

भारत सरकार /GOVERNMENT OF INDIA
रेल मंत्रालय/MINISTRY OF RAILWAYS
रेलवे बोर्ड /RAILWAY BOARD

No. 2021/Tele/15(10)/3

New Delhi, Dated 23/06/2021

PCSTEs
All Indian Railways

Sub: Monsoon Precautions for Telecom Systems

In order to deal with any breakdown of communication system due to dust- storm, heavy rains, moisture, breaches floods, failure of Power Supply etc. during the monsoon season and pre- monsoon period, it is necessary to take adequate precautionary measures to ensure that communication systems are available all the time and restored back in minimum possible time in case of any breakdown.

Some of the measures, to be acted upon immediately, are indicated below for compliance:-

Control and Exchange circuits

1. Updated Records of Circuit ID, Cable Route of main path as well as protection path of all the Long haul EIs / Ethernet should be kept at HQ/Divisional NOCC/Test Room/ Exchanges. Adequate spares may also be kept at specified locations to restore any communication failure quickly. Automatic switchover from Main to protection path, in case of cable cut, and back to main on restoration should be ensured jointly with Railtel. This should be tested fortnightly and recorded.

Attending Leakage and Earthing:

2. Leakage should be checked & attended by concerned departments at all service locations/building housing Telecom Equipments like OFC equipments, Exchanges, VSATs, Datacom equipments, Railnet Equipments, Train Traffic Control system equipments, Passenger Amenities items. Electrical earthing at all the service buildings / Telecom huts / PoPs to be attended to avoid shock to Railway person due to poor earthing of Power Supply System. Proper earthing and its connectivity with the Telecom Equipment should also be ensured. Earthing value should always be less than 1 ohm. Adequate Surge protection through Class A, Class "B" & Class "C" surge protection devices as per extant policy should be ensured for all telecom equipment.
3. Water leakage/seepage to be attended at stations/locations where PA System, PIS viz Train Indication Boards and Coach Guidance Boards and other Telecom Equipment on the Platforms, FOBs, Subways, Entrance of the Station to Platforms are installed, to avoid water ingress.

Emergency Communication

4. Satellite Phones, ART VSATs (with VSAT Hub at NDLS), Mobiles and other Communication equipment available at Divisional/Zonal Disaster Management Cell/Control Centre/ARTs should be tested periodically for proper working. Details of

these equipments along with associated Telephone directory with STD / ISD dialing codes should be well publicized and shall be uploaded on Divisional/Zonal websites. A drive should be carried out to ensure proper working of Portable Emergency Control phones available with Driver/Guards. Emergency Sockets provided to be tested periodically as per schedule.

Network Monitoring and Monitoring of vulnerable locations through suitable means

5. Monitoring of Parameters like Temperature, Humidity, AC Mains Voltage / DC Voltage of all OFC Huts should be done from NOCC, through Suitable Remote Monitoring System, to avoid total shutdown due to prolonged un-availability of AC Mains Supply System. Proper Working of NMS of STM, and PDMUX should be ensured.
6. Monitoring of conditions in ghat/tunnels/other vulnerable locations, be done by providing suitable mechanism.

Testing and Spares

7. Testing of various parameters like as insulation resistance, loop resistance, cross talk of all PIJF cables, and Tx/Rx Power and Losses in case of OFC should be completed before beginning of the Monsoon. All test parameters along with details of cable route diagrams, numbers and type of DPs in the routes of cable, number of working pairs with details of circuits working on them, number of spare/faulty cable pairs to be documented and to be made available at all Telecom Locations.
8. Testing of spare OFC fibers to be done periodically to ensure availability when working fire pair fails.
9. Availability of spare sets of 25 Watt VHF sets along with 12V Battery sets and Chargers should be ensured. It should be ensured that all these sets are in proper working order with all accessories so they can be installed on short notice. Periodical testing of these sets is to be documented.
10. Availability of Cable of Sufficient Length and quantity to be ensured at important locations for patching purpose in case of damage to main cables.
11. Availability of Spare jointing kits of all types required & OFC Joint enclosure, along with jointing material and accessories should ensured at all the important locations along with portable generators and 12V Battery sets.
12. Vehicles, manpower along with spares be also kept at important/specified locations to attend breakdowns.

Non RE Section

13. Diesel Generators should be in working condition and adequate quantity of diesel shall be stocked.

Digitally signed by
DHARMENDRA SINGH
Date: Wed Jun 23 11:42:48 IST
2021
Reason: Approved

(धर्मन्द्र सिंह)
निदेशक/ दूरसंचार