

EMC Testing

IMPORTANCE OF EMC – APPENDEND IN TELECOM MANUAL

SECTION A: COMMUNICATION AT ACCIDENT SITE

17.1 Communication from the site of accident is to be established as soon as an accident takes place. For this purpose, drivers of all trains shall be provided with portable control telephones. Portable Control telephones shall be 2 wire type in overhead communication territory, 4 wire type in underground cable territory, and shall be of 2 wire / 4 wire type wherever a train passes through both overhead communication and underground cable territories or 2 wire / 4 wire type may be used over both type of territories. As soon as an accident occurs, driver/asst. driver shall establish Communication with the portable control telephone by hooking on to the overhead lines / plugging into the emergency sockets, so as to establish communication with control office.

17.2 In addition to drivers being provided with portable control telephones, guards of all passenger carrying trains are also provided with portable control phones of the types mentioned above. Guard of the passenger carrying train shall also establish communication with control office as soon as an accident occurs.

ANNUAL INSPECTION SCHEDULE OF OFFICERS AS PER TELECOM MANUAL

EMERGENCY SOCKETS.

TECHNICIANS - EVERY 10 DAYS (AS PER PARA NO. 8.4.1.6)

SSE/TELE – ALL BLOCK SECTIONS IN A YEAR

DSTE/SR.DSTE- ONE SECTION IN A YEAR

THINGS TO BE NOTED DURING EMC TESTING.

During Foot Inspection.

- a) Don' t Walk on the same direction of train movement in Double line section.
- b) Wear Proper shoe & Cap for walking
- c) Don't walk between UP line and Down line, when these tracks are close to each other.

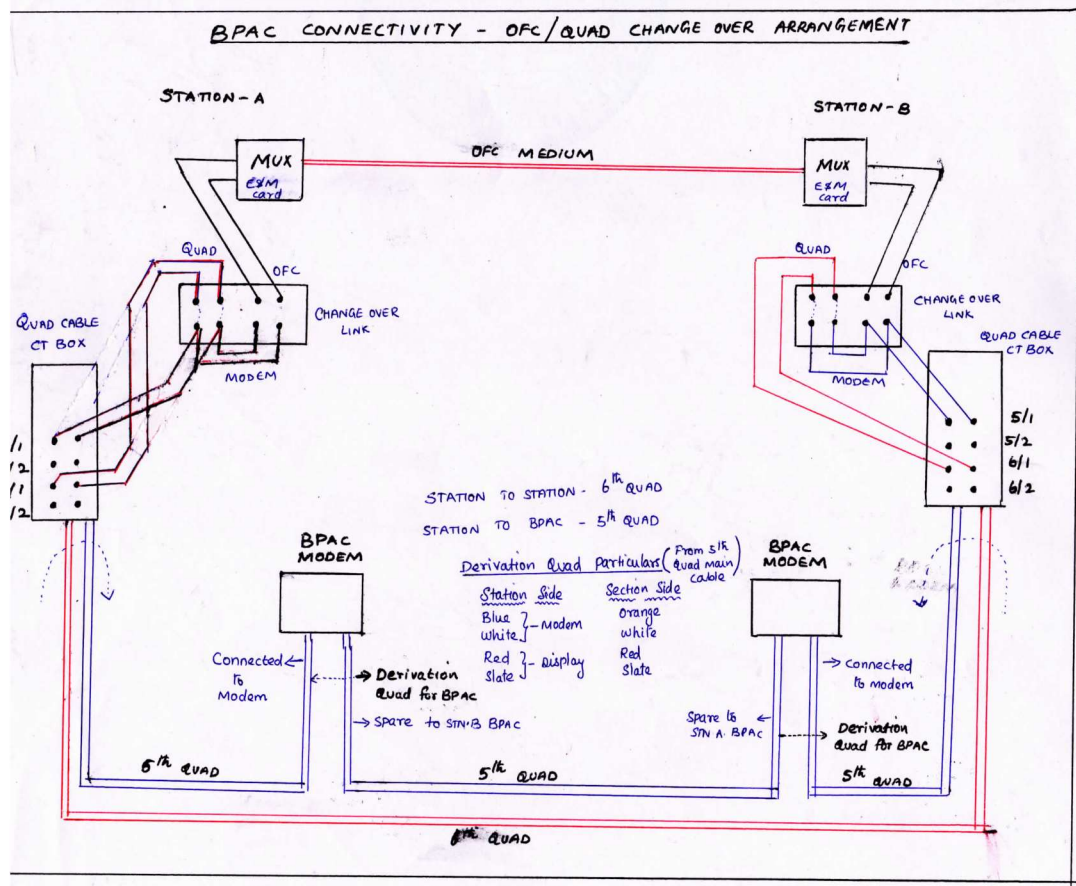
Things to be watched during inspection.

- 1) Inspection of Quad Cable route
- 2) Observe any on going works are happening very close to Quad Cable route.
- 3) Inspect the quad cable laying arrangements on the culverts and bridges.
If the cable is exposed, inform to the section incharge and do arrangements at the cable exposure region.
(Since, culverts and bridges are theft prone area)
- 4) Check the availability of Quad Cable route markers.
- 5) Check the EMC direction marker painting at OHE Mast in RE Area and at Hectometre post in NRE Area.

Things to be carried out during EMC Testing.

- 1) Test the trans level and Receive level of the speech with HQ.
 - 2) Check the loop resistance of Disaster Management pair (Loop to be provided at way station).
 - 3) Clean the sockets (Insects or web may be present).
 - 4) EMC plug to be inserted freely. Don't give force to insert the plug.
 - 5) On free hand, EMC socket should work.
 - 6) If EMC socket is working on your adjustment of EMC Plug, attend the socket immediately. Since, Guard of the train may not know the adjustment.
 - 7) The approach path of EMC Post should be clear.
 - 8) Check the kilometre painting available on the EMC Socket.
 - 9) Apply oil on the EMC Socket Lock for easy working.

EMC Joint with Phantom arrangement



1. VF Transformer at station end should be 470:600 ohms, 470 ohms to be connected to Quad Cable side and 600 ohms to PDMUX side.
2. VF Transformer at EMC Joint should be 470:1120 ohms, 470 ohms to be connected to Quad Cable side and 1120 ohms to EMC Post side.
3. EMC pin socket No. 1 & 6 – Portable control Phone TX, Pin No. 2 & 5 are Portable control Phone RX and Pin No. 3 & 4 for connecting Autophone.
4. For Autophone working, The overall loop resistance should be within 1000 ohms.

2) EMC Testing Report as per CCE/MAS Lr.No.SG/99.I dated 23.07.12

Section:

| EMC Km | Date | Time | TX Speech | RX Speech | Condition of Box | Tested by | Tested with | Remarks |
|--------|------|------|-----------|-----------|------------------|-----------|-------------|---------|
| | | | | | | | | |

Signature of Maintainer

Date

Signature of Supervisor