

QRs OF DIGITAL MONITORING RECEIVER

Parameters	Specifications
a. Role	Static/Mobile / Manpack version.
b. Frequency Range	100 KHz to 1300 MHz
c. No of memory channel	Minimum 2000 memory channel
d. Memory bank	40 or More
e. Search bank	40 or More
f. Tuning steps/ Frequency resolution	Minimum step size 10 Hz
g. Receive Mode	Intercept both digital and analog modes:- a) Digital Mode-DMR(4FSK), DPMR, NXDN, P25 (APCO25), TETRA, D-STAR ,ALINCO EJ-47U, YAESU, DIGITAL- CR etc. b) Analog Mode-AM,USB,LSB,CW,NFM etc.
h. Antenna Impedance	50 Ohm
i. Selectivity	Better than 60 dB(25KHz), better than 50dB(12.5)KHz
j. Sensitivity	530 KHz-17.99999 MHz: 0.75 μ V(12dB) SINAD, 18 MHz-1300 MHz 0.35 μ V (12dB SINAD)
k. VFO (Variable Freq. Oscillator)	Minimum 3 Nos.(0.5-1300MHz)
l. Frequency stability	< \pm 2.5 ppm
m. AF Power Output	1 W(Approx.)
n. Weight & Dimensions	Less than 2kg and 200 mm(W)x 65mm(H)x 250mm(D)
2. Power Supply: Should operate with AC and DC Power supply	
a. AC 230 V \pm 10%	
b. 12V DC \pm 10%	
3. Environmental Parameters	
Operating Temperature	-10 $^{\circ}$ to +55 $^{\circ}$ C
4. Antenna with accessories. Provide suitable antenna for interception (As per user requirement)	
Manpack Role	i) VHF Tape Antenna ii) UHF Tape Antenna iii) Flexible Whip VHF & UHF Antenna iv) Battery capacity- 7Ah & 12V v) DC cable, Carry bag, Battery Charger, Head Gear (Single side).
Mobile Role	i) 0/3 dB VHF antenna with 3mtrs. Cable bracket mount. ii) 0/3 dB UHF antenna with 3mtrs. Cable bracket mount. iii) Flexible Whip VHF & UHF Ant. With DC cable.
Static Role	i) 0/3/6 dB VHF GP Antenna. ii) 0/3/6 dB UHF GP Antenna. iii) HF Broad band Dipole Ant with 30mtrs RG213. iv) Discone Wide band Antenna. v) HF, VHF & UHF Antenna. vi) 1/2 inch Low Loss RF Cable 30mtrs (Loss-0.03dB/mtrs) DC Cable, Power supply unit.
a. Connector jack for external speaker/ headphone	Should be available
b. Technical/operation Manual	Should be provided by firm
c. Telescopic Mast (Optional as per user requirement)	20 feet Telescopic mast with supporting rope(3 sections), base plate, fixing piccle
d. External speaker (Optional as per user requirement)	Yes
5. Receiver Features	
a. Display	Alphanumeric LCD/LED display

The bottom of the page contains several handwritten signatures and initials in black ink. From left to right, there is a signature that appears to be 'An', followed by 'Shoko', 'A', 'MCSH', 'Raj', 'Vij', and a date '6/12/18'. There is also a small circular mark on the far right.

Parameters	Specifications
b. Priority scanning	Should be available
c. Auto store of frequency	Should be available
d. AFC(Automatic Freq Control)	AFC (Automatic frequency Control) function for spot on tuning
e. Squelch	NSQ,LSQ
f. Squelch & Volume control knob	Should be available
g. Pass frequency mode	Should be available
h. Multiple IF bandwidth	3/6/15/30/100/200 KHz
i. Audio recording(Built-in)	>200 Hrs
j. Built in playback facility	Should be available
k. Data clone Lead	To interface with computer
l. Data backup & Restore data facility via SD/SDHC card	Backup & Restore data (Memory channel/search bank/configuration) facility should be available
m. Real time clock	Should be available
n. Auto sleep, Alarm, Record Timer	Should be available
6. Optional system	Life time online firmware update support for newly added features
	Receiver should have facility to operate by window based PC
	Audio Analyzer Software

WO/RM R.S. Dhaka
Assam Rifles

SI/RO. Awasthi
CISF

AC-I R.K. Giri
NSG

K.K.Roy, AD(Tele)
SSB

J.P. Azad, AC(Com)
BSF

K. Solairaj, DC
ITBP

P.R. Jha, DC(Comn)
CRPF

Harjinder Singh, DIG(Eqpt)
CRPF

D.S. Rana, DIG(Comn)
CRPF

Raju Bhargava, IPS, IGP(Comn &IT)
CRPF

Md. Jawed Akhtar, IPS,
ADG (Work & Comn), CRPF

Approved/Not Approved

Rajeev Rai Bhatnagar, IPS
DG, CRPF

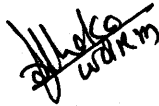
TDs OF DIGITAL MONITORING RECEIVER

Parameters	Specifications	Trial Directives
a. Role	Static/Mobile / Manpack version	Board will check practically
b. Frequency Range	100 KHz to 1300 MHz	Board will check practically
c. No of memory channel	Minimum 2000 memory channel	Board will check practically
d. Memory bank	40 or More	Board will check practically
e. Search bank	40 or More	Board will check practically
f. Tuning steps/ Frequency resolution	Minimum step size 10 Hz	Board will check practically
g. Receive Mode	Intercept both digital and analog modes:- a) Digital Mode-DMR(4FSK), DPMR, NXDN, P25(APCO25), TETRA, D-STAR, ALINCO EJ-47U, YAESU, DIGITAL -CR etc. b) Analog Mode-AM, USB, LSB, CW, NFM etc.	Board will check practically with available radio sets and firm will also submit OEM certificate.
h. Antenna Impedance	50 Ohm	Firm will submit OEM certificate.
i. Selectivity	Better than 60 dB(25Khz), better than 50dB(12.5)Khz	
j. Sensitivity	530 Khz-17.99999 Mhz: 0.75 μ V(12dB) SINAD, 18 Mhz-1300 Mhz 0.35 μ V (12dB SINAD)	
k. VFO	Minimum 3 Nos.(0.5-1300Mhz)	
l. Frequency stability	$\leq \pm 2.5$ ppm	
m. AF Power Output	1 W(Approx.)	
n. Weight & Dimensions	Less than 2kg and 200 mm(W)x 65mm(H)x 250mm(D)	Board will check practically
2. Power Supply: Should operate with AC and DC power supply.		
a. AC 230 V \pm 10%		Board will check practically.
b. 12V DC \pm 10%		Board will check practically
3.Environmental Parameters		
Operating Temperature	-10 $^{\circ}$ to +55 $^{\circ}$ C	Firm will submit certificate of any Govt. Lab or NABL or ILAC accredited laboratory.
4. Antenna with accessories. Provide suitable antenna for interception (As per user requirement)		
Manpack Role	i) VHF Tape Antenna ii) UHF Tape Antenna iii) Flexible Whip VHF & UHF Antenna iv) Battery capacity- 7Ah & 12V v) DC cable, Carry bag, Battery Charger, Head Gear (Single side).	Board will check practically
Mobile Role	i) 0/3 dB VHF antenna with 3mtrs. Cable bracket mount. ii) 0/3 dB UHF antenna with 3mtrs. Cable bracket mount. iii) Flexible Whip VHF & UHF Ant. With DC cable.	

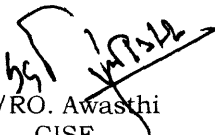
Parameters	Specifications	Trial Directives
Static Role	i) 0/3/6 dB VHF GP Antenna. ii) 0/3/6 dB UHF GP Antenna. iii) HF Broad band Dipole Ant. iv) Discone Wide band Antenna. v) HF, VHF & UHF Antenna. vi) ½ inch Low Loss RF Cable 30mtrs (Loss-0.03dB/mtrs) DC Cable, Power supply unit.	Board will check practically
a. Connector jack for external speaker/headphone	Should be available	Board will check practically
b. Technical/operation Manual	Should be provided by firm	Board will check physically
c. Telescopic Mast (Optional as per user requirement)	20 feet Telescopic mast with supporting rope(3 sections), base plate, fixing piccle	Board will check practically
d. External speaker (Optional as per user requirement)	Yes	Board will check practically
5. Receiver Features:		
a. Display	Alphanumeric LCD/LED display	Board will check practically
b. Priority scanning	Should be available	Board will check practically
c. Auto store of frequency	Should be available	Board will check practically
d. AFC	AFC (Automatic frequency Control) function for spot on tuning	Board will check practically
e. Squelch	NSQ,LSQ	Board will check practically
f. Squelch & Volume control knob	Should be available	Board will check practically
g. Pass frequency mode	Should be available	Board will check practically
h. Multiple IF bandwidth	3/6/15/30/100/200 KHz	Board will check practically
i. Audio recording(Built-in)	≥200 Hrs	Board will check practically
j. Built in playback facility	Should be available	Board will check practically
k. Data clone Lead	To interface with computer software	Board will check practically
m. Data backup & Restore data facility via SD/SDHC card	Backup & Restore data (Memory channel/search bank/configuration) facility should be available	Board will check practically
n. Real time clock	Should be available	Board will check practically

A series of handwritten signatures and initials are present at the bottom of the page, including names like 'Shaka', 'Ray', and 'Hary', along with various scribbles and initials.

Parameters	Specifications	Trial Directives
o. Auto sleep, Alarm, Record Timer	Should be available	Board will check practically
6. Optional System	Life time online firmware update support for newly added features.	Firm will submit OEM certificate.
	Receiver should have facility to operate by window based PC.	Board will check practically.
	Audio Analyzer Software	



WO/RM R.S. Dhaka
Assam Rifles



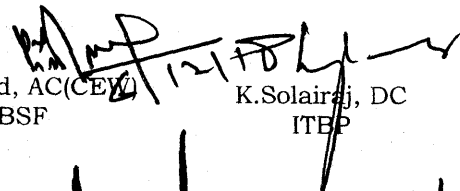
SI/RO. Awasthi
CISF



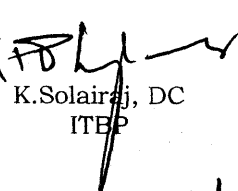
AC-I R.K. Giri
NSG



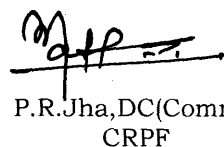
K.K. Roy, AD(Tele)
SSB



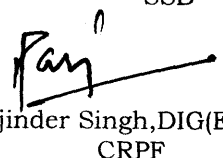
J.P. Azad, AC(CEV)
BSF



K. Solairaj, DC
ITBP



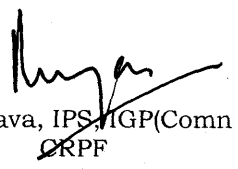
P.R. Jha, DC(Comn)
CRPF



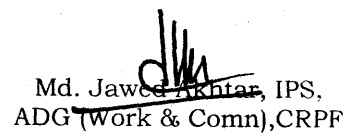
Harjinder Singh, DIG(Eqpt)
CRPF



D.S. Rawat, DIG(Comn)
CRPF

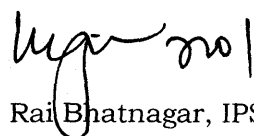


Raju Bhargava, IPS, IGP(Comn &IT)
CRPF



Md. Jawed Akhtar, IPS,
ADG (Work & Comn), CRPF

Approved/Not Approved



Rajeev Rai Bhatnagar, IPS
DG, CRPF