



# XSJB Lone Worker Function

## Lone Worker Operation:

Lone worker (LW) provides a personnel based safety focused controlled monitoring system in conjunction with use of an X10DR secure wireless microphone system. The X10DR users duress status will automatically immediately advise other network users, in the event of a user failing to regularly notify their "I'm safe" operational status within the pre-configured activity response time.

Three activity response times can be selected at time of installation.

- 1 minute: Critical high risk user
- 15 minutes: Medium risk user (default setting)
- 60 minutes: Low risk user

The LW functionality is provided by a XSJB function box connected between the X10DR gateway and the host mobile radio via a standard XIC-0.5 interface cable. The interval timing can be adjusted by re-configuration of the control port. See table 1 below for values.

## Activation:

The LW functionality is normally activated by simply removing the X10DR Elite microphone from the gateway cradle. Should the LW functionality not be required every time the X10DR mic is used, then an optional LW on/off external switch (normally provided by others) can be connected to the control port on the XSJB device.

## Activity Timer:

X10DR's LW system requires the user to press either the X10DR's PTT, talkaround or the emergency button at least once every 1, 15 (default) or 60 minutes (time selected at installation time) to prevent the LW activity timer expiring. If the worker forgets to press either button within the pre-set activity time window and the timer subsequently expires, a long warning pre-alert tone will sound from the users X10DR secure microphone for approximately 30 seconds to alert them to the pending emergency alarm sequence. If the user still fails to reset the countdown activity timer, then the system will automatically go into its defined emergency mode sequence, as described below.

Note: By default, LW will still activate emergency regardless of whether the X10DR microphone is out of range or the secure microphone has been turned off, once the activity timer expires. Alternatively, the control port can be configured so as to halt the emergency alarm should the unit go out of range (the timer still runs) until such time as the user regains coverage between the secure mic and its associated gateway.

**Deactivation:**

Once the LW pre-alert warning alarm has been triggered the user can deactivate the LW emergency function by:

A/ Momentarily pressing PTT, talkaround or the emergency button.

B/ Returning the X10DR microphone to the charging cradle.

C/ Manually turning off an optionally fitted external LW on/off switch.

**Duress Mode – Panic Switch:**

The worker can immediately enter the host radio emergency mode at any time by pressing the emergency button. For radios requiring the emergency button to be depressed for a pre-defined period, the user must continue to hold panic switch for that period.

**Emergency Mode:**

When the system enters LW emergency mode an audible alarm will be emitted from the X10DR secure microphone’s speaker. Upon activation, this unique alarm tone is also sent over the radio channel / talkgroup for about 4 seconds, so as to alert other co-channel users of the emergency situation. This PTT command with alert tone is then followed by triggering the host mobile’s external emergency input for 4 seconds. Should the mobile radio not be equipped for emergency, unit identification (if available) could be used to identify the unit under duress by noting the PTT ID whenever the alert tone sounds over the radio channel / talkgroup.

Control Pin	Status	Lone Worker Function
2	Open Circuit	15 minute timer enabled *Default
2	Ground	15 minute timer disabled
3	Open Circuit	1 minute timer disabled *Default
3	Ground	1 minute timer enabled
4	Open Circuit	60 minute timer disabled *Default
4	Ground	60 minute timer enabled
6	Open Circuit	Alarm runs regardless of out of range *Default
6	Ground	Alarm pauses if out of range

**Table 1 – Lone Worker Timing Settings**

### Lone Worker Control Port - Non default operation:

The control port has been designed to provide the installer with an easy way of customizing each vehicle implementation to best suit the individual users required situation.

Pin 2 should be grounded to **disable** lone worker feature.

Pin 3 & 2 should be grounded to **enable** the 1 minute lone worker feature.

Pin 4 & 2 should be grounded to **enable** the 60 minute lone worker feature.

Pin 6 should be grounded to "halt" the emergency trigger if the handset is out of range. In the "halt" position the activity timer continues to count down but halts prior to the 30 second pre-alert sequence. When the user comes back into range they are presented with the pre-alert tones and then can press PTT, TA or Emerg. to prevent emergency being triggered and an alert tone being sent over the radio channel.

### X10DR Elite Programming (IMPORTANT)

The X10DR Elite gateway's external interface is set by default to allow for correct LW. If changes are made, ensure that the settings below are programmed:

Gateway function 5 output, active high, handset out of range

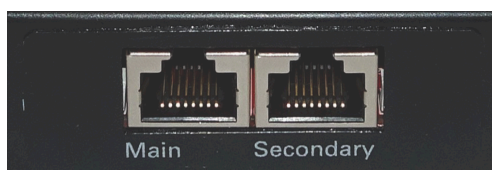
Gateway function 6 output, active high, handset in cradle

### Custom configuration:

Alternate timing and customization of operating protocol is available by special order - minimum order quantity applies. Contact Wireless Pacific for further information. For those requiring a specific Lone Worker emergency response protocol, you should contact your X10DR dealer for a system specific quotation from Wireless Pacific



Wireless Pacific



13 April 2017



# XSJB

## Dual Radio Function

### Dual Radio Operation:

The XSJB also allows up to two\* X10DR Elite devices to be connected to 2 separate host radios (or one radio and a satellite link etc.). The X10DR Elite PTT button is pressed to transmit on the radio device connected to the "Main" port. The top centre "Control" button is used to transmit on the radio (or other device) connected to the "Secondary" port. Only one X10DR Elite user can talk on one radio at any time but both can hear both sides of all conversations.

### Alignment

To align the XSJB you will need a test radio/s on the same channel/s as your host radio/s so that you can talk to and monitor the X10DR audio levels. Start by setting the receive audio volume on the X10DR Elite Mic to level 4 by pressing the volume up button 5 times and then press the volume down button once. Talk on the test radio and adjust trimpot MRI to set the receive volume in the X10DR. Talk on the X10DR microphone via Main radio and adjust trimpot MRO for correct transmit deviation so that it matches the host radio's wired mic levels. Listen on the test radio for clarity and volume. Repeat the process for Secondary radio, adjusting trimpot SRI for transmit deviation, and trimpot SRO for receive volume.

The Secondary radio port offers a marker tone at the end of receive to distinguish from the Main radio receive audio (only available with radio devices which have a COR indicator). Momentarily transmit on the test radio on the same channel as radio 2 and notice the beep heard in the X10DR at the end of each transmission. Adjust trimpot TONE to set preferred volume of the marker tone. Note: setting the marker tone level too loud will often cause user dissatisfaction within a few weeks of usage. The recommended level setting is "just" audible.

### Talkaround

The X10DR Elite devices when configured for dual radio operation, utilizing a XSJB device, are not normally able to also have talkaround, local "off-network" communication between devices. However both X10DR Elite devices can still hear both sides of all conversations and can thus still communicate in that fashion although each transmission is also being broadcast over a radio channel. Optional ways to still have the "off-network local talkaround capability would require limited secondary radio access either at times or in functionality.

Mode A – Secondary Port: Receive only operation.

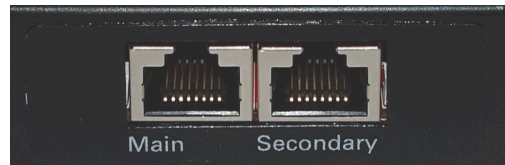
This could be achieved by use of a custom firmware or a custom XCA radio interface adaptor so as to remove the X10DR’s Secondary PTT. (Contact your Wireless Pacific Distributor for further details).

Mode B – On demand Secondary radio.

This could be achieved by simply manually turning off the secondary radio whenever the need for local off-network communications is a higher priority operational requirement.

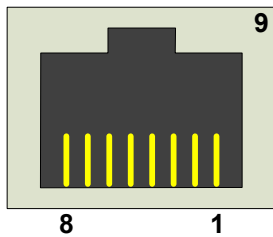
**\*TDMA/Non TDMA Radios**

\*Whilst the XSJB provide two X10DR ports, only one X10DR Elite may be connected if either of the attached host radios use TDMA technology. To connect two or more X10DR Elite devices with host TDMA radios, the X10DR Elite devices should connect via XJB-DCI junction boxes so as to avoid unwanted TDMA noise passing from the host mobile radios. Non-TDMA installations do not have this configuration requirement and if desired multiple X10DR Elite devices can be connected via a XJB junction box connected to XSJB units “X10DR” ports 1 & 2.





**Connect  
“Lone Worker” X10DR  
to this port**



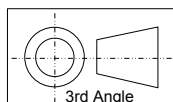
**CONTROL**


**X10DR Gateway should be programmed with default settings:**  
Function 5 = Handset out of Range  
Function 6 = Handset in Cradle

Pin Number	Name	Comment
1	B+	Battery Volts
2	Lone Worker (15 minutes)	See page 2 for wiring details.
3	Lone Worker (1 minute)	See page 3 for wiring details.
4	Lone Worker (60 minutes)	See page 4 for wiring details.
5	Ground	
6	Out-of-Range Pause	Pauses Alarm until Handset is back in range. See "Option 2" on pages 2,3,4 for wiring.
7	RS422- I/O	Leave unconnected
8	RS422+ I/O	Leave unconnected
9	Ground	

**Note: With nothing connected to the CONTROL port, the XSJB defaults to the following features:**

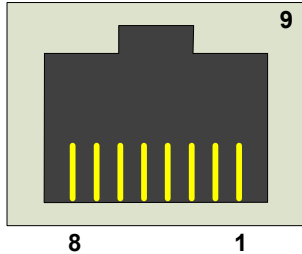
- Lone Worker Timer = 15 minutes, and is active when Handset is removed from Cradle.
- Out-of-Range Alarm = Alarm is still triggered while Handset is out of range.



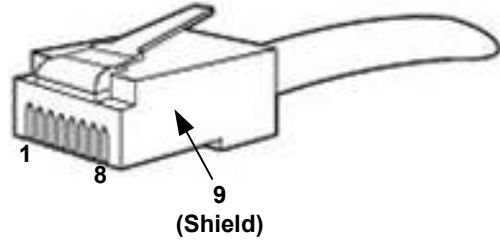
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Size: <b>A4</b>	Part No: <b>ENG-X10-002</b>	Revision: <b>1D</b>	 <b>WIRELESS PACIFIC</b>
	Date: <b>28/4/2017</b>	Sheet: <b>1 of 5</b>	
File: XSJB LW Wiring 1D.vsd		27/4/2017 16:57:50	Drawn: <b>Jens Kuhrt</b>



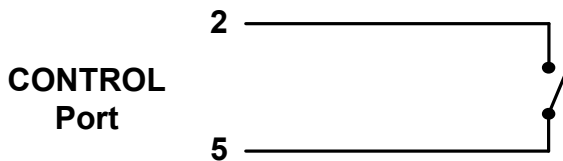
# 15 Minute Timer wiring:



**CONTROL**

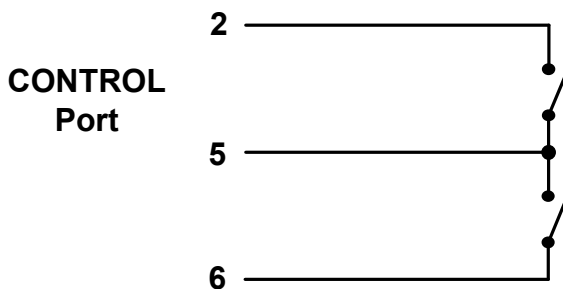


## Option 1 : Manual OFF/ON switch



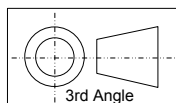
**OPEN = LW enabled if Handset out of cradle**  
**CLOSED = LW disabled**


## Option 2 : Alarm paused when out of range



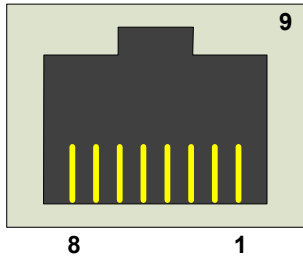
**OPEN = LW enabled if Handset out of cradle**  
**CLOSED = LW disabled**

**OPEN = Out-of-Range ignored**  
**CLOSED = Paused when out of range**

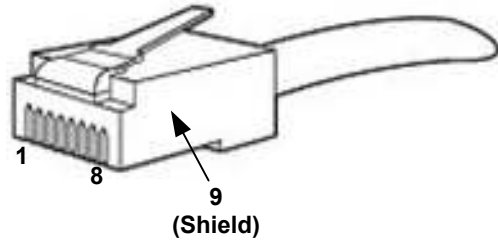


Title: <b>XSJB : Lone Worker CONTROL port wiring</b>			<b>WIRELESS PACIFIC</b> 9/21 Huntingdale Rd Burwood VIC 3125 Australia	 <b>WIRELESS PACIFIC</b>
Size: <b>A4</b>	Part No: <b>ENG-X10-002</b>	Revision: <b>1D</b>		
	Date: <b>28/4/2017</b>	Sheet: <b>2 of 5</b>		
File: XSJB LW Wiring 1D.vsd		27/4/2017 16:57:50	Drawn: <b>Jens Kuhrt</b>	

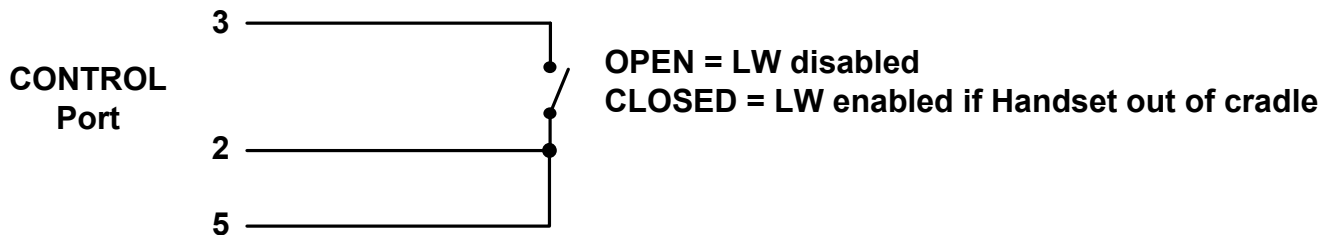
# 1 Minute Timer wiring:



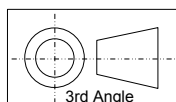
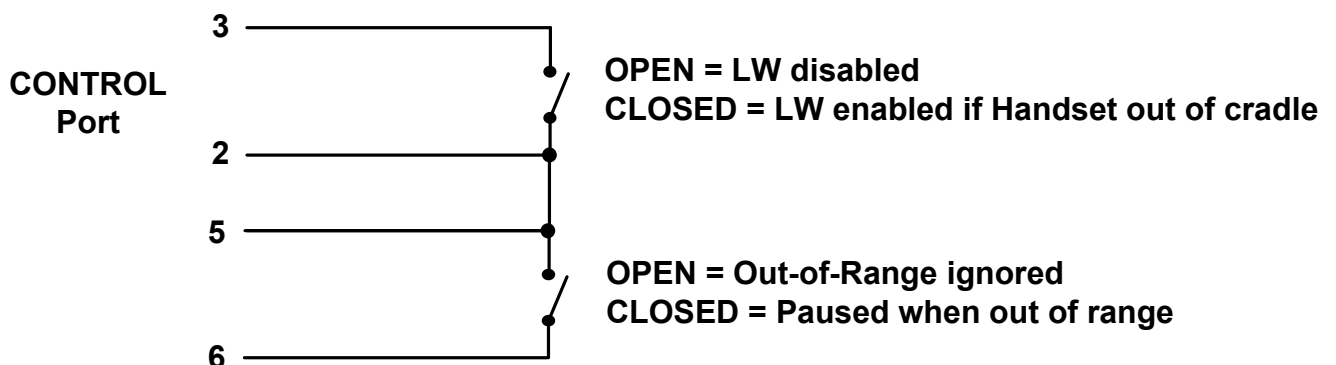
**CONTROL**




## Option 1 : Manual OFF/ON switch



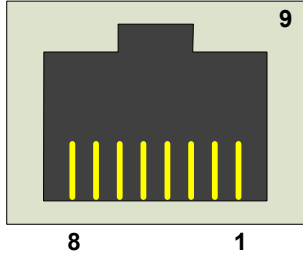
## Option 2 : Alarm paused when out of range



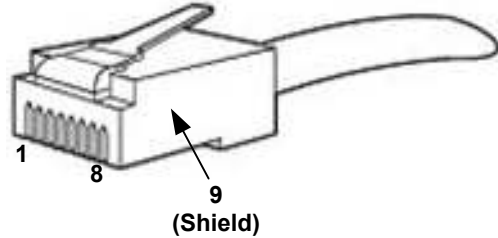
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Size: <b>A4</b>	Part No: <b>ENG-X10-002</b>	Revision: <b>1D</b>		
Date: <b>28/4/2017</b>		Sheet: <b>3 of 5</b>		
File: XSJB LW Wiring 1D.vsd		27/4/2017 16:57:50	Drawn: <b>Jens Kuhrt</b>	



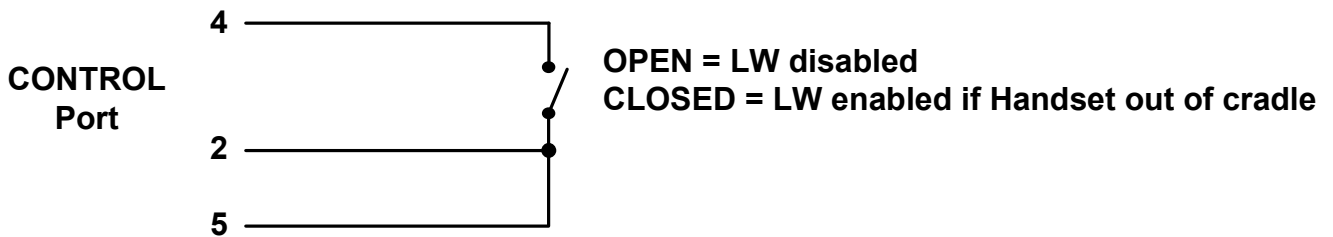
# 60 Minute Timer wiring:



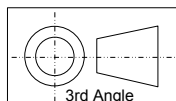
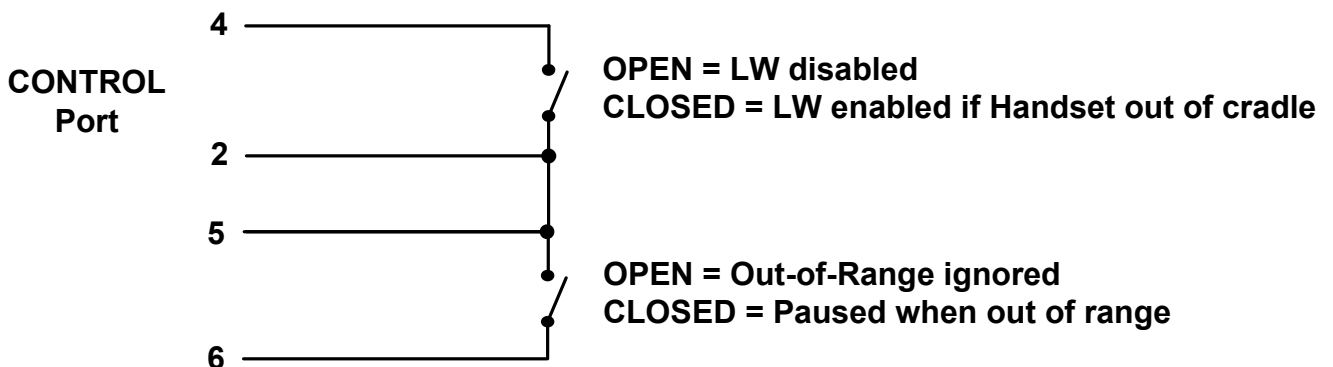
**CONTROL**



## Option 1 : Manual OFF/ON switch



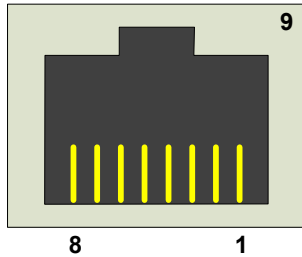
## Option 2 : Alarm paused when out of range



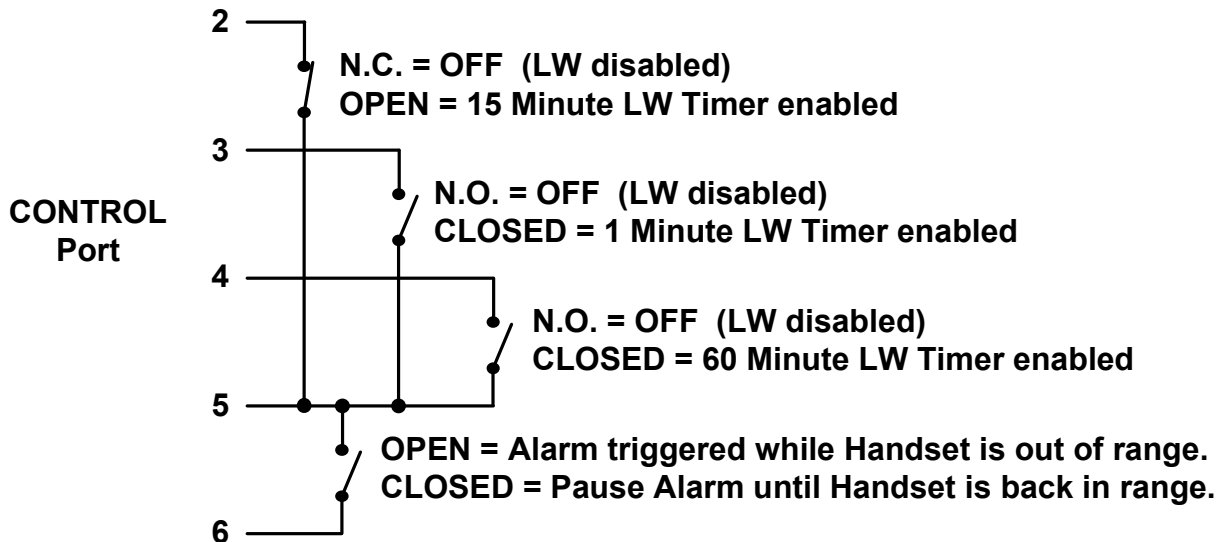
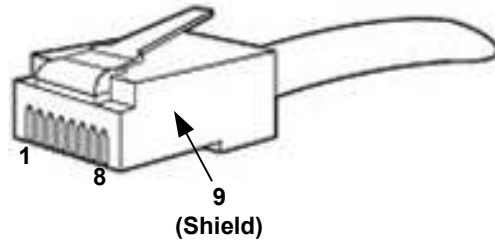
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Size: <b>A4</b>	Part No: <b>ENG-X10-002</b>	
	Date: <b>28/4/2017</b>	Revision: <b>1D</b>
File: XSJB LW Wiring 1D.vsd		Sheet: <b>4 of 5</b>
	27/4/2017 16:57:50	Drawn: <b>Jens Kuhrt</b>



# Total Control



**CONTROL**



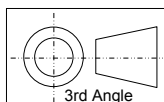
N.C. = Normally Closed  
N.O. = Normally Open

**Note: If only manual OFF/ON of LW feature is required, use the XFPK field programmer to set the Gateway "Function 6" I/O line to "Disabled". This disables the Out-of-Range feature.**

Distributed by:



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sales@airradio.com



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**WIRELESS PACIFIC**  
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Drawn: **Jens Kuhrt**

