# Model 80AS1 TERMALINE Coaxial Load Resistor

Instructions
for
Installation - Operation - Maintenance

## General

The Bird Model 80AS1 TERMALINE Coaxial Load Resistor is a liquid cooled RF line termination capable of dissipating 20 watts continuous power in 50-ohm coaxial circuits. It furnishes an accurate termination of medium power transmission systems during design, maintenance, and adjustment phases. The Load Resistor may also be used in conjunction with a Bird Model 43 Wattmeter for power measurements up to 20 watts.

The resistive element of the Model 80AS1, individually selected for its accuracy, is enclosed in a special tapered housing to provide a linear reduction in surge impedance directly proportional to the distance along the resistor. The dielectric coolant oil transfers the heat generated by the load resistor to the walls of the rectangular metal case. The external surface of the case dissipates the heat into the surrounding air.

## Specifications

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| Power Rating | 20 watts continuous |
| Frequency Range | DC to 3500 MHz |
| VSWR | 1.1:1 dc to 1000 MHz<br>1.2:1 1000 - 2000 MHz<br>1.3:1 2000 - 3500 MHz |
| Input Connector | Female N |
| Impedance | 50-ohm nominal |
| Ambient Temperature Range | -40°C to +45°C |
| Dimensions | 1-1/2" x 4-7/8" x 4-5/16" |
| Weight | One pound |
| Operating Position | Horizontal only |

## Operation

Operate the Model 80AS1 in a horizontal plane only (nameplate on top). Attach the Load to the RF generator with a short piece of 50-ohm cable such as RG-58/U or RG-5/U. Make sure the cable plugs mate with the transmitter and Load Resistor connectors. .Locate the Model 80AS1 to permit adequate air circulation around the unit. DO NOT exceed its 20 watt rating.

## Maintenance

The Model 80AS1 Coaxial Load Resistor is rugged and simple. The principle maintenance required will be the cleaning of the RF input connector. Wipe the insulator and metallic contact surfaces using a dry cleaning solvent such as Inhibisol or trichlorethylene on a cotton swab stick. Use adequate ventilation when using dry cleaning solvents.

An accurate measurement of the dc resistance between the RF input connector and ground will provide a good check of the Model 80AS1 Load Resistor condition. For this measurement, a resistance bridge with an accuracy of one percent or better at 50 ohms (such as the Leeds & Northrop Model 5305 Test Set) should be used. Use low resistance leads, preferably a short piece of 50 ohm cable (RG-5B/U or RG-58C/U) attached to a plug which mates with the input connector on the load resistor. When the resistance is checked at room temperature, the reading should be a nominal 50 ohms.

A defective unit must be returned to Bird Electronic Corporation for repair. The Model 80AS1 is a sealed unit. Do not attempt parts replacement or repair in the field.