Some tubes may be covered by small, round metal covers called tube shields. To remove most tube shields, simply press down and twist slightly, then lift up. Other tube shields fit tight around the tube and remove with the tube. Another type you may encounter tele-scopes. Simply press down on the shield and the tube is then within reach.

These 32 pages might well be one of the most important books you ever read if you want to save more important money than ever before on...

TV Trouble Finding
Home and Car Radio
Stereo & Record Players
THE 64 EDITION GIVES YOU...

You will find a complete stock of nationally ad- vertised replacement tubes on hand at all U-Test-M tester locations.

NOTE: DO NOT attempt to test more than one tube at a time or you will get false readings.

After you have tested the suspected tubes and replaced any if needed, check to see that you haven’t accidentally pulled any wires, then, see that all tube that requires a wire or cap on top of the tubes have these caps back in place. Also be sure that all tube shields have been put back on the tubes that need them.

Keep this fact in mind—Although some tubes may appear alike physically, their inside connections may be completely different and damage to other components may result if installed in the wrong sockets.

Now, replace the back cover. Taking care to seat the interlock switch properly so contact is made, and last, see that the antenna connections are securely fastened and not touching (shorted across) or broken. Move the set back to its original position, turn it on, and enjoy your favorite program.

YOU'RE ON THE WAY...
TO BECOMING AN EXPERT...

THANKS TO u-test-m

FREE
u-test-m
TUBE TROUBLE
SHOOTING TIPS

TAKING ONE!
See how easily anyone can check tubes!

NO DOUBT you are aware of the fact that weak, shorted, or dead tubes register different effects on the face of the picture tube screen, or affect the sound or possibly both picture and sound. Therefore, if you know which tubes to test, most TV troubles can be corrected by testing one or two tubes.

A close visual inspection may prove to be a valuable short cut in repairing the set. Take a few screws out of the top section of the back cover so the tubes can be viewed with the power on. TOUCH NOTHING INSIDE! Look for unlit tubes, tubes that flash internally or those that have a deep purple glow. Make a mental note of their location as you will want to check these tubes first. Tubes may be weak or shorted even though they may be lighted or appear normal. Test them to be sure.

Consult your tube layout chart. This information enables you to quickly locate and test suspected tubes.

Most TV sets have tube layout charts glued to the back cover or inside the cab-net. This chart provides the tube type, numbers, their function and their position on the chassis.

These tubes may be covered by small, round metal covers called tube shields. To remove most tube shields, simply press down and twist slightly, then lift up. Other tube shields fit tight around the tube and remove with the tube. Another type you may encounter telescopes. Simply press down on the shield and the tube is then within reach.

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FOLLOW THESE ABC'S...

TEST OSCILLATOR-MIXER. Tube located on the tuner behind the channel selector dial. Some sets the tuner is mounted separately or beneath the chassis—look for tube types such as 6L6, 6L6, 6L6A, 12AT7, 12AT7C, or 12AT7. Later model sets 5866, 5881, 5801, 5CBC, 5C6L, 5166, 5I6C, 6880, 6880, 6816, 6816A, 6825, 6825A, 6826, 6826A, 6827, or 6827B.


TEST PICTURE I.F. TUBES. Two, three or four miniature tubes that run in a line across the width or the length of the chassis. Look for tube types 5AS4, 5G85, 6G85, 6G85C, or 6G85D. Later model sets: 5AI6, 5BI6, 5CI6, 5DI6, 5AI6A, 5AI6B, 5AI6C, 5AI6D, 5AI6E, 5AI6F, 5AI6G, 5AI6H, 5AI6I, 5AI6J, 5AI6K, 5AI6L, 5AI6M, 5AI6N, 5AI6O, 5AI6P, 5AI6Q, 5AI6R, 5AI6S, or 5AI6T.

TEST VIDEO AMPLIFIER OR VIDEO OUTPUT TUBE. (Some sets use both) Tube types such as 6AG7, 6AG7C, 6AI6, 6AI6C, 6AI6D, 12AX7, 12AU7, 12AX7A, 12AX7B, or 12AX7C. Later model sets 6AM6, 6B6, 6B6A, 6B6B, 6B6C, 6B6D, 6B6E, 6B6F, 6B6G, 6B6H, 6B6I, 6B6J, 6B6K, 6B6L, 6B6M, 6B6N, 6B6O, 6B6P, 6B6Q, 6B6R, 6B6S, 6B6T, 6B6U, 6B6V, 6B6W, 6B6X, 6B6Y, or 6B6Z.

TEST SOUND (Audio) OUTPUT TUBE. Located close to the point the speaker wires enter the chassis. Tube types such as 6AS7, 6AJ7, 6AI6, 6AI6C, 6AI6D, 12AU7, 12AX7, 12AX7C, 12AX7A, 12AX7B, or 12AX7C. Later model sets 6AM6, 6B6, 6B6A, 6B6B, 6B6C, 6B6D, 6B6E, 6B6F, 6B6G, 6B6H, 6B6I, 6B6J, 6B6K, 6B6L, 6B6M, 6B6N, 6B6O, 6B6P, 6B6Q, 6B6R, 6B6S, 6B6T, 6B6U, 6B6V, 6B6W, 6B6X, 6B6Y, or 6B6Z.

NOTE: Some sets use the sound output tube as part of the power supply as well as to operate the speaker.

The following sound tubes are generally located close to the sound output tube. Test sound amplifier tubes such as 6AG7, 6AI6, 6AI6C, 6AI6D, 6B6, 6B6A, or 6B6B. Later model sets 5AL5, 5AL5A, 5AL5B, 5AL5C, 5AL5D, 5AL5E, 5AL5F, or 5AL5G.

Test sound detector tubes (Ratio Detector) types such as 6AG7, 6AI6, 6AI6C, or 6B6A. Later model sets 3AI6, 3AI6A, 3AI6B, 3AI6C, 3AI6D, 3AI6E, 3AI6F, or 3AI6G.

Test sound I.F. tube types such as 5AN4 or 6CG7A. Later model sets 5AI6, 5AI6A, 5AI6B, 5AI6C, 5AI6D, or 5AI6E.

TEST HORIZONTAL OUTPUT TUBE: A large tube (sometimes two tubes) located inside or near a metal compartment 8" to 10" high. Tube types such as 6AS7, 6AS7C, 6AS7D, 6AS7E, 6AS7F, 6AS7G, 6AS7H, 6CI6, 6CI6A, 6CI6B, 6CI6C, 6CI6D, 6CI6E, 6CI6F, 6CI6G, 6CI6H, 6CI6I, 6CI6J, 6CI6K, 6CI6L, 6CI6M, 6CI6N, 6CI6O, 6CI6P, 6CI6Q, 6CI6R, 6CI6S, 6CI6T, 6CI6U, 6CI6V, 6CI6W, 6CI6X, 6CI6Y, 6CI6Z, or 6CI6AA.

Later model sets: 5CI6, 5CI6A, 5CI6B, 5CI6C, 5CI6D, 5CI6E, 5CI6F, 5CI6G, 5CI6H, 5CI6I, 5CI6J, 5CI6K, 5CI6L, 5CI6M, 5CI6N, 5CI6O, 5CI6P, 5CI6Q, 5CI6R, 5CI6S, 5CI6T, 5CI6U, 5CI6V, 5CI6W, 5CI6X, 5CI6Y, 5CI6Z, or 5CI6AA.

NOTE: Some RCA models use tube type 6CG7A or 6CG7D for the video output tube. If so, test it as in some instances this tube affects the picture tube.

When testing tubes inside the metal compartment, do not touch below or around the base (the pin connections) of tube types such as 1AJ2, 1AJ3, 1AJ4, 1AJ5, 1AJ6, 1AJ7, or 1AJ8. To remove this tube, pull the cap and wire at the top off, place finger around the glass envelope and pull up in a circular motion. BE SURE POWER IS OFF.
Some tubes may be covered by small, round metal covers called tube shields. To remove such tube shields, simply press down and twist slightly, then lift up. Other tube shields fit right around the tube and must be removed with a tool. Another type may be encountered telescope. Simply press down on the shield and the tube is then within reach.

Then... testing tubes on the self-service tube tester. Each tester varies somewhat in operation and design, simply follow the instructions designated on the tester panel, allow the tube to warm up, then observe the meter and short lights. This handy service will quickly evaluate the condition of your tubes. You will find a complete stock of nationally advertised replacement tubes on hand at all U-Test-MR tester locations.

NOTE: DO NOT attempt to test more than one tube at a time or you will get false readings.

And finally... After you have tested the suspected tubes and replaced any if needed, check to see that you haven't accidentally pulled any wires loose, see that all tubes that require a wire and cap on top of the tubes have these caps back in place. Also be sure that all tube shields have been put back on the tubes that need them.

Keep this fact in mind—Although some tubes may appear alike physically, their inside connections may be completely different and damage to other components may result if installed in the wrong sockets.

Now, replace the back cover, taking care to seat the interlock switch properly so contact is made, and last, see that the antenna connections are securely fastened and not touching (shorted across) or broken. Move the set back to its original position, tune it in, and enjoy your favorite program.

The "Do-It-Yourself" TV TROUBLE-SHOOTERS GUIDE

1963 EDITION

TV Trouble Finder
Trouble-Shooting Color TV
Home & Car Radio
Stereo & Record Players

This booklet shows you—the average television set owner—how to find and fix all of the common TV troubles caused by defective tubes. It also tells you how to care for other TV troubles not directly caused by defective or faulty tubes. No schooling in electronics or previous experience in TV Trouble-Shooting is necessary, to follow the simple, specific directions given in this booklet.

The trouble-finder section will save you many times over the price of this booklet. The trouble-finder is entirely new and different. It not only lists the remedies, but also pinpoints tubes, tubes and adjustments in their position on the chassis.

Dial and Pin-Point Your TV Troubles

New... consult your tube layout chart, this information enables you to quickly locate and test suspected tubes.

Most TV sets have tube layout charts glued to the back cover or inside the cabinet. This chart provides the tube type numbers, their function and their position on the chassis.

If you do not have a tube layout chart, mark the tubes in a convenient manner so that they can be returned to their original sockets.

FREE... Take One u-test-m

Trouble-Shooting Tips

No doubt you are aware of the fact that weak, shorted, or dead tubes register different effects on the face of the picture tube screen, or affect the sound or possibly both picture and sound. Therefore, if you know which tubes to test, most TV troubles can be corrected by testing 3 or 4 tubes.

First... a close visual inspection may prove to be a valuable short cut in repairing the set. Take a few screws out of the top section of the back cover so the tubes can be viewed with the power on. "TOUCH NOTHING IN SIDE." Look for unlighted tubes, tubes that flash internally or those that have a deep purple glow. Make a mental note of their location so you will want to check these tubes first. Tubes may be weak or shorted even though they may be lighted or appear normal. Test them to be sure.

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