Coaxial Dynamics
A CDI INDUSTRIES, INC. COMPANY
SPECIALISTS IN RF TEST EQUIPMENT & COMPONENTS

6800 Lake Abram Drive
Middleburg Heights, Ohio 44130
Telephone: (440) 243-1100
Fax: (440) 243-1101
Web Site: www.coaxial.com
E-mail: support@coaxial.com

The 91090 Series of Wattchman® are designed to measure power and load match in 50-Ohm coaxial lines. They are similar in appearance and operation to the 81090 Series except they have been designed to accurately measure power of complex waveforms such as CDMA (Code Division Multiple Access), DAB (Digital Audio Broadcast), DTV (Digital TV), and HDTV (High Definition TV), as well as CW, AM and FM.

The insertion VSWR of this equipment is very low, in order of 1.05:1 for frequencies up to 1000 MHz. The direct reading scale is expanded downscale for improved readability. Power ranges and frequency ranges are determined by the plug-in Elements.

To use the Wattmeter, simply install the line section between the power source and an antenna or "dummy load". Then insert the element, connect the cables to the line section and the element, plug in the power cord and read the power directly on the 4 ½" 3-scale meter. The SMA Female connector on the side of the element knob provides a DC supply to the internal circuitry in the element. Carefully route the cable connected to the element so it does not cause the element to rotate in the socket.

The operation of the Wattmeter is based on the Traveling Wave Concept of RF transmission. As RF is applied to a transmission line, there is a forward wave traveling from the transmitter to the load, and a reflected wave traveling from the load back to the transmitter. The closer the load is matched to the transmission line, the smaller the reflected wave will be.

Please refer to the 81090/81091 Instruction Manual for further information.