



Model AD-4
TUBE TESTER ADAPTER

INSTRUCTION MANUAL

MERCURY
ELECTRONICS CORP.

manufacturers of quality electronic products

PRELIMINARY

Your AD-4 is designed to bring your tube tester up to date by providing the latest new sockets. The following new types are covered by the AD-4:

1. Nuvistors – RCA new tuner types
2. Compactrons – G.E. new 12-pin types
3. The new 10-pin Sylvania tubes
4. Novars – RCA's new large 9-pin types

It will be necessary to obtain electrical data on any new types which you test with the aid of your AD-4. This data will be found in the various technical bulletins of the tube manufacturers, such as the RCA "Receiving Tube Manual" and others. You will need to know the base pin connections and heater rating of each new type.

TEST PROCEDURE

1. Set the HEATER VOLTAGE SELECTOR on your tube tester to the rated heater volts of tube to be tested.
2. Set all other controls of your tube tester to the position for REGULAR TEST OF TYPE 6W4.

NOTE: The LOAD or SENSITIVITY control may have to be changed, as described in step 6, following.

3. Set AD-4 control A to number corresponding to cathode (K) pin of tube to be tested. If tube has no separate cathode, such as in directly heated types 1R5, 1U4, 5U4, etc., set control A to number 12 position.
4. Set AD-4 control B to number corresponding to control grid (G) pin of tube to be tested. If tube is a diode, set control B to number corresponding to diode plate pin (labeled P or Pd on the tube base diagram).

5. Insert AD-4 male plug into tube tester octal socket which is regularly used for test of type 6W4.
6. Test tube for SHORTS and QUALITY in the regular manner, after finding LOAD setting as follows:

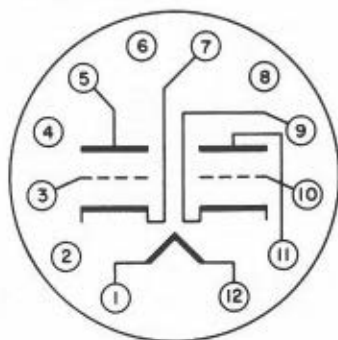
To find proper LOAD value, use a brand new tube or a tube known to be in good condition. Set LOAD or SENSITIVITY control so as to give a QUALITY reading in the center of the GOOD zone of your tube tester meter scale. Mark this setting in your tube chart for future use.

7. Repeat steps 3, 4, 5, and 6 for each section of multiple-section tubes.

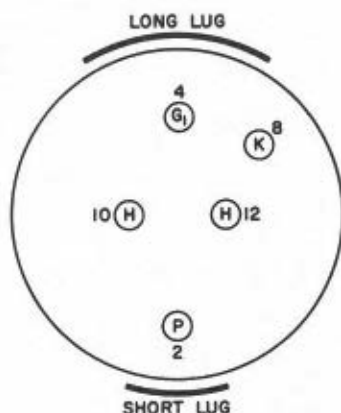
TEST RESULTS

1. With your AD-4 set as directed in steps 3 and 4 of TEST PROCEDURE, shorts between Control Grid (G-1) and Cathode (K), as well as shorts between Cathode (K) and Heater (H), will be found, using the regular SHORTS TEST Procedure of your tube tester. G-1-K and K-H shorts constitute over 95% of shorts that occur in tubes. However, the AD-4 can also locate a short between any two elements in a tube, simply by setting controls A and B to the corresponding pin numbers, and then making a test for shorts in the regular manner on your tube tester.
2. Example, using NUVISTOR type 6CW4
 1. Set HEATER VOLTAGE to 6.3 volts on your tube tester.
 2. Set other controls on tube tester for type 6W4.
 3. Set "A" on AD-4 to 8 (this Nuvistor cathode).
 4. Set "B" on AD-4 to 4 (this Nuvistor control grid).
 5. Plug AD-4 into 6W4 socket on your tube tester.
 6. Check Nuvistor for shorts, using the regular test procedure given on the chart of your tube tester for type 6W4. Check Nuvistor for QUALITY as in 6W4 QUALITY test, after experimentally finding proper LOAD or SENSITIVITY setting as described in step 6 of TEST PROCEDURE.

NOTE: To check for Plate-to-Control Grid short, set control "A" on AD-4 to 2, and repeat test for Shorts.



6FJ7
COMPACTRON



NUVISTOR
TRIODE BASE

3. Example using Compactron type 6FJ7

1. Set heater voltage to 6.3 volts on your tube tester.
2. Set other controls on tube tester for type 6W4.
3. For first section, set "A" on AD-4 to 7.
4. For first section, set "B" on AD-4 to 3.
5. Plug AD-4 into 6W4 socket on your tube tester.
6. Check first section for SHORTS and QUALITY as described in step 6 of TEST PROCEDURE.
7. For Second Section, set "A" to 9 and "B" to 10, and repeat tests.

NOTE: To check plate-to-control grid shorts, move control "A" from 7 to 5 in first section test, and from 9 to 11 in second section test.

SERVICE NOTES

1. If your meter reads backwards on Quality tests, AD-4 controls "A" and "B" are reversed.
2. No Quality reading means one or both of the AD-4 controls are at the wrong setting. Check the base diagram of tube under test.

The following tube chart can be completed as you get test data on new types tested in your AD-4

Tube Type	AD-4 Settings		Tube Tester Settings	
	A Cathode	B Grid or Diode Plate	Heater Volts	Load or Sensitivity
2CW4	8	4	2.0	
6AX3	7	4	6.3	
6AY3	9	2	6.3	
6B10	2	3	6.3	
6B10	7	5	6.3	
6B10	9	8	6.3	
6B10	9	10	6.3	
6BH3	9	2	6.3	
6C9	6	7	6.3	
6C9	10	1	6.3	
6C10	3	11	6.3	
6C10	4	9	6.3	
6C10	6	7	6.3	
6CW4	8	4	6.3	
6D10	3	11	6.3	
6D10	4	9	6.3	
6D10	6	7	6.3	
6DS4	8	4	6.3	
6FJ7	7	3	6.3	
6FJ7	9	10	6.3	
6K11	3	11	6.3	
6K11	4	9	6.3	
6K11	6	7	6.3	
12AY3	9	2	12.6	
17AY3	9	2	16.8	
17BH3	9	2	17.0	
17C9	6	7	16.8	
17C9	10	1	16.8	
22BH3	9	2	22.4	
7586	8	4	6.3	
7587	8	4	6.3	
7868	3	2	6.3	
7895	8	4	6.3	

