



## Mini-Console Box Application Tool

**M018.0.5**

<b>Customer Name:</b>			
<b>Contact Name:</b>			
<b>Email:</b>		<b>Phone:</b>	
<b>Application Description / Machine Type:</b>			
<b>Date of Submission:</b>		<b>Revision:</b>	

**Thank you for considering Cervis, Inc. We look forward to working with you in your application.**

This tool is designed as a pre-sale document to aid in the communication and documentation of the application. The information presented in this document will be used for quoting purposes. Therefore, we recommend you provide as much detail as possible so that the proposal reflects the total requirements as closely as possible. Should any questions arise during use of this document, please contact the Cervis, Inc. sales department at 724-741-9000. Thank you for considering Cervis, Inc. We look forward to working with you in your application.

## Application Description

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Describe application including environment of operation:

## Radio Frequency Operation Options

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**Note:** Range estimations above are not guarantees and depend on device-to-device relationship and obstructions that will reduce the quality of the radio frequency (RF) link. Operating distances mentioned above are results based on good "conditions" and "line of sight" between devices.

## Mini-Console Box Design

The **SmART Wireless** mini console box (MCB) is available in multiple configurations that are derived from four standard physical layouts. Minor adjustments to the layouts can be accommodated. Major layout requests will be quoted based on the supporting business case.

### Standard Layout Choices

4 Joysticks



2 Joysticks - 1



2 Joysticks - 2



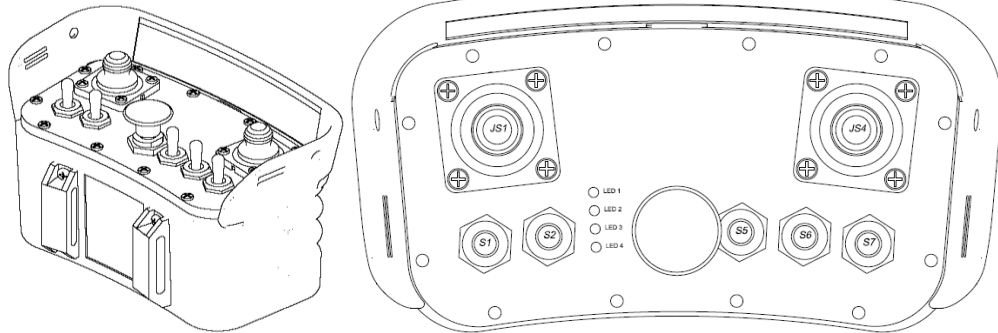
### MCB Options

- Variable potentiometer option
- Tether back-up option  
Supports loss of RF communication and loss of battery power
- Display option

Describe desired display usage:

Mini-Console Box Design

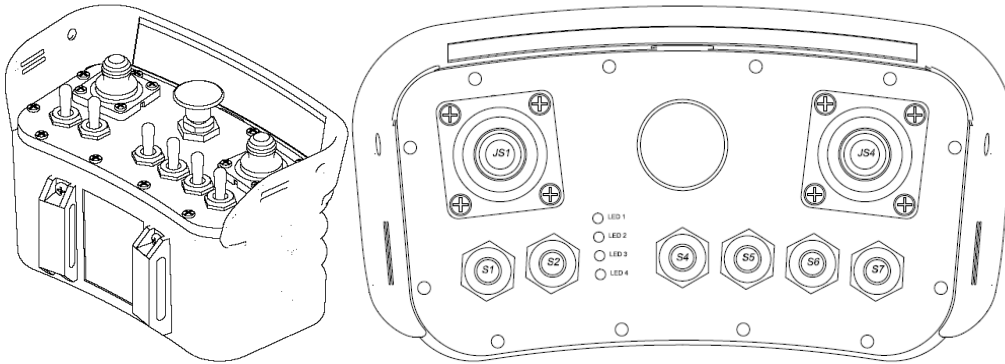
**MCB-XH02JS-1**



FUNCTION ?		SWITCH TYPE	CUSTOM LOGIC
*S1+			
*S1-			
S2+			
S2-			
S3	LED		
S4	M-STOP		
S5+			
S5-			
S6+			
S6-			
S7+			
S7-			
JS1Y+			
JS1Y-			
JS1X+			
JS1X-			
JS4Y+			
JS4Y-			
JS4X+			
JS4X-			

Describe any special requirements:

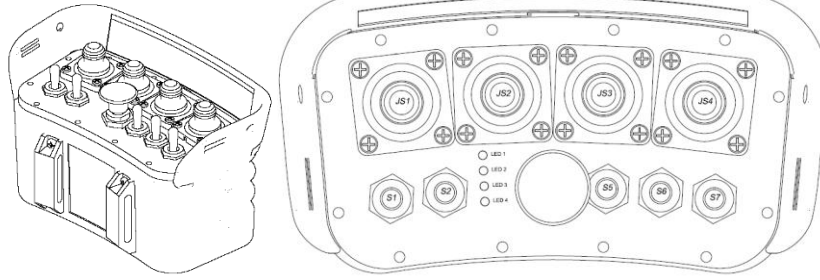
**MCB-XH02JS-2**



FUNCTION ?		SWITCH TYPE	CUSTOM LOGIC
*S1+			
*S1-			
S2+			
S2-			
S3	<b>LED</b>		
S4+			
S4-			
S5+			
S5-			
S6+			
S6-			
*S7+			
*S7-			
JS1Y+			
JS1Y-			
JS1X+			
JS1X-			
JS2-JS3	<b>M-STOP</b>		
JS4Y+			
JS4Y-			
JS4X+			
JS4X-			

**Describe any special requirements:**

**MCB-XH04JS**



FUNCTION		SWITCH TYPE	CUSTOM LOGIC
*S1+			
*S1-			
S2+			
S2-			
S3	<b>LED</b>		
S4	<b>M-STOP</b>		
S5+			
S5-			
S6+			
S6-			
S7+			
S7-			
JS1Y+			
JS1Y-			
JS1X+			
JS1X-			
JS2Y+			
JS2Y-			
JS2X+			
JS2X-			
JS3Y+			
JS3Y-			
JS3X+			
JS3X-			
JS4Y+			
JS4Y-			
JS4X+			
JS4X-			

**Describe any special requirements:**

### MCB Software Feature

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Handheld Inactivity Timeout

- 4 Minutes       10 Minutes       Other \_\_\_\_\_ Minutes       None

### MCB Accessories

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- Tether cable 50-foot length with machine mount bulkhead connector/dust cap
- Tether cable 24-foot with flying leads for terminal strip mounting

### Graphic Label

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**Company Logo**

**Label Notes:**



### Base Unit Antenna Options

Internal Antenna (Typically used when mounting base unit outside of other enclosures)

External antenna:



Panel Mount Bulkhead



Straight Connector



Right Angle Connector



900Mz Antenna  
7 inch length  
Right Angle/Straight



2.4GHz Antenna  
6 inch length  
Right Angle/Straight

### Base Unit Power Supply

7–28 VDC\*

110–220 VAC 47–440Hz

110–340 VDC\*\*


12–24 VAC\*\*

\*Some models have split low voltage DC specifications 9–12VDC or 18–36VDC

\*\*Not available on all base unit models

Describe power supply type:


### Base Unit Output Requirements

- |  |  |                                |
|--|--|--------------------------------|
| <input type="checkbox"/> Relay contacts  | <input type="checkbox"/> Normally open contact   | Quantity: ____                 |
|  | <input type="checkbox"/> Normally closed contact | Quantity: ____                 |
| <input type="checkbox"/> Solid State  | <input type="checkbox"/> High Side Output        | Quantity: <input type="text"/> |
|  | <input type="checkbox"/> Low Side Output         | Quantity: <input type="text"/> |

Contact Rating

- Resistive: 5A at 250 VAC or 30 VDC
- Resistive: 10A at 250 VAC or 30 VDC
- Inductive: 2A at 250 VAC or 30 VDC (proposal will include snubber circuits on contacts)

Describe output interface:

- PWM (Pulse Width Modulation) output  
PWM Frequency: \_\_\_\_\_ Hz  
Coil Resistance: \_\_\_\_\_  $\Omega$   
Quantity: \_\_\_\_\_
- Current control  
Initial Current: \_\_\_\_\_ mA  
Final current: \_\_\_\_\_ mA  
Quantity: \_\_\_\_\_
- Analog output  
Variable voltage: \_\_\_\_ to \_\_\_\_ VDC  
 Ratiometric Variable Voltage:  
\_\_\_\_\_ to \_\_\_\_ VDC  
Valve Error Detection:
- 4–20mA

Describe output interface/valve type:

**Base Unit Output Requirements (Continued)**

Motor Reversing H-Bridge 25A Max Load @ 55°C 12 VDC




**Base Unit Data Communication Requirements**

CAN Bus J1939  For Receiver-to-Receiver or Umbilical support.  
 For network connection using standard Cervis messaging.  
 Custom messaging. *Please detail below.*

CAN Bus CAN Open

None

**Base Unit Output List**

	Function Name 	Output Type 	Logic: Special Requirements 
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

### Base Unit Input Requirements

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- 4–20mA
- Variable voltage: \_\_\_ to \_\_\_ VDC
- Digital  High side voltage: \_\_\_\_\_
- Low side (contact to power supply ground)
- None

### Base Unit Input List

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	Function Name ?	Input Type ?	Logic: Special Requirements ?
1			
2			
3			
4			
5			
6			

Describe input interface/device:

## Base Unit Options

Four character LED alphanumeric display



Display Example

Eight character LED alphanumeric display



None

Describe desired display usage:

## Base Unit Software Requests

Link Definition

**Safety LINK Enabled** (where all outputs will clear upon loss of link)

**Safety LINK Disabled** (where latched commands will remain latched on loss of link, but all momentary commands that are active deactivate)

Component Architecture

**One-to-One** (where one handheld and one base unit have an exclusive pairing)

**Many-to-One** (where more than one handheld can be paired to a base unit)

**One-to-Many** (where one handheld is paired to several base units)

**Many-to-Many** (open architecture where many handhelds and base units are paired)

Describe any special requirements:

### Standard Base Unit Wiring Offering

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### Base Unit Mounting

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Base Unit Mounting:

- Outside Environment
- Inside Environment
- Inside other enclosure

### Customer Approval

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