

microRemote System

User Guide

redrockmicro.com/microremote
support@redrockmicro.com
1-888-214-3903



microRemote Technical Specifications

The microRemote system complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (I.) this device may not cause harmful interference and (II.) this device must accept any interference received, including interference that may cause undesired operation.

Minimum Voltage 12VDC, 3A
Maximum Voltage 18VDC, 3A



MADE IN USA

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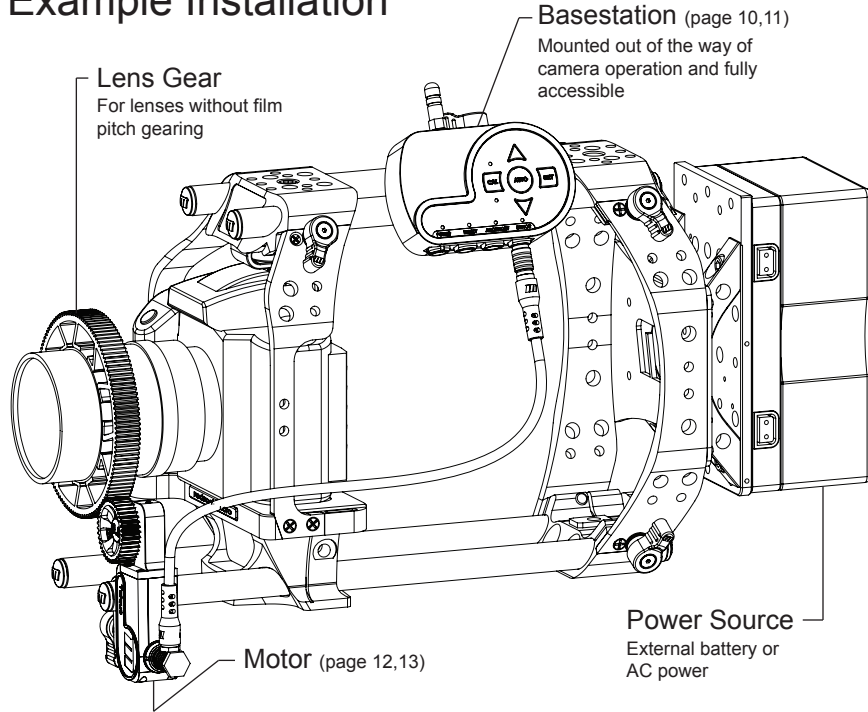
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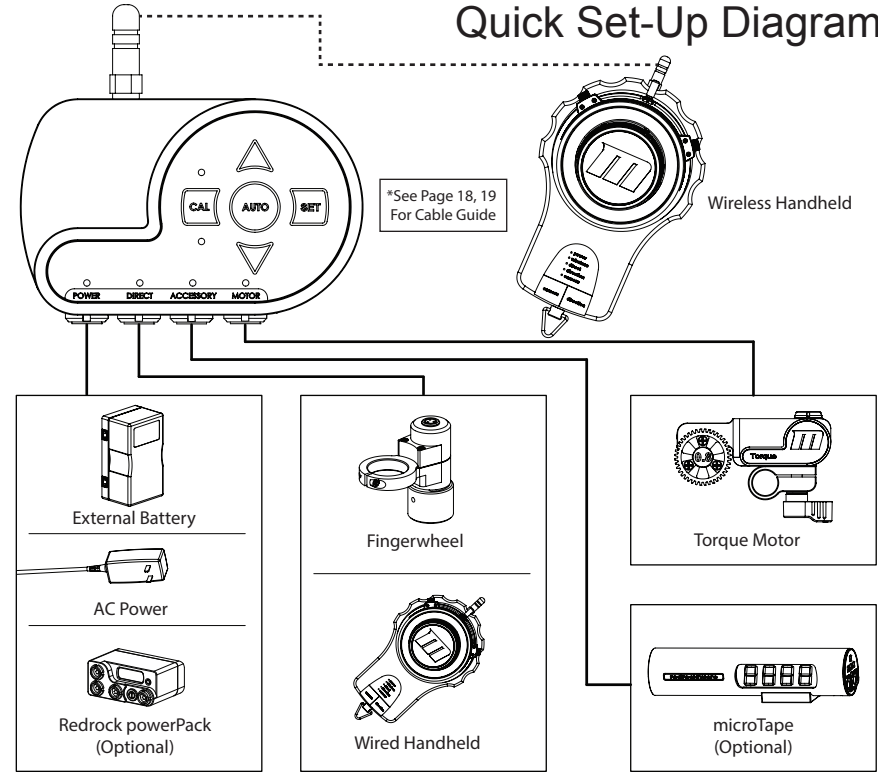
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Example Installation*



*Shown on a Redrock ultraCage Studio bundle. Visit redrockmicro.com for more rig configurations.

Quick Set-Up Diagram



Your New microRemote

Congratulations on your purchase of the microRemote system. The microRemote system is a versatile, expandable, remote focusing system. This booklet will guide you through the setup and function of each component that is available for this system at this time. You may not have purchased some of the items described within, as this manual is comprehensive of the entire microRemote System. Please review this entire manual before attempting your initial setup.

Quick Start Guide

Wireless Set-Up

- 1 Insert batteries into Handheld unit (page 9). Turn on Power Switch. All LEDs should flash in sequence and then in unison, then settle into their operational mode.
- 2 Plug in 7 pin Motor Cable (page 19) to Motor and Basestation. The larger right angle connector connects to the Motor. See page 12 for proper cable installation.
- 3 Apply power to Basestation (via your wall mount, external battery, etc.) being careful NOT to insert the Power connector into the Motor port (page 10). The motor light will then blink, indicating the Basestation is ready for motor calibration.
- 4 Set your lens focus ring to the center. Mount motor to rig in the appropriate position (page 12,13). Press the drive gear against the lens gear using light pressure until teeth interlock.

5 Calibrate Lens:

Make sure the motor is positioned somewhere in the middle of the lens' focus range. Avoid starting at either end of the focus.

A. Auto Calibration: use with cinema lenses or lenses with hard stops

Press the **AUTO** button on the Basestation (page 10). The motor will travel from one end of the lens to the other, then return to the position of the controller. Your lens is now calibrated.

B. Manual Calibration: use with DSLR lenses or lenses without hard stops

- a. Press the CAL button on the Basestation (page 10) to enter manual calibration.
- b. The CAL indicator LED will blink. Press the UP button until you reach the end of the lens' focus. Use UP/DOWN if you need to refine the position.
- c. Press SET to set first focus point. The opposite LED will now blink, press the corresponding arrow button until you reach the opposite end of the lens.
- d. Press SET to set the second focus point. Your lens is now calibrated.

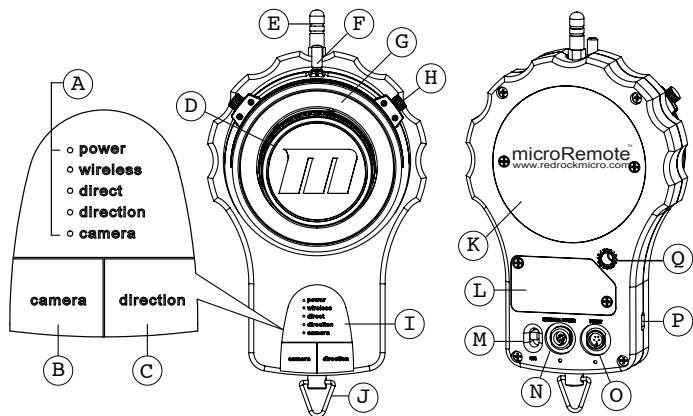
- 6 Turn Handheld Control Knob (page 8) and the motor will turn in unison. If you wish to reverse motor direction, press the DIRECTION button on the Handheld. Now go shoot!

Wired Set-Up

- 1 Connect Control Cable to the Direct port on the Basestation. Connect opposite end to your controller (Handheld, Fingerwheel, etc.). Use cable part #2-100-0012 for direct tethered connect to Remote Handheld. Use cable part #2-100-0025 for Fingerwheel.
- 2 Follow steps 2-6 of Wireless Set-Up section.

Handheld

In wireless mode the Remote Handheld unit can be used up to 300 feet away (line-of-sight). The Handheld unit can also be wired to the Basestation (tethered) when wireless is not available or desired. Turning on the wireless Handheld controller overrides the Fingerwheel connection. Removing the tethered cable from the Handheld controller reactivates wireless communication.



- | | | |
|----------------------------------|--|---------------------------------|
| A LED function indicators | G Illuminated (optional) marking disk** | M On/Off switch |
| B Camera run/stop button* | H Adjustable hard stop | N Power port |
| C Motor direction button | I Control pad | O Direct control port |
| D Control knob | J Lanyard hook | P Mini USB port |
| E Wireless radio antenna | K Battery compartment | Q Radio channel selector |
| F Adjustable indicator | L Radio compartment | |

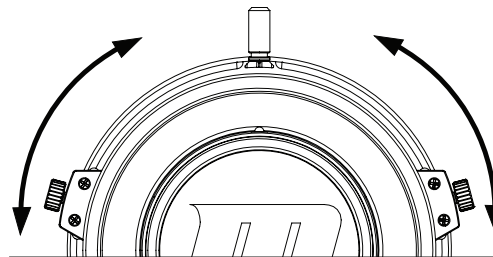
*With optional cable (camera specific, camera capable) camera run/stop can be controlled from the microRemote.

**See page 17 for illuminated marking disk information

Adjusting the Hard Stops

Rather than relying solely on marks on the marking disk, the adjustable hard stops help you achieve better accuracy and repeatable focus.

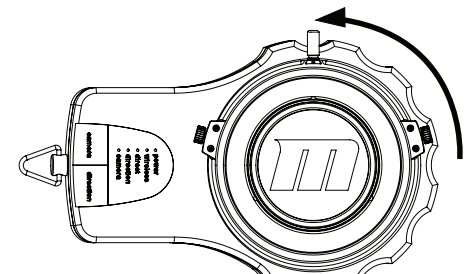
Loosen the hard stop thumb screw. Slide to desired position. Tighten thumb screw.



Adjusting the Indicator

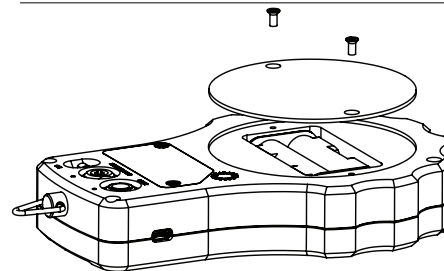
The adjustable indicator allows you to hold the Handheld unit however you find most comfortable. Decide which position works best for you and bring the indicator to the 12 O'clock position.

To adjust the indicator, loosen the indicator knob. Slide to desired position. Tighten knob.



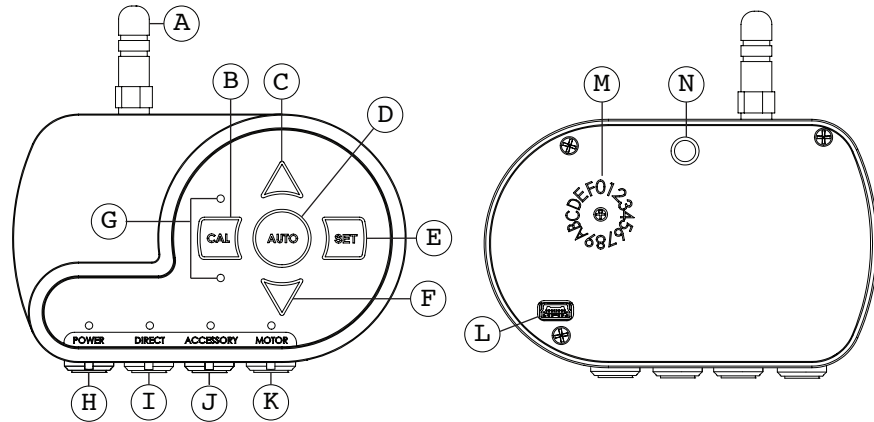
Changing the Batteries

The handheld unit runs on 2 AA batteries, included with your purchase. Loosen the two screws in the battery compartment cover. Remove the cover, insert batteries, and replace cover.

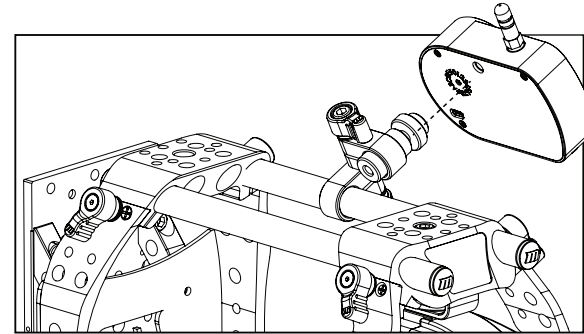


Basestation

The Basestation controls all the major functions of the microRemote system: lens calibration, motor torque adjustment, and accessory control.



- | | |
|---|---|
| A Wireless antenna | H Power port / power LED indicator |
| B Manual calibration button | I Direct connect port / direct connect LED indicator |
| C Up button | J Accessory port / accessory LED indicator |
| D Auto calibration button | K Motor port / motor LED indicator |
| E Manual calibration set button | L Mini USB port |
| F Down button | M Radio channel selector |
| G Calibration direction / Error indicators | N 1/4-20 mounting point |



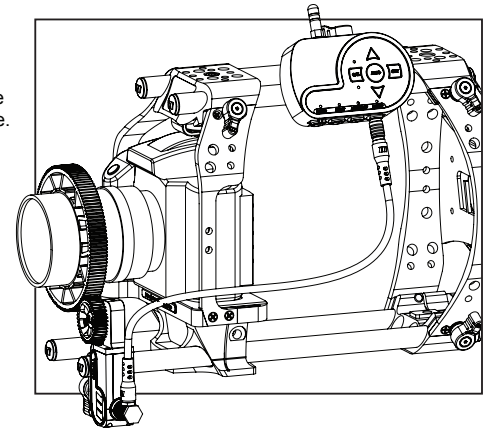
Mounting to Your Rig

Attach a microMount™ or other 1/4-20 mounting device to any 15mm rod on your rig. The Basestation can be mounted up to 18 inches away from the motor (cable length limited).

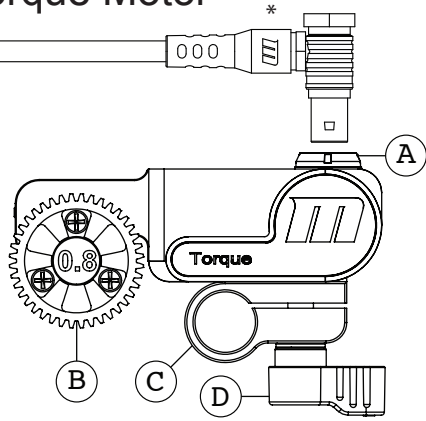
Lens Calibration

The Basestation motor controller contains an auto-torque feature. This feature calculates the ideal amount of torque for optimal performance. Please follow these steps **EACH TIME** you remove the motor or replace the lens.

1. Attach motor to rails in line with focus/iris/zoom gear, carefully following the instructions on page 13.
2. If performing an auto-calibration, simply tap the AUTO button (D).
3. If performing a manual calibration, refer to Quick Start guide (page 7).

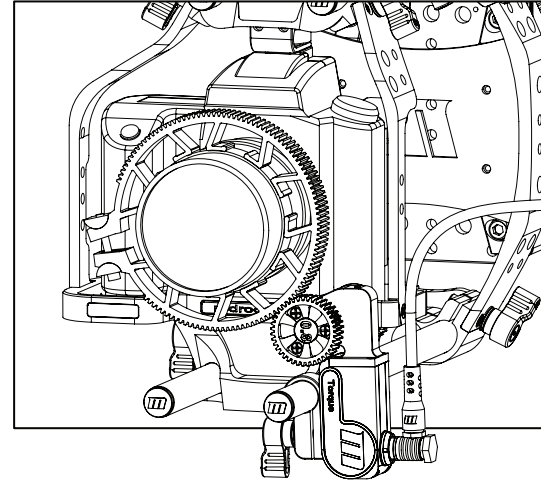


Torque Motor™



The Torque Motor is designed with a small footprint, making it perfect for compact rigs but powerful enough for almost any set-up. The Torque Motor comes with a 15mm rod mounting clamp. It can be mounted in any position necessary to achieve optimal performance and usability.

- A Control cable port
- *Note direction of cable elbow.
- B Reversible drive gear
- C 15mm rod clamp
- D Adjustable ratcheting thumb screw



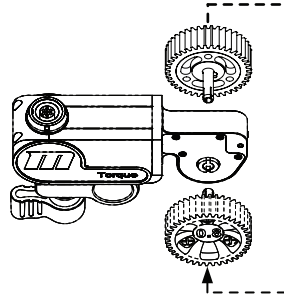
Mounting to Your Rig

Loosen the motor thumb screw, which loosens both the 15mm clamp and the vertical height adjustment mechanism. Engage the teeth of the motor drive gear with the teeth of the lens or lens gear **without applying any pressure. Mounting the gear too tightly may affect its performance and noise.** Tighten the 15mm clamp. The motor can also be mounted upside-down to create a larger distance between the rail and the drive gear.

Flipping the Gear

To accommodate almost any lens you shoot with, the Torque Motor drive gear is functional on both sides.

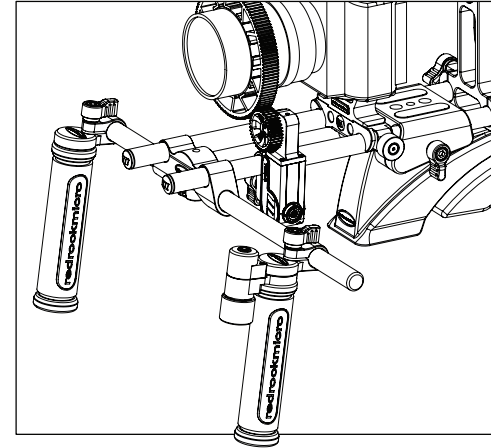
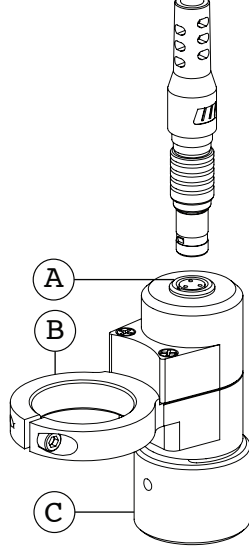
Simply pull the gear out, position it on the opposite side, line up with peg, and push firmly into place. **Make sure drive gear is fully seated and engaged before using.**



Fingerwheel Controller

The Fingerwheel controller mounts to Redrock Micro handgrips as well as any other .878" diameter rails. Once mounted to a handgrip, the Fingerwheel controller allows you to support your rig and pull focus simultaneously. It can be mounted on any handgrip on your rig, in any position.

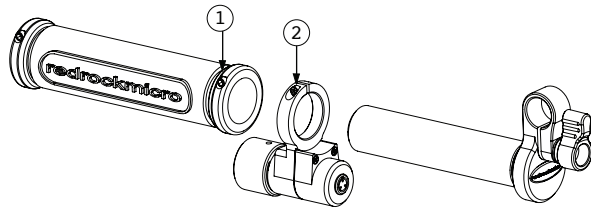
- A Control cable port
- B Handgrip mounting clamp with 3/32" allen screw
- C Focus control knob



Mounting to Your Rig

Once the Fingerwheel is mounted to your handgrip, attach the handgrip to your rig in the right or left handed position. Route the cable to the direct port on Basestation using microTies™ for a cleaner/safer installation.

If you already own the microRemote Handheld system, fingerwheel control can be achieved by purchasing part # 8-114-0004 (Fingerwheel controller add-on option).



Mounting to a microHandgrip

Loosen the handgrip clamp screw (1) with a 3mm hex wrench and slide blue grip off stud. Loosen the Fingerwheel clamp screw (2) and slide onto stud as shown. Tighten in place. Slide blue grip back onto stud and tighten.

Reversing Motor Direction When Using Fingerwheel

When using the Fingerwheel and reversing motor direction is desired, tap the SET button on the Basestation (page 10). This will reverse direction of the lens. Tap SET button to return to original direction.

Advanced Features

microGain Matrix

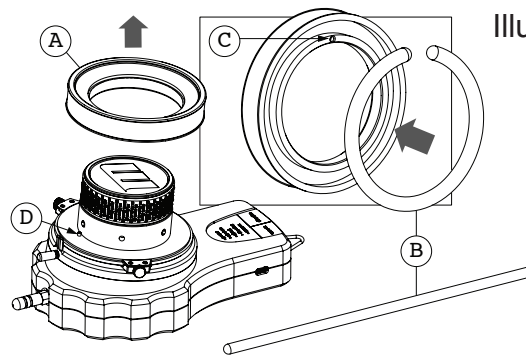
The microGain Matrix allows you to customize the sensitivity of your microRemote to better accommodate your personal touch. The Motor's torque power is inversely related to the smoothness of its revolutions. Use the UP and DOWN arrows on the Basestation (page 10) to find a setting that works best for you.

Example: If you have set the Basestation at a high torque setting, the control knob will be very sensitive and may result in more jerky movement. Inversely, if you have the Basestation set very low for maximum smoothness, the motion of the control knob may not be as responsive to subtle hand movements.



Setting the Gain

Before adjusting the gain, perform a lens calibration taking care not to apply too much pressure to the lens gear from the motor. The Basestation comes set from the factory at the optimized setting 5. To adjust the gain, tap either the UP (C) or DOWN (F) (see diagram on page 10). After each tap the red LEDs will indicate the current setting by blinking in succession. Example: If you are at setting 3, the LEDs will blink three times. Allow for the succession of flashes to complete before tapping either up or down again. Controller will be unresponsive during the blinks.



Illuminated Marking Disk

Remove the marking disk (A) from the Handheld by simply pulling it straight off. Snap an illuminating flare (B) to initiate glow, and flex until it glows evenly throughout. Bend flare into a circle and push it into place in the inside ring of the marking disk. When putting the illuminated marking disk back into place on the Handheld, **make sure that the guide hole (C) lines up with the guide pin (D).**

Radio Channel Selector



As with any remote control device, you may find your microRemote picking up radio interference and may have to switch to another channel. When changing the radio channel selector dial, **make sure to set the Basestation and Handheld units to the same channel.** Use a flat-head screwdriver to turn the dial to desired channel. Cycle power (Basestation and Handheld) after channel change.

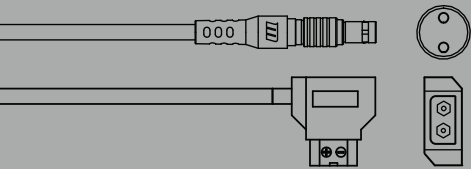
If you already know the RF Channel you want to use, consult the chart at the right to see how the microRemote corresponds with RF Channels.

Remote Channel	RF Channel
0	11
1	12
2	13
3	14
4	15
5	16
6	17
7	18
8	19
9	20
A	21
B	22
C	23
D	24
E	25
F	26

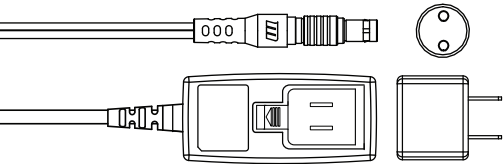
Cable Guide

We strongly recommend the use of Redrock Micro cables when connecting your remote gear. This will help ensure safe, reliable use. This guide will help you choose the right cables.

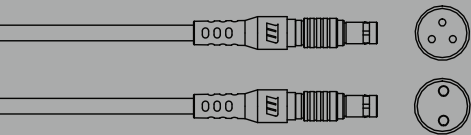
*As of February 2013 all remote system units ship with 2 pin power connectors. If you received your unit before then, it may contain 6 pin power connectors. Please contact customer support if you require replacement cables.



2 pin / D-tap Power Cable
Connects Basestation to battery
part # 2-100-0035

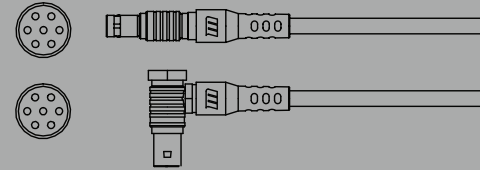


2 pin / Wall Adaptor Power Cable
Connects Basestation to wall outlet
part # 2-100-0034

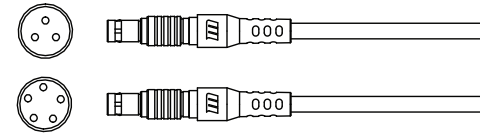


3 pin / 2 pin Power Cable
For use with powerPack
part # 2-100-0036

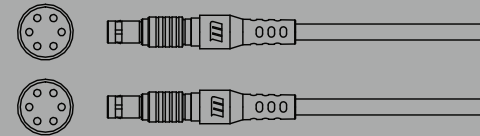
7 pin Motor Cable
Connects Motor to Basestation
part # 2-100-0011



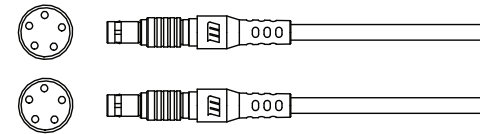
3 pin / 5 pin Fingerwheel Cable
Connects Fingerwheel to Basestation
part # 2-100-0025



6 pin Accessory Cable
Connects microTape to Basestation.
part # 2-100-0010



5 pin Direct Cable
Connects Handheld to Basestation for
tethered control.
part # 2-100-0012



Troubleshooting

Handheld/Basestation Wireless Communication:

Check that the Wireless Indicator LED is illuminated on the Handheld. If the Handheld is communicating with the Basestation, the light will be on. *Note: wireless communication overrides any directly connected devices (i.e. Fingerwheel).*

1. Check / replace Handheld batteries (page 9). Fast blinking LEDs indicate low batteries.
2. Power off the Handheld and Basestation. Power up the Basestation first, then the Handheld.
3. Check all cable connections and make sure they are in their correct port and fully plugged in.
4. Make sure Handheld and Basestation antennae are tightly fastened.
5. Confirm Handheld and Basestation are on the same RF channel (page 17).
6. Check for RF/WiFi interference. If interference is present, select an alternate RF channel on Handheld and Basestation (page 17).
7. Make sure you have properly performed a lens calibration (page 7, 11).
8. To eliminate the possibility of hardware issues, attempt a Direct Connect to test system function. (Direct connect cable part #2-100-0012) If there is full system function in Direct Connect Mode, contact support for further wireless diagnostics.

Handheld/Basestation Tethered Communication:

In tethered mode the Wireless LED on the Handheld will be off and the Direct LED on the Handheld and the Basestation will be on. *Note: wireless communication overrides any directly connected devices (i.e. Fingerwheel).*

1. Check / replace Handheld batteries (page 9). Fast blinking LEDs indicate low batteries.
2. Power off the Handheld and Basestation. Power up the Basestation first, then the Handheld.
3. Check all cable connections and make sure they are in their correct port and fully plugged in.
4. Make sure you have properly performed a lens calibration (page 7, 11).

Motor:

Communication Issues

1. Make sure you are using the right cable (part #2-100-0011) and that it is fully plugged into the motor port on the Basestation.
2. Make sure you have properly performed a lens calibration (page 7, 11)

Motor Function

1. Motor won't calibrate
 - a. See Motor Communication section above.
 - b. See page 13 to ensure your motor is properly set up.
 - c. Adjust microGain until successful calibration (page 16)
2. Motor is loud, jittery and/or unresponsive
 - a. Check your power supply. (**minimum 12VDC, 3A. maximum 18VDC, 3A**)
 - b. Make sure the drive gear is properly seated (Flipping the Gear, page 12).
 - c. See page 13 to ensure your motor is properly set up.

Basestation:

1. See the appropriate communication section at the left for Basestation communication issues.
2. Motor attempts but fails to calibrate: red flashing lights on Basestation.
 - a. This occurs when the lens requires more torque than is available. Check to make sure your lens is not jammed or the motor is not in a bind with the lens gear. Once checked, perform a lens calibration (page 7, 11).
 - b. Adjust the microGain Matrix one increment at a time until a successful calibration has been performed (page 16).
 - c. Attempt a calibration with the motor off the lens. Press AUTO, count to three, stop the drive gear from turning, release. The motor will change direction. Count to three again, stop the drive gear from turning, release.

Troubleshooting Checklist

Most potential issues that you may encounter with your microRemote system can be solved by reviewing this list and the diagram on the opposite page.

- Power cycle system
- Battery is charged in handheld, battery for basestation, battery mount
- Check that all wires are plugged in to correct ports and fully seated (page 6, 18, 19)
- Make sure lens is calibrated properly (page 7, 11)
- Check that microGain setting is not too high or low (page 16)
- Check for interference (page 17)
- Make sure wireless channel matches on handheld and basestation (page 17)
- Make sure lens gear and motor gears are properly meshed (page 13)
- Calibrate after any lens change or motor reposition (page 11)
- Make sure hard stops on handheld unit are not stopping movement (page 9)

If you are still experiencing issues with your microRemote after consulting the Troubleshooting solutions please contact Redrock Support toll free at 1-888-214-3903 or support@redrockmicro.com.

