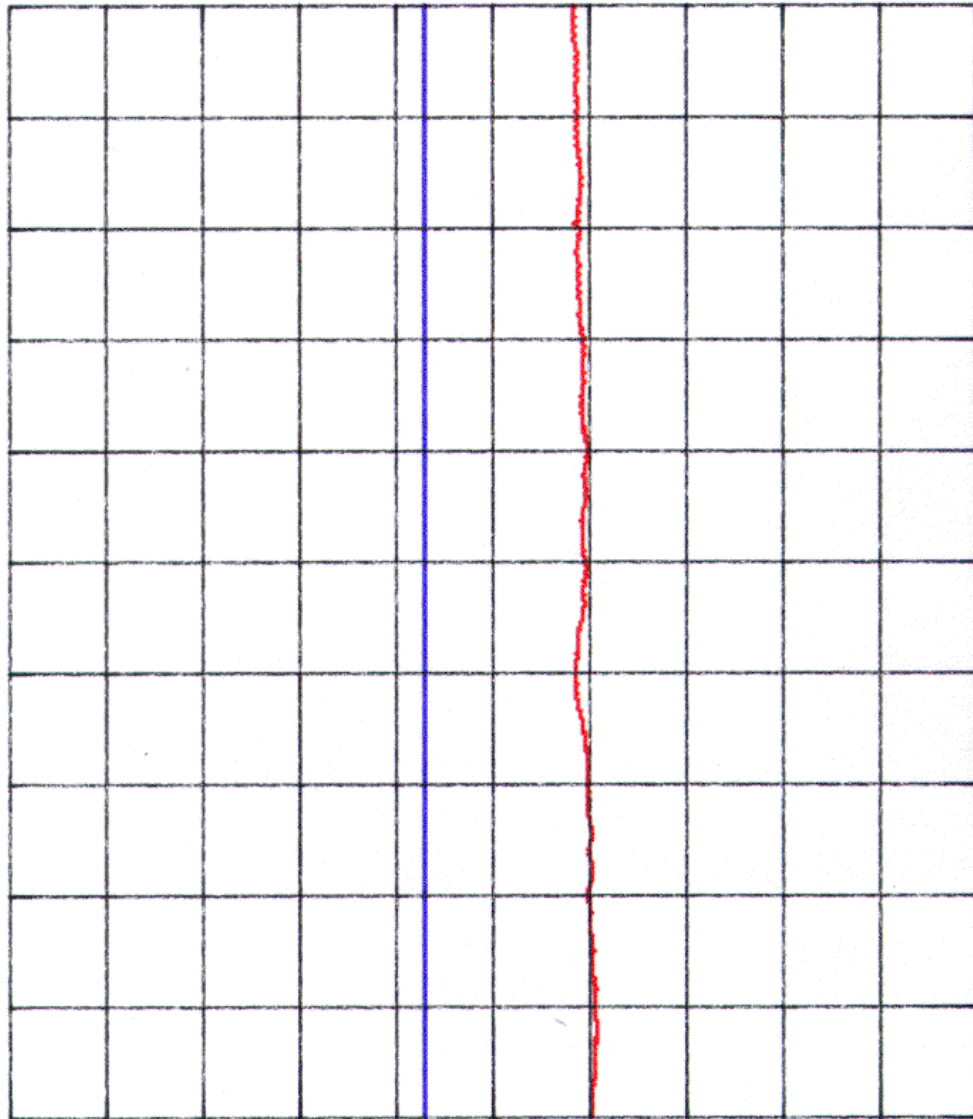
START 8.000 GHz STOP 10.000 GHz

RBW 1 MHz  
VBW 10 Hz  
SWP 400 S



TEST: FCC RADIATED EUT: SERIES 300 WIRELESS LINK S/N: 0002  
FREQ: 8G-10GHZ SPEC: PARAGRAPH 15.249 INT. RAD. ANT.HT/POL: 1.0u V  
DETECT: AVG. AMBIENT ANTENNA: N/A EUT POSITION: -  
DATE: 16-27-99 TEST SITE: 1 METER TESTER: AB

REF 97.0 dB $\mu$ V/m ATT 0 dB A\_write B\_blank  
10dB/



RBW 1 MHz  
VBW 10 Hz  
SWP 400 S

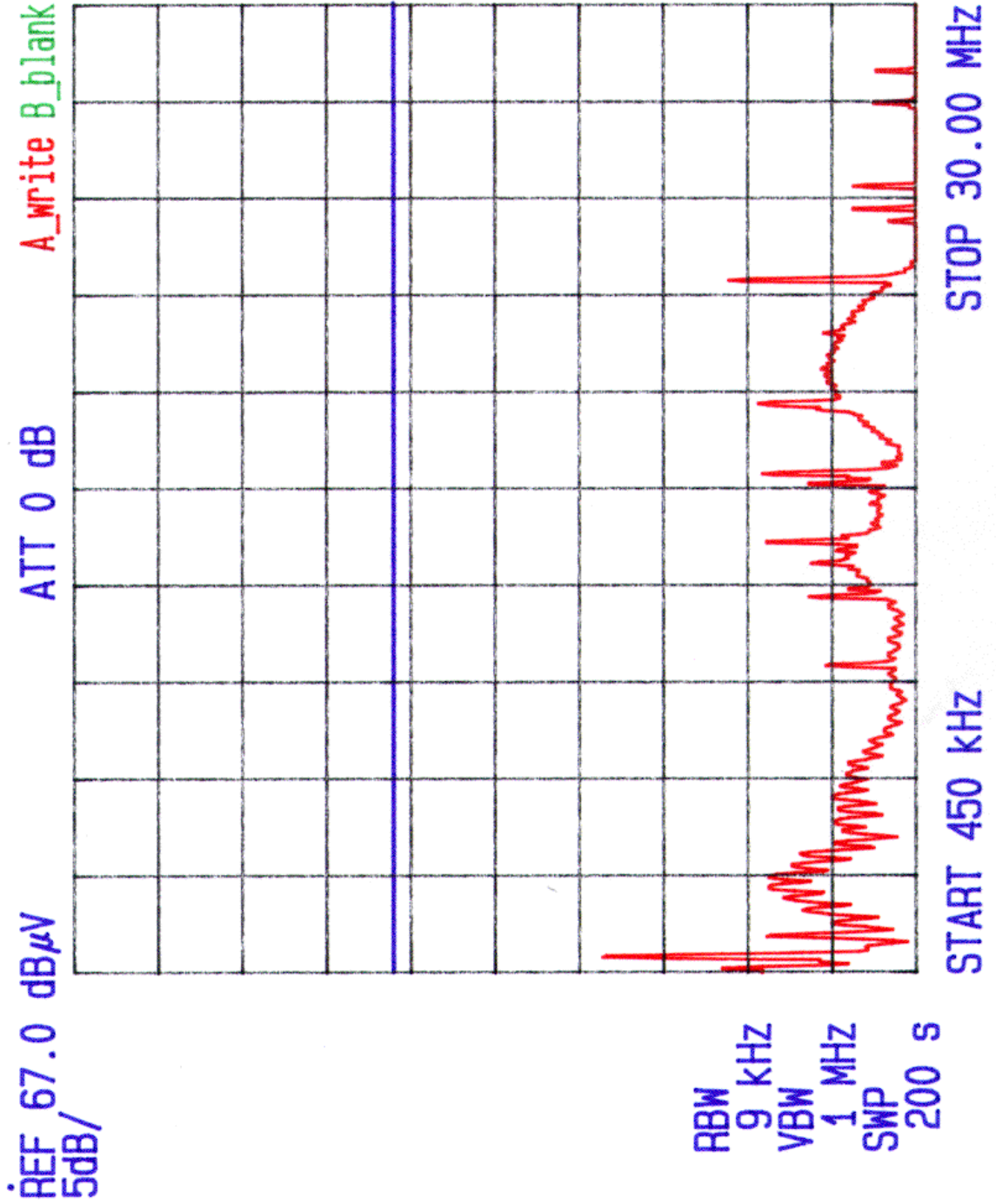
START 8.000 GHZ STOP 10.000 GHZ

JA-1679



TEST: FCC CONDUCTED EUT: SERIES 300 WIRELESS LINK S/N: 0002  
FREQ: 450K-30MHz SPEC: FCC CLASS B ANT.HT/POL: N/A  
DETECTOR: PEAK LINE UNDER TEST: PHASE EUT POSITION: FRONT  
DATE: 11-17-99 TEST SITE: ROOM 1 TESTER: *ALB*

JA-1679



DATA SHEET 6.2-1





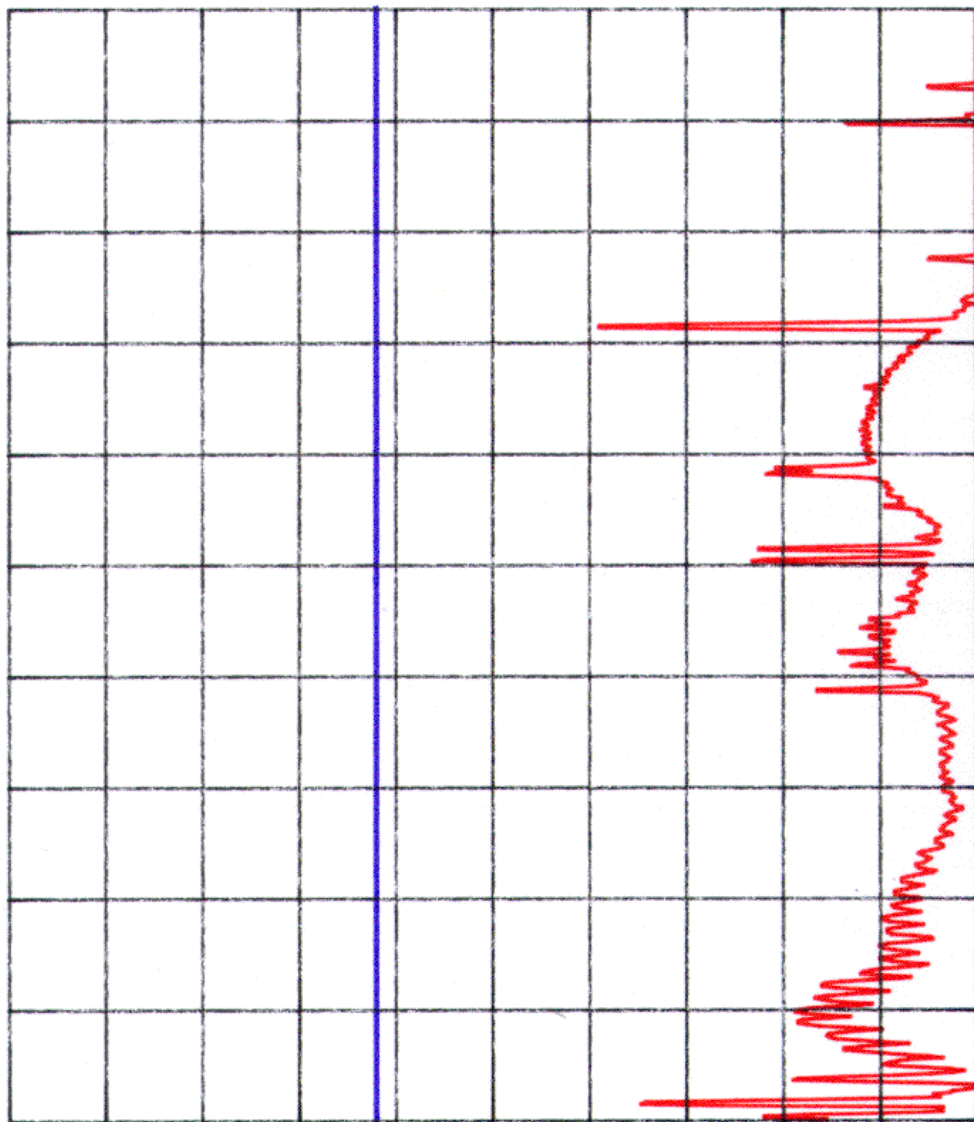
TEST: FCC CONDUCTED	EUT: SERIES 300 WIRELESS LINK	S/N: 0002
FREQ: 450K-30MHz	SPEC: FCC CLASS B	ANT.HT/POL: N/A
DETECTOR: PEAK	LINE UNDER TEST: NEUTRAL	EUT POSITION: FRONT
DATE: 11-17-99	TEST SITE: ROOM 1	TESTER: <i>AD</i>

JA-1679

REF 67.0 dB $\mu$ V  
5dB/

ATT 0 dB

A\_write B\_blank



RBW 9 KHz  
VBW 1 MHz  
SWP 200 s

START 450 KHz

STOP 30.00 MHz

APPENDIX A  
COMPLIANCE LETTER

# FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road  
Columbia, MD 21046  
Telephone: 301-725-1585 (ext-218)  
Facsimile: 301-344-2050

**JA-1679**

December 5, 1996

IN REPLY REFER TO  
31040/SIT  
1300F2

Rubicom Systems, Inc.  
284 West Drive, Suite B  
Melbourne, FL 32904

Attention: Joseph G. Barbee

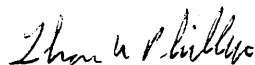
Re: Measurement facility located at above address  
(3 meter site)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is published periodically and is also available on the Laboratory's Public Access Link as described in the enclosed Public Notice.

Sincerely,



Thomas W. Phillips  
Electronics Engineer  
Customer Service Branch

Enclosure:  
PAL PN

**APPENDIX B**  
**SYSTEM DESCRIPTION**



Model ST-320/SR-340

**Wireless Link<sup>®</sup>**

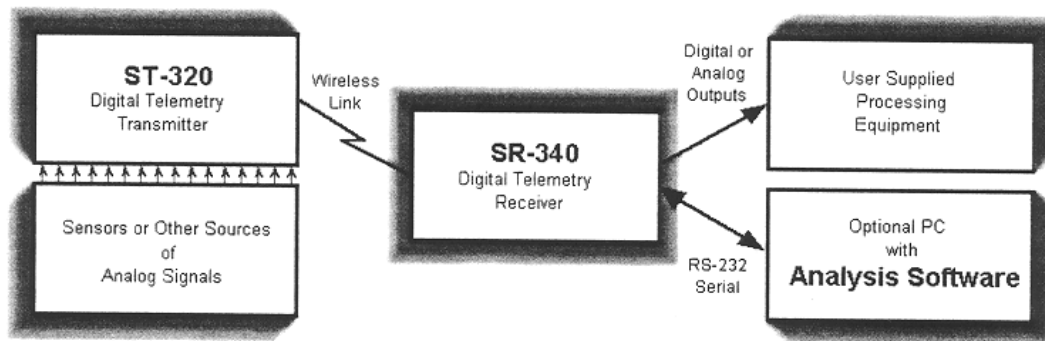
**SRI *PMD* Inc.**

Advanced Technology General Purpose

## Series 300 Digital Telemetry Systems

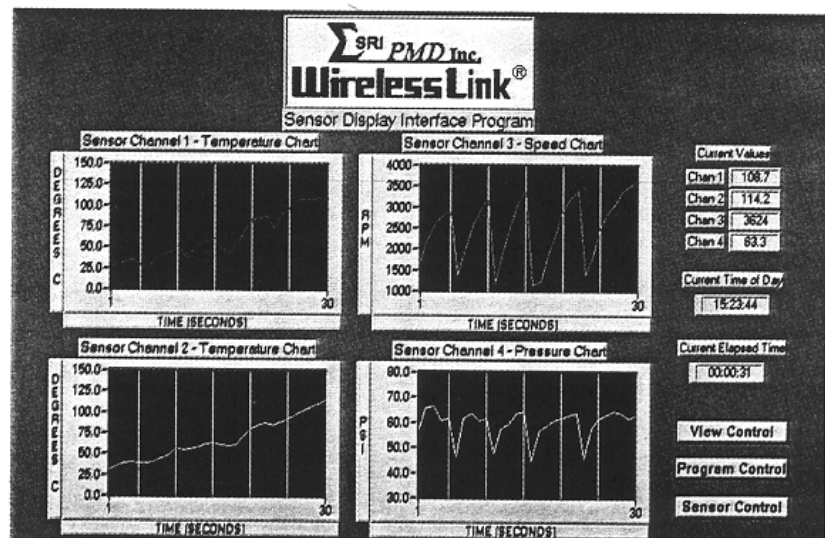
for Multiple Sensors and Sensor Types

**SRI/PMD** has been designing and producing ruggedized wireless telemetry systems for more than 20 years. The transmit side of these systems, capable of withstanding temperatures in excess of 150° C and acceleration forces of up to 20,000 Gs, have provided access to **temperature, strain, pressure** or other types of critical measurement data from locations where hard wire interconnects or slip rings have proven ineffective, cumbersome or unreliable.

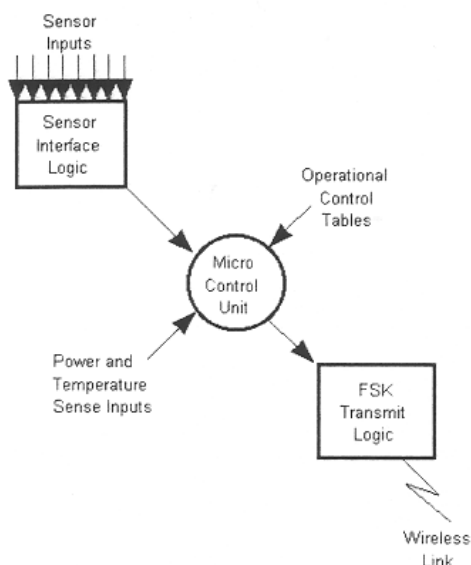


By applying the latest digital signal processing technology, the **ST-320 Digital Telemetry Transmit System**, combined with the companion **SR-340 Receive System**, offers a far more versatile and cost effective solution to telemetry applications ranging from **turbines, generators, kilns, car engines** and other hard-to-get-at places. Furthermore, the price of these products offers effective alternative solutions to simple applications, such as transferring analog signals across a city street. A single general purpose design allows this unique system to be applied to a wide variety of sensor configurations, including multiple and mixed inputs of thermocouple data, strain bridges and various other types of static or dynamic input voltages. The digital architecture of the implementation not only insures the integrity of the data measurements throughout the detection, transmission, recovery and output processes, but also allows the system to automatically compensate for steady state or dynamic errors introduced by external or internal sources.

**SRI/PMD** offers standard and custom analysis software packages compatible with execution on most standard Personal Computers (PCs). The software utilizes standard interfaces to communicate with the **SR-340 Receive System**, frequently eliminating the need for stand-alone data recorders, strip charts and/or oscilloscopes. By providing data storage and retrieval functions, operators may capture critical measurement data, alter operational parameters of a system under test and then perform detailed comparison and analysis on new measurements.



ST-320

**Wireless Link<sup>®</sup> TRANSMITTER****Transmission Overview****TRANSMITTER SIMPLIFIED OVERVIEW**

The heart of the **ST-320 Transmitter** is a powerful and versatile micro-controller unit (MCU) capable of up to 30 million operations per second. Firmware loaded into the MCU at the factory supports a wide variety of sensor types to satisfy most common applications of the system.

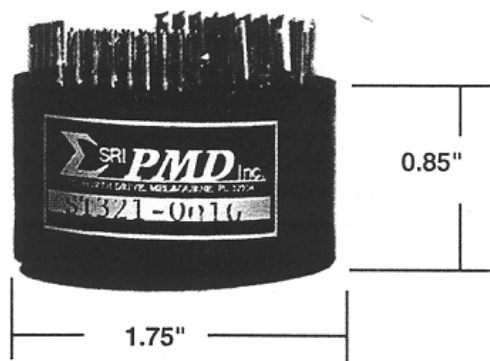
Tables loaded within electronically erasable PROM (EEPROM) memory space establish the sensor configuration of each transmitter. Referring to these tables, the controller invokes configuration settings for the analog sensor interface circuitry, altering the various input offsets and gain parameters in order to accurately detect the input voltages. Up to sixteen (16) sensor inputs can be configured for a standard single **ST-320 Transmitter**. (Consult factory for custom expansion of these inputs.)

The EEPROM tables also control the operational parameters associated with sampling frequency and/or dwell time for each sensor input. Highly critical measurements can be burst sampled at the maximum system rate of approximately 50 K samples per second. The detection resources of the design can be allocated across multiple inputs, supporting either a fixed rate sampling of all voltages, or a variable rate

sampling algorithm invoking high speed update rates on selected inputs and slower speed sampling on others.

An on-board temperature sensor combined with primary power voltage detection logic allows the design to compensate for measurement errors associated with temperature or voltage drifts. For most applications, the **ST-320** can guarantee better than 1% accuracy of typical measurements.

Primary power input for the design is largely dictated by the user's application. At typical power consumption levels of under 25 milli-Amps, battery power can frequently satisfy limited time frame measurement functions. On rotating installations, standard accessory modules providing power generation via inductive coupling can be supplied, thus satisfying long term telemetry data requirements.

**SAMPLE PACKAGING**

The **ST-320 Transmitter** is usually encapsulated within thermally conductive epoxy, allowing it to be installed in locations presenting severe environmental and/or contaminated conditions. While many applications require custom packaging to suit unique end-user installation form/fit specifications, standardized housings exist, including circular and shaft mount forms.