Product Overview:

The Tiltamax Nucleus-M Wireless Follow Focus System:

- Made for industry professionals
- Quick, Easy, and Reliable precision control of Focus, Iris, and Zoom
- Compatible with Cine Lenses and Photo Lenses
- Ambidextrous FIZ Unit design
- Ergonomic Handle grips
- Low Noise High Torque Motors
- Compact and Modular
- Multi-Channel System

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Disclaimer:

1. Please read this disclaimer before use
2. User is responsible for operation and consequences of operation
3. Tilta is not responsible for any modification made by the user to software or hardware
   which may cause immediate or prolonged measurable damage to the unit
4. For additional troubleshooting please call us at:
   International: +86 4006 1998 67
   North America: +1 818 561 4991
# Technical Specifications

<table>
<thead>
<tr>
<th>Total Weight</th>
<th>Case Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>4167g (including battery handle)</td>
<td>330<em>280</em>150mm</td>
</tr>
</tbody>
</table>

## FIZ Hand Unit

- **Dimensions**: 142*90.5*70mm (L*W*H) |  
- **Weight (with battery)**: 430g |  
- **Operating Frequency**: 2.4G |  
- **Max Transmission Distance**: Main handwheel 150-300M, handle 75-150M, maximum distance with amplifier 2000M |  
- **Emission Power**: 30MW~100MW / 100MW~800MW (Additional Long Distance Module) |  
- **Current**: 0.15A |  
- **Voltage**: 7.2V (EXT: 7.2V~14.8V) |  
- **Battery Type**: 18650 |  
- **Operating Temperature Range**: -20°C~+50°C |  
- **Ideal Environment**: Dry climates, avoid condensation in high humidity.

## Motor

- **Dimensions**: 114*92*30.7mm (L*W*H) |  
- **Weight (with battery)**: 225g |  
- **Operating Frequency**: 2.4G |  
- **Max Receiving Distance**: 500M (unobstructed and upgradable to 2000M) |  
- **Emission Power**: 30MW~100MW / 100MW~800MW (Additional Long Distance Module) |  
- **Current**: Quiescent Current : 0.10A/14.8V  
  Conventional Current : 0.5A/14.8V  
  Locked Rotor Torque Current: 2.8A/14.8V |  
- **Voltage**: 7.2V~24V |  
- **Red Compatibility**: 15mm/19mm |  
- **Noise**: 15db |  
- **Gear**: Module: 0.8  
  Teeth: 39 |  
- **Operating Temperature Range**: -20°C~+50°C |  
- **Ideal Environment**: Dry climates, avoid condensation in high humidity.

## Handles

- **Dimensions**: 85*59.5*175.5 mm (L*W*H) (including thumb unit)  
  85*51*175.5 mm (L*W*H) (not including thumb unit) |  
- **Weight (with battery)**: 340g / 355g (including thumb unit) |  
- **Current**: 0.1A |  
- **Voltage**: Battery: 7.2V (EXT: 7.2V~14.8V) |  
- **Battery Type**: 18650 |  
- **Operating Frequency**: 2.4G |  
- **Emission Power**: 10MW~100MW |  
- **Max Transmission Distance**: 10M~100M |  
- **Operating Temperature Range**: -20°C~+50°C |  
- **Ideal Environment**: Dry climates, avoid condensation in high humidity.

---

## Standard Packing List

<table>
<thead>
<tr>
<th>X2</th>
<th>X4</th>
<th>X2</th>
<th>X2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIZ Wireless Hand Unit</td>
<td>Left Wireless Handle</td>
<td>Right Wireless Handle</td>
<td>Wireless Motor</td>
</tr>
<tr>
<td>Follow Focus Marking Disk</td>
<td>740mm P-TAP Power Cable</td>
<td>Straight 180mm Motor Cable</td>
<td>Straight 296mm Motor Cable</td>
</tr>
<tr>
<td>Handle to Arri Standard Rosette Adaptor</td>
<td>Handle to Gimbal Bar Adaptor (25mm/30mm diameter)</td>
<td>Follow Focus Ring</td>
<td>Battery Charger</td>
</tr>
<tr>
<td>FIZ Unit Lanyard</td>
<td>Motor Antenna</td>
<td>Waterproof Safety Case</td>
<td></td>
</tr>
</tbody>
</table>

---

## Optional Accessories

- Quick Release Handgrip Bridge  
- Wireless Motor  
- Run/Stop Cable  
- Universal Gimbal Ring Adaptor w/ Rosette  
- Motor Antenna  
- 0.4/0.5/0.6 Gear  
- Left Handle Thumb Joystick Unit  
- 740mm P-TAP Power Cable  
- 740mm 2pin Lemo Cable 740mm  
- Universal Gimbal Ring Adaptor  
- Battery Charger  
- Straight 296mm Motor Cable  
- Straight 180mm Motor Cable  
- Long Distance Wireless Module

For More Information Please Visit: www.lillfa.com
Component Functions

FIZ Hand Unit

1. ZOOM Joystick
   Zoom Controller
2. REC Button
   Activate Run/Stop
3. FUNCTION Button
4. DELETE Button
5. MARKER Button
   Make Marks
6. CALIBRATE Button
   Hold to Calibrate Range of Lens
7. MENU Button
   Enter Main Menu
8. UP Button ▲
   Upward Selection
9. DOWN Button ▼
   Downward Selection
10. ENTER Button

11. USB port
    For Data Transfer and Updating Firmware
12. EXT port
    Power and Communication In/Out
13. IRIS Wheel
    Iris Controller and Control Zoom Speed
14. L6650 Battery Compartment Latch
15. Battery Compartment Button
    Push to open Battery Compartment latch
16. Light Sensor
    Adjusts Key LED and Screen Brightness
17. POWER Button
18. Lanyard Attachment
19. FOCUS Knob
    Focus Controller
20. Attachment Bracket

Firmware Update

FIZ Unit

Firmware updates are first downloaded to the FIZ Unit by connecting it to a Mac or PC via MicroUSB cable. The FIZ unit will appear on the computer as an external drive called “Tilta.” Drag the files into the FIZ and unplug. Now follow the images below to update the FIZ Unit itself.

Handles

Use the 7-pin to 7-pin LEMO cable to connect the FIZ to a Handle and on the FIZ, repeat the following steps to update the Handle. Repeat this process for the other handle.

Motors

Use the 7-pin to 7-pin LEMO cable to connect the FIZ to a Motor and on the FIZ, repeat the following steps to update the Motor. Repeat this process for the other motors.

You are able to control the motors and their specifications by TILTA APP instead of handwheel and handles.

This function will be available later through APP.

For more information on the: Nucleus-M Wireless Follow Focus System
Visit the product page on our website: www.tilta.com
Double click [MENU], select "Joystick SPD.", double click [MENU] to enter, and use ▼ to select Joystick SPEED - values from 1-99, with 99 being the fastest and 1 being the slowest setting.

9. ZOOM/SPEED
When Motor No. on the Knob is "0", the Knob is used as the Speed Controller for the Zoom.

When Knob is assigned a Motor Number from 1 thru 4, speed must be changed in the menu; however a snap zoom or "Zip" can still be performed by holding down the front [AB] - this will instantaneously multiply the current speed value by 5 when using the Zoom Joystick.

10. Factory Reset
Double click [MENU], select "RESTORE", double click to [ENTER], Double click ▼ to restore to factory default settings.

11. Calibrate Handle Knob

When does the Handle Knob need calibration?

1) If the motor spins one way then rapidly spins the other way in the same instance.
2) If the Knob is completely rotated to the end and the Knob Rotation Value on the display is not 000 or 999.

Double click [MENU], select "Calibrate Kb", and double click [MENU] to enter. Follow the on-screen directions. Rotate the Knob clockwise to the end for "Minimal", then confirm with double clicking ▼.

Repeat the previous steps for the second calibration.
5. Knob Torque
Double click [MENU], and use the ▼ to select "Knob torque" 30%, 50%, 90% different Knob Motor Torques can be selected.

6. Knob Motor Control Number
Double click [MENU], select "Knob No.", double click MENU button to enter, and use ▼ to select Motor Number. Setting Knob No. to '0' prevents a signal transmission.

7. Knob Motor Direction
Double click [MENU], select "Knob Dir.", double click [MENU] to enter, and use ▼ to select Knob Motor Direction. "CW" is "Clockwise." "CCW" is "Counter Clockwise."

8. Joystick
Double click [MENU], select "Joystick No.", double click [MENU] to enter, and use ▼ to select Joystick Motor Control No. Setting Joystick No. to "0" prevents a signal transmission.

Controller:
01. RECORD Button
   Activate Run/Stop
02. FOCUS / IRIS Knob
03. Knob Degree Adjustment Switch
   Rotation Settings: 85, 180, 310 Degrees
04. MENU Button
   Enter Main Menu
05. LCD Display
06. EXT Port
   Power and Communication in/Out

Optional: Left Handle Thumb Joystick Unit
5. Motor Information
Double click MENU, select "INFORMATION" to check Motor Information

6. Factory Reset
Double click [MENU], select "RESTORE", [ENTER], double click ▼ to confirm

Handles

1. Home Screen

2. Setting the 2.4G
Double click [MENU] select "Wireless", [ENTER] and select 2.4G with ▼. Press ▼ to return to the Home Screen

3. Changing the Channel
Double click [MENU] select "Channel", [ENTER] and select Channel Number with the ▼. Press ▼ to return to the Home Screen

4. Run / Stop
Properly attach a Run/Stop cable. Click ▼ on the top of the Handle. If "STBY" on the display changes to ▼, the recording has commenced

Controller :
01. RECORD Button
Activates Run/Stop

02. FOCUS / IRIS Knob

03. Knob Degree Adjustment Switch
3 Rotation Settings: 85, 180, 310 Degrees

04. MENU Button
Enter Main Menu

05. LCD Display

06. EXT Port
Power and Communication In/Out

07. ZOOM Joystick
The ZOOM Distance can be controlled

08. Battery Compartment Button
Push to open Battery Compartment Latch

09. 18650 Battery Compartment Latch

10. Knob A-B Marker Button
Creating Close Focus and Infinity Focus Marks

11. Joystick A-B Marker Button
Creating Close Focus and Infinity Focus Marks

12. Z LED
Joystick LED Indicator

13. F LED
Knob LED Indicator
Attaching the Motor to a DSLR Camera

Add the follow focus ring to the lens. Secure it tightly. Make sure the fastener is not in a position where the motor’s gear will hit it during it’s calibration run.
Once the follow focus ring is on the lens, follow the same steps for calibration as if it were a cine lens.

Note: If the lens already has a 0.8 gear or has been modified to have one, then the motor can be attached and calibration can begin just as if it were a cine lens.

Inserting the Batteries

Installing the Batteries in the FIŻ
Hold the FIŻ Unit. Push the [Open]. The battery compartment latch will release. Place (2) 18650 Batteries in any direction and then close the latch.

Installing the Batteries in the Handles
Hold the Handle. Push the [Open]. The battery compartment latch will release. Place (2) 18650 Batteries in any direction - as long as positive and negative ends on the batteries touch - and then close the latch.

10. Calibrate FIŻ Knob
Click the [MENU], highlight “FUNCTION”, and click [ENTER]. Highlight “Calibrate Knob” and [ENTER]. Follow the on screen directions. Rotate the Knob clockwise to the end for “Minimal”, then confirm with [ENTER]. Repeat the process until FIŻ Knob calibrates.

Motor

1. Home Screen

2. Setting 2.4G
Double click the [MENU], select “Wireless”, [ENTER] Button, and use the ▲▼ to pick between the 2.4G settings.

3. Changing Channel
Double click the [CH-] to decrease the Channel number or double click the [CH+] to increase the Channel number.

4. Changing Motor Number
Double click the [MENU], select “Motor No.”, [ENTER], and use the ▲▼ to assign a Motor Number.
2 Setting and Deleting Marks

The FIZ unit can create up to 10 "soft" marks. Rotate the Focus Knob to the desired mark. Double click the [MARK] on the side of the FIZ Unit to set a mark. The mark will appear as a letter. Rotate the Focus Knob to the next desired position and then double click the [MARK] to create another marker. Vibrations will occur when marks are passed along the Focus pull. Double clicking the [DEL] will erase markers in reverse alphabetical order.

8. Factory Reset

Press the [MENU], highlight "System", [ENTER], highlight "Factory Reset", and [ENTER].

9. Adjusting the Zoom with the Speed Controller Setting

Set the Iris to "0" by having no Motor No. synced to the Iris controller on the FIZ. The Home Screen will now show an "S" where "I" used to be. "S" refers to speed. Now the speed of the Zoom controller can be changed by spinning the Iris wheel controller on the FIZ.

If the Iris is set to a Motor No. of 1-4, speed can be controlled by double clicking ↑↓. The speed range will increase or decrease by increments of 1 with a range from 1-99, where 99 is the fastest and 1 is the slowest setting.

To perform a snap zoom or "ZIP", hold down ↑ while using the Zoom Joystick Zoom, hold ↓ while using the Zoom Joystick, dividing the current speed value by 10.

⚠️ When does the FIZ Knob need calibration?

1) If the FIZ Knob has been rotated to end and this icon does not reach the end of the display bar
2) If the motor spins one way then rapidly spins the other way in the same instance
Motor: Power Supply and Run/Stop
Each Motor has (1) EXT-1 port and (1) EXT-2 port
Both ports can Power In/Out as well as control Run/Stop

1. Power can be sent directly to the Motor and/or daisy-chained from Motor to Motor

2. A single cable can be used to power the motor and activate the camera’s R/S, if the camera port is capable of power out and R/S - such as the 3-pin LEMO ports on the Tilta Alexa Mini and RED DSMC2 Cages

For Example:
ARRI XT-RS port
TILTA FOR ALEXA MINI Cage - 14.8v 3pin R/S port
TILTA FOR RED DSMC2 Cage - 14.8v 3pin R/S port

if Camera Port is not capable of both R/S and Power out, then separate cables must be used to achieve motor power supply and R/S (see image below)

3

1. Connect Motor to Motor via motor connection cable through its EXT-1 to the other motor’s EXT-2 port
2. Use the P-TAP cable to provide power from the battery to a motor through its EXT-1 port

* Use either the straight 296mm cable or the straight 180mm cable to connect the motors according to your needs

5. Changing the Torque of Motors
Click on the [MENU] to enter the menu system. Use ▲▼ to highlight “Motor” and [ENTER]. Highlight “Focus”, [ENTER]. Highlight “Torque”, [ENTER]. Three options will appear: High, Medium, and Low - highlight and select the desired Torque value. Click enter and a confirmation will appear as a check mark. Press the [MENU] till the Home Screen appears

6. Syncing the Motor
Click on [MENU] enter the menu system. Use ▲▼ to highlight “Motor” and [ENTER]. Highlight “Focus”, [ENTER]. Highlight “SYNC”, [ENTER]. Three options will appear: Motor 1, Motor 2, Motor 3 - highlight and select the desired Motor. Click enter and a confirmation will appear as a check mark. Press [MENU] till the Home Screen appears

7. Setting Hard Stops / Limits
Hard Stops/Limits can be made on the FIZ unit. Position the Knob to the desired [A] Mark. Hold down [MARK] . With the [MARK] held down, rotate the Knob to the desired [B] Mark. Release [MARK] when finished. Confirmation is defined by a vibration. The limited range selected will expand to the entire throw of the Knob. Below the limited range is identified by the white bar. Hold the [DEL] to delete the Hard Stops/Limits

Warning: If the motors are already connected to the camera through a R/S with Power Output port (as seen in Fig 1) an additional power cable will cause the motors to shut down
Nucleus-M: Shoulder Mount Assembly

4. Change the Language
Click on [MENU] to enter the menu system. Use ▼ to highlight “System”. Highlight “Language” and choose the language as needed by clicking [ENTER]. A confirmation will appear as a check mark. Push [MENU] repeatedly to return to the Home Screen.

5. 2.4G and CHANNEL
Click on [MENU] to enter the menu system. Use ▼ to highlight “Wireless”. Highlight “2.4G”. Pressing [ENTER] will change the 2.4G Setting. Use ▲ to change the Channel. Use ▼ to change the High, Medium, and Low Torque value.

4. Run/Stop
Properly attach the R/S cable to the camera. Click on the left side of the FIZ Unit. On the display, “STBY” will turn into . A vibration will notify the AC that recording has begun.
1. Slide the Motors into position under the lens gear. When using the Nucleus-M on a gimbal or drone it is recommended to place one motor on each side to maintain the camera's equilibrium.

2. Creating and Deleting Hard Stops from the Handle

2.1 Creating Hard Stops / Limits via Knob controller

Hard stops can be set on the Handles' Knob. Rotate the Knob and double click on the front [A6] to set [A] Mark. The mark has been confirmed when the “F” LED blinks green. Rotate the Knob to the next mark and double click [A8] to set a [S] Mark. The “F” LED will glow solid green. Now the full 360 degree throw of the Knob controller will reflect [A] to [S] Mark. To delete the hard stops, double click on [A8] again. The “F” LED will turn off.

2.2 Hard Stops / Limits via Thumb Unit / Joystick controller

Hard stops can be set on the Handles' Joystick. Position the joystick and double click on the thumb unit’s [A3] to set [A] Mark. The mark has been confirmed when the “Z” LED blinks red. Position the joystick to the next mark and double click [A8] to set a [S] Mark. The “Z” LED will glow solid red. Now the full throw of the Joystick controller will reflect the [A] to [S] Mark. To delete the hard stops, double click on [A8] again. The “Z” LED will turn off. On the Joystick, the speed from which [A] to [S] Marks are reached is determined by the Speed controller, when iris has been assigned to “O”.

Long Distance Wireless Module (Sold Separately)

Original chips manufactured in America allow for a wireless range boost of up to 2000 meters.
Setting the Range & Hard Stops on Handles

1. Setting the Rotation Degree on the Knob
Some lenses have long focus throws. To compensate for this, the Handle’s knob can be set to various rotational degrees. Both the left and right handles can change their rotational degrees. Shortening the knob’s rotational degrees will shorten long focus throws by making the motor speed up and vice-versa; long knob degrees can be used on short focus throws. There are 3 ranges that can be chosen. The following directions pertain to the Right Handle. When using the Left Handle, the knob’s spin direction will be reversed.

Pull [RANGE] ↓. The letter “L” will appear on the Handle’s display. “L” or “Long” sets the knob to the longest distance it can rotate from left to right, 310 degrees. The motor will move slowly in this setting.

Pull [RANGE] ↓. The letter “S” will appear on the Handle’s display. “S” or “Short” sets the knob to the shortest rotational distance, 85 degrees.

Pull [RANGE] ↓. The letter “M” will appear on the Handle’s display. “M” or “Medium” sets the knob to 180 degrees.

Handle to Gimbal Bar Assembly

3.1
1. Use Allen Key to screw down the Gimbal Bar Adaptor into the handle.
2. Attach Gimbal Bar Adaptor from Handle to the Gravity Gimbal Bar and secure connection via thumb screw.

Handle to Universal Gimbal Adaptor with Rosette Assembly

3.2
1. Use Allen Key to screw down the Arri Standard Rosette Adaptor into the handle. Attach Arri Standard Rosette from handle to the Universal Gimbal Adaptor with Rosette and secure connection via large thumb screw.
2. Attach Universal Gimbal Adaptor to Gimbal Ring. Repeat for opposite side.

The Universal Gimbal Adaptor is optional. Bushings are also available for Freefly and DJI Gimbals.
2. Calibrating from the Motor

2.1 Setting the Auto CAL Mode

When the Motor is powered on, the following screen may appear.

![Start calibrate screen](image)

This screen is dependent on the “Auto CAL Mode.” This auto calibration setting can be found in the Motor’s menu. Use ▲▼ to select “Auto CAL Mode.” Toggle between the 3 options pictured below.

The “Manual Start” setting will prevent the Motor from calibrating when initially turned on. The “Auto Start After 3 Secs” setting will automatically trigger calibration after 3 seconds when initially turned on. The user has 3 seconds to press any button on the motor to cancel the calibration. The “Auto Start Immediately” setting will immediately trigger calibration from the Motor the moment it turns on.

![Calibration modes](image)

Once a calibration mode has been selected the Motor will turn red and calibration will begin. When the Motor’s LED turns white, calibration has finished.

2.2 Single and Multi-Motor Calibration from the Motor

Calibration from the Motor can happen at anytime, simply hold down [CAL] and release.

Two options will appear: “CALIBRATE THIS” and “CALIBRATE ALL.” “CALIBRATE THIS” will begin calibration on only the motor being programmed. “CALIBRATE ALL” will begin calibration on all motor’s daisy-chained to it. Double click [CAL] to confirm and the motor(s) will begin calibration.

![Calibration options](image)
CALIBRATION

1. Calibration from the FIZ Unit

1.1 Calibration of Lens with Hard Stops

When using cine lenses or modified photo-lenses with follow focus gears and hard stops, calibrate from the FIZ unit by holding down [CAL]. The screen will show a 3 second countdown. Holding down [CAL] on the motor will also trigger a calibration.

Note: By default, the motors are set to the "Manual Start" - Auto CAL Mode. Motors need to be set the "Auto Start" Mode and calibrate on a lens before the CAL button can be used on the FIZ and handles. Doing so in this order will prevent any damage to the lens.

1.2 Calibration of Lens without Hard Stops

Lenses without hard stops need to be manually calibrated. Follow the images below to set manual calibration from the FIZ. For this example, we will calibrate [Focus].

1) Be sure that the Motor is not making contact with the lens gear.
2) Turn the FIZ knob so that it is in the middle of its range.
3) Now, manually position the lens gear to "middle" focus position between close and infinity.
4) Securely attach the Motor to the lenses focus gear.
5) Take the FIZ Unit and press the MENU Button to open the menu system.
6) Highlight and select "FUNCTION".
7) Select "MANUAL CAL". Three options will appear: FOCUS, ZOOM, IRIS.
8) Choose the one in need of calibration according to your needs. In this case select Focus.
9) Follow the directions on the screen. Turn the knob completely counterclockwise and select enter. This sets the close focus.
10) Now follow the directions on the screen once more. Turn the knob completely clockwise, the Motor should pull the lens gear to infinity. Select OK and return to the Main Menu. The Focus should now be properly calibrated.

2. Motor

Turn-on —— Hold [POWER] to Open Main Menu

Turn-off —— 1.1 Hold [POWER] then release, choose the mode Double click [POWER] to confirm
1.2 Hold [POWER] Down for 3 Seconds and then the designated unit will shutdown

3. Handle

Turn-on —— Hold [Red] to Open Main Menu

Turn-off —— Hold [Red] Down for 3 Seconds and then the designated unit will shutdown
Syncing FIZ Hand Unit with Motors

**NUCLEUS-M**

**Note:** The FIZ Unit Channel Number must match one of the daisy-chained Motor Channels. The FIZ Unit defaults to MASTER mode. To use the Handles, set FIZ Unit to SLAVE mode.

1. Setting the FIZ Unit's Channel

   1. From the Home Screen, use [MENU] to open the Menu System.
   2. Use [▲▼] to highlight “WIRELESS,” press [ENTER] to confirm.
   3. With “2.4G” highlighted, press [ENTER] to confirm.

2. Assigning Handle's Knob to Motor

   1. From the Home Screen, double click [MENU] to open the Menu System. Use [▲▼] to select “NOB NO.,” double click [MENU] to confirm.
   2. When a Motor has been assigned a Motor No. that number corresponds to the value that can be selected by the Handle’s Controller. Thus, the Knob Motor Control No. will sync the the Motor assigned that number between 1 and 4. Using a value of “0” prevents any controller connection to a motor.

      - In this case, set the Knob Motor Control No. to 1.

   3. Use [JOYSTICK] to return to the Home Screen. If the Home Screen appears like the image above, then the Motor has been synced with the Knob.

3. Assigning Handle’s Joystick to Motor

   1. From the Home Screen, double click [MENU] to open the Menu System. Use [▲▼] to select “JOYSTICK NO.,” double click [MENU] to confirm.
   2. When a Motor has been assigned a Motor No. that number corresponds to the value that can be selected by the Handle’s Controller. Thus, the Joystick Motor Control No. will sync the the Motor assigned that number between 1 and 4. Using a value of “0” prevents any controller connection to a motor.

      - In this case, set the Joystick Motor Control No. to 2.

   3. Use [JOYSTICK] to return to the Home Screen. If the Home Screen appears like the image above, then the Motor has been synced with the Joystick.
Syncing Handles with Motors

1. Setting the Handle’s Channel

1. From the Home Screen, double click [MENU] to open the Menu System

2. Use the ▲▼ to select “WIRELESS” - double click [MENU] to confirm

3. Use ▲▼ to select “M”. This value represents the “2.4G” or Long Range Value.

4. Use [MENU] to return to the Home Screen, if the Home Screen appears like the image above, then the LORA has been confirmed

5. Use ▲▼ to select “CHANNEL” - double click [MENU] to confirm

6. Use ▲▼ to change the Channel Number. Available Channels range from 00-15. Set the CHANNEL to “02”

7. Use ▲▼ to return to the Home Screen. If the Home Screen appears like the image above, then the Channel has been confirmed

Wireless Mode

Wireless Mode = M

Wireless Channel = 02

Wireless Mode = M

2. Assigning the Motor Numbers to the FIZ Unit

Note: Motors cannot share the same Motor Number. A Motor can identify if its Motor Number is being repeated and will automatically cancel the last Motor Number assigned

1. Press [MENU] to enter the Main Menu

2. Use ▲▼ to highlight “MOTOR” - press [ENTER] to confirm

3. Choose the corresponding controller of the FIZ Unit to the designated function of each Motor.

   For example, pair the Motor on the Focus gear of the lens to the Focus Knob on the FIZ. In this case, that Motor has been assigned as Motor Number 1.

   Highlight “FOCUS” and press [ENTER]

   Torsure
   SYN
   Back Enter

   Motor 1
   Motor 2
   + Motor 3
   Back Set

4. Use ▲▼ to highlight “SYNC” - press [ENTER] to confirm

5. Use ▲▼ to highlight “Motor 1” - press [ENTER] to confirm

6. Repeat Steps 1-5 to assign the Motor and its Motor to the FIZ Unit.

Press [MENU] to return to the Home Screen. If the display looks like the picture above, then all 3 Motors have been synced properly.
3. Setting the Motor’s Channel

1. From the Home Screen, double click [MENU] to open the Menu System

2. Use ▲▼ to highlight "Wireless" - double click [ENTER] to confirm

3. Continue pressing [ENTER] until "M" is selected. This value represents the "2.4G" or Long Range Value:
- **MAX**: Further Wireless Distance, High Power Consumption
- **M** Medium: Recommended Wireless Distance, Average Power Consumption
- **MIN**: Short Wireless Distance, Low Power Consumption
- **OFF**: No Wireless Signal Transmitted (Used when handing RZ and/or Handle to Motor(s))

4. Press [Nxt] to return to the Home Screen

5. Double click ▲▼ to change the channel.

Set the Channel to "01" then press [MENU] to return to the Home Screen. If the display looks like the image on the left, then the Motor Channel has been set

4. Setting the Motor’s Motor Number

For the purposes of this tutorial, if the Motor is not assigned to Motor No. 1, it will not be synced with the FIZ’s focus knob controller.

1. From the Home Screen, double click [MENU] to open the Menu System

2. Use ▲▼ to highlight "MOTOR NO.": double click [ENTER] to confirm

3. Use ▲▼ to assign the Motor a number between 1 and 4.

   In this case, set the Motor No. to 1, corresponding to the focus on the FIZ

4. Press [MENU] to return to the Home Screen. If the display looks like the image above then the Motor Number has been set.

   Lastly, repeat the steps above to match the corresponding Motor No. 2 and 3 with the FIZ Unit controller.

5. Switching between the FIZ Unit and Handles for Control of Motors

   By default the FIZ Unit has priority control over the Motors. To release the FIZ Unit’s control and give the Handles priority control, double click on the FIZ Unit’s [FUNC]. If “SLAVE” appears on the Home Screen display, this is confirmation that the handles now have priority control over the Motors.

   Recalibration is not necessary, but be sure to assign a controller and do not attempt to control one motor with the FIZ and Handle simultaneously.

   The FIZ Unit defaults to MASTER mode. To use the Handles, set FIZ Unit to SLAVE mode.

   Double Click [FUNC] on the FIZ Unit to switch between Master and Slave Modes.

   When the display reads "Master" the FIZ Unit has priority control over the Motors.

   When the display reads "Slave" the Handles have priority control over the Motors.

   For the purposes of this tutorial, let’s keep the FIZ in Master mode.