QRs OF DIGITAL HAND HELD WIDE BAND RECEIVER

S. N	Parameters	Specifications
1.	Role	Hand Held
a)	Operational Mode	Memory scan, Programme scan
b)	Frequency range	100 KHz to 1300MHz or better
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 Ω
i)	Selectivity	CW 0.2 / 0.5 KHz (-3dB)
		SSB 1.8 / 2.6 KHz (-3dB)
		AM 3.8 / 5.5 / 8 / 15 KHz (-3dB)
		FM 6 / 15 / 30 KHz (-3dB)
		WFM 100 KHz (-3dB)
		Digital Mode 6 / 15 / 30 KHz (-3dB)
j)	Sensitivity	530 KHz – 17.99999 MHz: 0.75 µv (12 dB SINAD, 18 MHz-1300 MHz: 0.35 µv (12 dB SINAD)
k)	VFO	Minimum 3 Nos (0.5-1300 MHz)
l)	Frequency stability	≤ ± 5 PPM or better
m	AF Power output	400mw or better
n)	Weight & dimensions	Less than 600 gms and 80 mm (W) x 150 mm (H) x 50 mm (D)
2.	**Power Supply**	
a)	Battery rating	Maximum 7.5V, 2000 mAh(min)
b)	Charger	Charging of rechargeable batteries
c)	Battery working hours	Not less than 8 hours
d)	Current consumption	500 mA (Max)
3.	**Environmental Parameters**	
a)	Operating temperature	-10° C to + 50° C
b)	Water protection	IPX5 or superior

(BSF) (NSG) (DCPW)

S. N	Parameters	Specifications
4.	Antenna	Suitable antenna for all receiving mode
5.	Connector Jack for External speaker/Head phone	Earphone jack for headphone
6.	**Receiver Feature**	
	Display	Alphanumeric LCD/LED display
a)	Keypad back-lit	Should be available
b)	Priority scanning	Should be available
c)	Auto store of frequencies	Should be available, (2000 channel or more)
d)	AFC(Automatic frequency control)	Frequency control function for spot on tuning
e)	Squelch	NSQ, LSQ
f)	Squelch and Volume control	Should be available
g)	Pass frequency mode	Should be available
h)	Audio recording facility	Not less than 50 Hrs
i)	Data clone Lead	To interface with computer software
j)	Data backup & Restore data facility via SD/SDHC card	Backup & Restore data (Memory channel/search bank/ configuration) facility should be available
k)	Real time clock	Should be available
l)	Auto sleep, alarm, record timer	Should be available
m)	Optional System	Life time online firmware update support for newly added features.
		Receiver should have facility to operate by window-based PC.
		Audio Analyser software
		GPS
n)	Dual Band operation	Should be available
7.	**Receiver Accessories**	
a)	Carrying Case	Should be available
b)	Belt Clip	Swivel belt clip or alligator type

(BSF) (NSG) (DCPW)

8.	**Literature**	
a)	User Handbook	As per requirement
b)	Technical Manual for receiver(optional)	Should give out full technical descriptions of equipment and circuit layout etc.

(Insp/RM Laxmi Pati)
BSF

(Sub M.K. Singh)
Assam Rifles

(S.P.Bhowmick), AC
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(G.Rajan), AC(Comn)
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(Maj. Shanshah Ali)
NSG

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(Mayank Kapoor)
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(Ravideep Singh Sahi), IG(Comn &IT)
CRPF

(Zulifiquar Hasan), IPS,ADG(HQ)
CRPF

Approved/Not Approved

(Kuldiep Singh, IPS)
DG, CRPF

TDs OF DIGITAL HAND HELD WIDE BAND RECEIVER

S. N	Parameters	Specifications	Trial Directive
1.	Role	Hand Held	Board will check practically.
a)	Operational Mode	Memory scan, Programme scan	Board will check practically.
b)	Frequency range	100 KHz to 1300MHz or better	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 set and firm will also submit OEM certificate.
h)	Antenna Impedance	50 Ω	Firm will submit OEM certificate.
i)	Selectivity	CW 0.2 / 0.5 KHz (-3dB) SSB 1.8 / 2.6 KHz (-3dB) AM 3.8 / 5.5 / 8 / 15 KHz (-3dB) FM 6 / 15 / 30 KHz (-3dB) WFM 100 KHz (-3dB) Digital Mode 6 / 15 / 30 KHz (-3dB)	BOO will check practically.
j)	Sensitivity	530 KHz – 17.99999 MHz: 0.75 µv (12 dB SINAD, 18 MHz-1300 MHz: 0.35 µv (12 dB SINAD)	BOO will check practically.

(BSF) (NSG) (DCPW)

S. N	Parameters	Specifications	Trial Directive
k)	VFO	Minimum 3 Nos (0.5-1300 MHz)	BOO will check practically.
l)	Frequency stability	≤ ± 5 PPM or better	
m	AF Power output	400mw or better	
n)	Weight & dimensions	Less than 600 gms and 80 mm (W) x 150 mm (H) x 50 mm (D)	
2.	**Power Supply**		
a)	Battery rating	Maximum 7.5V, 2000 mAh(min)	BOO will check practically.
b)	Charger	Charging of rechargeable batteries	
c)	Battery working hours	Not less than 8 hours	
d)	Current consumption	500 mA (Max)	
3.	**Environmental Parameters**		
a)	Operating temperature	-10° C to + 50° C	Firm will submit certificate of any Govt. Lab or NABL OR ILAC accredited laboratory.
b)	Water protection	IPX5 or superior	Firm will submit certificate of any Govt. Lab or NABL OR ILAC accredited laboratory.
4.	Antenna	Suitable antenna for all receiving mode	BOO will check practically.
5.	Connector Jack for External speaker/Head phone	Earphone jack for headphone	BOO will check practically.
6.	**Receiver Feature**		
	Display	Alphanumeric LCD/LED display	BOO will check practically.
a)	Keypad back-lit	Should be available	BOO will check practically.
b)	Priority scanning	Should be available	BOO will check practically.
c)	Auto store of frequencies	Should be available, (2000 channel or more)	BOO will check practically.
d)	AFC(Automatic frequency control)	Frequency control function for spot on tuning	BOO will check practically.
e)	Squelch	NSQ, LSQ	BOO will check practically.

(BSF) (NSG) (LOAR) (DCPW)

S. N	Parameters	Specifications	Trial Directive
f)	Squelch and Volume control	Should be available	BOO will check practically.
g)	Pass frequency mode	Should be available	BOO will check practically.
h)	Audio recording facility	Not less than 50 Hrs	BOO will check practically.
i)	Data clone Lead	To interface with computer software	BOO will check practically.
j)	Data backup & Restore data facility via SD/SDHC card	Backup & Restore data (Memory channel/search bank/ configuration) facility should be available	BOO will check practically.
k)	Real time clock	Should be available	BOO will check practically.
l)	Auto sleep, alarm, record timer	Should be available	BOO will check practically.
m)	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.	BOO will check practically.
		Audio Analyser software	
		GPS	
n)	Dual Band operation	Should be available	BOO will check practically.
7.	**Receiver Accessories**		
a)	Carrying Case	Should be available	BOO will check physically.
b)	Belt Clip	Swivel belt clip or alligator type	

8.	**Literature**		
a)	User Handbook	As per requirement	BOO will check physically.
b)	Technical Manual for receiver(optional)	Should give out full technical descriptions of equipment and circuit layout etc.	BOO will check physically.

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