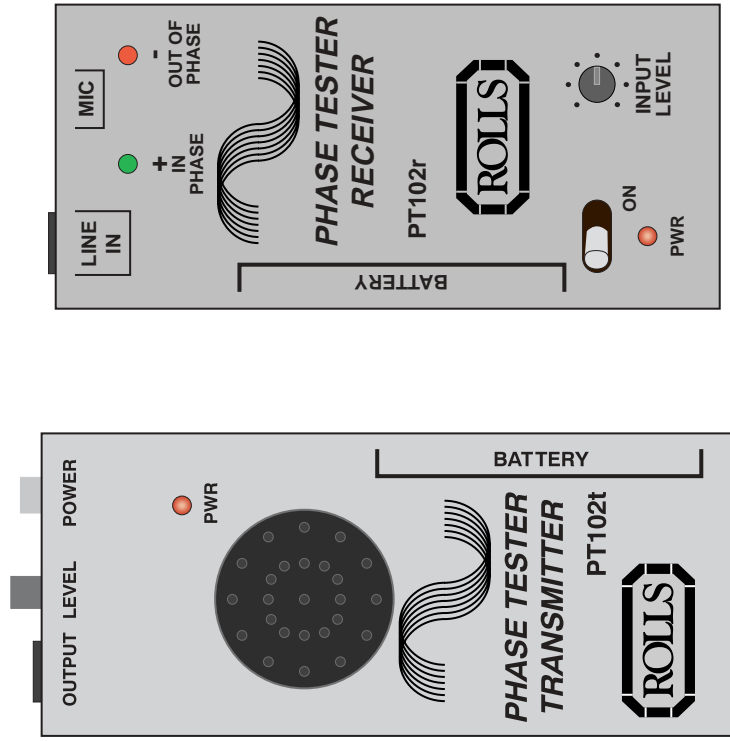


PT102

PHASE TESTER

Transmitter and Receiver



PT102 Phase Tester

- Check the phase integrity of any micro phone or audio system.
- Transmitter features a speaker and line level 1/4" output
- Receiver features a microphone and line level 1/4" input.
- Battery operation

PT102 Phase Tester



Rolls Corporation
Salt Lake City, UT
2/04

Owners Manual

INTRODUCTION

Thank you for your purchase of the PT102 Phase Tester. The PT102 consists of two units, a transmitter and receiver. The PT102 transmitter creates a pulse that is sent through an audio system. The receiver then picks up the signal at various intervals in the system, and indicates whether or not the system is in or out of phase.

The PT102t transmits a positive-going pulse via a speaker, or a 1/4" unbalanced jack. The PT102t speaker is placed near a microphone which may be connected to the PT102r receiver or to an audio system. Plugging into the 1/4" LINE IN jack on the receiver disables the mic.

When testing a microphone it is *very important* that the mic face the PT102t speaker *directly* at at 90 degree angle.

INSPECTION

1. Unpack and inspect the PT102 box and package.

If obvious physical damage is noticed, contact the carrier immediately to make a damage claim. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.

2. Please complete the Warranty Registration Card and return it to the factory.

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LIMITED WARRANTY

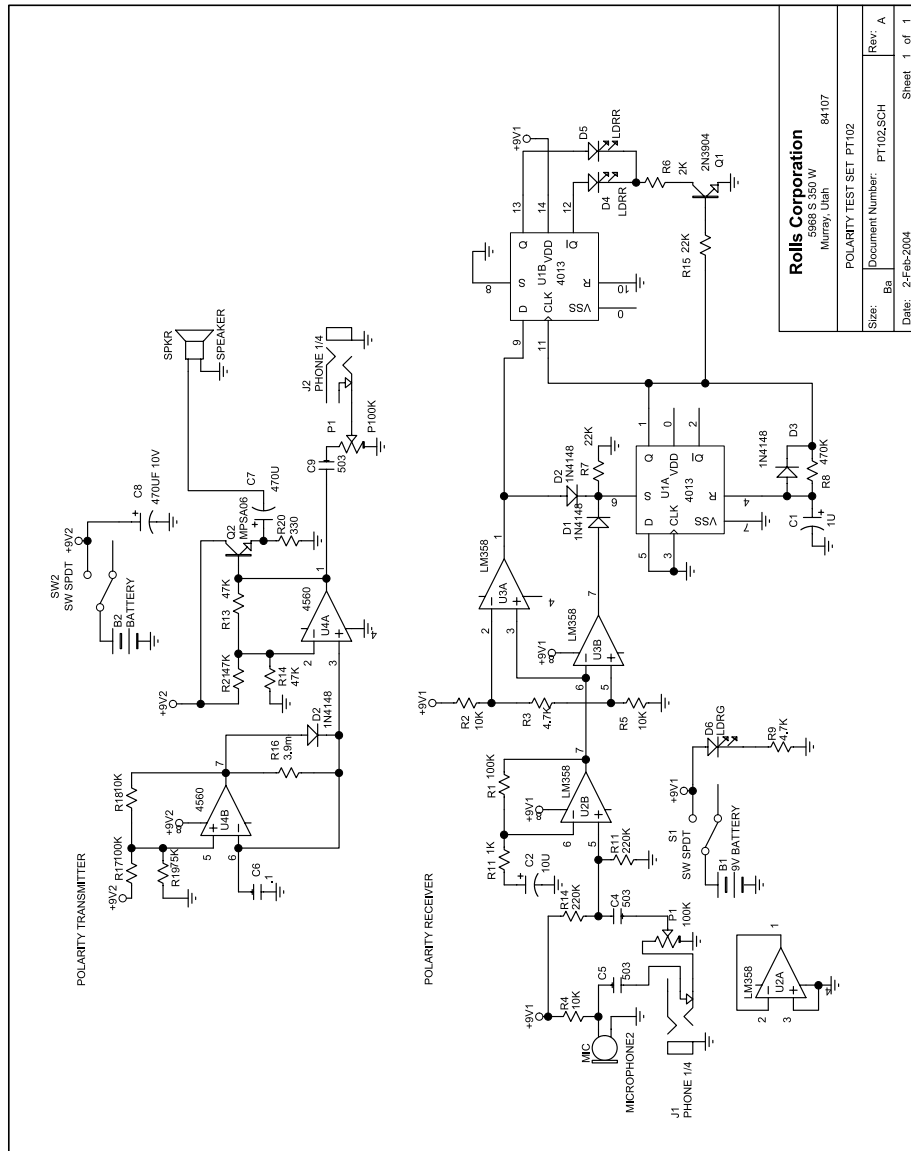
This product is warranted to the original consumer purchaser to be free from defects in materials and workmanship under normal installation, use and service for a period of one (1) year from the date of purchase as shown on the purchaser's receipt.

The obligation of Rolls Corporation under this warranty shall be limited to repair or replacement (at our option), during the warranty period of any part which proves defective in material or workmanship under normal installation, use and service, provided the product is returned to Rolls Corporation, TRANSPORTATION CHARGES PREPAID. Products returned to us or to an authorized Service Center must be accompanied by a copy of the purchase receipt. In the absence of such purchase receipt, the warranty period shall be one (1) year from the date of manufacture.

This warranty shall be invalid if the product is damaged as a result of defacement, misuse, abuse, neglect, accident, destruction or alteration of the serial number, improper electrical voltages or currents, repair, alteration or maintenance by any person or party other than our own service facility or an authorized Service Center, or any use violative of instructions furnished by us.

This one-year warranty is in lieu of all expressed warranties, obligations or liabilities. ANY IMPLIED WARRANTIES, OBLIGATIONS, OR LIABILITIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE ONE YEAR DURATION OF THIS WRITTEN LIMITED WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER. Some states do not allow the exclusion or limitation of special, incidental or consequential damages so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

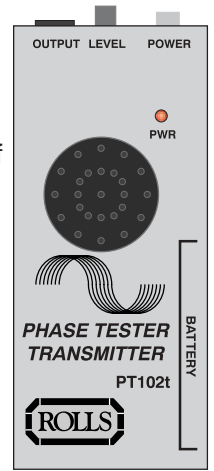


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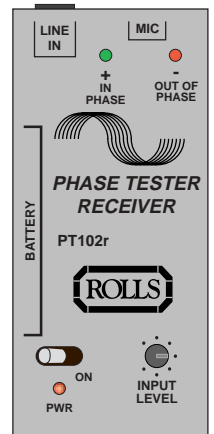
Transmitter

POWER: Push switch - turns the PT102t on and off.
LEVEL: Adjusts the amount of test pulse level sent out the OUTPUT jack.
OUTPUT: 1/4" unbalanced jack for connection to the input of the device to be tested.
PWR: LED indicating power is properly connected to the PT102t and the POWER switch is in the on position.
Speaker: (Not labeled) Creates an audible pulse. To be placed in front of a microphone which may then be tested, or connected to a system being tested. NOTE: The speaker is always ticking when the transmitter is on.
BATTERY: Removable door, 9 Volt battery clip.



Receiver

LINE IN: 1/4" unbalanced jack for connection to line level devices carrying the pulse signal from the transmitter and system being tested.
MIC: Small condenser microphone on the top of the PT102r. Picks up the audio pulse from a speaker.
IN PHASE: Green LED indicating positive-going or in-phase signals.
OUT OF PHASE: Red LED indicating negative-going or out of phase signals.
BATTERY: Removable door, 9 Volt battery clip.
POWER SWITCH: When switched to the ON position, turns on the PT102r.
PWR: LED indicating that the PT102r is on.

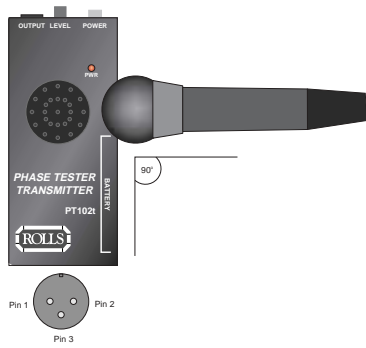


OPERATION

The PT102 will check the phase of any audio signal source. There are, however, some considerations that *must* be observed. For balanced applications we use pin 2 as the "hot" or positive connection. So an XLR connector is Pin 1 ground, pin 2 hot, pin 3 neutral or negative.

Because of the nature of audio signals, the receiver microphone must be held as close to 90 degrees to the sound source to get an accurate reading. See the example below.

MICROPHONE PHASE



There are a couple of options to check the phase of a microphone. If the mic is dynamic, it may be connected directly to the receiver via an XLR female to 1/4" TS unbalanced male cable. The tip of the 1/4" plug must be wired to pin 2 of the XLR plug, and pin 1 and 3 should be wired together and connected to ground. Switch the Power switch on the PT102r ON. The mic may then be held close to the transmitter to check the phase of the microphone.

If the microphone is a condenser type, the mic must first be powered by either its own internal battery, or by a phantom power adapter. Rolls PB23, PB223, or PB224 are all correctly phased phantom power adapters, and may be used to power condenser microphones. The output of the condenser mic or phantom power adapter may be plugged into the PT102r receiver using the unbalanced cable mentioned above, and the mic is tested the same way.

AUDIO SYSTEM PHASE

To check the phase integrity of your audio system, connect the 1/4" OUTPUT of the PT102t to the input of the system to be checked. Or, as in the example above, hold the transmitter up to a microphone that is connected to the system.

The PT102r receiver may then be connected in various places throughout

your audio system to check the phase integrity.

You may wish to begin at either the microphone, or line input source. Then check each connection before it enters the next device. An example connection is shown below. Note that the PT102r receiver may also be placed in front of the speakers to check the final phase. Just ensure the PT102r is directly facing the speaker.

