A Wattchman Monitor/Alarm measures forward and reflected RF power simultaneously in 50 ohm transmission lines. It is compatible with our entire series of 7/8" thru 61/8" Line Sections and will accept plug in elements that range from 5 watts to 100,000 watts full scale from 0.45 MHz to 2.3 GHz.

One or both meters may incorporate a front panel adjustable set point which controls the trip point of the alarm. Model 81070's have our standard 5/10/25 scales and 81080's have 15/30/60 scales.

A station monitor/alarm system installation consists of a Wattchman, a dual socket line section and two elements for monitoring both forward and reflected power. The Wattchman is supplied with two 25' DC cable assemblies for connection to the line section, and a 6' AC power cord. Installation requires inserting the line section into the transmission line, and connecting the terminals of the transmitter interlock system(s) to the proper terminals on the Wattchman and providing AC power.

Abnormal load conditions will quickly cause transmitter shutdown in less than 15 milliseconds (including control relay). An audible single tone alarm will indicate system/ transmitter malfunction. Relay contacts are provided for remote alarm and reset switching. Fail-Safe or Non-Fail-Safe mode is selected by a switch located on the rear of the instrument.

Element selection: Suggest using a 10:1 ratio. Example: 10 kW forward and 1 kW reflected.

For additional information on our Wattchman Station Monitor/Alarm Systems and accessories, consult factory.

SPECIFICATIONS: 81070/81080 SERIES WATTCHMAN

METER SPECIFICATIONS

30 microamps full scale, ±1%. 1400 ohms terminal resistance. 41/2" movement.

SYSTEM SPECIFICATIONS

±5% O.F.S.accuracy when used with proper Coaxial Dynamics line sections and elements.

CONTROLS: FRONT PANEL

Push button reset. Trip set adjustment.

REAR PANEL

Audible alarm switch. Fail-safe mode switches. 110/220 VAC switch.

CONNECTIONS

Meter inputs. *N.O./N.C. control connections. Remote alarm turn on - N.O.

Remote reset connections. AC power.

CONTACT RATINGS

5A at 120 VAC non-inductive.

RESPONSE TIME

Less than 15 milliseconds (including control relay function.) *N.O./N.C. - Normally Opened/ Normally Closed.



Station Monitor / Alarm



DIMENSION

19" L x 8" W x 51/4" H

WEIGHT

71/2 Lbs.

Blue Textured Panel Anodized Aluminum

POWER REQUIREMENTS

110/220 VAC, 50/60 CPS, 10 Watts Max

WATTCHMAN FEATURES:

PROTECTS YOUR TRANSMITTER SYSTEM

CONTINUOUS POWER DISPLAY FORWARD AND REFLECTED

AUDIBLE AND VISUAL ALARMS

FAST FAULT RESPONSE (15 MILLISECONDS)

REMOTE RESET PROVISION

110/220 VAC INPUT SWITCH



Coaxial Dynamics

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MODEL

81070 SPECIALIZED FEATURES

The Original Transmitter Monitor/Alarm System with a forward power meter and a reflected power shut-down control monitor and meter for high reflected power. Model 81070 is designed to be used with all Coaxial Dynamics Dual Socket Line Sections and standard catalog elements.

81071 This Model has a control monitor and meter for an alarm on low forward power levels (via contact on the rear panel) as well as the transmitter shut-down on high reflected power levels of Model 81070 above. Model 81071 is also intended to be used with all C.D.I. Dual Socket Line Sections and standard catalog elements.

81073 Model 81073 has only one monitor and control meter intended to provide an alarm on low forward power only. No indication of reflected power is provided. Start up switching circuits are provided to avoid alarm when the transmitter first starts up. Model 81073 is used with all C.D.I. Single Socket Line Sections and standard elements.

81074 Model 81074 has only one monitor and control meter and is intended to provide an alarm and transmitter shut-down with high power levels. There is only one indication of power provided. This unit is generally used to monitor and protect against high reflected power levels. However, it may also be used to monitor and protect against high forward power levels by simply rotating the detector element 180 degrees. Model 81074 is designed to be used with all C.D.I. Single Socket Line Sections and standard elements.

MODEL SPECIALIZED FEATURES

Model 81081 is similar to Model 81070 except that the standard 30 microamp meters have special 15, 30 and 60 scales. Model 81081 is designed to be used with all C.D.I. Dual Socket Line Sections and special C.D.I. elements.

Model 81082 is similar to Model 81071 except that the standard 30 microamp meters have special 15, 30 and 60 scales. Model 81082 is designed to be used with all C.D.I. Dual Socket Line Sections and special C.D.I. elements.

AVAILABLE "WATTCHMAN" OPTIONS

81070-200 Model 81070-200 is an amplified DC output option available for all Wattchman Models. This option provides a pair of adjustable amplified DC outputs that are available on the terminal strip on the rear of the unit. The outputs are proportional to the meter indication and are calibrated at the factory so that a full scale deflection will cause a DC voltage of 2.00 Volts to be present. The amplifiers are designed to work with any DC load impedance of 500 ohms or greater.

SECTION A

81081

81082

STANDARD ELEMENTS FOR 1-5/8" SYSTEM 82100 SERIES (30µA) PLUG-IN ELEMENTS

FOR USE IN ALL 1-5/8" LINE SECTIONS

Power Range	2-30 MHz	25-60 MHz	50-125 MHz	100-250 MHz	200-500 MHz	400-1000 MHz
250		82106	82113	82120	82127	82134
500		82107	82114	82121	82128	82135
1000	82101	82108	82115	82122	82129	82136
2500	82102	82109	82116	82123	82130	82137
5000	82103	82110	82117	82124	82131	82138
10 kW	82104	82111	82118			
25 kW	82105	82112	82119			

SPECIAL 15/30/60 SCALE (30µA) ELEMENTS FOR 1-5/8" LINE SECTIONS

Power Range	2-30 MHz	25-60 MHz	50-125 MHz	100-250 MHz	200-500 MHz	400-750 MHz
300		82155	82162	82169	82174	82179
600		82156	82163	82170	82175	82180
1500	82150	82157	82164	82171	82176	82181
3000	82151	82158	82165	82172	82177	82182
6000	82152	82159	82166	82173	82178	82183
15 kW	82153	82160	82167			
30 kW	82154	82161	82168			

STANDARD LINE SECTIONS

Model No.	Description	
88514	1-5/8" 50 ohms, Dual Socket, Swivel Flanged E.I.A.	
88515	1-5/8" 50 ohms, Dual Socket, Unflanged	
88515-2	1-5/8" 50 ohms, Dual Socket, Unflanged Recessed	

SECTION B

STANDARD ELEMENTS FOR 3-1/8" SYSTEM 82300 SERIES (30µA) PLUG-IN ELEMENTS

FOR USE IN ALL 3-1/8" LINE SECTIONS

Power Range	2-30 MHz	25-60 MHz	50-125 MHz	100-250 MHz	200-500 MHz	400-750 MHz
1000		82306	82311	82316	82321	82326
2500		82307	82312	82317	82322	82327
5000	82301	82308	82313	82318	82323	82328
10 kW	82302	82309	82314	82319	82324	82329
25 kW	82303	82310	82315	82320	82325	82330
50 kW	82304		82332	82333		

SPECIAL 15/30/60 SCALE (30µA) ELEMENTS FOR 3-1/8" LINE SECTIONS

Power Range	2-30 MHz	25-60 MHz	50-125 MHz	100-250 MHz	200-500 MHz	400-750 MHz
1500		82354	82360	82366	82372	82378
3000		82355	82361	82367	82373	82379
6000	82350	82356	82362	82368	82374	82380
15 kW	82351	82357	82363	82369	82375	82381
30 kW	82352	82358	82364	82370	82376	82382
60 kW	82353	82359	82365	82371	82377	82383

STANDARD LINE SECTIONS

Model No.	Description	
88516	3-1/8" 50 ohms, Dual Socket, Swivel Flanged E.I.A.	
88517	3-1/8" 50 ohms, Dual Socket, Unflanged	
88517-2	3-1/8" 50 ohms, Dual Socket, Unflanged Recessed	

NOTE: 4-1/16" AND 6-1/8" Standard Line Sections and Elements may also be used with Coaxial Dynamics Wattchman Series. Please consult the factory, or our price list for more information.

