AL FEED LINES

half-wave dipole antennas attenuate
iation and the half-wave dipole feed
te spruious radiation at TV frequencies.

dded tuning controls are necessary.

kial connectors provide a convenient
nsferring antennas.

NA DETAILS.

e following gives the nominal performance
m the antennas described in this section.

IFICATIONS

FIGURE 8-4	FIGURE 8-5
40-Meter Dipole	80-Meter Dipole
7.0 to 7.3 mc	3.5 to 4.0 mc
----	----
----	----
1.8 at band ends	2.5 at band ends

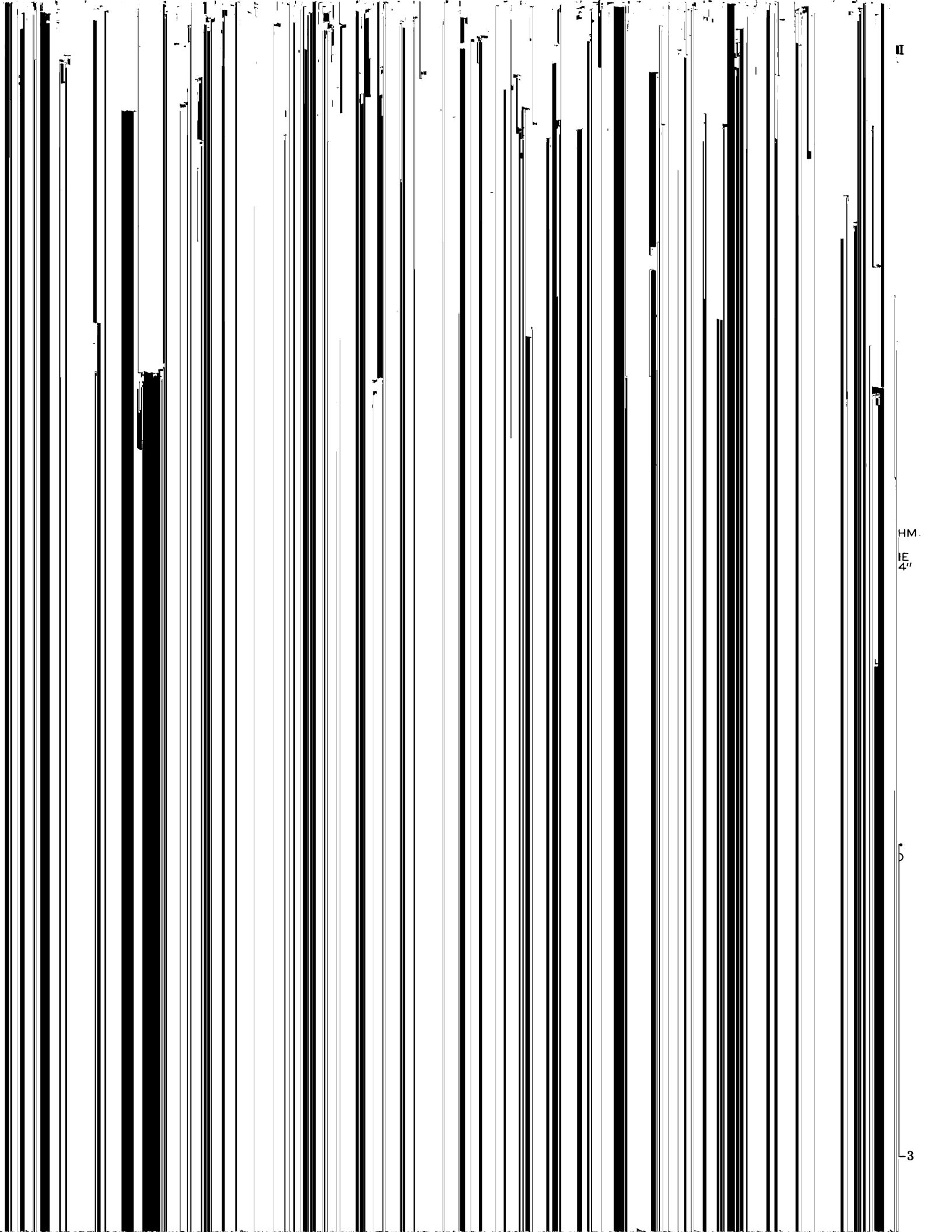
details of beams for use on 10 or 11
rs. Each beam is constructed with a
nbalanced transformer (balun) to match
a coaxial feed line. Figures 8-4 and
struction details of horizontal dipoles
) and 80 meters. Each dipole is con-
a balun to match the dipole to a coaxial
lf it is desired to use shorter length
those shown for the 40 and 80-meter
er to figure 8-6, Short Balun for 40

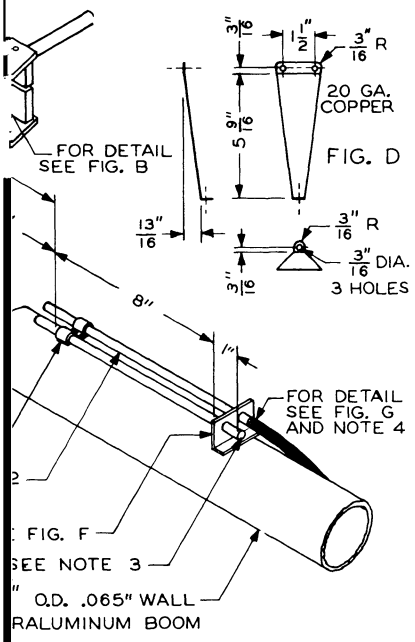
line. Figure 8-1 indicates the construction details of a balun for this purpose.

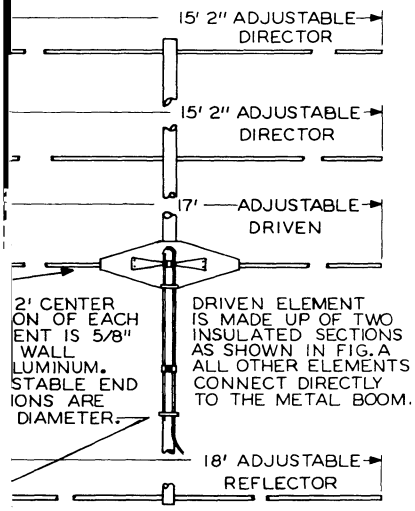
8.4. TEST INFORMATION.

All baluns mentioned in this discussion are resonant circuits. The baluns are cut to operate at the center frequency of the band specified.

If it is desired to check any balun, disconnect the antenna from the balun, and the center conductor of the feed cable from the shield of the opposite cable. Use a grid dip meter, or other means, to check for resonance. If the balun is off frequency, correction may be made by either changing the length of the balun or changing the value of the capacity used. The resonant frequency may also be varied by altering the spacing between cables. The length of the balun must not exceed one quarter wavelength, and baluns shorter than those given in figure 8-6 are not recommended.







COMPLETE BEAM

DER COAX INNER CONDUCTOR TO
TH TUBES WITH SCOTCH ELECTRICAL
HE DIELECTRIC FROM ONE TUBE TO

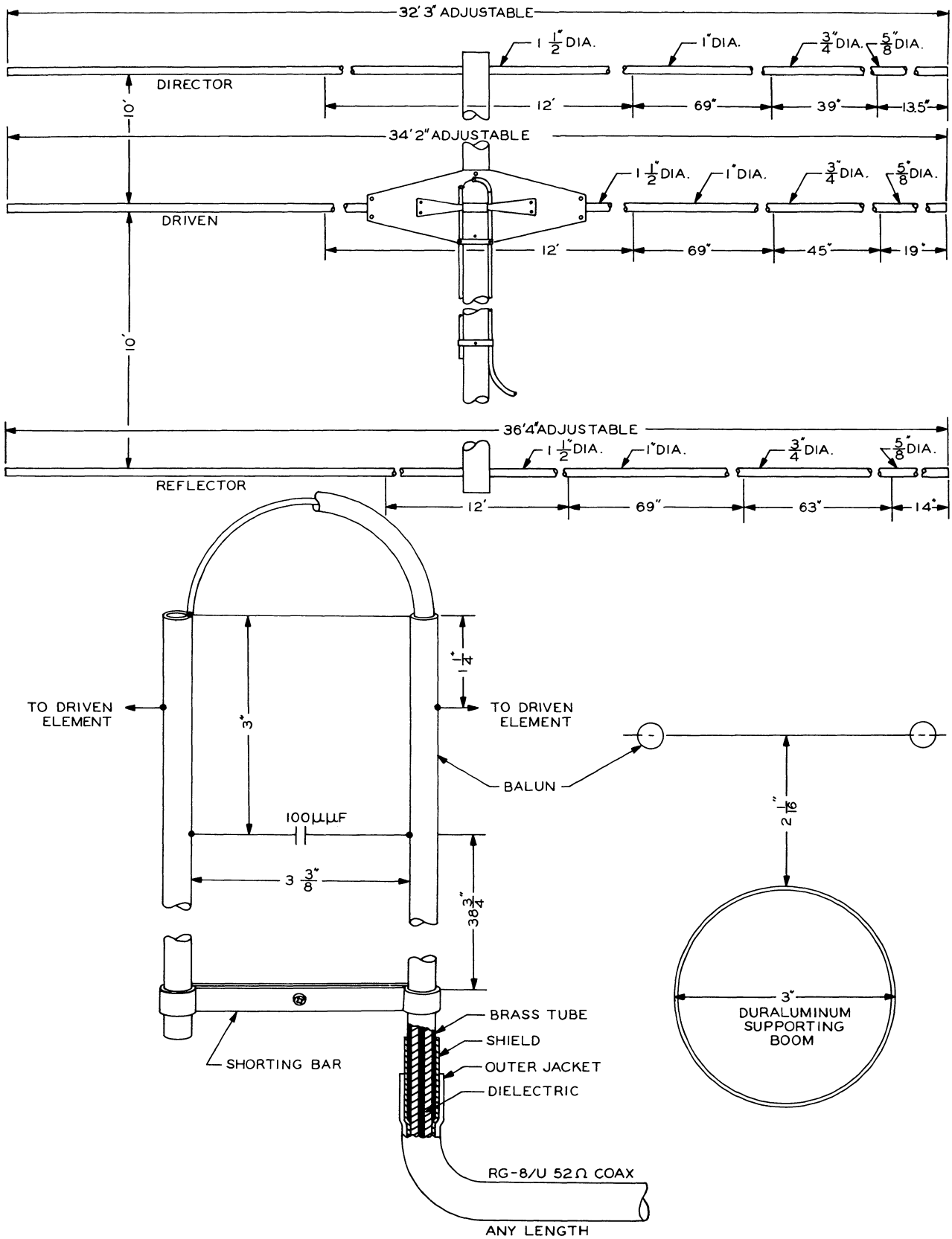
I COAXIAL CABLE. CUT THE OUTER
HE 3/8" O.D. BRASS TUBE. SLIDE
THE BRASS TUBE BETWEEN THE
SHOWN. SOLDER THE SHIELD TO
HE DIELECTRIC. HOLD THE CABLE
APPING OF SCOTCH ELECTRICAL

ITICAL. BEFORE INSERTING THE
THE ELEMENT, USE A GRID-DIP
THE 17 3/4" DIMENSION IS

COPPER TRIANGLE. SOLDER

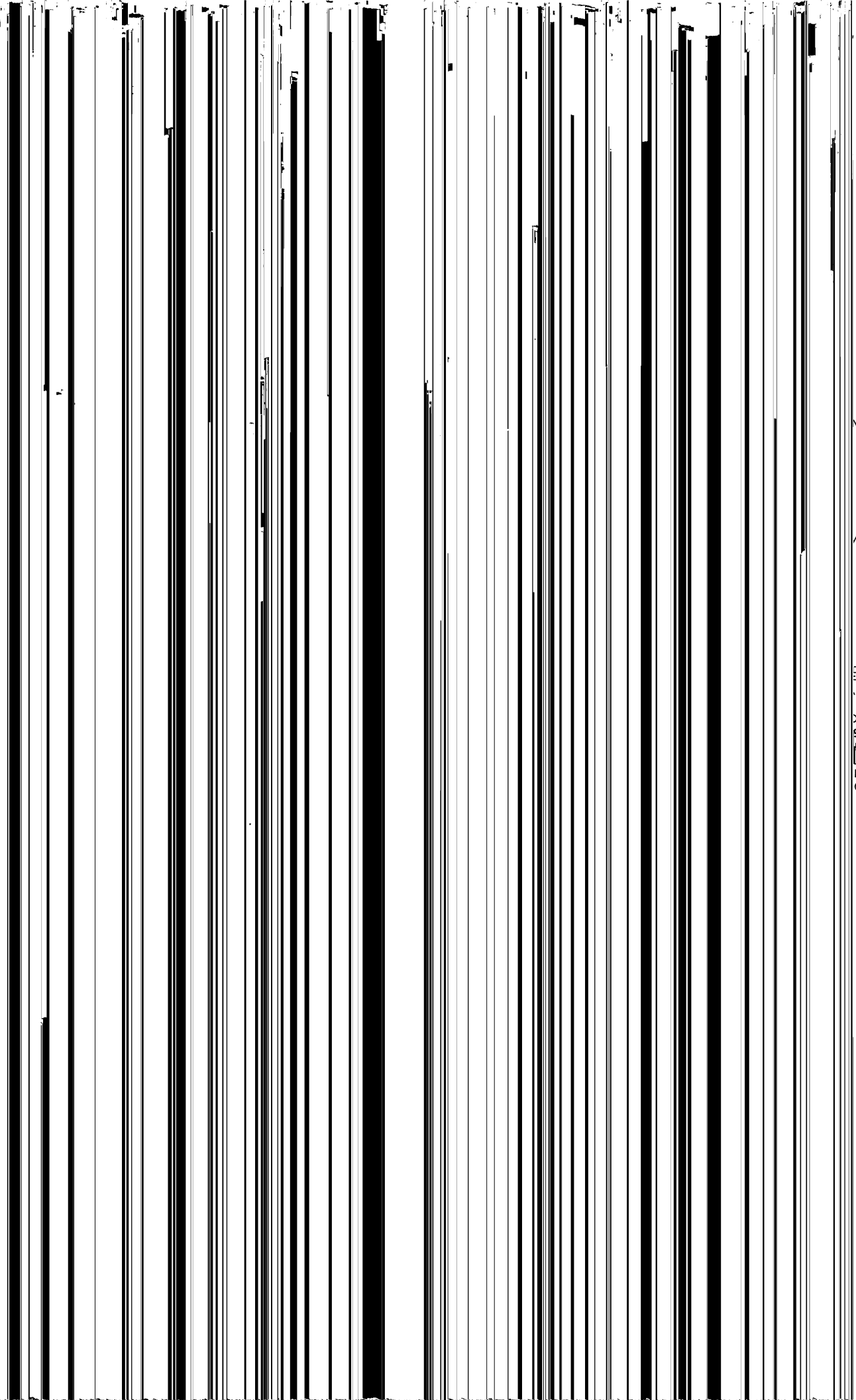
D
EM

Transformer (Balun) Feed System

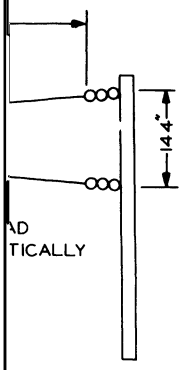


20 METER BEAM WITH SHORTENED UNBALALANCED TO BALANCED TRANSFORMER (BALUN) FEED SYSTEM. GENERAL CONSTRUCTION IS THE SAME AS THE TEN METER BEAM.

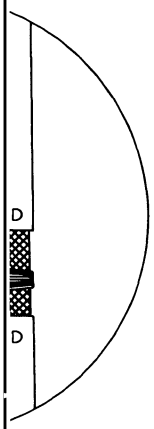
Figure 8-3. 20-Meter Beam With Shortened Unbalanced to Balanced Transformer (Balun) Feed System



LENGTH
E SHIELD
ND INNER
JACKET.
) OF COAX C
E CONNECTION,
E DIELECTRIC
LE SOLDERING.
RAPPING OF
ON TO INNER

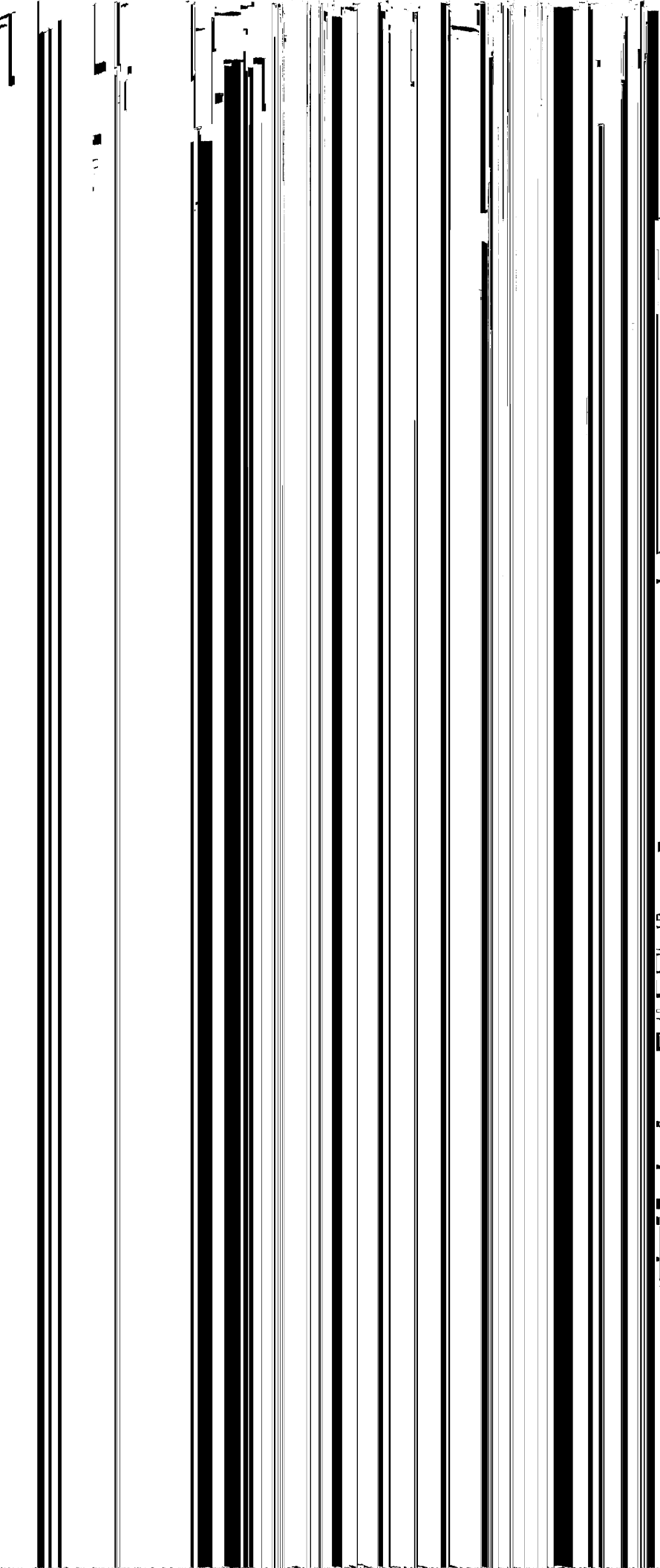


AD
TICALLY



A SHORT LENGTH
BRAID THE SHIELD
ECTRIC AND INNER
OUTER JACKET.
P SHIELD OF COAX C
LDER THE CONNECTION,
DAMAGE THE DIELECTRIC
RAIGHT WHILE SOLDERING.
TINUOUS WRAPPING OF
O CONNECTION TO

ed



ANTENNA

PHENOLIC BLOCK,
1" x 1½" x ½".
SEE NOTE 2.

SEE NOTE 1.

B– SUITABLE CAPACITORS

TYPE	VALUE	COLLINS PART NO.
ALAB TYPE 850	100MMF	913 0821 00
ALAB TYPE 850	100MMF	913 0821 00

ER TO FIGURES 8-4 AND 8-5.

THREE SPACERS. CONSTRUCT
VE SPACERS.

ARALLEL.