

AudioJoG™ Pro 3 Operations Manual

Introduction

The AudioJoG Pro 3 Cable Tester is a versatile unit that allows the user to either identify the connections within a variety of Professional Audio cables, Or carry out rapid comparison tests having stored known good cable details.

Cables fitted with any of the following connectors may be checked:

- 3 XLR Male and Female
- 6.35mm Jack, stereo or mono
- RCA Phono

The AudioJoG Pro 3 Cable Tester allows you to visually test for the following conditions:

- Continuity
- Short Circuits (end to end & between unconnected pins)
- Open Circuits (end to end & between unconnected pins)
- Crossed Wires
- Leakage between wires (up to 47K ohms)

The AudioJoG™ Pro 3 Cable Tester has five methods of operation:

- 1. Manual, double ended - both ends of the cable under test plugged into AudioJoG Pro 3
- 2. Automatic, double ended - both ends of the cable under test plugged into AudioJoG Pro 3 using the MEMORY feature.
- 3. Automatic, double ended intermittent - both ends of the cable under test plugged into AudioJoG Pro 3 using the MEMORY feature.
- 4. Manual, single ended - one end of the cable under test plugged into AudioJoG Pro 3 the other into a compatible AudioJoG Pro 3,5 or 8, testing can be from either end.
- 5. Automatic, single ended - one end of the cable under test plugged into AudioJoG Pro 3 the other into a compatible AudioJoG Pro 3,5 or 8, testing can be from either end using the MEMORY feature.
- Less than 2 seconds test time

Please read the following instructions carefully before using the AudioJoG Pro 3 Cable Tester.

Warning:

The Cables 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 AudioJoG Pro 3 Cable Tester, for which the manufacturer and suppliers can accept no liability.

1

Getting started/Battery

The AudioJoG Pro 3 Cable Tester will require fitting of a 9 volt battery (not supplied). Using a screwdriver to undo the four screws holding the base plate of the tester to gain access to the battery compartment. Fit the 9 volt PP3 battery observing correct polarity. Re fit the base plate.

Test Procedure

There are 2 rows of 4 Light Emitting Diodes (LED's) corresponding to each of the 3 possible connector pins and one for the screen connection. Checking the status of connections is made using the TEST button. Until you become familiar with the connectors pin wiring you may wish to refer to the handy LED/Connector Identification table on the last page.

METHOD 1 - Manual Double Ended

This is the preferred method for testing a cable that is different to the previously tested one and has both ends available for plugging into the AudioJoG Pro 3.

1. Plug one end of the cable to be tested into an appropriate socket using the 'Local' half of the tester.
 2. Plug the other end of the cable into an appropriate connector using the 'Remote' half of the tester.
 3. Switch ON.
- After a brief random display, ALL the LED's should turn ON for a couple of seconds and then turn OFF. If this is not the case then please check the battery voltage, otherwise return the AudioJoG Pro 3 for repair.

4. To start the test press and release the TEST button. On the Local row of LED's the No1 LED will turn ON,

A single LED ON indicates that there are no connections to that pin (Fig1).

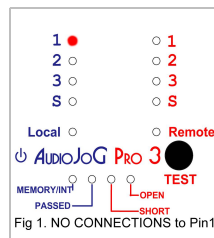


Fig 1. NO CONNECTIONS to Pin1

Two or more LED's ON (either row) indicate that there is a connection from PIN 1 of the connector plugged into the Local half to the Remote half of the tester (Fig2).

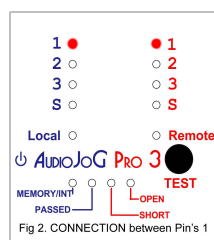


Fig 2. CONNECTION between Pin's 1

2

METHOD 1 - Manual Double Ended (Continued)

5. Press and release the TEST button again, the current LED's will go out.

If there were no connections in previous step then the Remote LED No1 will turn ON (Fig3).

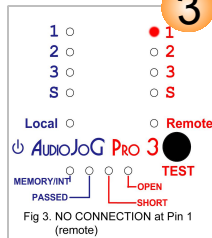


Fig 3. NO CONNECTION at Pin 1 (remote)

Or if there were connections in the previous step then the Local No2 LED will turn ON (Fig4).

As before if there are any other LED's ON (either row) then they indicate the connection from the PIN 2 of the connector plugged into the Local half of the tester.

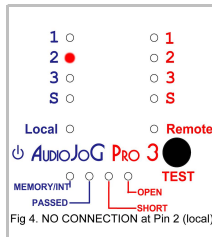


Fig 4. NO CONNECTION at Pin 2 (local)

Repeat step 5 until the Remote or both SCREEN LED turn ON (Fig5).

This is the end point for the visual test procedure, AudioJoG Pro 3 can not decide for you whether the results are correct or not.

Then either:-
Press and release the TEST button to clear the display and take you back to step 4. Or see next chapter for how to automatically test cables against details held in memory.

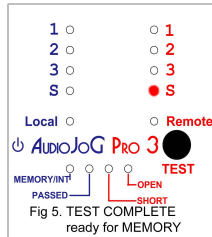


Fig 5. TEST COMPLETE ready for MEMORY

METHOD 2 - Automatic Double Ended

This method uses the AudioJoG Pro 3's internal MEMORY to test against a cables details held in memory.

1. Follow the Method 1 instructions until the test completed stage with either both or just the Remote screen LED's on.
2. Press and hold the Test button until the MEMORY (yellow) LED comes on.

Release the Test button will cause the tester to run through all the connections and store them in MEMORY.

After a few seconds the display should show the Pass (green) and MEMORY (Yellow) LED's. If either the SHORT or OPEN LED is on then there is probably an intermittent connection in the cable.

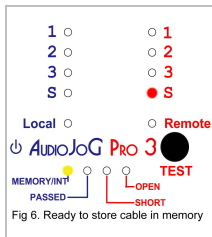


Fig 6. Ready to store cable in memory

METHOD 2 - Automatic Double Ended (Continued)

3. Plug in the cable to be tested using the same connector(s) and locations as before.

4. Press and release the TEST button.If all is well the Pass LED will turn ON, remove the cable. To test another cable repeat steps 3 & 4.

5. To clear the MEMORY either, switch OFF and then ON again or, press and hold the test button until the MEMORY LED and PASSED OR OPEN/SHORT LED's go OFF

6. If the SHORT LED turns ON, then the AudioJoG Pro 3 has found a difference between the cable details in memory and the current cable. The LED's will stop at the error stage. Examples of failures follow:-

- a) A short was found, at the Local end within the connector, where no connection existed before (Fig8.).

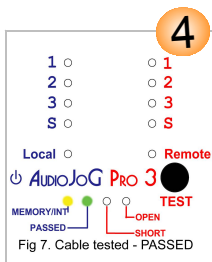


Fig 7. Cable tested - PASSED

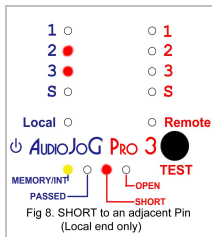


Fig 8. SHORT to an adjacent Pin (Local end only)

- b) An open connection was found, usually indicated by a single LED (Fig9.).

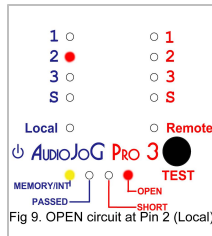


Fig 9. OPEN circuit at Pin 2 (Local)

- c) A short to SCREEN, this may be indicated by one, or both the screen LED's being ON in conjunction with another pair of LED's (Fig10.).

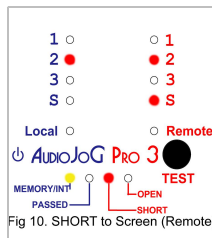


Fig 10. SHORT to Screen (Remote)

METHOD 2 - Automatic Double Ended (Continued)

- d) A short between two adjacent pins which have connections at both ends of the cable (Fig11).
7. Press the TEST button to proceed, if there are more failures the test will stop at each and everyone of them, finally only the FAILED and MEMORY LED's will be ON.To test another cable repeat steps 3 & 4.
8. Press and hold until the MEMORY LED flashes will put the tester into method 3 for detecting intermittent faults, see next chapter, holding the TEST button down until all the LED's go out will reset the tester putting it into method 1 the same as switching off and on.

METHOD 3 - Automatic Double Ended Intermittent

This method continuously tests the cable against the details held in memory until a difference is found.

1. Follow the Method 1 and 2 instructions until the last completed stage the PASSED LED should be lit.
2. Press and hold the Test button until the MEMORY (yellow) LED starts to flash.
3. Releasing the Test button will cause the tester to run through all the connections continuously until a fault is found all the LED's will glow (Fig 12). Please note there is no battery saving feature in this method and prolonged use will shorten the battery life.
4. After a fault is found and displayed the tester goes back to method 2 and once again the cable will have to pass this before intermittent testing can be carried out.
5. To go back to method 1 testing either, switch the tester off, or hold the TEST button down until all the LED's go out (about three seconds).

METHOD 4 - Manual Single Ended

This method uses two AudioJoG cable testers, one at each end of the cable. One unit is set to 'Remote' the other to 'Local', testing is carried at the 'Local' end This method of test ONLY WORKS IF THERE IS A GOOD Ground or Pin1 CONNECTION BETWEEN THE TWO CABLE ENDS.

1. Set up the Remote end first by pressing and holding the Test button whilst switching the tester on. Plug the cable under test in the appropriate socket on the 'Remote' side of the unit.
2. When you see only the Remote and local LED's still on release the Test button.
3. The Remote LED will go out. Pressing the Test button now switches between Local and Remote.
4. Select remote, then press and hold the Test button until the remote LED goes out.
5. Release the Test button. The tester is now ready to receive and send information to the Local unit.
6. Set up the Local end by pressing and holding the Test button whilst switching the tester on. Plug the cable under test in the appropriate socket on the 'Local' side of the unit.
7. Release the Test button, the remote LED will go out.

METHOD 4 - Manual Single Ended (Continued)

8. The Local LED should be on. Press the Test button again and release it as soon as Pin 2 on the local side starts sending information to the other end, this is indicated by the LED flashing. If there is a connection to pin 2 at the other end then the result will be seen at the Remote side of the Local unit and Pin 2 will light on the Local and Remote sides at the Remote end (Fig 13 & 14).
9. Press and release the Test button, the test pin will move onto the next one.
10. Repeat step 8 until the Local screen LED is lit.

This is the end point for the visual test procedure, AudioJoG Pro 3 can not decide for you whether the results are correct or not. Then either:-

Press and release the TEST button to clear the display and take you back to step 6.

Or see next chapter for how to automatically test cables against details held in memory.

METHOD 5 - Automatic Single Ended

Like the previous method this uses two AudioJoG Pro 3 cable testers. As with the process of going from Manual to Automatic Double ended testing the start of the Automatic testing is the completion of the Manual test ending on the 'Local' screen LED.

1. Once again at the 'Local' screen LED on position press and hold until the MEMORY LED lights (Fig15).
2. After a few seconds (if there are unconnected pins then this will increase the test time) the display should show the Pass (green) and MEMORY (Yellow) LED's. If the Fail LED is on then there is probably an intermittent connection in the cable.
3. Plug in the cable to be tested using the same connector(s) and locations as before.
4. Press and release the TEST button.If all is well the Pass LED will turn ON, remove the cable. To test another cable repeat steps 3 & 4.
5. To clear the MEMORY either, switch OFF and then ON again or, press and hold the test button until the MEMORY LED goes OFF.
6. If the OPEN LED turns ON, then the AudioJoG Pro 3 has found a missing connection between the cable details in memory and the current cable. The numbered and screen LED's will stop at the error stage (Fig16).

- 7.If the SHORT LED turns ON, then the AudioJoG Pro 3 has found an extra connection between the cable details in memory and the current cable. The numbered and screen LED's will stop at the error stage.

- a) A short was found at the local end within the connector (Fig17.).
- b) A short was found between wires 2 and 3 (Fig 18)

8. Press the TEST button to proceed, finally only the FAILED and MEMORY LED's will be ON.To test another cable repeat steps 3 & 4. To clear the MEMORY option either, switch OFF and then ON again or, press and hold the test button until the ALL the LED's go OFF.

LED/Connector pin identification table

Connector	PIN	LABEL	LED
3 pole XLR Male & Female	1	ground	1
	2	hot	2
	3	cold	3
	shell	screen	S
6.35mm Mono/Stereo Jacks	sleeve	ground	1
	tip	hot	2
	ring	cold	3
RCA Phono	screen	screen	1
	inner	inner	2

DECLARATION OF CONFORMITY

Manufacturers Name: CableJoG Ltd.
Address: 18 Browmere Drive, Croft, Warrington. WA3 7HT.

Type of equipemnt: Cable tester
Model: AudioJoG Pro 3

I hereby declare that the equipment specified above conforms to the provisions of the EC DIRECTIVE 2004/108/EC on Electromagnetic Compatibility (EMC). Having applied the following standards;

BS EN61000-6-1 :2007
"Generic EMC Immunity Standard for the residential, commercial & light industry enviroment".

BS EN61000-6-3 :2007
"Generic EMC Emissions Standard for the residential, commercial & light industry enviroment".

Edward Stefan Zych, Director.10th April 2014

RoHS+WEEE

