



## Recommended Handling Procedures For All-Glass Picture Tubes

This Note describes recommended handling procedures for all-glass picture tubes to prevent glass-surface damage and to eliminate or reduce the possibility of field implosions. The side walls of all cathode-ray tubes are under high stress due to atmospheric pressure. Surface damage to the glass, especially in the area where the faceplate and side walls meet, is dangerous and may be the cause of breakage. In the event of breakage, flying glass fragments can cause serious damage or personal injury.

All picture tubes are carefully inspected at the factory to ensure freedom from surface damage. There is very little chance that a tube which has a damage-free surface will implode. Provided the tube is handled carefully, both the handler and the final customer will be protected from the possibility of tube failure and flying glass.

### Recommended Procedure

Picture tubes should be kept in the shipping box or similar protective container until just prior to installation. In areas where unpacked and unprotected tubes exist, heavy protective clothing including gloves and eye shields should be worn.

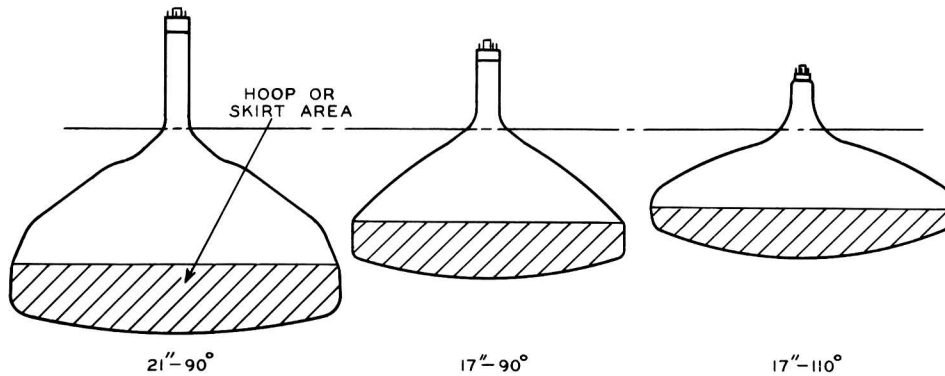
After the tube is removed from its shipping box, the "hoop" or "skirt" area must be protected from scratches, blows, or contact with metal or other glass surfaces. This critical area is shown in Fig.1 for three types of glass picture tubes. The "hoop" area of tubes such as the 17-inch, 110-degree types is especially vulnerable because of the contour of the faceplate.

Only a soft, dry cloth should be used to clean the "hoop" area. Wetting of the glass surface is not recommended. In the event that a tube is placed on its side, it should always be placed on a material which will not scratch the glass surface, such as corrugated paper box liner or rubber pad.

All picture tubes are subject to damage if they are placed side by side and allowed to knock together. Every precaution should be taken to eliminate the possibility of bruising the glass surface by bumping



tubes together or accidentally striking them with tools during installation. The tube should never be deliberately struck with any instrument. Furthermore, the glass should be protected from direct contact with metal parts of the mounting assembly.



*Fig.1 - Outline sketches of three sizes of television picture tubes showing vulnerable "hoop" area.*

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