

Test Procedure for Field Trials of Static/Mobile/Handheld VHF/UHF Radio Set

Specification:

Static/Mobile/Handheld VHF/UHF Radio Set (user organization may specify)

Name of OEM/Vendor/Organization:

Serial Number of Equipment:

Make/Model of Equipment:

SNO	Parameters	Test Purpose	Trial/Test Procedure	Complied/ Not complied	Remarks
1.1	Communication from radio set to another radio set (Range Check)	To verify whether communication is being established between two Radio sets at distance of 30 KM for VHF sets and 25 KM for UHF sets, in case of Handheld at a distance of 5 KM respectively.	1. Place two radio sets at a distance of 30KM in case VHF Static/Mobile sets or 25 KM in case of UHF Static/Mobile sets and incase of Handheld both the Radio sets should be placed at a distance of 4-5 KM. 2. Switch ON the both radio sets respectively 3. Select the same Channel/Frequency in both radio sets. 4. Check for the communication is happening between each other or not.		
1.2	Communication between one mobile/static and another handheld radio set(Range Check).	To verify whether communication is being established between Static/Mobile Radio sets and Handheld VHF/UHF radio sets at a distance of 5KM.	1. Place one Static/Mobile VHF/UHF radio set and another Handheld radio set within the coverage range of 5KM 2. Switch ON the both set respectively. 3. Select the same Channel/Frequency in both radio sets. 4. Check for the communication is happening between each other or not.		
1.3	Caller ID Display	To verify whether caller ID display is available on Radio set.	1. Programme two radio sets on same frequency and different ID. 2. Make call from one radio set to another radio set. 3. ID of caller radio set		

			should be displayed on other set.		
1.4	Transmitter Time Out Timer (TOT)	To verify whether Time out Timer is functional as per specification	1. Press PTT of radio set continuously. 2. Radio set comes automatically in reception mode after completion of time programmed for TOT option.		
1.5	LCD Display	To check functionality of LCD display	1. Check practically/ physically by 'switching on' the radio set. 2. Check the LCD Display is available or not.		
1.6	Mode of calls	To verify Selective call, Group Call, Inter and Intra Group call facilities available in radio set	Check different modes of call practically by making Selective call, Group call, Inter and Intra call one by one.		
1.7	Remote Radio Kill/ Stun/Revive facility	To verify whether Radio set is responding to Kill/Stun/Revive commands	1. Check practically by sending kill command to particular radio set. 2. Radio set received kill command will get killed. 3. Radio set should revive if we send revive command to the killed radio.		
1.8	Mode of operation	Radio should operate in analog mode and digital mode. (Compatible with existing all type of VHF analog and digital radio sets viz: Motorola, Icom, Kenwood, Vertex etc)	1. Make call from existing analog sets to digital set after setting it in analog mode and vice-versa. 2. Check interoperability with existing digital radio set (if available) make calls between them and the proposed radio sets (in digital mode) and verify. 3. Check proper communication established if both radio		

			sets are based on same technology.		
1.9	Facility for locking the channel or key pad locking	To verify that radio set having locking facility for channel and keypad.	1. Programme radio set for locking channel or key pad locking 2. Check whether the channel or keypad locked or otherwise		
1.10	Scan with priority	To verify that radio set having scan facility on priority	1. Programme Radio sets with priority scanning. 2. Press the scan button of the radio set. 3. Radio set starts scanning channels with the priority.		
1.11	Emergency Button	Allows a user to obtain help in critical situations.	Press the emergency button and ensure functionality		
1.12	SMS Texting	To check whether the radio set is capable of sending pre-defined messages & short messages from keypad.	1. Send pre-defined messages from one radio set to another. 2. Message should be displayed on the screen of receiving radio set.		
1.13	Programming	To programme the set for user's requirement from front panel or PC.	1. Programme radio set from front panel having password protection. 2. Similarly, programme radio set with the help of PC also.		
1.14	DTMF front panel key pad with back lit	To verify DTMF signaling is functional by pressing front panel key	Press front panel keys of radio set and check dual tone and backlit is available.		
1.15	Battery strength bar	To check battery strength bar and low battery alert feature is functional	1. Put batteries on charge. 2. Check battery strength bar 3. Level on battery strength bar is increasing/decreasing when battery is charged/discharged.		
1.16	Support GPS	To check	Features related with		

		accuracy of GPS of the radio set with inbuilt GPS system with accuracy of less than 10 meters.	GPS/GIS/Networking (mentioned at SI No.1.16 to 1.18) to be demonstrated by OEM/Vendor during the trial and all function should work as per requirement.		
1.17	GIS	Radio should have Application protocol interface along with software applications to provide locations and messaging on PC/Console.			
1.18	Networking	Should be IP based for automatic roaming etc.			
1.19	Simplex Press to Talk	To talk from Radio set using PTT	Press PTT and make call, other user should receive your call and vice-versa.		
1.20	Continuous Tone Coded Squelch System (CTCSS)	To check whether continuous tone squelch is functional	Check audio in headphone and verify that continuous tone is absent during no audio period		
1.21	Busy Channel Lockout	To verify busy channel lockout feature is functional	Press PTT and check, during transmission mode no other user is able to transmit.		
1.22	PTT ID Encode/Automatic number identification (ANI)	To verify that PTT ID encoded in other receiving radio set	Press PTT of a radio set and verify on other radio set that PTT ID of calling radio set is display.		
1.23	Channel scanning with call quieting facility	To check that radio set is scanning channels with call quieting facility.	To be checked practically as per technical manual		
1.24	Talk around Mode	To check whether talk around feature is functional during repeater station is out of order	1. During Programming of the radio set the Talk around Mode is enabled. 2. Check Communication between two sets at a distance of 50-70 KM from each other. In this		

			case the communication will establish through repeater. 3.Check Communication between two radio sets at a distance less than 30 KM (in range), then the radio set should be able to communicate without repeater.		
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