

# **MATRIX**

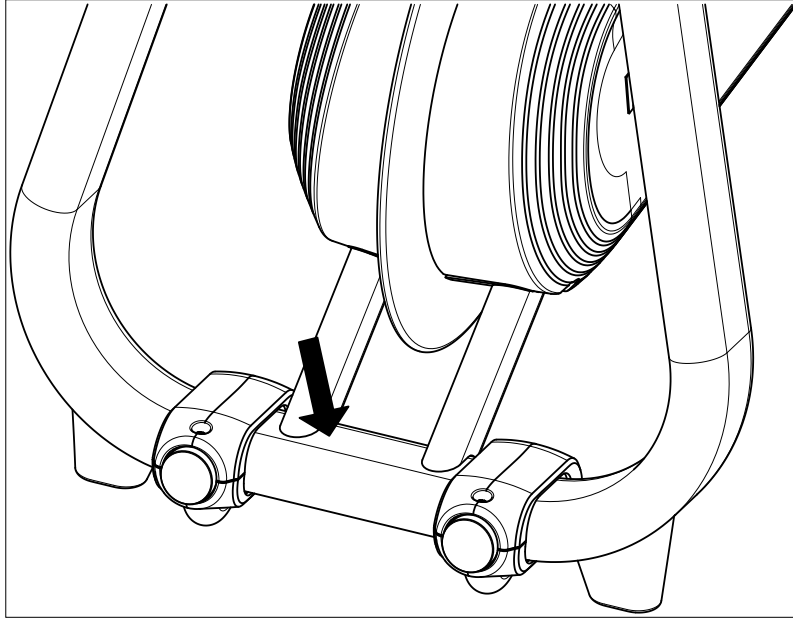
**ROWER-02 (AR11)  
SERVICE MANUAL**

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### 1.1 SERIAL NUMBER LOCATION

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## CHAPTER 2: IMPORTANT SAFETY INSTRUCTIONS

### 2.1 READ AND SAVE THESE INSTRUCTIONS

This Rower is intended for commercial use. To ensure your safety and protect the equipment, read all instructions before operating the MATRIX Rower.

Use the Rower for its intended purpose as described in this manual. Do not use attachments that have not been recommended by the manufacturer.

Never drop or insert any object into any opening in the product. If an object should drop inside, carefully retrieve it while the unit is not in use. If the item cannot be reached, contact Matrix Fitness or authorized dealers.

Never operate the Rower if it is not working properly, or if it has been damaged or immersed in water. Return it to Matrix Fitness or authorized dealers for examination and repair.

Keep hands and feet clear at all times from moving parts to avoid injury.

Do not reach into, or underneath the unit, and do not tip the unit on its side during operation.

Do not use the Matrix Rower outdoors, near swimming pools or in areas of high humidity.

Do not operate where aerosol (spray) products are being used or when oxygen is being administered.

Do not remove the side shrouds. Service should only be done by an authorized service technician.

Close supervision is necessary when used near children, invalids or disabled people.

When the Rower is in use, young children and pets should be kept at least three meters / ten feet away.

Assemble and operate the unit on a solid, level surface. Place the unit at least one meter / three feet of clearance from any obstructions, including walls and furniture.

Do not wear any clothing that might catch on any moving parts of this Rower.

Place handle in hooks before letting go.

Do not let handle fly into console bracket.

Perform proper maintenance as described in the Maintenance section of this manual.

**CAUTION:** If you experience chest pain, nausea, dizziness or shortness of breath, STOP exercising immediately and consult a physician before continuing.

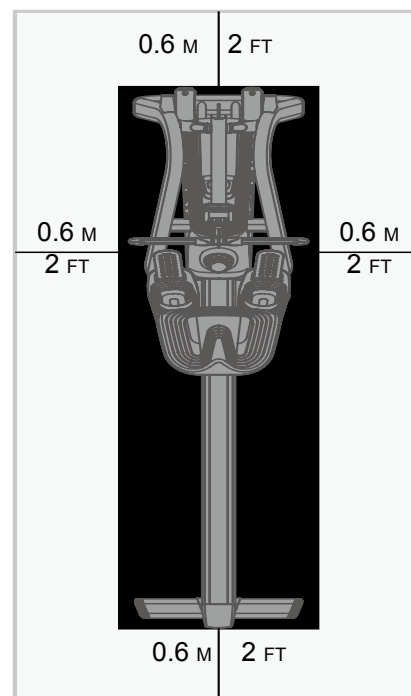
**CAUTION:** Any changes or modifications to this equipment could void the product warranty.

### 2.2 LOCATING THE UNIT

#### LOCATION OF THE UNIT

Place the equipment on a level and stable surface away from direct sunlight. The intense UV light can cause discoloration on the plastics. Locate your equipment in an area with cool temperatures and low humidity. Ensure a minimum clearance width of 0.6 meters (24") for access to and passage around MATRIX equipment. Please note, 0.91 meters (36") is the ADA recommended clearance width for individuals in wheelchairs. Do not place the equipment in any area that will block any vent or air openings. The equipment should not be located in a garage, covered patio, near water or outdoors.

Store the vertical unit on a solid and level surface.





### 2.3 BEFORE GETTING STARTED

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#### GETTING STARTED

Read the Owner's Manual before setting up the Matrix Rower. Place the unit where it will be used before beginning the setup procedure.

#### CHOOSING A LOCATION

The site should be well-lit and well-ventilated. Place the Rower on a structurally solid flat surface and kept a few feet from the wall or any equipment. If the site has a heavy plush carpet, to protect the carpeting and machinery, you should place a rigid plastic base under the unit.

Please do not place the Rower in an area of high humidity, such as the vicinity of a steam room, indoor pool, or sauna. Exposure to intensive water vapour or chlorine could adversely affect the electronics, as well as other parts of the machine.

#### BEFORE YOUR FIRST ROW

Consult your physician. Be sure that it is not dangerous for you to undertake a strenuous exercise program.

Improper technique such as extreme layback or jumping off the seat can result in injury.

Start each workout with several minutes of easy rowing for a warm-up.

Start your exercise program gradually. Row no more than 5 minutes the first day to let your body adjust to the new exercise.

Gradually increase your rowing time and intensity over the first two weeks. Do not row at full power until you are comfortable with the technique and have rowed for at least a week. Like any physical activity, if you increase the volume and intensity too rapidly, fail to warm up properly, or use poor technique, you will increase the risk of injury.

The best resistance setting for a great cardiovascular workout is in the range of 3-5. Rowing with the resistance setting too high can be detrimental to your training program because it may reduce your output and increase your risk of injury.

Aim for a stroke rate (spm) of between 24 and 30 spm (strokes per minute).

### 3.1 CARE AND MAINTENANCE INSTRUCTION

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DO NOT use any equipment that is damaged and or has worn or broken parts. Use only replacement parts supplied by your country's local MATRIX dealer.

**MAINTAIN LABELS AND NAMEPLATES:** Do not remove labels for any reason. They contain important information. If unreadable or missing, contact your MATRIX dealer for a replacement.

**MAINTAIN ALL EQUIPMENT:** Preventative maintenance is the key to smooth operating equipment as well as keeping your liability to a minimum. Equipment needs to be inspected at regular intervals.

Ensure that any person(s) making adjustments or performing maintenance or repair of any kind is qualified to do so. MATRIX dealers will provide service and maintenance training at our corporate facility upon request.

#### **DAILY MAINTENANCE ITEMS**

Look and listen for loose fasteners, unusual noises, and any other indications that the equipment may be in need of service. If you notice any of these, obtain service.

Matrix Fitness recommends the Rower be cleaned before and after each workout. The following daily maintenance tips will keep your unit operating at peak performance:

Use a damp, soft cloth with water or mild liquid detergent to clean all exposed surfaces. DO NOT use ammonia, chlorine, or acid-based cleaners.

Keep the display console free of fingerprints and salt build-up caused by sweat.

Frequently vacuum the floor underneath the unit to prevent the accumulation of dust and dirt, which can affect the smooth operation of the unit.

Check for dust inside flywheel with flashlight.

#### **QUARTERLY MAINTENANCE ITEM**

Inspect rope for damage, wear, frays and inspect crimp under rubber collar, replace if suspect.

## 4.1 CONSOLE DESCRIPTION

Display feedback	SPM
	Time/500M
	Time
	Distance (Meters, Miles)
	Strokes(same HR place)
	HR
	Watts
	Calories
	Pace boat (Challenge Programs)
	Force Curve (All Programs)



### 5.1 USING MANAGER MODE

The Manager's Custom Mode allows the club owner to customize the Rower for the club.

- 1) To enter Special Mode, please hold the "Up & Down" on the function keypad. Manager Mode will appear on the display (Figure A).
- 2) To scroll through the list of options in Manager Mode, use the button UP and DOWN keys. Each of the custom settings will show on the display.
- 3) To select a custom setting, press the ENTER key when the desired setting is shown.
- 4) To change the value of the setting, use the button UP and DOWN keys.
- 5) To confirm and save the value of the setting, press the ENTER key.
- 6) To exit the setting without saving, press the BACK key.
- 7) Press and hold the STOP key for 3-5 seconds to return to normal operation.



FIGURE A

## 5.2 MANAGER MODE OVERVIEW

Group	Item1	Item2	Default Value	Values/Range	Unit	Notes
Workouts	Maximum Time	-	30	4~99	Minutes	-
	Default Time	-	20	20 Second ~ MAX	Minutes	-
	Pause Time	-	2:00	0:30/1:00/2:00 /3:00/4:00/5:00	Minutes : Second	After x seconds (see black-light), the console should turn off the backlight.
	Default Distance	-	2000	50 ~ 50000	meter	-
User	Age	-	30	10-100	-	-
	Weight	-	150lb/68kg	50lb/23kg ~ 400lb/182kg	-	Default as kg
	Default Height	-	175cm/5'09'	102cm/3'04" ~ 229cm/7'06"	-	Default as cm
	Gender	-	Male	Male/Female	-	-
Unit	-	-	Metric	Metric/Imperial	-	-
Software	Version	Bootload	-	-	-	-
		UCB	-	-	-	-
		Language	-	-	-	-
	Update	UCB	-	-	-	-
		Language	-	-	-	-
General	Accumulate Distance	-	0	0~999999999	-	Mile/Km
	Accumulate Time	-	0	0~999999	-	-
	Accumulate Stroke	-	0	0~999999999	-	-
Language	Default Language	-	English	English, Spanish, Portuguese, German, Italian, French, Dutch, Chinese(T), Chinese(S), Polski	-	List out languages, UP/DN for select, enter for confirm
Machine	Type	-	-	-	-	-
	Serial Number	Console	Prefix+(Type) +YYMM000000	YY-MM-xxxxx	-	Type: B~Z (A not display)
		Frame	Prefix+(Type) +YYMM000000	YY-MM-xxxxx	-	-
	Out of Order	-	OFF	ON/OFF	-	-
LCD	Backlight off	-	30 Second	10 sec ~ 1 Min	-	Based on Hardware, should turn it off when there is no RPM detected for those
	Brightness	Level 1~10	-	-	-	-
	Contrast	Level 1~20	-	-	-	-
Sleep Time	15 sec ~ 5 Min	-	15 Second	15 sec ~ 5 Min	Minute	-

## 6.1 ENGINEERING MODE OVERVIEW

Group	Item1	Item2	Default Value	Values/Range	Unit	Notes
Calibrate	Calibrate	N/A	N/A	N/A	N/A	N/A
Error Codes	Disable/Enable	-	Disable	Disable/Enable	-	-
Watt Formula	Formula 1 Formula 2	-	Formula 1	Formula 1 Formula 2	-	Formula 1: without string watts, Formula 2: with string watts

## 7.1 SERVICE MODE OVERVIEW

Group	Item1	Item2	Default Value	Values/Range	Unit	Notes
Accumulate	Distance	-	Current Value	0~999999	-	Mile/Km
	Time	-	Current Value	0~999999	-	Hour
Configuration	Export from USB	-	-	-	-	Export the console default date to USB
	Import from USB	-	-	-	-	Import the console default date from USB
Factory Default	Reset	-	-	-	-	System come back to Factory Default

## 7.2 TEST MODE OVERVIEW

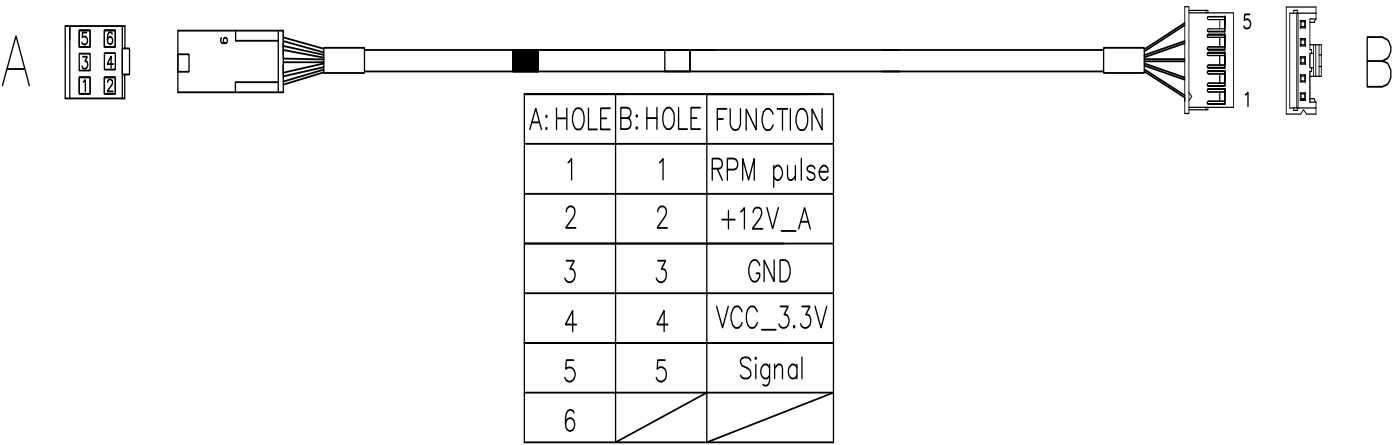
Group	Item1	Item2	Default Value	Values/Range	Unit	Notes
Display	Manual	Line ; Black/ White	-	-	-	Screen test
Keypad	Auto	Line ; Black/ White	-	-	-	Auto Screen test
Generator	-	-	-	-	-	Press any key to test – Press menu 2x to exit
Heart Rate	-	-	-	-	-	Row to test RPMs
Battery	-	-	-	-	-	Heart Rate Test
LCD	Backlight	Off, levels	-	-	-	Console Battery Voltage
	Contrast	levels	-	-	-	Adjust Console Backlight



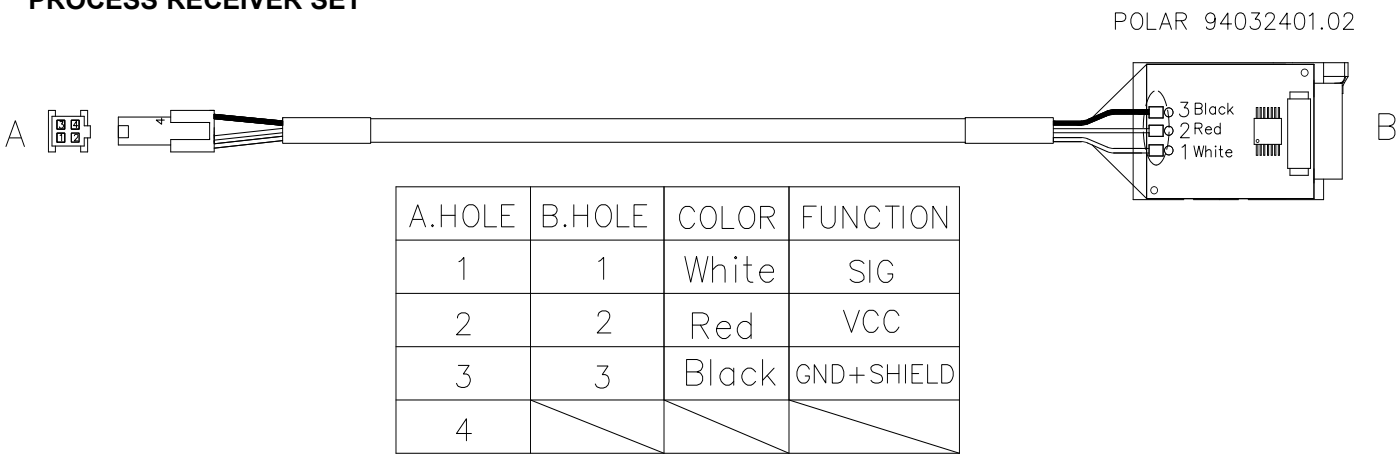
The diagram illustrates the electrical architecture of the ROWER-02 system. It features three main control boards: the POWER CONTROL BOARD (L147A1 AY2) and the CONSOLE CONTROL BOARD (U147A1 AY1), which are interconnected via a multi-pin FPC connector (J7). The POWER CONTROL BOARD is connected to a PULSE RECEIVER SET (F30) and a GENERATOR (P01) through connectors W09 and J1. The CONSOLE CONTROL BOARD is connected to an LCD PANEL (W01) via connector J7, a BATTERY - RECHARGEABLE BATTERY (W03) through connector J2, and a CONSOLE KEYPAD (W02) through connector J5. Signal lines are labeled with their respective functions, such as 1.50V, 2.00V, 3.00V, 5.00V, 1.00V, 1.5V, 2.0V, 2.5V, 3.0V, 3.5V, 4.0V, 4.5V, 5.0V, 5.5V, 6.0V, 6.5V, 7.0V, 7.5V, 8.0V, 8.5V, 9.0V, 9.5V, 10.0V, 10.5V, 11.0V, 11.5V, 12.0V, 12.5V, 13.0V, 13.5V, 14.0V, 14.5V, 15.0V, 15.5V, 16.0V, 16.5V, 17.0V, 17.5V, 18.0V, 18.5V, 19.0V, 19.5V, 20.0V, 20.5V, 21.0V, 21.5V, 22.0V, 22.5V, 23.0V, 23.5V, 24.0V, 24.5V, 25.0V, 25.5V, 26.0V, 26.5V, 27.0V, 27.5V, 28.0V, 28.5V, 29.0V, 29.5V, 30.0V, 30.5V, 31.0V, 31.5V, 32.0V, 32.5V, 33.0V, 33.5V, 34.0V, 34.5V, 35.0V, 35.5V, 36.0V, 36.5V, 37.0V, 37.5V, 38.0V, 38.5V, 39.0V, 39.5V, 40.0V, 40.5V, 41.0V, 41.5V, 42.0V, 42.5V, 43.0V, 43.5V, 44.0V, 44.5V, 45.0V, 45.5V, 46.0V, 46.5V, 47.0V, 47.5V, 48.0V, 48.5V, 49.0V, 49.5V, 50.0V, 50.5V, 51.0V, 51.5V, 52.0V, 52.5V, 53.0V, 53.5V, 54.0V, 54.5V, 55.0V, 55.5V, 56.0V, 56.5V, 57.0V, 57.5V, 58.0V, 58.5V, 59.0V, 59.5V, 60.0V, 60.5V, 61.0V, 61.5V, 62.0V, 62.5V, 63.0V, 63.5V, 64.0V, 64.5V, 65.0V, 65.5V, 66.0V, 66.5V, 67.0V, 67.5V, 68.0V, 68.5V, 69.0V, 69.5V, 70.0V, 70.5V, 71.0V, 71.5V, 72.0V, 72.5V, 73.0V, 73.5V, 74.0V, 74.5V, 75.0V, 75.5V, 76.0V, 76.5V, 77.0V, 77.5V, 78.0V, 78.5V, 79.0V, 79.5V, 80.0V, 80.5V, 81.0V, 81.5V, 82.0V, 82.5V, 83.0V, 83.5V, 84.0V, 84.5V, 85.0V, 85.5V, 86.0V, 86.5V, 87.0V, 87.5V, 88.0V, 88.5V, 89.0V, 89.5V, 90.0V, 90.5V, 91.0V, 91.5V, 92.0V, 92.5V, 93.0V, 93.5V, 94.0V, 94.5V, 95.0V, 95.5V, 96.0V, 96.5V, 97.0V, 97.5V, 98.0V, 98.5V, 99.0V, 99.5V, 100.0V, 100.5V, 101.0V, 101.5V, 102.0V, 102.5V, 103.0V, 103.5V, 104.0V, 104.5V, 105.0V, 105.5V, 106.0V, 106.5V, 107.0V, 107.5V, 108.0V, 108.5V, 109.0V, 109.5V, 110.0V, 110.5V, 111.0V, 111.5V, 112.0V, 112.5V, 113.0V, 113.5V, 114.0V, 114.5V, 115.0V, 115.5V, 116.0V, 116.5V, 117.0V, 117.5V, 118.0V, 118.5V, 119.0V, 119.5V, 120.0V, 120.5V, 121.0V, 121.5V, 122.0V, 122.5V, 123.0V, 123.5V, 124.0V, 124.5V, 125.0V, 125.5V, 126.0V, 126.5V, 127.0V, 127.5V, 128.0V, 128.5V, 129.0V, 129.5V, 130.0V, 130.5V, 131.0V, 131.5V, 132.0V, 132.5V, 133.0V, 133.5V, 134.0V, 134.5V, 135.0V, 135.5V, 136.0V, 136.5V, 137.0V, 137.5V, 138.0V, 138.5V, 139.0V, 139.5V, 140.0V, 140.5V, 141.0V, 141.5V, 142.0V, 142.5V, 143.0V, 143.5V, 144.0V, 144.5V, 145.0V, 145.5V, 146.0V, 146.5V, 147.0V, 147.5V, 148.0V, 148.5V, 149.0V, 149.5V, 150.0V, 150.5V, 151.0V, 151.5V, 152.0V, 152.5V, 153.0V, 153.5V, 154.0V, 154.5V, 155.0V, 155.5V, 156.0V, 156.5V, 157.0V, 157.5V, 158.0V, 158.5V, 159.0V, 159.5V, 160.0V, 160.5V, 161.0V, 161.5V, 162.0V, 162.5V, 163.0V, 163.5V, 164.0V, 164.5V, 165.0V, 165.5V, 166.0V, 166.5V, 167.0V, 167.5V, 168.0V, 168.5V, 169.0V, 169.5V, 170.0V, 170.5V, 171.0V, 171.5V, 172.0V, 172.5V, 173.0V, 173.5V, 174.0V, 174.5V, 175.0V, 175.5V, 176.0V, 176.5V, 177.0V, 177.5V, 178.0V, 178.5V, 179.0V, 179.5V, 180.0V, 180.5V, 181.0V, 181.5V, 182.0V, 182.5V, 183.0V, 183.5V, 184.0V, 184.5V, 185.0V, 185.5V, 186.0V, 186.5V, 187.0V, 187.5V, 188.0V, 188.5V, 189.0V, 189.5V, 190.0V, 190.5V, 191.0V, 191.5V, 192.0V, 192.5V, 193.0V, 193.5V, 194.0V, 194.5V, 195.0V, 195.5V, 196.0V, 196.5V, 197.0V, 197.5V, 198.0V, 198.5V, 199.0V, 199.5V, 200.0V, 200.5V, 201.0V, 201.5V, 202.0V, 202.5V, 203.0V, 203.5V, 204.0V, 204.5V, 205.0V, 205.5V, 206.0V, 206.5V, 207.0V, 207.5V, 208.0V, 208.5V, 209.0V, 209.5V, 210.0V, 210.5V, 211.0V, 211.5V, 212.0V, 212.5V, 213.0V, 213.5V, 214.0V, 214.5V, 215.0V, 215.5V, 216.0V, 216.5V, 217.0V, 217.5V, 218.0V, 218.5V, 219.0V, 219.5V, 220.0V, 220.5V, 221.0V, 221.5V, 222.0V, 222.5V, 223.0V, 223.5V, 224.0V, 224.5V, 225.0V, 225.5V, 226.0V, 226.5V, 227.0V, 227.5V, 228.0V, 228.5V, 229.0V, 229.5V, 230.0V, 230.5V, 231.0V, 231.5V, 232.0V, 232.5V, 233.0V, 233.5V, 234.0V, 234.5V, 235.0V, 235.5V, 236.0V, 236.5V, 237.0V, 237.5V, 238.0V, 238.5V, 239.0V, 239.5V, 240.0V, 240.5V, 241.0V, 241.5V, 242.0V, 242.5V, 243.0V, 243.5V, 244.0V, 244.5V, 245.0V, 245.5V, 246.0V, 246.5V, 247.0V, 247.5V, 248.0V, 248.5V, 249.0V, 249.5V, 250.0V, 250.5V, 251.0V, 251.5V, 252.0V, 252.5V, 253.0V, 253.5V, 254.0V, 25

8.1 ELECTRICAL DIAGRAMS - CONTINUED

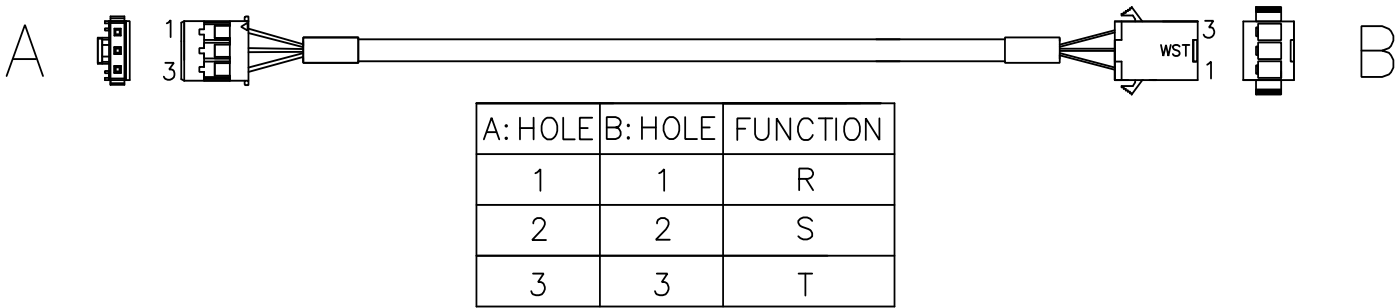
CONSOLE PWR EXT WIRE



PROCESS RECEIVER SET



GENERATOR WIRE



### 8.2 TROUBLESHOOTING - ROW FOR CHARGING

#### Row for Charging

##### 1) SYMPTOM:

Press any key on console, when the display shows "Row for charging", it means Battery Voltage is low, under 3.3V (Figure A).

##### 2) SOLUTION:

- 1) Please row the machine to charge the console battery for 30 minutes.
- 2) Replace the battery (Figure B).

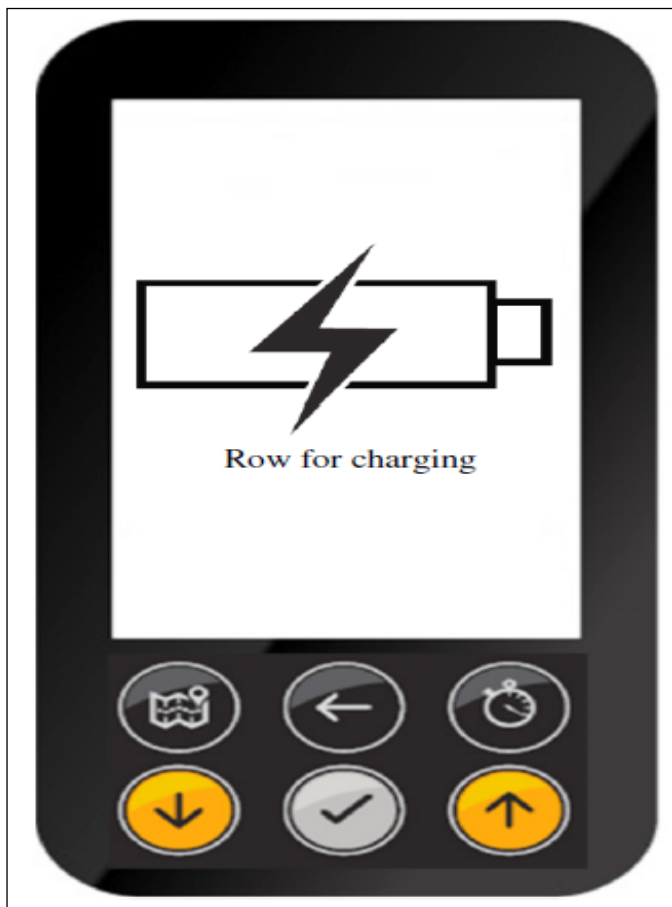


FIGURE A



FIGURE B

### 8.3 TROUBLESHOOTING - CONSOLE NO POWER

#### Console No Power

##### 1) SYMPTOM:

Console doesn't light after pulling the handlebar.

##### 2) SOLUTION:

- 1) Pull the handlebar and check if there's DC Voltage output from the PWR EXT Wire pin 2 (+12v) & pin 3 (GND) - Figure A.
  - 1.1 Yes, console damage, replace console.
  - 1.2 No, follow next step.
- 2) Please use the electric meter to check the Generator 3 points (R/T/S) and see if there's data whether between  $2.53 \sim 2.07\Omega$  (Figure B).
  - 2.1 Yes, replace power control board.
  - 2.2 No, replace Generator.



FIGURE A



FIGURE B

### 9.1 RECEIVER SET REPLACEMENT

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- 1) Upright the machine (Figure A).
- 2) Remove the 3 screws holding rail set to the frame (Figure B).



**FIGURE A**



**FIGURE B**

- 3) Remove the one screw holding end cover to the rail (Figure C).
- 4) Remove the 2 screws holding Receiver Set to the rail (Figure D).



**FIGURE C**



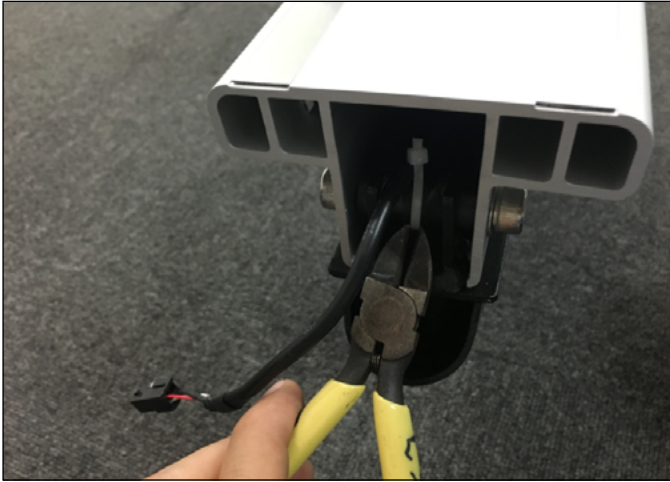
**FIGURE D**



### 9.1 RECEIVER SET REPLACEMENT - CONTINUED

5) Cut off the cable tie (Figure E).

6) Tie the wire on damaged Receiver Set (When you pull out Receiver Set, the wire will be inside the rail. It will be easier to replace new Receiver Set) - Figure F.



**FIGURE E**



**FIGURE F**

7) Take off the damage Receiver Set (Figure G).



**FIGURE G**

### 9.2 GENERATOR REPLACEMENT

- 1) Remove the 3 screws holding right covert to the frame (Figure A).
- 2) Remove the 2 screws and wire holding generator to the frame (Figure B).



FIGURE A

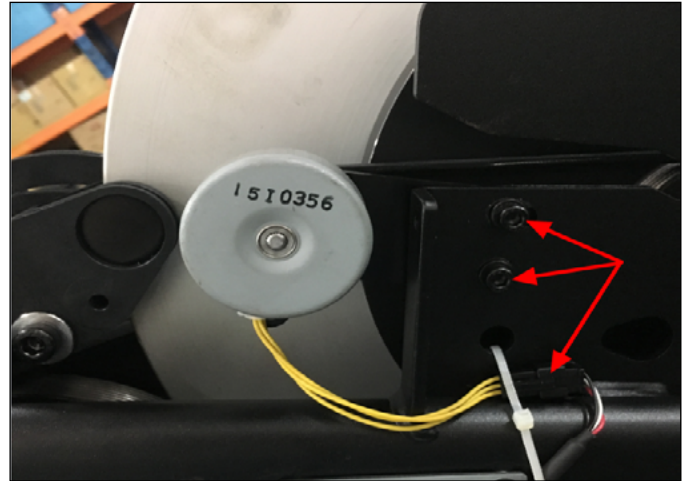


FIGURE B

- 3) When replacing new generator, please make sure the belt is on the generator plastic wheel (Figure C).
- 4) The screw needs to be at the left side of the hole to make sure the belt is tight (Figure D).

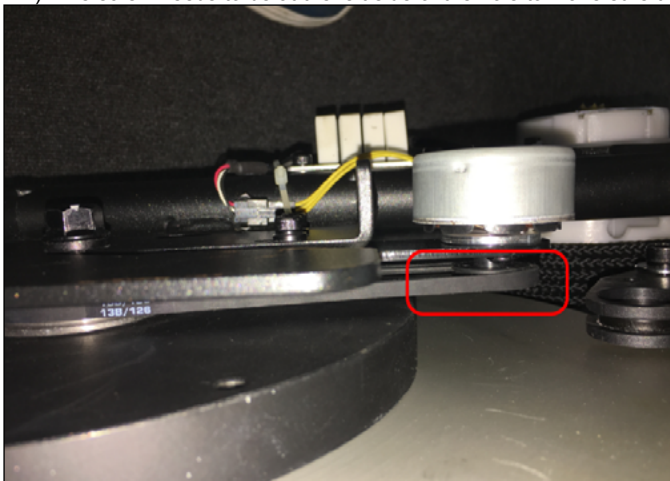


FIGURE C



FIGURE D



### 9.3 ECB REPLACEMENT

- 1) Remove the 3 screws holding right covert to the frame (Figure A).
- 2) Remove the 3 screws holding left covert to the frame (Figure B).



FIGURE A



FIGURE B

- 3) Remove the spring (Figure C).
- 4) Remove the 2 screws holding the ECB to the frame (Figure D).



FIGURE C

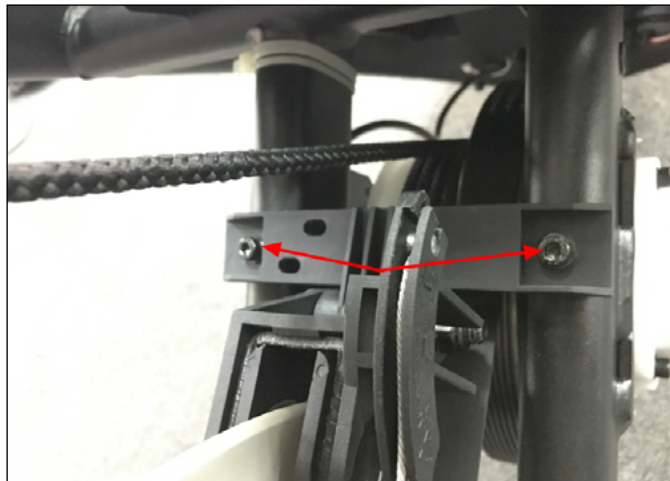


FIGURE D

- 5) Remove the tension wire (Figure E).
- 6) Before fixing the 2 screws of ECB, please make sure the flywheel is in middle of the 2 magnets (Figure F).



FIGURE E

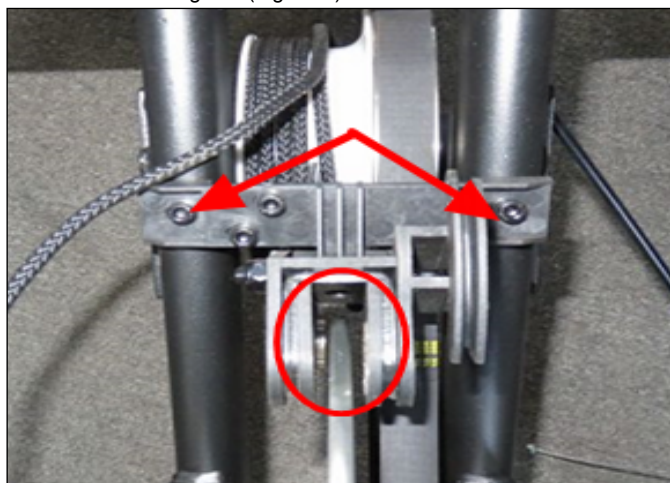


FIGURE F



### 9.3 ECB REPLACEMENT - CONTINUED

- 7) Install the tension wire (Figure G). Note: Don't fix the tension wire to the frame at this time.
- 8) Install the spring (Figure H).

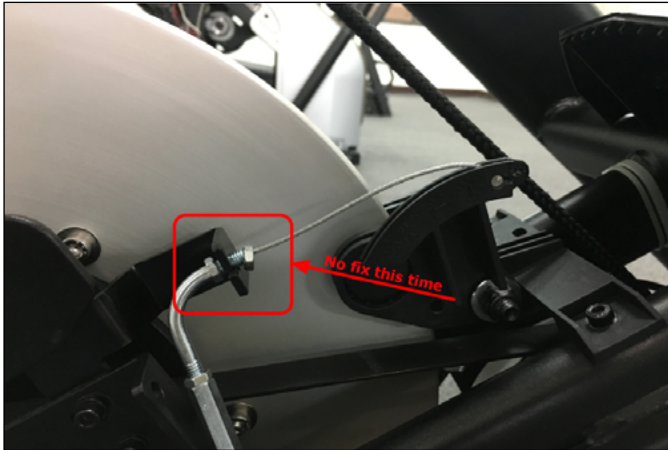


FIGURE G



FIGURE H

- 9) Insert  $\phi 8$  rod through the hole of ECB to touch the flywheel (Figure I).
- 10) Adjust Tension level to the first paragraph (Figure J).

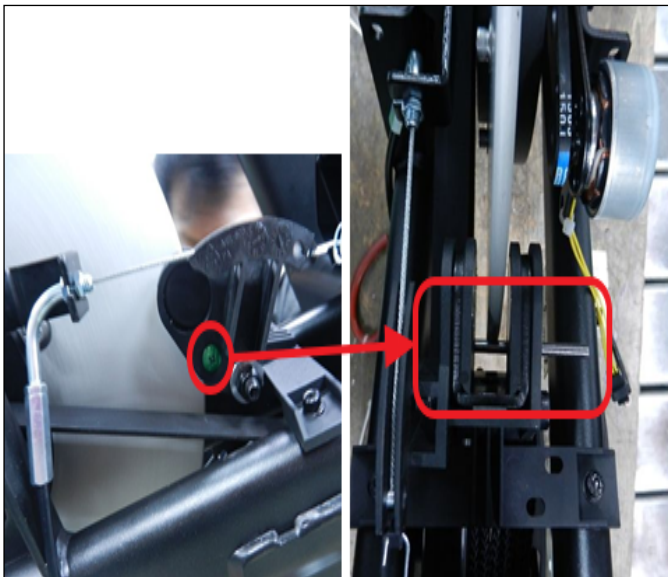


FIGURE I



FIGURE J

- 11) Adjust the tightness of the cable (Figure K).



FIGURE K

### 9.4 TENSION CONTROL REPLACEMENT

- 1) Refer to 9.3.1 and 9.3.2 to remove the covers.
- 2) Remove the spring (Figure A).
- 3) Turn the cover to left and it will be removed (Figure B).



FIGURE A



FIGURE B

- 4) Remove the 2 screws holding tension knob to the frame (Figure C).
- 5) Remove the tension knob (Figure D).



FIGURE C



FIGURE D



### 9.4 TENSION REPLACEMENT - CONTINUED

- 6) Remove the 4 screws holding front frame cover to the frame (Figure E).
- 7) Cut off the 2 cable tie (Figure F).

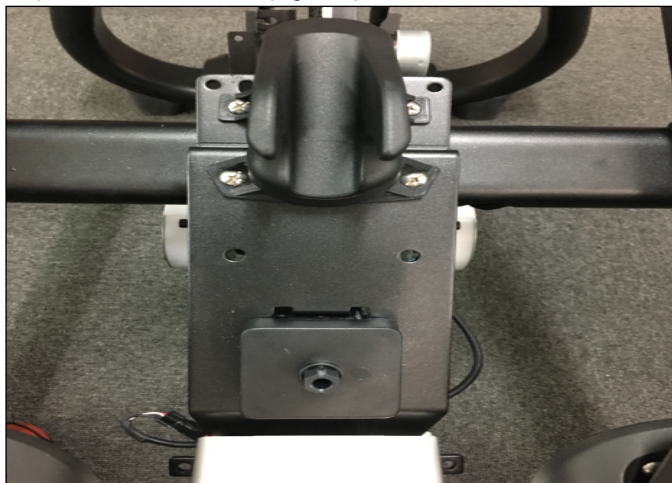


FIGURE E

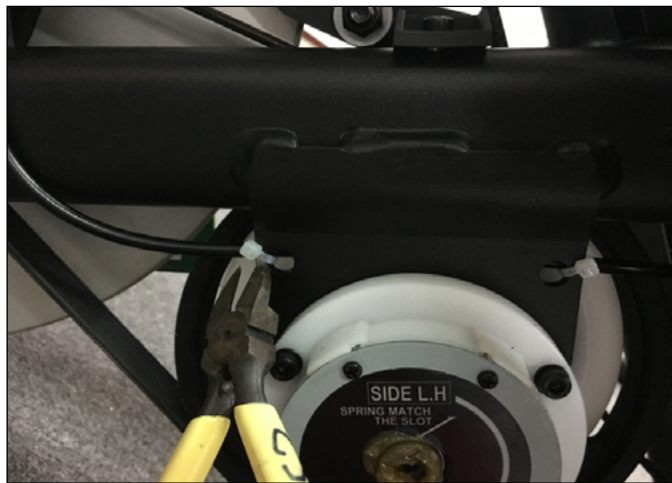


FIGURE F

- 8) Remove the tension wire (Figure G).
- 9) Remove the one screw holding tension wire to the frame (Figure H).

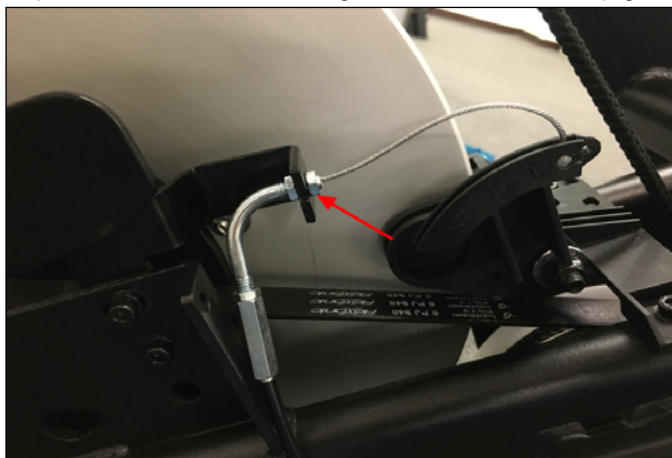


FIGURE G

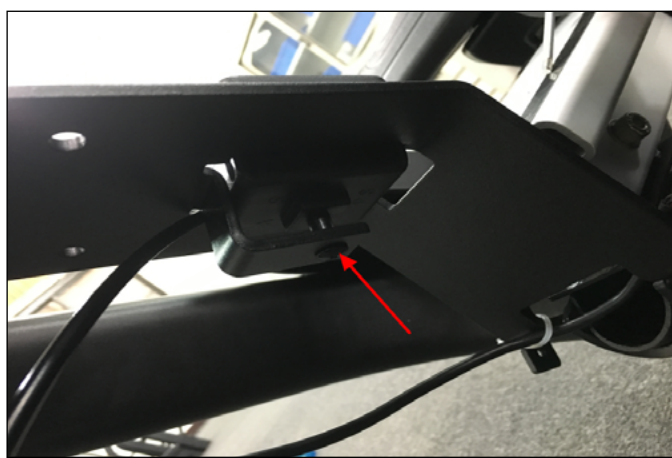


FIGURE H

- 10) When reinstalling the tension knob, please make sure the yellow mark at the left side (Figure I).
- 11) Install the tension wire (Figure J). Note: Don't fix the tension wire to the frame at this time.

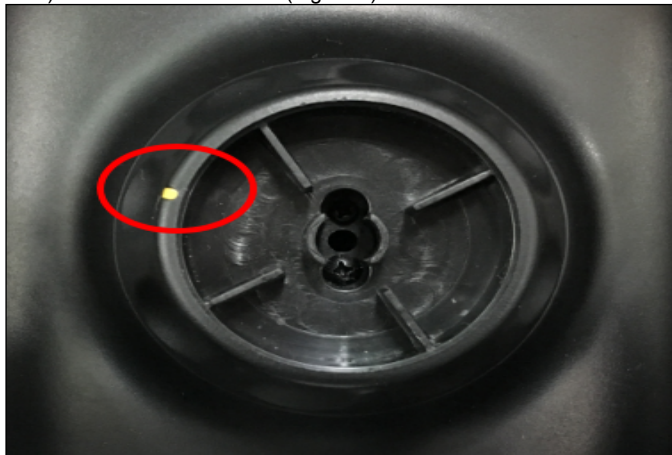


FIGURE I

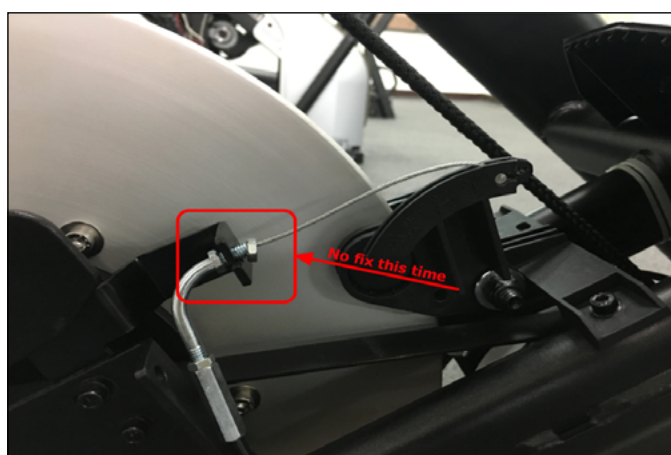


FIGURE J

### 9.4 TENSION REPLACEMENT - CONTINUED

12) Install the spring (Figure K).

13) Insert  $\phi 8$  rod through the hole of ECB to touch the flywheel (Figure L).



FIGURE K

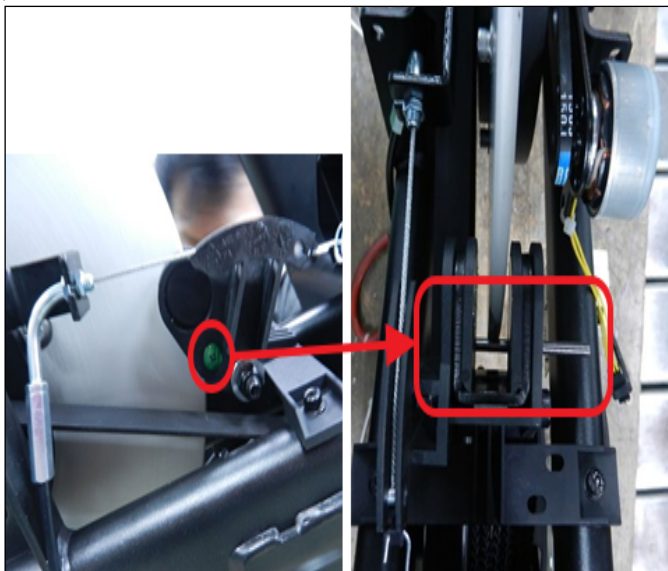


FIGURE L

14) Adjust Tension level to the first paragraph (Figure M).

15) Adjust the tightness of the cable (Figure N).



FIGURE M



FIGURE N



### 9.5 SPIRAL SPRING SET REPLACEMENT

- 1) Refer to 9.3.1 and 9.3.2 to remove the covers.
- 2) Remove the 3 screws holding Left/Right spiral spring to the frame (Figure A). Note: Be careful when these 3 screws are released. The spiral spring will rotate.
- 3) Insert a pointed screwdriver into the screw holes on Left/Right spiral spring and follow the direction of rotation indicated by  $2\frac{1}{2}$  (Figure B).

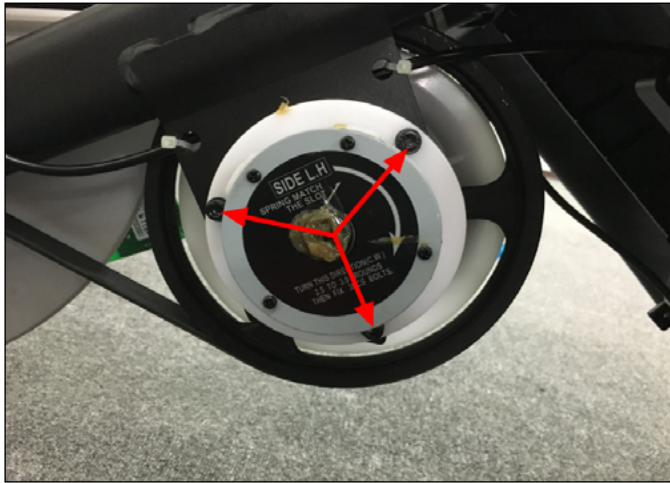


FIGURE A



FIGURE B

### 9.6 BELT PULLEY SET REPLACEMENT

- 1) Remove the Left/Right spiral spring as outlined in Section 9.5.
- 2) Remove the belt (Figure A). Note: This is a flexonic belt. Remove the flexonic belt by walking it off the side of the pulley.
- 3) Remove the grip (Figure B).



FIGURE A



FIGURE B

- 4) Remove the rope rubber (Figure C).
- 5) Remove the 6 screws holding Left/Right belt pulley set to the frame (Figure D).



FIGURE C

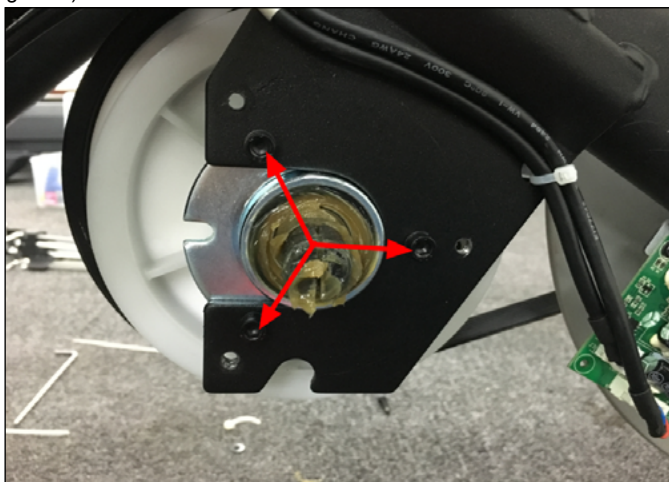


FIGURE D



### 9.6 BELT PULLEY SET REPLACEMENT - CONTINUED

- 6) When the belt pulley set is fixed, put the belt installation tool on the pulley, turn the pulley until the belt is installed (Figure E).

Note:

6-1 The belt installation tool part number: 0000093768.

6-2 If there's no belt installation tool, please use 3 pcs cable tie to fix the pulley and belt (Figure F).

6-3 Rotate the pulley at least 3 full rotations to insure that the belt is centered. You may need to slowly help walk the belt into place by hand.

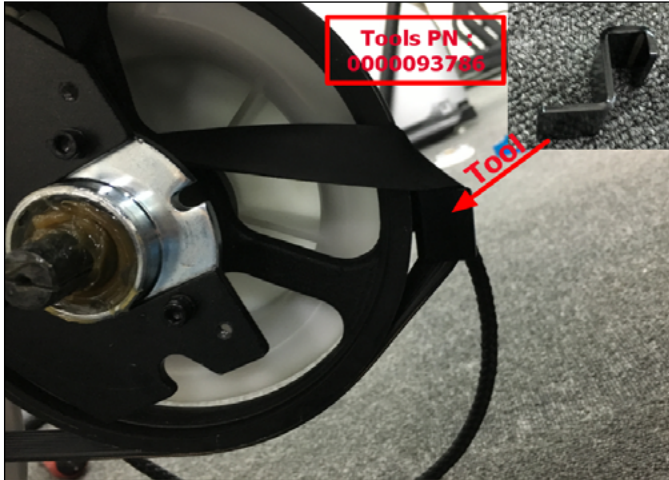


FIGURE E



FIGURE F

- 7) Install the grip and make sure grip wire is tight (Figure G).

- 8) Insert a pointed screwdriver into the screw holes on Left/Right spiral spring and follow the direction of rotation indicated by 2 1/2 (Figure H).



FIGURE G



FIGURE H

### 9.7 FLY WHEEL SET REPLACEMENT

- 1) Remove the ECB set as outlined in Section 9.3.
- 2) Remove the 2 screws holding tension wire plate to the frame (Figure A).
- 3) Remove the 2 screws holding generator plate to the frame (Figure B).



FIGURE A

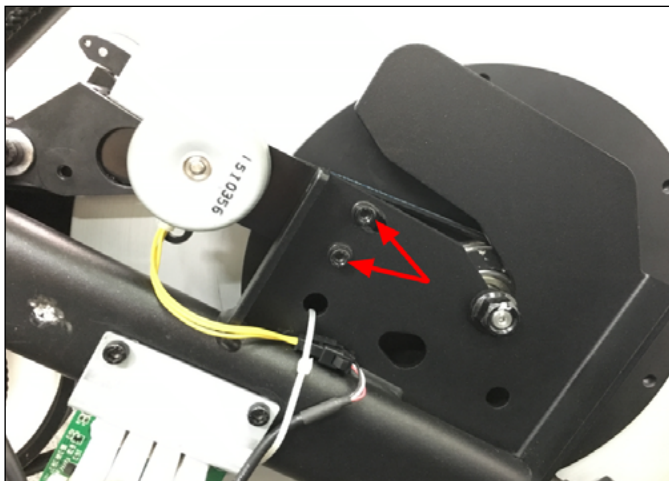


FIGURE B

- 4) Remove the belt and 2 nuts holding fly wheel set to the frame (Figure C).
- 5) Take off the fly wheel set (Figure D).

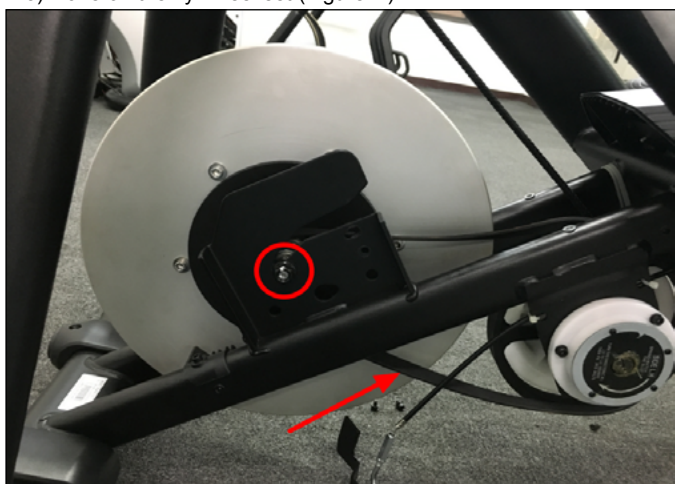


FIGURE C



FIGURE D



### 9.7 FLY WHEEL SET REPLACEMENT - CONTINUED

- 6) Tighten the fly wheel screws to 400kgf-cm (Figure E).

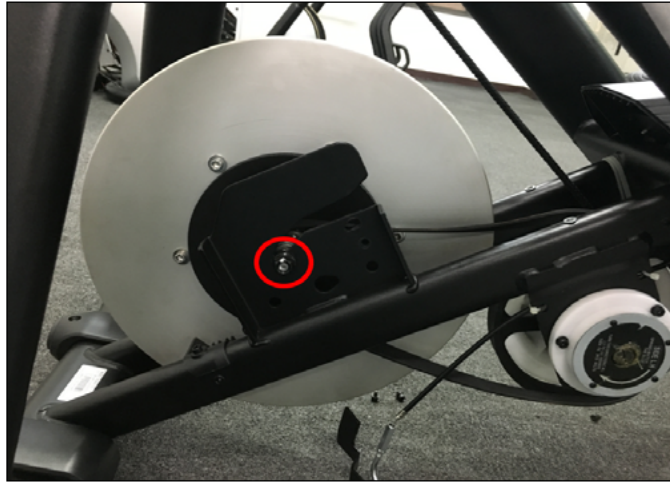


FIGURE E

- 7) When the belt pulley set is fixed, put the belt installation tool on the pulley, turn the pulley until the belt is installed (Figure F & G).  
Note: Please refer to 9.6 for installation steps.

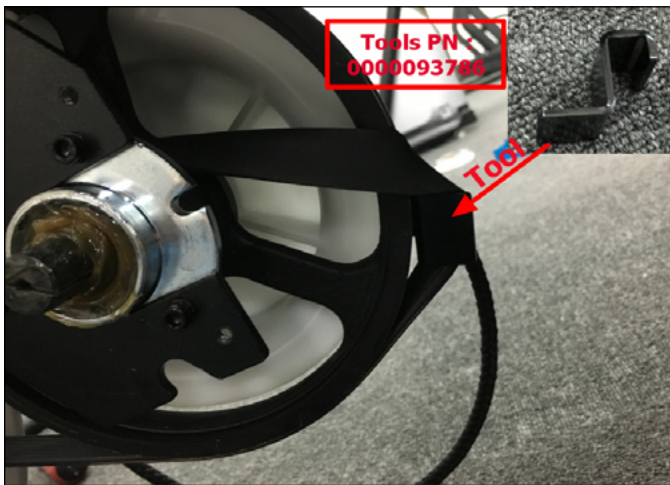


FIGURE F



FIGURE G

- 8) Install the ECB set as outlined in Section 9.3 (Figure H).

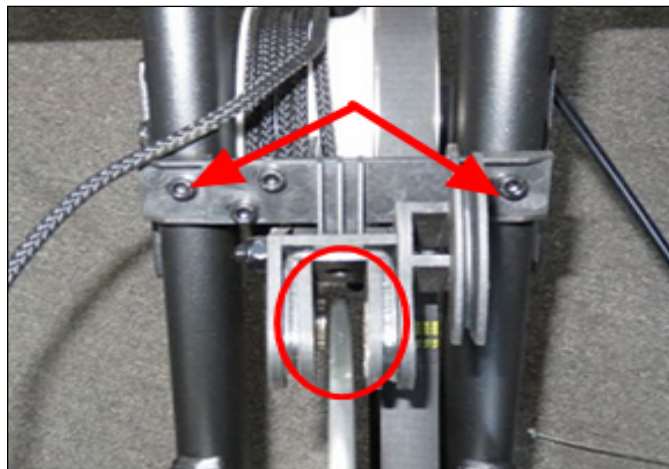


FIGURE H

## 10.1 ROWER-02 SPECIFICATIONS

### PRODUCT SPECIFICATIONS

<b>CONSOLE</b>	
Display Screen	Extra-large LCD display
Display Readout	Time, Distance, SPM (strokes per minute), Stroke, Watts, Heart Rate, Calories, 500 mtr/split
Programs	Manual, Interval, Challenge
Telemetric Receiver	Yes
<b>TECHNICAL DATA</b>	
Resistance Technology	Magnetic resistance
Resistance Levels	10
Drive System	Coil spring poly-V belt
Max User Weight	160 kg / 350 lbs
Product Weight	59 kg / 130 lbs
Shipping Weight	69 kg / 152 lbs
Overall Dimensions (L x W x H)*	222.9 x 80.12 x 57.7 cm / 87.8" x 31.5" x 22.7"
Power Requirement	Battery powered for LCD display
<b>SPECIAL FEATURES</b>	
Handlebar Design	Extra-long ergo-grip handlebar
Foot Stretchers	Adjustable heel cups with easy-to-read settings
Monorail	Aluminum
* Ensure a minimum clearance width of 0.6 meters (24") for access to and passage around MATRIX equipment. Please note, 0.91 meters (36") is the ADA recommended clearance width for individuals in wheelchairs. Product specifications are subject to change without notice.	

## 10.2 FASTENERS AND ASSEMBLY TOOLS

### TOOLS REQUIRED FOR ASSEMBLY (not included)

4MM L-Shaped Allen Wrench



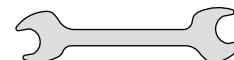
Phillips Screwdriver



5MM L-Shaped Allen Wrench



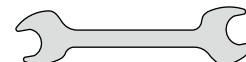
13MM Open-End Wrench



6MM L-Shaped Allen Wrench



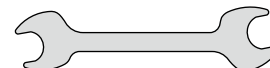
14MM Open-End Wrench



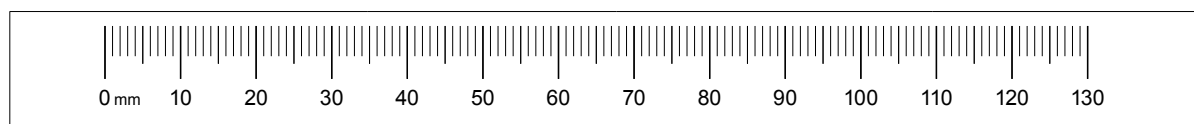
8MM L-Shaped Allen Wrench



17MM Open-End Wrench



If any items are missing please contact your country's local MATRIX dealer for assistance.



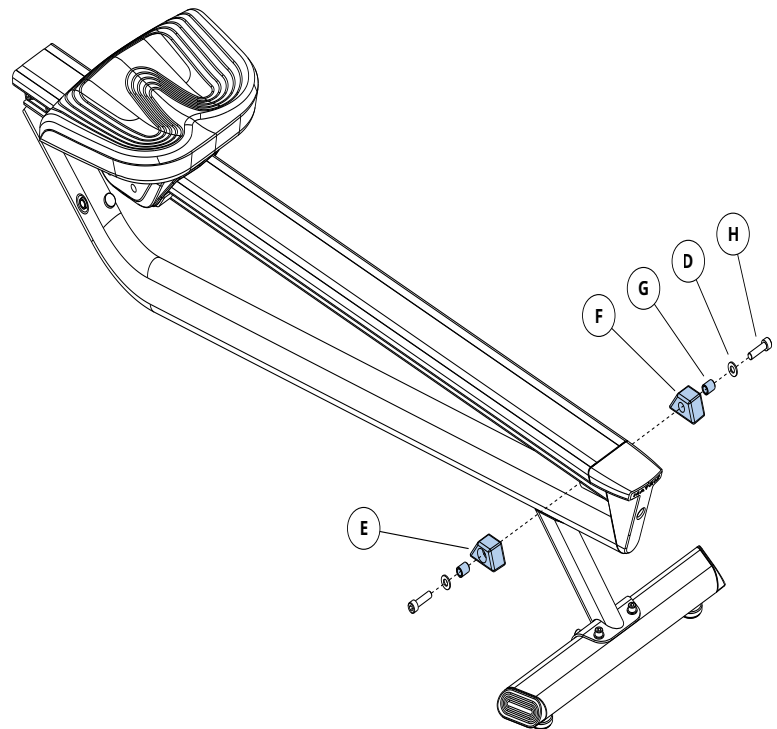
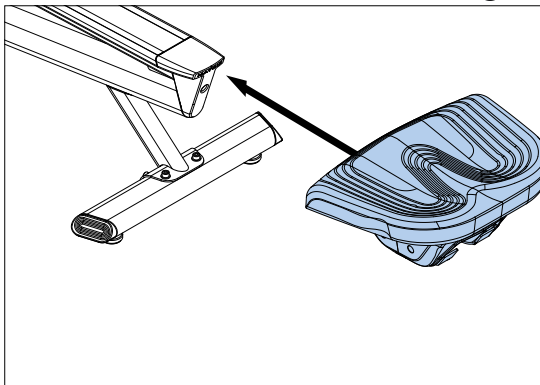
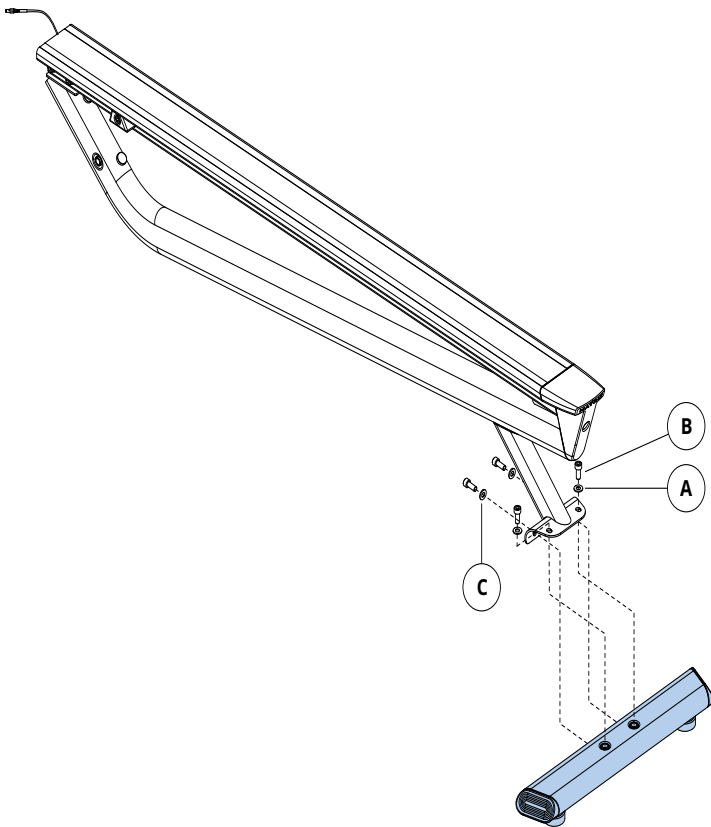
## 10.3 ASSEMBLY INSTRUCTIONS

### STEP 1

Orange Hardware Pack		
Description	Qty	
A Flat Washer	2	
B Bolt	4	
C Arc Washer	2	
Note:		
Tighten hardware from step 1 using the Torque Value: 24.5 Nm / 18 ft-lb		

### STEP 2

Pre-installed Hardware		
	Description	Qty
D	Flat Washer	2
E	Stopper Left	1
F	Stopper Right	1
G	Bushing	2
H	Bolt	2
Note:		
Tighten hardware from step 2 using the Torque Value: 24.5 Nm / 18 ft-lb		

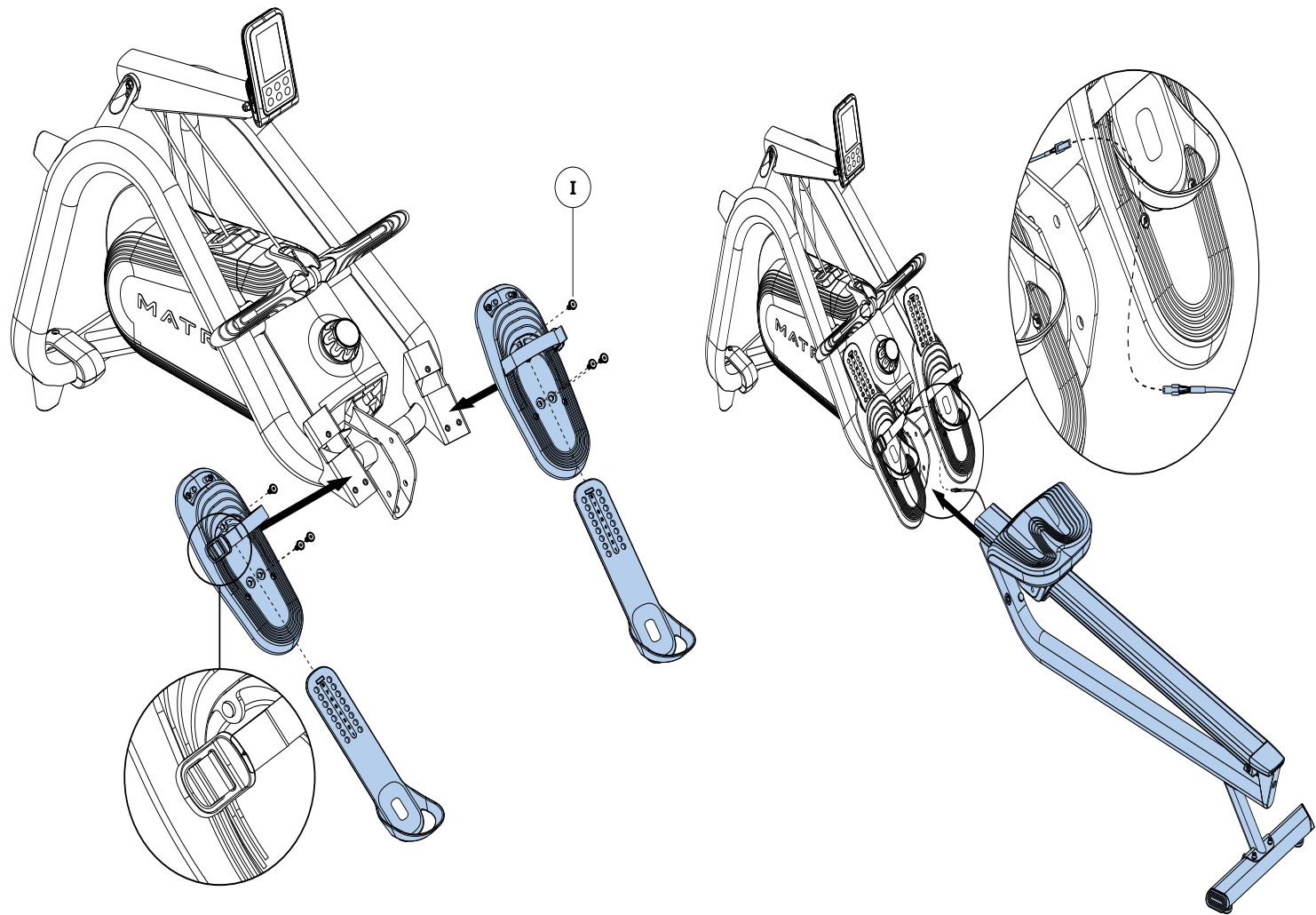


10.3 ASSEMBLY INSTRUCTIONS - CONTINUED

STEP 3

White Hardware Pack		
Description		Qty
I	Bolt	6
Note:		
Tighten hardware from step 3 using the Torque Value: 24.5 Nm / 18 ft-lb		

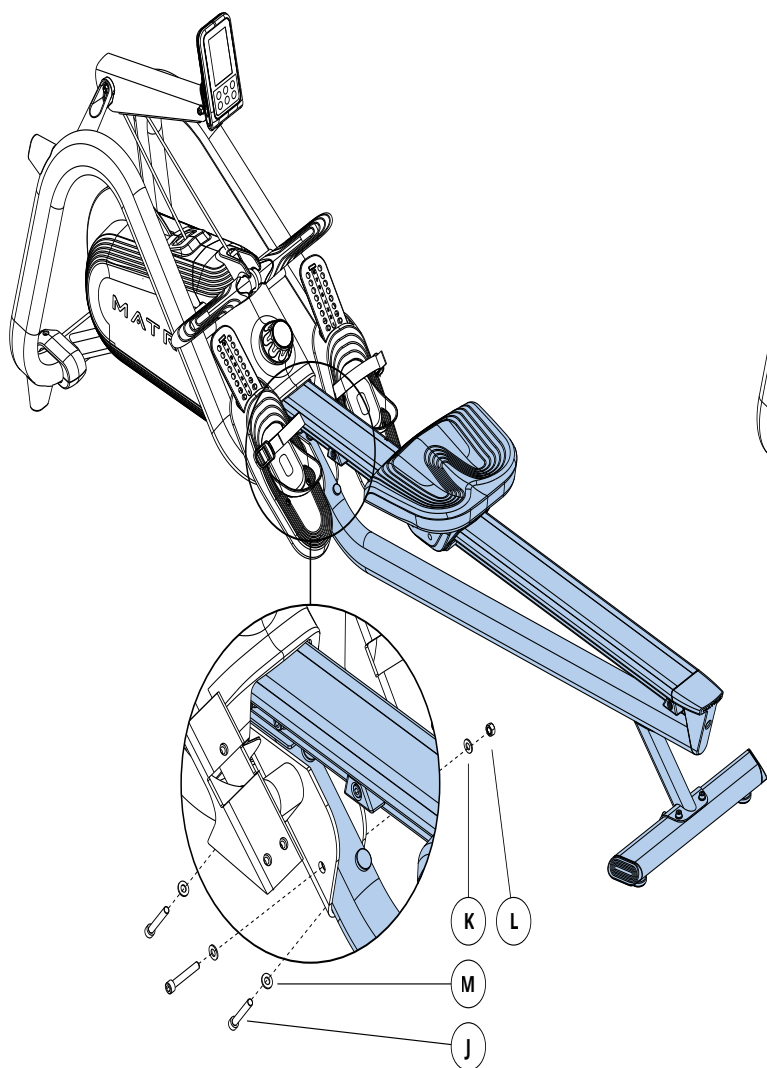
STEP 4



## 10.3 ASSEMBLY INSTRUCTIONS - CONTINUED

### STEP 5

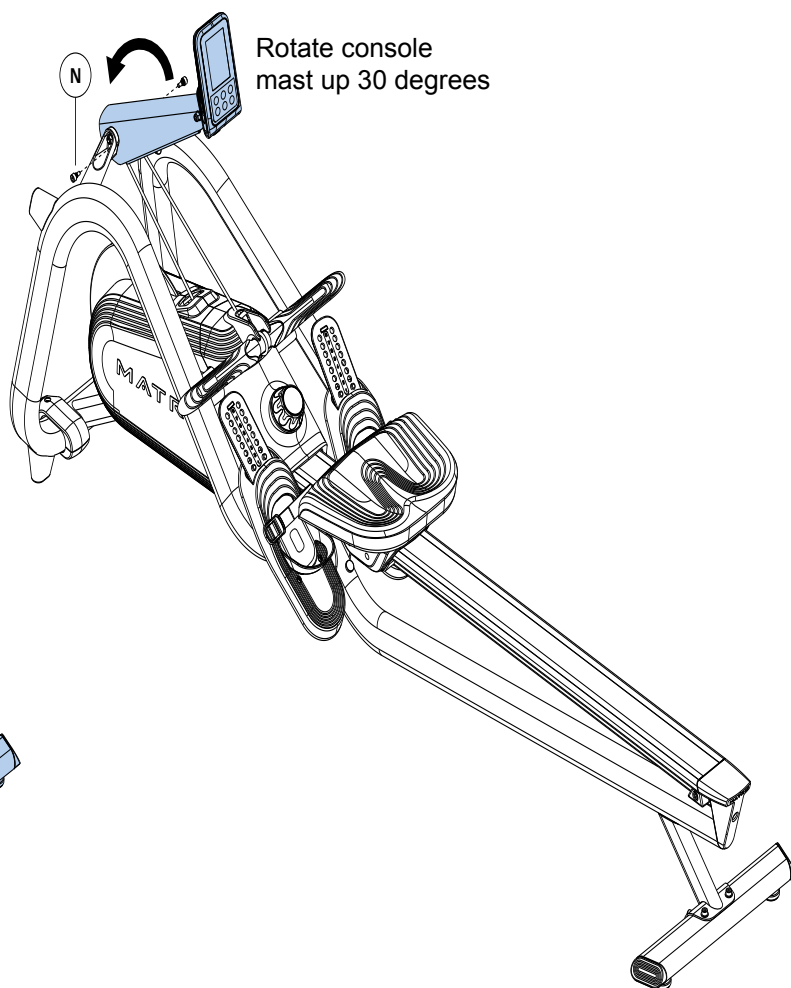
Red Hardware Pack		
	Description	Qty
J	Bolt	3
K	Flat Washer	2
L	Nut	1
M	Arc Washer	2
Note:		
Tighten hardware from step 5 using the Torque Value: 39.2 Nm / 29 ft-lb		



### STEP 6

Black Hardware Pack		
	Description	Qty
N	Bolt	2

**ASSEMBLY COMPLETE!**





## 11.1 SOFTWARE UPGRADE INSTRUCTIONS

1. Create a file on the USB flash drive which will be used. The folders should be MATRIX\FW\UCB (create a folder called MATRIX, then a folder in MATRIX called FW, then a folder in FW called UCB).
2. Copy the software files into the UCB folder on the USB flash drive (the access should read \MATRIX\FW\UCB (Figure A)).
3. Insert the USB flash drive into the USB port on the console (Figure B).
4. Enter Manager Mode by pressing and holding the LEVEL UP and DOWN keys simultaneously (Figure C).
5. Please follow below step from Figure (See Figure D ~ H) to update the software.

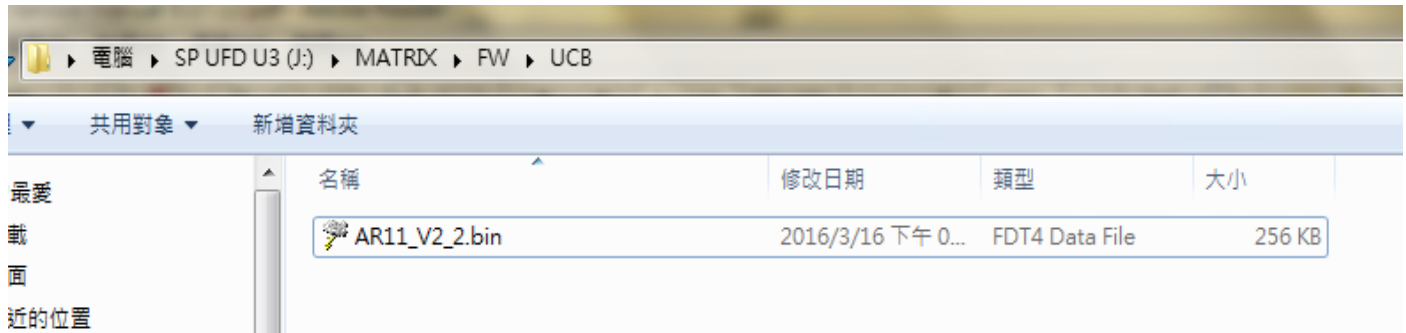


FIGURE A



FIGURE B

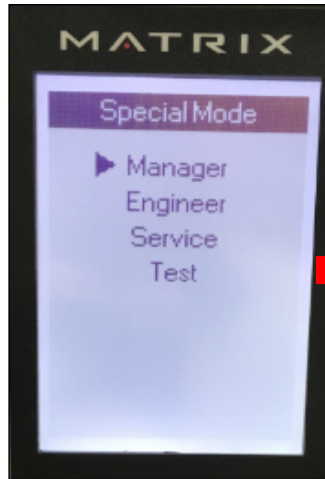


FIGURE C

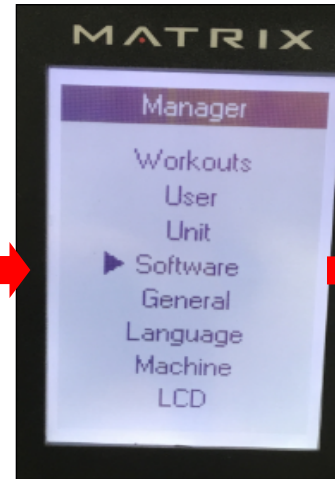


FIGURE D



FIGURE E

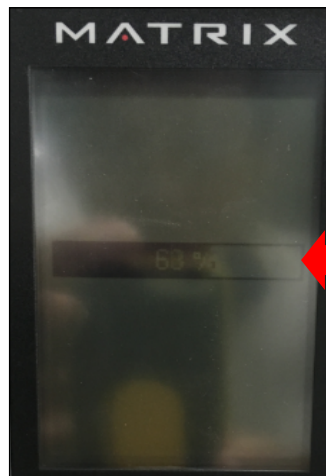


FIGURE H



FIGURE G

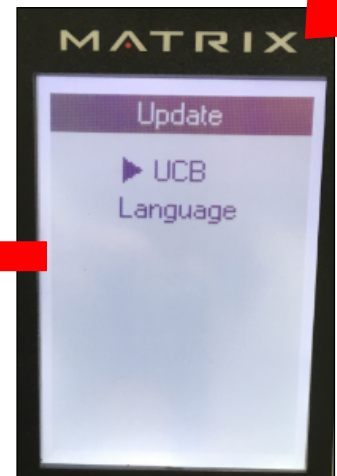


FIGURE F



## NOTES

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