TUNING:

AFTER INSTALLATION HAS BEEN COMPLETED IT IS NECESSARY THAT THE RIG BE CAREFULLY TUNED UP. THIS IS BEST DONE WITH THE AID OF AN S. W. R. BRIDGE, FIELD STRENGTH METER, OR BOTH. A SMALL TRIMMER CAPACITOR LOCATED BETWEEN THE LARGE CAPACITOR PLATES PERMITS RESONATING THE ANTENNA ANYWHERE IN THE 6 METER BAND. AFTER THE S. W. R. INDICATOR IS CONNECTED IN THE FEED LINE, SET THE TRANSMITTER TO THE PREFERRED OPERATING FREQUENCY; THEN CAREFULLY ADJUST THE SMALL TRIMMER CAPACITOR FOR MINIMUM S. W. R. INDICATION. THIS SHOULD BE DONE BY FIRST LOOSENING THE LOCKING NUT, THEN MOVING THE ADJUSTING SCREW A SLIGHT AMOUNT IN THE DIRECTION THAT IMPROVES METER READINGS. DO NOT STAND CLOSE TO THE ANTENNA OR HOLD YOUR HANDS NEAR IT WHEN OBSERVING METER READINGS AS THIS WILL DETUNE THE ANTENNA. THE LOCKING NUT SHOULD BE TIGHTENED SLIGHTLY AT EACH ADJUSTMENT.

IF A FIELD STRENGTH METER IS USED, MAXIMUM RADIATION SHOULD TAKE PLACE AT THE SETTING WHICH ALSO RESULTS IN MINIMUM S. W. R.

THE SETTING OF THE TRIMMER IS DIFFERENT FOR THE TWO RECOMMENDED METHODS OF FEEDING, I. E., WHEN USING THE MT-1 TRANSFORMER THE TRIMMER MUST BE SET MORE OPEN BECAUSE OF THE SLIGHT ADDITIONAL LOADING PRESENTED BY THE TRANSFORMER.

IF THE FEED LINE IS 'PRUNED' WHEN USING THE 'Q' MATCHING SECTION, TO EFFECT BEST OVERALL PERFORMANCE, A SECTION OF LINE OF CORRECT LENGTH SHOULD THEN BE INSTALLED IN PLACE OF THE S. W. R. METER AND THE LINE BETWEEN THE BRIDGE AND TRANSMITTER.

THE APPEARANCE OF THE "SATURN 6" ON THE CAR CAN BE IMPROVED BY PAINTING THE ENTIRE ANTENNA AND SUPPORT WITH A MATCHING COLOR OF TOUCH-UP PAINT, AVAILABLE IN SMALL SPRAY CANS. A COAT OF ZINC CHROMATE PRIMER, ALSO AVAILABLE IN SPRAY CANS, SHOULD BE APPLIED BEFORE THE MATCHING COLOR OF PAINT. THE INSULATOR OR TERMINAL BLOCK OF THE ANTENNA SHOULD BE COVERED OR MASKED WITH TAPE SO THAT PAINT IS NOT APPLIED ACROSS THE CONNECTIONS.

Installation of The "Saturn 6" Antenna

MODEL S-1 CONTAINS ALL NECESSARY MATERIALS, WITH THE EXCEPTION OF THE FEED LINE, FOR A BUMPER MOUNTED INSTALLATION. ASSEMBLY OF THE BUMPER HITCH IS ILLUSTRATED ON THE CARTON IN WHICH IT IS PACKED, AND IN FIG. 1 WITH BRACKET AND MAST ATTACHED.

ON CERTAIN LATE MODEL CARS THAT USE A VERY WIDE BUMPER, IT WILL BE NECESSARY TO 'ADAPT' THE HITCH AS SHOWN IN FIG. 2. A LONG 1/2" BOLT OR PIECE OF THREADED ROD, OBTAINABLE AT MOST HARDWARE STORES, IS BENT TO CONFORM TO THE BUMPER. IT WILL BE NOTED THAT CERTAIN PARTS SUPPLIED WITH THE HITCH ARE NOT USED IN THIS ADAPTATION, I.E., LARGE 'U' BOLT, ONE HOOK, ETC.

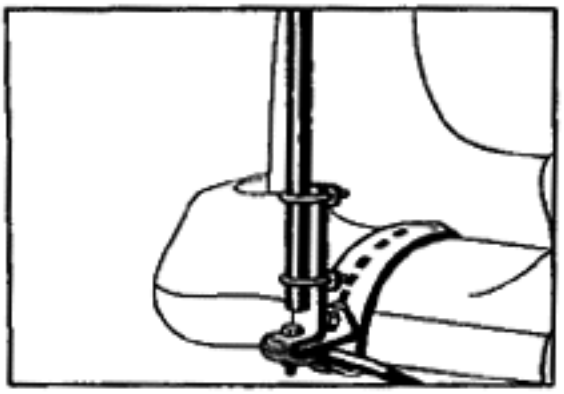

FIG. 1

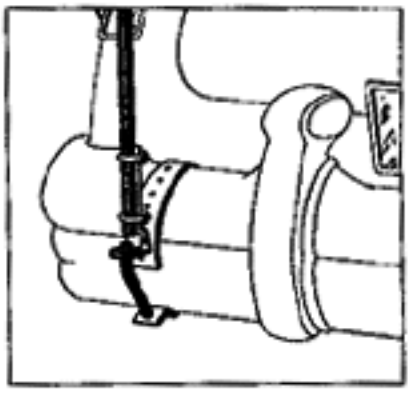

FIG. 2

FEEDING:

THE ANTENNA IS FED WITH RG/58U CABLE. EITHER OF TWO METHODS MAY BE EMPLOYED WITH EXCELLENT REGULTS. IN FIG. 3, A 'Q' MATCHING SECTION IS SHOWN MADE UP OF TWO PIECES OF RG/58U CABLE IN PARALLEL. ONE END OF THE 'Q' SECTION IS ATTACHED TO THE DRIVEN ELEMENT OF THE ANTENNA, AND THE OTHER END TO THE RG/58U LINE TO THE RIG. A SLIGHT IMPROVEMENT IN PERFORMANCE MAY BE NOTED IF THE LENGTH OF THE FEED LINE IS ADJUSTED OR 'PRUNED' BY EXPERIMENTATION. THIS IS TO PLACE THE TRANSMITTER AT A "VOLTAGE" POINT ALONG THE LINE AND WILL PERMIT SOME TRANSMITTERS TO LOAD MORE EASILY.

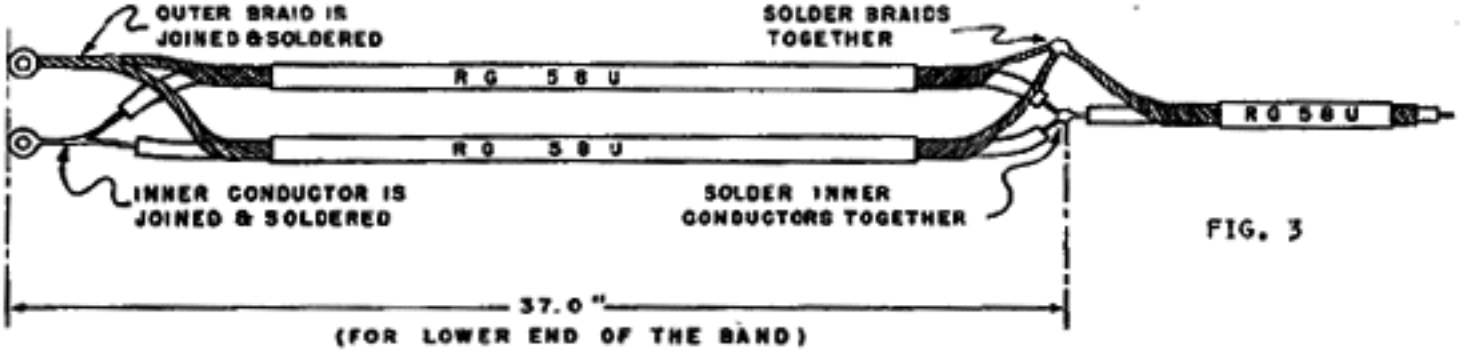

FIG. 3

TO SIMPLIFY THE INSTALLATION OF THE FEED LINE A MATCHING TRANSFORMER, MODEL MT-1, IS AVAILABLE AS AN ACCESSORY. THIS PROVIDES EXACT IMPEDANCE MATCHING BETWEEN THE LINE AND ANTENNA, AND ALSO HAS THE CONVENIENCE OF A BUILT-IN COAXIAL CONNECTOR. ANY LENGTH FEED LINE MAY BE USED WITHOUT PRUNING.

(OVER)