

Trouble Shooting Guide



Customer service

SP-130
SP-140
Series

The troubleshooting information in this document is taken mostly from the repair logs of Maxon Electronics Australia Pty Ltd. The most common components that have been replaced are listed first.

	SYMPTOM	CHECK THIS
RADIO WIDE	EEPROM Error: A single repeating beep indicates this on radios with no display. No program in the radio, or a faulty EEPROM, can cause this.	Check Programming and reprogram if necessary. If reprogramming does not help then the EEPROM may need to be replaced.
	PLL Out of Lock: Indicated by 2 beeps on radios without displays. This error occurs when the PLL cannot lock onto the appropriate frequency.	Q6, TCXO, IC2, C22, Q7, C24, C21, C23, VCO, R908, X401, Q904 and Q905
	Low Battery: This error is indicated by four beeps.	This can be caused by low voltage from the battery, battery terminals not making good contact, problem in the battery checking circuit or a partially blown fuse.
	Dead: A radio is dead when there is no indication of start up tone, indicator lights or any function. A blown fuse or no power source to the radio usually causes this problem.	Fuse, VR3, C60, PA, Battery, Battery Contact, X401, C132, D15 and D17
	Program Transfer: This problem is indicated by the program not transferring to or from the radio. An error may show up on the computer screen during programming or the radio will not go into program mode at all.	First check the programming cable, then J2, J1 and PTT.
	Receive and Transmit: This is a problem that effects both receive and transmit. This may be in the form of low receive and low transmit or audio quality on receive and transmit.	Antenna Connector, TCXO, J2, J1, Antenna, VCO, IC409, X401, C454, IC1, IC2, D5, IC408, IC411 and Channel Switch.
	Programming : The radio was in good working order prior to re-programming, but now indicates the PLL is out of lock (after reprogramming).	Incorrect selection of the frequency band which the radio was designed for, or incorrect selection of the channel step.
RECEIVE	RX Sensitivity Low: Problem that causes desensitisation of the receiver.	T1, XF1, Antenna Conn, XF2, CF2, X1, VR3, Front End, D6 and CF1
	RX Audio: Receive audio is distorted or non-existent.	VR3, Speaker, J1, IC6, T1, C468, Speaker Wire, X1, CF1, Antenna Conn, C136, XF1 and XF2
TRANSMIT	TX Frequency Error: Transmit frequency cannot be aligned to spec	TCXO
	Voice Modulation: Problem that causes transmit audio to be distorted or non-existent.	J2, MIC, C468, MIC WIRE, PA, D17, C430, IC404, R490 and VR3
	TX Power Low: Problem that causes the transmit power to be lower than spec.	PA, D5, Antenna Conn, D6, Q22 and Q20
	TX Power None: Radio does not have any power out and may not go into transmit mode.	PA, PTT, D5, Antenna Conn, D6, C60, D17, J2, Q17, R109, C49, C75, C77, Channel Sw, Q16, Q19 and VR1