BATTERY LIFE

Low Battery - When the battery is below the level required for the LanMaster 30 to operate properly, the "SIGNAL" indicator blinks on and off while a test is being conducted.

APPLICATIONS

Moves, Adds and Changes - Reduce risk of equipment damage by identifying correct outlet for connecting telephone and network devices.

Installation - Verify physical layer connectivity to the far-end equipment.

Trouble Calls - Reduce troubleshooting time by ensuring the connection is correct and outlet is functional. Prevent damage to sensitive test equipment by identifying outlet type before running tests.

Telecom System Management - Locate expensive unused analog phone circuits for reassignment or termination.

Network Management - Identify Ethernet Link data rate (10Mbps or 100Mbps) and support for auto-negotiation.

ETHERNET LINK SIGNAL OVERVIEW

Three different signals can be used to establish an Ethernet Link: a Link Code Word, an NLP or an MLT-3 waveform. The Link Code Word is specific in both Link speed and duplex mode. The NLP is specific in speed (10Mbps) but ambiguous in duplex mode (half or full). The MLT-3 waveform is also specific in speed (100Mbps) but ambiguous in duplex mode. Duplex modes for equipment that use NLP or MLT-3 signaling must be carefully managed to ensure proper Link operation.

WARRANTY

Psiber Data Systems Inc. warrants that the product shall be free from defects in parts or workmanship for a period of 12 months from the date of purchase if used in accordance with Psiber Data Systems Inc. operating specifications.

THIS IS THE ONLY WARRANTY MADE BY Psiber Data Systems Inc. AND IS EXPRESSLY MADE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

Should any parts or workmanship prove defective, Psiber Data Systems Inc. will repair or replace at Psiber Data Systems' option, at no cost to the Buyer except for shipping costs from the Buyer's location to Psiber Data Systems Inc. This is Buyer's **SOLE AND EXCLUSIVE REMEDY** under this Agreement. This warranty does not apply to products which have been subject to neglect, accident or improper use, or to units which have been altered or repaired by other than an authorized repair facility.

Return of Equipment - To return a product to Psiber Data Systems Inc., first obtain a Return Authorization number from our Customer Service by calling 619-287-9970. The RA# must be clearly marked on the shipping label, or the package will not be accepted by Psiber Data Systems Inc. See sample label below.

To: Psiber Data Sytems Inc.
7075-K Mission Gorge Road
San Diego, CA 92120
RA# XXXXXXXX

Part No. 1005-0300-0000 Rev B

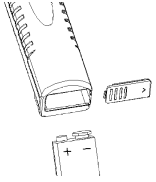
LANMASTER 30
USER'S GUIDE

psiber

BOX CONTENTS

- LanMaster 30 Outlet Identifier
- 9 Volt Alkaline Battery
- RJ-45 Coupler
- User Guide

BATTERY



The LanMaster 30 operates on one 9 volt alkaline battery. Remove the battery cover at the bottom of the unit and insert the battery with the terminal orientation as shown. Battery polarity is marked on the back of the battery cover and inside the battery well for reference.

TECHNICAL OVERVIEW

The LanMaster 30 Outlet Identifier is a comprehensive signal detection, measurement and identification device. The unit measures signals on every combination of wire pairs in a four (RJ-11), six (RJ-12) or eight (RJ-45) wire outlet or plug. The measurements are compared to known signal parameters for telecommunication and data communication equipment and reported to the user by illumination of equipment-type LEDs. A "SIGNAL" indicator is provided to warn when signals are present at the outlet or plug that do not correspond to known equipment parameters. A "NO LINK" indicator is illuminated when no signals are detected on any of the wires.

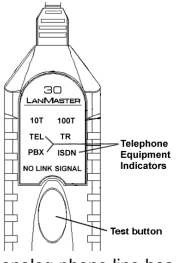
The LanMaster 30 conducts a three step test that is completed in less than six seconds. The first test measures voltages on all wire pairs and identifies an Analog, PBX or ISDN telephone circuit. The second test measures Standard (10baseT) and Fast (100baseTX) Ethernet Link Signals and identifies the operating mode of the far-end equipment. The third test transmits a Token Ring voltage that causes the unit to be inserted in to a ring and then measures the ring speed (4MHz or 16MHz).

OPERATION

Insert the LanMaster 30 plug end in to the RJ-45 jack of a wall outlet, or attach to a 4-wire, 6-wire or 8-wire patch cable with the RJ-45 coupler provided. Press and **hold** the "TEST" button.

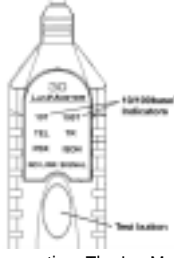
Telephone Circuit Identification

While the unit is conducting the telephone test, the "TEL" indicator will blink on and off. During the first two seconds of the test, each combination (64 total) of two wires are scanned for signals and each voltage measurement is recorded. If telephone line voltage is detected on wire pair 4,5 and no signals are present on any other pair, the "TEL" indicator is illuminated showing that an analog phone line has been detected. If 24VDC or 48VDC is detected between wire pairs 3,6 and 4,5 (S/T interface) or sealing current on pair 4,5 (U interface), the "ISDN" indicator is illuminated showing that an ISDN circuit has been identified. If appropriate voltage levels are detected on one or more wire pairs, the "PBX" indicator is illuminated showing that a PBX type switch or a multiple line phone circuit has been detected. NOTE: If voltages above expected levels are measured, the "SIGNAL" indicator is lit showing that an unknown and potentially damaging voltage is present. The user should identify the equipment installed at the far-end prior to connecting any devices to the outlet under test.



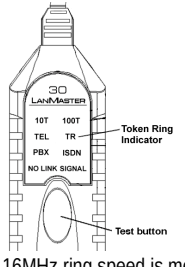
10baseT/100baseTX Link Identification

While the unit is conducting the 10baseT/100baseTX Link test, the "10T" and "100T" indicators will blink on and off. If an MLT-3 waveform is detected or a Link Code Word is decoded for 100baseTX operation, the "100T" indicator is illuminated showing a 100baseTX connection. If a Normal Link Pulse (NLP) is detected or a Link Code Word is decoded for 10baseT operation, the "10T" indicator is illuminated. If a Link Code Word is decoded for 10/100 auto-negotiation, both the "10T" and "100T" indicators are illuminated showing that the far end equipment is capable of auto-negotiating to either the 10baseT or 100baseTX mode of operation. The LanMaster 30 does not test 100baseT4. The "SIGNAL" indicator will be illuminated if a Link Code Word is detected that is invalid or contains a reported Fault or the MLT-3 waveform frequency is incorrect.



Token Ring Link Identification

While the unit is conducting the Token Ring Link test the "TR" indicator will blink on and off. The Model 30 transmits the standard Token Ring phantom voltage between wire pairs 3,6 and 4,5. If the measured current is within the correct range, the voltage is maintained to allow the unit to be inserted into the ring. Once inserted in the ring, the "TR" indicator is illuminated if a 4MHz or 16MHz ring speed is measured. The "SIGNAL" indicator is lit if the current is below the minimum value, indicating an open wire, or the speed of the ring is not 4MHz or 16MHz.



No Link

When no signals are detected during any of the three previous tests, the "NO LINK" indicator is illuminated. Total time to complete all tests is less than six seconds.