
Verification Kit
for use with
AT-400
Antenna Tester

BIRD
Electronic Corporation
Cleveland (Solon) Ohio USA

Introduction

Connecting a mismatch of a known value and measuring it with the Antenna Tester provides a test to determine the degree of measurement accuracy.

Measurement accuracy is specified to be ± 0.040 of $\text{Rho}(\rho)$, where:

$$\rho = \frac{VSWR - 1}{VSWR + 1}$$

Because of the manufacturing tolerance, each mismatch is analyzed across the frequency band of the Antenna Tester. Rho data is recorded so that future comparisons can be made without regard to the manufacturing tolerance.

This verification kit is used to verify Antenna Tester performance. It is intended for use with the AT-400 Antenna Tester. These instructions were written with the understanding that the operator is familiar with the operation of the Antenna Tester. Refer to the Antenna Tester Operator Manual for more information.

Kit Contents and Specifications

- Standard Mismatch—p/n 2-T-MN-1R50 (includes verification data)

VSWR	1.5:1 (nominal)
$\text{Rho}(\rho)$	0.200 (nominal)
Connector	Type N (M)
Power Rating	1 Watt cw maximum
Operating Temperature	20° to 30° C (68° to 86°F)
Storage Temperature	0° to 50° C (32° to 122°F)
- Adapter—p/n 4240-403

Connector	N(F) to Universal Adapter(M)
Impedance	50 Ω nominal
- Verification Data—Rho data included with mismatch,

Data Uncertainty	
VSWR	$\pm 2.4\%$
Rho	± 0.012

Instructions

The Cellular System, Base or Mobile, and Band should be selected and displayed in the right side of the display.

Note: Use 65 MHz as the Low Frequency ONLY if the frequency range of the unit is 65-520 MHz. If the frequency range of the unit is 80-520 MHz, use the Low Frequency of 80 MHz.

- Connect the adapter to the test port on the Antenna Tester.
- Connect the mismatch to the adapter.
- Press the ON key.
- Press the MENU key.
- Press the MEAS MATCH key.
- Press the SINGLE FREQ key.
- Press the UNITS key.
- Press the RHO key.
- Press the FREQ MHz key.
- Using the numeric keys, enter 65 or 80.
- Press the ENTER key.
- Compare the resultant value to the minimum and maximum values listed for 65 or 80 MHz.
- Repeat for 293, 300, and 520 MHz. To enter another frequency repeatedly press the SELECT key until the cursor is blinking on the frequency, then use the numeric keys to enter the desired frequency.
- If any value is outside the listed minimum and maximum acceptable values see the Calibration section on page 3.

Calibration

For maximum performance and accuracy, the Antenna Tester should be calibrated once every 12 months or if the verification test indicates the accuracy is not within the specified range. Return the unit to the Bird Electronic authorized service center listed below.

Service Center

U.S.A. Sales and Manufacturing

Service Group

Bird Electronic Corporation

30303 Aurora Road

Cleveland (Solon), Ohio 44139-2794

Phone: (440)248-1200

Cable: BIRDELEC

Fax: (440)248-5426

Telex: 706898 Bird Elec UD

Sales Offices

For the location of the Sales Office nearest you, give us a call or visit our Web Site at:

<http://www.bird-electronic.com>

Limited Warranty

All products manufactured by Seller are warranted to be free from defects in material and workmanship for a period of one (1) year, unless otherwise specified, from date of shipment and to conform to applicable specifications, drawings, blueprints and/or samples. Seller's sole obligation under these warranties shall be to issue credit, repair or replace any item or part thereof which is proved to be other than as warranted; no allowance shall be made for any labor charges of Buyer for replacement of parts, adjustment or repairs, or any other work, unless such charges are authorized in advance by Seller.

If Seller's products are claimed to be defective in material or workmanship or not to conform to specifications, drawings, blueprints and/or samples, Seller shall, upon prompt notice thereof, either examine the products where they are located or issue shipping instructions for return to Seller (transportation-charges prepaid by Buyer). In the event any of our products are proved to be other than as warranted, transportation costs (cheapest way) to and from Seller's plant, will be borne by Seller and reimbursement or credit will be made for amounts so expended by Buyer. Every such claim for breach of these warranties shall be deemed to be waived by Buyer unless made in writing within ten (10) days from the date of discovery of the defect.

The above warranties shall not extend to any products or parts thereof which have been subjected to any misuse or neglect, damaged by accident, rendered defective by reason of improper installation or by the performance of repairs or alterations outside of our plant, and shall not apply to any goods or parts thereof furnished by Buyer or acquired from others at Buyer's request and/or to Buyer's specifications. In addition, Seller's warranties do not extend to the failure of tubes, transistors, fuses and batteries, or to other equipment and parts manufactured by others except to the extent of the original manufacturer's warranty to Seller.

The obligations under the foregoing warranties are limited to the precise terms thereof. These warranties provide exclusive remedies, expressly in lieu of all other remedies including claims for special or consequential damages. SELLER NEITHER MAKES NOR ASSUMES ANY OTHER WARRANTY WHATSOEVER, WHETHER EXPRESS, STATUTORY, OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS, AND NO PERSON IS AUTHORIZED TO ASSUME FOR SELLER ANY OBLIGATION OR LIABILITY NOT STRICTLY IN ACCORDANCE WITH THE FOREGOING.