

Radio remote control Concrete Pumping.

Musca 2S - Remote control

- IP67 waterproof housing
- High-quality keypad, provides sound and tactile click
- Works anytime, even in the dark due to backlit keys
- Durable construction: made of impact resistant TPE rubber
- User friendely: ergonomic design for ease of use
- Multiple handheld transmitters per receiver is possible
- Powered by 2x Standard AA Alkaline batteries

Receiver IP67 waterproof housing

- IP68 extreme robust waterproof housing
- Full Encapsulated Radio receiver
- 0 100% water, dirt and dust resistant
- Impact and shockproof
- Pre-wired plug & play, flyout sealed cable
- 6 Large button functions, latching/Mom
- Fully programmable, latching/momentary blocking between buttons

Button #	Text Description	Button Description
1	Pump ON/OFF	Pump ON/OFF (Latched)
2	Pump REV/FWD	Forward/Reverse (Latched)
3	Throttle + (Increase)	Increase Engine Speed (Mom)
4	Throttle – (Decrease)	Decrease Engine Speed (Mom)
5	Volume + (Increase)	Volume Control + (Mom)
6	Volume – (Decrease)	Volume Control – (Mom)
Green ON	Standard	Enables Remote (hold for 1-2 seconds until Handheld
		beeps)
RED OFF	Standard	Disables remote. Pump OFF and all functions OFF

Radio must be first enabled by pressing the ON button for 2-3 seconds. This enables the handheld/transmitter. After handheld is enabled and in range you can activate machine functions as described below:

Pump ON/OFF Latching:

Pressing button 1 PUMP ON/OFF activates the latched pump output ON. This activates wire # 2 to switch to + Battery.

If the Pump is on, pressing button 1 (pump ON/OFF) turns the pump OFF. This deactivates Wire #2, Battery + is switched OFF.

Alternatively, the radio OFF button can be pressed to turn the pump OFF which disables the handheld transmitter. To reactivate the PUMP ON, the operator must press the Radio ON button for 2-3 seconds which activates the remote and then press button 1 which activates the latched output to turn pump ON.

FWD / REV Latching output.

Pressing button 2 FWD/REV activates the latched FWD/REV output ON. This activates wire # 3 to switch to + Battery, pressing it again will turn it OFF.

Alternatively, the radio OFF button can be pressed to turn the FWD/REV OFF which disables the handheld transmitter. To reactivate the FWD/REV ON, the operator must press the Radio ON button for 2-3 seconds which activates the remote and then press button 2 which activates the FWD/REV output to activate.

Throttle control (buttons 3 and 4 Momentary)

Button 3. Engine throttle Increase (Mom):

Pressing button 3 Throttle Increase, activates the mom output ON. This activates wire # 4 to switch to + Battery.

When button 3 is released this deactivates, the Mom output OFF. This deactivates Wire #4 and Battery + is switched OFF.

Button 4. Engine throttle Decrease (Mom):

Pressing button 4 Throttle Decrease, activates the mom output ON. This activates wire # 5 to switch to + Battery.

When button 3 is released this deactivates, the mom output OFF. This deactivates Wire #4 and Battery + is switched OFF.

Volume control (buttons 5 and 6 Momentary)

Button 5. Volume + Increase (Mom):

Pressing button 5 Throttle Increase, activates the mom output ON. This activates wire # 6 to switch to + Battery.

When button 5 is released this deactivates, the Mom output OFF. This deactivates Wire #6 and Battery + is switched OFF.

Button 6. Volume - Decrease (Mom):

Pressing button 6 Throttle Decrease, activates the mom output ON. This activates wire # 7 to switch to + Battery.

When button 6 is released this deactivates, the mom output OFF. This deactivates Wire #7 and Battery + is switched OFF.

Wiring for Pump ON / OFF latched functionality and latched pump FWD & REV:

Button #	Text Description	Wiring/Output
1	Pump ON/OFF	Wire # 2
2	Pump FWD/REV	Wire# 3
3	Throttle Increase	Wire # 4
4	Throttle Decrease	Wire # 5
5	Volume +	Wire # 6
6	Volume -	Wire # 7
Main Ground		Wire color Green/Yellow
Main Radio Receiver	Standard	Wire # 1
+ Battery		

Remote LEDs Guide

6. Transmitter features

Status-LEDs

The handheld transmitter is equipped with two separate status-LEDs for the following indications:

- · Transmit-indication-LED (color green)
- Battery-indication-LED (color red)

Status-led functionality	Musca 2S
Transmit indicator	
If a key is pressed, with active handheld transmitter	Transmit-indication-LED flashes green
Battery indicator	
Battery low indication, with active handheld transmitter	Battery-indication-LED flashes red, slowly (1x per sec.)
If a function key is pressed when the handheld transmitter is turned on	Battery-indication-LED flashes red. Flashes the number of times of the key number (e.g. flashes 3 times when key 3 is pressed)
Pairing	
System is in 'pairing mode'	The status-LEDs on the handheld transmitter flash rapidly alternating red and green
Pairing successfully completed	The alternating flashing is stopped
Pairing failed	The flashing stops, the buzzer beeps once
Change of function	
Default settings	Green status-LED flashes 1x
Option 1 to be set	Green status-LED flashes 2x
Option 2 to be set	Green status-LED flashes 3x

Out of range indication

Systems transmitters equipped with a status-LED, status-indication-LED, and/or display give a visual indication when the transmitter is out of range.

- When the handheld transmitter is out of range of the receiver, the receiver cannot be switched off or operated.
- When the handheld transmitter comes within range again, the connection will restore itself. The functions can be operated again.

Musca 2S out of range indication

- The green status-LED flashes rapidly when there is connection to the receiver.
- The green status-LED flashes slowly when there is no longer a connection to the receiver.

Remote Configuring Guide

Setup-mode (general)

First put the handheld transmitter in setup mode:

Step	Description
1.	Turn the handheld transmitter off by pressing the OFF-key for 1 second.
2.	Put the handheld transmitter in setup mode by holding function keys 1 and 2 while pressing the OFF-key for 5 seconds.
3.	The green status-LED will light up continuously, the handheld transmitter is now in setup mode. Release the function keys.
4.	If no key is pressed for 30 seconds, the handheld transmitter goes out of setup mode again.

Once setup mode is activated, the following can be changed via the steps described in table 1.

Table 1

Function key operation (Momentary / Latching)

Press the function key to be changed until the green status-LED flashes 2x. The function key changes to latching function. (The key lock is still active)

Return to default settings

Press the function key to be changed again. The function key changes to momentary function. The green status-LED flashes once.

Key lock

Table 2 shows which function keys cannot be used at the same time by default (locked) and which can be used together (function keys without locking)

To unlock function keys that are locked by default

Press both function keys until the green status-LED flashes 2x. The key lock changes to no lock.

Activating key lock for function keys that are not locked by default

Press both function keys until the green status-LED flashes 2x. The key lock is activated.

Return to default settings

Press the two function keys again until the green status-LED flashes once. The key lock changes to its original state.

Line output

1 line output

Press the ON-button until the green status-LED flashes 2x.

2 line outputs

Press the ON-button until the green status-LED flashes 3x.

No line outputs

Press the ON-button until the green status-LED flashes 1x.