APPLICATION NOTE No. 49
July 23, 1935.

APPLICATION NOTE
ON
THE CONSTRUCTION OF A TOP-CAP SHIELD FOR METAL TUBES

One of the many significant features of the new metal tubes is that
the tube elements are shielded by the metal envelope from external dis-
turbances; the effectiveness of the metal envelope as a shield has been
found to be more than sufficient for most receiver designs. However, at-
tention is called to the fact that possibly a small, but sometimes neces-
sary, increase in receiver stability may be obtained by shielding the top
cap of one or, perhaps, two of these tubes in a receiver. In all proba-
bility, this top-cap shield will not be needed except in very sensitive
receivers requiring careful alignment of the tuning circuits.

It is not necessary to enclose the entire tube in order to provide
shielding for the small top cap. A thimble-shaped metal shield with the
proper diameter to grip the dome of the tube and with sufficient length
to house the top cap and its terminal meets requirements. A further
requisite is that the shield be arranged to cut through the paint on the
dome in order to insure good electrical contact with the metal envelope
of the tube. The accompanying drawing shows the essential construc-
tional details of a suggested type of shield; other constructions will occur to
those interested in this problem.

A slot, approximately 7/8" long and 1/4" wide, along the length of
the shield permits the use of a shielded connection to the top cap; the
hole through the top of the shield may be utilized for the same purpose.
Three equidistant slits are provided; one face of each of these slits is
bent inwardly, as shown, in order that the flanges may cut through the
paint and grip the dome of the tube.

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TOP-CAP SHIELD FOR METAL-TUBE TYPES

.830" APPROX.

.024" DEEP DRAWING STEEL

5/16"

1"

.78"

.250"

.300"

.125" R.

.050" SLOT

I.D. .782" MIN.

.369" R. MAX.

120°

120°

120°

.125"

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RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

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