

## **SMT Station Monitor**

## DATA SHEET

The SMT station monitor is recommended for higher power (QRO) operation. It does not include the optional detector biasing supply. When connected to a low cost oscilloscope, it allows the adjustment and tuning of the entire transmitting chain including the transceiver, RF amplifier, and other components. It is designed for transceiver output levels of up to 100 Watts driving linear RF amplifiers. It features a wide band sampler, a high performance demodulator, a variable base band output and an oscilloscope trigger output.



A Linear RF amplifier commonly amplifies an RF signal from 20-100 Watts by 20dB or more to about 500-1,500 Watts. Its performance



and modulation can be characterized using a spectrum analyzer or a low cost oscilloscope using a trapezoid display.

High level RF Sampler		
Max input power:	1,500 Watt PEP crest factor 4:1	
Insertion loss:	Negligible (< .01 dB)	
Bandwidth:	1-100 MHz (useable to 250 MHz)	
Impedance RF IN:	50ohm	
Impedance RF OUT:	50ohm	
Impedance sampler out:	50ohm	
VSWR:	Better than 1:1.1	
Return loss:	> -25dB	
Sampler output level:	-30dB +/- 1dB	
Sampler power gain:	0.001	
Samper voltage gain:	0.0316 (1v/div=31.6V)	
Connectors RF IN/OUT:	SO-239	
Connector sampler OUT:	BNC	
Demodulator RF		
Maximum RF IN:	200W PEP with crest factor of 4: 1	
Bandwidth:	2MHz - 150MHz	
Isolation RF IN/OUT to DEMOD OUT:	> 50dB	
Insertion loss:	Negligible	
VSWR:	Better than 1.1:1	
Return loss: >	25dB	
Impedance DEMOD RF IN/OUT:	50ohms	
Connectors RF IN/OUT:	SO-239	

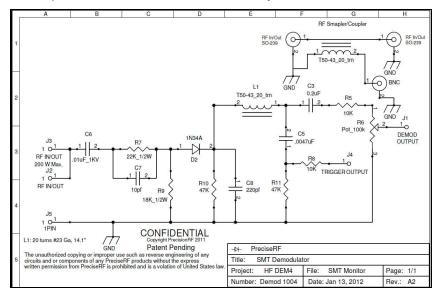
Demodulator		
	Baseband RF detection:	AM and SSB
Bandwidth Baseband:		10Hz – 30KHz
Spurious THD:		<-60dB
Linearity 5-100% modulation:		Better than <1%
Linearity 0-5% modulation:		Better than <10%
Rise/fall time:		< 10us aberrations less than 5%
Output modulation level:		-20dB externally variable
Output trigger level:		>1.5V p-p
Impedance DEMOD OUT:		47K
Impedance TRIGGER OUT:		47K
Physical:		1 lbs 4 x 3 x 1.2 in
Application:	Ideally suited for monitoring, testing and analyzing transceiver and RF amplifier transmitters using the trapezoid method; includes a high power sampler/coupler signal conditioner and integrated SSB and AM baseband demodulator.	

Each SMD-Pro Demodulator comes completely assembled in a premium shielded die cast aluminum alloy A380 housing. The housing is blue baked enamel per Federal Standard 595 #25109 over primer wash per DOD-P-15328.

All products are calibrated and tested to meet or exceed published specifications. The optional NIST calibration certificate is provided for users needing a calibration reference showing the actual performance achieved. This calibration is done using NIST traceable instruments. Some test and measurement equipment was calibrated at



the PreciseRF laboratory using NIST traceable instruments. The item calibrated may be used as a calibration reference only, and shall not be used as a NIST calibration standard. This certificate shall not be reproduced without the express written permission from the calibration facility.



PreciseRF warrants its products to be free from defects in material and workmanship for one (1) year from the date of purchase. If you need support or service for your PreciseRF product, whether the product is under warranty or otherwise, please contact PreciseRF and arrange for a return or repair authorization. Manufactures Suggested Retail Price (MSRP). Prices and specifications subject to change without notice.

