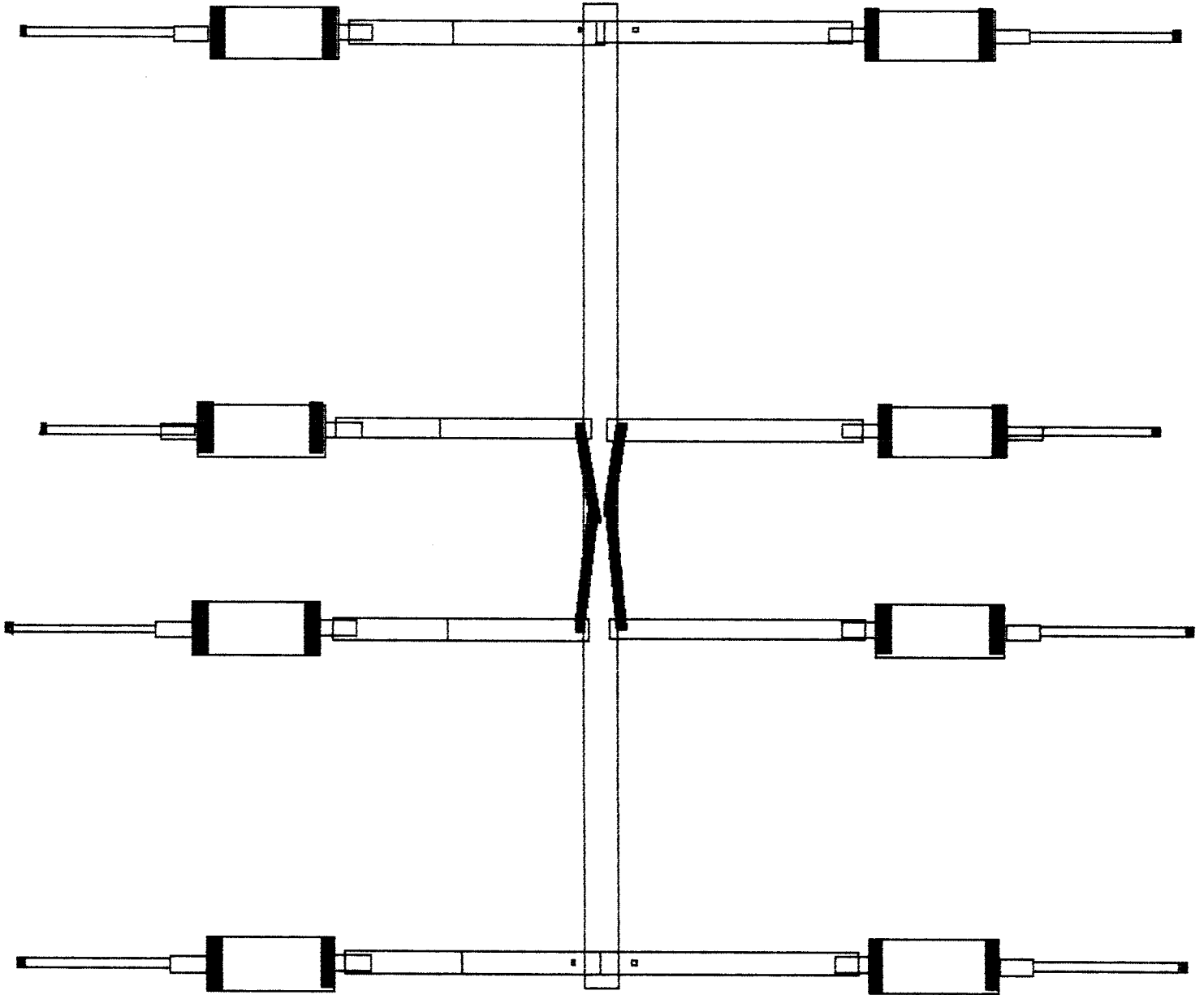


MOSLEY

TA-33-M-WARC



MOSLEY ELECTRONICS, INC.
1325 STYLE MASTER DRIVE
UNION, MO 63084

ADDENDUM

CHANGES TO PHASING LINES

The 5/16" clamp is no longer used. The phasing lines are pre-drilled at the proper attachment point for your coax.

Place an 8-32 x 1" machine screw through the hole in the phasing line and secure with lockwasher and nut provided.

Secure the solder lug to the 8-32 screw with the remaining lockwasher and nut. The center, or "HOT", section of the coax should be attached to the phasing line farthest from the mast.

Parts List for TA-33-MW

Item #	Part #	Quan.	Description
1	A1001	2	Element Support
2	A1002	8	Insulator Block
3	1003	16	10-32 x 1-1/4" Screw
4	1004	24	#10 Lockwasher
5	1005	8	10-32 x 1-3/4" Screw
6	A1006	2	1"x.058x72" Coded Blue
7	A1007	2	7/8"x.058x36" Coded Blue
8	A1008	2	Trap Assembly Coded Blue
9	A1015	2	5/8"x.035x33" Coded Blue
10	1016	8	5/8" End Cap
11	1017	25	#8x1/2" SS Sheet Metal Screw
12	A1018	12	1/4-20 x 1-1/2" U Bolt
13	1038	2	#40 Clamping Block, Aluminum
14	1019	24	1/4" Internal tooth lockwasher
15	1020	24	1/4-20 Nuts, SS
16	1021	2	Solder Lugs
17	A2889A	1	1-1/8"x.058x72" Coded Brown
18	A2889B	2	1"x.058x72" Coded Brown
19	A1343A	1	1-1/8"x.058x72" Coded Black
20	A1343B	2	1"x.058x72" Coded Black
21	A1025	2	7/8"x.058x54" Coded Brown
22	A1024	2	7/8"x.058x36" Coded Black
23	A1027	2	Trap Assembly, Brown
24	A1026	2	Trap Assembly, Black
25	A1029	2	5/8"x.035x33" Coded Brown
26	A1028	2	5/8"x.035x33" Coded Black
27	A1030	1	Mast Plate, 1-1/2 & 2" holes
28	A1031	1	Boom Section, Coded Black/Blue
29	A1032	1	Boom Section, Coded Brown
30	A1034	0	Ground Strap, Not used on WARC
31	A1033	1	Boom Splice, 1-1/4"x.058x12"
32	1035	2	Boom Caps, 1-1/4"
33	1036	4	Element Caps, 7/8" Inner
34	1037	8	#43 Clamping Block, Plastic
35	1191	2	#47 Clamping Block, Aluminum
36	1014	16	2" Trap Seal
37	A1123	1	Penetrox
38	A1187	2	2" U Bolts, 5/16" SS
39	1188	4	5/16-18, Lock Washer
40	1189	4	5/16" SS Nut
41		16	Individual Coil with Specified Number of Turns
42		16	#8 Self Tapping Screw For Trap
43			
44		2	8-32x1" Machine Screw
45		4	#8 Lock Washers
46		4	8-32 Hex Nuts
47		2	3/8".049x33" Phasing Lines
48		2	1"x.058x72"
49		2	7/8"x.058x40"
50		2	Traps
51		2	5/8"x.035x17-1/4"
52		1	Instruction Manual
53		1	Warranty Card
54		1	Deburring Notice
55		1	Warning Notice

ASSEMBLY INSTRUCTIONS FOR
THE TA-33-MW

CAUTION: Coil Assemblies are color coded on one end only; this color code MUST ALWAYS be installed pointing in toward the center of the antenna, toward the BOOM.

NOTE: Added protection to Color Code. To insure proper placement of the traps, you can use a piece of masking tape marked and placed on the trap cover showing the end with the color code. This will prevent confusion if the color code is rubbed off when adding the penetrox to the tubing.

REVERSAL OF TRAPS WILL CAUSE HIGH SWR AND OTHER MALFUNCTIONS OF BEAM!

DO! MAKE SURE YOU PLACE A SMALL AMOUNT OF PENETROX ON ALL TELESCOPING PIECES OF TUBING.

DON'T EVER OPEN TRAPS AND PLACE PENETROX ON THE INSIDE OF THE TRAP!

READ DIRECTIONS CAREFULLY! Mosley antennas go together very easily. Review the drawings and instructions BEFORE starting assembly.

Preparing Coax

< > To attach 1021 solder lugs to coax, strip back the braid only 2-1/2" and make a twisted lead out of the braided wire side. Solder the 1021 solder lug a 1/4" down from the end of this braided leg.

< > Trim back the insulation of the center of the coax a 1/4" and solder the 1021 lug.

< > Tape the "Y" between the 2 leads with a good 3M type tape and also tape up each leg to the 1021 solder lug. If this is done correctly, with a good tape, nothing else is needed to seal the coax.

< > The above step needs to be done so it can be ready in the following steps.

BEFORE ASSEMBLY REVIEW ALL PARTS

< > Check the parts list to make sure all of the parts are there. (If you think a piece of tubing is missing CHECK ALL OF THE LARGER PIECES TO BE SURE IT ISN'T TELESCOPED INSIDE ANOTHER PIECE. THIS IS USUALLY THE CASE 99.999999% OF THE TIME.)

< > If something is missing make sure you have your serial number ready when calling. To expedite any Warrantee claims call into our Engineering line for prompt service.

ASSEMBLY

< > Begin assembly by grouping all elements and trap sections according to color code.

ASSEMBLY OF BOOM

< > Assemble U BOLTS onto mast plate. (Items 27, 12, 14, 15). Four U BOLTS will go on one side of mast plate to hold BOOM. Two U BOLTS will go on opposite of mast plate to hold antenna to MAST. Loosely install the U BOLTS so that further assembly can be completed. Refer to drawing.

< > Once this is completed set aside until boom is assembled.

< > The boom is in 2 pieces. It is joined in the middle with a 1-1/4" OD splice. This splice and one inner end of the boom has a drill hole. This is to allow splice to be locked into position so that when the opposite end of the boom is slide over the splice it won't move out of position.

< > Insert Boom splice (Item 31), into half of boom with drill hole. Secure splice with #8 screw. (Items 31, 28, 29, 11).

< > Slide remaining section of boom over splice.

Locking Boom Sections together.

< > Slide boom into the 4 U BOLTS on the mast plate and CENTER boom in the middle of the mast plate and the four U BOLTS.

< > Make sure boom is butted together.

< > Place four #43 Clamping Blocks between the boom and the mast plate, keeping the flat side of the clamping block against the mast plate side. The curved side will hold the boom against the curved side of the U BOLT.

< > Center each clamping block under the respective U BOLT. Once these blocks are centered and the boom is butted and centered on the mast plate, tighten U BOLTS. At this time leave the mast U BOLTS loose until later.

FRONT RADIATOR ASSEMBLY
Color Coded BLUE

- < > Loosely install insulators (Item 2) to element support (Item 1) with screws and lockwashers (Items 3 and 4).
- < > Place element section (Item 6) into "V" of insulator block (Item 2) so that screw hole on BLUE color coded end of element (Item 6) is facing DOWN.
- < > This is important to assure proper position of trap assembly that are provided with breather holes and must face downward.
- < > Place screw (Item 5) through lock washer (Item 4) and 1" tubing coded BLUE (Item 6) and secure to outermost insulator (Item 2). DO NOT OVER TIGHTEN SCREW INTO INSULATOR BLOCK. TIGHTEN ENOUGH TO SEAT LOCK WASHER ONLY.
- < > Note: The BEND IN THE PHASING LINES GO IN TOWARD EACH OTHER OVER THE BOOM. This will ensure that the lines are clear of the mast. Place the bend in the phasing lines NEAREST the mast.
- < > Place screw, lock washer and Phasing line on top of 1" tubing at inner insulator block. (Items 5, 4, 46, 2). DO NOT OVER TIGHTEN SCREW INTO INSULATOR BLOCK. TIGHTEN ENOUGH TO SEAT LOCK WASHER ONLY.
- < > REMEMBER to keep the 3/8" tubing pointing inward at the bend toward each other. (See Drawing)
- < > Repeat the above on the opposite side of BLUE element. Refer to drawing.
- < > The next steps will require the use of PENETROX placed between the telescoping pieces of tubing. Have this ready to use. (SUGGESTION: Cut a off a small corner of the PENETROX bag, this will allow you to squeeze out controlled amounts of the PENETROX. Use just a light amount rub over the end of the piece to be inserted with your finger. Be careful not to get this paste on clothing etc., it will not wash out!
- < > Apply a small amount of penetrox on the overlapping pieces as you assemble.
- < > Insert the Blue piece of 7/8" tubing color coded BLUE. NOTE: This piece of tubing gives you 2 choices for frequency settings. Code I, the longest is for CW. Code II, the shortest is for PHONE. (SUGGESTION: The phone setting is so broad that we recommend this setting for best all around use on the TA-33-M-WARC.)
- < > Once setting is selected align the 7/8" tubing with the hole in the 1" tubing and secure with the #8 Stainless Screw. (Items 7, 6, 11). NOTE: ONCE SCREW SEATS DON'T OVER TIGHTEN OR YOU WILL STRIP OUT HOLE.

< > Insert Blue color coded end of trap into the exposed 7/8" tubing and secure with a #8 screw. (Items 7, 8, 11).

< > Insert the Blue color code 5/8" end tip into exposed end of trap and secure with #8 screw. (Items 8, 9, 11).

< > Slide on 5/8" end cap to end of element. (Items 9, 10).

< > Check to make sure element is correctly mounted on the Vee blocks, so that trap drain holes and element screws are downward as element sits on element support.

< > Repeat the above steps to complete opposite half of BLUE element. MAKE sure that the FREQUENCY settings are all the same.

This completes assembly of BLUE FRONT RADIATOR ASSEMBLY.

Placing RADIATOR onto boom.

< > Take assembled RADIATOR and place it over the BLUE color code on the top of the boom. Place a PLASTIC #43 clamping block under the element support, keeping the flat side of the block against the rectangle and the curved side on the boom. (Items 34, 1, 28, 29, 12, 14, 15).

< > Place a U BOLT around the boom and through the rectangle element support. Secure with a 1/4-20 lock washer and nut. NOTE: There are two U BOLTS used on the RADIATOR. (Items 34, 1, 28, 29, 12, 14, 15).

< > Before tightening U BOLTS completely make sure the element is at right angles to the mast plate. This will keep the elements horizontal when you attach the mast plate to the mast.

< > Tighten U Bolts on BLUE RADIATOR.

ASSEMBLY OF BACK RADIATOR COLOR CODED RED

< > Repeat the same steps as used on the Front Radiator Assembly. Follow the color code for RED. Also there are No Dimension differences. There is only ONE setting on this element.

< > Check over the element to make sure Traps are in correctly and that drain holes are pointed downward.

< > Since the mast plate is between the two radiators, the back radiator is placed on the reflector side of the boom at the point where the phasing lines mate the inner insulator blocks.

< > Attach the phasing lines to the Back Radiator and level element with the Front Radiator.

< > Tighten U BOLTS on Back Radiator keeping element level.

ASSEMBLY OF DIRECTOR AND REFLECTOR

NOTE: THE DIRECTOR IS PLACED IN THE PHONE SETTING
THE REFLECTOR IS PLACED IN CODE "I" THE LONGEST SETTING.

- < > Gather all BLACK color code pieces to begin assembly. (Items 19, 20, 22, 24, 26, 11, 10, 12, 14, 15).
- < > Make sure that all burrs of aluminum are removed from the 1" and 1-1/8" pieces of tubing before beginning this section.
- < > Use a small amount of PENETROX on all telescoping pieces where they overlap. (5/8", Trap, 7/8").
- < > For the larger pieces of tubing the 1" and 1-1/8", only apply the penetrox at the center where the 1" and 1-1/8" attach at the U BOLT. Apply penetrox 6" down on the 1" tubing at the 1/4-20 drill hole side.
- < > Start by inserting the 1" BLACK coded sections with the single 1/4-20 drill hole into the 1-1/8" BLACK stiffener. (Item 19, 20). Make sure that the U BOLT holes align. Also, pay attention that the remaining drill hole on the opposite end is in the same direction. (That is both sides outer holes are DOWN).
- < > Insert a U BOLT into the element locking the 1" tubing into the 1-1/8" center stiffener. (Item 12, 14, 15). Secure U BOLT with the lock washers and nuts, to keep U BOLT in place. Do NOT tighten at this time.
- < > Insert the BLACK piece of 7/8" tubing (Item 22), into the 1" (Item 20), selecting the PHONE code setting as chosen on the RADIATOR. Secure the 7/8" to the 1" with a #8 screw. (Item 11).
- < > Insert the BLACK color coded trap into the exposed 7/8" tubing and secure with a #8 screw. (Item 24, 22, 11).
- < > Place the 5/8" BLACK end tip into the exposed end of the trap and secure with a #8 screw. (Item 26, 24, 11).
- < > Place the 5/8" end cap on the end of the 5/8" tubing. (Item 26, 10).
- < > Check to make sure trap drain holes and screws are facing downward. This is controlled by the correct placement of the 1" into the 1-1/8" center section.
- < > Complete the remaining side of the element following the same procedure as above.
- < > This completes assembly of the Black Director Element.

ASSEMBLY OF REFLECTOR

< > NOTE: The reflector is set to the longest setting color coded "I" or CW.

< > Repeat all of the above steps using the BROWN color coded element sections and traps. (Items 17, 18, 21, 23, 25, 10, 11, 12, 14, 15).

< > Check to make sure all drain holes are downward and element is completed correctly.

ATTACHING THE DIRECTOR AND REFLECTOR TO THE BOOM

< > Locate the Black mark on the end of the boom closest to the Radiator. Slide the BLACK element onto the top side of the boom.

< > Place a #40 Aluminum clamping block under the element and on top of the boom, between the U BOLT. See Drawing.

< > Level the element with the RADIATOR, making sure both elements are level with each other and at right angles to the MAST PLATE.

< > Tighten U BOLT making sure U BOLT is butted up against BOOM. (NOTE: If U BOLT is not seated properly you can tighten U BOLT down on tubing and it will appear to be tight. To verify U Bolt is seated correctly tap bottom of U BOLT with a hammer to insure it is snug against boom.)

< > Repeat this same procedure with the Reflector element at other end of boom.

< > Recheck all elements and connections one last time. Make sure all elements are level and are at right angles to the mast plate.

This completes assembly of antenna.

ATTACHING FEED LINE

< > Place a 3/8" clamp (Item 43) on each phasing line. Place these clamps so that the holes on the clamps are pointing inward toward each other. Use the 8-32 screw and lock washer to attach as shown in drawing.

< > The 3/8" clamp is placed 14-1/2" from the center of the screw on the insulator block of the FRONT DRIVEN BLUE element and the edge of the 3/8" clamp. See Drawing.

< > Attach the "HOT" side of the coax to the phasing line FURTHEST away from the mast. Use the remaining #8 lock washer and 8-32 nut to secure to the 8-32 screw already on the 3/8" clamp.

< > Attach the BRAID side of the coax to the inner phasing line which is closest to the mast in the same manner using the #8 lock washer and 8-32 nut.

< > Make sure the phasing line closest to the mast, when installed does not touch the mast itself.

< > Make sure that the lead to the phasing line is no longer than 2-1/2" per lead.

CHECKING ANTENNA BEFORE FINAL INSTALLATION

If you wish to check antenna on the ground it needs to be at least 10 to 12 feet off the ground in a horizontal position. Do not put reflector on ground or use other methods of checking.

A 10 to 12 foot wooden step ladder is a good structure to do a sample check.

Due to the high "Q" of the antenna it will couple with ground. Artificial or real. This type of check will allow you to see that the antenna is trying to dip and does possess a SWR curve. However, due to its nearness to ground this curve might be shifted lower in frequency and not totally bottom out to 1:1. This is normal.

A problem would be indicated if all bands are showing in excess of 2:1 with no dip of any kind.

WATCH OUT FOR ARTIFICIAL GROUND

Artificial ground is presented to an antenna through various means. Guy wires up under the antenna, roof top, other resonant antennas near by are the most common.

The antenna should be at least a 1/4 wave length from any artificial ground at the lowest operating frequency of the antenna. In the case of the TA-33-MW the lowest frequency is 20 meters or 14 MHZ. With this in mind the antenna should be at least 17 feet away from any artificial ground. Remember this is a minimum.

To break up guy wires use an insulator ever 4' for the first 16' or non metallic guys. This will give a non resonant length under the antenna and help its performance.

A sign of artificial ground will be a shift lower in frequency of the SWR curves and possibly a dip that doesn't reach 1:1 at its lowest point. Also, the SWR will rise at a faster rate when tuning to the higher portions of the band.

If you need any assistance with this type of a problem, please call us on our engineering line and we will be glad to discuss your installation with you.

USE OF A BALUN OR NOT

We do not require the use of a balun. It is not needed. The TA-33-MW, is using our BALANCED Military "Q" match.

If a Balun is used make sure it is a 1:1. Keep the leads running from the balun to the phasing lines as short as possible.

We recommend an 8 to 12 foot separation between the TA-33-MW and any other beam on the same mast.

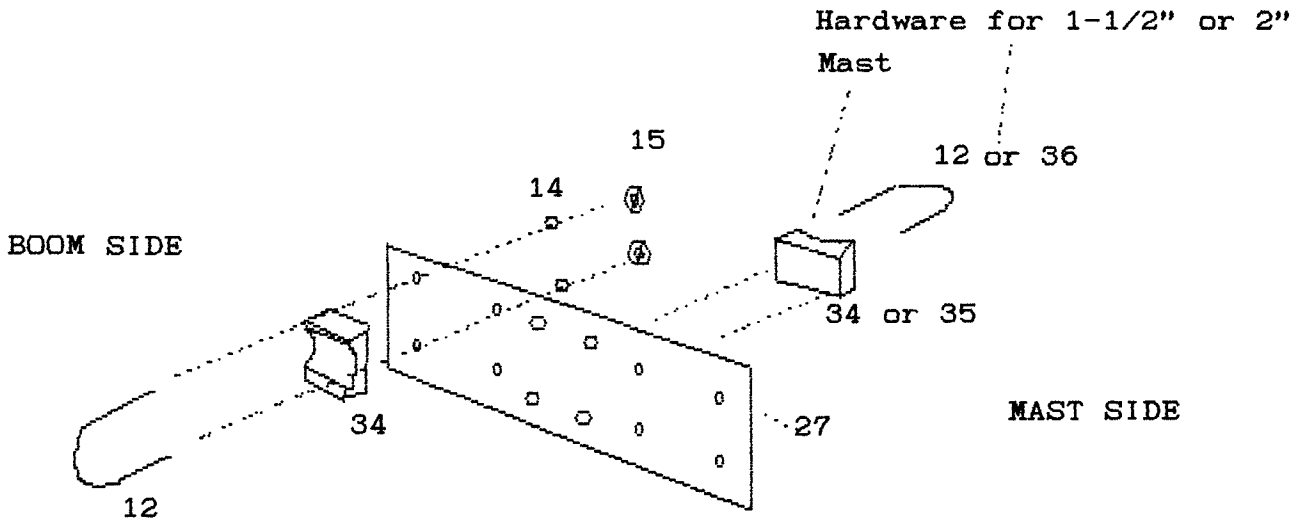
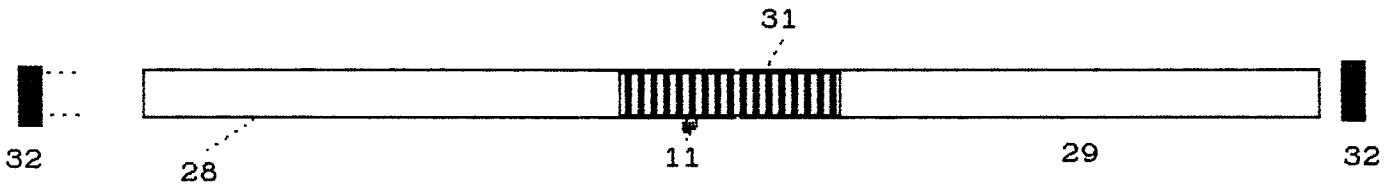
USE OF AN R.F. CHOKE

A lot of users confuse a Balun and a Choke. They are not the same. If you are experiencing some RF down your feed line or if you want to insure you have no RF down your feed line then a simple R. F. Choke made with your feed line will work well. This choke can be made by coiling 5 turns of your feed line in a 6" Inside Diameter right at the connection of the feed line to the RADIATOR.

This coil is just a loop of your feed line rolled up like a rope in the size mentioned. This coil is then taped immediately after the connection point to the radiator at the boom.

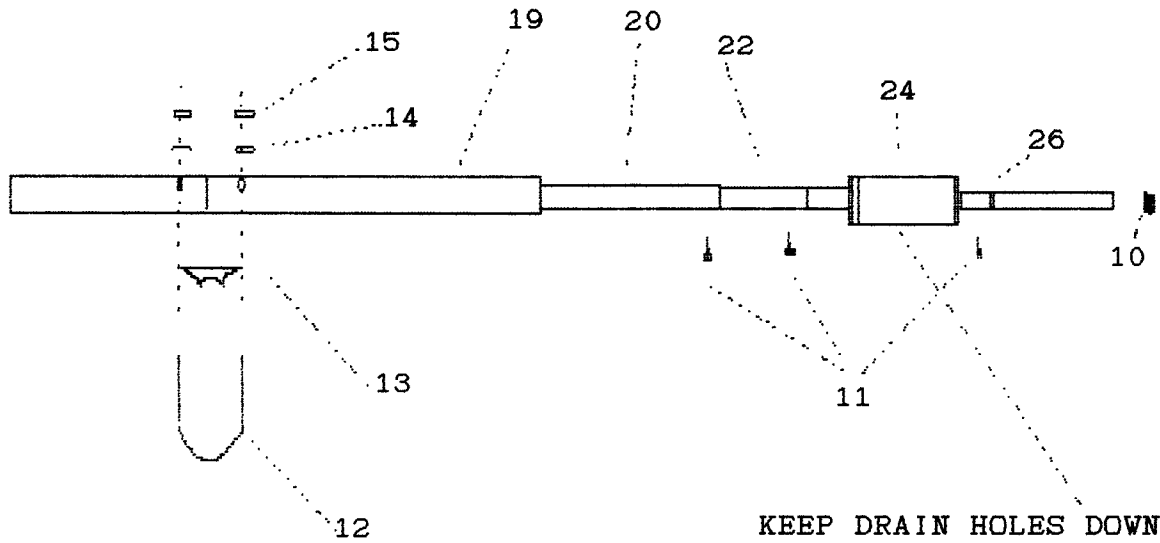
If you have any questions, or if we can be of help, please let us know.

BOOM

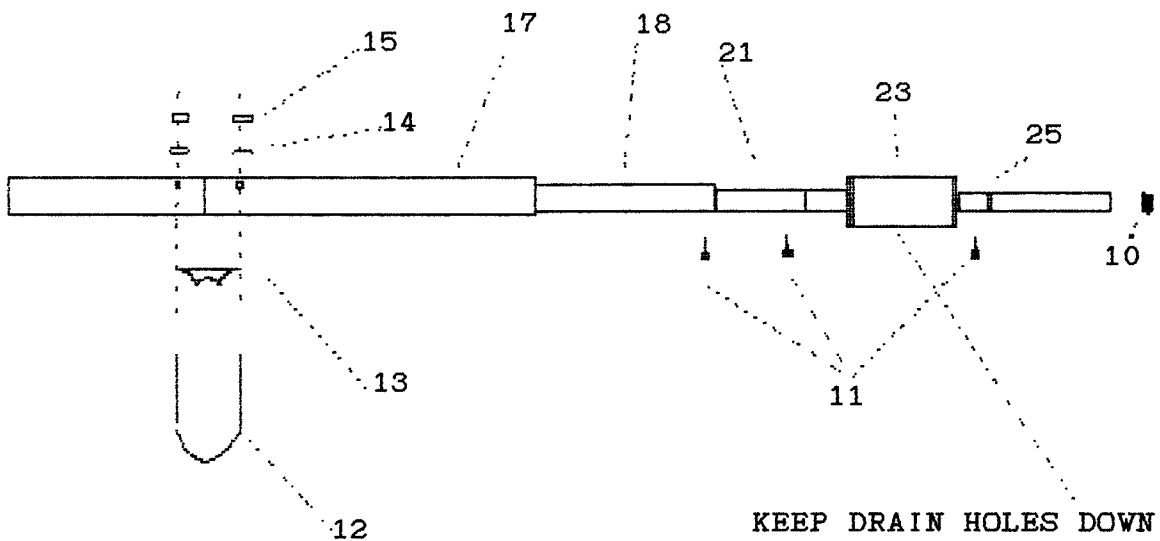


TA-33-M-WARC

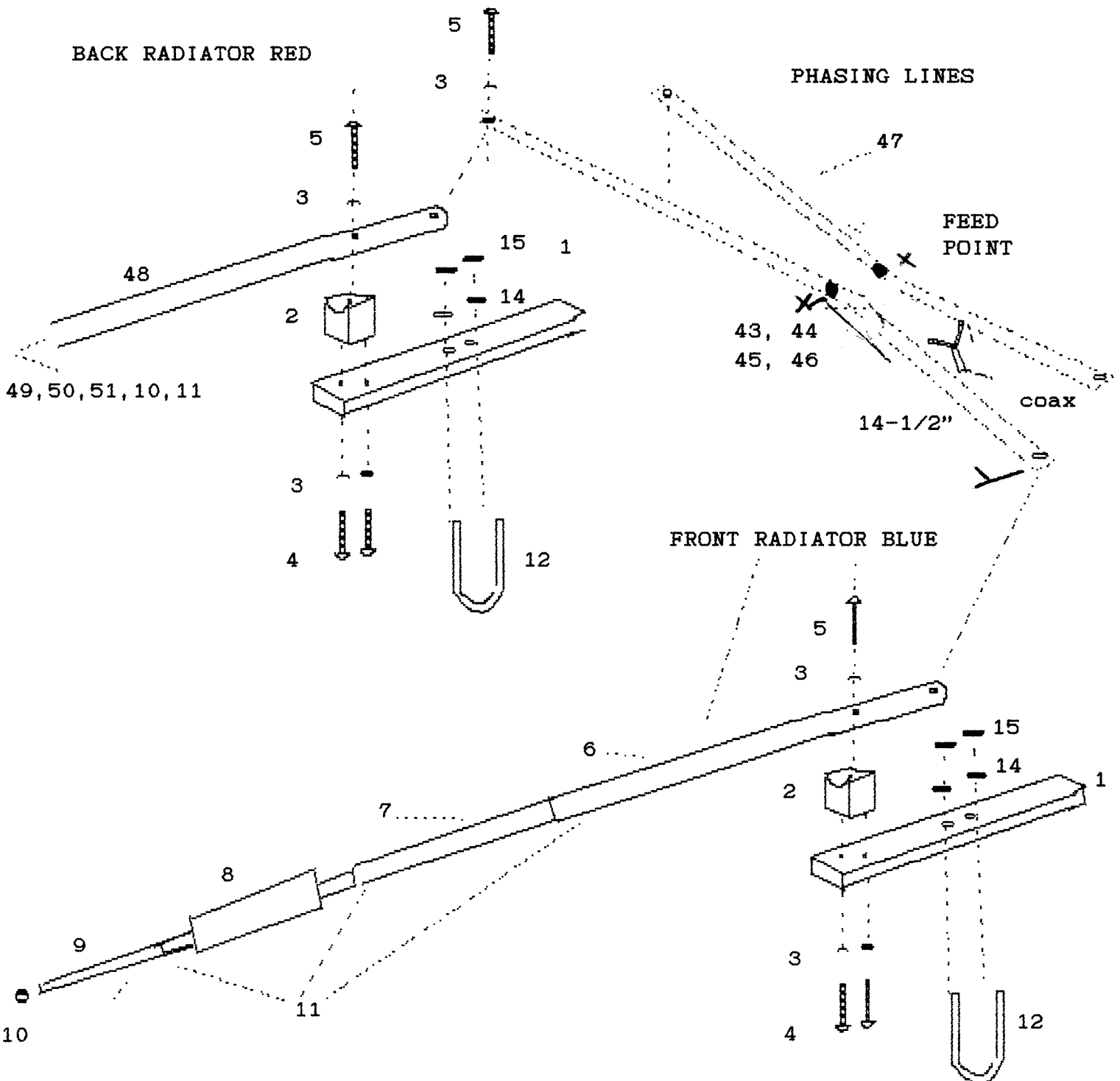
COMMON ELEMENT DIRECTOR
BLACK

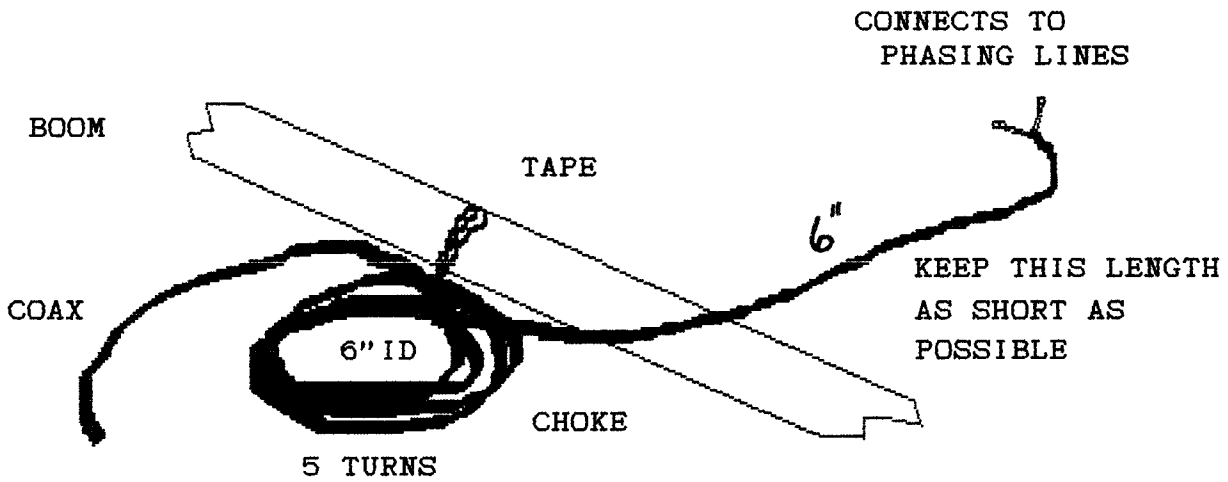
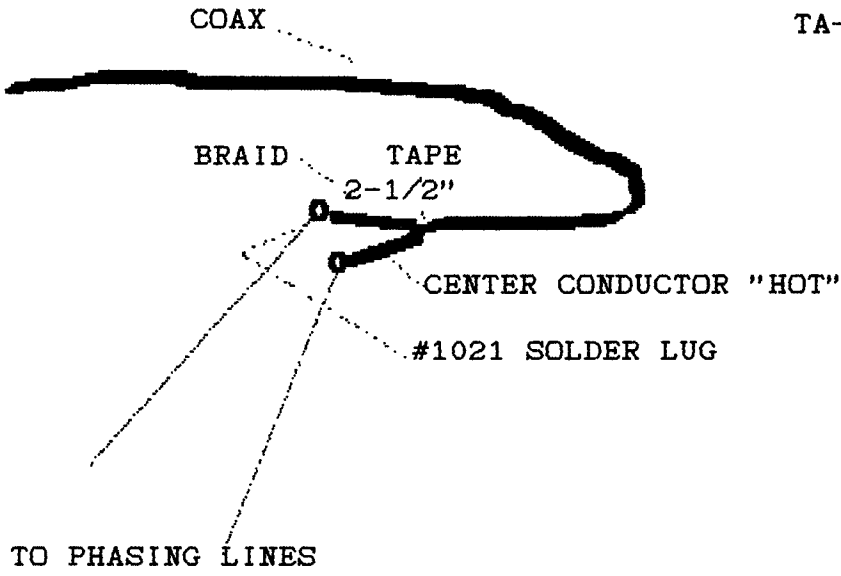


COMMON ELEMENT REFLECTOR CODED BROWN



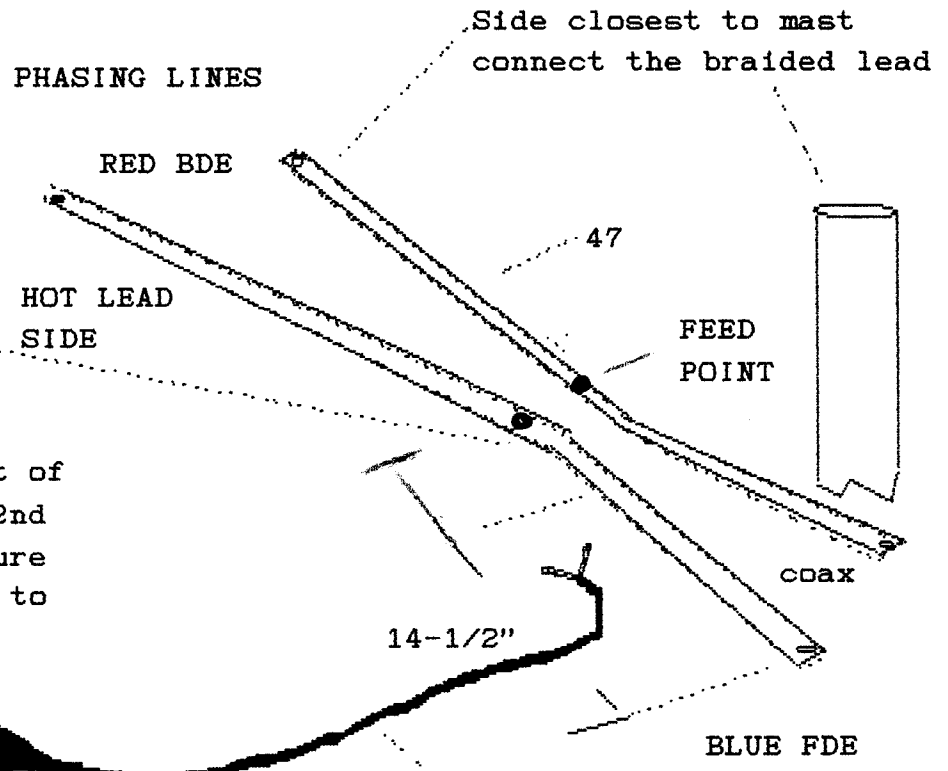
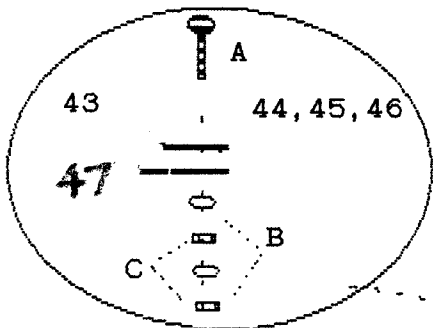
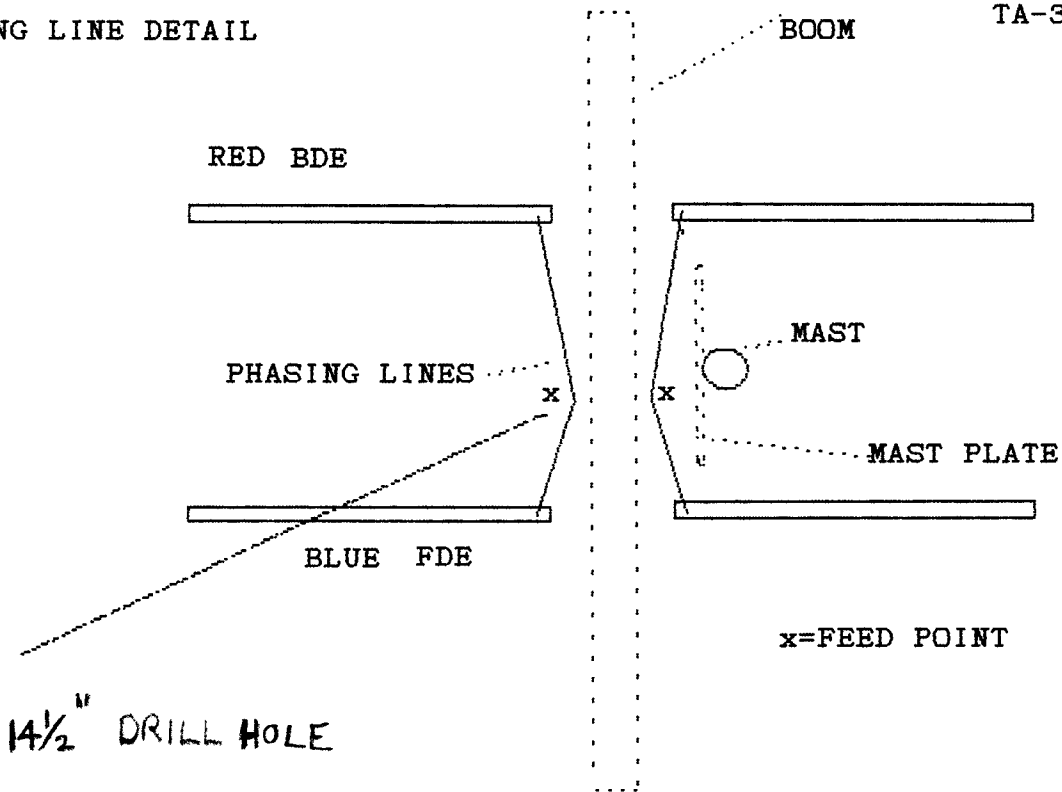
TA-33-M-WARC





PHASING LINE DETAIL

TA-33-M-WARC

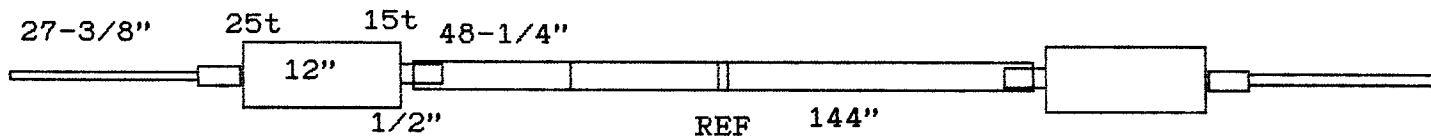


tighten down using 1st set of lockwasher and nut. Use 2nd lockwasher and nut to secure #1021 solder lug attached to coax.

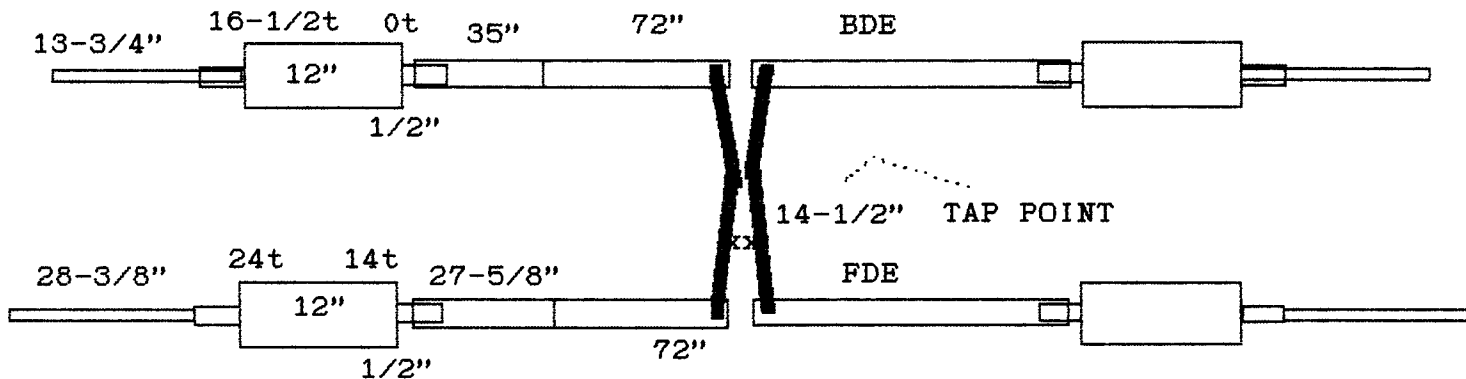


KEEP THIS LEAD AS SHORT AND CLOSE TO COIL AS POSSIBLE

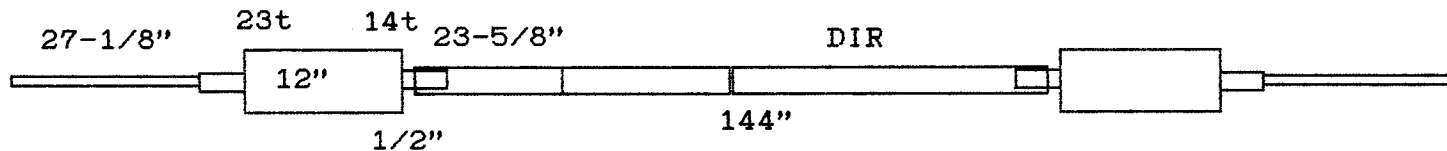
TA-33-MW



62 1/16"
cc



71"



- 28,325-1.0-80w
- 24,943-1.0-85w
- 21,225-1.0-90w
- 18,118-1.0-90w
- 14,175-1.0-90w

SWR READING WITH TOWER AT 45'

TA-33-M-WARC

TEST HEIGHT 45'

SWR CODE II

