

CHAPTER XVII

ACCIDENT COMMUNICATION

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.
- 17.3 In addition to portable control telephones, drivers and guards of all trains shall be provided with 5 watt walkie-talkie sets, and as soon as an accident occurs, information shall be given in the 5 watt walkie-talkie set to the adjacent station wherever possible. Apart from giving information through the walkie-talkie to the adjacent station, it is necessary that communication is established to the control office using portable control phones. In some sections arrangements are available to communicate with control office on walkie- talkie/ duplex VHF sets and this may be used where such arrangement exist.
- 17.4 As and when, advanced means of communication like GSM-R are deployed on the Railways, the same shall also be used to establish communication with the control office.
- 17.5 Additional means of communication shall be provided progressively within the shortest possible time as under:
- Provision of Railway telephone / telephones.
 - Provision of BSNL telephone / telephones.
 - Mobile phones wherever network coverage exists.
- 17.6 Accident Relief Trains (ART) are located at strategic locations of each division and are provided with telecommunication equipment for providing additional facilities as under:
- PA system shall be established for making important announcements.
 - Megaphones shall be given as per need at site.
 - Walkie-talkie sets shall be distributed as per need.
 - Magneto communication as required at site.
 - Communication through satellite phone shall be established.

FAX, E-mail shall be established wherever communication media is available. It shall be possible to provide the communication using satellite technology / through Railways own OFC links, by extending bandwidth from the accident site to the adjacent station / using BSNL connections. Mobile telephone exchange (WLL) may be established , if available.

Wherever cell phone coverage exists, cell phones available with officers and with ART shall be used.

It is desirable to send pictures of accident spot to Railway Board / Zonal / Divisional Headquarters using e-mail for which extension of internet/railnet to site is required. It is desirable to send video coverage to Railway Board / Zonal / Divisional Headquarters, as and when the necessary equipment are provided in the ARTs.

SECTION B: ACCIDENT INFORMATION FOR PUBLIC

- 17.7 As soon as information regarding an accident is received, accident information number shall be activated and manned. This number shall normally be at the zonal/divisional headquarters. Adequate personnel shall be posted by commercial branch to meet the demand depending on the seriousness of the accident. Number of lines for this number shall be suitably augmented depending on the demand.
- 17.8 Close liaison shall be maintained with BSNL officials for monitoring the call rates and increasing the lines as necessary.
- 17.9 The accident information number should be made wide publicity through audio, video and print media.

SECTION C: GENERAL GUIDELINES FOR MAINTENANCE OF ARTs

- 17.10 ARTs are provided with equipment as detailed in section D. The equipments are to be periodically tested to ensure their satisfactory working at all times. Testing / Inspections shall be carried out as under

Complete testing by ART nominated staff : once in 15 days.

Inspection by ASTE/DSTE: once in 3 months.

Inspection by Sr.DSTE/DSTE: once every year.

- 17.11 A register is to be maintained in the ART for making entries for testing of equipment (Section - D)
- 17.12 Whenever the ART returns from accident spot, equipments are to be immediately checked for their proper working.
- 17.13 Any short fall / missing equipment should be replaced with good working equipment at the earliest.

- 17.14 All equipments having shelf life, viz. jointing kits, torch cells etc., shall be replaced in due time.

SECTION D: ART EQUIPMENT

- 17.15 The list of minimum essential equipments to be provided in ART shall be as under:

A. GENERAL (Common for RE as well as non-RE areas)

S.No.	ITEM	Quantity
1.	Inspection Book	1 no.
2(a)	Magneto Telephone	4 nos.
2(b)	Dry cells large 6-I, 1.5 volts each for magneto phones	12 Nos.
3.	PVC insulated, PVC sheathed twin core cable	500 mts.
4.	Microphone for cordless PA system	2 Nos.
5.	Loud speaker horn type 5/10 watts	2nos.
6(a)	Amplifier of minimum 20 watts power output (having interface for cordless microphones) and operating voltage of 12 V DC	2 nos.
6(b)	12V storage battery for 6(a) along with appropriate battery charger	2 sets
7.	Megaphones Transistorised (minimum 10 watts each)	3 nos.
8.	Portable stand for loud speaker with adjustable height from 1.5M to 3M.	2 nos.
9.	Field service telephone cable PVC insulated (D-8)	4 drums of 500 meters each
10.	Push button auto telephone with tone/pulse switching facility	4 nos
11(a)	Walkie-talkie sets (2/5watts-VHF) with 100% spare batteries	30 nos
11(b)	Battery chargers for 12(a) (two position charger with rapid charging)	100%
12.	Multimeter	1 no.
13.	Extension Boards for power supply (Mains)	4 nos.
14.	Hand held torch of 3 cells complete with dry cells	4 nos.
15.	Jointing kit & material for cables and overhead wires – this is required to be decided by the Railways themselves according to their local needs for different ARTs.	
16.	Tool Box containing:	
	a) soldering iron – 10W/12volts, 10 W/220V & 65 W/220V	1 no.each
	b) Long nose plier – 200mm	1 no.
	c) Cutter diagonal 200mm	1 no.
	d) Box spanner 6, 5.5 & 5mm	1 no. each
	e) Hammer Steel 750 grams	1 no.
	f) Hammer wooden	1 no.
	g) Adjustable spanner 300 mm	1 no.
	h) Screw Driver – 200mm	1 no.
	i) Screw Driver – 250 mm	1 no.
	j) Mains tester (230 volts)	1 no.

	k) Electrical insulation tape 12mm x 15 meters	1 no.
	l) Resin core	500 gms
17.	Tape recorder (cassette type)	2 nos.
18.	Control way station equipment DTMF type 2 wire & 4 wire with amplispeaker telephone and suitable Ni-Cd cells	2 nos.
19.	Cellular Phones/Fixed communication terminals	5 Nos.
20.	Satellite phone (SAT phone – miniature type)	2 nos.
21.	FAX Machine (Plain paper)	1 no.
22.	Auto dialing system from emergency socket (only way station emergency control telephone)	1 no.
23.	Map showing sections of track where communication through cellular phone is possible	1 set.
24.	WLL mobile exchange with 30 handsets	1 set.

B. Specific Equipments required for ARTs having beats in non-RE area

S.No.	ITEM	Quantity
1.	2 wire portable control phone in a suitable box with dry cells	2 sets
2.	Telescopic pole of minimum 6 meters height with its bracket opening space at least 350mm	2 nos.
3.	Overhead control alignment charts	1 set

C. Specific Equipments required for ARTs having beats in RE Area:

S.No.	ITEM	Quantity
1.	4 wire Emergency portable control telephone in a suitable box with dry cells	2 sets
2.	Tapping transformers (1120 : 1120)	2 nos each
3.	Terminating transformers (1120:470)	2 nos.

- 17.16 Adequate space shall be provided in the ART for housing all the equipments.
- 17.17 The telecom equipment shall be properly housed to avoid the equipment rolling off during the movement of ART.
- 17.18 Adequate packing shall be provided for sophisticated equipments like satellite phones, walkie-talkie sets, FAX machines, PA equipment etc.
- 17.19 Sophisticated equipments shall not be stacked one above the other, unless packed in proper protective boxes and arrangements are provided to secure them properly.
- 17.20 Arrangements shall be made for extending power supply for charging batteries for PA system, VHF batteries etc. For satisfactory charging of batteries, regular power supply shall be made available near to the Art location, where it is normally stationed.

SECTION E: STAFF FOR ART

- 17.21 Every ART shall have nominated telecom staff. The incharge shall generally be SE/JE and shall be assisted by 2 Telecom Maintainers and 3 Khalasi Helpers / Khalasis.
- 17.22 The nominated staff shall test the ART equipment as per schedule and ensure satisfactory working of all equipments.
- 17.23 The nominated staff shall respond immediately whenever an accident takes place and proceed by ART to the site of accident.
- 17.24 The nominated staff shall be responsible for establishing communication as detailed in para 17.5 & 17.6, immediately on reaching the site of accident.

SECTION F: INSTRUCTIONS FOR TESTING OF ART EQUIPMENT

- 17.25 All active devices shall be tested for their satisfactory operation.
- 17.26 Charging of batteries shall be carried out as per requirement. The requirement may vary depending on the battery and the self-discharge characteristics of the battery.
- 17.27 Wherever feasible, batteries shall be separated from the equipment and protected properly to minimize the self-discharge.
- 17.28 Primary cells viz., torch cells shall be replaced as soon as deterioration in performance is observed. In any case, the cells shall be replaced at interval not exceeding one year. Leak proof cells only shall be used.
- 17.29 Detailed guidelines are given below:
While inspecting the telecom equipments in ART, the following guidelines related to the equipments shown against them may be observed

1. Portable Telephone Set:
 - a) Check for any physical damage to the phone, wires, cords and the plug. (Pole and connecting bracket in the case of 2W PT set).
 - b) Condition of dry cells; change if due.
 - c) Quality of speech both way.
2. Magneto Phones:
 - a) Check for any physical damage to the phones & wires.
 - b) Condition of dry cells; change if due.
 - c) Quality of speech both way.
 - d) Ring Test.
 - e) Check FS cable's continuity & insulation.
3. Megaphones:
 - a) Condition of dry cells; change if due.
 - b) Quality of speech and condition of volume control.
 - c) Working of the Siren.

4. P.A. System:
 - a) Functional Test.
 - b) Quality of reproduction of the amplifier.
 - c) Condition of mike cords.
 - d) Condition of Loud Speaker wires.
 - e) Functional test in the case of cordless mike.
 - f) Condition of standby battery 12V.

5. Walkie – Talkie sets:
 - a) Functional test.
 - b) Quality of speech.
 - c) Condition of battery.
 - d) Battery swapping after charge.

6. 25W VHF set:
 - a) Physical check of set, antenna, feeder, mike and battery cord
 - b) Functional test.
 - c) Condition of 12V storage battery.

7. Way Station Control Equipment:
 - a) Functional test (Ring & Speech).

8. Auto Dialler:
 - a) Functional test.

9. Fax Machine:
 - a) Physical check.
 - b) Functional test.

10. Cassette Tape Recorder:
 - a) Functional test.
 - b) Condition of dry cells; change if due.

11. Checking of Records:
 - a) Availability of all material as per check list.
 - b) Inspection book for record of inspections.
 - c) Record of charging of storage batteries & walkie-talkie batteries.
 - d) Record of replacement of dry cells.

SECTION G: ARRANGEMENTS AT DISASTER MANAGEMENT CONTROL ROOMS AT HEADQUARTERS / DIVISIONS

17.30 The following facilities shall be available in the disaster management control rooms at headquarters and divisions:

- a) BSNL Phones – 2 Nos with ISD facility.

- b) Railway Telephones – 3 Nos with STD facility.
- c) Fax Machines – 1 No. connected to BSNL line and 1 No. connected to railway line.
- d) Facility to extend section control to the disaster management control. The concerned section control in whose jurisdiction the accident takes place, shall be connected..
- e) Hot line between Headquarters and divisional disaster management control rooms shall be provided.
- f) Important telephone numbers of hospitals / doctors /officials of state and district administration and other important functionaries be kept ready.