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# MCT-7

## Multiple Cable Test System

### INTRODUCTION:

The MCT-7 Cable Tester is a versatile unit that allows the user to test almost any pre-made and custom made leads or cables used in a typical audio/visual set up.

Leads fitted with any combination of the following connectors may be checked:

- Male or female XLR
- Speakon (4 pole)
- Stereo or mono 1/4" (6.3 mm) jack
- Stereo or mono 1/8" (3.5 mm) mini jack
- Phono RCA
- BNC
- Midi (180 degrees DIN)

The MCT-7 Cable Tester allows you to test for the following conditions:

- Positive Continuity
- Cross Wiring
- Loose Contact
- Open Circuit
- Leakage Between Wires (up to 10KΩ)
- Short Between Wires
- Short to Ground (female XLR & MIDI)

Please read the following instructions carefully before using the MCT-7 Cable Tester.

**Warning: The leads to be tested must be fully disconnected from any other equipment or electrical source. Failure to do so could result in electrical shock and permanent damage to the MCT-7 Cable Tester unit, for which the manufacturer and suppliers can accept no liability.**

The MCT-7 Cable Tester comes fitted with a 9 Volt type battery. Under normal usage this will allow several hundred hours of operation. We advise that before

commencing testing, you check battery status (See section “**Testing and Replacing Battery** ”).

## **TEST PROCEDURE:**

The MCT-7 Cable Tester is simple to operate. A schematic diagram of the connectors and their pin assignments is shown on the front panel of the unit. Light Emitting Diodes (LEDs) give a clear visual representation of the connections.

YELLOW LEDs 1-5 refer to the pins of connectors on the left side (INPUT) of the unit. Green LEDs 1-5 refer to the pins of connectors on the right side (OUTPUT) of the unit.

Checking the status of connections is made using the Pin Selector Switch. Until you become familiar with the connectors, pin wiring and switch selector positions, you may wish to refer to the data shown in Table 1.

**Table 1**

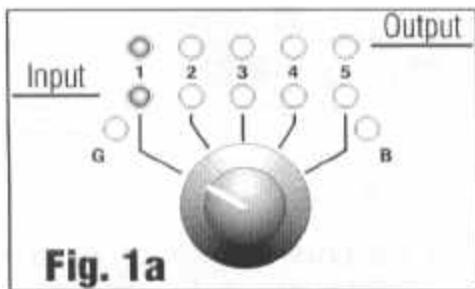
	<b>Connector</b>	<b>Pin</b>	<b>Assigned Position</b>
A	Speakon NL4	1	2
		-1	1
		2	4
		-2	3
B	Phono/RCA	Center	2
		Ring	1
B	BNC / Video	Center	2
		Ring	1
C	MIDI 5 DIN	1	1
		2	2
		3	3
		4	4
		5	5
D	Jack 3.5mm (1/8”)	Tip	2
		Ring	3
		Sleeve	1
D	Jack 6.3mm (1/4”)	Tip	2
		Ring	3
		Sleeve	1
E	Male or female XLR	1	1
		2	2
		3	3

1. Plug one end of the lead to be tested into the corresponding connector on the INPUT (left) side of the unit.

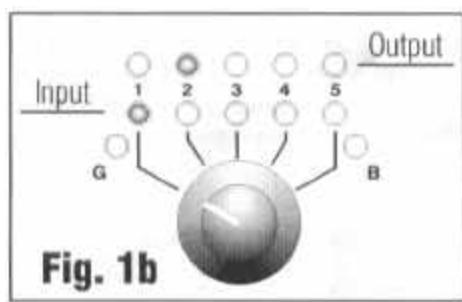
2. Plug the other end of the lead into the corresponding connector on the OUTPUT (right) side of the unit.
3. Turn the Pin Selector Switch to position 1 to verify continuity of pin 1 of the INPUT connector.
4. At least one pair of LEDs should light at the same time to show continuity between INPUT and OUTPUT pins. Remember the five YELLOW LEDs on the bottom row show the INPUT pin and only one will light in any position of the Pin Selector switch. The five GREEN LEDs on the top row indicate continuity to the OUTPUT pins of the cable being tested. More than one of these five LEDs may illuminate. To determine which position of the Pin Selector Switch corresponds to the pins of the selected connector refer to Table 1 or the diagrams printed on the front panel of the MCT-7 Cable Tester.
5. Rotate the Pin Selector Switch to position 2, 3 and so on, until all pins of the selected connectors have been tested.

Following are some examples of possible conditions that may arise while testing a lead (all examples show the Pin Selector Switch in position 1).

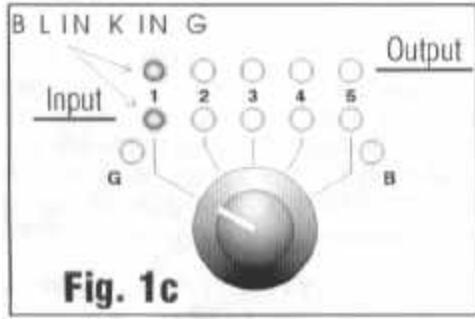
- **POSITIVE CONTINUITY**, one LED for the corresponding pin being tested will light on the INPUT row and another LED will light on the OUTPUT row. See Fig. 1a



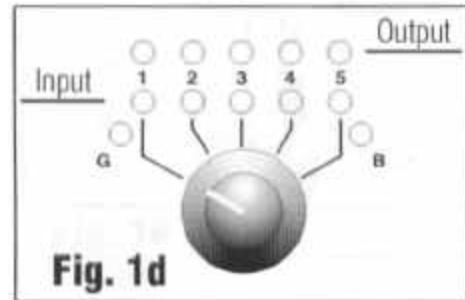
- **CROSS WIRING**, the LEDs corresponding to the pin being tested will remain unlit while other LEDs will light up. See Fig. 1b.



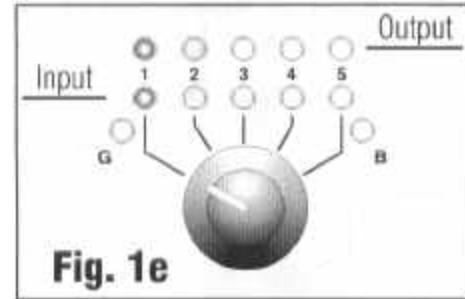
- **FALSE OR LOOSE CONTACT**, the LEDs blink or flicker as you move the cable. See Fig. 1c.



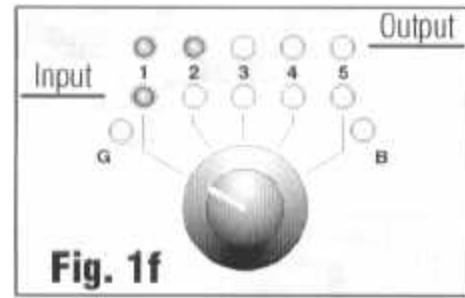
- **OPEN CIRCUIT**, the corresponding LEDs will remain unlit. See Fig. 1d.



- **LEAKAGE BETWEEN WIRES**, the LEDs of the pins being tested will light, also other LEDs will light with lesser intensity. The intensity with which these other LEDs will light is proportional to the leakage between wires. The MCT-7 Cable Tester will show leakage up to  $10K\Omega$  between wires. See Fig. 1e.

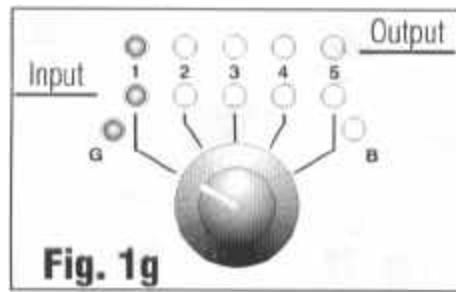


- **SHORT BETWEEN WIRES**, the LEDs of the pin being tested will light, also other LEDs will light (for the wires in short). See Fig. 1f.

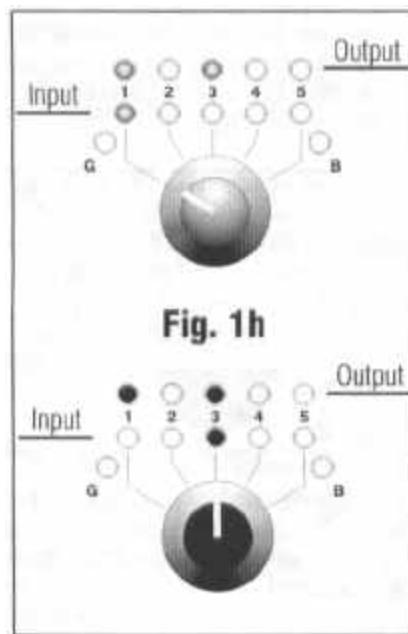


- **SHORT TO GROUND**, the LEDs of the pin being tested will light as well as the Ground LED (Red and indicated with a "G"). If more than one LED lights at the same

time as the Ground LED, then all those pins have a short to ground. This test only functions for the female XLR and 5 pin DIN (MIDI) connectors. See Fig. 1g.

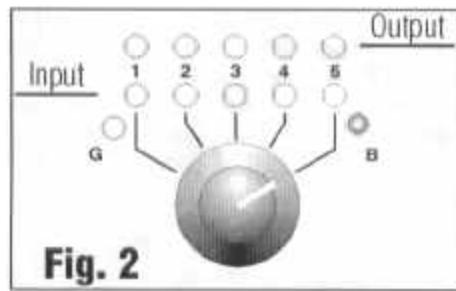


**Note:** In case of the mini (3.5mm) and 1/4" (6.3mm) jack plugs, there are two versions, mono and stereo. When testing mono plugs and the pin selector knob is in position 1 or 3 the LEDs 1 and 3 will light. See Fig. 1h. Notice that in this case the Pin Selector Switch is in positions 1 and 3 respectively.



### Testing and Replacing the Battery

If you place the Pin Selector Switch to position number five, the LED marked "B" will light, this means the battery is good. The intensity with which this LED lights is proportional to the battery's charge. See Fig.2.



To change the battery, you will require a Phillips head screwdriver. Remove the four screws located on the bottom of the MCT-7 Cable Tester as shown in Fig. 3.

To remove the battery, turn the unit upside-down and carefully remove the base-plate.

Remove the battery from the unit being careful not to strain the battery leads. Disconnect the battery and connect a new one. Position the newly connected battery back in the unit and reassemble with care.

We recommend that you use only alkaline type batteries, to prevent any type of leakage that may damage the MCT-7 Cable Tester.

