



Mini-Console Box Application Tool

Customer Name: _____

Contact Name: _____

Email: _____ Phone: _____

Application Description / Machine Type: _____

Date of Submission: ____/____/____ Revision: _____

MCB Model Application Tool

Thank you for considering Cervis, 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 and therefore it is recommended to provide as much detail as possible such that the following proposal reflects the total requirements as closely as possible.

Should any questions arise during use of this document please contact Cervis' sales department at 724-741-9000. Thank you for considering Cervis, we look forward to working with you in your application.

Application Description

Describe application including environment of operation:

Radio Frequency Operation Options

900MHz 10 mW Output Power (Typical Range ~300m)

2.4GHz 100 mW Output Power (Typical Range ~300m)

Note: Range estimations above are not guarantees and are dependent on device to device relationship and obstructions that will reduce the quality of the RF link. Operating distances mentioned above are results based upon good "conditions" and "line of sight" between devices.

Mini-Console Box Design

The **SmaRT Wireless** mini console box is available in multiple configurations that are derived from three standard physical layouts. Minor adjustments to the layouts can be accommodated. Major layout requests will be quoted based upon the supporting business case.

Standard Layout Choices

4 Joysticks



2 Joysticks – 1



2 Joysticks - 2



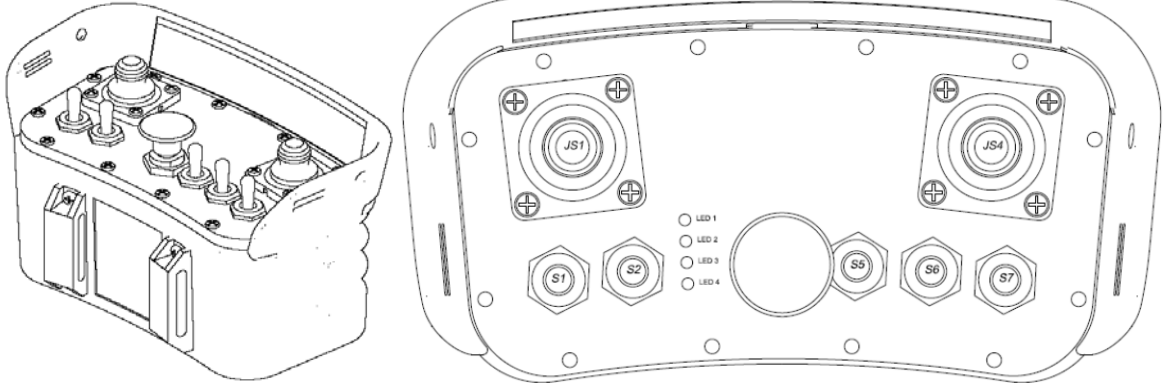
MCB Options

- 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



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

* Switch required

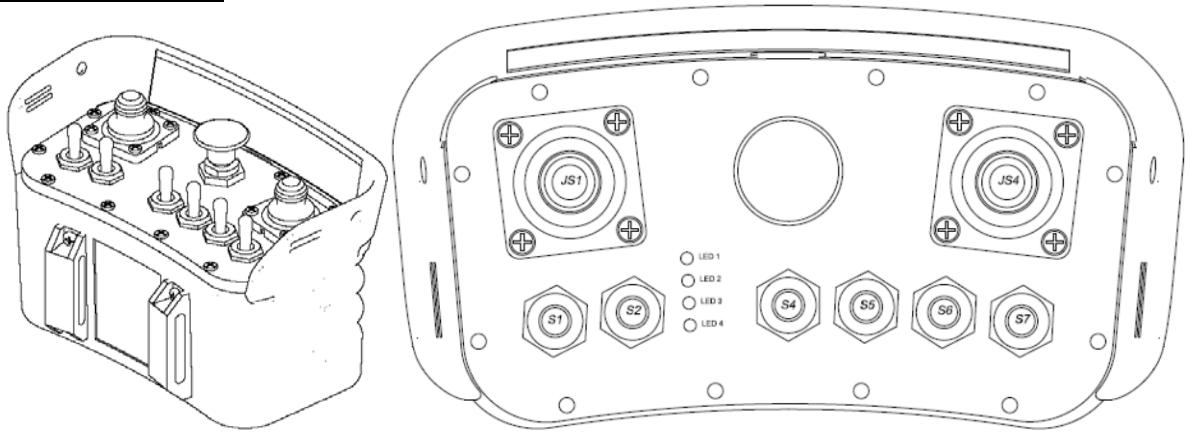
MCB Model Application Tool

Function Name Example
Switch Type

Drive Forward, Drive Reverse, Rotate CCW, Rotate
POT (Potentiometer)
PB (Push Button)
3PM (Three Position Momentary toggle switch)
3PD (Three Position Maintained toggle switch)
2PM (Two Position Momentary toggle switch)
2PD (Two Position Maintained toggle switch)
3PMD (Three Position Maintained/Momentary toggle switch)
SA-X (Single X-Axis Joystick)
SA-Y (Single Y-Axis Joystick)
DAOG (Dual Axis Open-Gate Joystick)
DACG (Dual Axis Closed-Gate Joystick)

Describe any special requirements:

MCB-XH02JS-2



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

* Switch required

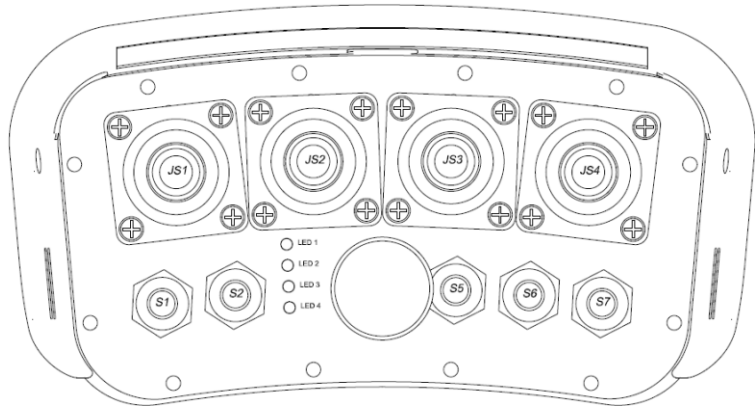
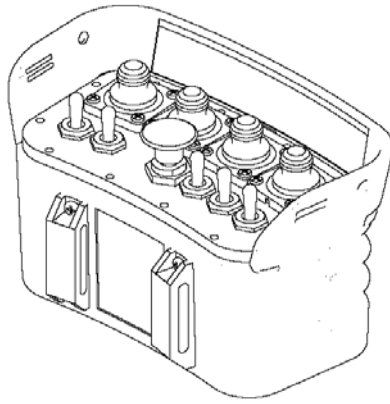
MCB Model Application Tool

Function Name Example
Switch Type

Drive Forward, Drive Reverse, Rotate CCW, Rotate
POT (Potentiometer)
PB (Push Button)
3PM (Three Position Momentary toggle switch)
3PD (Three Position Maintained toggle switch)
2PM (Two Position Momentary toggle switch)
2PD (Two Position Maintained toggle switch)
3PMD (Three Position Maintained/Momentary toggle switch)
SA-X (Single X-Axis Joystick)
SA-Y (Single Y-Axis Joystick)
DAOG (Dual Axis Open-Gate Joystick)
DACG (Dual Axis Closed-Gate Joystick)

Describe any special requirements:

MCB-XH04JS



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

* Switch required

MCB Model Application Tool

Function Name Example
Switch Type

Drive Forward, Drive Reverse, Rotate CCW, Rotate
POT (Potentiometer)
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3PM (Three Position Momentary toggle switch)
3PD (Three Position Maintained toggle switch)
2PM (Two Position Momentary toggle switch)
2PD (Two Position Maintained toggle switch)
3PMD (Three Position Maintained/Momentary toggle switch)
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SA-Y (Single Y-Axis Joystick)
DAOG (Dual Axis Open-Gate Joystick)
DACG (Dual Axis Closed-Gate Joystick)

Describe any special requirements:

MCB Software Feature

Handheld Inactivity Timeout

- 4 Minutes 10 Minutes Other _____ Minutes

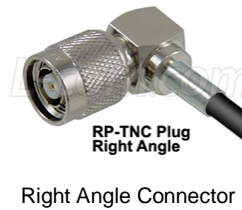
MCB Accessories

Tether cable 50 foot length with machine mount bulkhead connector/dust cap

Tether cable 24 foot with flying leads for terminal strip mounting

Base Unit Antenna Options

- Internal Antenna (Typically used when mounting base unit outside of other enclosures)
- External antenna
 - Mounted to Base Unit
 - With 3 foot extension cable (straight connector to panel mount bulkhead)
 - With 10 foot extension cable (straight connector to panel mount bulkhead)
 - With 10 foot extension cable (right angle connector to panel mount bulkhead)
 - With 20 foot extension cable (right angle connector to panel mount bulkhead)



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: _____ |

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)

Resistive load example: indicator light
Inductive load example: valve or relay coil

Describe output interface: _____

-
- | | |
|---|----------------------------------|
| <input type="checkbox"/> PWM (Pulse Width Modulated) output | PWM Frequency: _____ Hz |
| | Coil Resistance: _____ Ω |
| | Quantity: _____ |
| <input type="checkbox"/> Current control | Initial Current: _____ mA |
| | Final current: _____ mA |
| | Quantity: _____ |
| <input type="checkbox"/> Analog output | Variable voltage: ___ to ___ VDC |
| | <input type="checkbox"/> 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

CAN Bus CAN Open

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			

Function Name Example

Output Type:

Logic/Special Requirements:

Drive Forward, Drive Reverse, Rotate CCW, Rotate CW, etc.

Latching, Momentary, PWM, Current, Analog, H-Bridge, CAN Bus, etc.

Describe special conditions for output, i.e., if the output is conditioned on an Input or other function

Base Unit Input Requirements

4-20mA

Variable voltage: ___ to ___ VDC

Digital

High side voltage: _____

Low side (contact to power supply ground)

Base Unit Input List

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

Function Name Example

Boom Pressure, Extend Limit

Input Type:

Variable voltage, 4-20mA, Dry contact, etc.

Logic/Special Requirements:

Describe if input interacts with other functions

Describe input interface/device: _____

Base Unit Options

Four character LED alphanumeric display



Display Example

Eight character LED alphanumeric display



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 upon 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

36" (multi-conductor cable)

96" (multi-conductor cable)

Base Unit Mounting

Base Unit Mounting:

Outside Environment

Inside Environment

Inside other enclosure Metallic enclosure Polymer Enclosure



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