



CE800 ENT

2020 ver.

Service Manual

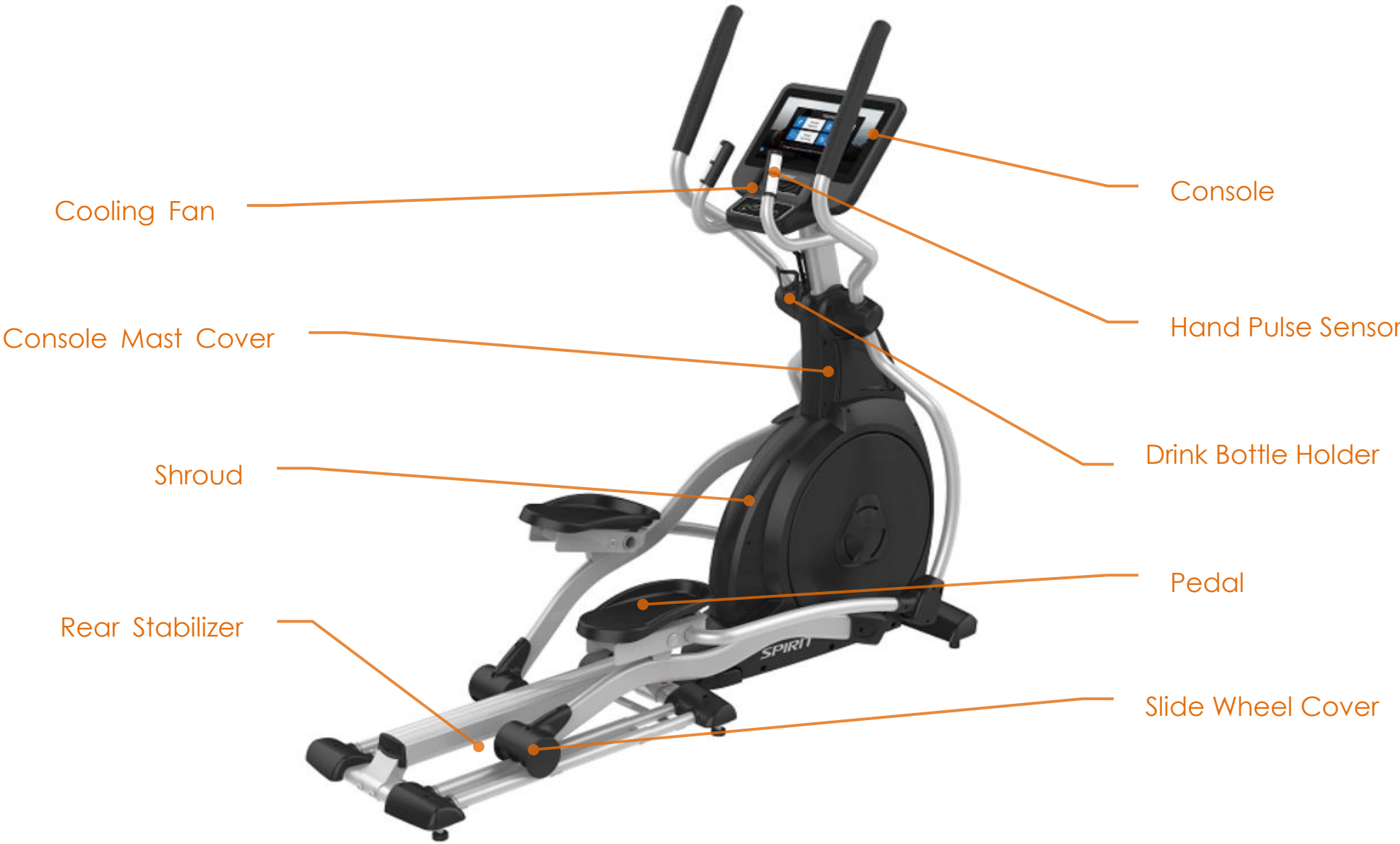
dyaco

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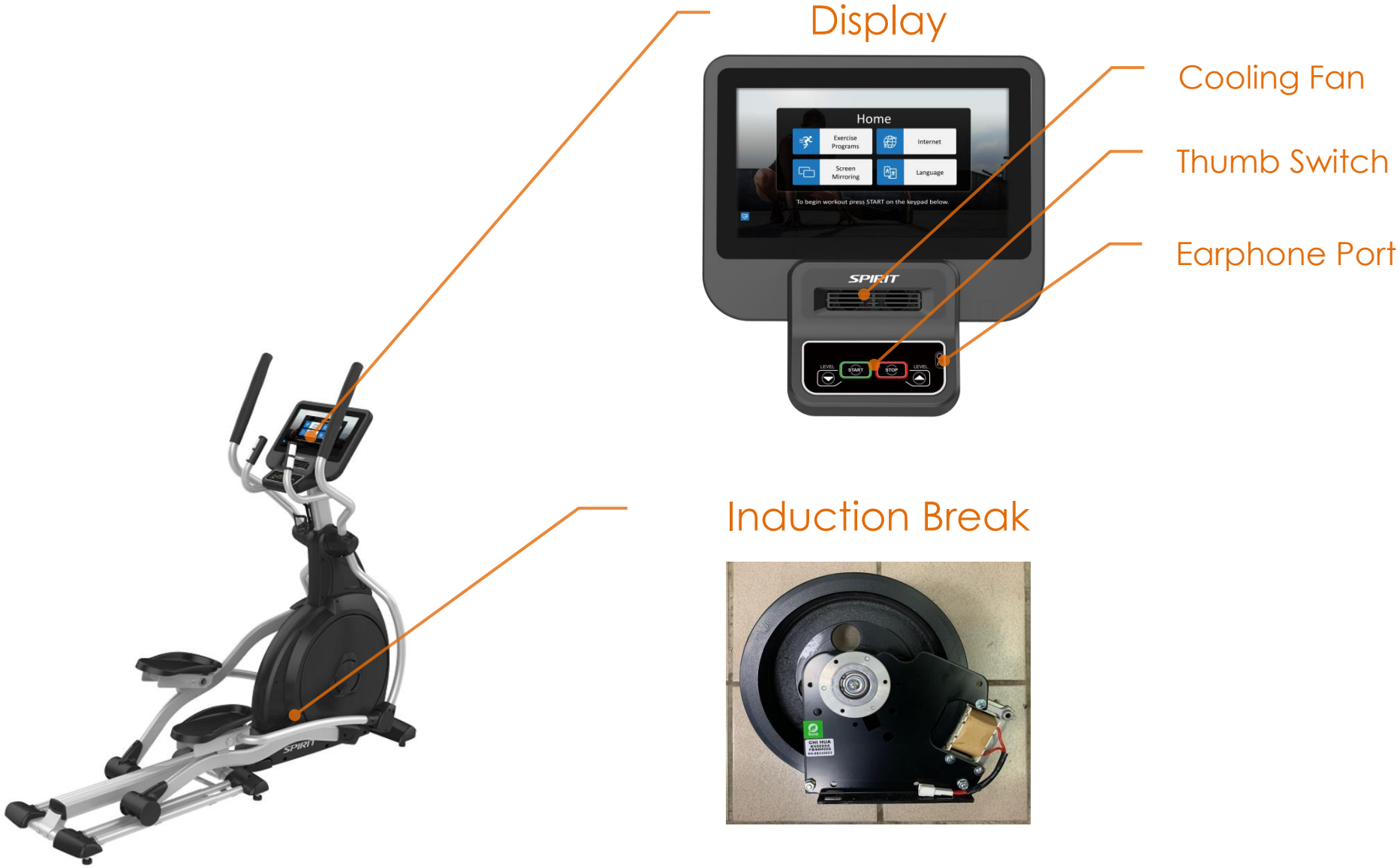
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1. Outlines



2. Electronic Parts

Upper Controllers



Display

Cooling Fan

Thumb Switch

Earphone Port

Induction Break

Lower Controller and Driver

Controller



Speed RPM Sensor



PCB & Power Converter



3. Electrical Configurations

CONSOLE:

Interface that controls all functions of the Elliptical.

MAIN CONTROLLER:

The circuit board is consist of the power supply for console, link the console to output appropriate voltages for braking resistance that control Bike functions.

GENERATOR FLYWHEEL:

It can change to increase or decrease resistance level of brake.

INCLINE MOTOR:

This is an AC motor. User can to control variable elevation by console within main controller.

GENERAL INFORMATION**CONSOLE:**

Contain keys control and TFT LCD touch panel. Main controller Include power supply, driver control circuit.

4. Product Operation

Display Windows



Operation

FUNCTIONS OF THIS UPRIGHT BIKE

The Touchscreen is used for operating all functions. You can directly touch any button on the screen or through quick button on the bottom to control functions. On the lower portion of the console there is the Start button to begin the workout, Stop button to pause/stop programs, Level button to change workload.

QUICK START

This is the quickest way to start a workout. After the console powers up you just press the Start button to begin. This will initiate the Quick Start mode. In Quick Start the Time will count up from zero, all workout data will start to accrue and the workload may be adjusted manually by pressing on the screen or the Up and Down buttons on lower control panel.

HEART RATE FEATURE

The Pulse (Heart Rate) on the screen shows the current value of the heart beats per minute. You must use both left and right stainless steel sensors to pick up your pulse. Pulse values are displayed anytime the computer is receiving a signal from the hand pulse sensors. You may use the hand pulse sensors while in Heart Rate Control. The CU800ENT will also pick up wireless heart rate transmitters that are Polar and Bluetooth compatible.

INTERNET

The Internet section offers various streaming, news, and social media options. The machine must be connected to the internet in order for the apps to work. Simply click on the app of your choice to connect. Follow any on-screen prompts to continue login or other authorizations as needed.

EARPHONE

The console has built-in an earphone sound output jack. The Jack is not an audio input jack. The volume must be controlled on the speaker icon.

CHARGING FUNCTION

Charge your personal device during your workout using the fitness equipment's on-console USB port. To charge your mobile electronics make sure the fitness equipment power is on.

NOTE :

* USB charging cable is not included; make sure compatible USB charging cable is being used.

** Your device "charging" icon may or may not indicate it is charging. Depending on the amount of current your particular device requires for charging the icon may not be on but your device is still charging, but possibly at a lower charge rate.

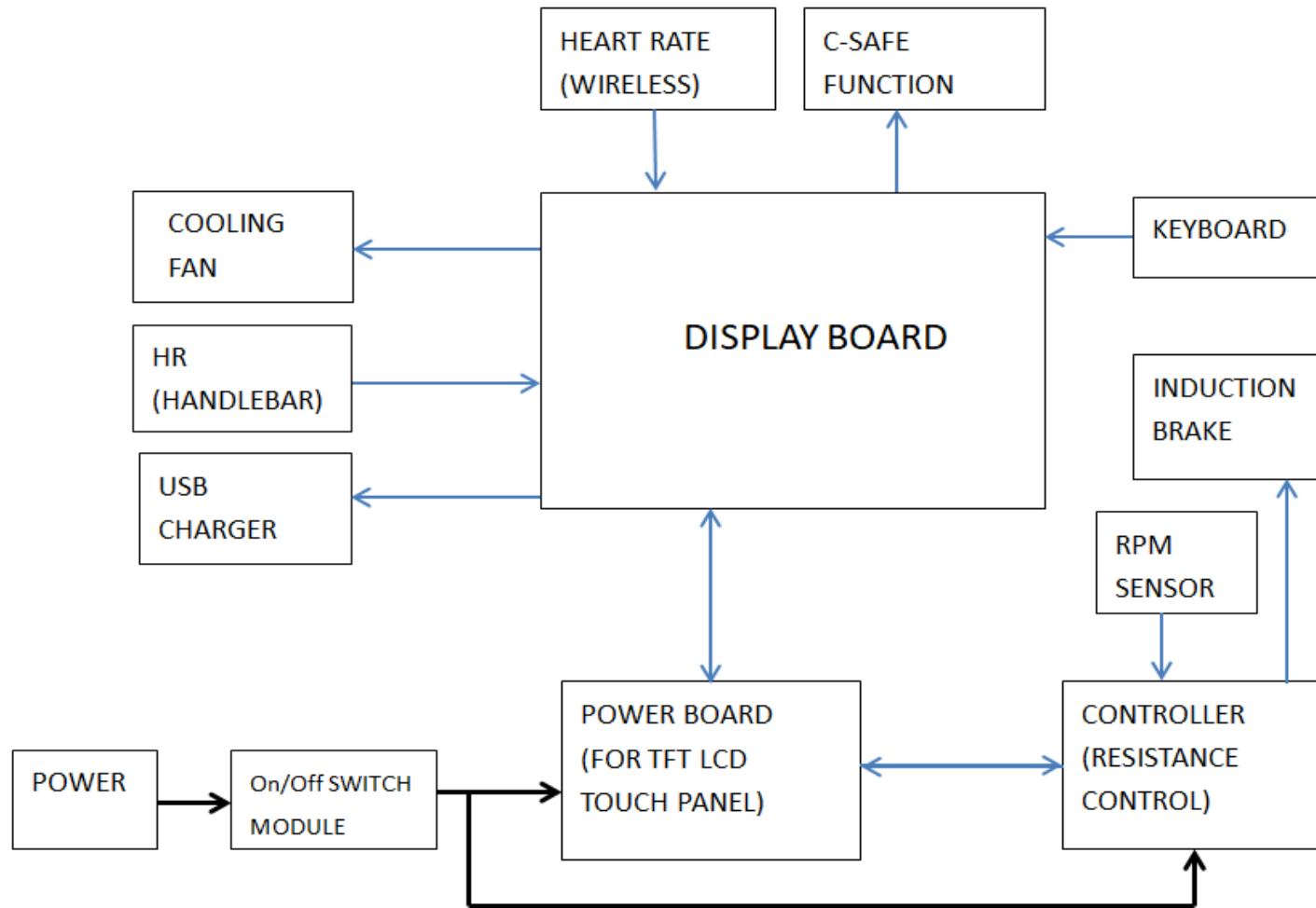
***The USB port on the console is capable of powering USB devices. It provides up to 5Vdc/1.0 amp of power and meets USB 2.0 regulations. You will not be able to save your workout data to a USB via this port; it is used for charging purposes only.

PROGRAMMABLE FEATURES

Each of the programs can be customized with your personal information and changed to suit your needs. Some of the information asked for is necessary to ensure the readouts are correct. You will be asked for your Age and Weight. Your Age is necessary during the Heart Rate control program to ensure the correct settings are in the program for your Age. Otherwise the work settings could be too high or low for you; entering your Weight aides in calculating a more correct Calorie reading. Although we cannot provide an exact calorie count we do want to be as close as possible.

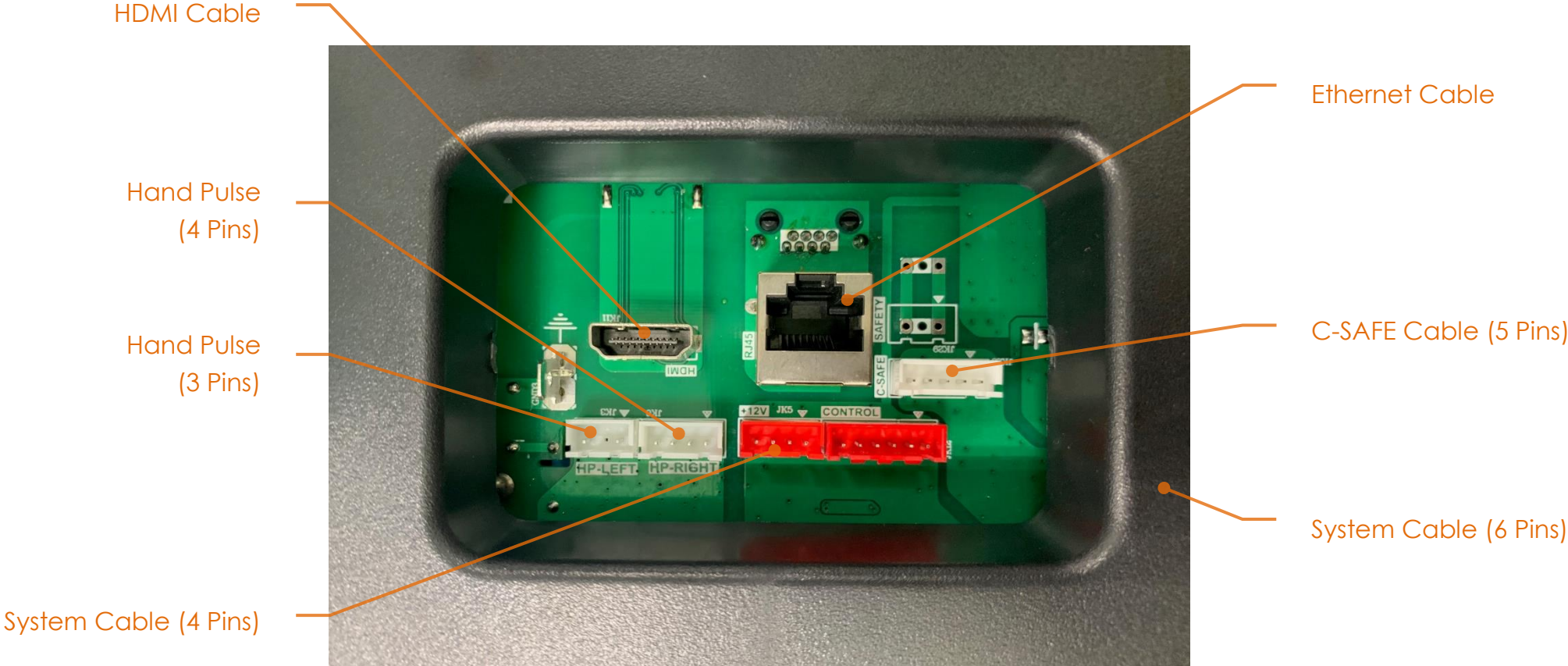
5. Unit Block Diagrams

Bike Configuration



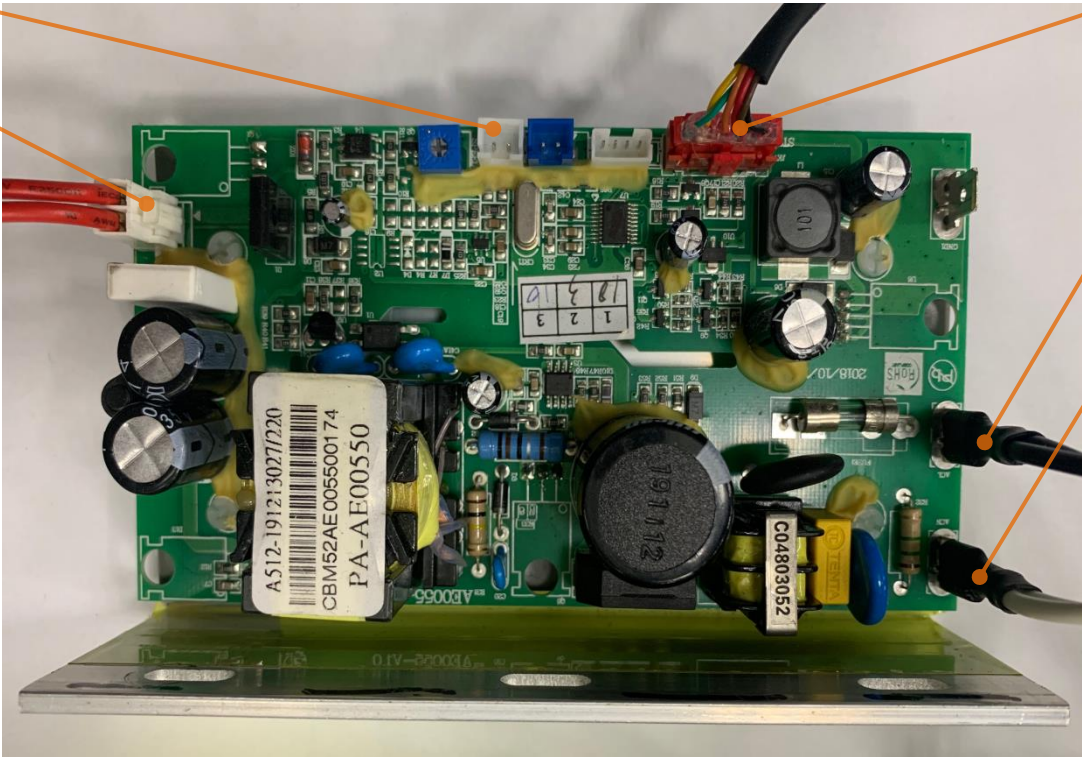
6. Basic Connections and Wiring

The back of console transfer PCB board



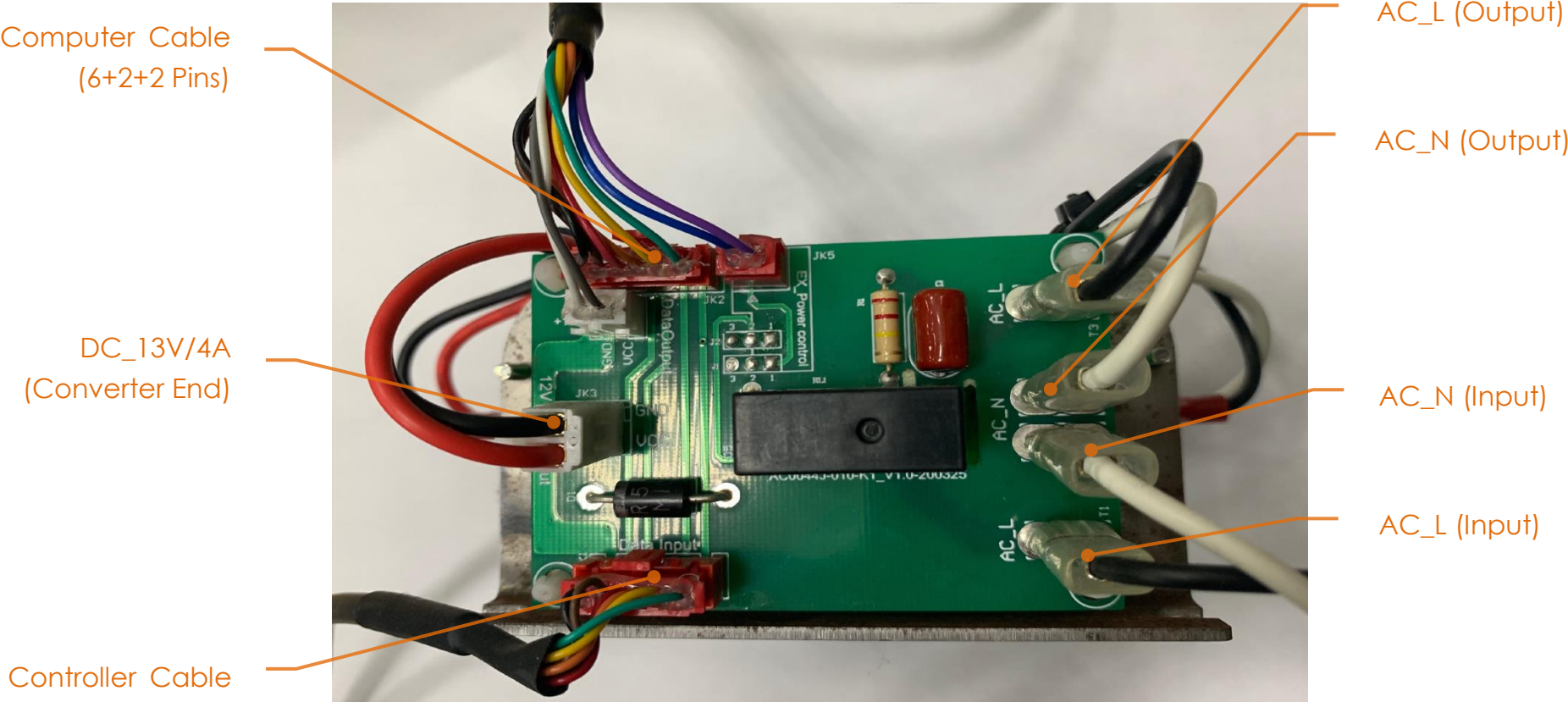
Driver Board PCB Component Locations and Wire Connections

RPM Sensor
Brake Coil Wire

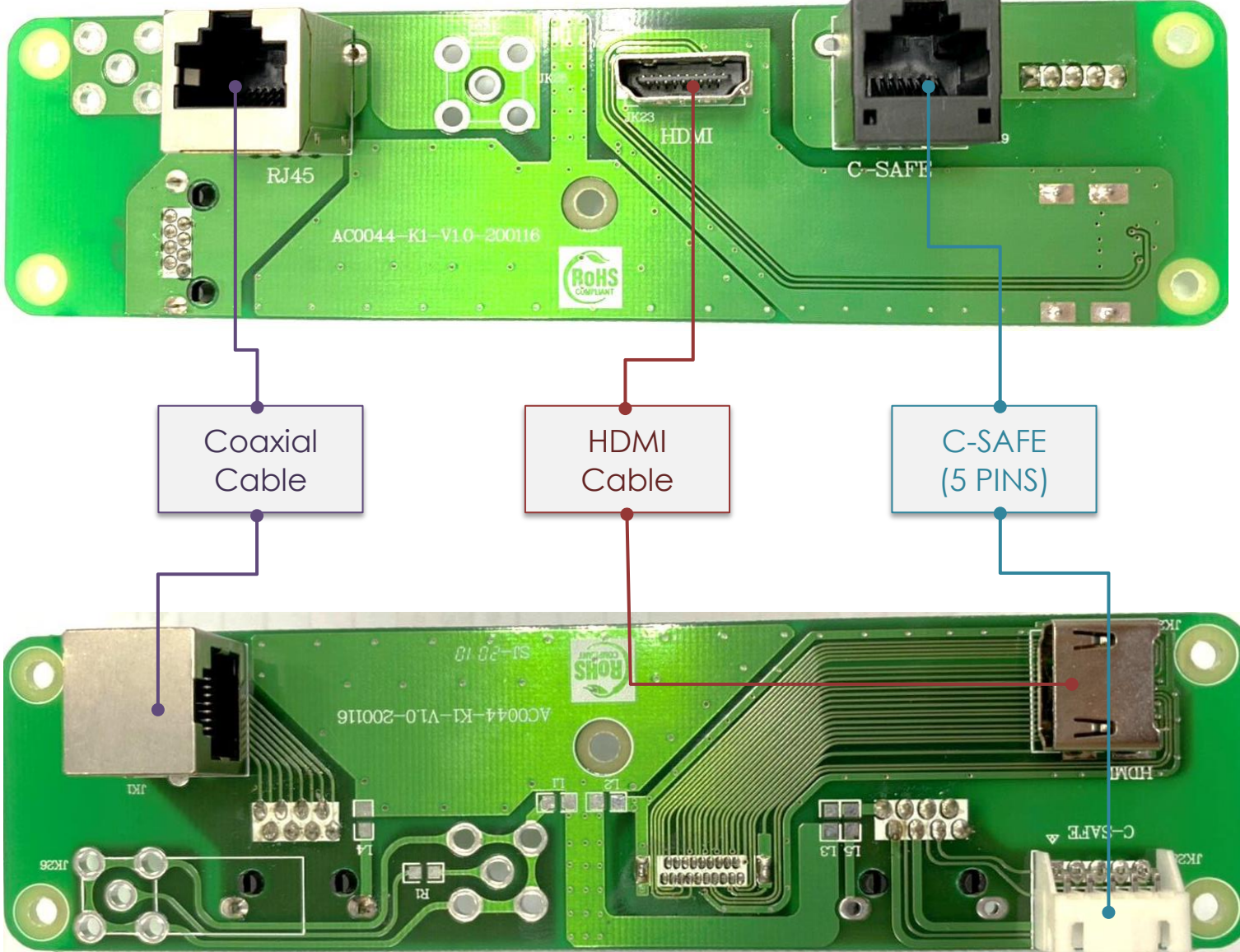


Controller Cable
AC L (input)
AC N (input)

The console POWER BRIDGE PCB board and POWER CONVERTER



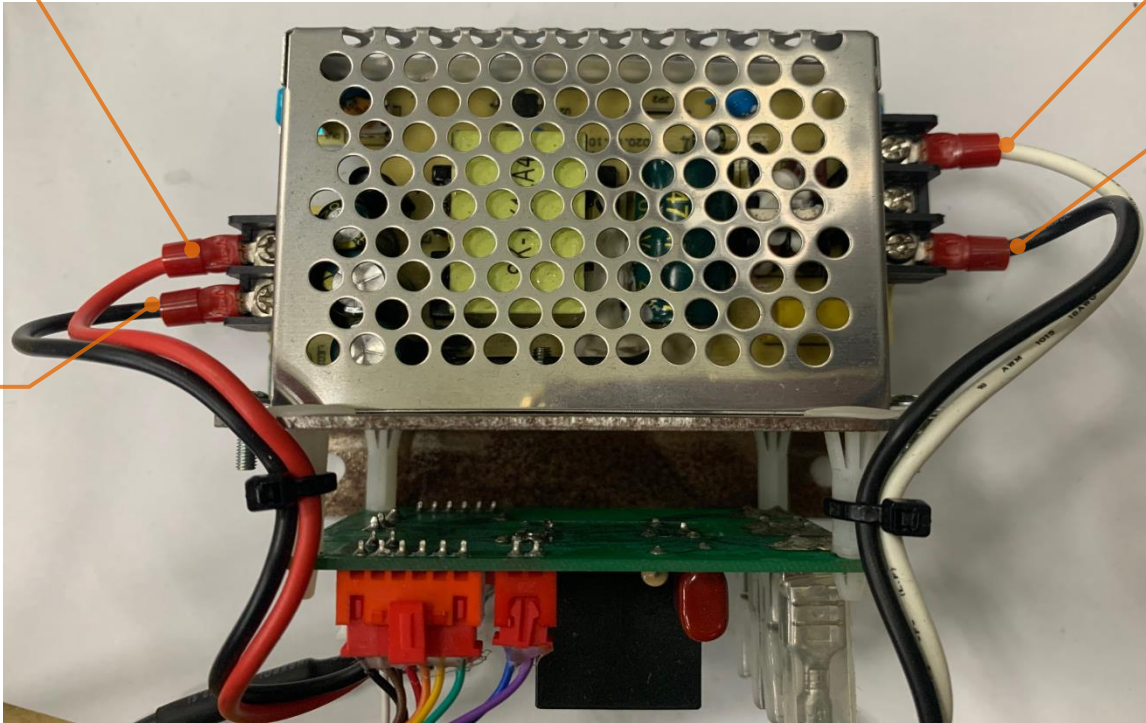
The Console HDMI/Coaxial cable/C-SAFE PCB board



Power Converter PCB board

POWER CONVERTER
V+ (RED)

POWER CONVERTER
V- (BLACK)



AC_N
(AC Output)

AC_L
(AC Output)

Flywheel definition function



Induction Brake

Resistance Voltage

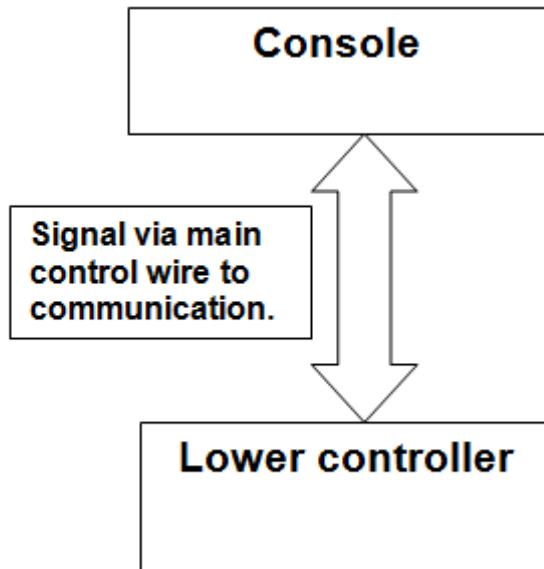
7. Error Messages / Troubleshooting

7-1 Error Message: E5

Definition

It is a Poor communication, between the console and lower controller is poor communication, almost it is bad on a main control wire, but also possible bad at console board or lower controller.

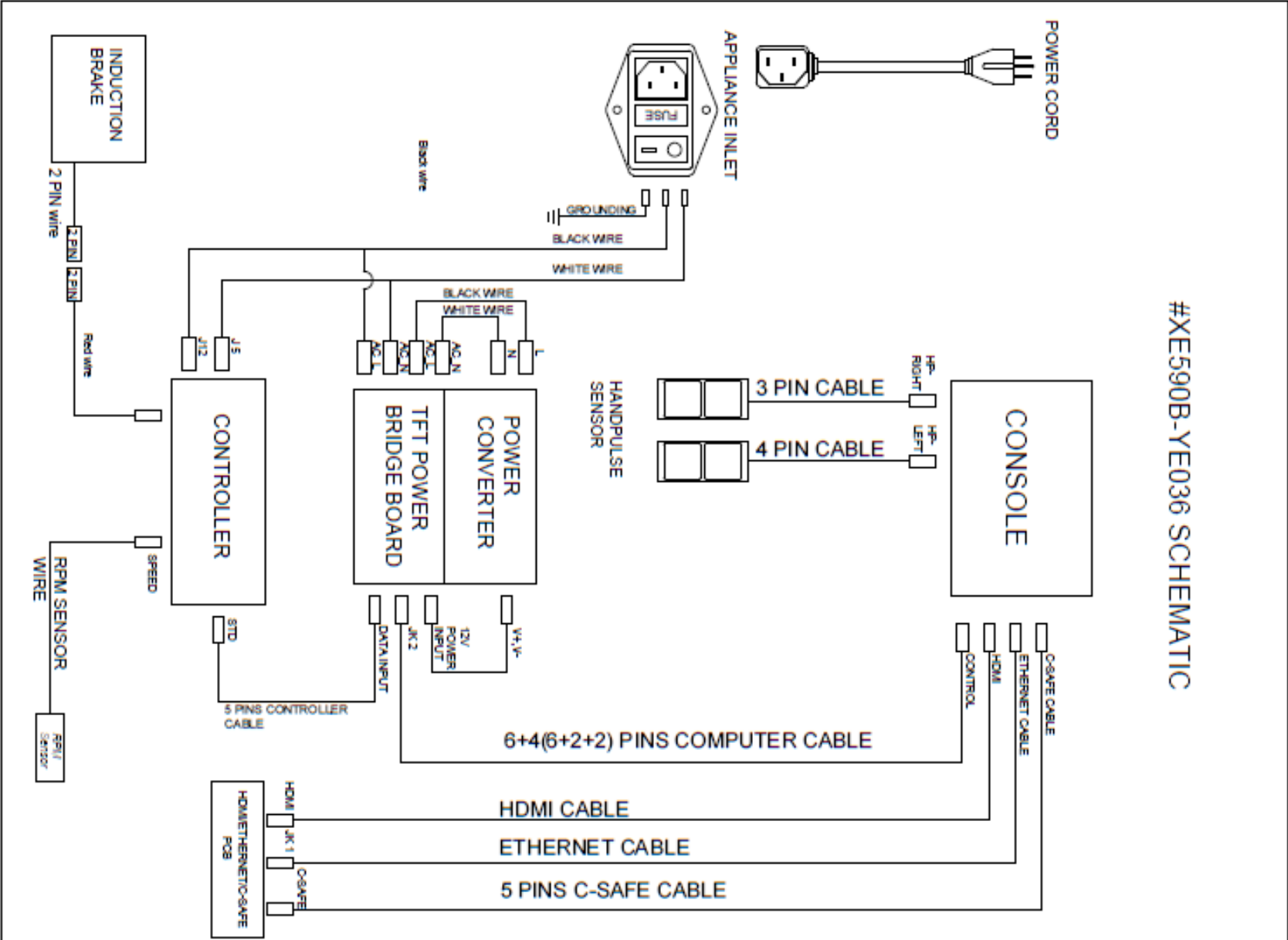
Configuration



Troubleshooting

Part	Troubleshooting
Lower controller board	Replace main control wire. Replace new lower controller.
Main control wires	Reinsert Main control wire. Replace main control wire.
Console cable	1. Inspect the wire connections. 2. Inspect whether wires are broken or crimped. 3. Replace the wires and test again.
Console	Replace new console.

7-2 Circuit Diagram



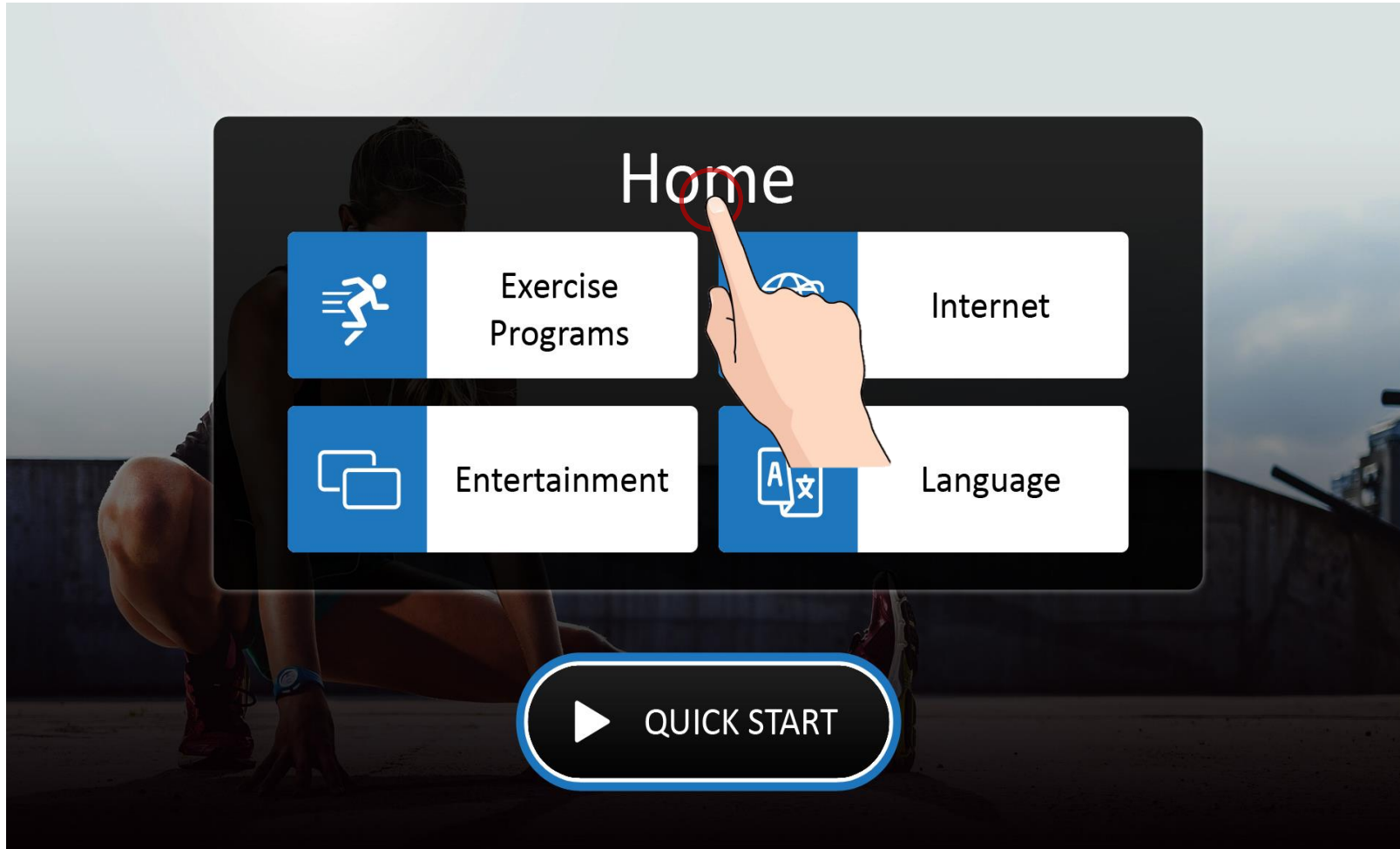
7-3 Troubleshooting procedure matrix

Condition	Reason	Solve
TFT touch panel not bright, incomplete or imperfect.	<ol style="list-style-type: none"> 1. Power cord isn't plugged into outlet 2. TFT touch panel is broken. 	<ol style="list-style-type: none"> 1. Check power cord to line equipment. 2. Check the power has 120VAC. 3. Replace new console.
Erratic pulse display.	<ol style="list-style-type: none"> 1. Another chest belt in use around treadmill. 2. Other magnetic field disturbance. 3. Receiver is broken. 	<ol style="list-style-type: none"> 1. Check for other chest belt use around bike. 2. Change the position or direction of bike. 3. Replace with new receiver.
Hand pulse lost its function. (No pulse displayed on monitor)	<ol style="list-style-type: none"> 1. Hands not on the hand pulse sensors or only one hand on sensor. 2. The connector of HANDPULSE W/WIRE and Console not connected properly. 3. The wires got damaged when connecting the HANDPULSE W/WIRE and Console. 4. Hand pulse board is broken. 	<ol style="list-style-type: none"> 1. Two hands hold the hand pulse. 2. Connect the cable again. 3. Replace with new cable. 4. Replace console or Hand pulse board.
Wireless lost its function. (No pulse displayed on monitor)	<ol style="list-style-type: none"> 1. Chest belt not worn properly. 2. Distance is too far and exceeds range of receiver. 3. Chest belt battery is weak or dead. 	<ol style="list-style-type: none"> 1. Check chest belt has proper contact with skin and is oriented correctly. 2. User chest belt in front of console within 3 feet. 3. Replace with new lithium battery type is CR2032.
Bluetooth chest strap heart rate monitor no function (No pulse displayed on monitor)	<ol style="list-style-type: none"> 1. No heart rate display on console. 	<ol style="list-style-type: none"> 1. Check the Bluetooth chest strap of power is enough. 2. Turn on Bluetooth on the console of system, tap the name of the Bluetooth device you want to pair with your Bluetooth chest strap.
No resistance	<ol style="list-style-type: none"> 1. Control board are broken. 2. Generator brake resistance voltage wire shedding. 3. Driver IC broken. 	<ol style="list-style-type: none"> 1. Replace with new Control board. 2. Please re-install wire. 3. Replace the new console.
No internet	<ol style="list-style-type: none"> 1. Can not to use internet 	<ol style="list-style-type: none"> 1. Check Wi-Fi must be turned on, and WIFI must be connected. 3. Ethernet must be connected and set.

7-4 Engineering Mode Instructions

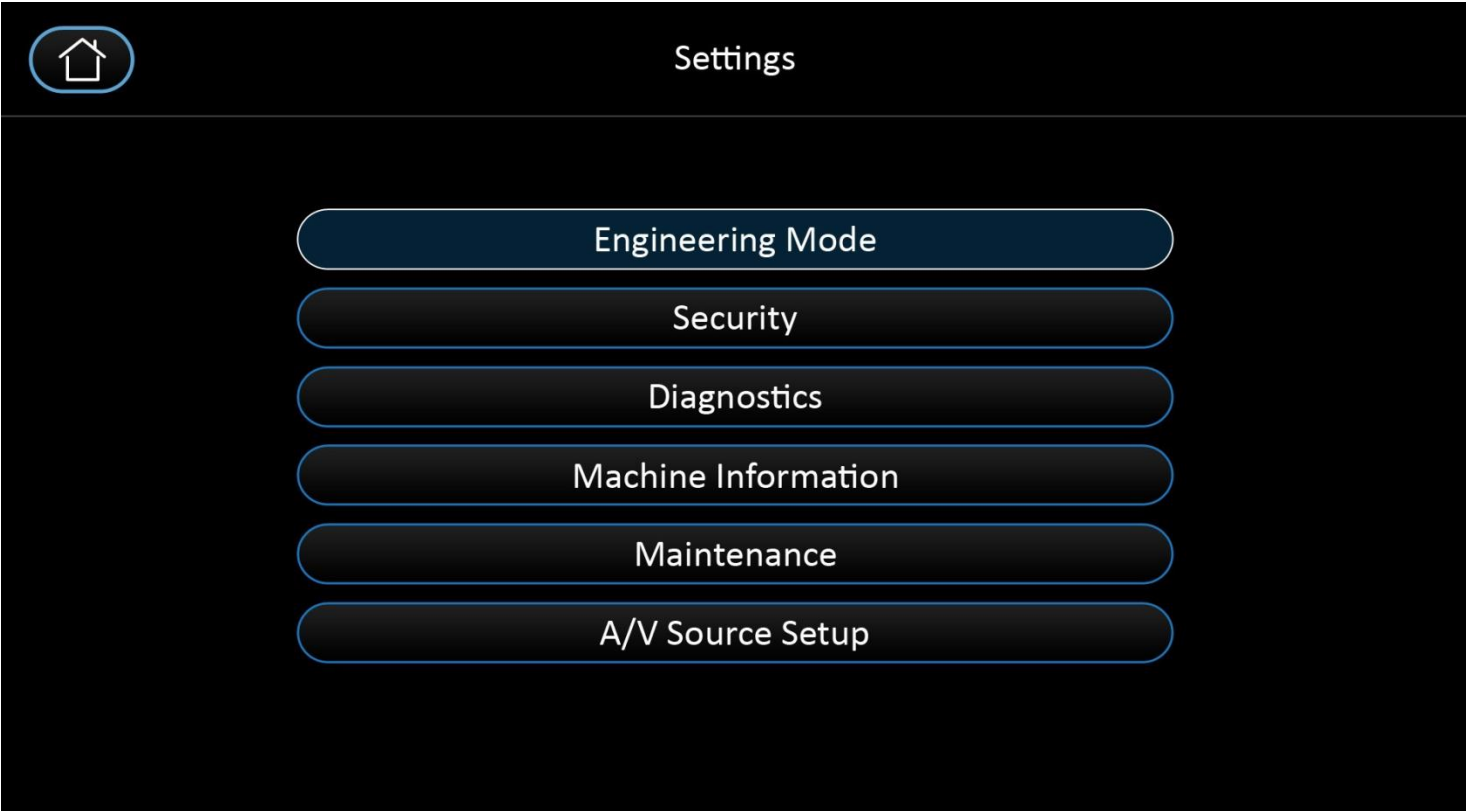
Home

Click on the Home icon at the top of the main page center 10 times to enter a total of 6 sub-menu modes on the setting page.



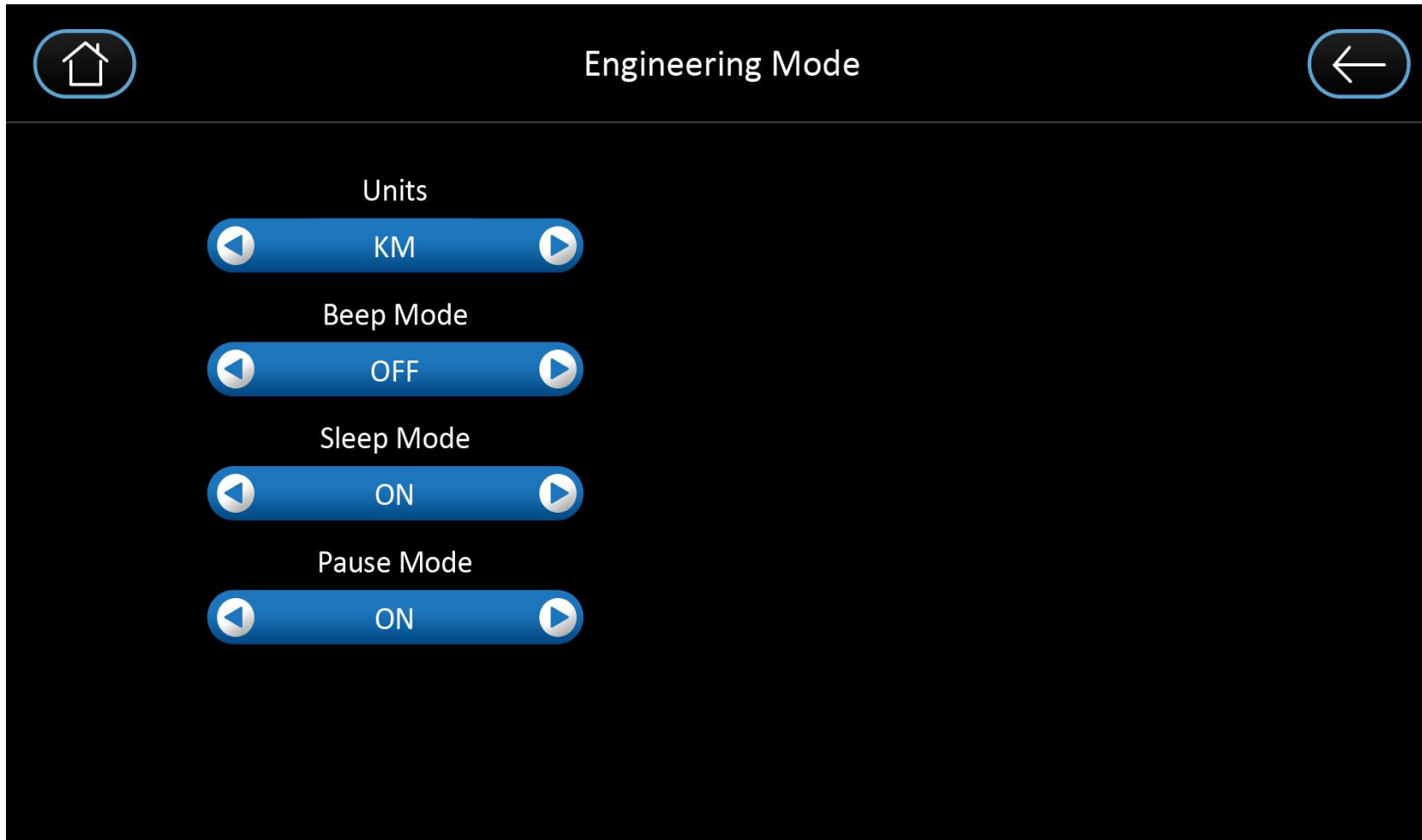
Engineering Mode Settings

Items	Description
Engineering Mode	Set the unit, Sleep mode
Security	Set Lock Accumulate mileage.
Diagnostics	The Error Diagnostics
Machine Information	Set Machine Type, GS Mode, Touch sound, Sleep Mode, Safety Mode, Zero mileage.
Maintenance	Set default language, Wi-Fi, Ethernet, Bluetooth, USB update, update OS.
A / V Source Setup	Set audio/visual source.



Engineering Mode

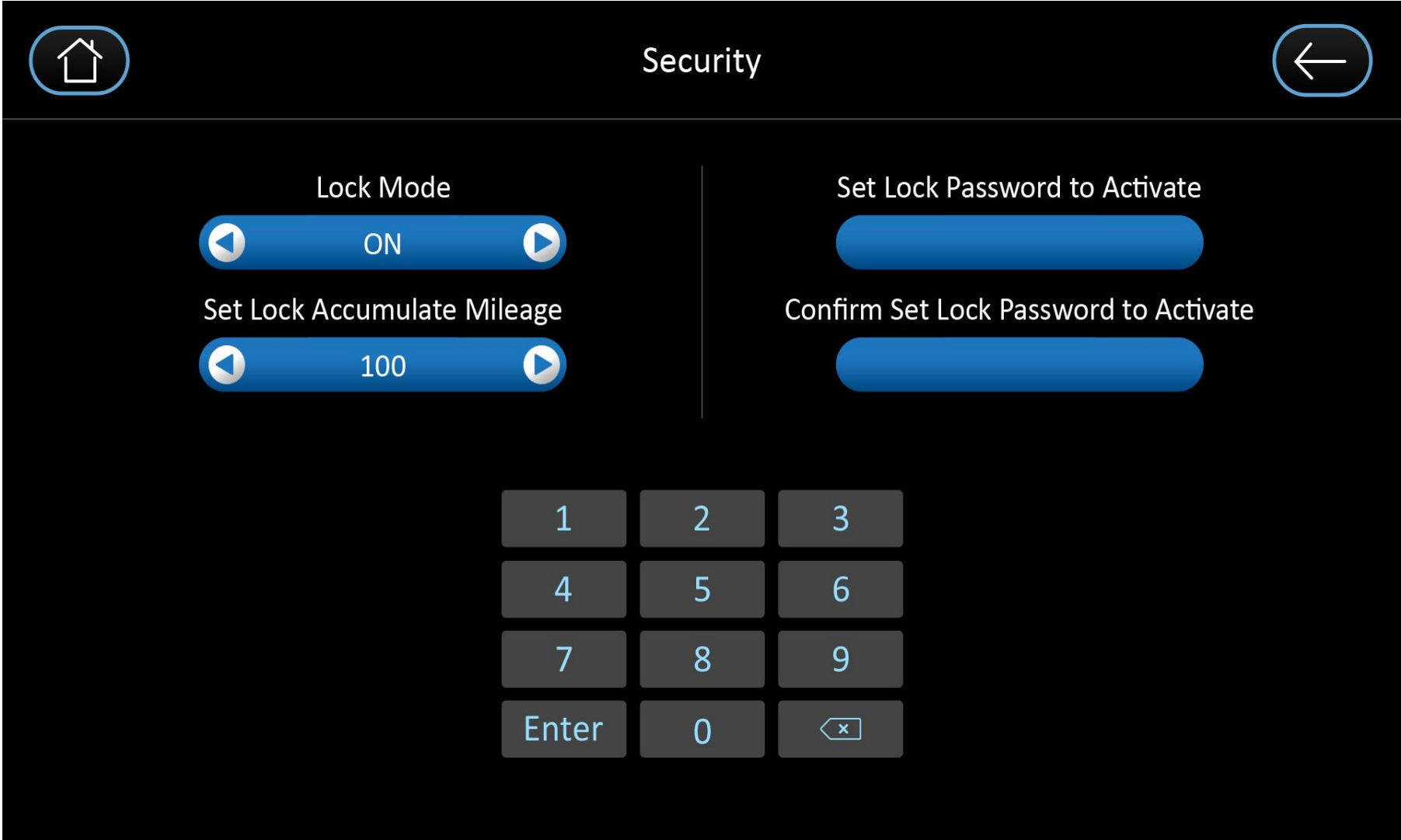
1. Units (Choice KM or Mile).
2. Beep Mode (Turn off beep of button, no beeping sound is heard).
3. Sleep Mode (The default OFF. When set ON, the electronic watch will go to sleep without any operation within 30 minutes. Press any key to wake up).
4. Pause Mode (Turn on allow 5 minutes of pause, turn off to have the console pause indefinitely).



Security

Set Lock Accumulate mileage :

- 1. Set a four-digit number password and the number of kilometers you want to lock.
- 2. Can use the set password to unlock or use the password 2222 to unlock.



Diagnostics

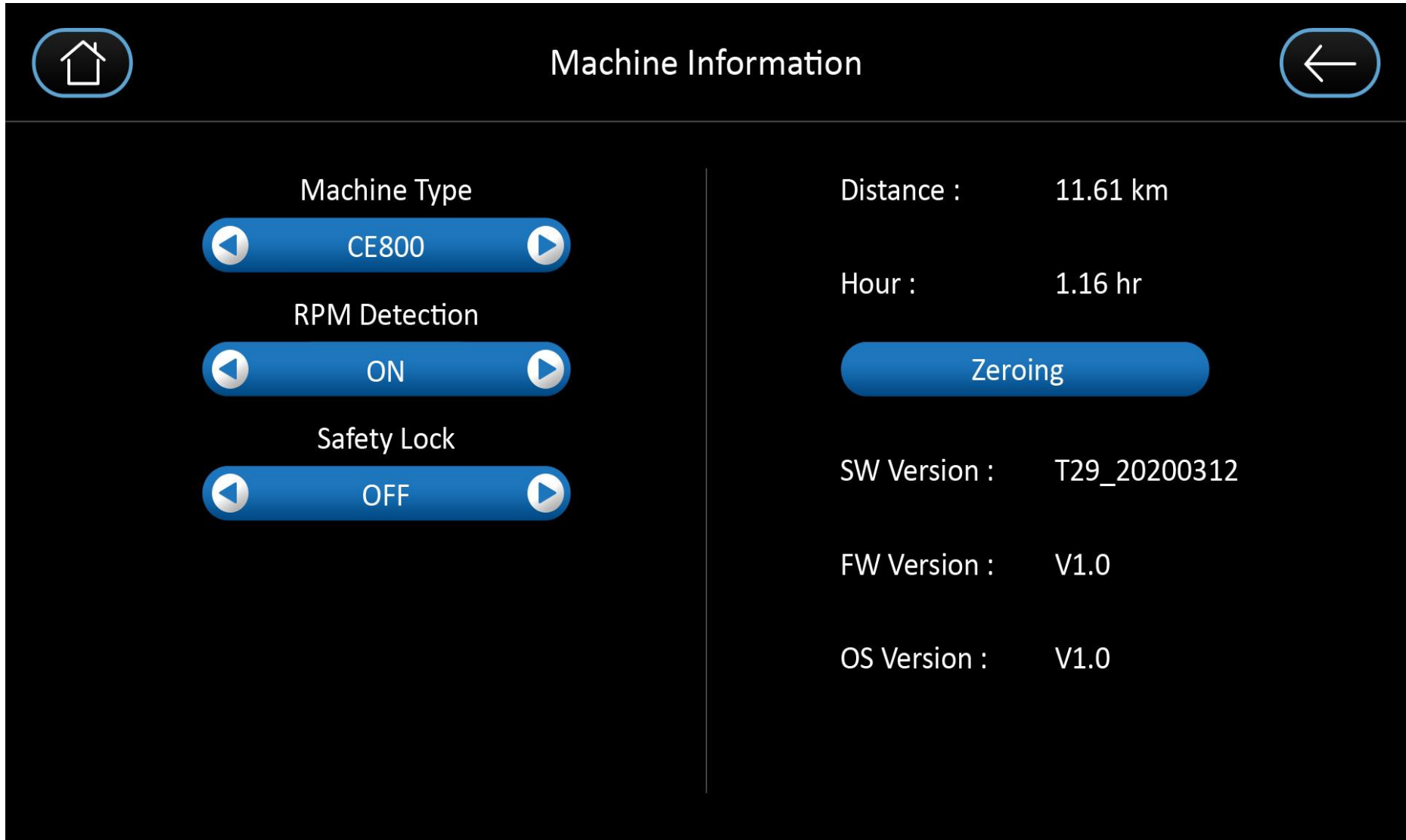
Recorder the error code on machine during running.

The screenshot shows a mobile application interface with a dark background. At the top, there is a header bar containing a home icon on the left, the text 'Error Code Log' in the center, and a back arrow icon on the right. Below the header, there is a list of three error entries, each separated by a horizontal line. Each entry consists of an error code '0x0021' followed by the description 'Treadmill-> Motor Error'.

Error Code	Description
0x0021	Treadmill-> Motor Error
0x0021	Treadmill-> Motor Error
0x0021	Treadmill-> Motor Error

Machine Information

1. Machine Type (Choice exercise equipment, this machine is CE800).
2. RPM Detection (Turns off the speaker so no beeping sound is heard).
3. Safety Lock : The default is OFF. (For EMS system)
4. Zeroing : Click on this key to clear all odometer.



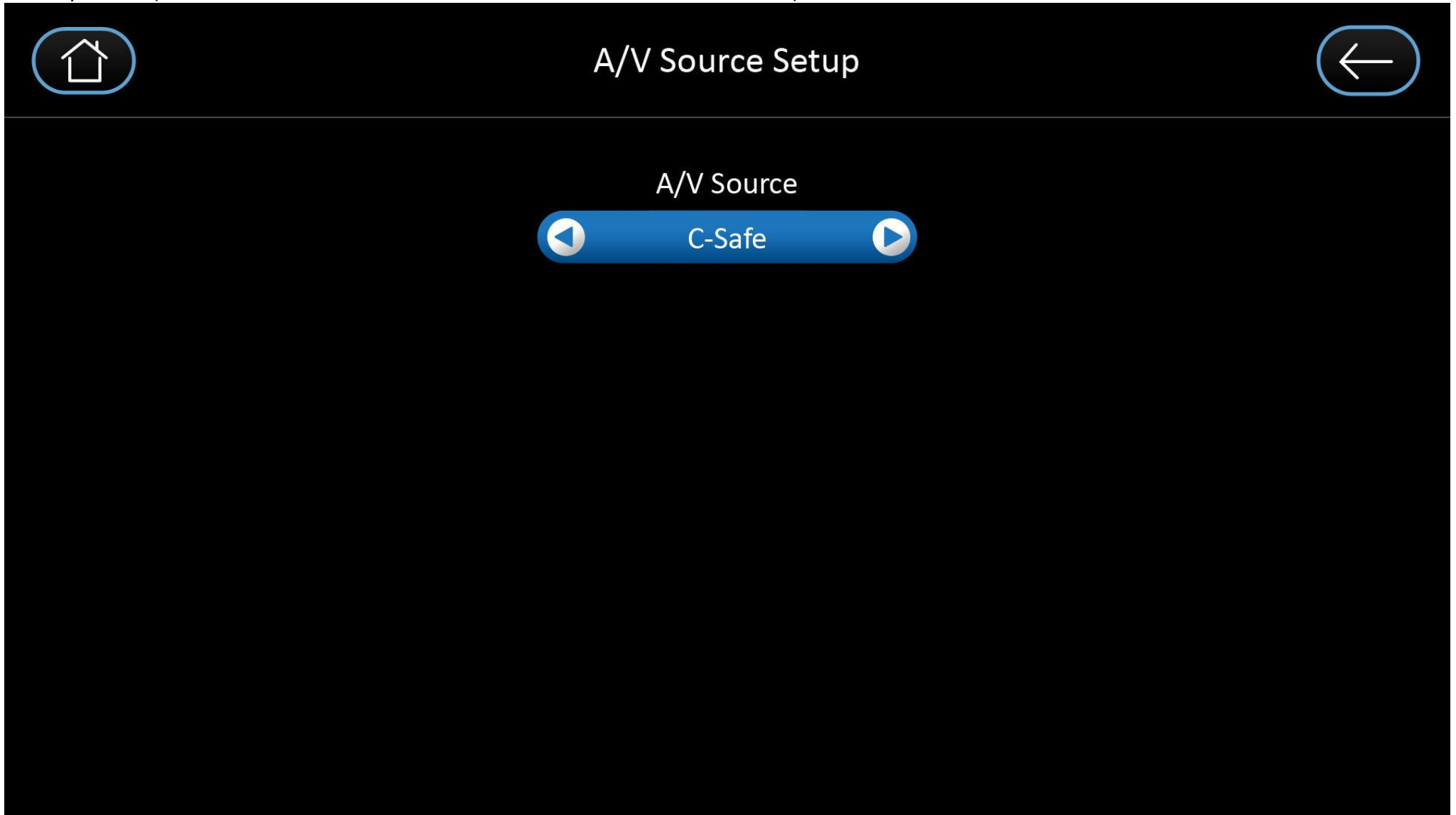
Maintenance

Set default Language, Wi-Fi or Ethernet, enable Bluetooth function, Update APP (USB of manual update), Update OS (reserved), Update APPS (internet function of APPs)



A/V Source Setup

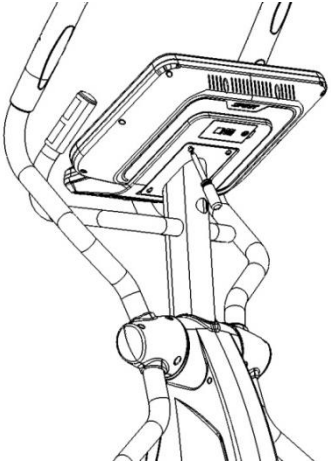
1. C-Safe protocol. (HDMI transfer to screen on TV of Entertainment function).
2. CAB protocol (connect a set-box transfer to screen on TV of Entertainment function).



8. Disassembling and Assembling

8-1 Console Replacement

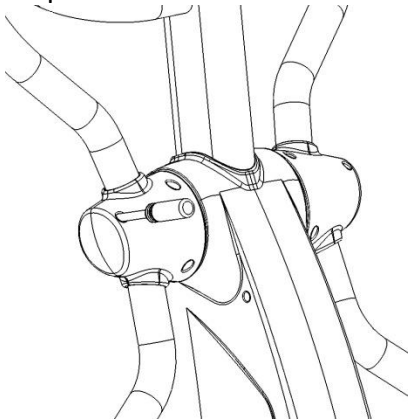
Step 1: Use a screwdriver to remove 4 bolts (M5*10mm), then unplug the control wire and Handpulse wires then take off the console.



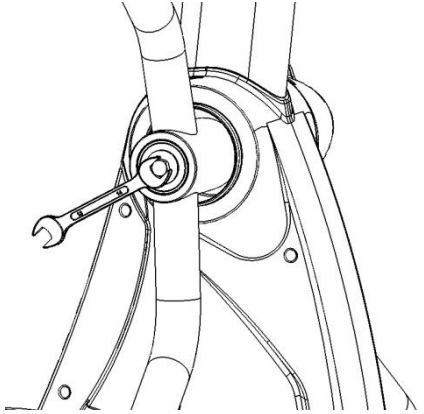
Step 2: To reassemble the console do the reverse of step 1.

8-2 Swing Arm Replacement

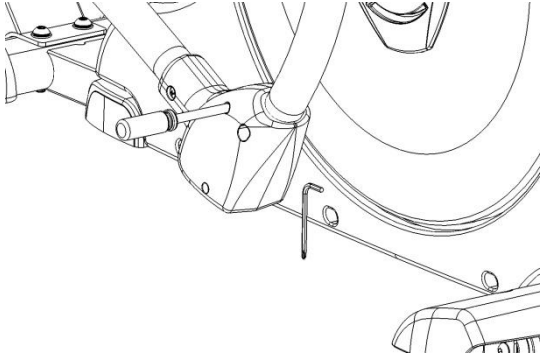
Step 1: Use a screwdriver to remove 3 screws (3.5*12mm) of handle bar cover then remove the covers.



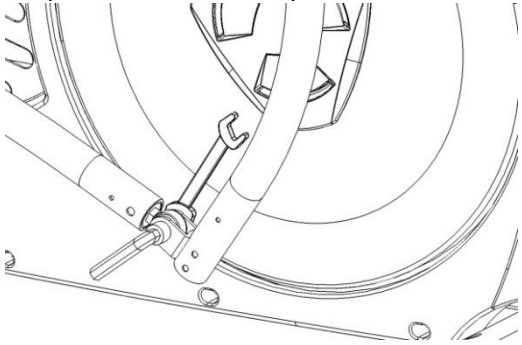
Step 2: Use a 14mm open-end wrench to remove the hex head bolt(3/8"*15mm) and flat washer (3/8"*30*2.0T).



Step 3: Use a screwdriver to remove the connecting arm cover (A) and (B).



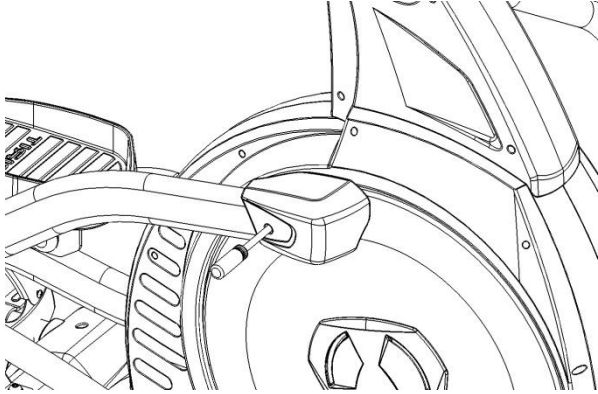
Step 4: Use a 17mm open-end wrench and 12mm L- Allen wrench to remove the bolt of rod end bearing.



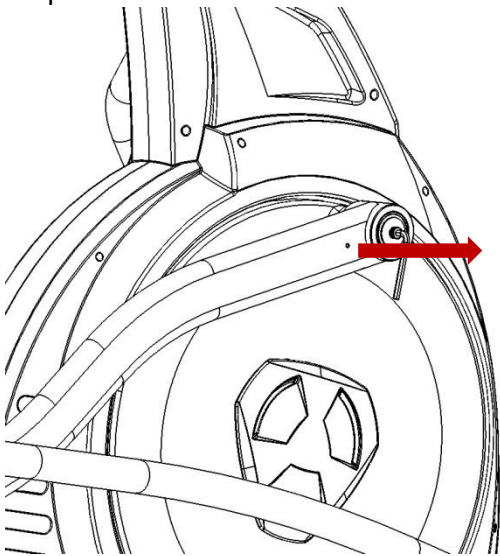
8-3 Connecting Arm Replacement

Step 1: Follow the step of 10-2 to unmount the connecting arm from the swing arm.

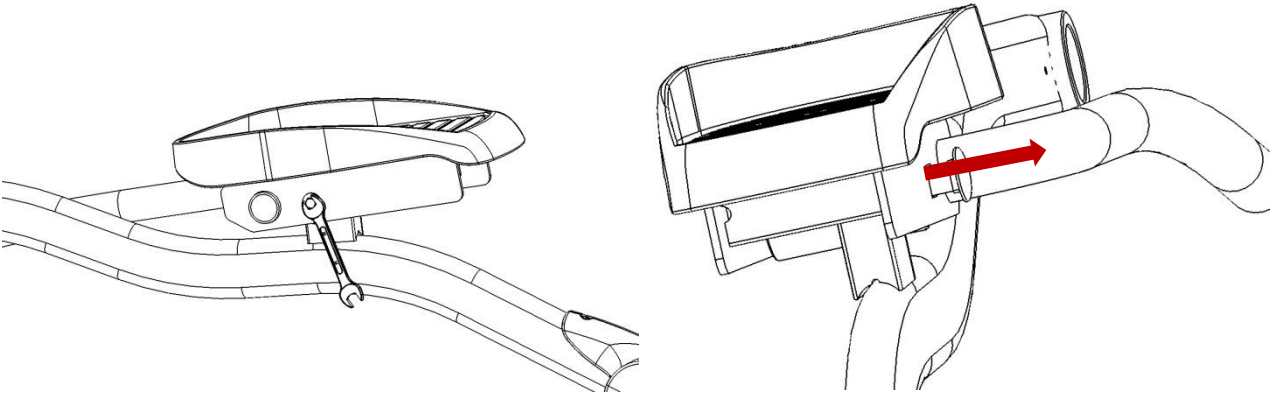
Step 2: Use the screwdriver to remove the screw(M6*15mm) of the pedal arm cover then remove it.



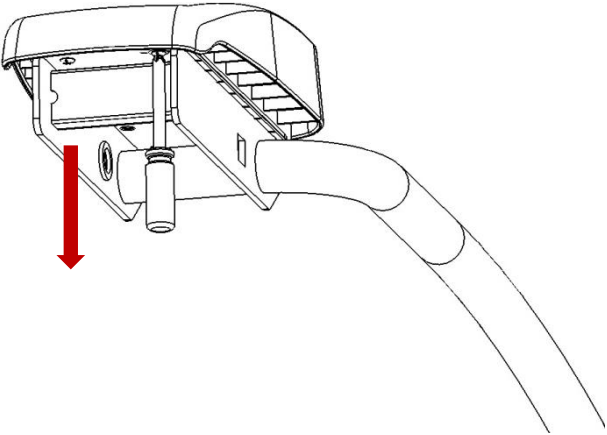
Step 3: Use an L-Allen wrench to remove the bolt(5/16"*3/4" hex head) and flat washer(5/16"*35*1.5T), then unmount the pedal arm and the connecting arm.



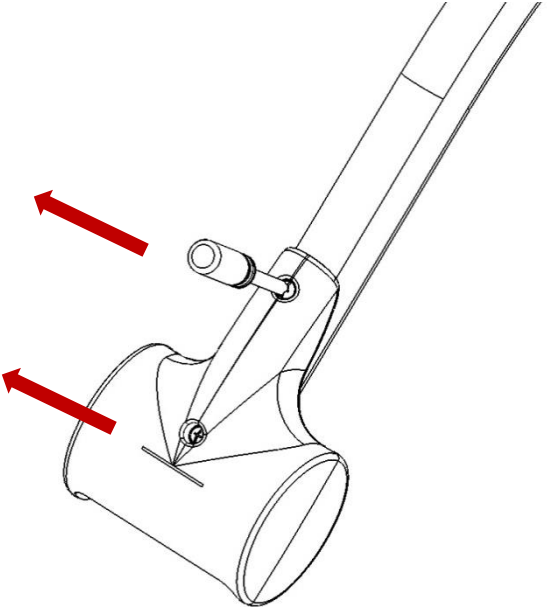
Step 4: Use a 12mm open-end wrench to remove the hex head bolt(5/16" * 15mm) and flat washer(5/16" * 23 * 15T). Remove the carriage bolt then disassembly the connecting arm from the pedal arm.



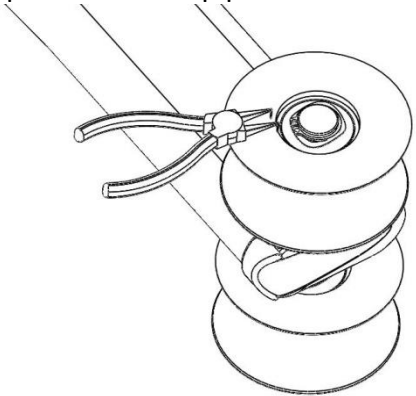
Step 5: Use a screwdriver to remove 4 screws(M5 * 10mm) from the pedal then remove it.



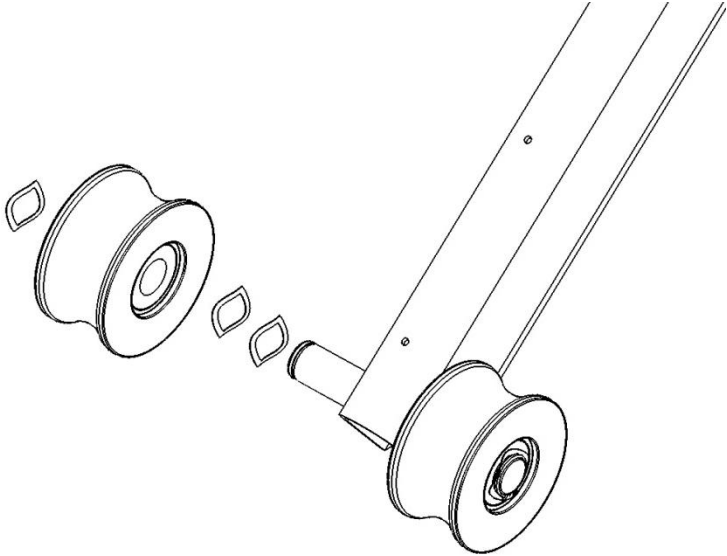
Step 6: Before unmount the slide wheels, use a screwdriver to remove 2 screws (M5*15mm) of the slide wheel cover.



Step 7: Use a circlip plier to remove the circlip $\varnothing 17$ then remove the slide wheel.



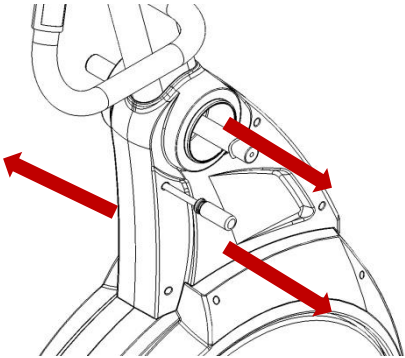
Step 8: To do the reverse of the above steps, and add 3 wave washers (Ø 17) to the slide wheel axle showing below fig.



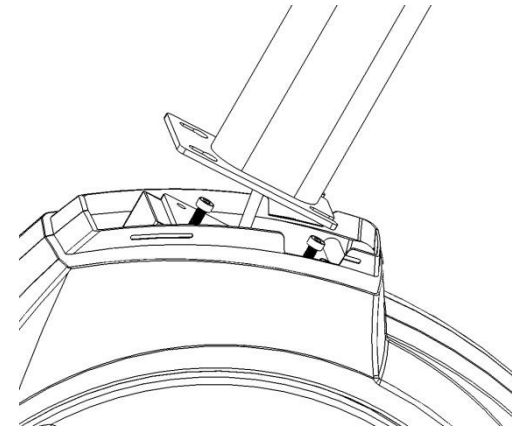
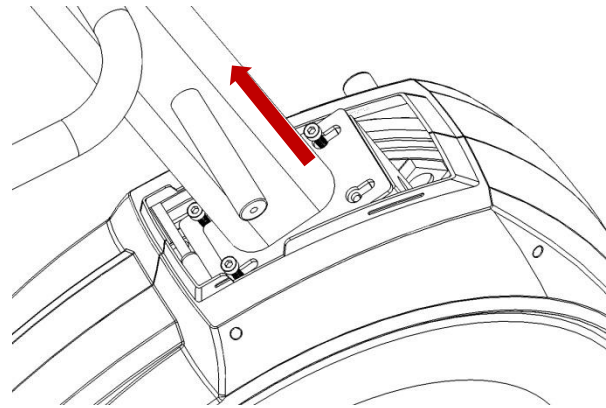
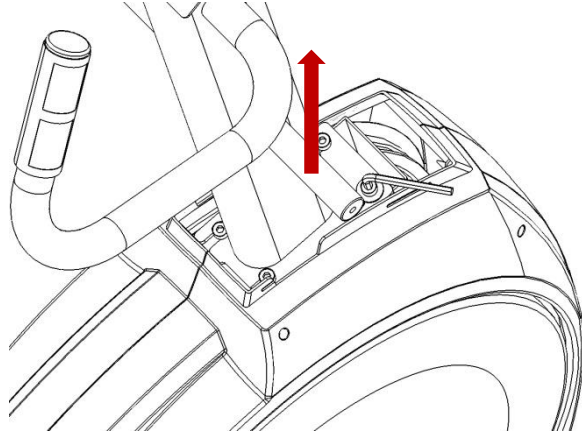
8-4 Console Mast Replacement

Step 1: Follow the steps of 10-2 to remove the swing arm.

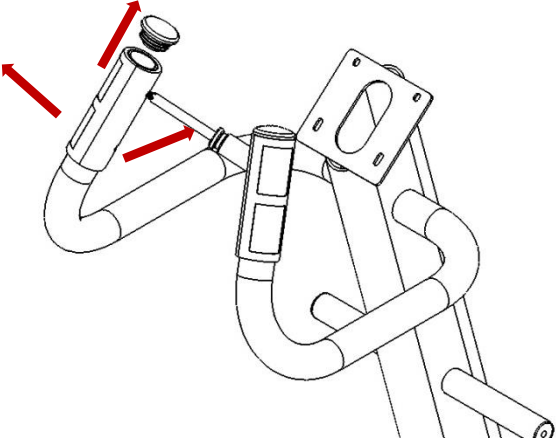
Step 2: Remove the wave washer($\psi 25$) from both left and right side axle then use a screwdriver to remove 4 screws(3.5*12mm) of the console mast covers(L) & (R) and remove them.



Step 3: Use an L-Allen wrench to loose 3 bolts(M8*25mm) of the console mast then remove the last bolt(M8*25mm) which a flat washer(5/16''*23*1.5T) with. Push the console mast to the front of the machine and unmount it from the mainframe then remove the control cable.



Step 4: Remove the roundcap first then use a screwdriver to remove 2 tapping Screws ($\psi 3 \times 20 \text{mm}$) of the handpulse then pull out the handpulse wire from the tube then remove the handpulse assembly.

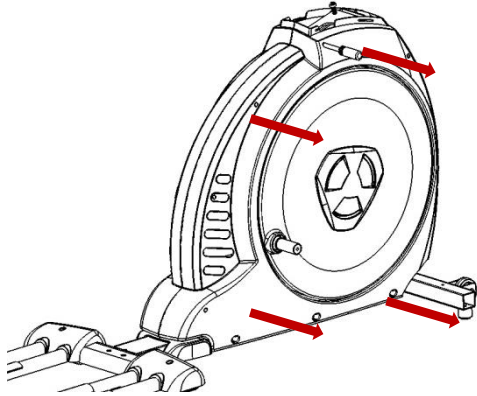


Step 5: To do the reverse of the above steps to reassembly console mast.

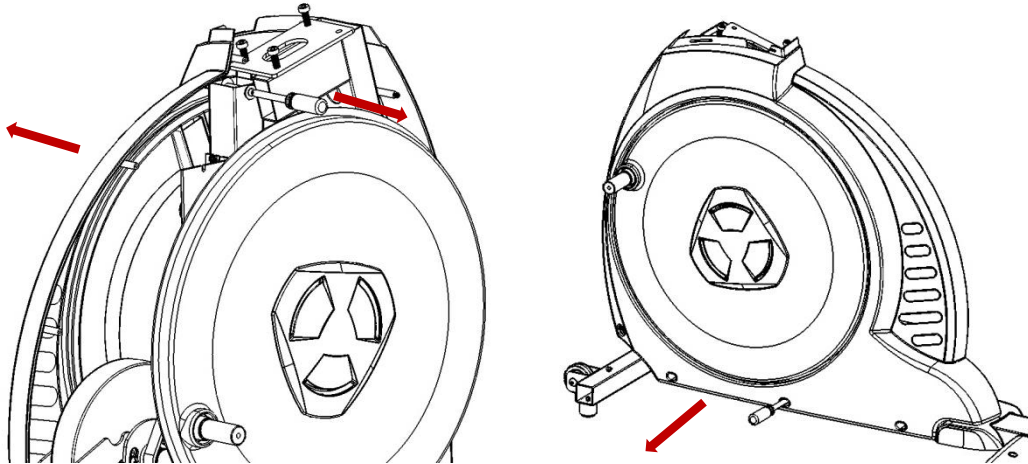
8-5 Chain Cover Replacement

Step 1: Follow the steps of “swing arm replacement” and “connecting arm replacement” to remove swing arm and connecting arm.

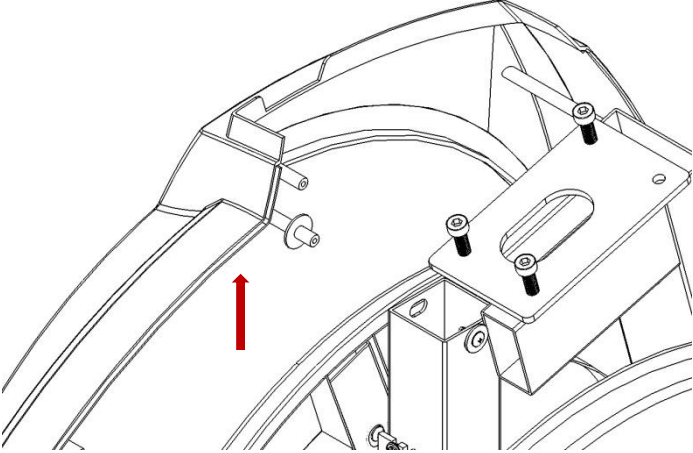
Step 2: Use a screwdriver to remove 7 screws(4*19mm sheet metal screw) and 3 screws(5*16mm Tapping Screw) , then remove the right chain cover.



Step 3: Remove the screw(4*16mm sheet metal screw) and flat washer($\psi 5/16'' \times \psi 23 \times 1.5T$) which lock the left chain cover on the mainframe and remove 3 screws(5*16mm Tapping Screw), then remove the left chain cover.



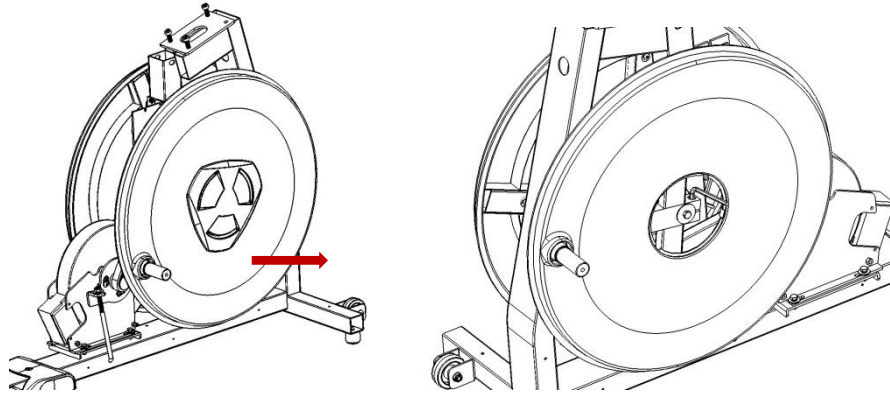
Step 4: To do the reverse of the above steps to reassemble the chain cover. (Remember to add the flat washer inside the left chain cover)



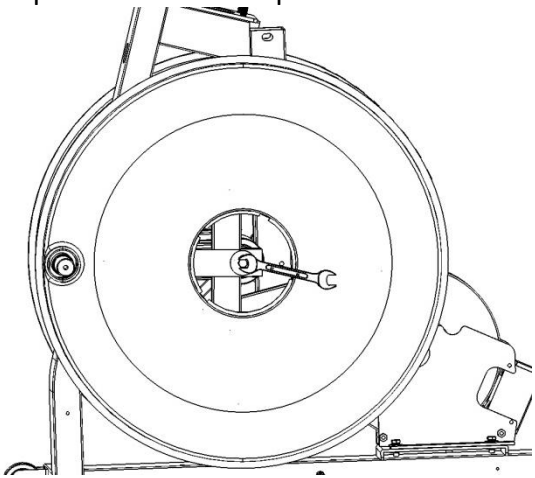
8-6 Cross Bar Replacement

Step 1: Follow the steps of "Chain Cover replacement" to remove both of the chain cover.

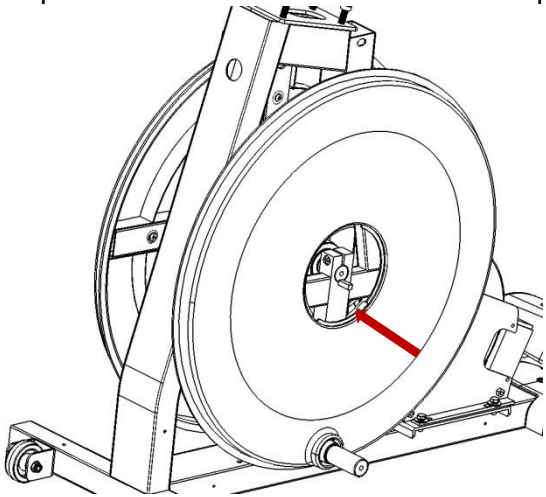
Step 2: Remove the Round Disk Cover, then use a 6mm L-Allen wrench to remove the bolt(M8*40mm Socket Head Cap Bolt) which lock the cross bar on the axle.



Step 3: Use a 12mm open-end wrench to remove a bolt(5/16"*15mm hex head bolt) and a flat washer(5/16"*35*1.5T) then unmount the cross bar and the round disk.



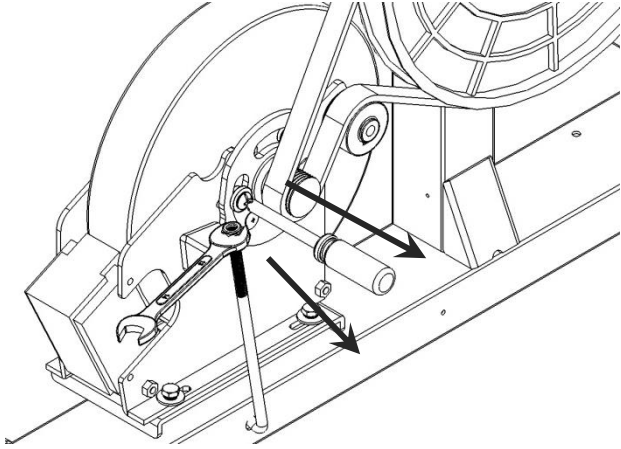
Step 4: Use a screwdriver to remove 8 screws(5*16mm tapping screw) and 8 flat washers(1/4"*19mm) then disassemble the round disk from the cross bar.
Step 5: To do the reverse of the above steps to reassemble the round cover and cross bar.(note the direction of the woodruff key, the round head direct to the axle)



8-7 Idler Wheel Assembly replacement

Step 1: Follow the steps of “Cross Bar replacement” to remove cross bar.

Step 2: Use a screwdriver to remove 3 screws(M6*15mm) then use 13mm open-end wrench to loose the nut(M8*9T) from “J bolt”. Unmount the belt from drive pulley then remove 3 screws(M6*15mm) to remove idler wheel assembly.

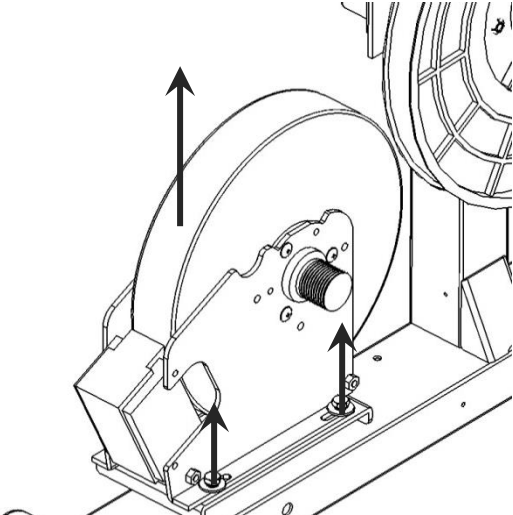


Step 3: To do the reverse of the above steps to reassemble the idler wheel assembly. Adjust the nut which on the J bolt to adjust the tension of the belt to the right value (About 185Khz~210Khz by using sonic belt tension meter)

8-8 Flywheel & Poly-V Belt replacement

Step 1: Follow the steps of "Idler Wheel Assembly replacement" to remove idler wheel assembly.

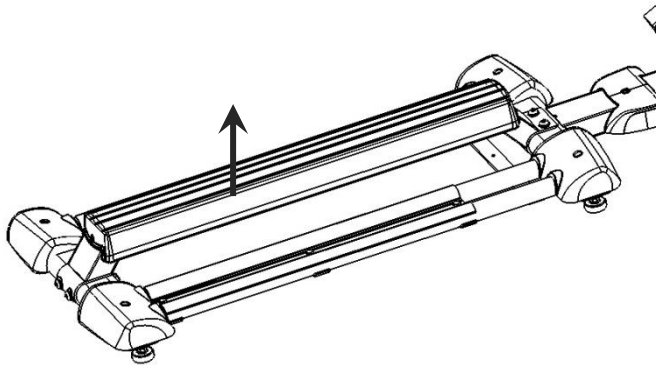
Step 2: Use an 11mm open-end wrench to remove flywheel 4 locking bolts(1/4"*3/4" hex head bolt), 4 flat washers(1/4"*19), and 4 spring washers(1/4"). Unplug the power cable then remove the flywheel.



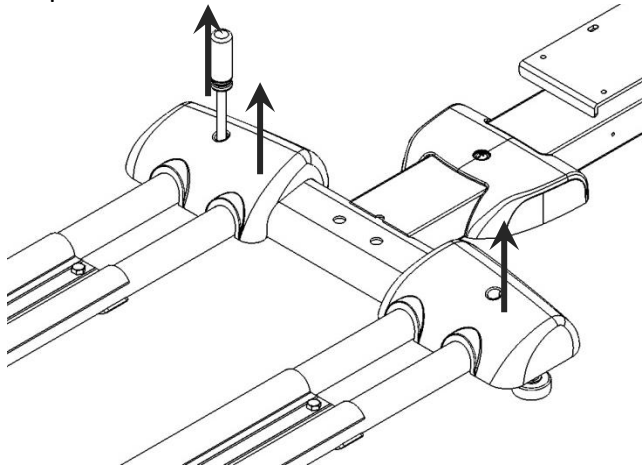
Step 3: To do the reverse of above steps to reassemble the flywheel and other parts.

8-9 Rear Rail Assembly replacement

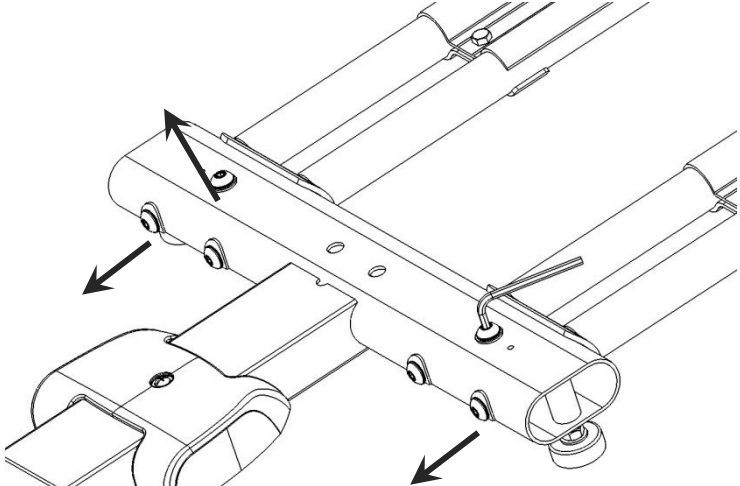
Step 1: Use an L-Allen wrench to remove the bolts, flat washers, and spring washers which locking the rail support assembly.



Step 2: Use a screwdriver to remove the rear stabilizer cover (A) & (B).



Step 3: Use a 6mm L-Allen wrench to remove all the bolts, flat washers, curve washers which locking the rear rail assembly.

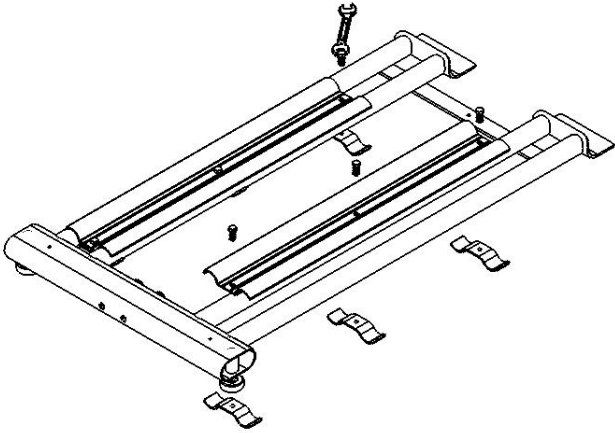


Step 4: To do the reverse of the above steps to reassemble the rear rail assembly.

8-10 Aluminum Track replacement

Step 1: Remove the rear stabilizer cover (A) & (B).

Step 2: Use a 12mm open-end wrench to remove 3 bolts (5/16" * 3/4" hex head bolt) then remove the aluminum track.



Step 3: To do the reverse of the above steps to reassemble.