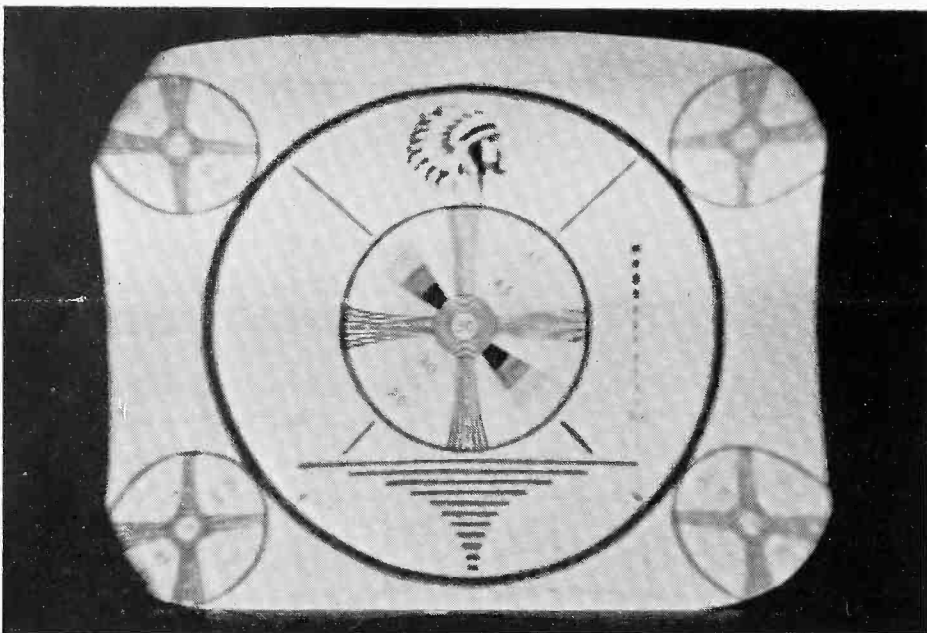


A



B

(Fig. 1.) Test Patterns Produced on the Screen of the 8XP4 Check Tube.

(A) By a 90-Degree Deflection System.

(B) By a 70-Degree Deflection System.

tions. A test pattern that was produced on the 8XP4 tube by a receiver having 70-degree deflection is shown in Fig. 1B.

The check tube has many features which simplify the handling of the tube on the service bench. The 8XP4 is able to reproduce a good picture under a wide variety of operating conditions, and connections between the check tube and a receiver can be made rapidly and easily. All the technician has to do when hooking up

the 8XP4 tube is to slip the yoke around the neck of the tube and to attach the tube socket and the anode lead. Since electrostatic self-focusing is employed, no external focusing device is required. In addition, the electron gun is constructed to operate without an ion trap magnet. It may develop an ion spot during use, but the spot will not impair the tube's usefulness. Centering magnets will, in general, be unnecessary. The 8XP4 voltage ratings are high

enough to permit its use in any conventional receiver. Potentials as high as those encountered in any conventional receiver may be applied to the anode.

The results of using the 8XP4 in testing picture tubes by substitution are conclusive. If a picture tube is suspected of being defective, the check tube should be tried in its place. A normal picture will be developed on the check tube if the receiver circuits are operating properly, and any suspicion that the picture tube might have been causing trouble will then be confirmed. In some cases, the picture on the check tube may be better than that on the old picture tube but still not satisfactory. This indicates that there may be defects in the circuits as well as in the picture tube. The use of the check tube allows the technician to isolate defects to the chassis or to the picture tube so that trouble shooting can be done more efficiently.

Even if the picture tube of a receiver might appear to be in good condition, the technician may wish to replace it with an 8XP4 during servicing for the simple reason that the check tube is much less bulky than the picture tube. This use of the check tube for the sake of convenience in handling is especially important in view of the current trend toward the cabinet mounting of picture tubes. Many of the new receivers having vertical chassis are featuring this style of tube mounting, and an increasing percentage of the receivers with horizontal chassis are also using cabinet mounting.

When a receiver must be taken to the shop for servicing, the chances are that the chassis will have to be removed from the cabinet sooner or later. In the case of a receiver that has a cabinet-mounted picture tube, it is a sensible practice to remove the chassis in the customer's home. The chassis should then be taken to the shop where it can be serviced with the aid of the check tube, and the