

# RX2050 - N/A

Type designation: **RX2050**

PN (RN): **2310.100.81**

N/A

## Operation features

### a) in all operation modes

- built-in test equipment (BITE) with error indication on the transceiver display;
- operating data programming from external equipment;
- emergency erasure of operating data on fixed frequency channels including encryption unit codes and information for FH networks, including TRANSEC and COMSEC;
- switching on/off of acoustic signaling by transceiver operators;
- backlit display and keypad;
- adjustable display contrast;
- operating channel signal reception signaling by a LED on the transceiver panel;
- whisper mode with reduced audio frequency output power;
- received signal loud monitoring with volume regulation and LED monitor signaling;
- service information display – firmware;
- remote receiver control via REMOTE connector and RS232 or RS485 communication link and PRC20 protocol;
- simple control.

### b) in fixed frequency operation

- up to 10 channel presents from the entire 25 MHz to 145.9875 MHz frequency range, number of preset channels is reduced when occupied by FH networks;
- simplex reception;
- 150 Hz sub-tone squelch or signal squelch (only signal in VHF II);
- reception via built-in encryption unit compatible with RF13, RF20, RF2050;
- reception of short coded messages – FLASH with opposite transceiver identification;
- keypad channel programming;
- fixed frequency channel preset scanning;
- operating frequency setting in 6.25 kHz. 8.33 kHz, 25 kHz or 1 MHz steps.

### c) in FH operation

- up to 6 network presets;
- operation in 30.000 MHz to 87.975 MHz frequency range;
- secured TRANSEC operation and encrypted COMSEC operation;
- compatible with RF20, RF2050 transceivers;
- HLC, HLG and 121.500 MHz (HLA) frequency monitoring;
- optional frequency hopping operating modes – FH, DFF, FCS and MIX with quick transition to HLC, HLG or HLA reception;
- reception of alert message to all network users;
- reception of selective communication from MASTER transceiver;

- reception of short text messages (maximum 156 characters);
- INTERLEAVING switching off for close-to-the-limits communication.

## Technical parameters

### BASIC SPECIFICATION

<b>Operating frequency</b>	25 MHz to 145.9875 MHz
<b>Nominal input impedance</b>	50 $\Omega$
<b>Frequency sub-bands</b>	
<b>HF</b>	25 MHz to 29.975 MHz
<b>VHF I</b>	30 MHz to 108 MHz
<b>VHF II</b>	117.975 to 140 MHz
<b>VHF III</b>	140.025 to 145.9875 MHz
<b>Type of received modulation</b>	
<b>HF</b>	F3E (FM)
<b>VHF I</b>	F3E (FM)
<b>VHF II</b>	A3E (AM)
<b>VHF III</b>	F3E (FM)
<b>Channel spacing</b>	
<b>HF</b>	25 kHz
<b>VHF I</b>	25 kHz; 12.5 kHz; 6.25 kHz
<b>VHF II</b>	25 kHz; 8.33 kHz
<b>VHF III</b>	25 kHz; 12.5 kHz
<b>Number of operating channels for 25 kHz channel spacing</b>	
<b>HF</b>	200
<b>VHF I</b>	3121
<b>VHF II</b>	882
<b>VHF III</b>	239
<b>Number of preset channels</b>	up to 10
<b>Number of frequency-hopping channels</b>	up to 6
<b>RECEIVER SPECIFICATIONS</b>	
<b>Receiver sensitivity</b>	

<b>25 MHz to 29,975 MHz</b>	0.6 $\mu$ V
<b>30 MHz to 90 MHz</b>	0.7 $\mu$ V
<b>90.00625 MHz to 108 MHz</b>	0.5 $\mu$ V
<b>117.975 MHz to 140 MHz</b>	0.5 $\mu$ V
<b>140.025 MHz to 145.9875 MHz</b>	0.5 $\mu$ V
<b>Dynamic two-signal selectivity for adjacent channel</b>	min. 57 dB
<b>Suppression of intermediate frequencies</b>	min. 80 dB
<b>Suppression of image-channel frequencies</b>	min. 60 dB
<b>Suppression of spurious receptions at &gt; 10 % detuning from operating frequency</b>	min. 70 dB
<b>AUDIO FREQUENCY OUTPUT SPECIFICATIONS</b>	
<b>Range of effectively transmitted frequencies</b>	
<b>narrow band audio</b>	300 Hz to 3000 Hz
<b>wide band audio</b>	10 Hz to 11000 Hz
<b>Audio frequency levels on AF connector</b>	
<b>narrow band audio</b>	min. 200 mW, adjustable level up to 8 $\Omega$
<b>narrow band audio</b>	min. 775 mV, constant level up to 600 $\Omega$
<b>wide band audio</b>	1000 mV, constant level up to 600 $\Omega$
<b>Acoustic pressure of the built-in speaker</b>	min. 85 dB at maximum volume
<b>Non-linear distortion factor</b>	up to 10 %
<b>POWER SUPPLY SPECIFICATIONS</b>	
<b>Nominal supply voltage</b>	12 V or 24 V
<b>Limit supply voltage range</b>	10 V to 33 V
<b>Maximum consumption</b>	0.625 A at 24 V 1.25 A at 12 V
<b>Consumption during synchronization hold</b>	up to 0.015 A from 24 V backup supply

## **SPECIAL OPERATION MODES SPECIFICATIONS**

<b>Range of operating frequencies in FH modes</b>	30 MHz to 87.975 MHz
<b>Number of monitored frequencies in FH modes</b>	3 (two programmable, third 121.5 MHz)
<b>Frequency hopping modes</b>	
<b>FH</b>	secure frequency hopping
<b>DFF</b>	secure digital fixed frequency
<b>FCS</b>	secure free channel search
<b>MIX</b>	mix mode FH + FCS
<b>Time to initial synchronization</b>	up to 5 s
<b>Synchronization hold</b>	48 hours
<b>Synchronization hold with disconnected power supply</b>	50 s
<b>Minimum number of operation frequencies in FH mode</b>	1
<b>Hopping rate</b>	100 hops/s

## **MECHANICAL SPECIFICATIONS**

<b>Maximum dimensions</b>	184 mm x 196 mm x 175 mm [w x h x d]
<b>Maximum weight</b>	up to 6.5 kg
<b>Resistances</b>	
<b>Operating temperature</b>	-40° C to +70 °C
<b>Mechanical and climatic resistance</b>	according to MIL-STD-810E
<b>EMC immunity</b>	according to MIL-STD-461E
<b>Mains power immunity</b>	according to MIL-STD-1275B

## **Documentation**

<b>RX2050 operating instructions</b>	2310.010.81
<b>RF2050 short operating instructions</b>	2310.011.12

## Set

Type designation	PN (RN)	Name
RX2050	2310.000.83	EPM receiver set

## Accessories

Type designation	PN (RN)	Name
RF13.3	7007.100.14	Mobile set frame
	2022.100.51	Handset
	2026.700.01	Handset holder
	1050.126.02	Power supply cable 3 m
	1050.993.01	Grounding
	2036.100.23, 2036.100.24	2.6 m VHF vehicle antenna
	2036.100.34	Vehicle antenna VHF/UHF 1.3 m
	2036.100.35	Vehicle antenna VHF 1.6 m
	2036.100.36	Vehicle antenna VHF/UHF 2.7 m
	2036.100.40	1.88 m VHF vehicle antenna
RF13.8	2036.100.38	Groundplane antenna
	2036.100.18	Discon antenna
RF13.8	2036.100.11	Hang-up antenna
PD13	2036.100.10	Long-wire antenna
	2036.100.20	Telescopic winch driven mast 10 m
	2036.100.39	Antenna mast
PK1302	2320.000.20	Fill gun set
RC20	2312.000.01	Remote control unit set

2011.904.02	Antenna cable (10 m)
2011.904.01	Antenna cable (3 m)
1050.405.02	RF cable
5605002002	High frequency protection 1 GHz 200 V 400 W RF headsets