

**Schedule\_1**  
**PR\_700070974**

**ITEM 10 (M9605600138): WALKIE TALKIE,HANDHELD,136-174MHZ,5W (WALKIE TALKIE HANDHELD SET WITH BATTERY, ANTENNA AND CHARGER)**

<b>Sl. No.</b>	<b>Description</b>	<b>Specification</b>
1	Make&Model	To be Quoted by bidder
2	Channel Capacity	Minimum 32
3	Typical RF Output	LowPower:1W,HighPower:5W
4	Frequency	136-174MHz
5	Battery	2900Mah(Li-Ion)Higher
6	Channel Spacing	12.5kHz /25kHz
7	Frequency Stability	±0.5ppm
8	Analog Sensitivity(12 dB SINAD)	0.16uV
9	Digital Sensitivity (5% BER)	0.14uV
10	Inter modulation	70dB
11	Adjacent Channel Selectivity	60dB@12.5kHz
12	Spurious Rejection	70dB
13	Rated Audio	0.5W
14	Modulation Limiting	±2.5kHz@12.5kHz/
15	Adjacent Channel Power	60dB@12.5kHz
16	Audio Distortion at rated Audio	0.03
17	Digital Modulation	4FSK
18	Hum and Noise	-40 dB (12.5khz Channel)
19	Operating temperature	-5 degree C to +60 Degree C
19	Charger	Rapid Battery Charger
19	Type of Antenna	Rugged flexible antenna
20	Type of operation	Simplex &Semi Duplex operation
21	Warranty	Minimum 03years
22	<b>MANAGEMENT</b>	Radio Management Over-the-Air Programming Over-the-Air Software Update IMPRES Battery Management Over-the-Air Battery Management
23	<b>SAFETY</b>	Lone worker Digital Emergency Emergency Search Tone Remote Monitor Radio Disable /Enable Water proof toIP67 Rugged to MIL-STD 810
24	<b>Additional Spare Battery &amp; Antenna</b>	01No additional Spare Battery & 01No additional Spare Antenna to be supplied along with each walkie talkie handheld set

## Schedule\_2

### Item 20 (M9605600152): VEHICLE MTD VHF,136-174MHZ,AL (Vehicle Mounted VHF Sets)

Make & Model	To be quoted by bidder
<b>Brand</b>	<b>VHF</b>
Frequency	136-174 MHz
Low Power Output	1-25W
High Power Output	25-45W
Channel Spacing	12.5, 25 kHz
Channel capacity	1000
Microphone	DTMF
IP	54
Power Supply (Nominal)	12v
<b>BLUETOOTH 4.0 STANDARD</b>	
Frequency Range	2400-2483.5 MHz
Channel BTver<4 Btver 4	0-78 0-39
Max Power	Class 1-100mW(20dBm)-1m W(0dBm)
Max Bandwidth	
BT ver <4	1MHz
BTver4	2MHz
Technology	FHSS
<b>WIFI STANDARD</b>	
Frequency Range	2400-2483.5 MHz
Channel	1_13
Max Bandwidth Range Ferquency (5 GHz) Max Channel Ferquency (149-161)	20 MHz b/g/n No No
Max Bandwidth	20 MHz
Max Power	Rated 14 dBm, max 16 dBm
Technology	b/g/n
<b>TRANSMITTER SPECIFICATIONS</b>	
4FSK Digital modulation	12.5 kHz Data: 7K60F1D and 7K60FXD 12.5kHz Voice: 7K60F1E and 7K60FXE Combination of 12.5 kHz Voice and Data; 7K60F1W
Digital protocol	ETSI TS 102 361-1,-2,-3,-4
Conducted/Radiated Emissions (TIA603D)	36 dBm< 1GHz, 30 dBm> 1GHz
Adjacent channel Power	60 dB(12.5 kHz channel). 70 dB(25 kHz channel).
Frequency Stability	±0.5 ppm
<b>RECEIVER SPECIFICATIONS</b>	

Analogue Sensitivity (12dB SINAD)	0.22 uV typical
Digital Sensitivity (5% BER)	019 uV typical
Intermodulation (TiA603D)	VHF : 78dB UHF1, UHF2,350,800 :75dB
Adjacent Channel Selectivity (TIA603A)-IT	VHF : 65dB (12.5 kHz channel) 80 dB (25 kHz channel) UHF1,UHF2,350,800 65 dB (12.5 kHz channel), 75 dB (25 kHz channel)
Adjacent Channel Selectivity (TIA603D)-2T & (TIA603C)-2T	VHF : 50 dB (12.5 kHz channel) 80 dB (25 kHz channel) UHF1,UHF2,350,800 50 dB (12.5 kHz channel), 75 dB (25 kHz channel)
Spurious Rejection (TIA603D)	VHF: 80 dB UHF1,UHF2,350,800:75 dB
<b>AUDIO SPECIFICATIONS</b>	
Digital Vocoder type	AMBE+2TM
Audio Response	TIA603D
Rated Audio	3 W (internal speaker ) 7.5 W (external 8 ohm speaker) 13 W (external 4 ohm speaker)
Audio Distortion at RatedAudio	3%
Hum and Noise	40 dB (12.5 kHz channel ) 45 dB (25 kHz channel)
Conducted Spurious Emissions (TIA603D)	57 dBm
<b>BLUETOOTH SPECIFICATIONS</b>	
Version	4
Range	Class2, 10m
Supported profiles	Bluetooth headset profile (HSP), Serial Port Profile (SPP), Motorola Fast push-to-talk
Simultaneous Connections	1× audio accessory and 1 × data device
Permanent Discoverable mode	Optional
<b>GNSS SPECIFICATIONS</b>	
Constellation Support	GPS, BEIDOU
Time to first fix , Cold Start	<60s
Time to first fix , Hot Start	<10s
Horizontal Accuracy	<5m
<b>Wi-Fi SPECIFICATIONS</b>	
Standards Supported	IEEE 802.11b, 802.11g, 802.11n
Security Protocol Supported	WPA, WPA-2,WPA
Maximum Number of SSIDs	128(64 for numeric Models)
<b>ENVIRONMENTAL SPECIFICATIONS</b>	

Operating Temperature	-30 to +60 Degree
Storage Temperature	-40 to +85 Degree
Electrostatic Discharge	IEC 61000-4-2 Level 4
Dust and Water Intrusion	IEC 60529-IP54
Packaging Test	MIL-STD 810C,D,E,F and G
<b>Accessories</b>	
3db Diamond Whip Antenna ( Vehicle Mounted )	

### Schedule\_3

#### Item 30 (M9605600151) : FXD BASE STN VHF,136-174MHZ,0 (Fixed VHF BASE station)

Make & Model	To be quoted by bidder
Brand	VHF
Frequency	136-174 MHz
Low Power Output	1-25W
High Power Output	25-45W
Channel Spacing	12.5, 25 kHz
Channel capacity	1000
Microphone	DTMF
IP	54
Power Supply (Nominal)	12v
<b>BLUETOOTH 4.0 STANDARD</b>	
Frequency Range	2400-2483.5 MHz
Channel BTver<4 Btver 4	0-78 0-39
Max Power	Class 1-100mW(20dBm)-1m W(0dBm)
Max Bandwidth	
BT ver <4	1MHz
BTver4	2MHz
Technology	FHSS
<b>WIFI STANDARD</b>	
Frequency Range	2400-2483.5 MHz
Channel	1_13
Max Bandwidth Range Ferquency (5 GHz) Max Channel Ferquency (149-161)	20 MHz b/g/n No No
Max Bandwidth	20 MHz
Max Power	Rated 14 dBm, max 16 dBm
Technology	b/g/n
<b>TRANSMITTER SPECIFICATIONS</b>	
4FSK Digital modulation	12.5 kHz Data: 7K60F1D and 7K60FXD 12.5kHz Voice: 7K60F1E and 7K60FXE Combination of 12.5 kHz Voice and Data; 7K60F1W
Digital protocol	ETSI TS 102 361-1,-2,-3,-4
Conducted/Radiated Emissions (TIA603D)	36 dBm< 1GHz, 30 dBm> 1GHz
Adjacent channel Power	60 dB(12.5 kHz channel). 70 dB(25 kHz channel).
Frequency Stability	±0.5 ppm
<b>RECEIVER SPECIFICATIONS</b>	
Analogue Sensitivity (12dB SINAD)	0.22 uV typical

Digital Sensitivity (5% BER)	019 uV typical
Intermodulation (TiA603D)	VHF : 78dB UHF1, UHF2,350,800 :75dB
Adjacent Channel Selectivity (TIA603A)-IT	VHF : 65dB (12.5 kHz channel) 80 dB (25 kHz channel) UHF1,UHF2,350,800 65 dB (12.5 kHz channel), 75 dB (25 kHz channel)
Adjacent Channel Selectivity (TIA603D)-2T & (TIA603C)-2T	VHF : 50 dB (12.5 kHz channel) 80 dB (25 kHz channel) UHF1,UHF2,350,800 50 dB (12.5 kHz channel), 75 dB (25 kHz channel)
Spurious Rejection (TIA603D)	VHF: 80 dB UHF1,UHF2,350,800:75 dB

<b>AUDIO SPECIFICATIONS</b>	
Digital Vocoder type	AMBE+2TM
Audio Response	TIA603D
Rated Audio	3 W (internal speaker ) 7.5 W (external 8 ohm speaker) 13 W (external 4 ohm speaker)
Audio Distortion at RatedAudio	3%
Hum and Noise	40 dB (12.5 kHz channel ) 45 dB (25 kHz channel)
Conducted Spurious Emissions (TIA603D)	57 dBm
<b>BLUETOOTH SPECIFICATIONS</b>	
Version	4
Range	Class2, 10m
Supported profiles	Bluetooth headset profile (HSP), Serial Port Profile (SPP), Motorola Fast push-to- talk
Simultaneous Connections	1× audio accessory and 1 × data device
Permanent Discoverable mode	Optional
<b>GNSS SPECIFICATIONS</b>	
Constellation Support	GPS, BEIDOU
Time to first fix , Cold Start	<60s
Time to first fix , Hot Start	<10s
Horizontal Accuracy	<5m
<b>Wi-Fi SPECIFICATIONS</b>	
Standards Supported	IEEE 802.11b, 802.11g, 802.11n
Security Protocol Supported	WPA, WPA-2,WPA
Maximum Number of SSIDs	128(64 for numeric Models)

<b>ENVIRONMENTAL SPECIFICATIONS</b>	
Operating Temperature	-30 to +60 Degree
Storage Temperature	-40 to +85 Degree
Electrostatic Discharge	IEC 61000-4-2 Level 4
Dust and Water Intrusion	IEC 60529-IP54
Packaging Test	MIL-STD 810C,D,E,F and G
<b>Accessories</b>	
6db GP antenna ( Base station)	
30 Mtr Low loss RF cable RG217	
13.8V/15A Power supply unit	
20 FEET GALVANISED TELESCOPIC MAST	

## Schedule\_4

### Item-60 Programming Installation & Commissioning

<b>Programming Installation &amp; Commissioning</b>	<b>The Walkie Talkie items shall be supplied as per the Bill of quantity meeting the technical Specifications. The Walkie Talkie System shall be programmed installed &amp; as per the details mentioned in Scope of Work</b>
---	---

## Schedule\_5

### Item-40 LIASONING WITH WPC CHARGES

<b>LIASONING WITH WPC CHARGES</b>	<b>Frequency liasoning charges</b>  <b>1. The frequency license for operating the Walkie Talkie System shall be allotted by WPC, Ministry of Communication, GoI</b>  <b>2. The Liasoning &amp; followup with WPC for allotment of frequency license shall be done by the agency on behalf of NTPC Darlipalli.</b>  <b>3. The agency shall submit the application of license through online portal &amp; all documentation work on behalf of NTPC for obtaining the licenses for the supplied wireless sets as per requirement.</b>  <b>4. NTPC shall intimate the agency of the receipt of LOI/DGL from DOT/WPC for execution of the contract. However, the required license fees will be paid by NTPC to Wireless planning commission. (WPC)</b>
-----------------------------------	---