3.10.8.18.5.1 The dust covers of all plug-in electronic modular assemblies employing printed circuit boards on which the component designations are not marked shall be provided with stenciled component and parts layout for assista in locating parts during maintenance and repair. All assemblies shall be provided with appropriate Federal stock number, type identification and manufacturing serial number.

3.10.8.19 Finish - The external finish of all units be in accordance with class 2 of MIL-E-15090.

3.10.8.20 Front panel layout design - The contractor shall submit a proposed equipment front panel layout design for the receiver-transmitter and the remote control units for approval prior to the construction of the pre-production equipment.

3.10.8.21.1 GFE design changes - The GFE equipment is a developmental, service test, model shop constructed type of equipment requiring extensive changes to include desired technical, operational and production modifications The following is a list of major changes required under this specification:

3.10.8.21.1 General changes shall be as follows:

(a) Improve chassis guide pin and receptacle design to permit more positive seating for a length equivalent to the pin total length, and to eliminate undesired cantilever loading.
(b) Improve the chassis of all units to strengthen for increased shock conditions.
(c) Provide surge limiting resistors where practicable in power supplies
(d) Modify receiver AGC circuitry for conventional AGC system.
(e) Provide wafer switches of more durable material and design for easy repair replacement.
(f) Design and provide modular assembly plugs and receptacles, for production closed entry type..
(g) Provide improved positive detents for digital controls on front pane on all digital switches.
(h) Improve parts identification including cables and connectors.
(i) Improve design for shaft-to-digital encoder for lower cost; improve reliability and reduce complexity.
(j) Improve design for cable markers so that they will not come off in temperature and humidity tests.
(k) Provide additional test points as required for adequate maintenance checks including translator/synthesizer electronic assembly input.
(l) Provide Plug-in relays, or substitute improved, more reliable relays or substitute diode gates for relays wherever possible.

3.10.8.21.2 The deleted items for the receiver-transmitter shall be as follows:

(a) MOISTURE INDICATOR on the equipment's front panel.
(b) Terminal connections for external audio output transformer center tap leads from the rear mounted multipin connector receptacle of the equipment. (Optional audio transformer center tap grounding connections shall be provided on equipment's chassis.

3.10.8.21.2.1 The items changed for the receiver-transmitter shall be as follows:

(a) Modify the dial light circuitry in the "on" position for an intensity at a level between the present GFE settings of dim and bright. Change switch to toggle type.
(b) Provide different mode and function selector knobs having better mechanical purchase.
(c) Modify circuitry to include 0.5 Kc. incremental tuning in lieu of 1 Kc. tuning.
(d) Change rear connector for antenna to a type N and label "ANTENNA".
(e) Change external frequency standard input connector to a type N and label "EXTERNAL FREQ. STD. INPUT 5 MC".
(f) Label internal frequency standard output connector "INTERNAL FREQ. STD. OUTPUT 5 MC".
(g) Change multipin receptacle mounted on the rear of the equipment's cabinet to a smaller type similar to those specified in MIL-C-26482. Spare terminals shall be provided.
(h) Redesign AGC circuit with a satisfactory time constant for all modes of operation. Design shall be for a conventional system in lieu of the existing step AGC system.
(i) Modify R.F. amplifier electronic plug-in assembly for greater linearity.
(j) Provide improved changes in I.F./audio plug-in assembly to remove regeneration.
(k) Provide adequately overrated components in critical circuits and where such components are not easily available for maintenance replacement.
(l) Provide capability for receiving and transmitting in the CW mode.
(m) Provide internal selection of 0 db, -10 db, -20 db and full carrier suppression level in the transmit mode.

3.10.8.21.2.2 The additions for the receiver-transmitter shall be as follows:

(a) Provide 500-cycle and "VERNIER" tuning controls on the front panel of the equipment.

(b) Provide yellow warning light on front panel to indicate tuning control in vernier or unlocked state.
(c) Provide headphone jack on front panel for monitoring operation.
(d) Provide jack on front panel for local CW hand key plug.
(e) Provide BFO pitch control on the front panel.
(f) Provide an internally connected case-to-chassis interconnecting cable (to permit operation of the receiver-transmitter retracted from its case on its chassis slides) if it can be accomplished without increasing the over-all case dimensions.

3.10.8.21.3 The radio remote control auxiliary unit shall be modified as follows:

(a) Provide separate headset and microphone jack receptacles connected in parallel with the handset connector. The receptacles shall be similar to those used on control units C-1138/UR, but with caps for waterproofing.
(b) Strengthen the unit mounting bracket to withstand shock and vibration.