SL/SP7102 SERIES HANDHELD TRANSCEIVER

- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Synthesized Scanning Radio

FCC RF EXPOSURE COMPLIANCE REQUIREMENTS FOR OCCUPATIONAL USEONLY

The Federal Communications Commission (FCC), with its action in General Docket 93-62, November 7,1997, has adopted a safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC regulated equipment. Maxon subscribes to the same safety standard for the use of its products. Proper operation of this radio will result in user exposure far below the Occupational Safety and Health Act (OSHA) and Federal Communications Commission limits.

DO NOT transmit for more than 50% of total radio use time (50% duty cycle). Transmitting more than50% of the time can cause FCC RF exposure compliance requirements to be exceeded.

- This radio is NOT approved for use by the general population in an uncontrolled environment. This radio is restricted to occupational use, work related operations only where radio operator must have the knowledge to control the user's exposure conditions for satisfying the higher exposure limit allowed for occupational use.
- When transmitting, hold the radio in a vertical position with its microphone 2 inches (5 cm) away from your mouth.
  The radio is transmitting when the red LED on the front of the radio is illuminated. You can cause the radio to transmit by pressing the PTT bar on the radio.
- These are required operating configurations for meeting FCC RF exposure compliance.
  Failure to observe these restrictions mean violation.

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Safety Information

The Federal Communications Commission (FCC), with its action in General Docket 93-62, March 13, 1997, has adopted a safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC regulated equipment. Maxon subscribes to the same safety standard for the use of its products. Proper operation of this radio will result in user exposure far below the Occupational Safety and Health Act and Federal Communications Commission limits.

WARNING - DO NOT hold the radio in such a manner that the antenna is next to, or touching, exposed parts of the body, especially the face or eyes, while transmitting.

WARNING - DO NOT allow children to operate transmitter - equipped radio equipment.

CAUTION - DO NOT operate the radio near unshielded electrical blasting caps or in an explosive atmosphere unless it is a type especially designed and qualified for such use.

CAUTION - DO NOT press and hold the transmit switch (P-T-T) when not actually wishing to transmit.

NOTE: This radio operates in FCC regulated frequency bands. All radios must be licensed by the FCC before use. Because this radio contains a transmitter, Federal law prohibits unauthorized use or adjustments of this radio.

SPECIFICATIONS

GENERAL

Equipment Type . . . . . Hand portable
Band . . . . . UHF/ VHF
Channel Spacings . . . . . 12.5 kHz, 25 kHz programmable
RF Output Power . . . . . UHF 4 / 1 watt/ , VHF 5 / 1 watt
Modulation Type F3E
Audio Power . . . . . 500 mW (Ext with 8 ohm)
600 mW (Int with 6 ohm)
Intermediate Frequency . . . . . 46.35 MHz & 450 kHz
Number of Channels. 255
Frequency Source . . . . . Synthesizer
Operation Rating . . . . . Intermittent
90 : 5 : 5 (Standby: RX: TX)
Power Supply. . . . . Rechargeable , li-ion polymer
Battery, 7.4 VDC

TEMPERATURE RANGE

Storage . . . . . From - 40° C to + 80° C
Operating. . . . . From - 30° C to + 60° C

CURRENT CONSUMPTION

Off. . . . . < 1 mA
Standby (Muted) . . . . . < 50 mA (Battery Save On)
< 120 mA (Battery Save Off)
Unmuted, 100 % Max AF Power . . . . . < 400 mA
Transmit 4 / 5 Watt RF Power . . . . . < 2.0 A
BATTERY LIFE (5-5-90% Duty Cycle)
1550 mAh. . . . . 10 Hrs @ 4 / 5 W

FREQUENCY BANDS

	RX	TX
VHF:	136.000 - 174.000 MHz	136.000 - 174.000 MHz
UHF:	400.000 - 470.000 MHz	400.000 - 470.000 MHz

DIMENSIONS

Radio . . . . . (120mm)H x (53 mm)W x (32.5 mm)D
with battery pack

WEIGHT

Radio . . . . . 290g (with 1500mAh li-ion polymer battery)

TRANSMITTER

Carrier Power	UHF	VHF
High :	4.0W	5.0W
Low:	1.0W	1.0W

AUDIO FREQUENCY DEVIATION

Without Subaudio Tone Modulation:
25 kHz Channel Spacing . . . . . Max. ±5.0 kHz
12.5 kHz Channel Spacing . . . . . Max. ±2.5 kHz
With Subaudio Tone Modulation @ 10 % Peak Deviation
25 kHz Channel Spacing . . . . . Max. ±5.0 kHz
12.5 kHz . . . . . Max. ±2.5 kHz
Audio Frequency Response . . . . . Within +1/-3dB of 6dB octave

ADJACENT CHANNEL POWER

25 kHz . . . . . < 70 dBc
12.5 kHz . . . . . < 60 dBc
Conducted Spurious Emission. . . . . < -36dBm
Transmitter Audio Distortion (Without CTCSS) . . . . . < 5% @ 1 kHz
Hum & Noise:

12.5 kHz Channel Spacing . . . . . > 40 dB (with PSOPH)
25 kHz Channel Spacing . . . . . > 40 dB (with no PSOPH)
Load Stability . . . . . No osc at ³ 10:1 VSWR all phase angles and suitable antenna
Peak Deviation @ 1 kHz (Nom. Dev +20dB)
25 kHz Channel Spacing . . . . . Max. 5.0 kHz
12.5 kHz Channel Spacing . . . . . Max. 2.5 kHz

RECEIVER

Sensitivity (12dB Sinad) . . . . . UHF: < -117 dBm(.31μV)
VHF: < -118 dBm(.28μV)
Amplitude Characteristic. . . . . < ±3 dB
Adjacent Channel Selectivity:
25 kHz Channel Spacing . . . . . >70 dB
12.5 kHz Channel Spacing . . . . . >60 dB
Spurious Response Rejection. . . . . 70 dB
Intermodulation Response Rejection . . . . . 65 dB
Temperature Stability. . . . . 0.0005% (-30°C to +60°C)
Conducted and Radiated Spurious Emission. . . . . Per FCC and IC Rules and Regulations
AF Distortion. . . . . < 5%
Frequency Response . . . . . 6 dB/octave de-emphasized response in the range 300 Hz - 3000 Hz
RX Hum & Noise:
25 kHz . . . . . < 40 dB (with no PSOPH)
12.5 kHz . . . . . < 40 dB (with PSOPH)

RX TONE DEMODULATION CHARACTERISTICS

SUBAUDIO TONES - CTCSS
Tone Range . . . . . 67 Hz to 250.3 Hz
Non-Standard Tones . . . . . 50 Hz to 260 Hz

Due to continuing research and development the company reserves the right to alter these specifications without prior notice.

INTRODUCTION

The SL7000 Series of portable radios from Maxon, utilizes the latest technology in its design and manufacturing. Both the VHF and UHF models are PLL (Phase Lock Loop Synthesizer) / microprocessor controlled, and offer 1 or 4 / 5 watts of power with 256 channel capability. Multiple functions including Scan, CTCSS / DCS signaling and 12.5 & 25 kHz channel spacing are standard in these fully programmable wide bandwidth handheld units. The SL7402 offers many advanced features found in more expensive Land Mobile Radios.

DESCRIPTION OF UNIT

Front Panel

No.	Description	No.	Description
①	Power On/Off, Volume Control S/W	⑥	Up/Down / Select Button
②	Rotary Selector	⑦	LED Indicator
③	Emergency Button	⑧	LCD Display
④	Monitor Button	⑨	Default Programmable Keys
⑤	PTT Key		

1 Emergency Key

2 Power on / off and Volume Control Switch
Turn the transceiver on by rotating power on / off and volume control switch clockwise and control the volume.

3 Whip Antenna.
Insert the threaded end of the antenna into the connector on top of the radio. Rotate the antenna clockwise to fasten it.

4 Tx / Rx Indicate LED (3 colour's)

Red	On	Transmitting programming and cloning write
	flashing	Low battery
Green	On	sub-tone when receiving programming and cloning read
	flashing	Different sub-tone when receiving
Orange	On	Receiving, monitoring cloning

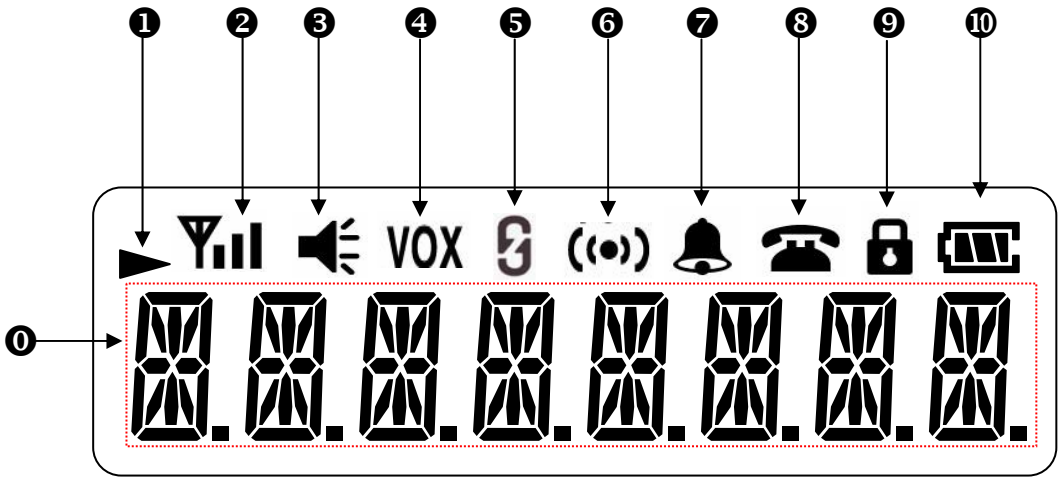
5 External Earphone/MIC and Programming Jack Socket
6 Speaker
7 Tx Output H/L
8 Function
9 Squelch (SQ)

10 Channel Select Button
Select the desired channel with pressing Up and Down button, pressing and holding down more than 1 second makes the channel moving fast. And you can choose On or Off in function mode

11 PTT(Push To Talk)
Button Hold down to transmit, release to receive.

12 Monitor Button
Press to monitor. Holding down over 2 seconds keeps monitoring function on, and press shortly again or PTT Button to stop.

13 Lcd display



No.	Description
❿	CH, Group, Name, Message etc. Display Digit
❶	Scroll Indicator
❷	RSSI Indicator
❸	Monitor Indicator
❹	VOX On/Off Indicator
❺	Scrambler On/Off Indicator
❻	Compander On/Off Indicator
❼	Bell Indicator
❽	Call Indicator
❾	Key Lock On/Off Indicator
❿	Battery Gauge