

## L0XN Wireless Remote Control Lunchbox - Toggle Switch Handset

The L0XN Remote Console is an intrinsically safe (Ex ia) radio control handset featuring toggle switches for control of a mobile mining machine

The internal re-chargeable battery provides up to 16 hours of continuous use between re-charge cycles

An internal motion sensor provides customisable safety shutdown options - such as console drop, console tilt or sudden impact shock

Pempek's two-way radio control technology also offers options for collecting and storing machine data while the machine is being controlled

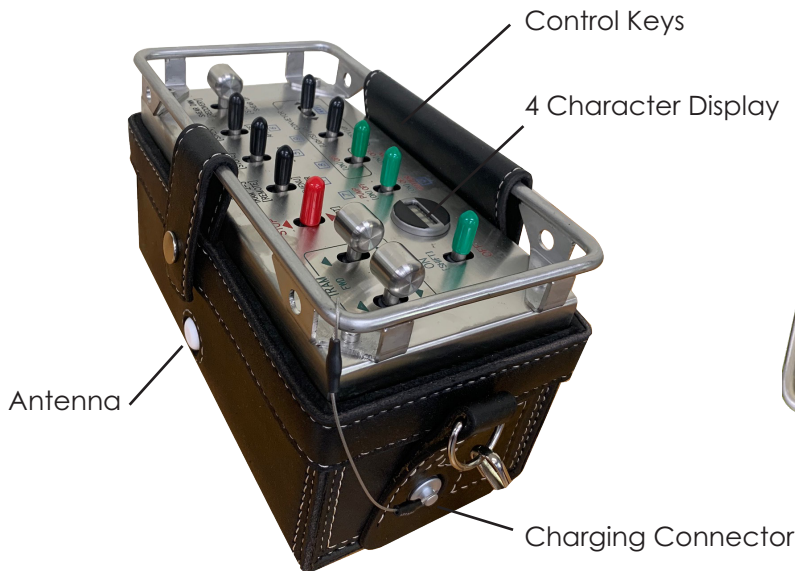
The data is collected at the end of each shift by the charging station. Data is then available for machine reporting and performance analytics

This model has been customized specifically for general purpose bolter miners.

The remote console can be used to quickly switch control between up to four (4) separate roof support machines.



## L0XN Remote Console Features



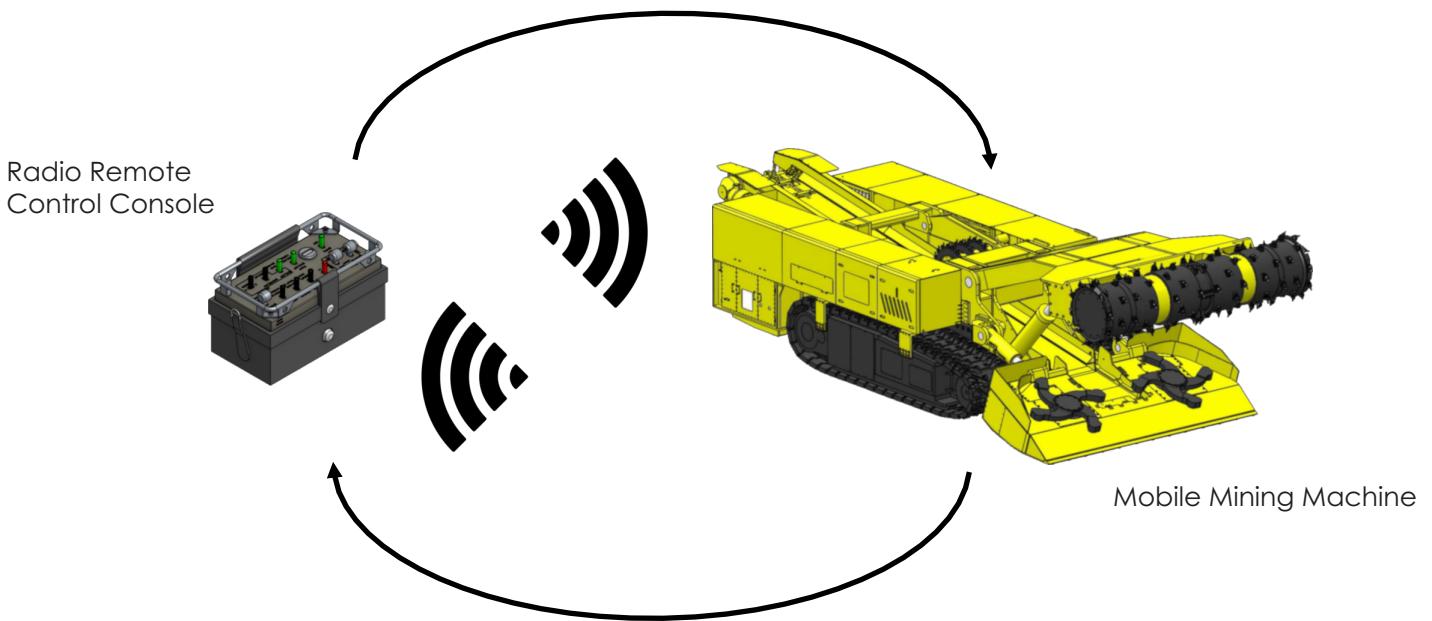
Engraving above is an example only

## L0XN Wireless Remote Control Lunchbox - Toggle Switch Handset

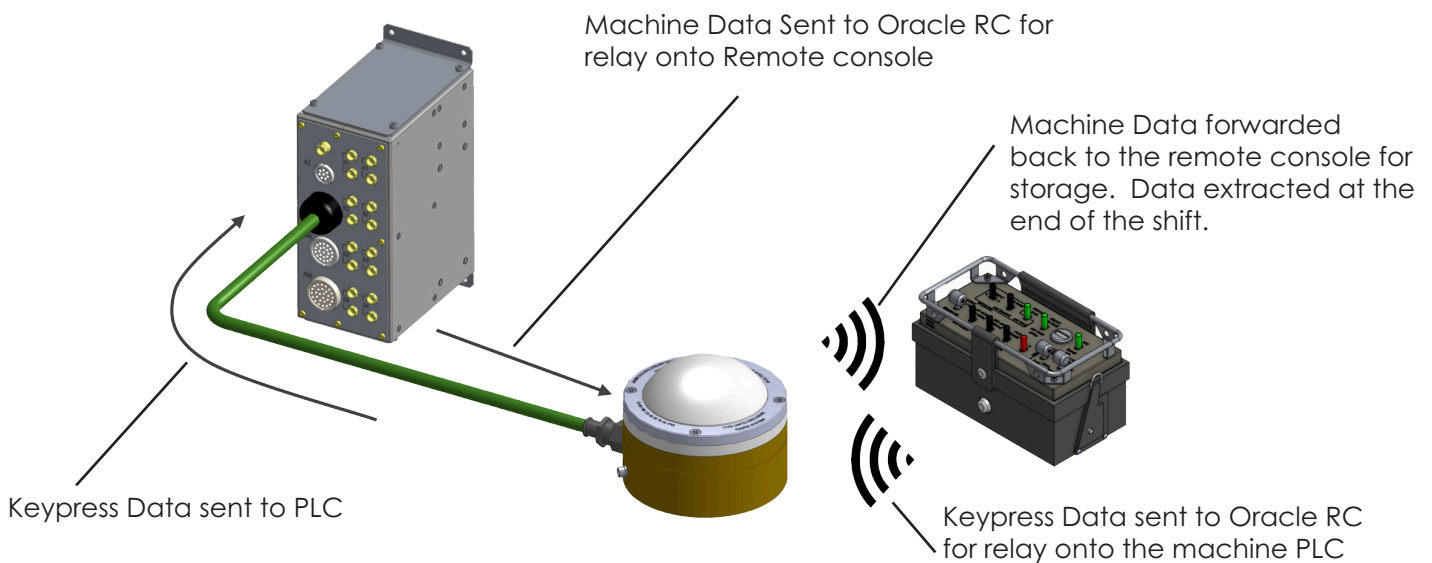
Integration of radio remote control in a machine control system application requires installation of a Pempek "Oracle" radio data transceiver. The Oracle manages 2-way radio data communications with the remote console. The machine control system can then communicate with the Oracle using any one of a range of industry-standard fieldbus options. Fieldbus options include RS-422 (Pempek K27 Protocol), canOPEN, Ethernet Powerlink, Ethernet/IP (CIP) or openSAFETY (Ethernet Powerlink).

### Pempek Remote Control – Principle of operation

#### Remote console sends switch information to control machine



#### Machine sends data logging and display information to remote console

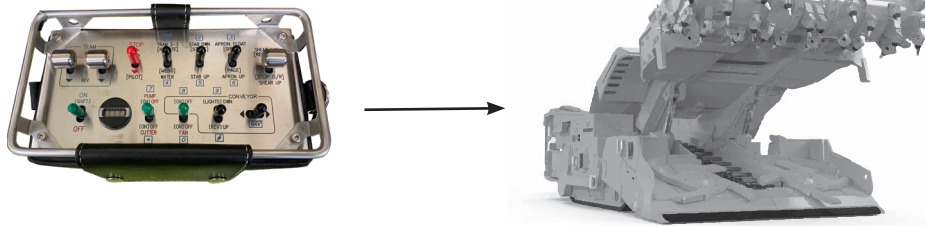


**LOXN Wireless Remote Control Lunchbox - Toggle Switch Handset**

We offer various configuration options to suit but not limited to, Continuous Miners, Continuous Haulage, Place Changer, Long Wall Shearers, Mobile Bolters, Mobile Roof Support, Road Headers and Feedbreakers.

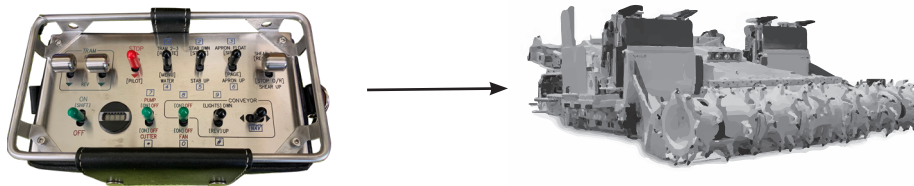
**LOXN\*\*\*\***

Wireless Remote Control Lunchbox  
Toggle Switch Handset for Place Change Miner



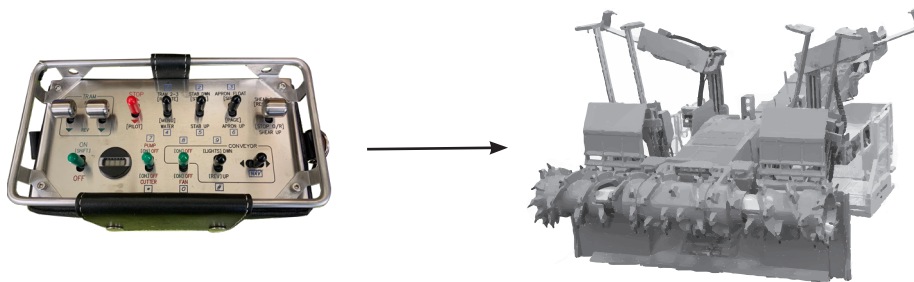
**LOXN\*\*\*\***

Wireless Remote Control Lunchbox  
Toggle Switch Handset for Bolter Miners



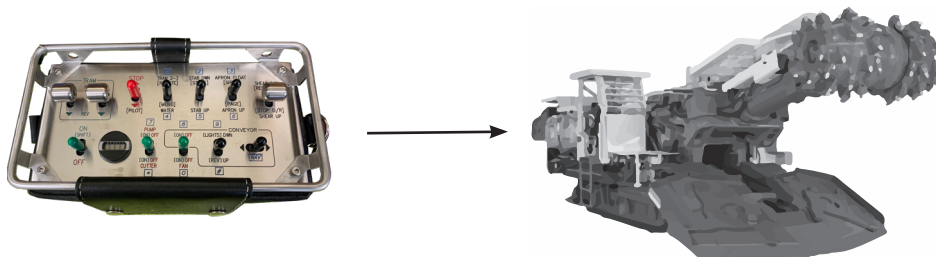
**LOXN\*\*\*\***

Wireless Remote Console Lunchbox  
Toggle Switch Handset TITO for Multi-bolter



**LOXN\*\*\*\***

Wireless Remote Console Lunchbox  
Toggle Switch Handset TITO for Roadheader



## LOXN Wireless Remote Control Lunchbox - Toggle Switch Handset

### Specifications

- Radio Band: 902 to 928 MHz
- Radio Signal Strength: Less than 100 mW
- Power Source: Internal Battery (rechargeable)
- Switch Type: 3-position Momentary Toggle (1-OFF-2)
- Switch Safety - Dual Contacts (DPDT)
- Number of Switches: 12
- Switch Layout: 11 x North-South / 1 x East - West
- Motion Sensor: Drop / Tilt / Impact Detection
- Ambient Temperature: -10°C to +50°C
- Ingress Protection: IP 66 / IP 67

### General

Parameter	Value
Type	Intrinsically-safe, battery-powered, radio remote control handset
Keypad	Momentary Toggle Switch (ON-OFF-ON) – 2 Functions per switch Option: Replace one Toggle Switch with latching, push-button STOP
Control Switches	12 Toggle Switches (Option: 11 Toggles and 1 latching push-button STOP)
Display	4 character LED dot display

### Radio Data Link

Parameter	Value
Protocol	Pempek K27
Type	Connection-oriented, half-duplex radio data link
Frequency Band	800 MHz Band or 900 MHz Band (depending on model configuration)
Operating Range	100 metres (typical)

### Battery

Parameter	Value
Type	Internal, lithium-ion pack
Capacity	5.4 Ampere-hours
Charge Endurance	24 Hours (continuous operation)
Lifespan	600 charge/discharge cycles (approximately 2 years normal operation profile)

### Radio Data Link

Parameter	Value
Operating Temperature	-10°C to +50°C
Environmental Protection	IP66/67
Mass	3.5 kilograms

### Standards Compliance

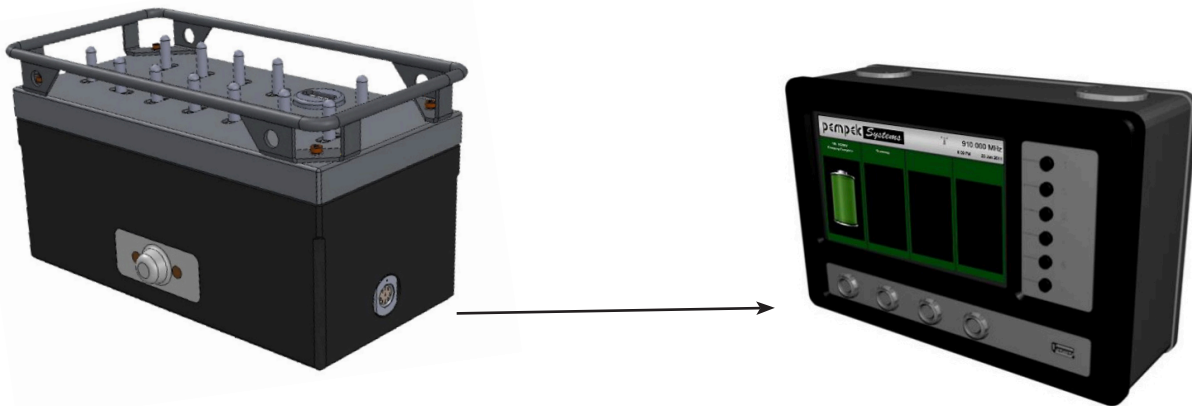
- AS/IEC 60079 (Exi)
- AS 4240.1:2009
- AS/IEC 61508 SIL 2

**L0XN Wireless Remote Control Lunchbox - Toggle Switch Handset**

**L0SS0101 Charging Station**

The L0XN Remote Console may be charged using an L0SS Remote Console Charging station (in the non-hazardous zone only). Connection in hazardous zones using the umbilical cord is only permitted using a Pempek-supplied charger which is still under development.

Connect the L0XN Remote Console to the L0SS Remote Console Charger via the cable provided with the charger. Charger and remote must be in the non-hazardous zone.



Connect via L0SS Charging Cable

**L0MT Oracle RC Flameproof Ex d Radio Control Transceiver**



The L0MT Oracle RC is a self-contained, flameproof (Ex d) radio control data transceiver supporting radio remote control of mobile mining machinery. The module communicates with a variety of Pempek-manufactured handheld remote control consoles via a 2-way radio data stream (based on the 915 MHz band).

A single cable entry to the product supplies power and data communications. A range of field bus options are supported - including RS-422, Ethernet and Ethernet/IP.

A host PLC communicates with the Oracle via field bus to receive key-press commands from the remote handset, and send machine status and data logging information back to the handset.

The PLC can also configure the operating channel.