MATRIX

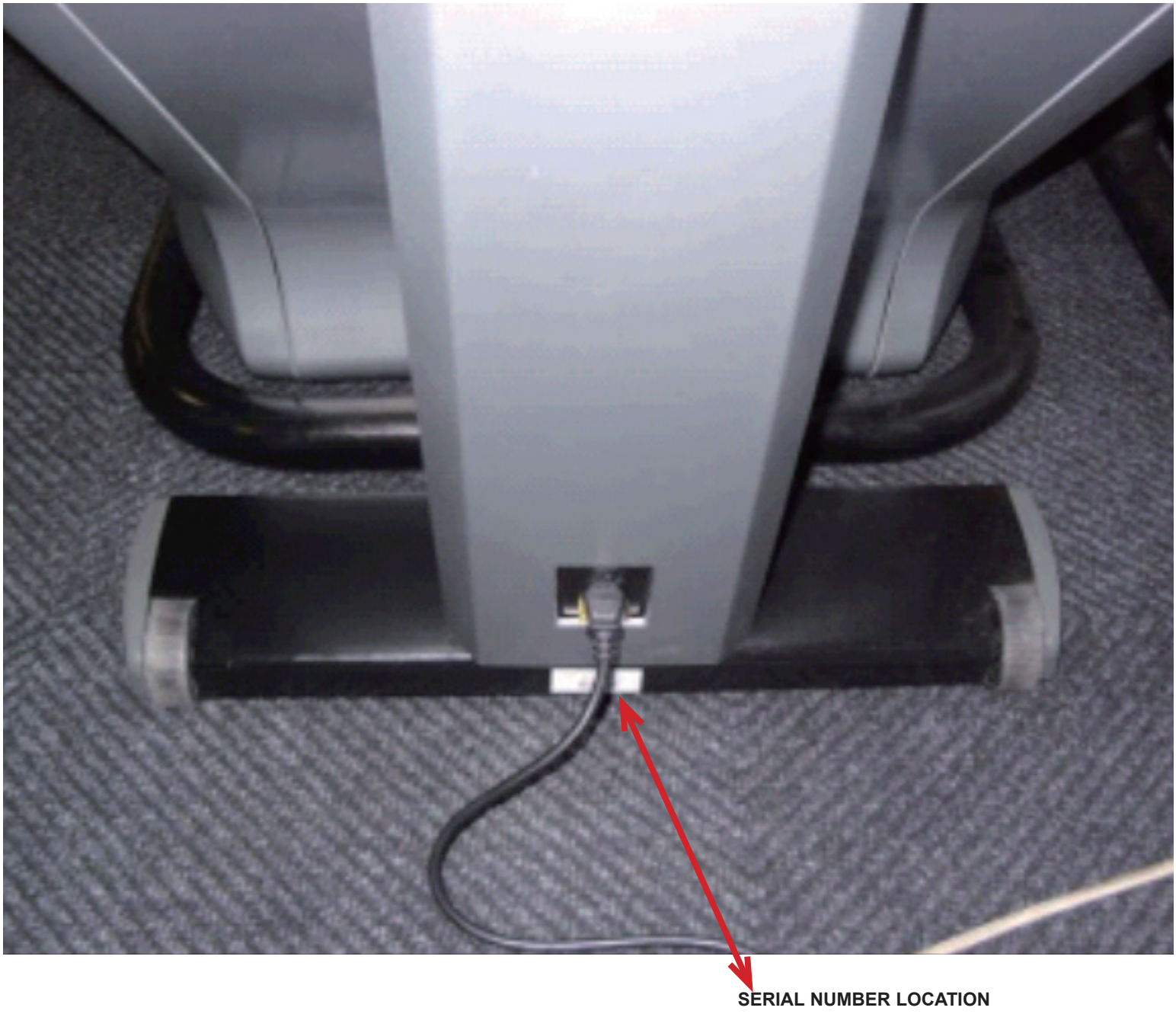
C3X-02 CLIMB MILL
SERVICE MANUAL

TABLE OF CONTENTS

TABLE OF CONTENTS

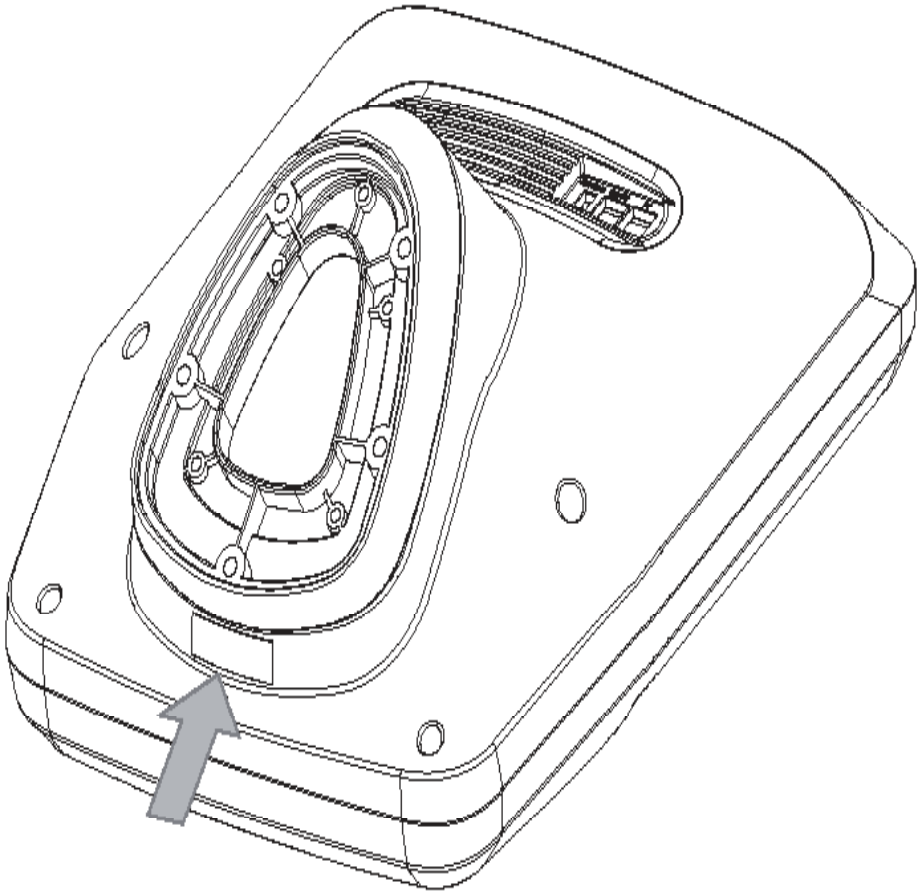
CHAPTER 1: SERIAL NUMBER LOCATION

1.1 SERIAL NUMBER LOCATION



1.1 SERIAL NUMBER LOCATION - CONTINUED

CONSOLE SERIAL NUMBER LOCATION



CHAPTER 2: IMPORTANT SAFETY INSTRUCTIONS

2.1 READ AND SAVE THESE INSTRUCTIONS

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

When using an electrical product, basic precautions should always be followed including the following:

- ***An appliance should never be left unattended when plugged in. Unplug the unit from the outlet when not in use and before putting on or taking off any parts.***
- ***This product must be used for its intended purpose described in this service manual. Do not use other attachments that are not recommend by the manufacturer. Attachments may cause injury.***
- ***To prevent electrical shock, never drop or insert any object into any opening.***
- ***Do not remove the side covers. Service should only be done by an authorized service technician.***
- ***Never operate the unit with the air opening blocked. Keep the air opening clean, free of lint and hair.***
- ***Never operate the unit if it has a damaged cord or plug, if it is not working properly, if it has been damaged, or immersed in water.***
- ***Close supervision is necessary when the unit is used by or near children or disable persons.***
- ***Do not use outdoors.***
- ***Do not operate where aerosol (spray) products are being used or when oxygen is being administered.***
- ***Do not use the equipment in any way other than designed or intended by the manufacturer. It is imperative that all Matrix Fitness Systems equipment is used properly to avoid injury.***
- ***Keep hands and feet clear of moving parts at all times to avoid injury.***
- ***Unsupervised children must be kept away from this equip ment.***
- ***Do not wear loose clothing while on the equipment.***

* ***At NO time should pets or children under the age of 14 be closer to the unit than 10 feet.***

* ***At NO time should children under the age of 14 use the unit.***

* ***Children over the age of 14 or disabled persons should not use the unit without adult supervision.***

* ***Never operate the unit if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or immersed in water. Return the unit to a service center for examination and repair.***

* ***To disconnect, turn all controls to the off position, then remove plug from outlet.***

* ***Do not remove the console covers unless instructed by Customer Tech Support. Service should only be done by an authorized service technician.***

* ***This unit is not equipped with a free wheel. Step speed should be reduced in a controlled manner.***

* ***Heart rate monitoring systems may be inaccurate.***

* ***Over exercising may result in serious injury or death.***

* ***If you feel faint, stop exercising immediately.***

CAUTION! ***If you experience chest pains, nausea, dizziness, or shortness of breath, stop exercising immediately and consult your physician before continuing.***

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

2.2 ELECTRICAL REQUIREMENTS

DEDICATED CIRCUIT AND ELECTRICAL INFO

A “Dedicated Circuit” means that each outlet you plug into should not have anything else running on that same circuit. The easiest way to verify this is to locate the main circuit breaker box, and turn off the breaker(s) one at a time. Once a breaker has been turned off, the only thing that should not have power to it are the units in question. No lamps, vending machines, fans, sound systems, or any other item should lose power when you perform this test.

Non-looped (isolated) neutral/grounding means that each circuit must have an individual neutral/ground connection coming from it, and terminating at an approved earth ground. You cannot “jumper” a single neutral/ground from one circuit to the next.

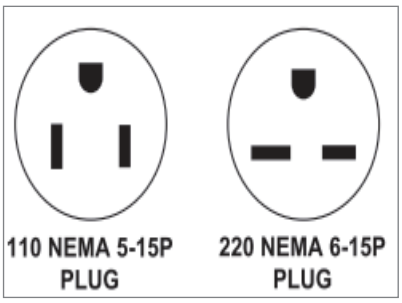
ELECTRICAL REQUIREMENTS

For your safety and to ensure good unit performance, the ground on this circuit must be non-looped (isolated). Please refer to NEC article 210-21 and 210-23. Any alterations to the standard power cord provided could void all warranties of this product.

The 3x, 5x and 7xe Climbmills are designed to be self-powered and do not require an external power supply source to operate. Without an external power supply, the console’s start-up time may be delayed. Add-on TV’s and other console accessories will increase the time needed for start-up. An external power supply will ensure power is provided to the console at all times and is recommended when add-on accessories are used.

For units with an integrated TV (like the 7xe and 7xi), the TV power requirements are included in the unit. An RG6 coaxial cable with ‘F Type’ compression fittings on each end will need to be connected to the cardio unit and the video source. Additional power requirements are not needed for the add-on digital TV (3x and 5x). For units with an add-on PCTV (3x and 5x), the TV power requirements are separate.

NOTE: ALL UNITS WITH VIRTUAL ACTIVE™ MUST BE POWERED!



North American power cord plugs shown.
Depending on your country, the plug type may vary.

110 V UNITS

All Matrix 3x, 5x, 7xe and 7xi 110 V Climbmills require the use of a 100-125 V, 60 Hz and a 15 A “Dedicated Circuit”, with a non-looped (isolated) neutral/ground for power. This outlet should be a NEMA 5-15R and have the same configuration as the plug. No adapter should be used with this product. These bikes can be daisy-chained together with up to 4 units per 15 A dedicated circuit. Matrix daisy-chain cord adapters are sold separately.

220 V UNITS

All Matrix 3x, 5x, 7xe and 7xi 220 V Climbmills require the use of a 216-250 V, 50 Hz and a 15 A “Dedicated Circuit”, with a non-looped (isolated) neutral/ground for power. This outlet should be a NEMA 6-15R and have the same configuration as the plug. No adapter should be used with this product. These bikes can be daisy-chained together with up to 4 units per 15 A dedicated circuit. Matrix daisy-chain cord adapters are sold separately.

GROUNDING INSTRUCTIONS

The unit must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. The unit is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. If the user does not follow these grounding instructions, the user could void the Matrix limited warranty.

ADDITIONAL ELECTRICAL INFO

In addition to the dedicated circuit requirement, the proper gauge wire must be used from the circuit breaker box, to each outlet that will have the maximum number of units running off of it. If the distance from the circuit breaker box to each outlet, is 100 ft (30.5 m) or less, then 12 gauge wire should be used. For distances greater than 100 ft (30.5 m) from the circuit breaker box to the outlet, a 10 gauge wire should be used.

ENERGY SAVING / LOW-POWER MODE

All units are configured with the ability to enter into an energy saving / low-power mode when the unit has not been in use for a specified period of time. Additional time may be required to fully reactivate this unit once it has entered the low-power mode. This energy saving feature may be enabled or disabled from within the ‘Manager Mode’ or ‘Engineering Mode.

ADD-ON PCTV

1.2 A of current (either from 110 V or 220 V). No more than 12 PCTVs should be used for each 15 A circuit and no more than 16 PCTVs shoaaaaauld be used for each 20 A circuit. The power outlet should have the same configuration as the plug. No adapter should be used with this product. An RG6 coaxial cable with ‘F Type’ compression fittings will need to be connected between the video source and each add-on PCTV unit.

ADD-ON DIGITAL TV

Additional power requirements are not needed for the add-on digital TV. An RG6 coaxial cable with ‘F Type’ compression fittings will need to be fittings will need to be connected between the video source and each add-on digital TV unit.

2.3 LOCATING THE UNIT

LOCATION OF THE UNIT

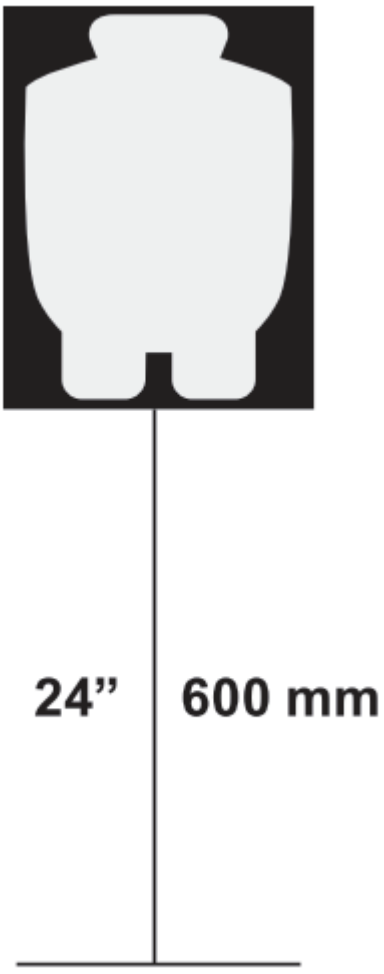
Place the unit on a level surface and away from direct sun light. The intense UV light can cause discoloration of plastics. Locate in an area with cool temperatures and low humidity. Leave a clear zone behind the unit of at least 24". This zone must be clear of any obstruction and allow the user a clear exit path from the unit. Do not place the unit in any area that will block the openings or vents. The unit should not be used in a garage or covered patio.

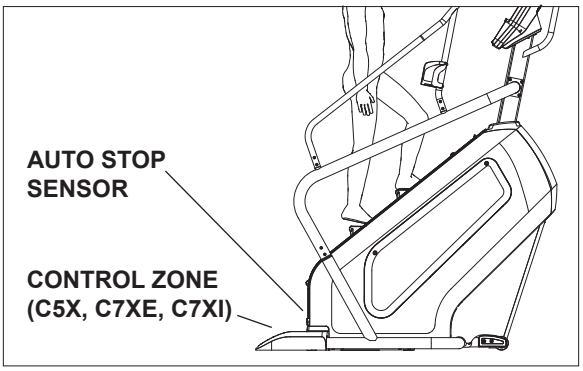
LEVELING THE UNIT

Locate a level, stable surface to position the equipment. The equipment has levelers located below the bottom step. To access the levelers, remove the end caps (C3X) or CONTROL ZONE (C5X, C7XE and C7XI). CAUTION: There is an electrical plug located under the CONTROL ZONE and will need to be unplugged before the cover can be completely removed. Use an allen wrench to level the unit. Once stable, replace parts as they were removed.

HEIGHT REQUIREMENTS

The Climb Mill adds 30" - 38" (76 - 96cm) to a user's height. For example, a 6' (183cm) tall user will be 7'8" (234.4cm - 254.4cm) off the floor. Total height of the user on the Climb Mill should not exceed 9'10" (300 cm), which means that users taller than 6'8" (204cm) should not use this equipment.





CHAPTER 3: PREVENTATIVE MAINTENANCE

3.1 RECOMMENDED CLEANING TIPS

In order to maximize life span, and minimize down time, all Matrix Fitness Equipment requires regularly scheduled cleaning.

YOU WILL NEED:

- Mild dish soap and water mixture in a spray bottle (10:1 water to soap ratio).
- Lint free 100% cotton cleaning cloths or Micro fiber cleaning cloths.
- Vacuum / Shop Vac with extendable hose and soft brush attachment.
- Super Lube Multi Purpose Synthetic Lubricant with Syncolon® (PTFE) Aerosol - www.super-lube.com/sythetic-aerosol-spray-ezp-46.html.
- Corrosion Block (available from Matrix - part # ZMS4001374).

Gym wipes are okay for customers to use as they will not leave over spray on your product yet will clean & disinfect.

The soap / water and vinegar / water solutions recommended above are okay to leave on your floor for customers to use. NOTE: Vinegar is a natural and safe disinfectant that will not cause corrosion.

We recommend that you do NOT allow customers to use spray bottles with chemical solutions to clean the equipment. If the cleaner is sprayed directly on the equipment or overspray is present, it may cause your equipment to rust and / or cause damage to console overlays.

WEEKLY:
1. With a clean dry 100% lint free cloth and water / soap mixture, wipe down the entire frame including the stairs so it is free of dust, dirt, and sweat.
2. With a clean dry 100% lint free cloth and water / soap mixture, wipe down the entire console area including the hand grips and hand rails.

MONTHLY:
1. Vacuum under and around the Climb Mill If you need to move the unit, unplug it first. Make sure to reset the casters after moving the unit back into position to stabilize the unit.

QUARTERLY:
1. Remove the side access panels and vacuum out the inside of the unit (Figure B).
2. Unplug the Climbmill and clean the AUTO STOP SENSORS (located under the bottom step) sensor with a cotton swab and rubbing alcohol.

FIGURE B

MAINTENANCE SCHEDULE	
ACTION	**FREQUENCY**
Check step motion and stability to ensure the Climbmill does not rock or wobble.	QUARTERLY
Check all connecting joint areas for tightness of bolt assemblies.	QUARTERLY
Ensure that there is little, or no free play at all joint assemblies once bolts have been tightened. Installation of washer kits may be required if free play does not come out from tightening bolts.	QUARTERLY
Unplug the Climbmill and remove the access panel. Clean sprockets of old grease and re-apply a lithium-based grease to sprocket teeth.	QUARTERLY
Unplug the Climbmill and clean the AUTO STOP SENSORS (located under the bottom step) with a cotton swab and rubbing alcohol.	QUARTERLY

3.2 CARE AND MAINTENANCE INSTRUCTION

In order to maximize life span, and minimize down time, all MATRIX equipment requires regular cleaning, and maintenance items performed on a scheduled basis. This section contains detailed instructions on how to perform these items, the frequency of which they should be done, and a check list to sign off each time service is completed for a specific machine. Some basic tools and supplies will be necessary to perform these tasks which include (but may not be limited to):

* Metric Allen wrenches
* #2 Phillips head screwdriver
* Adjustable wrench
* Teflon based spray lubricant such as “Super Lube”, or other Matrix approved product
* Lithium-based grease

You may periodically see addendums to this document, as the Matrix Technical Support Team identifies items that require specific attention, the latest version will always be available on the Matrix website, www.matrixfitness.com

DAILY MAINTENANCE ITEMS

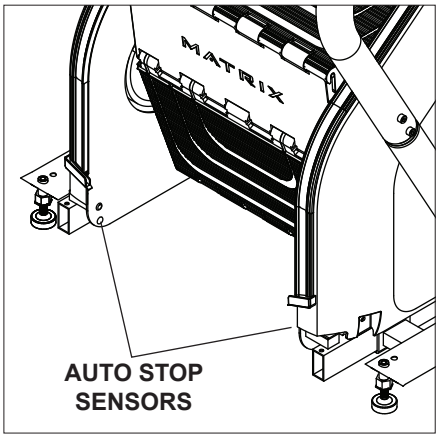
1. Attempt to wobble the unit from side to side and front to back. Level the unit if needed (See Section 10.4).

MONTHLY MAINTENANCE ITEMS

1. Check all connecting joint areas for tightness of fastened assemblies.
2. Remove the maintenance cover and clean and grease the drive chains using lithium-based grease.

QUARTERLY MAINTENANCE ITEMS

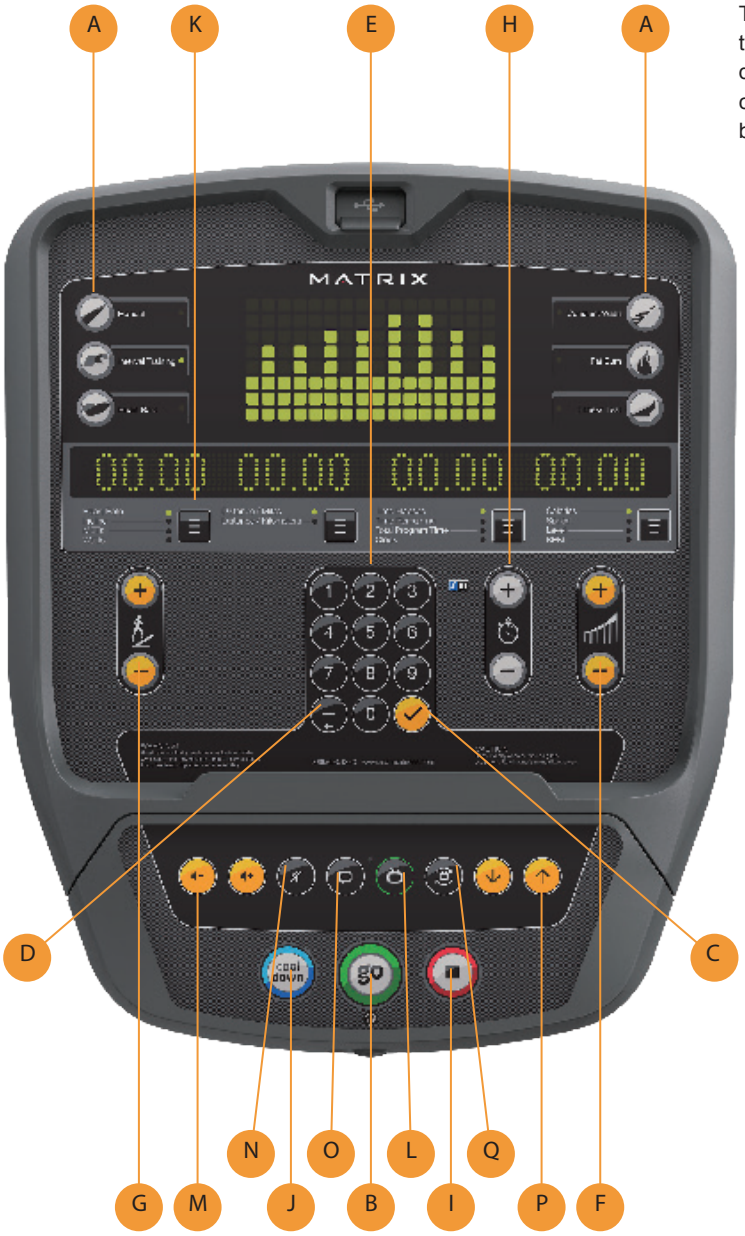
1. Check all connecting joint areas for tightness of fastened assemblies.
2. Check step motion and stability to ensure the Climbmill does not rock or wobble.
3. Remove the maintenance covers and check the brake for function.
4. Remove the maintenance cover and check the fans for function. Also clean and remove any debris from the digital speed sensor.
5. Remove the maintenance cover and check the chains for damage, alignment and proper tension.
6. Clean sprockets of old grease and re-apply a lithium-based grease to sprocket teeth.
7. On units with a AUTO STOP SENSORS, check to ensure the AUTO STOP SENSORS is working properly by walking on the unit, then Put your foot in the middle of the IR sensors (transmission & receiver) to test the sensors are working and enough to stop machine.
8. Unplug the Climbmill and clean the AUTO STOP SENSORS (located under the bottom step) with a cotton swab and rubbing alcohol.



CHAPTER 4: CONSOLE OVERLAY AND WORKOUT DESCRIPTION

4.1 CONSOLE DESCRIPTION

e.g. A3X CONSOLE SHOWN



3X CONSOLE DESCRIPTION

The Matrix machine is inspected before it is packaged. It is shipped in two pieces: the base and the console. Carefully unpack the unit and dispose of the box material. Note: There is a thin protective sheet of clear plastic on the overlay of the console that should be removed before use.

A) **WORKOUT KEYS:** Simple program view and selection buttons.

B) **GO:** One Touch Start.

C) **ENTER ✓:** Confirm each program setting.

D) **BACK:** Go to previous program setting.

E) **NUMBER KEYPAD:** Enter program settings.

F) **UP/DOWN LEVEL:** Adjust resistance level.

G) **UP/DOWN INCLINE (A3X ONLY):** Adjust incline level.

H) **UP/DOWN TIME:** Adjust workout time.

I) **STOP:** Ends workout and shows workout summary data.

J) **COOL DOWN:** Puts the console into Cool Down mode.

K) **TOGGLE DISPLAY:** Cycles between 3 or 4 rows of workout information displayed in LED window. The console will automatically cycle between the workout information if the Toggle Display button is pushed and held down for 3 seconds.

ENTERTAINMENT BUTTONS

L) **TV POWER:** Turns connected TV on or off.

M) **VOLUME UP/DOWN:** Adjusts the volume output through headphones.

N) **MUTE:** Mutes sound.

O) **CC:** Turns closed captioning on or off.

P) **CHANNEL UP/DOWN:** Change channels on the integrated console TV.

Q) **LAST CHANNEL:** Cycle between the current channel and the previous channel.

E) **NUMBER KEYPAD:** Enter channel number. Press ✓ to confirm channel number.

4.2 WORKOUT SETUP STEPS - MANUAL

GO - Press to immediately begin a workout. Workout, resistance level, and time will automatically go to default settings. Pressing GO will not prompt user for age, weight, or level settings.

1) Start pedaling and press the GO key to begin your workout. 2) The display will read 3, 2, 1, Begin and then the program will start.

MANUAL - Manual allows the user to input more information while defining their own workout. Calorie expenditure will be more accurate when inputting information in Manual than by pressing GO.

1) Start pedaling, press the MANUAL key. Then press ENTER.
2) Select Level by using the UP or DOWN LEVEL keys and press ENTER.
3) Select Time by using the UP or DOWN LEVEL keys and press ENTER.
4) Select Weight by using the UP or DOWN LEVEL keys and press ENTER.
5) Press GO, and then the display will read 3, 2, 1, Begin and then the program will start.

4.3 WORKOUT SETUP STEPS - LEVEL BASED PROGRAMS

FAT BURN - Fat burn is a level based program that is designed to help users burn fat through various resistance level changes.

1) Start pedaling and press the Training Workouts. Then press ENTER.
2) Select FAT BURN by using the UP or DOWN LEVEL keys and press ENTER.
3) Select Level by using the UP or DOWN LEVEL keys and press ENTER.
4) Select Time by using the UP or DOWN LEVEL keys and press ENTER.
5) Select Weight by using the UP or DOWN LEVEL keys and press ENTER.
6) Press GO, then the display will read 3, 2, 1, Begin and then the program will start.

4.3 WORKOUT SETUP STEPS - LEVEL BASED PROGRAMS - CONTINUED

INTERVAL TRAINING - The Interval Training program is a level based program that automatically adjusts the resistance of the machine from low to high intensity settings at regular intervals.

1) Start pedaling and press the Training Workouts. Then press ENTER.
2) Select Intervals by using the UP or DOWN LEVEL keys and press ENTER.
3) Select Level by using the UP or DOWN LEVEL keys and press ENTER.
4) Select Time by using the UP or DOWN LEVEL keys and press ENTER.
5) Select Weight by using the UP or DOWN LEVEL keys and press ENTER.
6) Press GO then the display will read 3, 2, 1, Begin and then the program will start.

4.4 WORKOUT SETUP STEPS - FITNESS TEST

FITNESS TEST (WFI) - The WFI (Wellness Fitness Initiative) protocol is a test used by firefighters in a series of intervals lasting a maximum of 16 minutes, where the speed is increased every minute until the Target Heart Rate is exceeded for 15 seconds. When the test is complete, the display provides a summary of VO2max, Highest SPM, Elapsed Time, and Target Heart Rate. The test requires constant monitoring of the user's heart rate, so the use of a telemetric heart rate strap is highly recommended.

CPAT

The Candidate Physical Ability Test (CPAT) is a new minimum requirement for the position of Firefighter. The job of a Firefighter is one of the most physically demanding jobs in North America. Participants wear a 50-pound (22.68-kg) vest to simulate the weight of self-contained breathing apparatus (SCBA) and firefighter protective clothing. An additional 25 pounds (11.34 kg), using two 12.5-pound (5.67-kg) weights that simulate a high-rise pack (hose bundle), is added to your shoulders for the stair climb event. The candidate must maintain 60 SPM (steps per minute) for 3 minutes.

FITNESS TEST (SUBMAXIMAL) - The Submaximal test measures cardiovascular fitness and provides an estimated Sub-maximal VO2 max result. This assessment is a 4 stage test lasting 3-5 minutes where the speed is increased until your Heart Rate is between 115 - 150 bpm for 2 of the stages. When the test is complete, a Fitness Rating is displayed as High, Good, Average, Fair, or Low along with your age and VO2 max. The test requires constant monitoring of the user's heart rate, so the use of a telemetric heart rate strap is highly recommended.

1) Start pedaling and press the FITNESS TEST key. Then press ENTER.
2) Select Age by using the UP or DOWN LEVEL keys and press ENTER.
3) Select Gender by using the UP or DOWN LEVEL keys and press ENTER.
4) Select Weight by using the UP or DOWN LEVEL keys and press ENTER.
5) Press GO, then the display will read 3, 2, 1, Begin and then the program will start.
6) Once the workout is complete, the display will read the results of the Fitness Test.

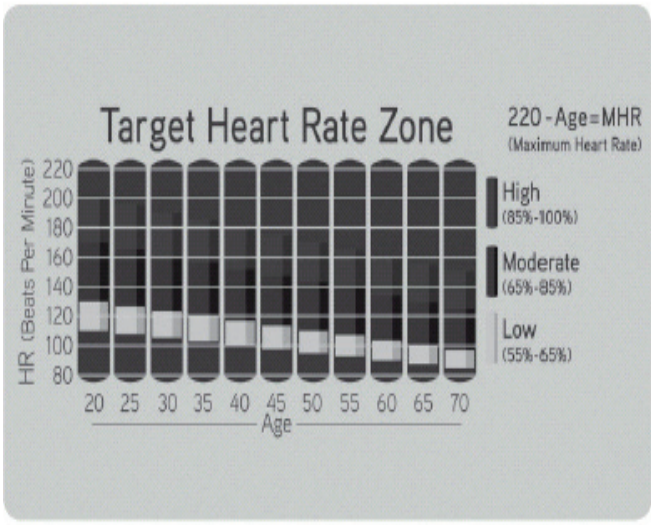
FITNESS RATING NORMS (V02 MAX)						
	AGE	**20-29**	**30-39**	**40-49**	**50-59**	**60+**
MEN						
	HIGH	51.4+	50.4+	48.2+	45.3	42.5+
	GOOD	51.3-46.8	50.3-44.6	48.1-41.8	45.2-38.5	42.4-35.3
	AVERAGE	46.7-42.5	44.5-41.0	41.7-38.1	38.4-35.2	35.2-31.8
	FAIR	42.4-39.5	40.9-37.4	38.0-35.1	35.1-32.3	31.7-28.7
	LOW	39.4 OR LESS	37.3 OR LESS	35.0 OR LESS	32.2 OR LESS	28.6 OR LESS
WOMEN						
	HIGH	44.2+	41.0+	39.5+	35.2+	35.2
	GOOD	44.1-38.1	40.9-36.7	39.4-33.8	35.1-30.9	35.1-29.4
	AVERAGE	38.0-35.2	36.6-33.8	33.7-30.9	30.8-28.2	29.3-25.8
	FAIR	35.1-32.3	33.7-30.5	30.8-28.3	28.1-25.5	25.7-23.8
	LOW	32.2 OR LESS	30.4 OR LESS	28.2 OR LESS	25.4 OR LESS	23.7 OR LESS

4.5 WORKOUT SETUP STEPS - TARGET HEART RATE

TARGET HEART RATE - The Matrix H5x-05 Bike comes with standard digital contact heart rate sensors and are POLAR telemetry compatible. The heart rate control workout mode allows the user to program their desired heart rate zone, and the bike will automatically adjust the level based upon the user's heart rate. The heart rate zone is calculated using the following equation: (220-Age)8%=target heart rate zone. The user must wear a POLAR telemetric strap or continually hold onto the contact heart rate grips for this workout.

Locate the metal sensors on the handlebars of the bike. Notice that there are two separate pieces of metal on each grip. You must be making contact with both pieces of each grip to get an accurate heart rate reading. You can grab these sensors in any program to view your current heart rate.

1) Start pedaling and press the HEART RATE key. Then press ENTER.
2) Select Age by using the UP or DOWN LEVEL keys and press SELECT.
3) Select Target HR Percentage by using the UP or DOWN LEVEL keys and press SELECT.
4) Select Time by using the UP or DOWN LEVEL keys and press SELECT.
5) Select Weight by using the UP or DOWN LEVEL keys and press SELECT.
6) Press GO, then the display will read 3, 2, 1, Begin and the program will start.



4.6 WORKOUT SETUP STEPS - CONSTANT WATTS

CONSTANT WATTS - Constant Watts is a unique program that allows you to vary your cadence or RPM and the bike's resistance level will adjust accordingly to your selected goal. The quicker you pedal, the less resistance for the goal selected.

1) Start pedaling and press the CONSTANT WATTS key. Then press ENTER.
2) Select Watts by using the UP or DOWN LEVEL keys and press SELECT.
3) Select Time by using the UP or DOWN LEVEL keys and press SELECT.
4) Select Weight by using the UP or DOWN LEVEL keys and press SELECT.
5) Press GO, then the display will read 3, 2, 1, Begin and the program will start.

4.7 WORKOUT TRACKING INSTRUCTIONS

3x consoles equipped with xID workout tracking allow users to login and record their workouts by entering their xID and 4-digit passcode.

4.8 USB CHARGING INSTRUCTIONS

The USB port on the 3x console now supports device charging.

CHAPTER 5: MANAGER MODE

5.1 MANAGER MODE OVERVIEW

1) To enter Manager Mode, press number key "ENTER, 1, 0, 0, 1, ENTER" on the number keypad. Manager Mode will appear on the display.
2) To scroll through the list of options in Manager Mode, use the UP and DOWN LEVEL 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 UP and DOWN LEVEL 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.

Group	Item1	Item2	Default Value	Values/Range	Unit	Notes
Workouts	Maximum Time		60	4~99	Minutes	Sets the total run time of any program.
	Default Time		20	4~MAX	Minutes	Workout time when GO is pressed or when no time is selected during program set up.
	Maximum Level		20	10~25		Set the level which is the max usable speed.
	Default Level		1	1~10		Starting resistance when GO is pressed or when no resistance is selected during program set up.
	Pause Time		5:00	0:30/1:00/2:00/ 3:00/4:00/5:00	Minutes : Second	This option controls the default pause time.
User	Default Age		30	10-100		This option controls the default user's age.
	Default Weight		150lb/ 68kg	50lb/23kg ~ 400lb/182kg		This option controls the default weight.
	Default Height		72/ 83	36/91~96/244		Default height of user.
	Gender		Male	Male/Femal		Determines the gender of the user when not selected during program set up.
Data & Time	Data					This option sets the current date of the machine.
	Time		RTC time			This option sets the current time of the machine.
	Time Zone		21	1~78		This option sets the time zone.
Speed	Unit		Standard	Standard/Metric		This option sets speed unit is standard (Mile) or Metric.
Software	Version	UCB				Current software version of UCB.
		LCB-MCUB				Current software version of LCB-MCUB.
		LCB-MCUA (option)				Current software version of LCB-MCUA.
		Language				Sets the language for the console.
		WiFi				Current software version of WiFi.
		Bootloader				Current software version of bootloader.
	Update	UCB				UCB software update.
		LCB-MCUB				LCB-MCUB software update.
		LCB-MCUA (option)				LCB-MCUA software update.
		Language				Language software update.
General	Accumulate Time		0	0~999999	Hours	Total time for all programs displayed in hours.
	Accumulate Floors		0	0~999999	Floors	Total floors for all programs.
Language	Default Language			English		Sets the language for the console. Select between English, Spanish, German, Italian, French, Dutch, Portuguese Swedish, Finnish, Turkish and Polish.
	Erase EEPROM					Erase language data in EEPROM.

5.1 MANAGER MODE OVERVIEW - CONTINUED

Group	Item1	Item2	Default Value	Values/Range	Unit	Notes
Logo	Default Logo		MATRIX			Customize.
	Import Logo					Import logo from USB to console.
	Erase EEPROM					Erase all logo data in EEPROM.
Machine	Type					This option selects the current model.
	Serial Number	Console	Prefix+(Type) +YYMM00000	YY-MM-xxxxx		Serial Number input is available for both the Console and Frame. Type: B~Z (A not display).
		Frame	Prefix+(Type) +YYMM00000	YY-MM-xxxxx		
	Out of Order		OFF	ON/OFF		This option allows the club to show the unit "out of order" if an error is present.
	Speaker		OFF	ON/OFF		Sets console speaker sound on / off.
	Beeper		ON	ON/OFF		Sets console beeper sound on / off.
	Headphone Jack	Notification	Enable	Enable/Disable		This option controls the headphone Jack insertion times warning function is disabled or enabled.
		Times to waring	30000	1000~1000000		This option controls the headphone Jack insertion times warning function is disabled or enabled.
	USB Port	Protection	Enable	Enable/Disable		This option controls the USB port protection is disabled or enabled.
	Keypad	Stuck Check	Enable	Enable/Disable		This option controls the keypad stuck check is disabled or enabled.
		Notification	Enable	Enable/Disable		This option controls the Keypad/overlay error notification is disabled or enabled.
TV	Power		OFF	ON/OFF		OFF: Turn off TV power after reset ON: Don't turn off TV power after reset
	Input Source		OFF	OFF/TV/PCTV/ Remote TV/CAB		Sets the audio of the console to the type of TV attached.
	Default Channel		3			This option controls the default TV channel on start up.
	Default Volume					a. input default (DF: 15/Range1~15) b. Max (DF: 32/ Range: 1~32) c. Output Default (DF: 13/Range:1~Max) Remote TV support a/b/c item, others only support c.
Internet	Enable/Disable					Sets the internet function (WiFi) is disabled or enabled.
	MAC ID					MAC ID data.
	IP					Automatically detects the available IP address and displays it.
	Site Survey					Club internet survey.
	Export setting to USB					Export internet setting (Wifi) to USB.
	Import setting from USB					Import internet (Wifi) setting from USB.
	Reset					Reset internet connected data. SSID/ password Factory Default Restore.
ErP	Erp Time		OFF	OFF~ 30(Minutes)	Minute	Console will enter ErP mode if user does not touch the screen or press any key pad for couple minutes.

CHAPTER 6: ENGINEERING MODE

6.1 ENGINEERING MODE OVERVIEW

1) To enter Engineering Mode, press number key "ENTER, 2, 0, 0, 1, ENTER" on the number keypad. Engineer Mode will appear on the display.
2) To scroll through the list of options in Engineering Mode, use the UP and DOWN LEVEL 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 UP and DOWN LEVEL 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.

Group	Item1	Item2	Default Value	Values/Range	Unit	Notes
Error Codes	Disable/Enable		Enable	Disable/Enable		This option displays the error code history on the unit.
DAPI	Server		Production	Dev/QA/Staging/ Production	Minutes : Second	Dev unsecure domain: dev.dls.jfit.co port: 80 SSL domain: dev-dls.jfit.co port: 443 QA unsecure domain: qa.dls.jfit.co port: 80 SSL domain: qa-dls.jfit.co port 443 Staging unsecure domain: staging.dls.jfit.co port: 80 SSL domain: staging-dls.jfit.co port 443 Production unsecure domain: dapi-ls.jfit.co port: 80 SSL domain: dapi-ls.jfit.co port: 443
Safety	Setting		100	4~500		The acting speed adjusted of old control zone (capacitance sensor).
	Switch		ON->5X, OFF->3X	ON/OFF		The function of control zone is enabled or disabled.

CHAPTER 7: SERVICE MODE / TEST MODE

7.1 SERVICE MODE OVERVIEW

1) To enter Service Mode, press number key "ENTER, 3, 0, 0, 1, ENTER" on the number keypad. Engineer Mode will appear on the display.
2) To scroll through the list of options in Service Mode, use the UP and DOWN LEVEL 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 UP and DOWN LEVEL 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.

Group	Item1	Item2	Default Value	Values/Range	Unit	Notes
Accumulate	Floors		Current value	0~999999		Manually sets the Accumulated Floors.
	Time		Current value	0~999999		Manually sets the Accumulated Time.
Log	Error	Display	None	Error0~Error10 / None		Shows the last 10 errors.
		Reset				Reset error log..
	Headphone Jack Sensor	Insert Counts	Current Value	0~999999		Insert headphone jack counts..
		Reset	NO	NO-YES		Reset headphone insert counts.
Configuration	Export to USB					Export engineer parameters to a USB device.
	Import from USB					Import engineer parameters from a USB device.
Factory Default	Reset		NO	NO-YES		Reset engineering default to factory value.
Asset management	Disable/Enable		Disable	Disable/Enable		This option controls the AM function is Disabled or Enabled.
	Club ID					This option records the club ID of the fitness facility.
xID Login	Enable/Disable		Disable	Disable/Enable		This option controls the xID login function is Disabled or Enabled.

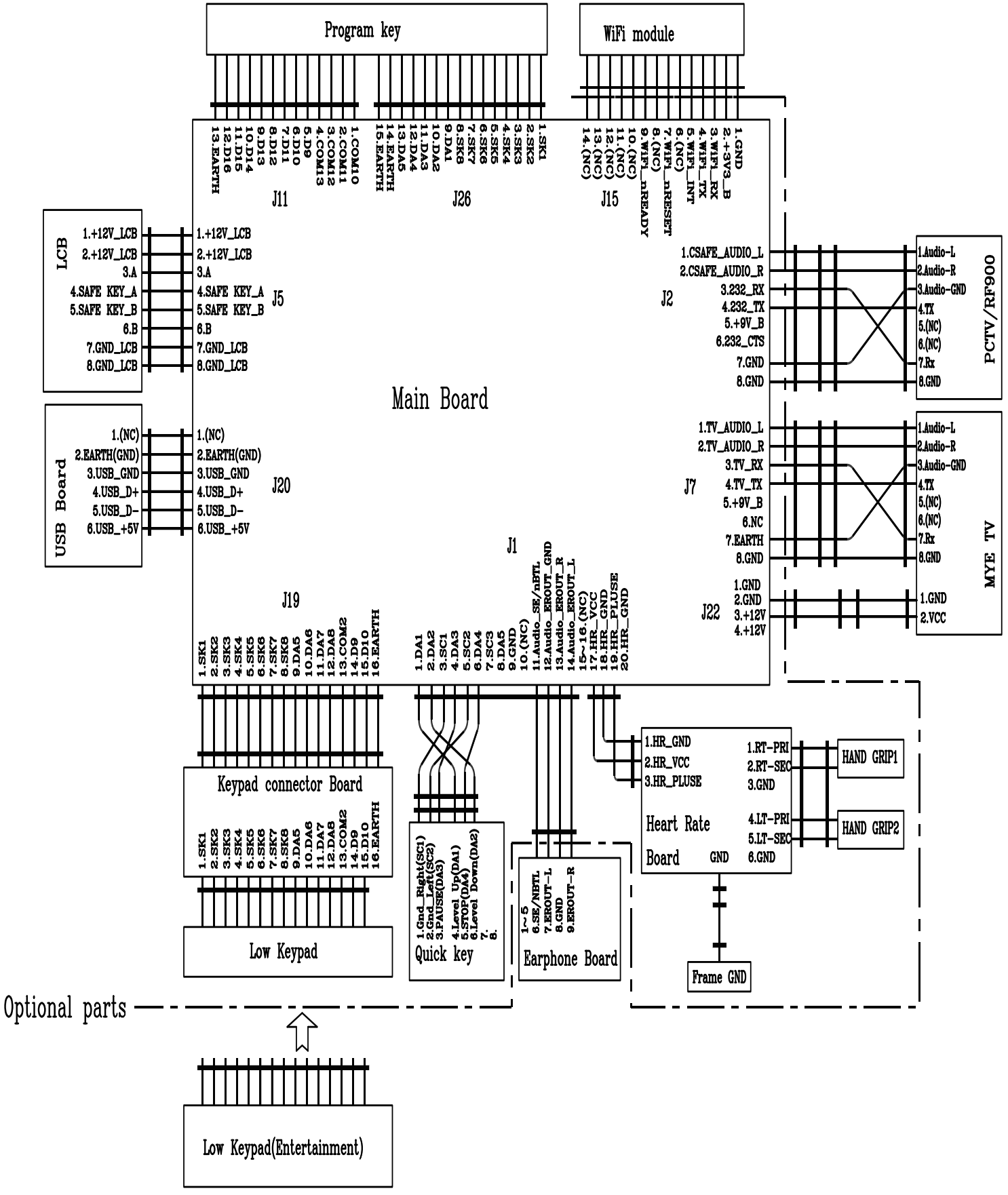
7.2 TEST MODE OVERVIEW

The Test's Custom Mode allows the club owner to customize the bike for the club.

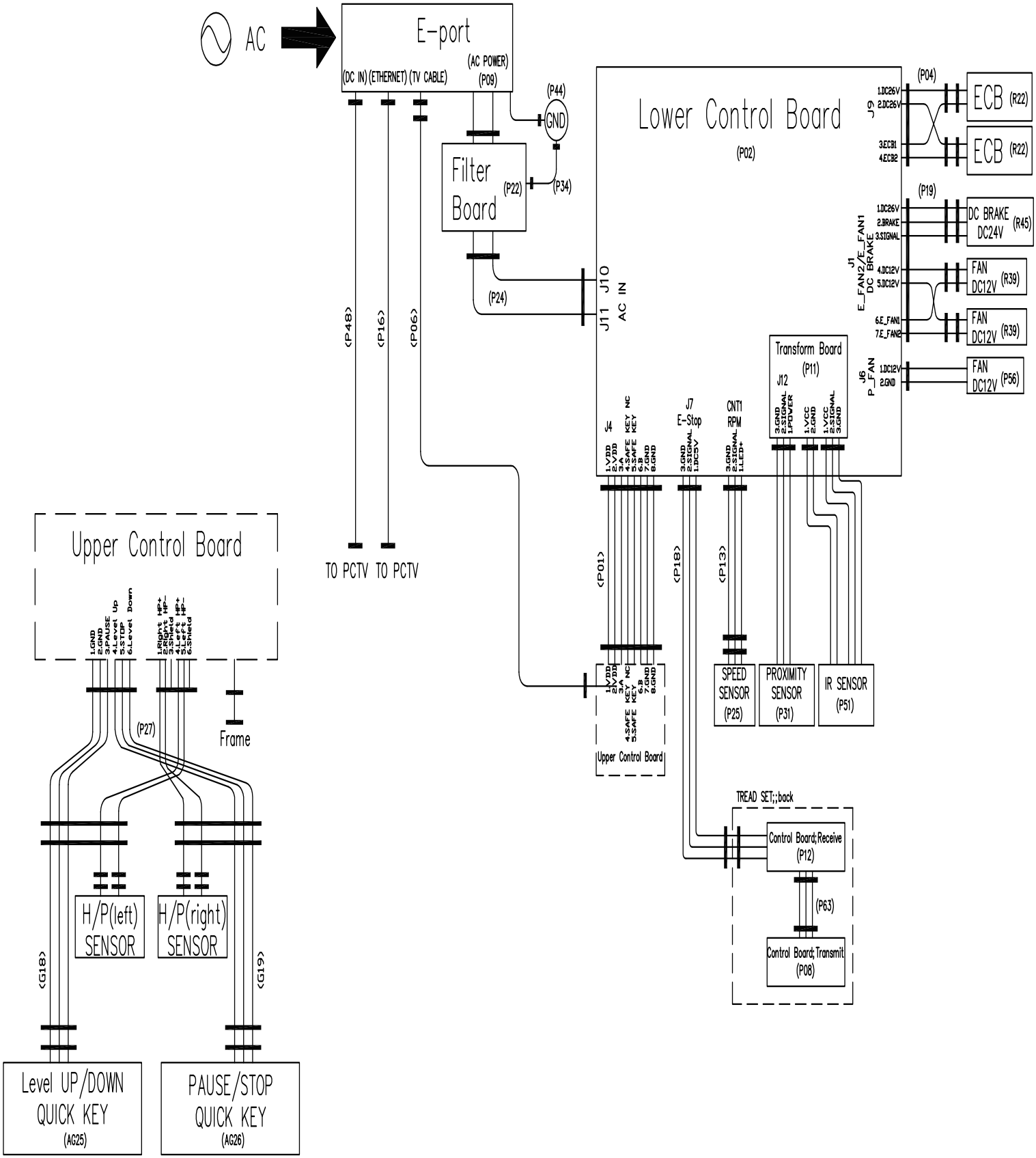
1) To enter Test Mode, press number key "ENTER, 5, 0, 0, 1, ENTER" on the number keypad. Engineer Mode will appear on the display.
2) To scroll through the list of options in Test Mode, use the UP and DOWN LEVEL keys. Each of the custom settings will show on the display.
3) To select a custom setting, press the ENTER key when the desired setting is shown.
4) To change the value of the setting, use the UP and DOWN LEVEL 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.

Group	Item1	Item2	Default Value	Values/ Range	Unit	Notes
Display						Press the ENTER key repeatedly to check each set of LEDs on the display sequentially.
Keypad						Press any key and the display should show the corresponding message.
C-SAFE						Press the ENTER key to test CSAFE.
Headphone Jack						Press the ENTER key to insert headphone jack counts test.
RFID						Test RFID hardware status when scan the ID tag.
ErP	AUTO/5/10/ 30/50				Scond	Erp testing only work in testing mode, it will not save and not work when the console out of testing mode. Auto- the machine will enter Erp mode after press the enter.

8.1 ELECTRICAL DIAGRAMS

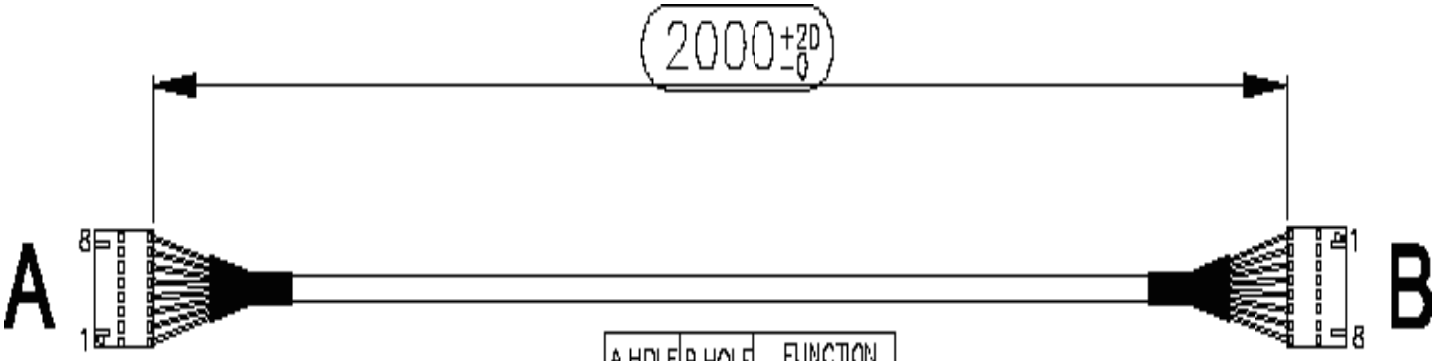


8.1 ELECTRICAL DIAGRAMS - CONTINUED



8.1 ELECTRICAL DIAGRAMS - CONTINUED

P01 - DIGITAL COMMUNICATION WIRE



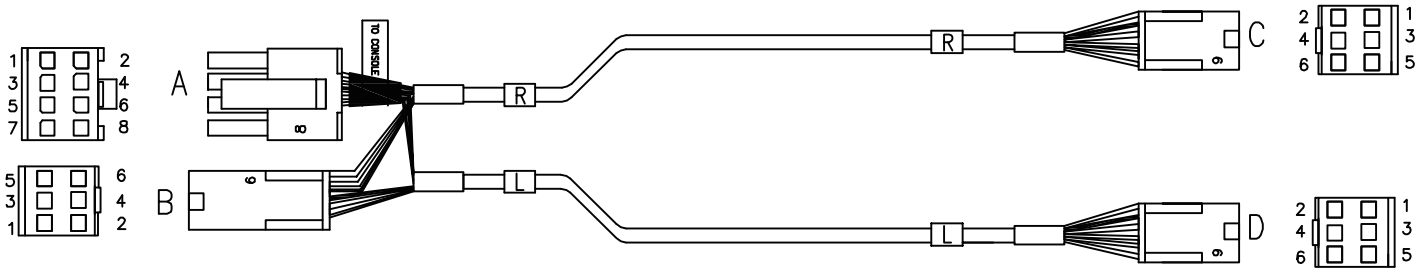
A.HOLE	B.HOLE	FUNCTION
1	1	VDD
2	2	VDD
3	3	A
4	4	SAFE KEY NC
5	5	SAFE KEY
6	6	B
7	7	GND
8	8	GND

P13- SPEED SENSOR EXTENSION WIRE (FRAME)

A: HOLD	B: HOLD	COLOR	FUNCTION
1	1	RED	LED+
2	2	WHITE	SIGNAL
3	3	BLACK	GND

8.1 ELECTRICAL DIAGRAMS - CONTINUED

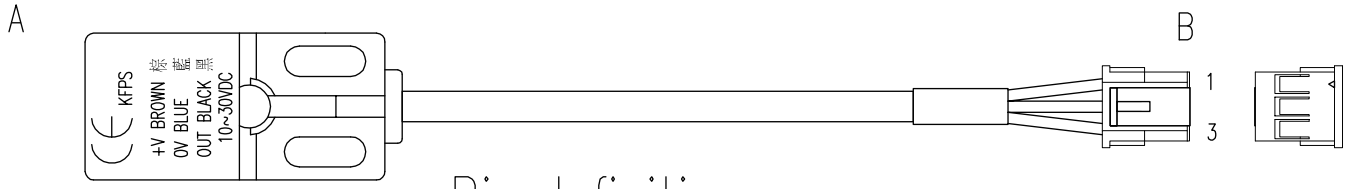
P27 - HAND PULSE WIRES (FRAME)



A.HOLE	B.HOLE	C.HOLE	D.HOLE	COLOR	FUNCTION
	1	4		Red	Right Hand Pulse+
	2	5		White	Right Hand Pulse-
	3	6			Shield
	4		4	Red	Left Hand Pulse+
	5		5	White	Left Hand Pulse-
	6		6		Shield
1		2			Gnd (Right)
2			2		Gnd (Left)
3		1			PAUSE
4			1		Level Up
5		3			Stop
6			3		Level Down
7					
8					

8.1 ELECTRICAL DIAGRAMS - CONTINUED

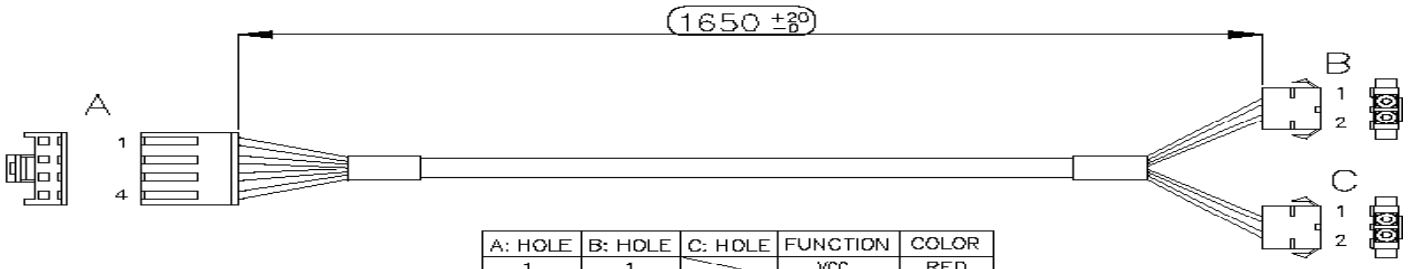
P31 - PROXIMITY SENSOR WIRE (FRAME)



Pin definition:

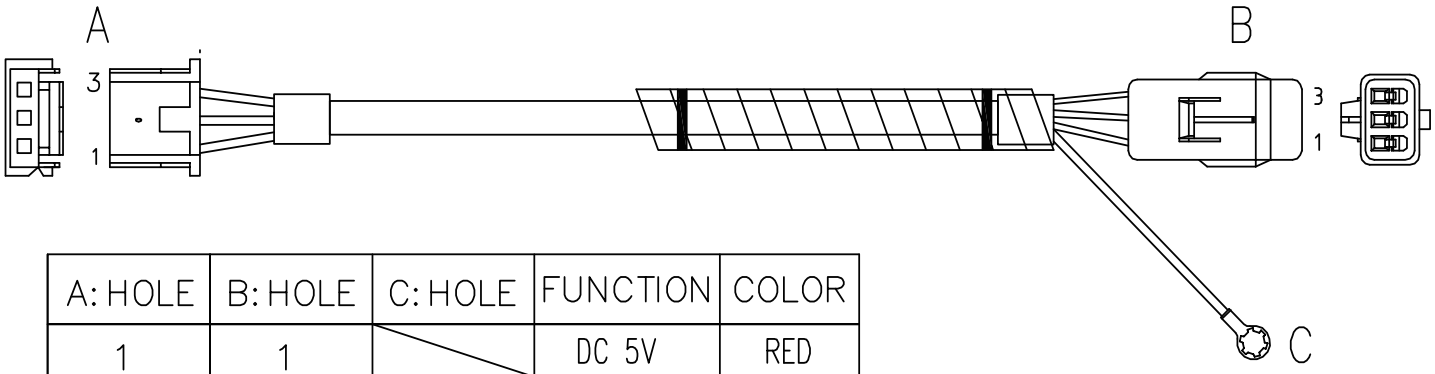
B.HOLE	FUNCTION	COLOR
1	10~30V	BROWN
2	SIGNAL	BLACK
3	GND	BLUE

P04 - ECB LOAD WIRE (FRAME)



A: HOLE	B: HOLE	C: HOLE	FUNCTION	COLOR
1	1		VCC	RED
2		1	VCC	WHITE
3	2		ECB1	BLACK
4		2	ECB2	GREEN

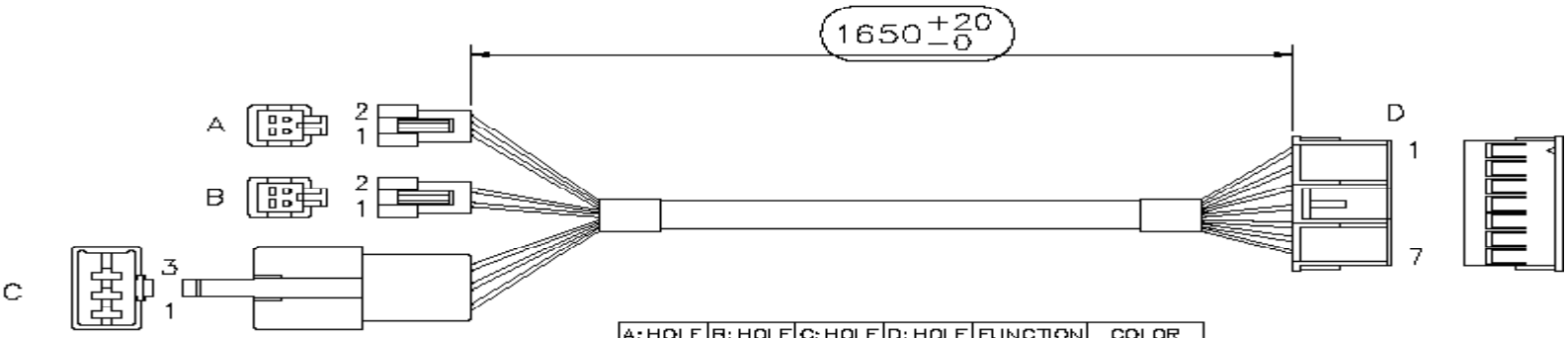
P18 - CONTROL ZONE SENSOR WIRE



A: HOLE	B: HOLE	C: HOLE	FUNCTION	COLOR
1	1		DC 5V	RED
2	2		SIGNAL	WHITE
3	3		GND	BLACK
		1	Shield	

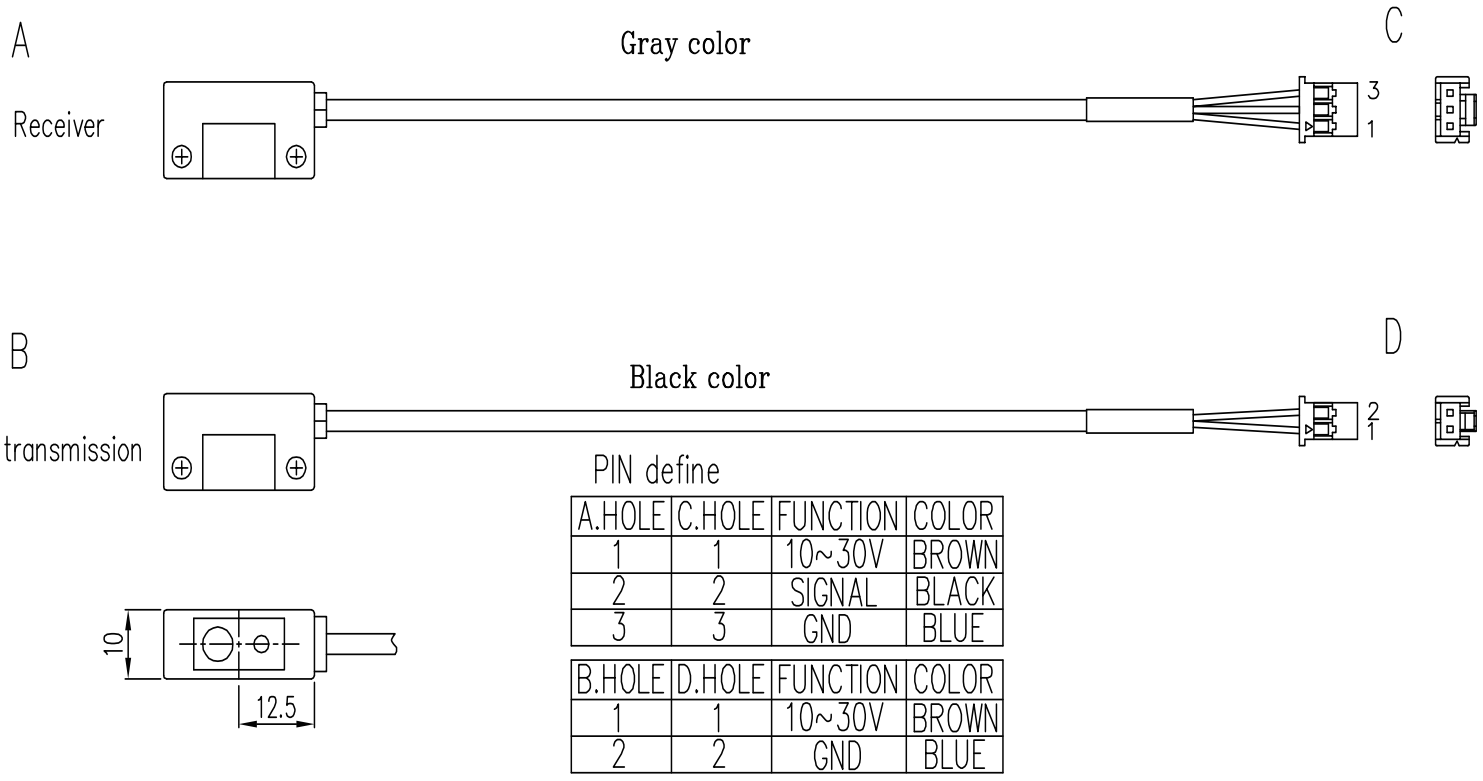
8.1 ELECTRICAL DIAGRAMS - CONTINUED

P19 - POWER SENSOR WIRE (FRAME)



A: HOLE	B: HOLE	C: HOLE	D: HOLE	FUNCTION	COLOR
		1	1	DC24V	WHITE
		2	2	COMMON	GRAY
		3	3	SIGNAL	YELLOW
1			4	DC12V	RED
	1		5	DC12V	BLUE
2			6	E_FAN1	BLACK
	2		7	E_FAN2	GREEN

P51 - IR SENSOR WIRE (FRAME)



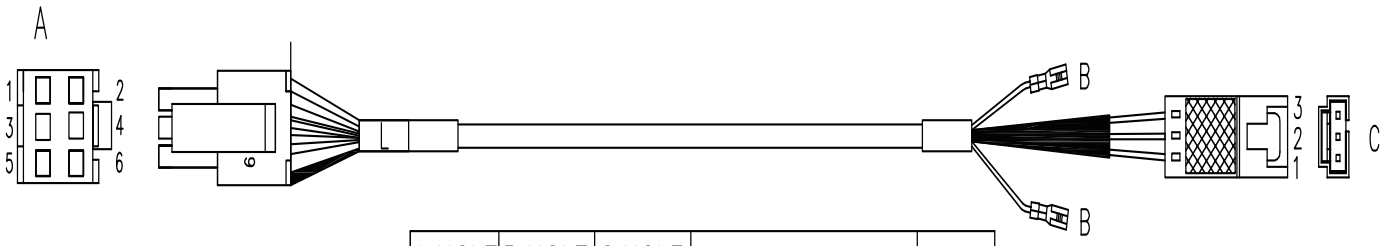
PIN define

A.HOLE	C.HOLE	FUNCTION	COLOR
1	1	10~30V	BROWN
2	2	SIGNAL	BLACK
3	3	GND	BLUE

B.HOLE	D.HOLE	FUNCTION	COLOR
1	1	10~30V	BROWN
2	2	GND	BLUE

8.1 ELECTRICAL DIAGRAMS - CONTINUED

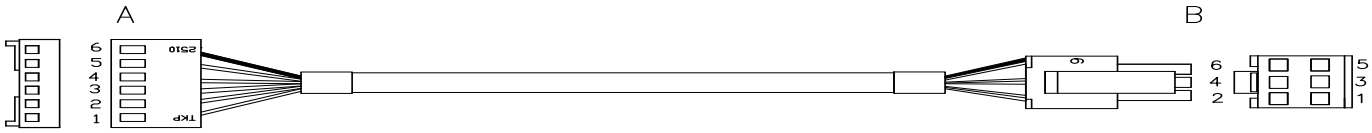
G18 - H/P CONNECT WIRE (FRAME)



A.HOLE	B.HOLE	C.HOLE	FUNCTION	COLOR
1		3	Level Up	
2		2	Gnd	
3		1	Level Down	
4	1		Left Hand Pulse+	Red
5	2		Left Hand Pulse-	White
6			Shield	

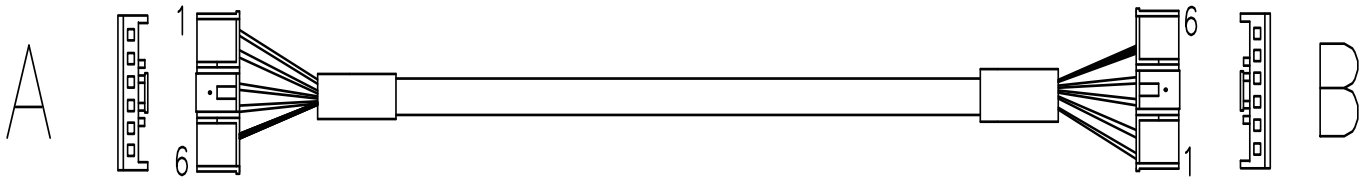
8.1 ELECTRICAL DIAGRAMS - CONTINUED

PAUSE SENSOR WIRE (CONSOLE)



A.HOLE	B.HOLE	FUNCTION
1	1	RT−PRI
2	2	RT−SEC
3	3	GROUND
4	4	LT−PRI
5	5	LT−SEC
6	6	Shield
		NC

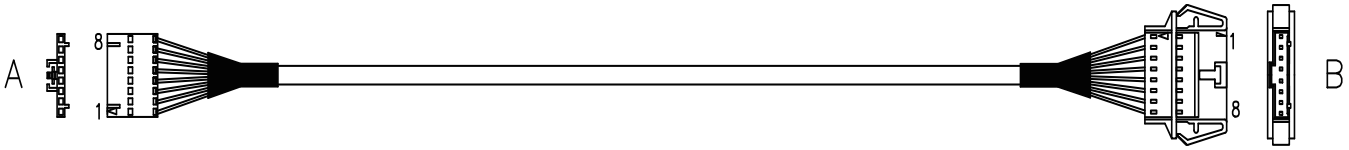
USB WIRE (CONSOLE)



A.HOLE	B.HOLE	FUNCTION	COLOR	NOTE
1	1	VCC	red	
2	2	D−	white	twisted
3	3	D+	green	
4	4	GND	black	
5	5	GND+Shielding		
6	6			

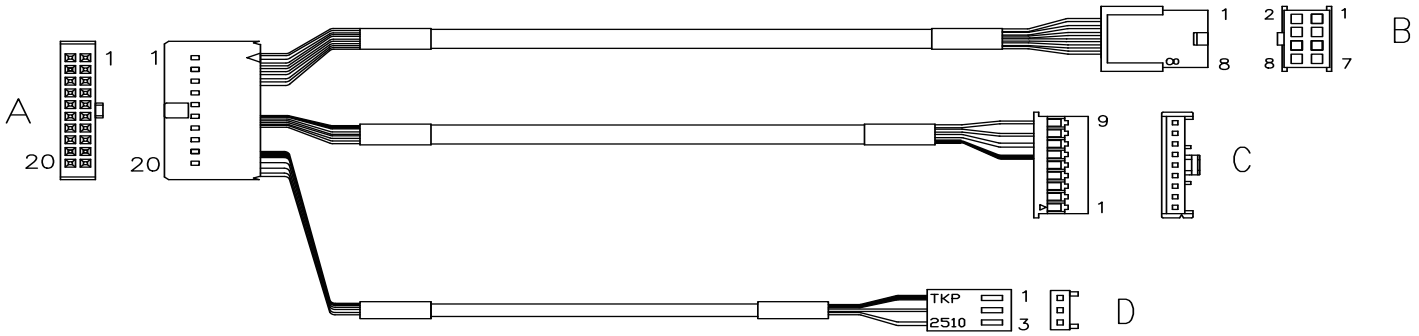
8.1 ELECTRICAL DIAGRAMS - CONTINUED

DIGITAL COMM WIRE (CONSOLE)



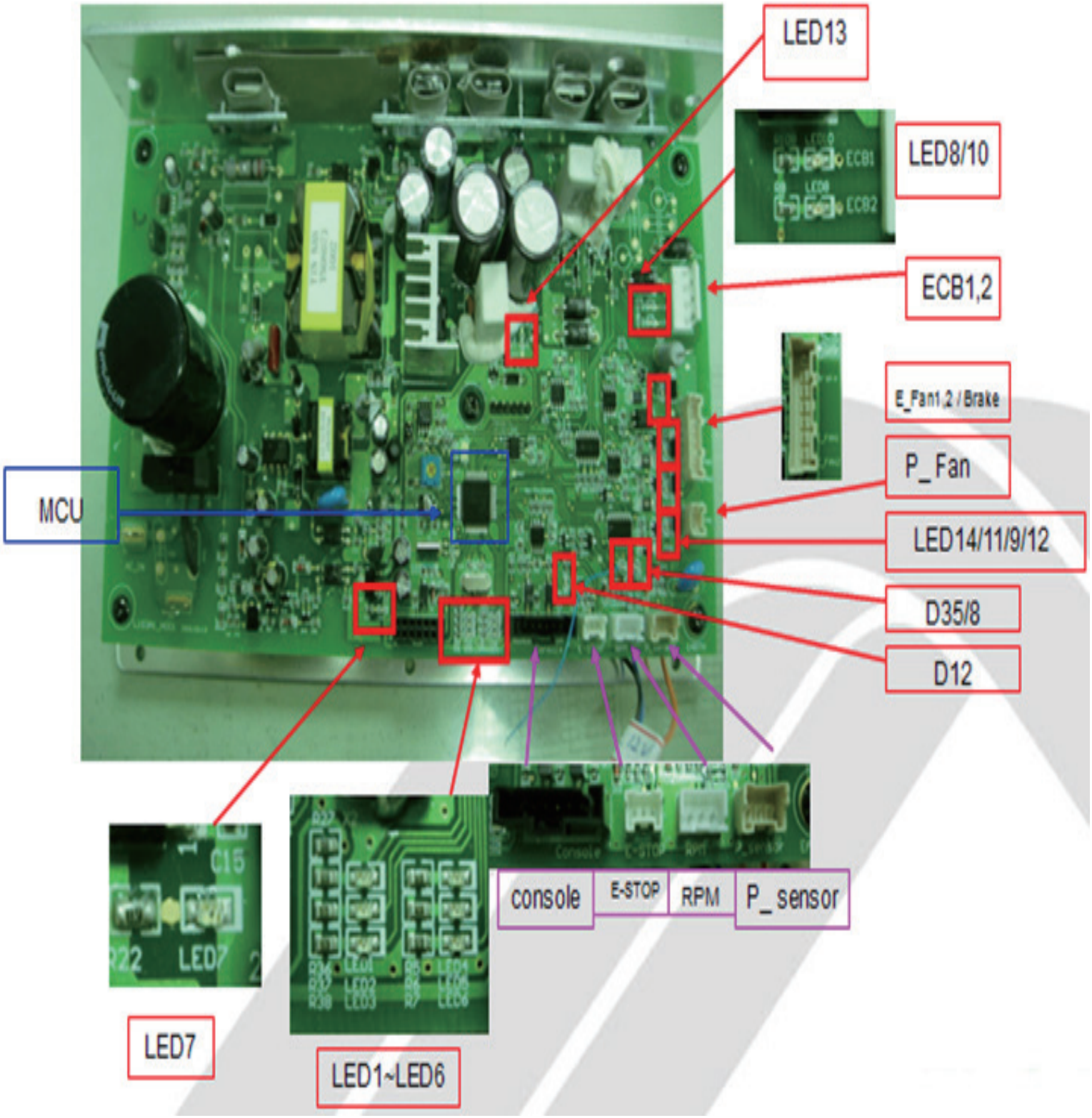
A.HOLE	B.HOLE	FUNCTION	COLOR
1	1	12V	red
2	2	12V	
3	3	RDA	
4	4	NA	
5	5	NA	
6	6	RDB	
7	7	GND	black
8	8	GND	

QUICKLY KEY WIRE (CONSOLE)



A: HOLE	B: HOLE	C: HOLE	C: HOLE	FUNCTION
3	1			Gnd_Right (SC1)
5	2			Gnd_Left (SC2)
6	3			PAUSE (DA3)
1	4			Level Up (DA1)
4	5			STOP (DA4)
2	6			Level Down (DA2)
11		9		SE/NBTL
12		6		GND(Shield)
13		8		EROUT-R
14		7		EROUT-L
18			1	GND(Shield)
17			2	VCC
19			3	SGN

8.2 LCB ERROR INDICATORS



Status LED

----------Firmware definition----------

LED STATUS	DESCRIPTION
LED1	LCB status (blinking: OK).
LED2	Start or Stop(bright: start)
LED3	Safety stop (bright: action)
LED4	Safety Key action status (bright: trigger)
LED5	LCB Error status
LED6	UCB and LCB connection status (blinking: OK)

----------Hardware definition----------

LED STATUS	DESCRIPTION
LED7	MCU power lamp
LED8	Electro-magnet device 2 PWM lamp
LED9	Electro-magnet device 2 fan lamp
LED10	Electro-magnet device 1 PWM lamp
LED11	Electro-magnet device 1 fan lamp
LED12	DC brake release lamp
LED13	DC 26V lamp
D12	Safety switch power lamp
D35	RPM lamp
D8	Positioning sensor lamp
D15	DC 12V lamp

ERROR CODE 0149 (01AC)

1) SYMPTOM:

a. 0149 (01AC) - Electro magnet (ECB) over current.

2) SOLUTION:

a. On standby mode, measure the resistance on ECB1 and ECB2. Check the ECB extension cable connection at the LCB (pins 1 & 3 for ECB1, pins 2 & 4 for ECB2), there should be between 12.8 ~ 14.2 ohms. (Figure A)

- If the ECB resistance is out of the range, replace the ECB.
- If the ECB resistance is within the range, replace the LCB.

b. Check the gap of ECB1 and ECB2. There should be a gap of .5mm between the ECB and the flywheel.

- Adjust the gap as shown in Section 9.16.

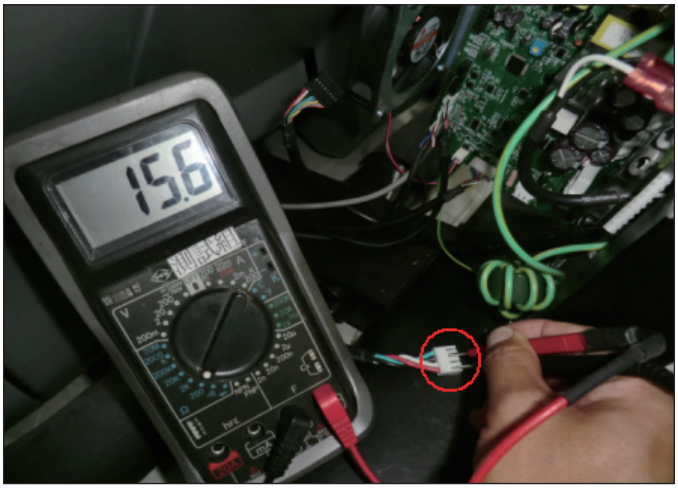


FIGURE A

ERROR CODE 01AF

1) SYMPTOM:

a. 01AF - Electro magnet (ECB) disconnected.

2) SOLUTION:

a. Check the connection of the ECB extension cable from the LCB to the ECB (Figure A).

b. Check to see if LED8 and LED10 on the LCB have a brief light for 3 second when you power on machine.

- If LED8 and LED10 do not have a brief light, replace the LCB.
- If LED8 and LED10 do have a brief light, check the ECB extension cable connection at the LCB (pins 1 & 3 for ECB1, pins 2 & 4 for ECB2), there should be between 12.8 ~ 14.2 ohms. (Figure B)
- If the ECB resistance is out of the range, replace the ECB.
- If the ECB resistance is within the range, replace the LCB.

c. Check the gap of ECB1 and ECB2 (Figure B). There should be a gap of .5mm between the ECB and the flywheel.

- Adjust the gap as shown in Section 9.16.

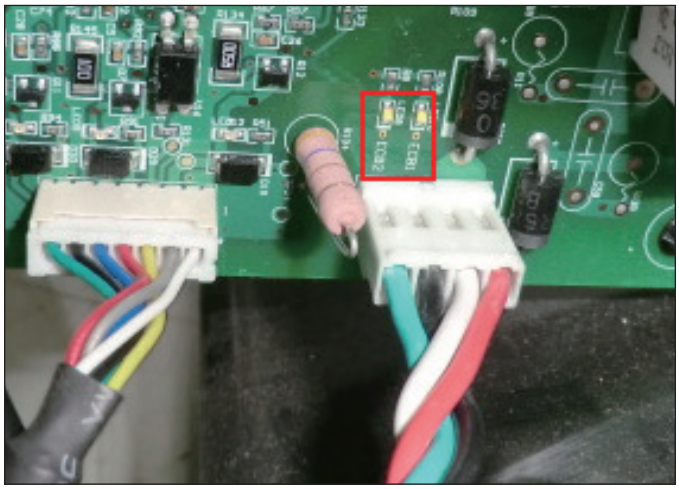


FIGURE A

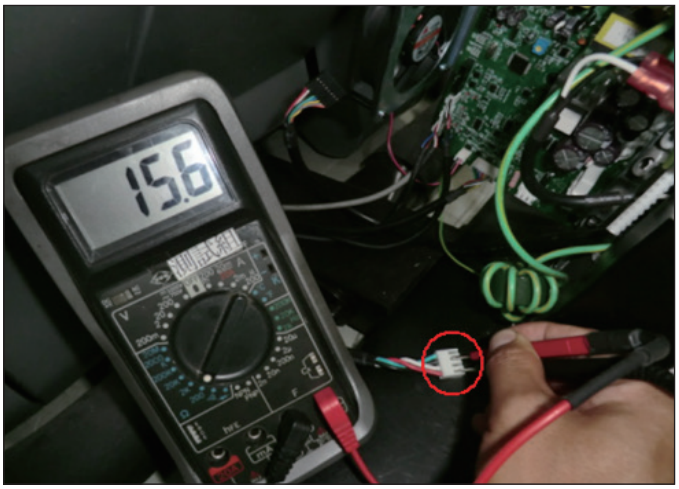


FIGURE B

ERROR CODE 02A0

1) SYMPTOM:

a. 02A0 - Encoder error.
b. The unit is in PAUSE Mode at all times.

2) SOLUTION:

a. Check the connection of the speed sensor cable from the LCB to the speed sensor.
b. Check to see if LED D35 on the LCB is on when the brake is turned to the left release position (Figure A).
If LED D35 is off, move the stairs about 3 stairs and check to see if LED D35 is flashing.
- If not, replace the speed sensor.
- If yes, adjust the speed sensor position and clean the speed sensor of any debris (Figures B), then re-test.

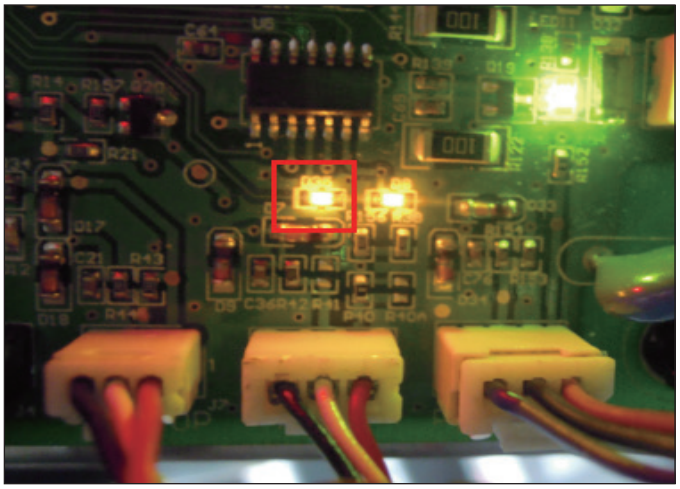


FIGURE A

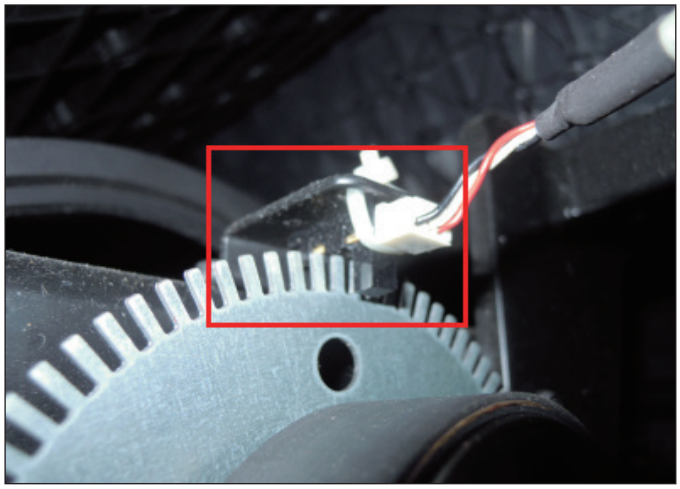


FIGURE B

ERROR CODE 02BE / 02BF

1) SYMPTOM:

a. 02BE - DC brake error (If movement is detected when the brake is in stop mode).
b. 02BF - DC brake over current (The brakes current is over 1A for a continuous 3 sec.).

2) SOLUTION:

a. Check the power extend wire connection between the brake and LCB for any damage (Figures A & B).
b. Check to see if the stairs will move when you are in the stop position. If yes, replace the brake.

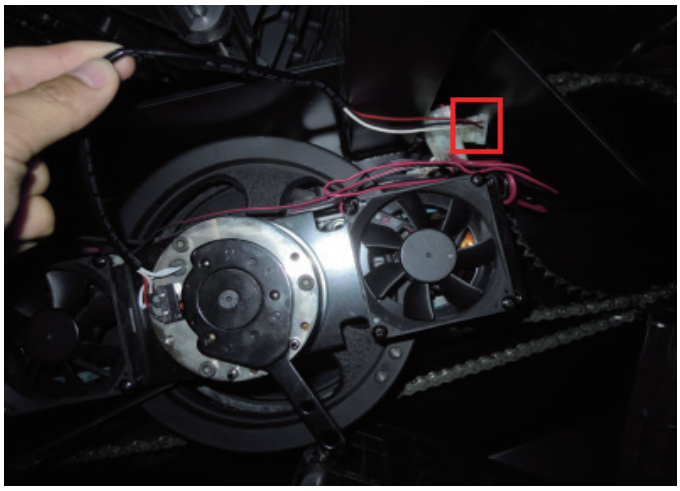


FIGURE A

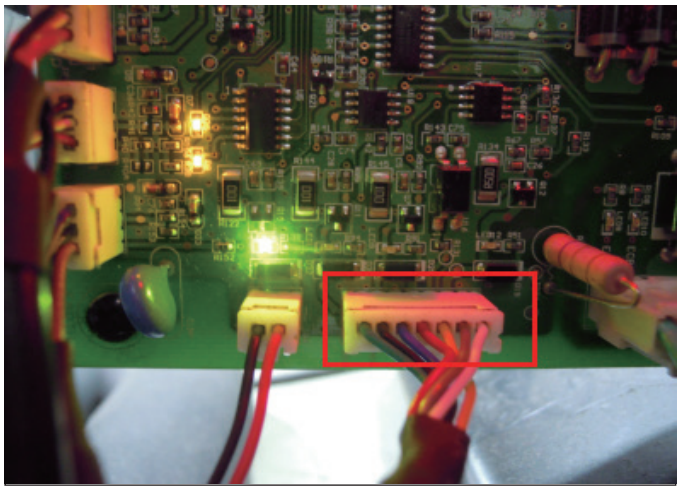


FIGURE B

ERROR CODE 02C0

1) SYMPTOM:

a. 02C0 - DC brake in manual mode.

2) SOLUTION:

a. Check if the DC brake is in the " Right " lock position (Figure A). Release the brake (move to the left) if in lock position.
b. Replace the brake.

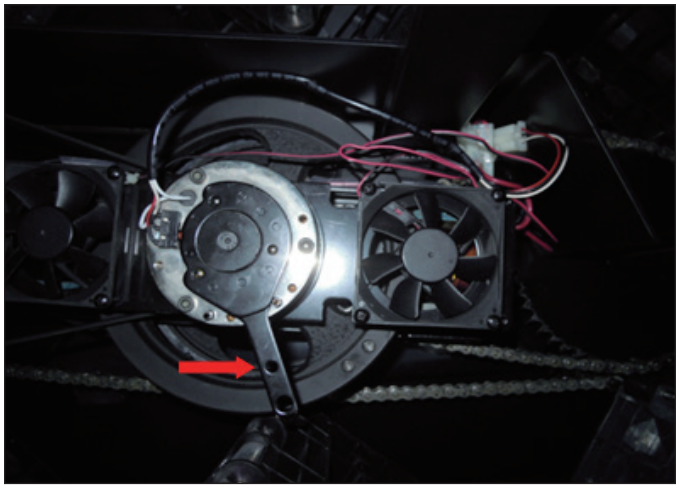


FIGURE A

ERROR CODE 02C1

1) SYMPTOM:

a. 02C1 -Speed tracking error (the speed tracking is off by at least 10 rpms for a continuous 20 sec).

2) SOLUTION:

a. Adjust the speed sensor position and clean the speed sensor of any debris (Figure A).

b. Check the ECB extension cable connection at the LCB (pins 1 & 3 for ECB1, pins 2 & 4 for ECB2), there should be between 12.8 ~ 14.2 ohms, check which ECB is outside the range and replace it (Figure B).

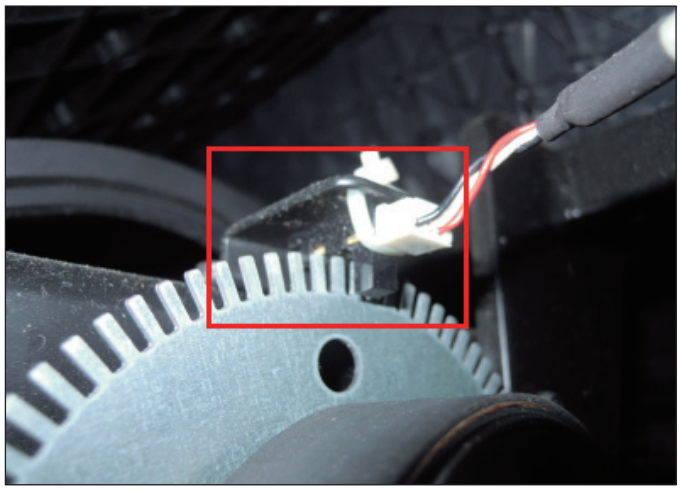


FIGURE A

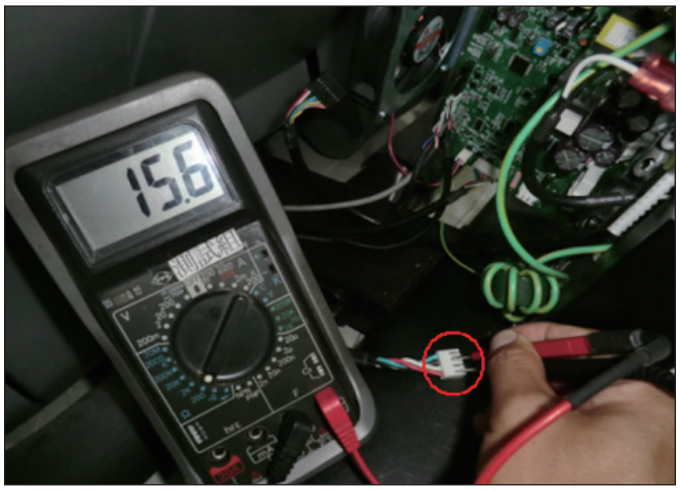


FIGURE B

8.9 ERROR CODE TROUBLESHOOTING - 02C3

ERROR CODE 02C3 (Frame IR transmitter Error)

1) SYMPTOM:

a. During power on, the frame IR receiver connector is disconnected.
b. During power on, the frame IR transmitter is no power or connector is disconnected.
c. During power on, the frame IR sensors are hidden for over 3 seconds.

2) SOLUTION:

a. Check if there's something blocking the control zone IR sensors. (Figure A).
b. Check if the frame IR sensors (transmitter and receiver) are aligned (Figure B).
c. Check the connection of the frame IR transmitter cable from the LCB to the frame IR transmitter sensors (Figure C & D).
d. Check if the frame IR transmitter cable is good. Replace it if the cable is defective (Figure C & D).

FIGURE A

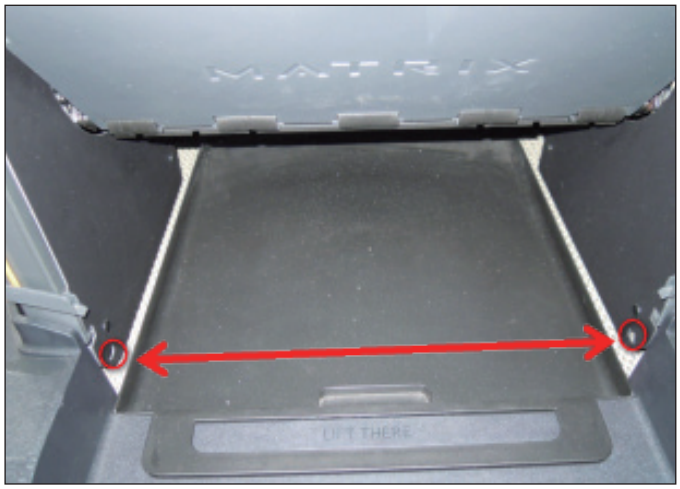


FIGURE B

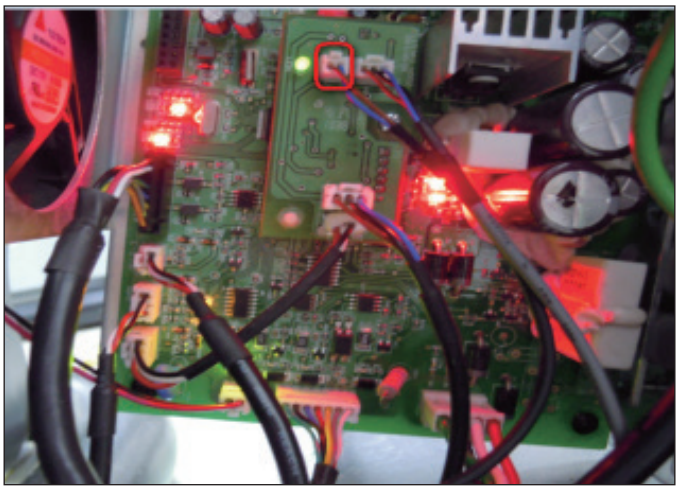


FIGURE C

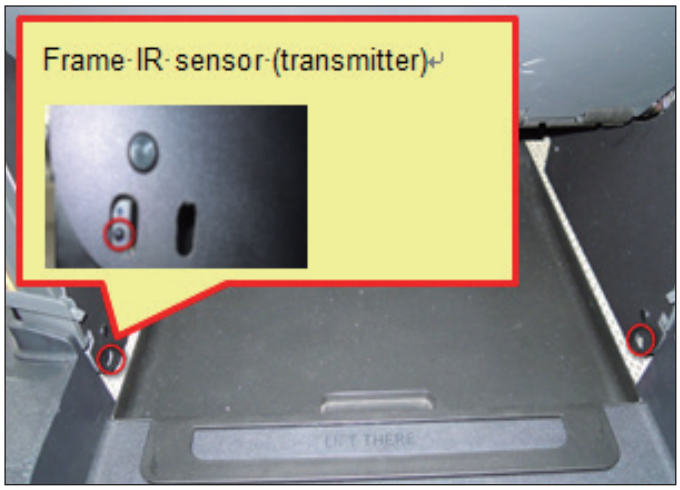


FIGURE D

8.10 ERROR CODE TROUBLESHOOTING - 02C5

ERROR CODE 02C5 (Frame IR frequency error)

1) SYMPTOM:
The signal is abnormal over ten seconds..

2) SOLUTION:
Replace LCB set (part no.1000336916).

8.11 ERROR CODE TROUBLESHOOTING - 02C7

ERROR CODE 02C7 (Frame IR receiver disconnection)

1) SYMPTOM:
Receiver connector is disconnected over 3 seconds.

2) SOLUTION:
a. Check the connection of the frame IR receiver cable from the LCB to the frame IR receiver sensor (Figure A).
b. Check if LED1 on the small transfer board is bright (Figure B).
- If not, replace the LCB set (part no.1000336916).
- If yes, replace frame IR receiver cable.

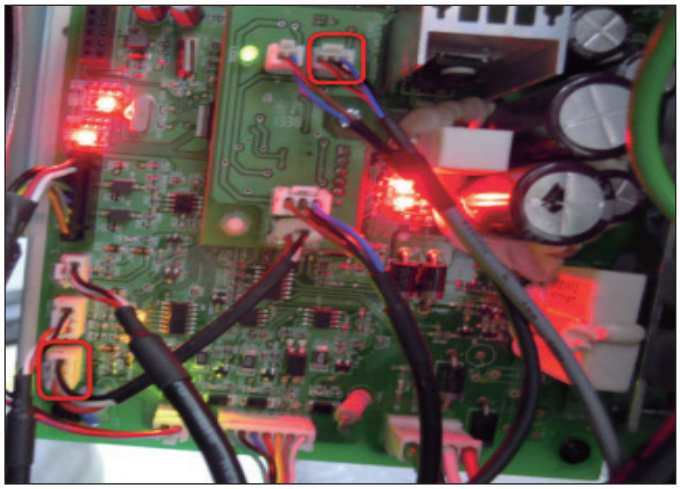


FIGURE A

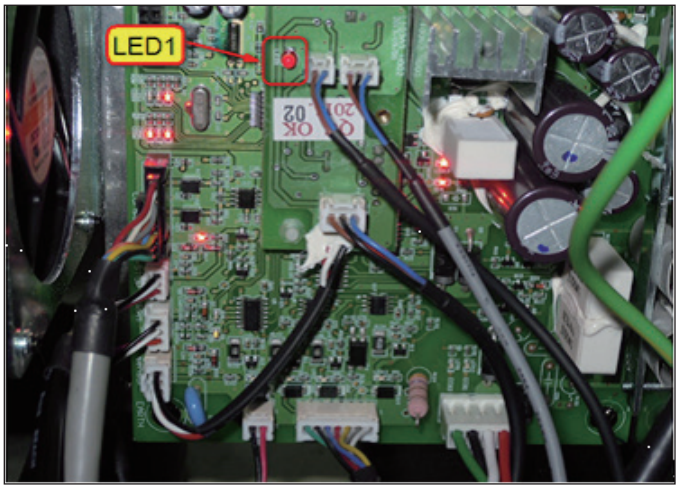


FIGURE B

8.12 ERROR CODE TROUBLESHOOTING - 04A0

ERROR CODE 04A0

1) SYMPTOM:

a. 04A0 - Console has no communication or is disconnected.

2) SOLUTION:

a. Check the console cable connections at the LCB (Figure A) and UCB (Figure B).
b. Replace the console cable.
c. Replace the UCB.

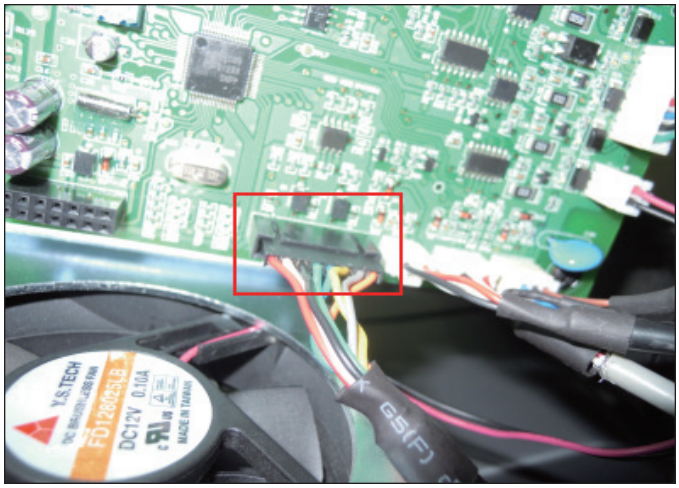


FIGURE A

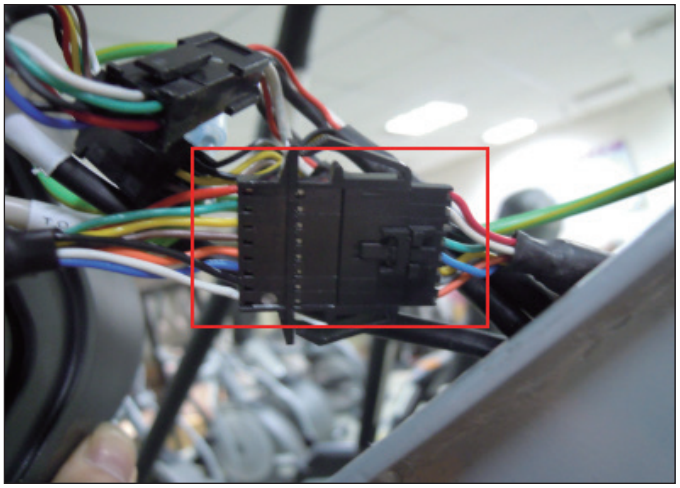


FIGURE B

8.13 ERROR CODE TROUBLESHOOTING - 04B0

ERROR CODES 04B0

1) SYMPTOM:

a. 04B0 - LCB no communication response for over 3 seconds. .

2) SOLUTION:

a. Check the console cable connections at the LCB (Figure A) and UCB (Figure B).
b. Replace the console cable.
c. Replace the LCB.

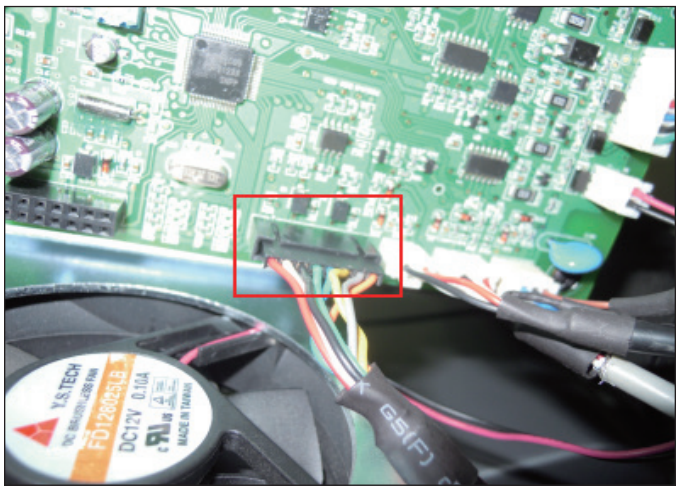


FIGURE A

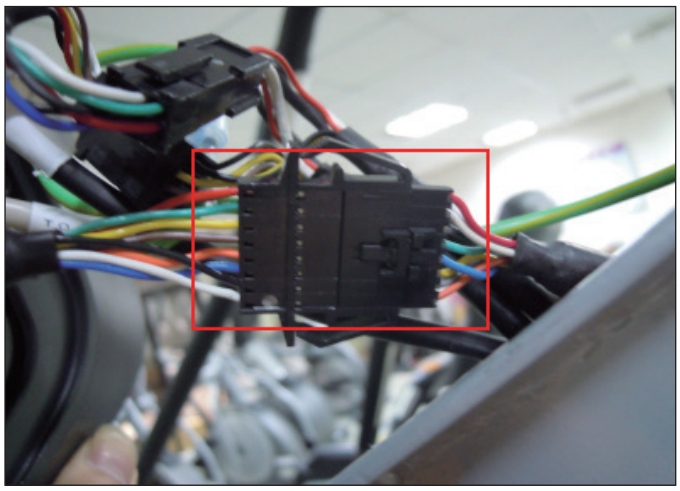


FIGURE B

8.14 TROUBLESHOOTING - NO POWER TO THE CONSOLE

NO POWER TO THE CONSOLE

1) SYMPTOM:

a. The unit is not getting power from the outlet.
b. The LCB is not getting power from the power receptacle.
c & d. The LCB LEDs are lit, but there is no power to the console.

2) SOLUTION:

a. Remove the front disk and check to see if LED D15 is lit on the LCB. If it is not, verify power at the outlet. If the outlet is not outputting 120V, check the fitness room power.
- If LED 15 is still not lit after verifying the fitness room power, replace the power cord.

b. Check to see if LED D15 is lit on the LCB (Figure A).
- If LED D15 is not lit, check for incoming AC voltage at the LCB. Replace the power components as needed if the voltage is not present.
- Replace the LCB if all power components are ok and there is AC voltage to the LCB.

c. Check the console cable for connection at the LCB and console (Figure B). Use a multi-meter to check console cable (pins 1 and 7 for 12V, pins 2 and 8 for 12V) - Figure B. There should be approximately 12V present. Replace the console cable if this reading is off.

d. If there is still no power, replace the console.

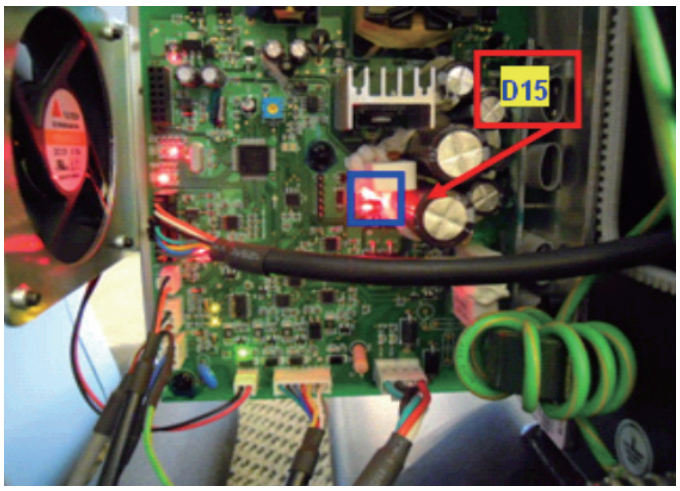


FIGURE A

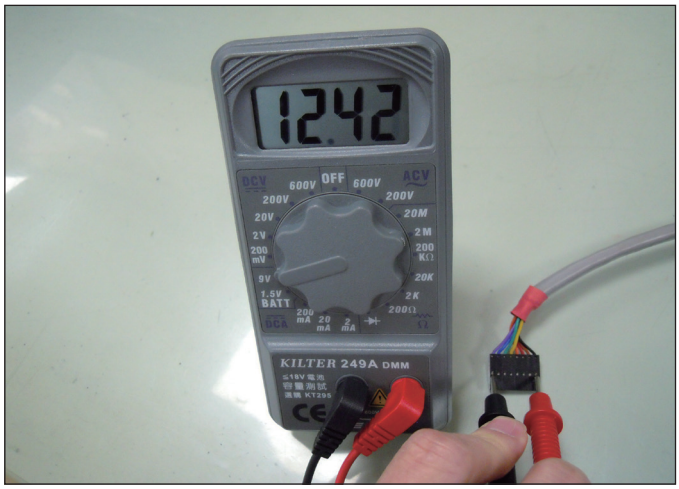


FIGURE B

HEART RATE ISSUES

1) SYMPTOM:

a. No heart rate.
b. Erratic or consistently high heart rate.

2) SOLUTION:

a. With a multi-meter set for DC Voltage, place one prong of the multi-meter on each of the heart rate plates on the handlebar (Figure A). A correctly connected HR grip will have a DC Voltage reading of between .5 and 2.0VAC. Repeat this step on both HR grips. If this reading is correct, skip to Step b. If not continue with Step a.

- Remove the screws holding the 2 halves of the HR grip together (Figure B).

FIGURE A

FIGURE B

- Check the connection of the heart rate grip wiring to the grips (Figure C). Replace the HR grips if any damage is seen to the plates.
- Loosen the 6 handlebar screws on each side of the unit (Figure D).

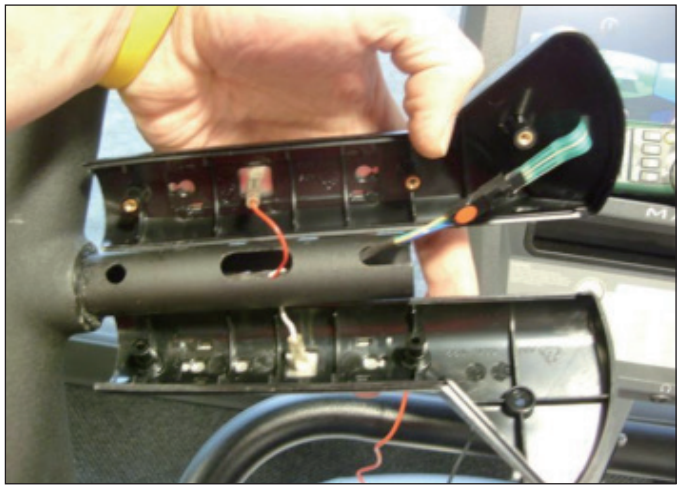


FIGURE C

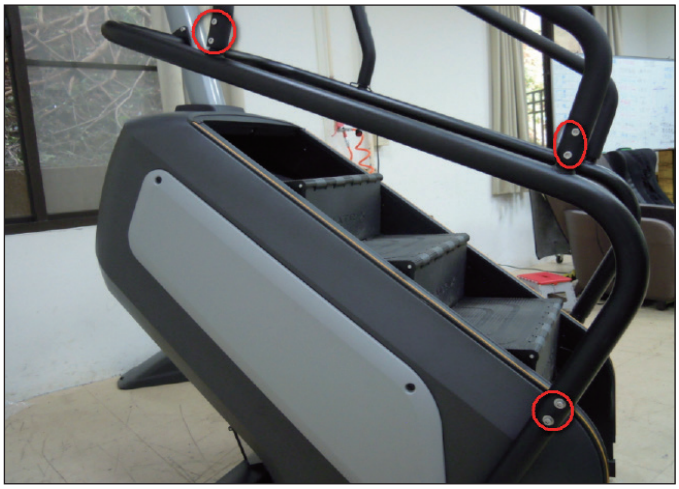


FIGURE D

8.15 TROUBLESHOOTING - HEART RATE ISSUES - CONTINUED

- Remove the 2 screws going into the handlebar connection frame from the bottom (Figure E).
- Remove the 3 screws going into the handlebar connection frame from the top (Figure F).

FIGURE E

FIGURE F

- Pull the handlebars out of the handlebar connection frame, and disconnect the HR wiring on each side (Figure G).
- Remove the handlebar connection frame from the unit (Figure H).

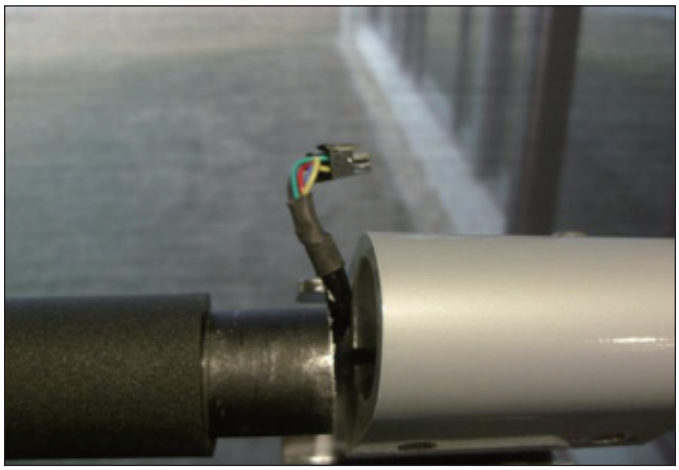


FIGURE G

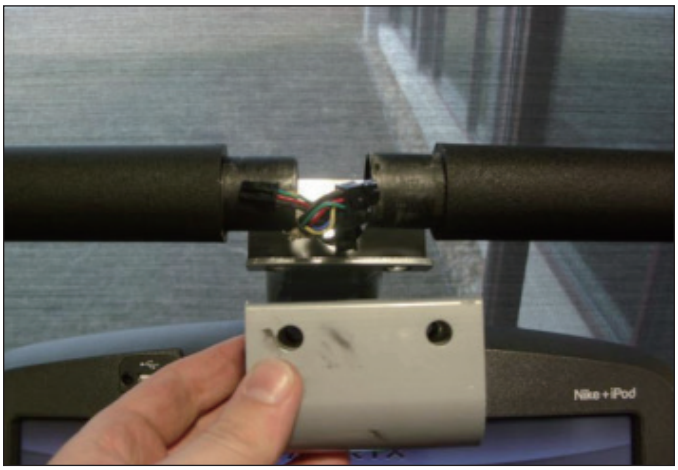


FIGURE H

- Perform a continuity test on the wiring going from the HR grip to the handlebar connection frame. With a multi-meter set for ohms, place one prong on the HR grip wiring coming out of the handlebar (Figure I) and one prong on the HR plate. The HR wiring is red, black, and white (match red with red and white with white). For example, the red wire on the left HR grip wiring should correspond with the left top plate. An ohm reading of less than 1 should be expected. If this reading is higher than 1, or if there is not a reading, replace this section of the HR grip wiring.
- Repeat the previous step with the opposite side HR grip wiring (Figure J).

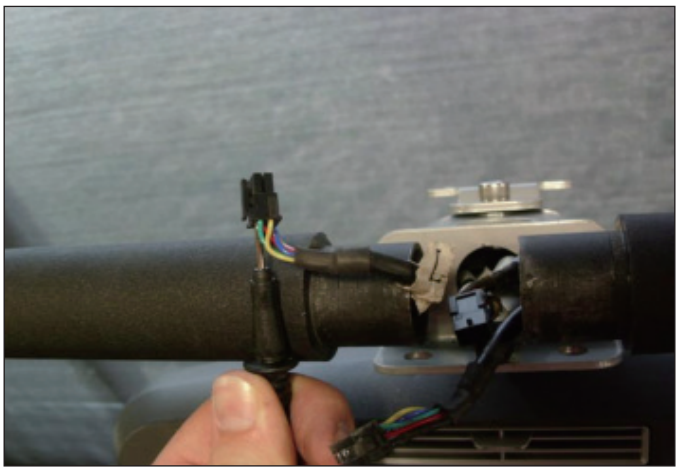


FIGURE I

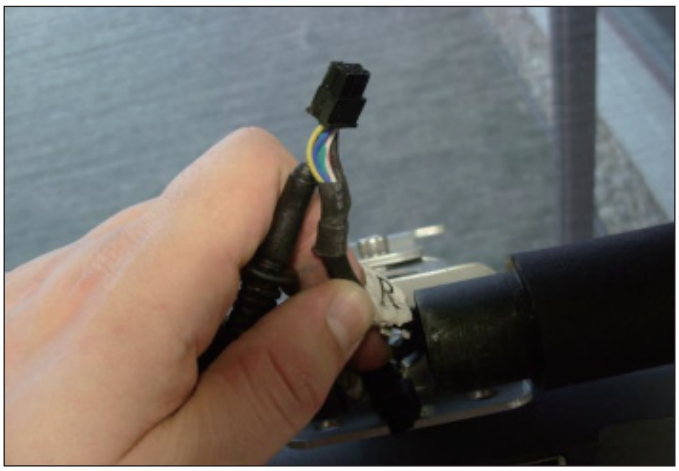


FIGURE J

8.15 TROUBLESHOOTING - HEART RATE ISSUES - CONTINUED

- Remove the console and perform a continuity test on the wiring going from the handlebar connection frame to the console. With a multi-meter set for ohms, place one prong on the HR grip wiring coming out of the console mast (Figure K) and one prong on the wiring that connects to the handlebar wiring (Figure L - match red with red and white with white). An ohm reading of less than 1 should be expected. If this reading is higher than 1 or if there is not a reading, replace this section of HR grip wiring.

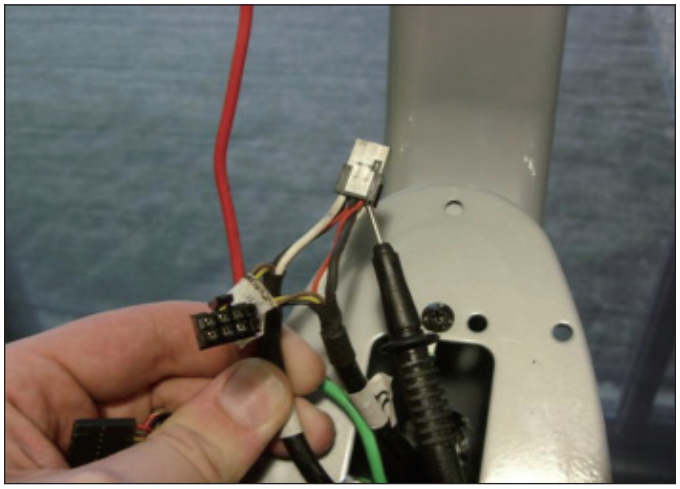


FIGURE K

FIGURE L

b. If your problem is not with the HR grips, a continuity check should be performed on the unit to verify that the console is properly grounded (see Service Bulletin – Continuity Test on Matrix Climb Mills).

- Once the console grounding has been verified, the heart rate board ground wire should be verified.
- Remove the 2 screws holding the console front service cover to the back (Figure M).
- Check to make sure that the HR board ground wire is plugged into the console ground wire that plugs into the ground wire run down the console mast. Retest for HR if not properly connected.
- Remove the 2 screws holding the HR board to the console frame.
- With your multi-meter set for ohms, place one prong of your multi meter on the ground wire coming from the HR board (Figure N) and the other on the console ground wire that comes out of the console and plugs into the ground wire going down the console mast. An ohm reading of less than 1 should be expected. If this is higher than 1 or if there is not a reading, replace the HR board ground wire.

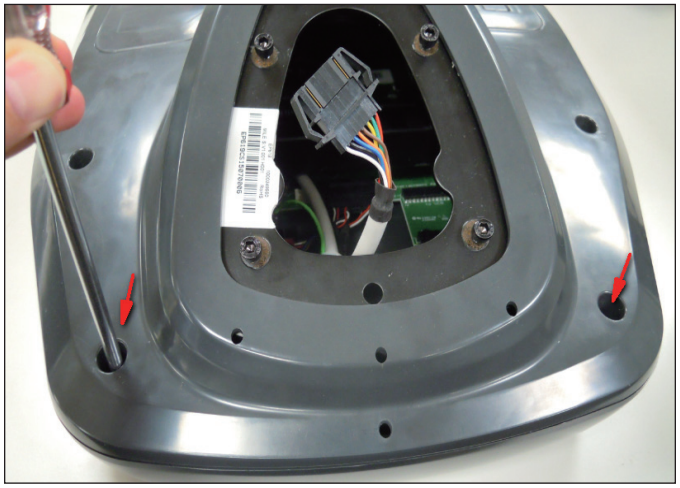


FIGURE M

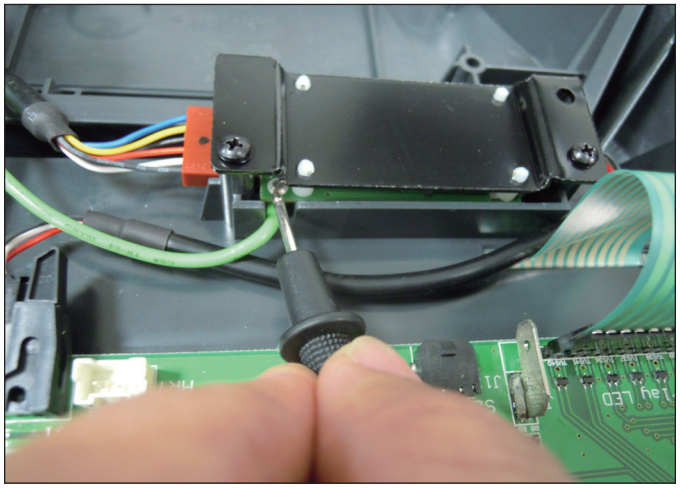


FIGURE N

- If no problems were found using the troubleshooting above, replace the HR board.
- If the HR board does not solve the issue, replace the console.

TOGGLE ISSUES

1) SYMPTOM:

a. No response on the grip toggles
b. The console beeps when the toggles are pressed, but no change on console.

2) SOLUTION:

a. Remove the screws holding the 2 halves of the HR grip together (Figure A).
- Check the connection of the toggle wiring to the toggle keypad (Figure B). ***NOTE:*** There should be a red dot on both the toggle harness and the grip wiring indicating the correct way to plug in the toggles (the red dots should be on the same side of the connector).

FIGURE A

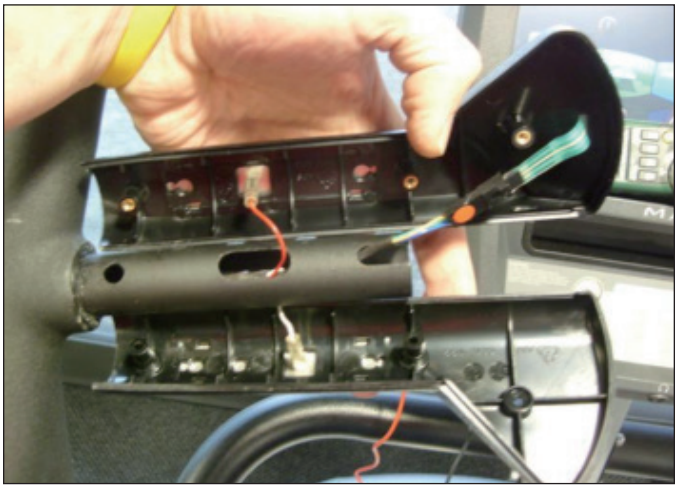


FIGURE B

- Place a screwdriver or other metal object between pins 1 & 2 and 2 & 3 on the grip wiring (Figure C). The console should beep when these wires are bridged. If the console beeps, replace the toggles. If the console does not beep, continue with the steps below.
- Loosen the 6 handlebar screws on each side of the unit (Figure D).

FIGURE C

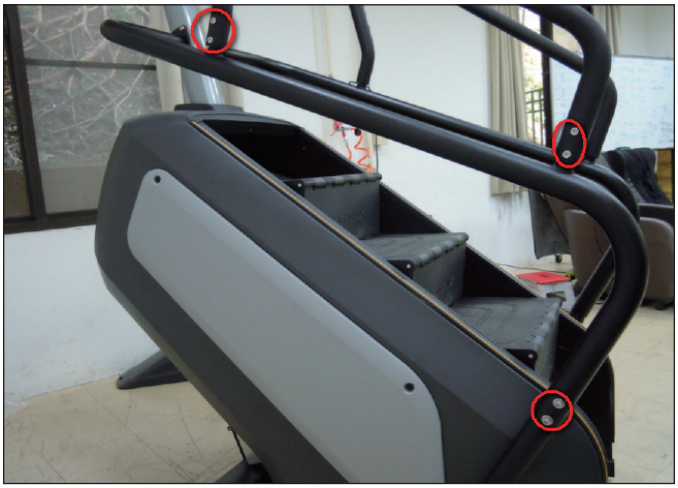


FIGURE D

8.16 TROUBLESHOOTING - TOGGLE ISSUES - CONTINUED

- Remove the 2 screws going into the handlebar connection frame from the bottom (Figure E).
- Remove the 3 screws going into the handlebar connection frame from the top (Figure F).

FIGURE E

FIGURE F

- Pull the handlebars out of the handlebar connection frame, and disconnect the grip wiring on each side (Figure G).
- Remove the handlebar connection frame from the unit (Figure H).

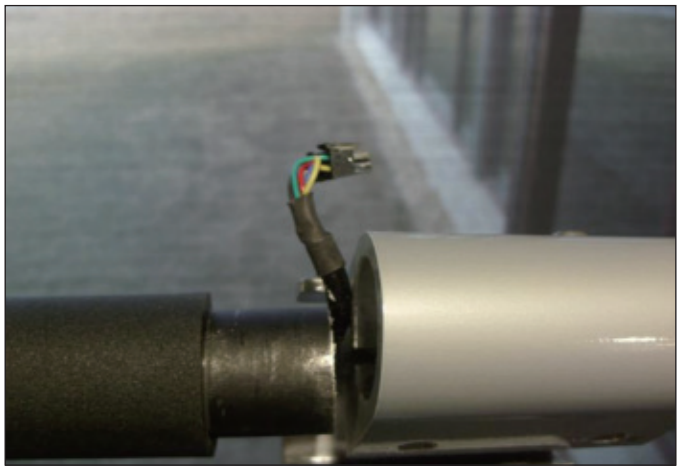


FIGURE G

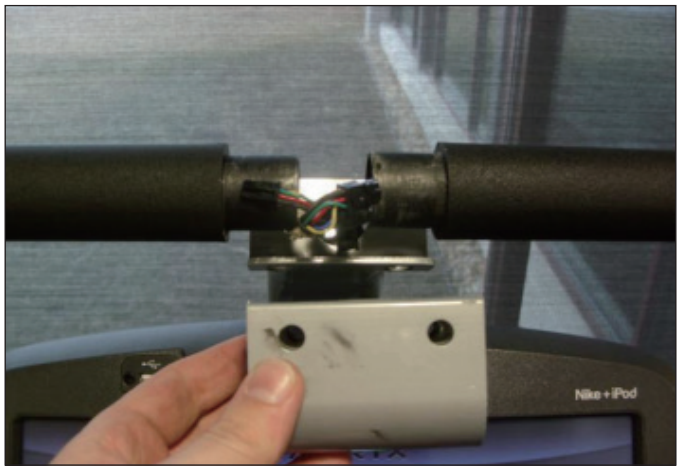


FIGURE H

- Perform a continuity test on the wiring going from the toggle to the handlebar connection frame. With a multi-meter set for ohms, place one prong on the toggle wiring coming out of the handlebar (Figure I) and one prong on the wire on the toggle connector (the toggle wires are yellow, blue, and green - match similar colors). An ohm reading of less than 1 should be expected. If this reading is higher than 1, or if there is not a reading, replace this section of the grip wiring.
- Repeat the previous step with the opposite side grip wiring (Figure J).

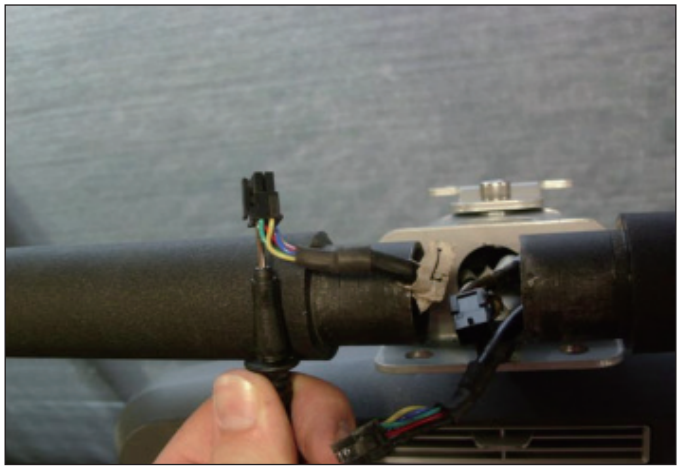


FIGURE I

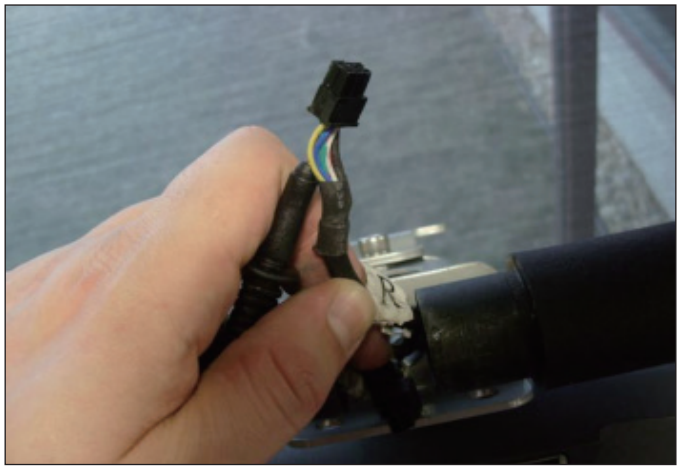


FIGURE J

8.16 TROUBLESHOOTING - TOGGLE ISSUES - CONTINUED

- Remove the console and perform a continuity test on the wiring going from the handlebar connection frame to the console. With a multi-meter set for ohms, place one prong on the grip wiring coming out of the console mast (Figure K) and one prong on the wiring that connects to the handlebar wiring (Figure L - match blue with blue, green with green, and yellow with yellow). An ohm reading of less than 1 should be expected. If this reading is higher than 1 or if there is not a reading, replace this section of grip wiring.

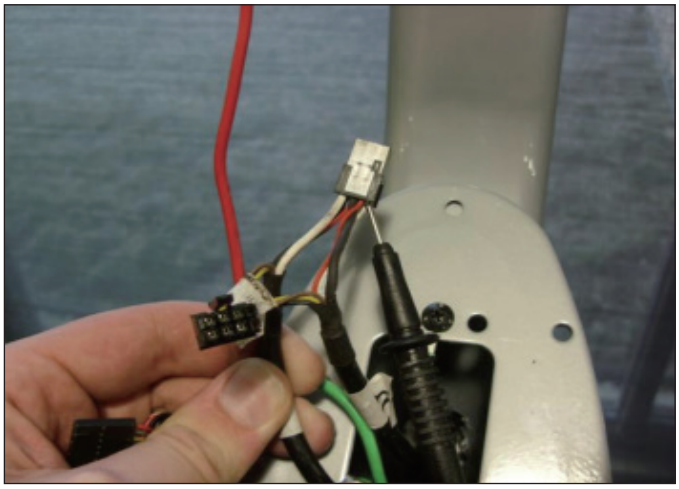


FIGURE K

FIGURE L

b. If your problem is not with the toggles or toggle wiring, the issue is likely with the console.

9.1 SIDE COVER REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Pull up on the end cap carefully (Figures A & B).

FIGURE A

FIGURE B

3) Remove the 3 screws and remove the small Matrix logoed cover at the top of the stairs (Figures C & D).

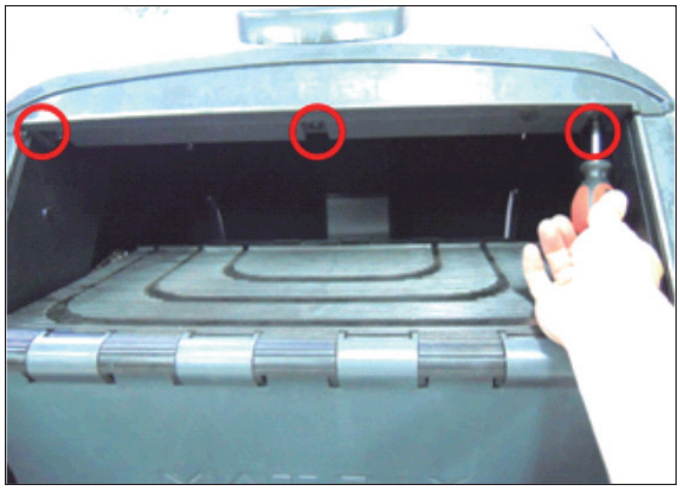


FIGURE C

FIGURE D

9.1 SIDE COVER REPLACEMENT - CONTINUED

4) Rotate the 2 plastic clips counter-clockwise to remove the Matrix logo cover (Figures E & F).

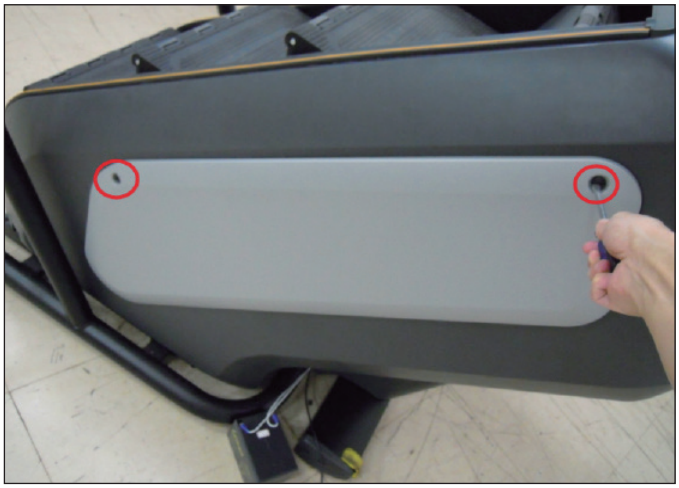


FIGURE E

FIGURE F

5) Remove the 4 screws holding the side cover to the frame and pull up on the side cover to remove it (Figures G & H).

FIGURE G

FIGURE H

6) Reverse Steps 1-5 to install a new side cover.

9.2 CONSOLE REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Remove the 5 screws that hold the console to the console mast (Figure A).
3) Disconnect the console cable and other wiring from the console, then remove the console (Figure B).

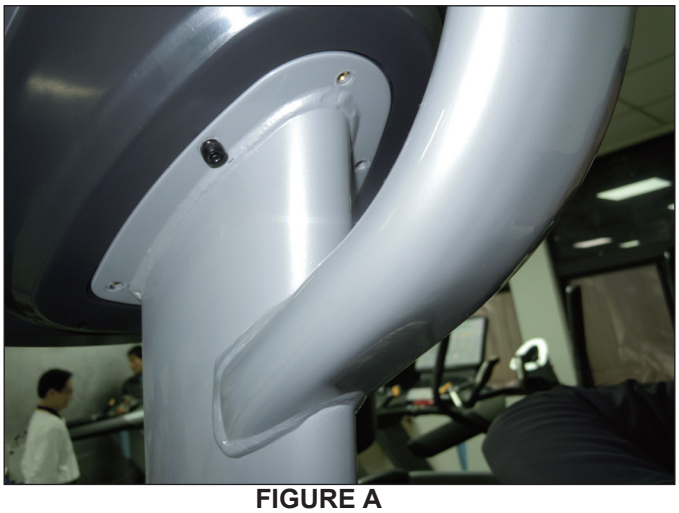


FIGURE A

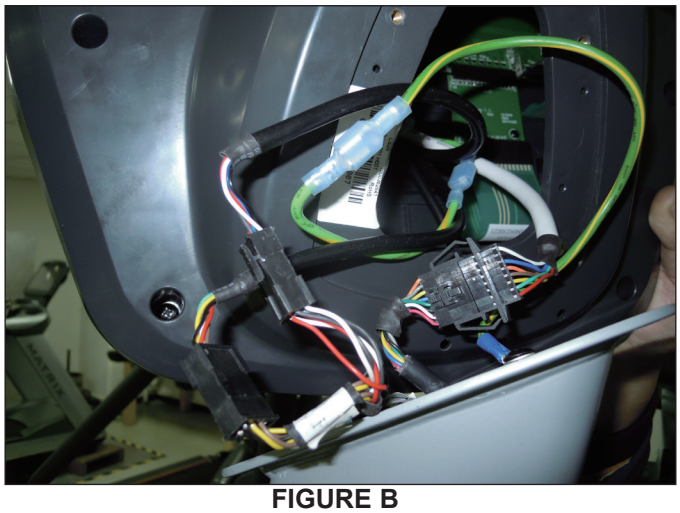


FIGURE B

4) Connect the wiring to the new console.
5) Carefully push the wires into the console and console mast until they are clear of the console / mast connection.
6) Attach the console to the console mast using the screws removed in Step 2.
7) Test the Climb Mill for function as outlined in Section 9.20.

9.3 CONSOLE OVERLAYS & KEYPADS REPLACEMENT

1) Remove the console as outlined in Section 9.1.
2) Remove the 6 screws holding on the back cover of the console and remove it (Figure A).
3) Remove the 2 screws holding the front of the console to the back and split the 2 halves (Figure B).

FIGURE A

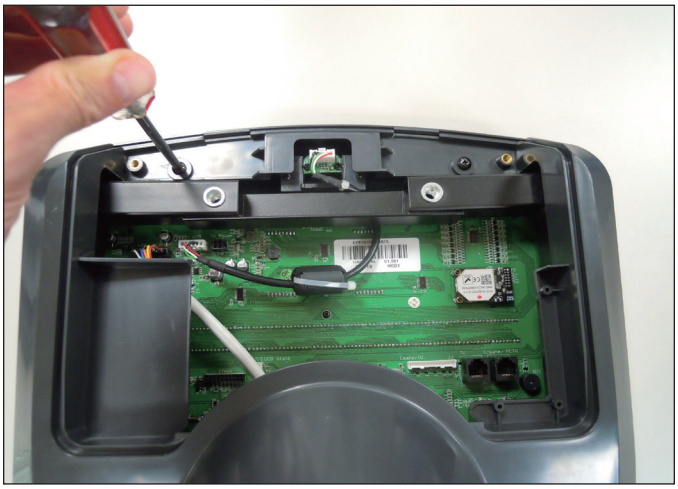


FIGURE B

3) Unplug the faulty keypad from the UCB - 2 ribbon cables for program (Figure C) and 1 ribbon cable for entertainment (Figure D).

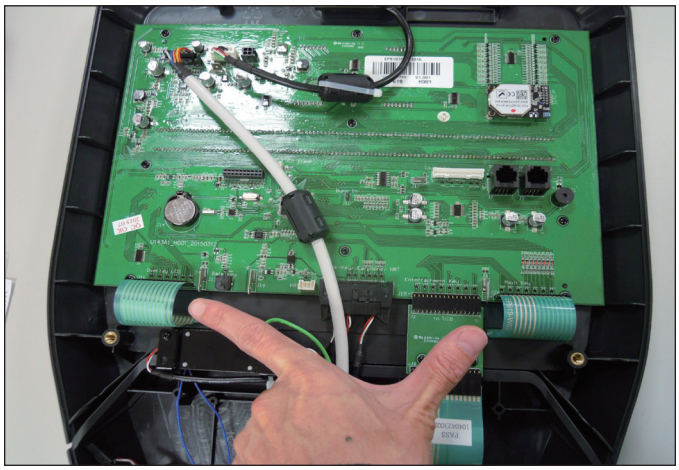


FIGURE C

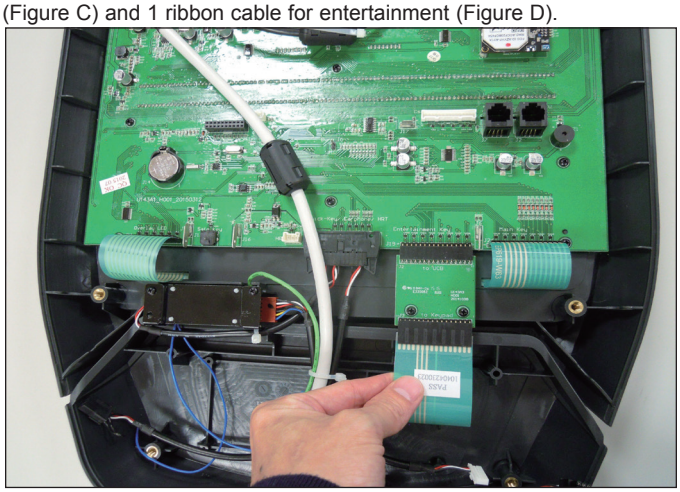


FIGURE D

4) Use a razor to remove the faulty keypad / overlay from the console faceplate (Figure E & F).

FIGURE E

FIGURE F

9.3 CONSOLE KEYPAD / OVERLAY REPLACEMENT - CONTINUED

5) Clean the console area with alcohol to remove any left over adhesive (Figure G & H).

FIGURE G

FIGURE H

6) Peel the backing off of the new keypad Figures I & J).

FIGURE I

FIGURE J

7) Slide the ribbon cables through the slots in the console faceplate (Figure K & L).

FIGURE K

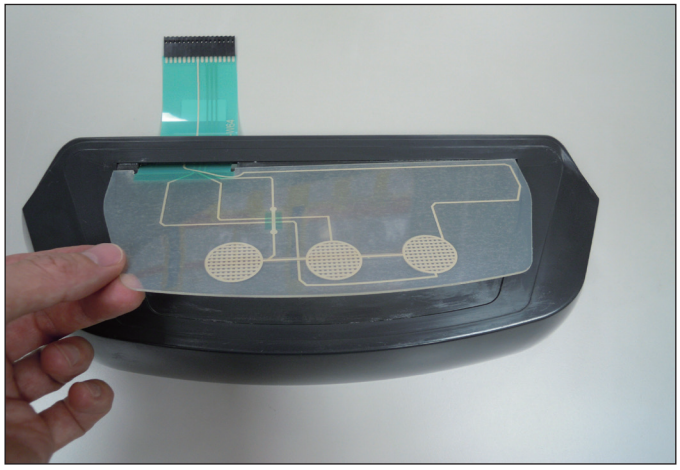


FIGURE L

9.3 CONSOLE KEYPAD / OVERLAY REPLACEMENT - CONTINUED

8) Plug the ribbon cables into the UCB (Figures M & N).

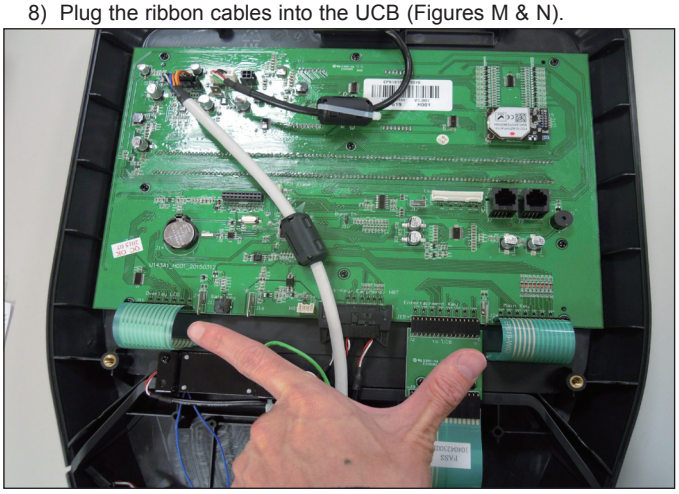


FIGURE M

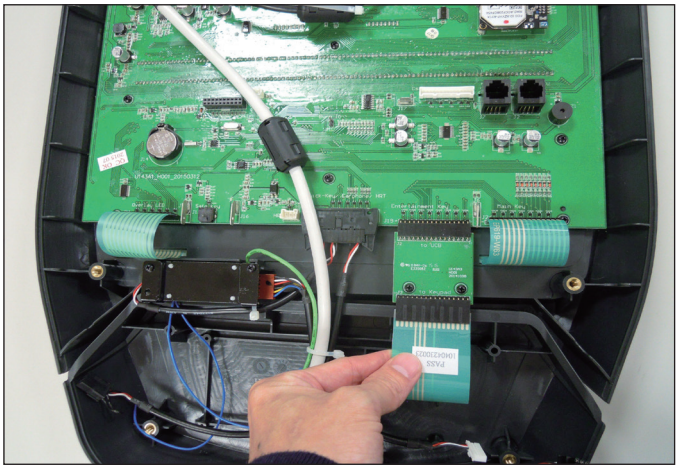


FIGURE N

9) Carefully line up the new keypad to the outline in the console faceplate (Figure O & P).

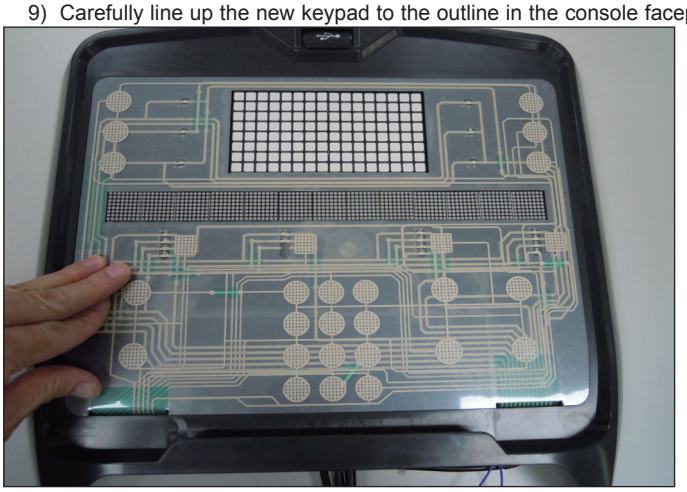


FIGURE O

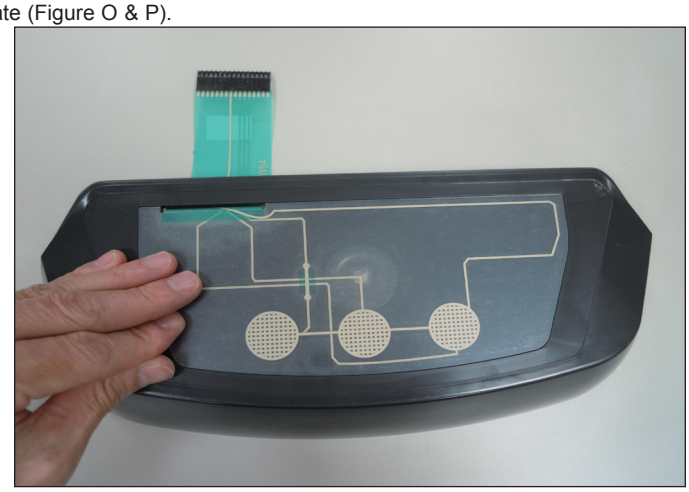


FIGURE P

10) Peel the backing off of the new overlay (Figure Q & R).

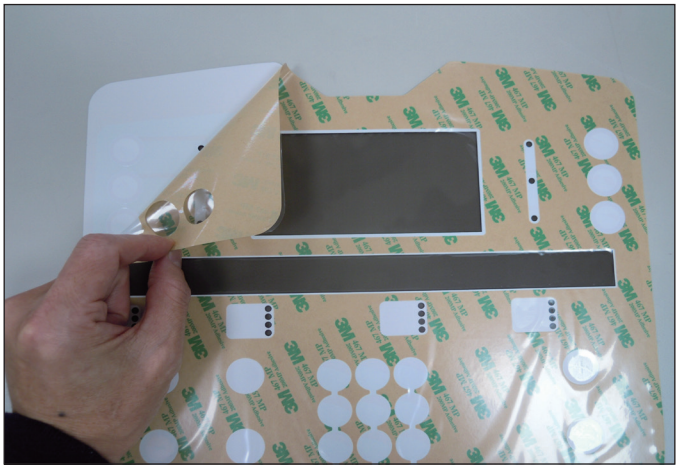


FIGURE Q

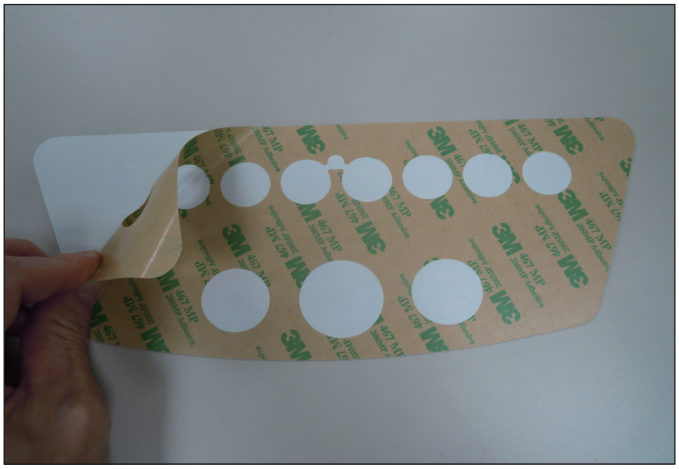


FIGURE R

9.3 CONSOLE KEYPAD / OVERLAY REPLACEMENT - CONTINUED

10) Carefully line up the new overlay to the outline in the console faceplate. Once it is in place, press down on the overlay so that the adhesive on the overlay bonds to the keypad (Figure S & T).

FIGURE S

FIGURE T

11) Reverse Steps 1-3 to re-assemble the console.
12) Test the unit for function as outlined in Section 9.3.

9.4 FRONT SHROUD REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Remove all of the cables from the front cover (Figure A).
3) Remove the 2 screws from the front cover and remove it (Figure B).

FIGURE A

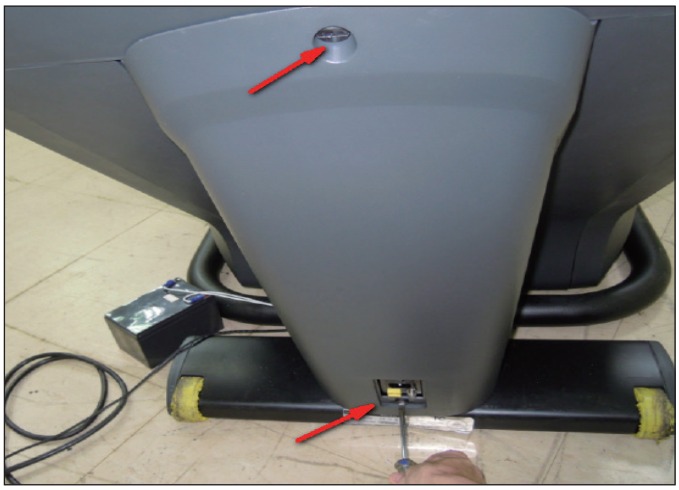


FIGURE B

4) Remove both side covers as outlined in Section 9.1.
5) Remove the console as outlined in Section 9.2.
6) Remove the 3 screws on each side that connect the front shroud to the frame (Figure C).
7) Remove the 5 screws that hold the upper handlebar set to the console mast (Figure D).

FIGURE C

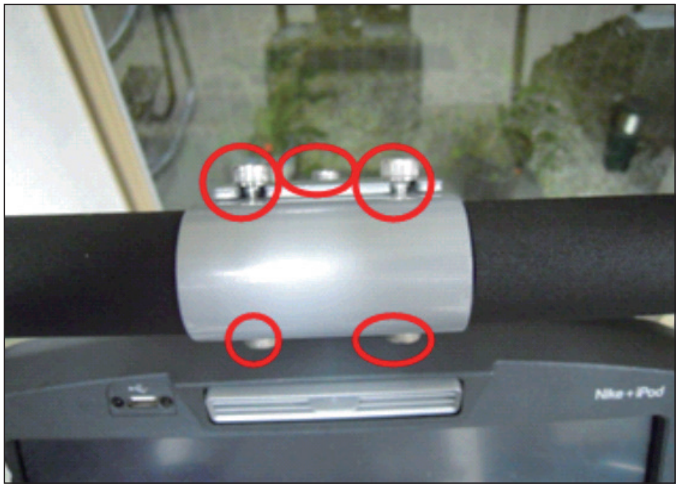


FIGURE D

9.4 FRONT SHROUD REPLACEMENT - CONTINUED

8) Disconnect the hand pulse and quick key cables on the inside of the console mast (Figure E).
9) Remove the 8 screws holding the lower handlebar set to the console mast (Figure F).

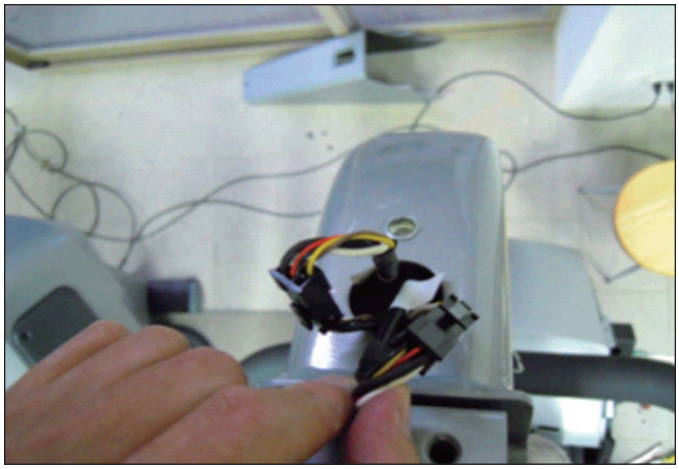


FIGURE E

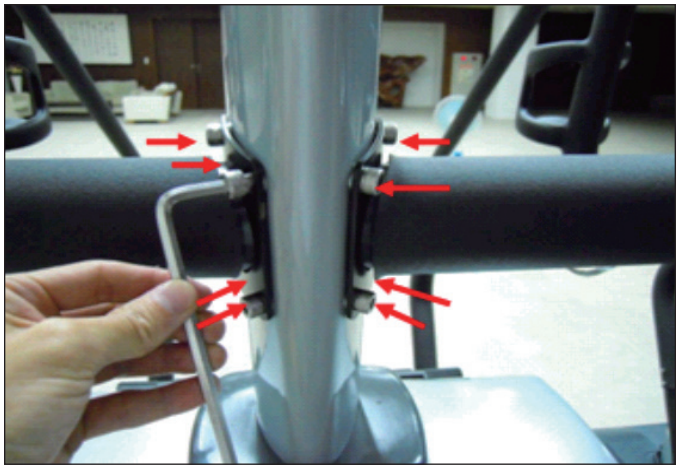


FIGURE F

10) Remove the 4 screws that attach the console mast to the frame (Figure G).
11) Pull the cables out of the console mast and remove it (Figure H).

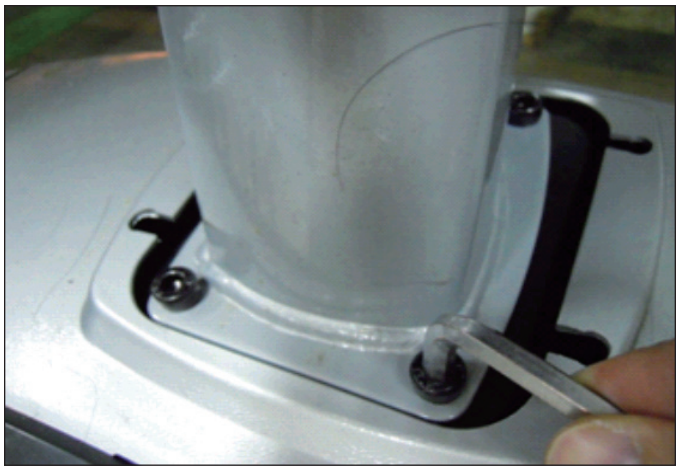


FIGURE G

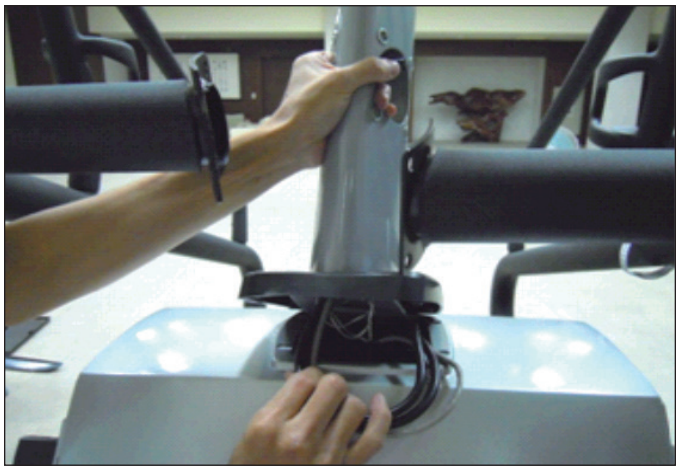


FIGURE H

12) Remove the 4 screws holding the front shroud to the sides (Figure I).
13) Pull up on the front shroud and remove it (Figure J).

FIGURE I

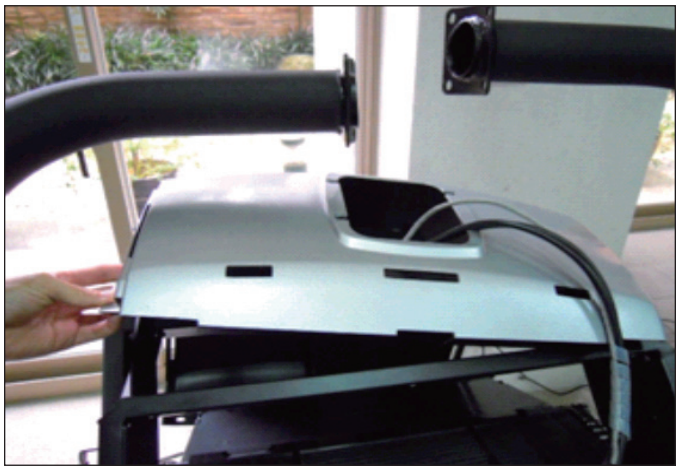


FIGURE J

14) Reverse Steps 1-13 to install a new front shroud.
15) Test the Climb Mill for function as outlined in Section 9.20.

9.5 LOWER CONTROL BOARD (LCB) REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Remove all wiring from the front cover and remove it from the machine as outlined in Section 9.4.
3) Disconnect all wiring from the LCB (Figure A).
4) Remove the 2 screws holding the LCB to the frame and remove the LCB (Figure B).

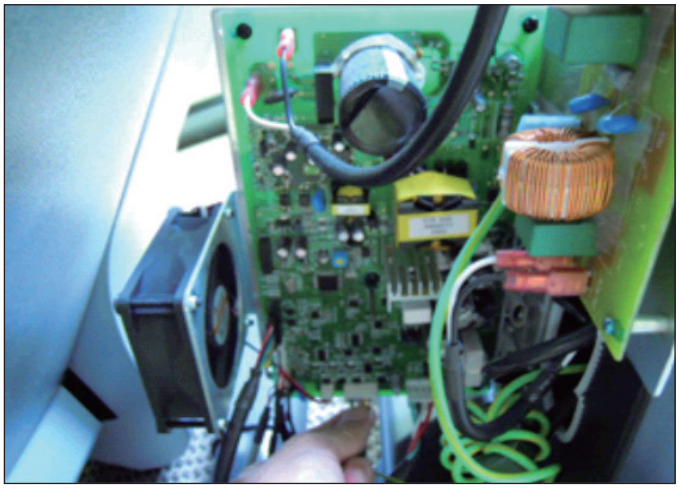


FIGURE A

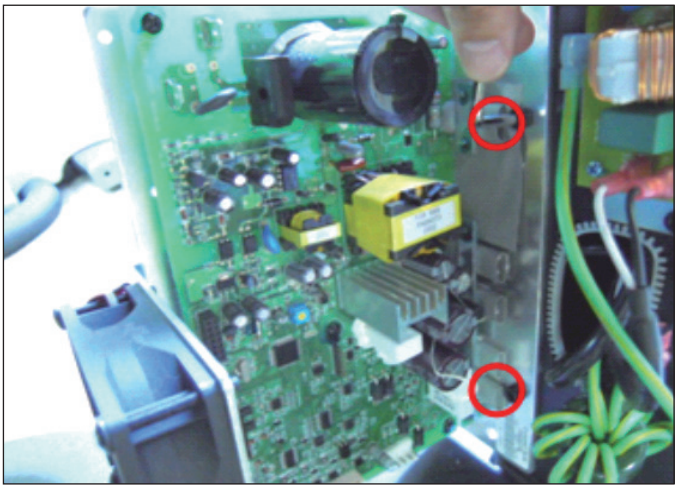


FIGURE B

5) Remove the 2 screws that hold the fan to the LCB and remove it (Figure C).

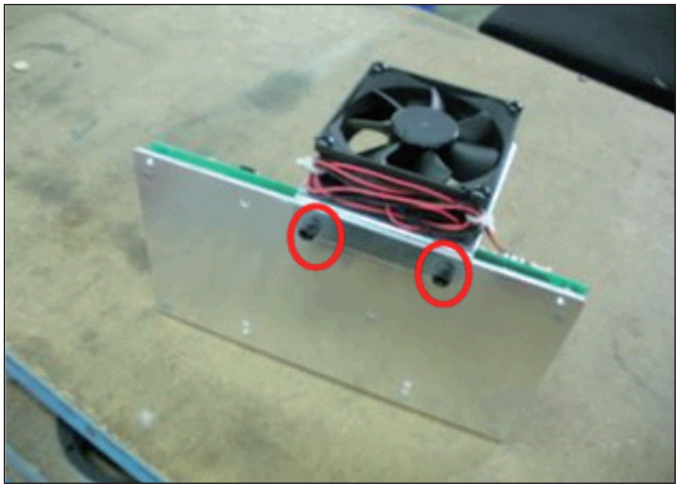


FIGURE C

6) Reverse Steps 1-5 to install a new LCB.
7) Test the Climb Mill for function as outlined in Section 9.20.

9.6 UPPER HANDLEBAR REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Remove the 5 screws holding the upper handlebar set to the console mast (Figure A).
3) Pull out the right handlebar and hand grip cable (Figure B).

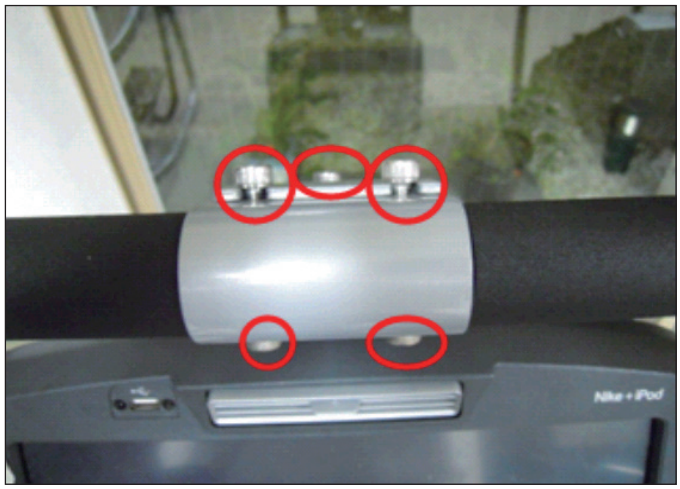


FIGURE A

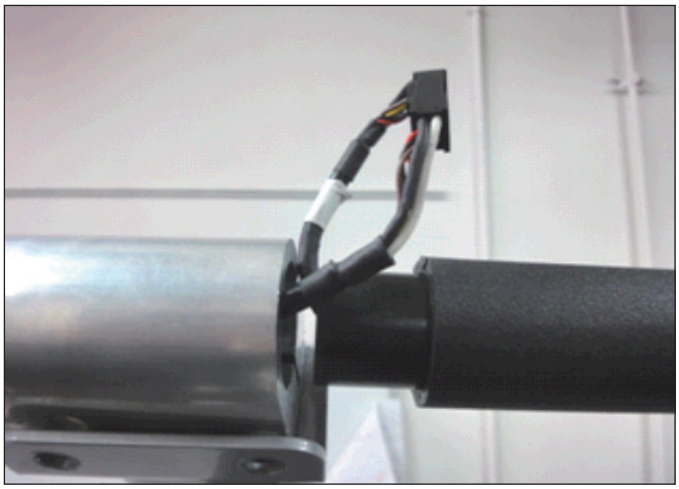


FIGURE B

4) Disconnect the wiring that connects the left hand grip cable to the hand pulse extension wire (Figure C).
5) Pull out the left handlebar and hand grip cable (Figure D).

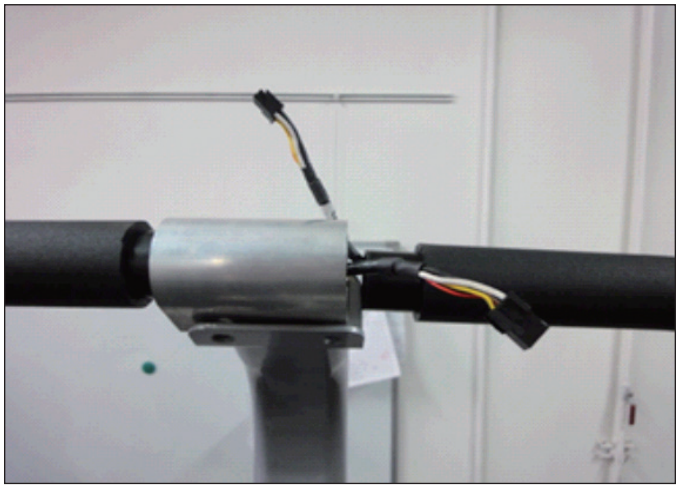


FIGURE C

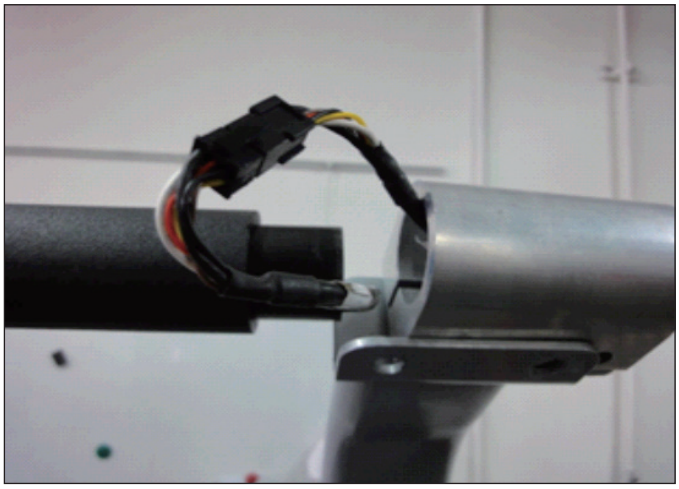


FIGURE D

9.6 UPPER HANDLEBAR REPLACEMENT SET - CONTINUED

6) Disconnect the wire that connects the left hand grip cable to the hand pulse extension wire (Figure E).
7) Remove the 2 screws on each side holding the front of the upper handlebar set to the lower handlebar set (Figure F).

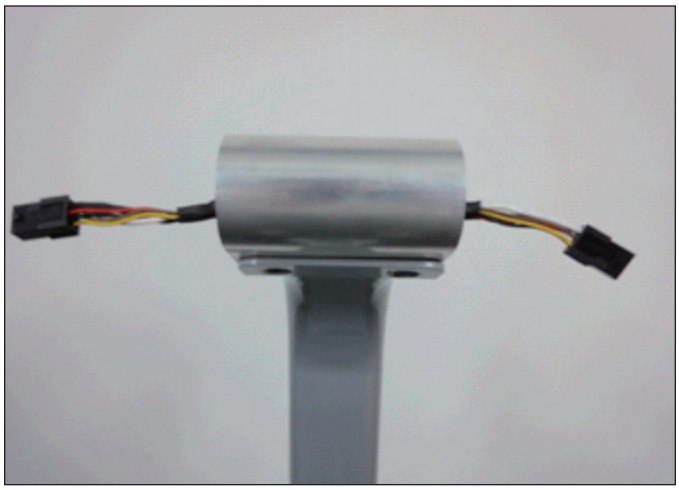


FIGURE E

FIGURE F

8) Remove the 2 screws on each side holding the rear of the upper handlebar set to the lower handlebar set (Figure G).

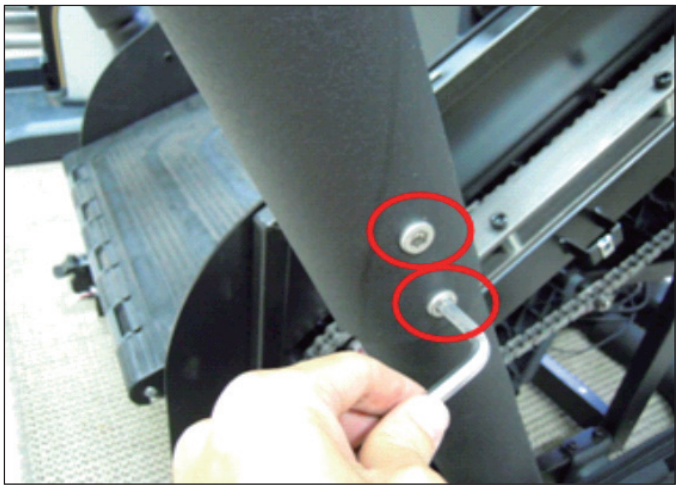


FIGURE G

9) Reverse Steps 1-8 to install a new upper handlebar set.
10) Test the Climb Mill for function as outlined in Section 9.20.

9.7 LOWER HANDLEBAR SET REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove the upper handlebar set as outlined in Section 9.6.
3) Remove the 8 screws holding the lower handlebar set to the console mast (Figure A).
4) Remove the 2 screws holding the lower handlebar set to the frame handlebar set, then remove the lower handlebar (Figure B).

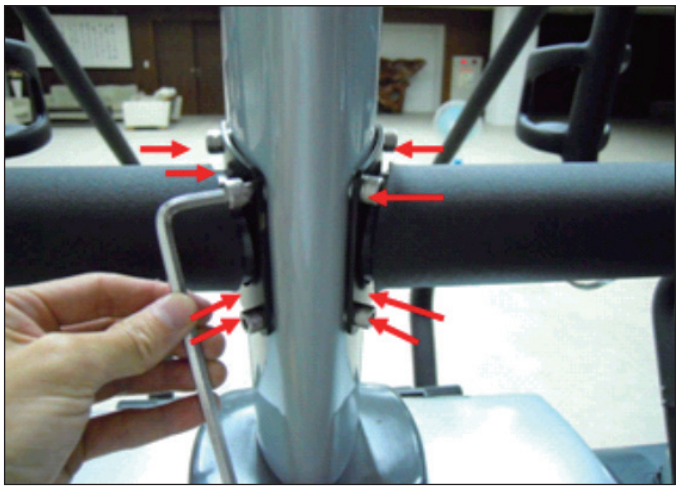


FIGURE A

FIGURE B

5) Reverse Steps 1-4 to install a new lower handlebar set.
6) Test the Climb Mill for function as outlined in Section 9.20.

9.8 HANDLEBAR SERVICE

1) Turn off the power and disconnect the cord from the machine.
2) All items on the handlebar are removed using a Phillips screwdriver from the underside of the bar.
3) Once the screws are removed, lift the part carefully then disconnect any wire connections to fully remove the part. This includes any resistance, pause / stop buttons, and the heart rate grip plates (Figures A & B).

FIGURE A

FIGURE B

4) Test the Climb Mill for function as outlined in Section 9.20.

9.9 STAIR REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Remove the side covers as outlined in Section 9.1.
3) Remove the front shroud as outlined in Section 9.4.
4) Turn the brake bar to the right to lock the stairs in place (Figure A).
5) Remove the X shaped clip from the long axle on the upper side of the stair needing to be replaced (Figure B).

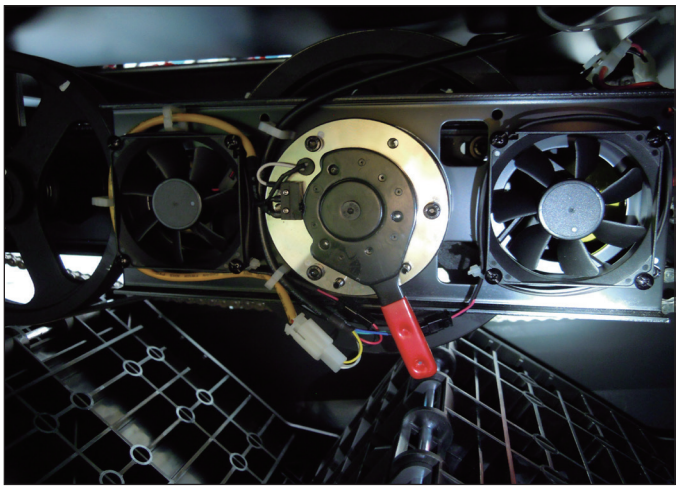


FIGURE A

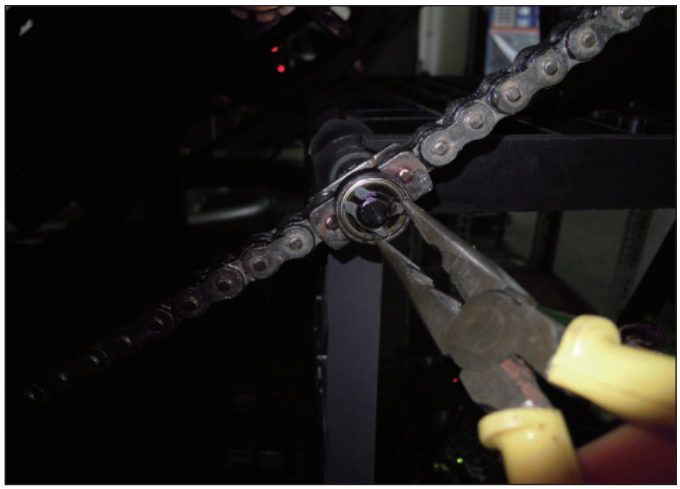


FIGURE B

6) Pull out the axle from the opposite side that you removed the X shaped clip from (Figure C). ***NOTE:*** 1. Pay attention to the order of the parts sequence on the axle as you remove it (Figure D). The correct parts sequence is X shaped clip > bearing > washer > chain > spacer > stair. 2. Do not reuse the X-washer retainers. Order replacements with your stair or bearing order.

FIGURE C

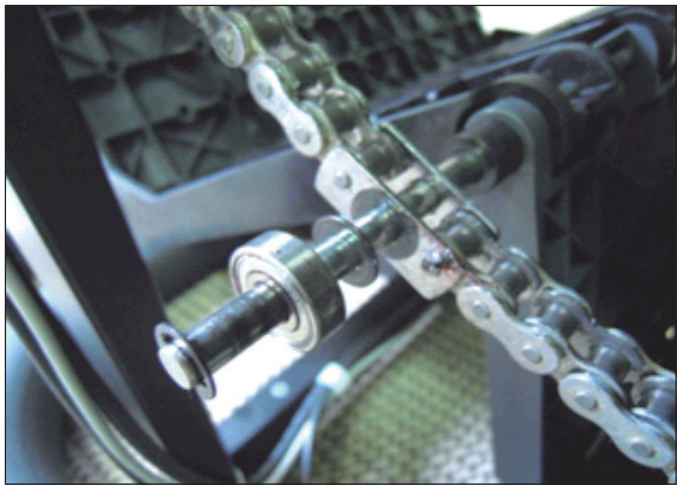


FIGURE D

9.9 STAIR REPLACEMENT - CONTINUED

7) Remove the axle from the lower side of the stairs needing to be replaced following the same procedure as Steps 4-6.
8) Remove the stair set when you have removed both axles (Figure E).
9) Remove the E-shaped clip from the short axle between the 2 portions of the stair set (Figure F). This will allow you to separate the 2 portions of the stair set.

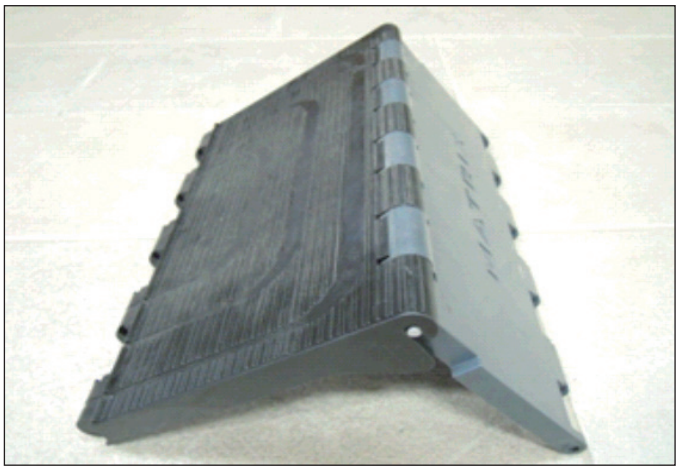


FIGURE E

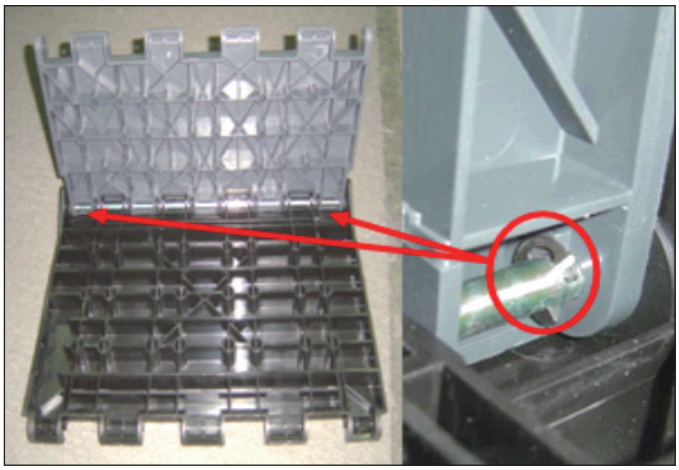


FIGURE F

10) Reverse Steps 1-9 to install a new stair set.
11) Turn the brake bar to the left to unlock the stairs once the replacement is finished.
12) Test the Climb Mill for function as outlined in Section 9.20.

9.10 DRIVE SET REPLACEMENT

NOTE: It is recommended that 2 technicians be present when replacing or removing the drive set. While it is not necessary to remove the side covers or a set of stairs, it makes it much easier to remove the drive set if these parts are removed for accessibility.

1) Turn off power and disconnect the cord from the machine.
2) Turn the 2 plastic screws counter-clockwise and remove the Matrix logo covers on both sides of the machine.
3) Turn the brake lever to the right to lock the stairs (Figure A) to prevent movement that could cause injury.
4) Disconnect the speed sensor wire (Figure B). ***NOTE:*** Use 2 hands to disconnect the speed sensor wire. Do not pull the socket downwards to disconnect as it will damage the connector.

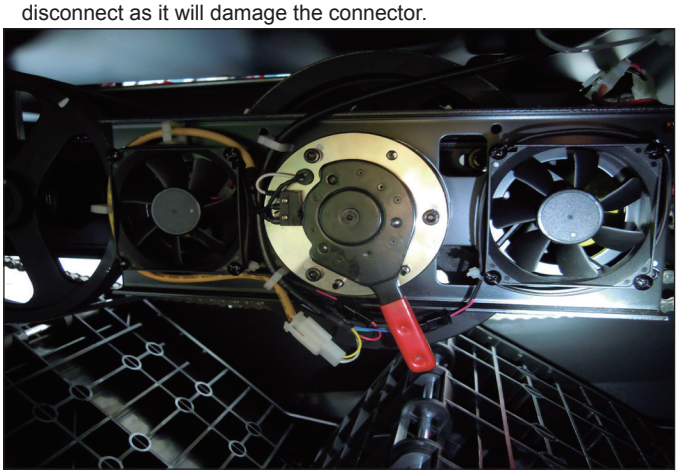


FIGURE A

FIGURE B

5) Loosen the screw that applies tension to the chain (Figure C).
6) Disconnect the 5 wire connectors (Figure D). These include 2 fan wires, 2 ECB wires, and a brake wire.

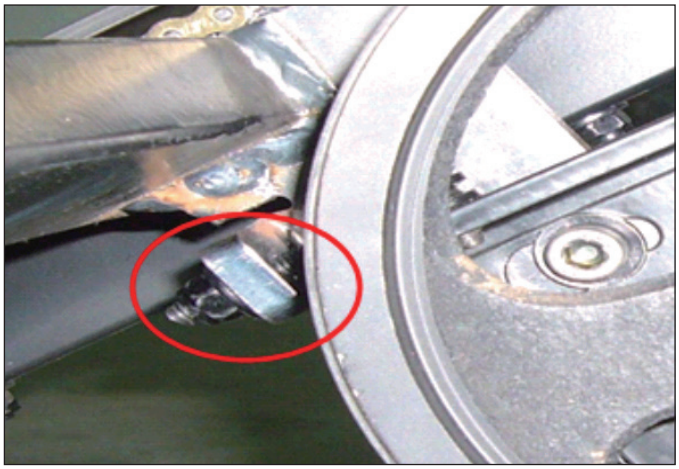


FIGURE C

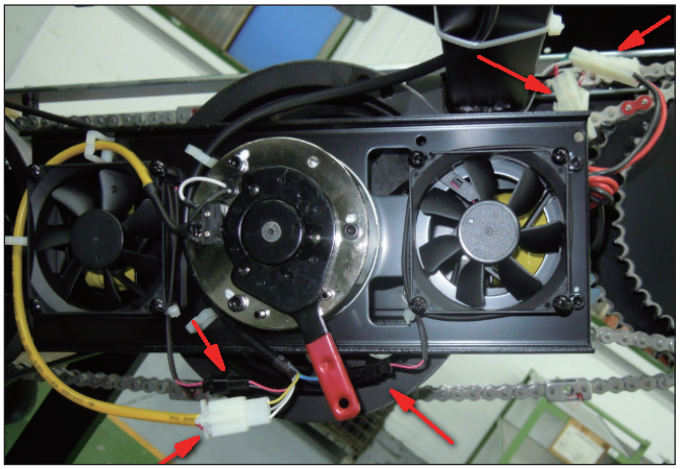


FIGURE D

7) Loosen the drive set guide screw if tight (Figure E).
8) Remove the 4 screws that hold the drive set to the frame (Figure F).

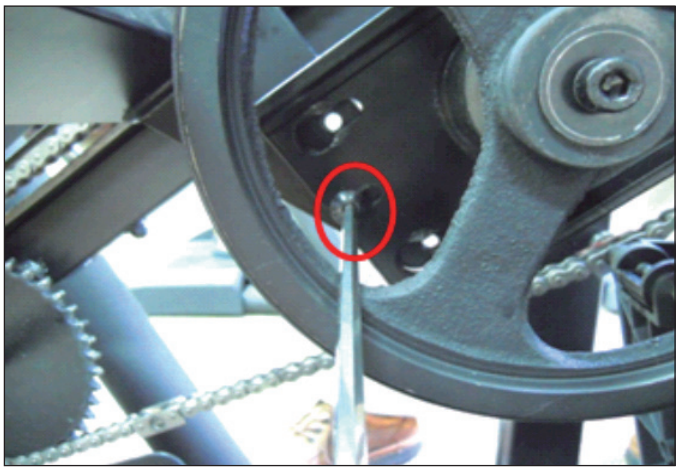


FIGURE E

FIGURE F

9.10 DRIVE SET REPLACEMENT - CONTINUED

9) While a tech is pushing the drive set towards the front of the unit (the drive set will still be supported by the guide screw - Figure G), the other tech should remove the chain from the sprocket simultaneously (Figure H).

FIGURE G

FIGURE H

10) Remove the drive set from the unit (Figure I). ***NOTE:*** The drive axle will need to be rotated so that the pulleys are horizontal to fit through the side covers (Figure J).

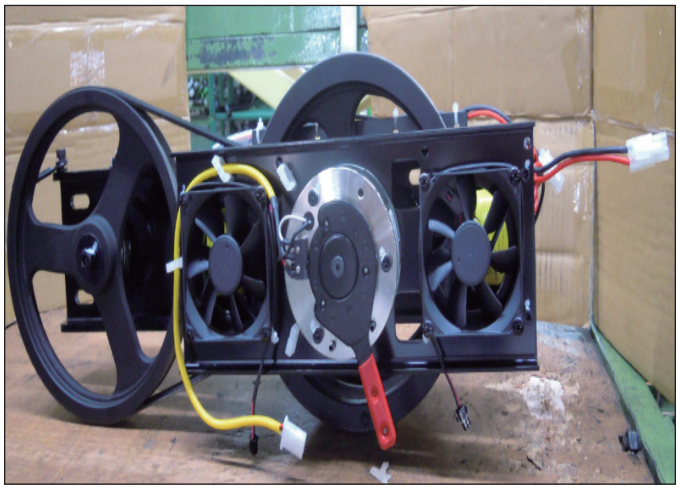


FIGURE I

FIGURE J

11) Reverse Steps 1-10 to install a new drive set. ***NOTE:*** Torque the bolts removed in Step 7 to 40N-m.
12) Test the Climb Mill for function as outlined in Section 9.20.

9.11 CHAIN REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove the side covers as outlined in Section 9.1.
3) Remove at least 3 sets of stairs as outlined in Section 9.9 to expose a significant portion of the chain.
4) Before removing the chain, measure the distance of the chain run from the middle of the front bearing seat to the middle of the rear bearing seat (Figure A). This distance should be 941mm.
5) If this length is not 941mm, it needs to be adjusted. Loosen the vertical bolts on the bearing seat, then adjust the length by adjusting the horizontal screw. Tighten the vertical bolts to tighten the bearing seat in place. The vertical bolts should be torqued to 60 N-m.

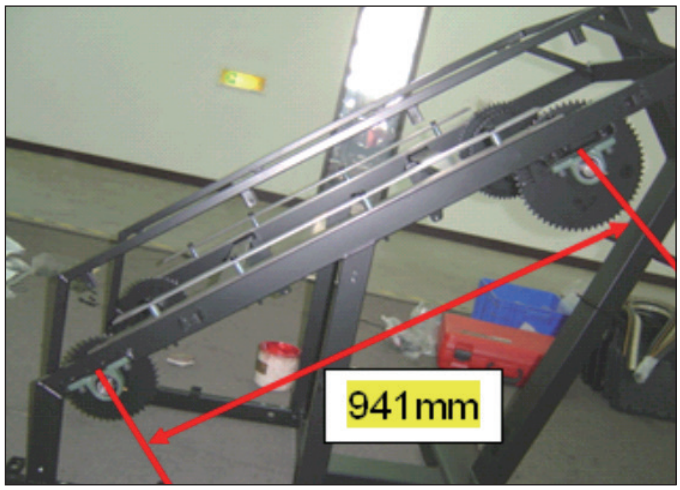


FIGURE A

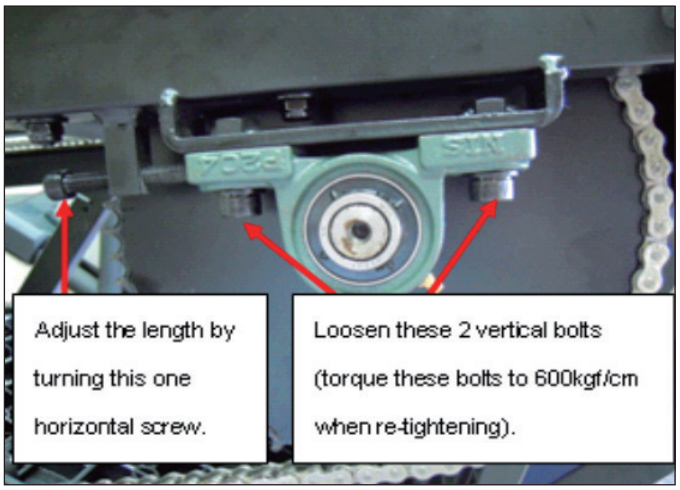


FIGURE B

6) Rotate the chain until a spring clip is in a convenient location and remove it (Figure C). ***NOTE:*** This chain link will normally be painted to make it easier to identify.
7) Remove the join plate on the chain (Figure D).

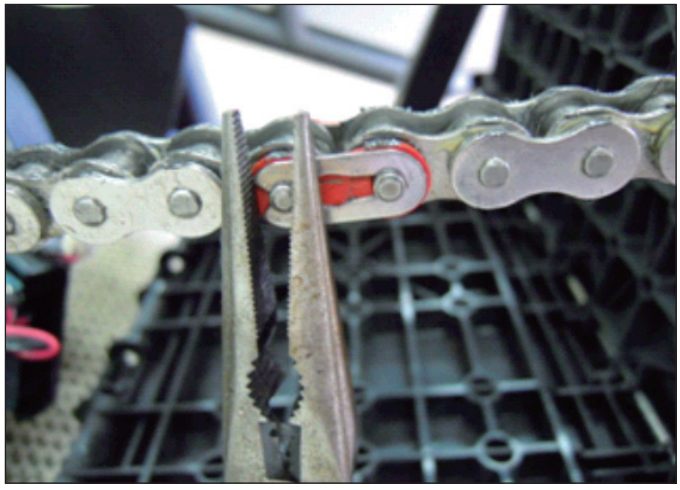


FIGURE C

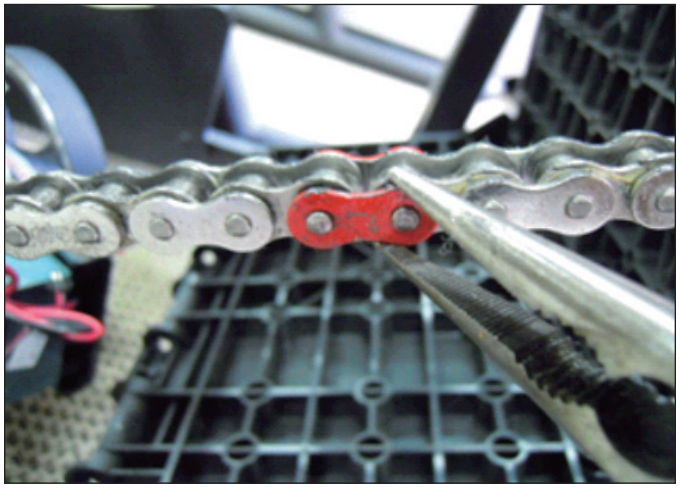


FIGURE D

9.11 CHAIN REPLACEMENT - CONTINUED

8) Remove the 2 seal rings from where the join link was just removed (Figure E).
9) The chain can now be removed.

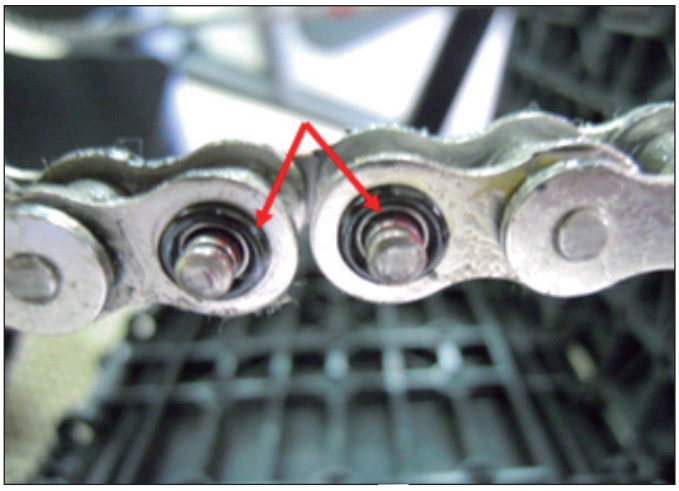


FIGURE E

10) Reverse Steps 1-9 to install a new chain. When installing a new chain, it is important to pay attention to the join plates. The join plates are wider than the chain itself. It is important that the side of the join plates that are flush with the rest of the chain get installed to the inside of the chain path (Figures F & G).

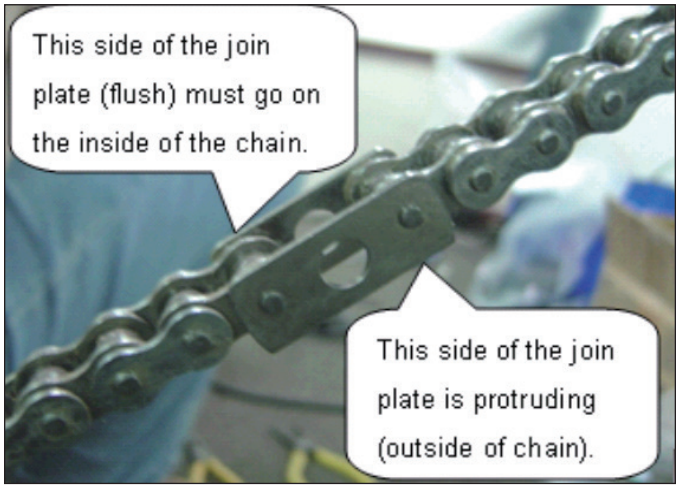


FIGURE F

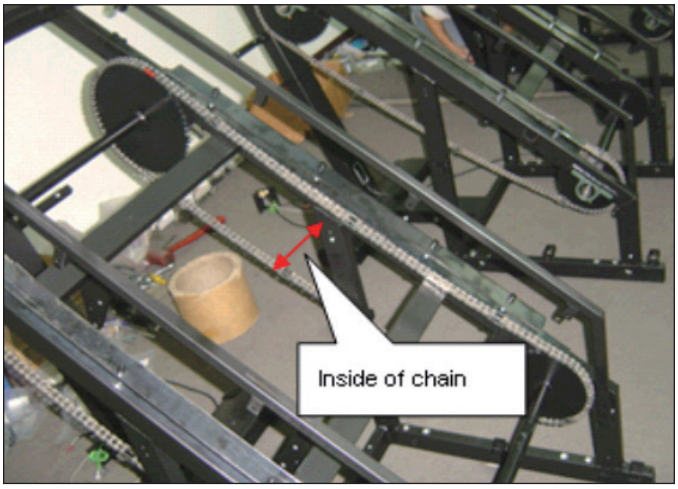


FIGURE G

11) Test the Climb Mill for function as outlined in Section 9.20.

9.12 BRAKE REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove the Matrix logo covers from each side of the machine.
3) Turn the brake lever to the right to lock the stairs and prevent movement that could cause injury.
4) Disconnect the brake wire connection (Figure A).
5) Remove the 3 screws holding the brake to the drive set (Figure B) and remove the assembly. **NOTE: BEFORE REMOVING THE BRAKE AND FAN PLATE, BLOCK THE STAIRS FROM ROTATING (place a block under the bottom stair) TO PREVENT INJURY.**

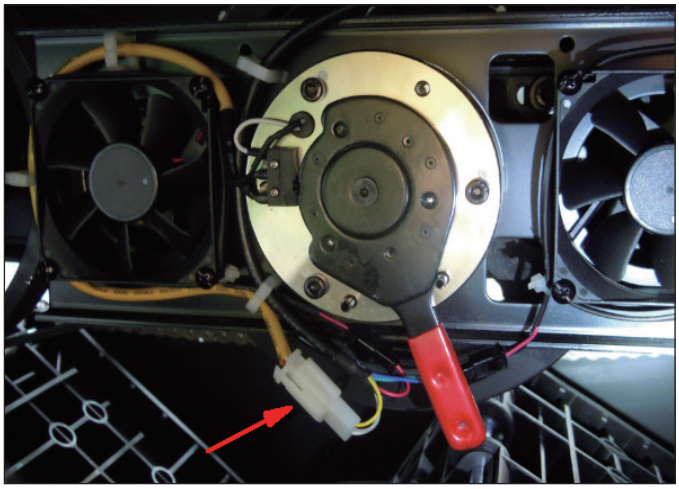


FIGURE A

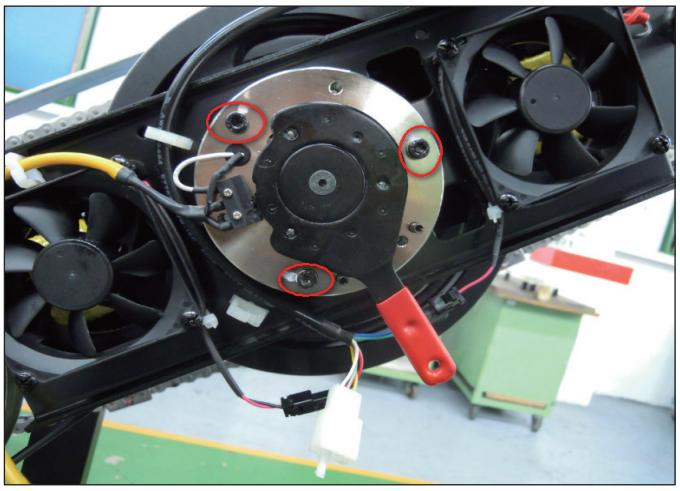


FIGURE B

6) Reverse Steps 1-5 to install a new brake. ***NOTE:*** When re-installing the plate assembly, make sure that the hexagon shaped plate on the brake lines up with the slots in the shaft of the flywheel (Figure C).

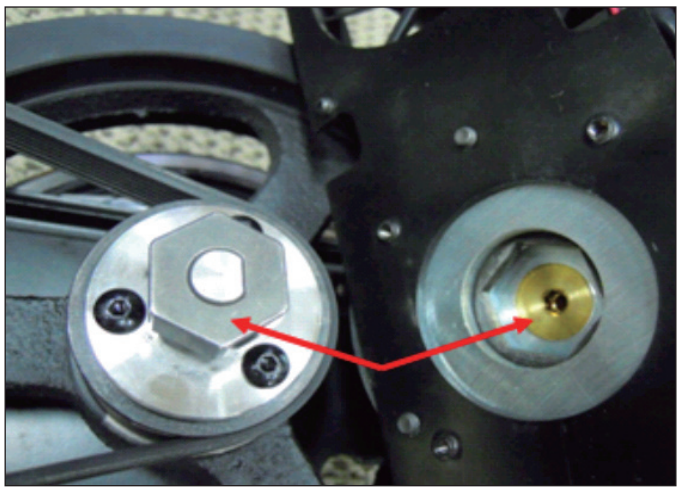


FIGURE C

7) Test the Climb Mill for function as outlined in Section 9.20.

9.13 FAN REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove the Matrix logo covers from each side of the machine.
3) Turn the brake lever to the right to lock the stairs and prevent movement that could cause injury.
4) Disconnect the both fan wire connections and remove cable ties holding the fan and fan wire to the plate (Figure A).
5) Remove the 4 screws holding the fan to the drive set (Figure B) and remove the assembly. **NOTE: BEFORE REMOVING THE FAN, BLOCK THE STAIRS FROM ROTATING (place a block under the bottom stair) TO PREVENT INJURY.**

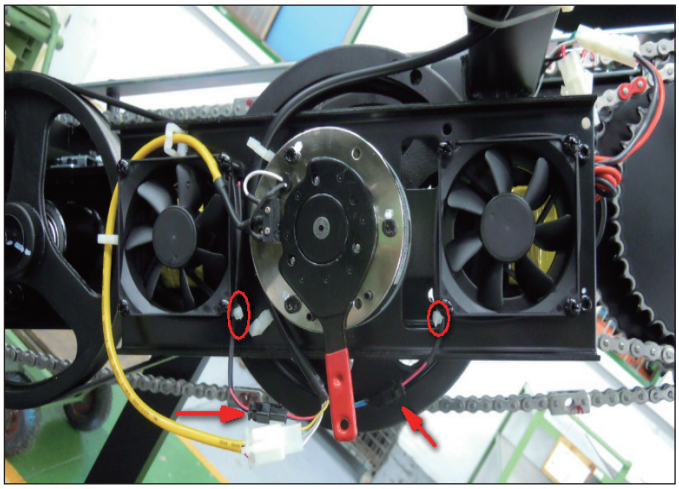


FIGURE A

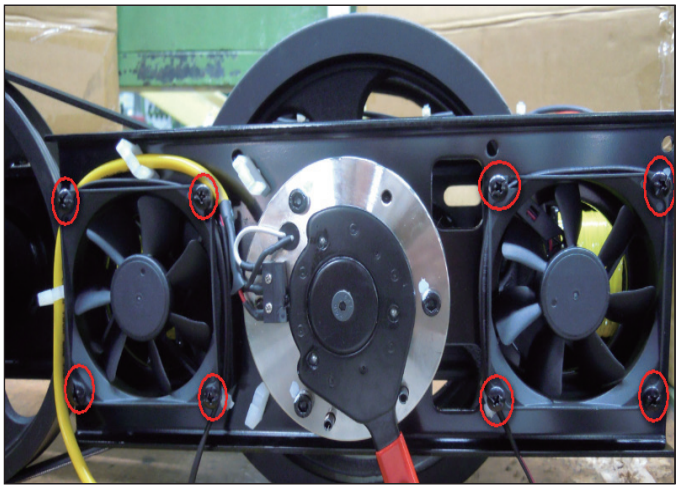


FIGURE B

6) Reverse Steps 1-5 to install a new fan.
7) Test the Climb Mill for function as outlined in Section 9.20.

9.14 ECB BELT REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Rotate the 2 plastic clips counter-clockwise to remove the Matrix logo cover (Figures A & B).

FIGURE A

FIGURE B

3) Turn the brake to the right to lock the stairs.
4) Disconnect the brake and both fan wire connections (Figure C).
5) Remove the 4 screws holding the brake and fan plate to the drive set (Figure D) and remove the assembly. **NOTE: BEFORE REMOVING THE BRAKE AND FAN PLATE, BLOCK THE STAIRS FROM ROTATING (place a block under the bottom stair) TO PREVENT INJURY.**

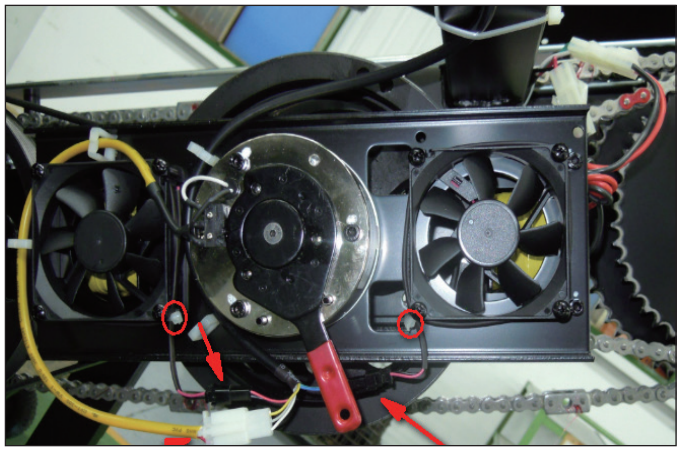


FIGURE C

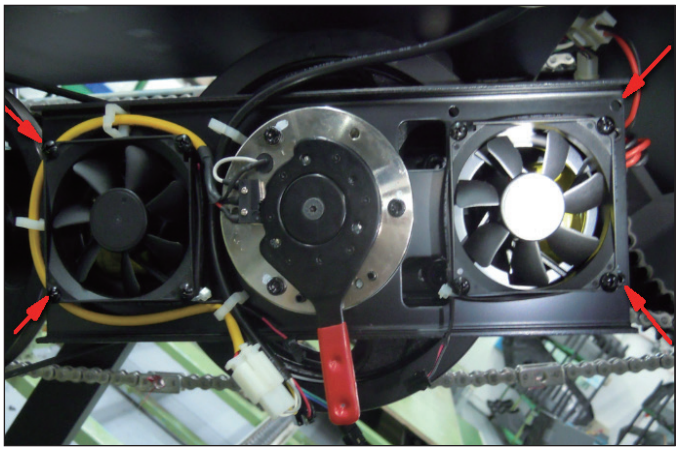


FIGURE D

6) Remove the old ECB belt.
7) Install a new ECB belt. ***NOTE:*** There is a belt installation tool available to assist with installing the Flexonic belt (Figure E - part # 0000093787). After installation, rotate the belt at least 3 full revolutions to insure the belt is centered.

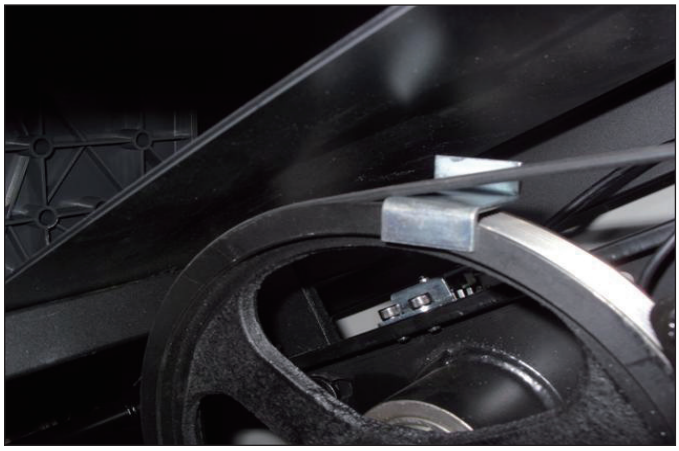


FIGURE E

8) Reverse Steps 1-5 to re-assemble the unit.
9) Test the Climb Mill for function as outlined in Section 9.20.

9.15 DRIVE BELT REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Remove the drive set as outlined in Section 9.10.
3) Loosen the belt tension nut (Figure A) and screw (Figure B) until there is enough slack in the drive belt to remove it (Figure C).
4) Use a straight edge to make sure that the pulley and encoder pulley are in a straight line (Figure D). If the belt is not on line, try to adjust the pulley and encoder pulley. The belt is flexonic, so belt tension is not critical.

FIGURE A

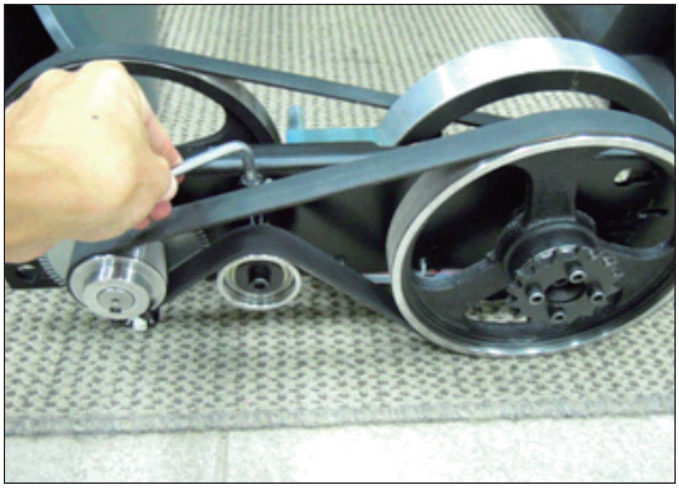


FIGURE B

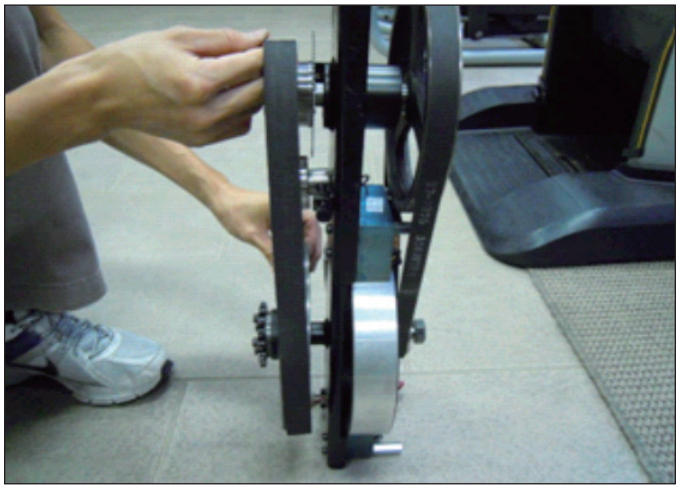


FIGURE C

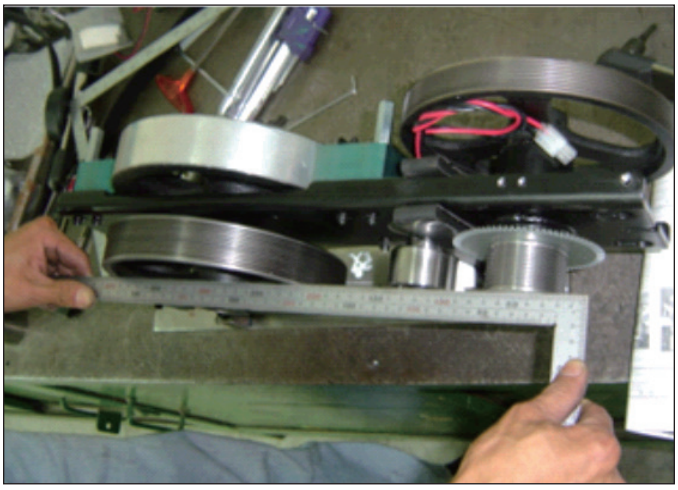


FIGURE D

5) Reverse Steps 1-4 to install a new drive belt. ***NOTE:*** Torque the screw removed in Step 3 to 60 N-m.
6) Test the Climb Mill for function as outlined in Section 9.20.

9.16 ECB REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Follow the steps outlined in Section 8.4 to test the new ECB before installing it.
3) Remove the drive set as outlined in Section 9.10.
4) Disconnect the ECB, brake and both fan wire connections (Figure A). **NOTE: BEFORE REMOVING THE BRAKE AND FAN PLATE, BLOCK THE STAIRS FROM ROTATING (place a block under the bottom stair) TO PREVENT INJURY.**
5) Remove the 4 screws holding the brake and fan plate to the drive set (Figure B) and remove the assembly.

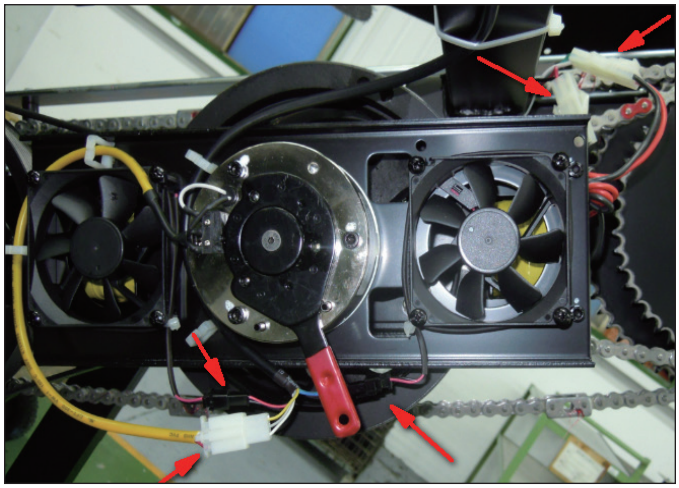


FIGURE A

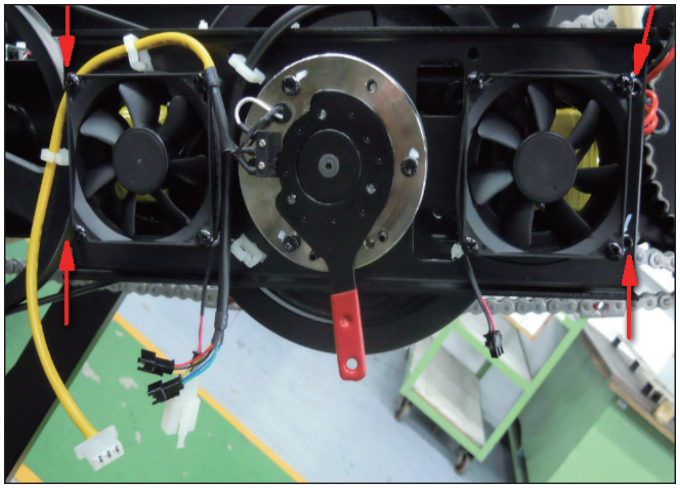


FIGURE B

6) Remove the cable ties holding the ECB wiring to the drive set (Figure C).
7) Loosen 2 screws to remove the nut standoffs off the ECB (Figure D).

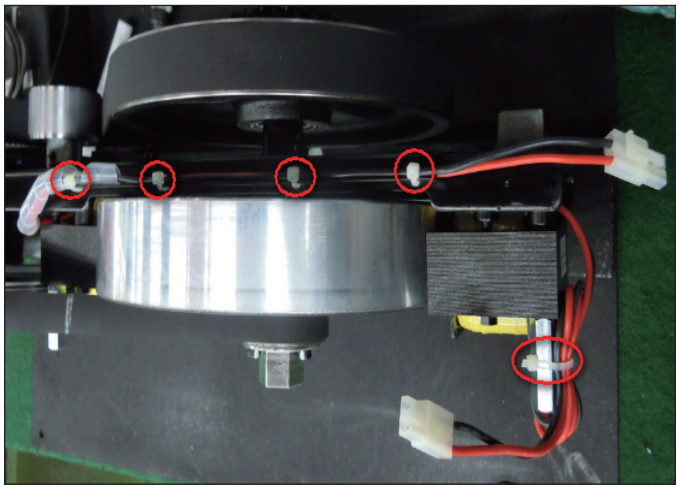


FIGURE C

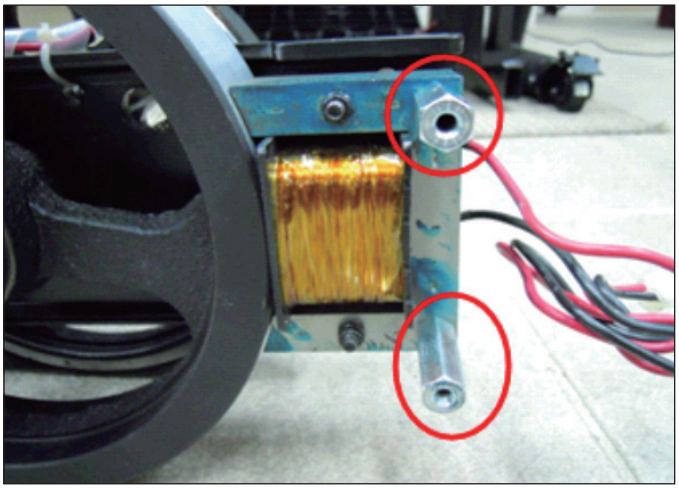


FIGURE D

9.16 ECB REPLACEMENT - CONTINUED

8) Loosen the remaining 2 screws to remove the 2 regular nuts (Figure E). Then remove the ECB.
9) There should be 4 screws & ferrules remaining to mount the new ECB (Figure F).

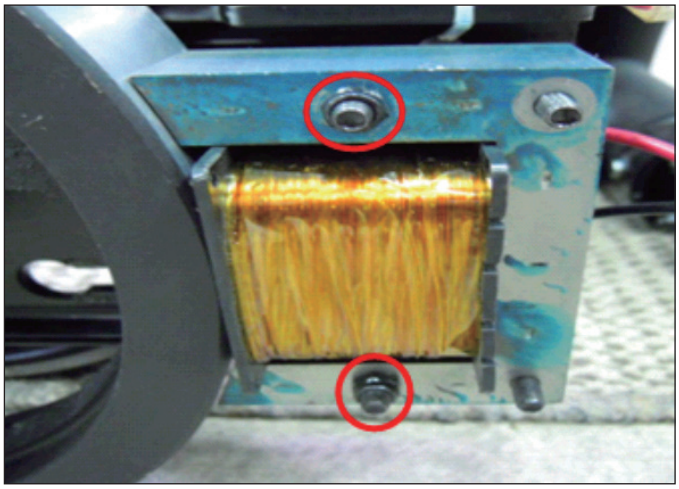


FIGURE E

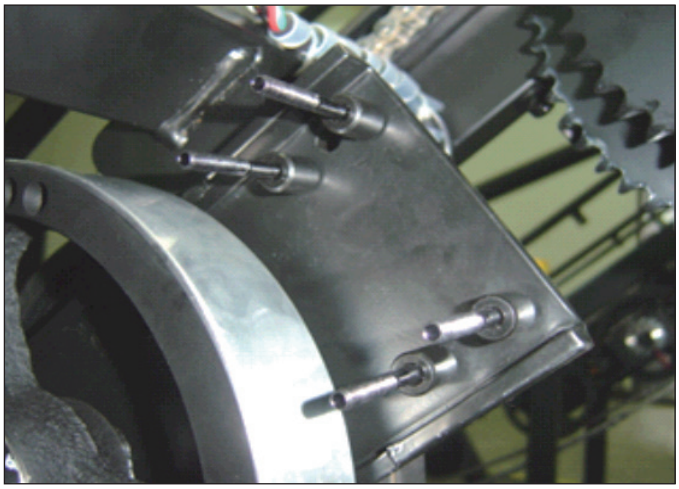


FIGURE F

10) Install a new ECB onto the 4 screws / ferrules.
11) Before tightening the nuts, use a piece of fabric or other material that is approximately 0.5mm thick to adjust the gap between the flywheel and the ECB (Figure G). ***NOTE:*** Once the ECB is in the correct position, torque the 4 ECB screws to 10 N-m.

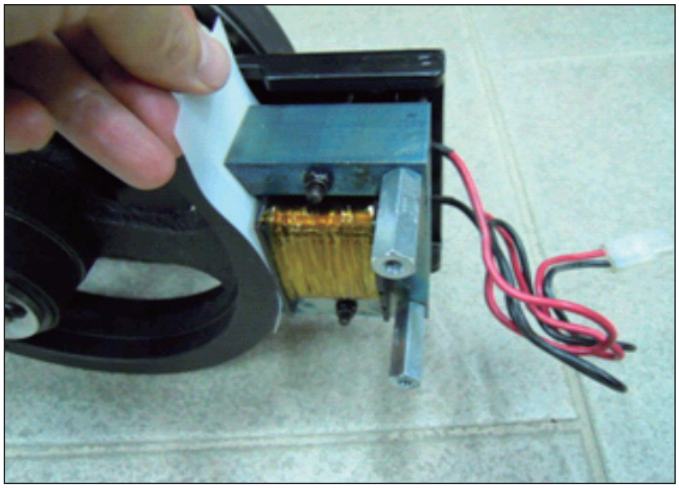


FIGURE G

12) Reverse Steps 1-9 to hook up the ECB and re-assemble the unit.
13) Test the Climb Mill for function as outlined in Section 9.20.

9.17 SPEED SENSOR REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Rotate the 2 plastic clips counter-clockwise to remove the left side Matrix logo cover.
3) Disconnect the speed sensor wire (Figure A). ***NOTE:*** Use 2 hands to disconnect the speed sensor wire. Do not pull the socket downwards to disconnect as it will damage the connector.
4) Remove the 2 screws holding the speed sensor plate to the drive set (Figure B), and remove the speed sensor and plate.

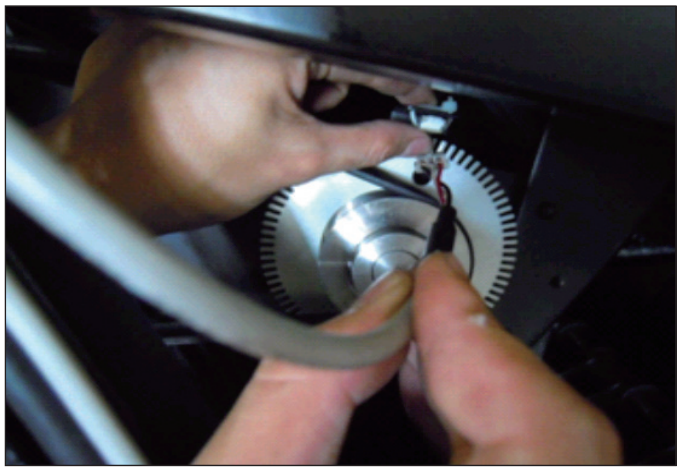


FIGURE A

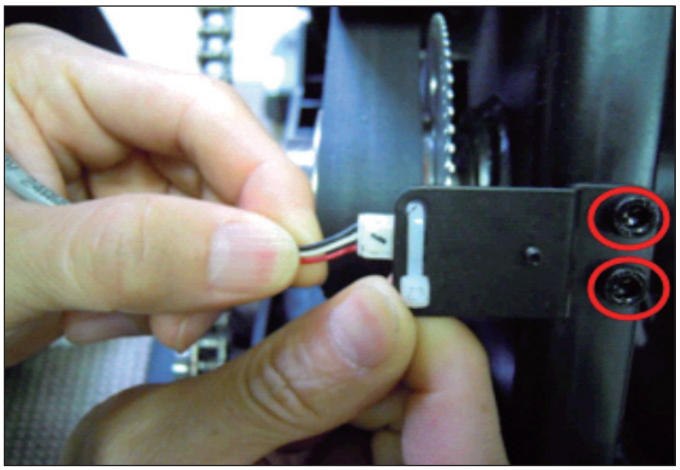


FIGURE B

5) Cut the wire tie and remove the screw holding the speed sensor to the speed sensor plate (Figure C), then remove the speed sensor.

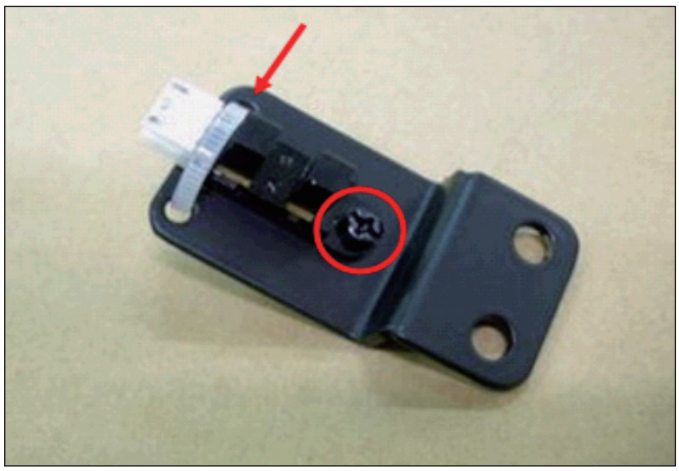


FIGURE C

6) Reverse Steps 1-5 to install a new speed sensor. ***NOTE:*** Install the speed sensor so that the encoder has a distance of 1.5mm from the optic disk on each side (Figures D & E).
7) Test the Climb Mill for function as outlined in Section 9.20.

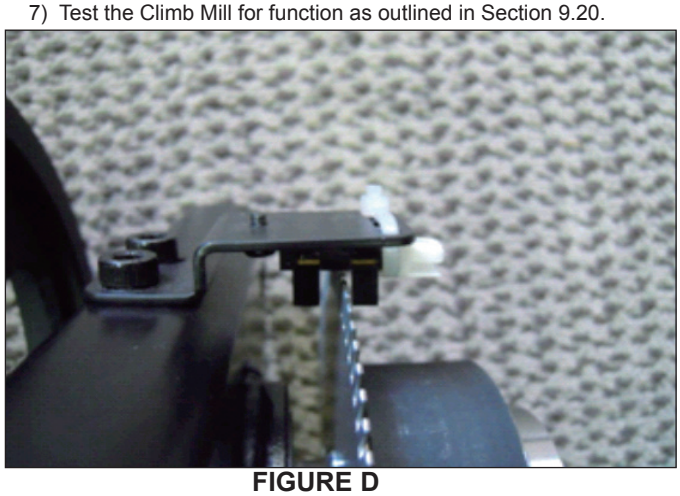


FIGURE D

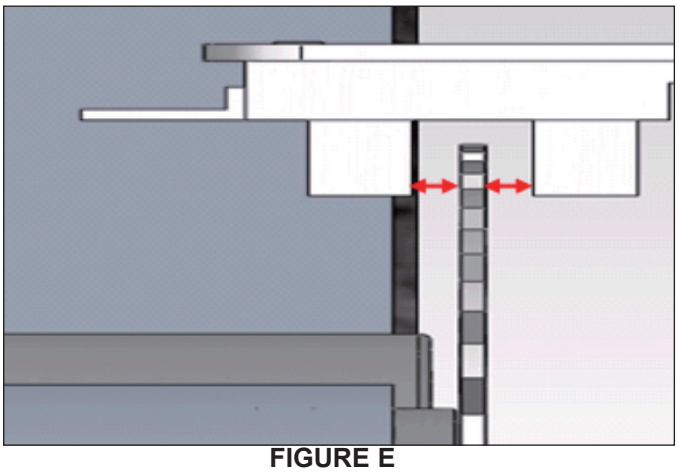


FIGURE E

9.18 PROXIMITY SENSOR REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Rotate the 2 plastic clips counter-clockwise to remove the left side Matrix logo cover.
3) Remove the proximity sensor cable from the LCB, and cut any wire ties holding the cable to the frame (Figure A).
4) Remove the 2 screws holding the proximity sensor to the frame (Figure B), and remove the proximity sensor.

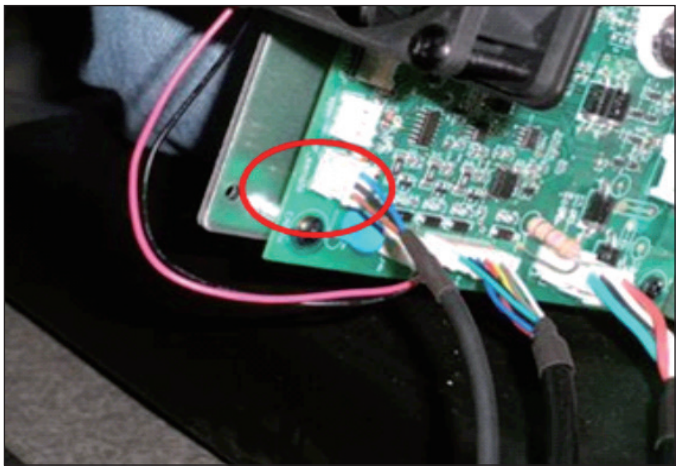


FIGURE A

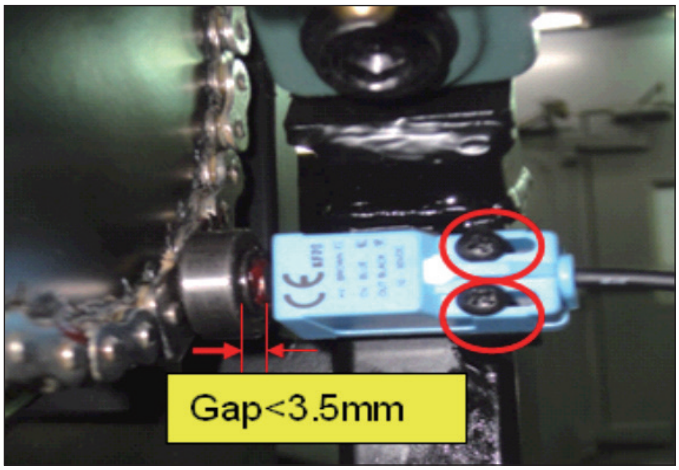


FIGURE B

5) Reverse Steps 1-4 to install a new proximity sensor. ***NOTE:*** The proximity sensor should be installed so that there is a gap of less than 3.5mm between the sensor and the axle (Figure B).
6) Once the proximity sensor is installed, rotate the stairs at least 2 complete revolutions to make sure the sensor does not hit. ***NOTE:*** The sensor has a signal LED located near the mounting screws. The sensor should be mounted close enough to trigger this LED.
7) Test the Climb Mill for function as outlined in Section 9.20.

9.19 IR SENSOR REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove the Matrix logo covers from each side of the machine.
3) Remove the front cover (Figure A).
4) Remove the IR sensor cable from the LCB, and cut any wire ties holding the cable to the frame (Figure B).

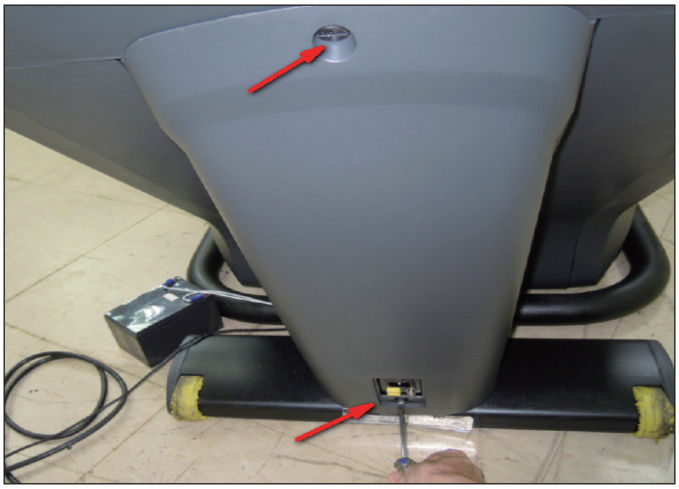


FIGURE A

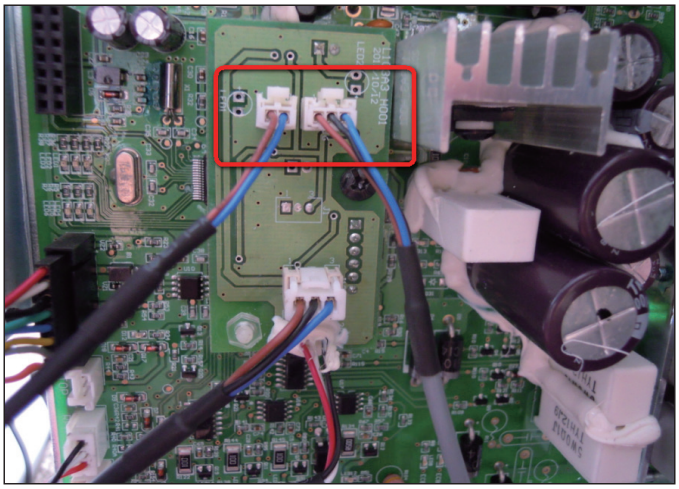


FIGURE B

5) Remove the plugs from each side of the machine (Figure C) and separate the side covers.
6) Remove the 2 screws holding the IR sensor to the frame (Figure D).

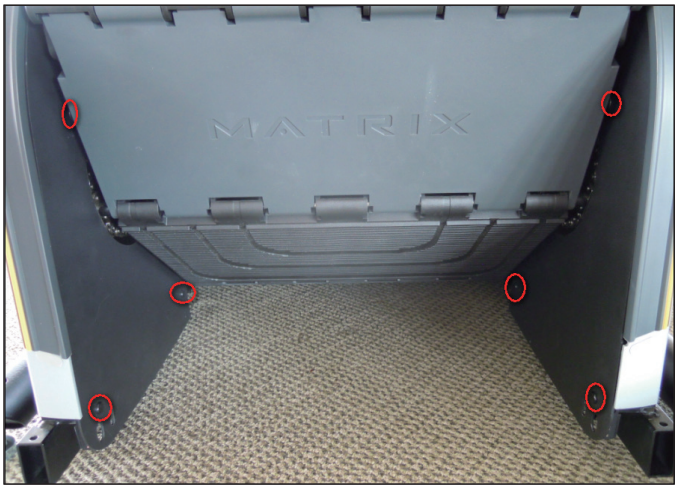


FIGURE C

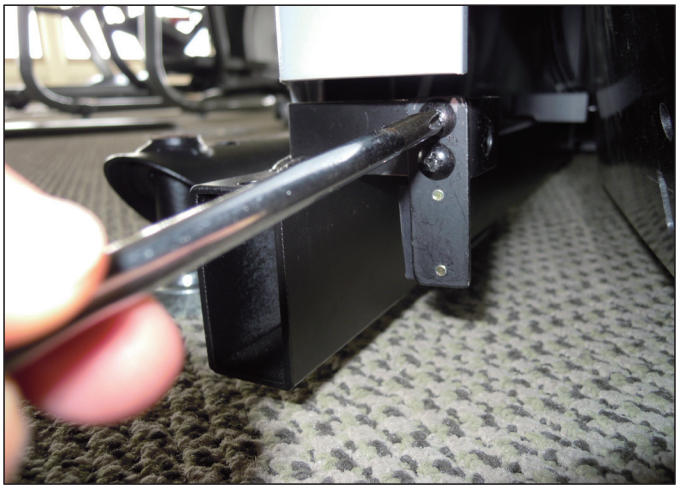


FIGURE D

9.19 IR SENSOR REPLACEMENT - CONTINUED

7) Remove the IR sensor with plate from frame (Figure E).
8) Remove the 2 screws holding the IR sensor to the plate (Figure F) and remover the IR sensor.

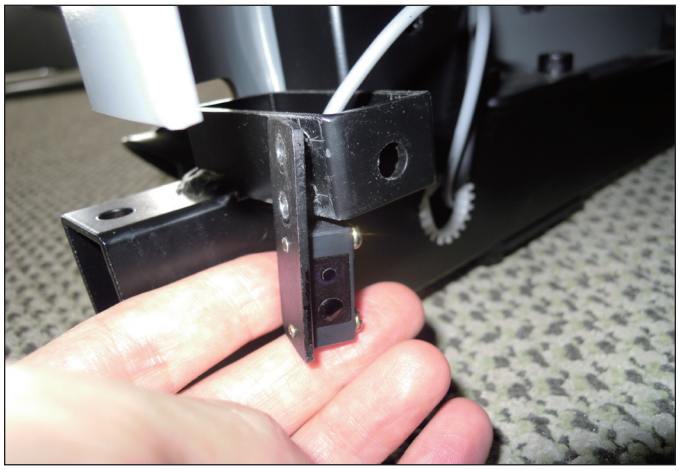


FIGURE E

FIGURE F

9) Reverse Steps 1-8 to install a new IR sensor. ***NOTE:*** When re-installing the IR sensor, make sure that the IR sensor with gray wire on the left (transmission) and another IR sensor with black wire on the right (receiver).
10) Once the IR sensor is installed, Press the green GO key and begin using the machine. Put your foot in the middle of the IR sensors (transmission & receiver) to test the sensors are working and enough to stop machine (Figure G). ***NOTE:*** The sensor has an eye. The eye of two sensors should be mounted opposite enough to fully functional (Figure H). Remove the Control Zone first before you start the IR sensor tests.

FIGURE G

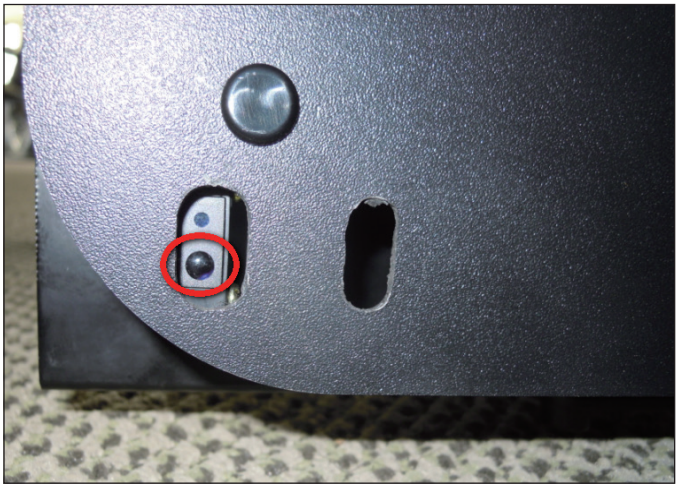


FIGURE H

12) Test the Climb Mill for function as outlined in Section 9.20.

9.20 TESTING THE CLIMB MILL

ONCE THE UNIT OR REPLACEMENT PART IS FULLY INSTALLED AND ASSEMBLED AND PROPERLY PLACED ON THE FLOOR, USE THE FOLLOWING INSTRUCTIONS TO TEST THE MACHINE:

1) To enter Manager Mode, press number key "ENTER, 1, 0, 0, 1, ENTER" on the number keypad. Input the serial number of the console. Also set the Machine Type and verify that the Date and Time are correct.

2) Press the green GO key and begin using the machine. Stand on the machine and hold the handlebars while initiating movement to simulate exercising. While moving listen for any odd noises or squeaks.

3) Grasp the hand grips to check for proper heart rate response.

4) Press the LEVEL UP and DOWN keys on the console to make sure resistance is fully functional.

5) Try stepping off the unit to make sure the proximity sensor is fully functional. Also test the STOP key on the grips, IR sensor for function. .

CHAPTER 10: CLIMB MILL SPECIFICATIONS AND ASSEMBLY GUIDE

10.1 CLIMB MILL SPECIFICATIONS

FEATURES	
Step Height	10"
Contact and Telemetric Heart Rate Sensors	Yes
Ultra Non-Slip Grips	Yes
Handlebar Design	Ergonomically designed handrails and horn.
Thumb Switch Controls	Yes
RESISTANCE SYSTEM	
Technology	ECB with flywheel
Power Requirements	100V - 240V - 50 / 60 HZ AC
Minimum Watts	N/A

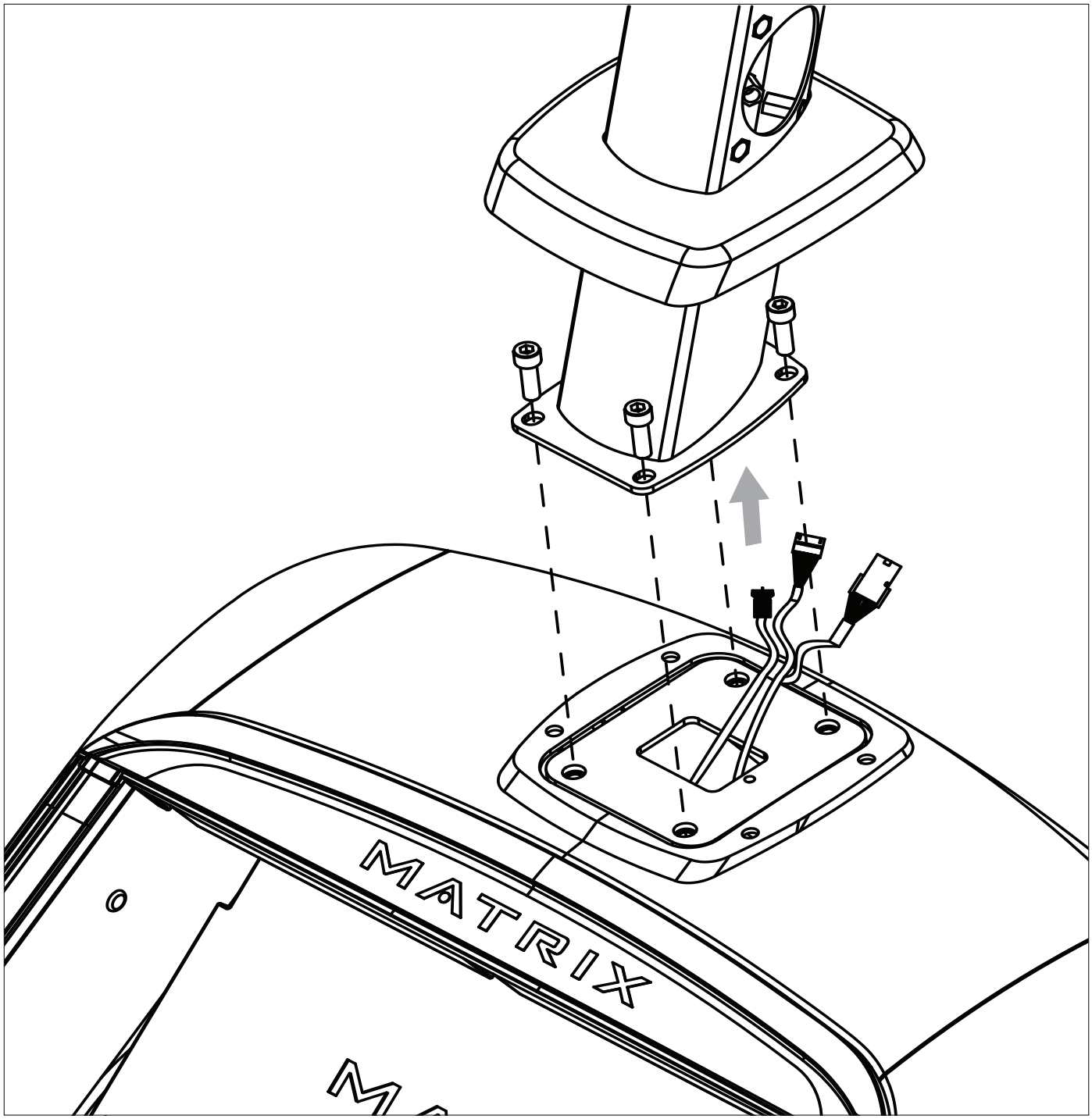
10.2 ASSEMBLY HARDWARE

QUANTITY	SKETCH	DESCRIPTION	PACKAGE COLOR
4		SOCKET HEAD SCREW (M8 X 25L)	BLACK
20		SOCKET HEAD SCREW (M8 X 20L)	BLUE
2		SOCKET HEAD SCREW (M8 X 35L)	GREEN
3		SOCKET HEAD SCREW (M8 X 16L)	GREEN
4		SOCKET HEAD SCREW (M8 X 16L)	BLUE
4		CURVED WASHER	BLUE
8		FLAT WASHER	BLUE
5		FLAT WASHER	GREEN

10.3 CLIMB MILL ASSEMBLY STEPS

STEP 1 - BLACK HARDWARE BAG

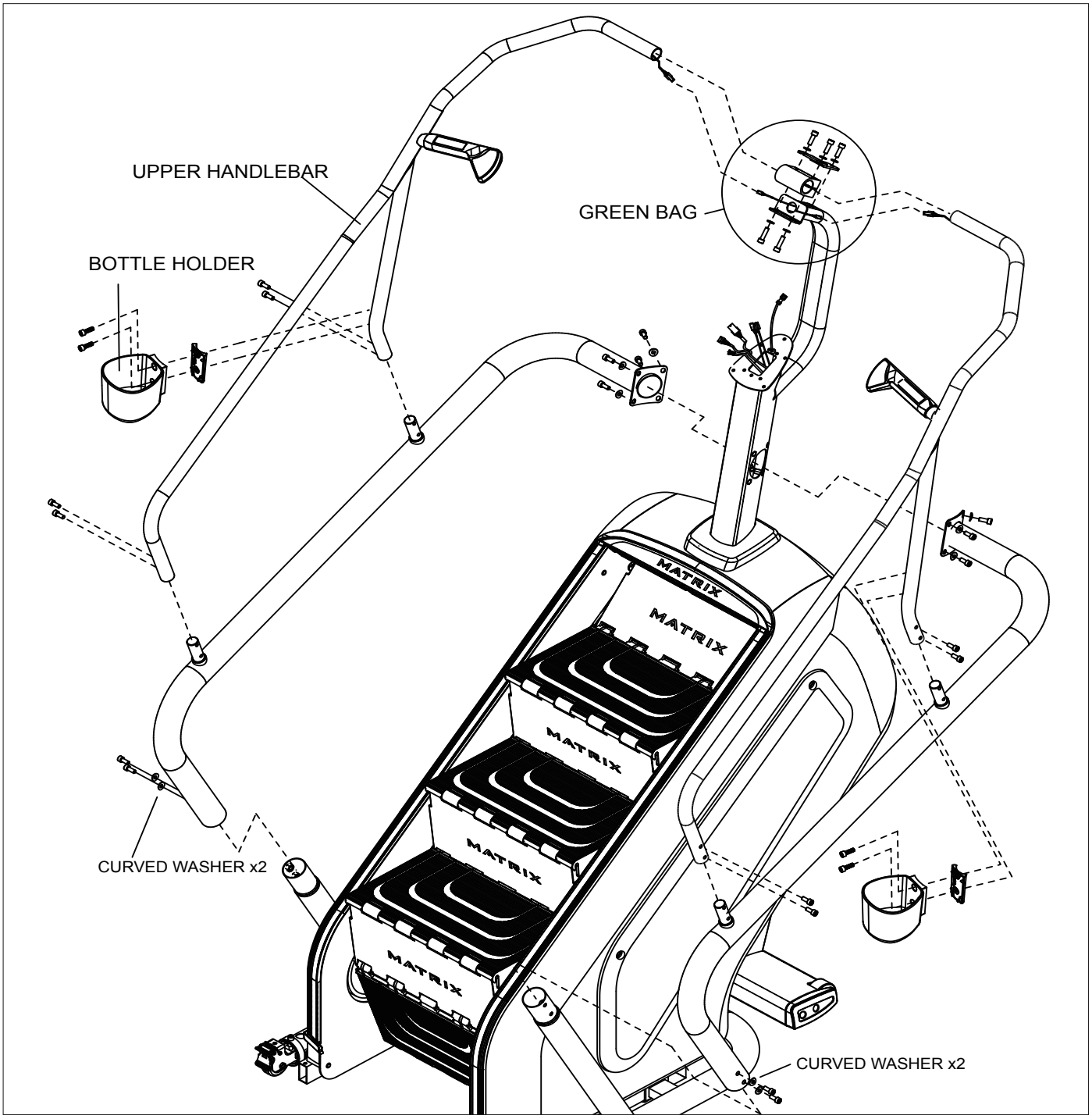
1) Open the Black hardware bag.
2) Carefully route the wires up the console mast.
3) Attach the console mast to the frame using the provided bolts. Secure tightly being careful not to pinch any wires.



10.3 CLIMB MILL ASSEMBLY STEPS - CONTINUED

STEP 2 - BLUE & GREEN HARDWARE BAGS

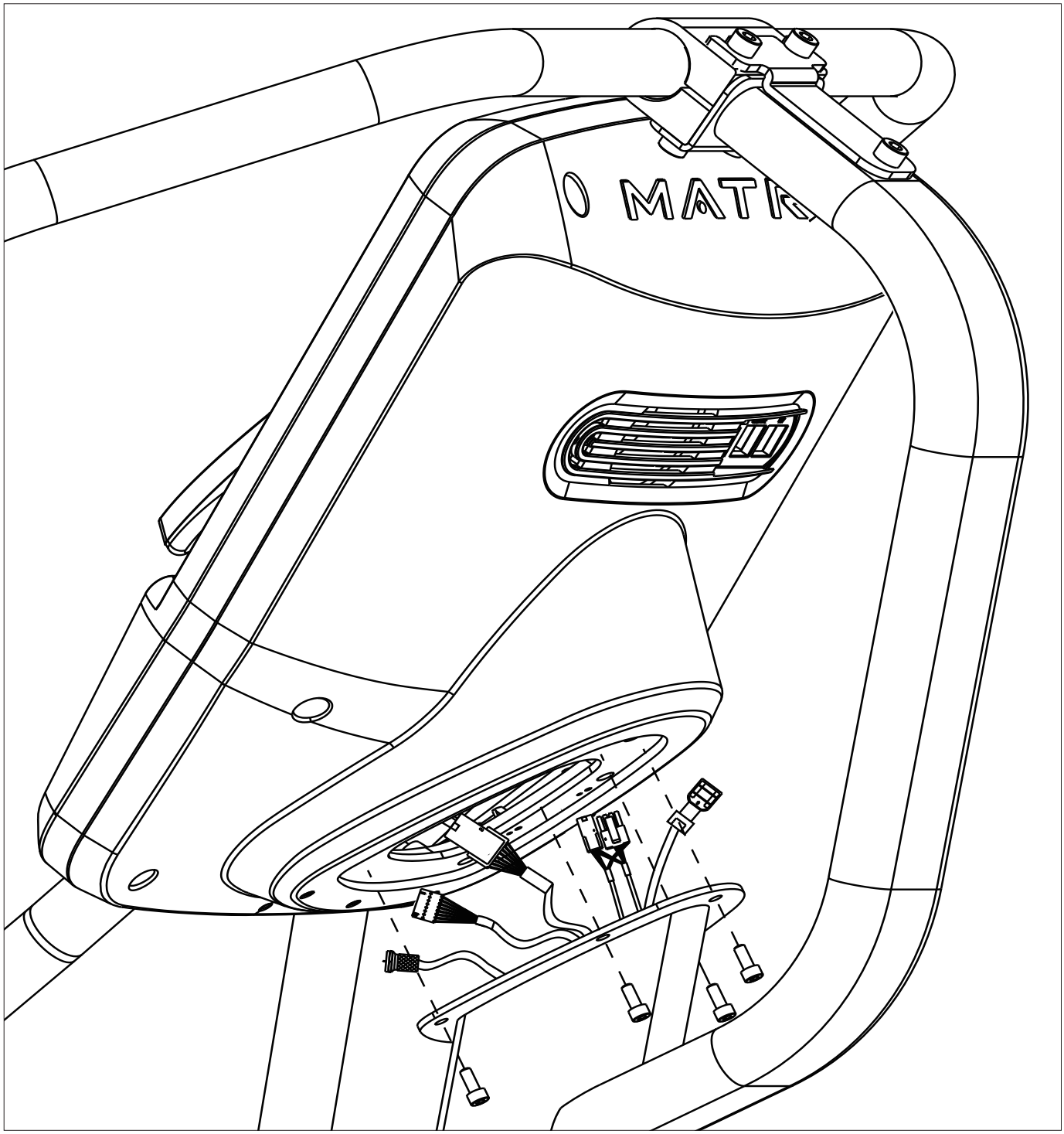
1) Open the Blue and Green hardware bags.
2) Attach the Lower Handlebar using the provided bolts. Tighten securely at the base and mast.
3) Attach the Upper Handlebar using the provided bolts. Carefully route and connect all wires to the console mast. Tighten securely.
4) Attach the bottle holders to the upper handlebar using the provided bolts.
5) Repeat on the opposite side.



10.3 CLIMB MILL ASSEMBLY STEPS - CONTINUED

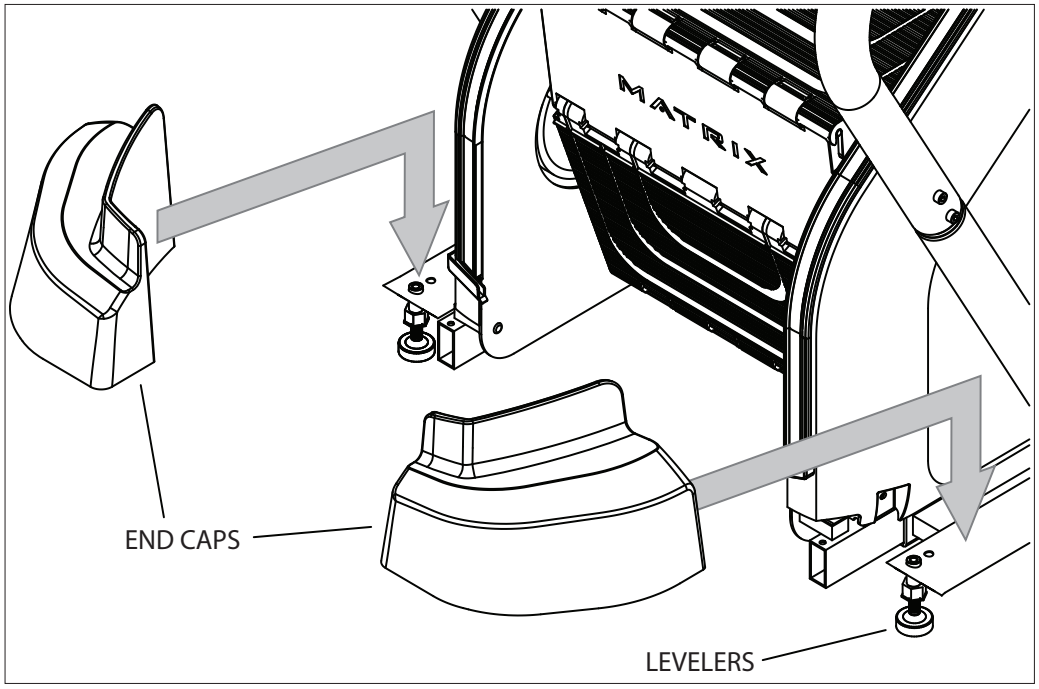
STEP 3 - CONSOLE

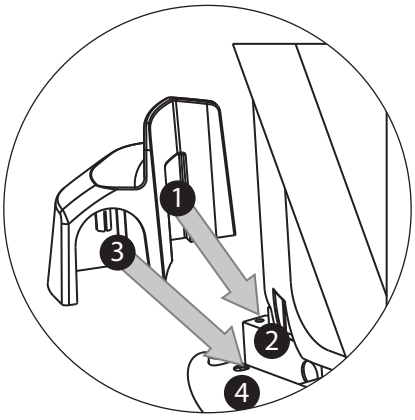
1) Remove the five pre-attached console screws from the back of the console.
2) Carefully connect all wires coming from the mast to the inside of the console. ***NOTE:*** Depending on the console, not all cables coming from the mast need to be connected.
3) Attach the console to the console mast using the screws removed from the console earlier. Secure tightly being careful not to pinch any wires.



STEP 4 - BASE STEP

1) Install the end caps by sliding (1) over (2) and (3) into (4).





10.4 STABILIZING THE CLIMB MILL

STABILIZING THE MATRIX CLIMB MILL

The Matrix Climb Mill should be level for optimum use. Locate a level, stable surface to position the equipment. The equipment has leveling transport wheels located under the rear side covers (Figure A). To access, grab the left and right side covers and lift off. Adjust the leveling feet (Figure B) until the equipment is stable and lock the wheels into place. Once stable, move the covers back into place.

FIGURE A

FIGURE B

CHAPTER 11: SOFTWARE UPGRADE PROCEDURE

11.1 SOFTWARE UPGRADE PROCEDURE FOR UCB

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 - Figure A).

2. Copy the software files into the UCB folder on the USB flash drive (the access should read \MATRIX\FW\UCB - Figure B).

3. Turn on the power to the Climb Mill, wait until the home screen has come up.

4. Insert the USB flash drive into the USB port on the console.

5. When the display is in home screen, press ENTER, 1, 0, 0, 1, ENTER to enter Manager Mode. Press the UP or DOWN LEVEL keys to choose the "Software" (Figure C) and press ENTER key -> Press the UP or DOWN LEVEL keys to choose the "Update" and press ENTER key -> Press the UP or DOWN LEVEL keys to choose the "UCB" (Figure D) and press ENTER key -> Press the UP or DOWN LEVEL keys to choose the correct software (if there are more than one versions on the USB drive). Once the correct software is found, press ENTER key and the upgrade procedure will start.

6. After the console beeps and comes back home screen, please remove the USB drive and reset machine power. Note: If the console display shows 04A0, turn off & turn on the machine again, and the display will go back to standard operation.

7. Enter into Manager Mode and make sure the software version and Machine Type is correct.

FIGURE A

FIGURE B

FIGURE C

FIGURE D

11.2 SOFTWARE UPGRADE PROCEDURE FOR LCB

1. Create a file on the USB flash drive which will be used. The folders should be MATRIX\FW\LCB (create a folder called MATRIX, then a folder in MATRIX called FW, then a folder in FW called LCB - Figure A).

2. Copy the software files into the LCB folder on the USB flash drive (the access should read \MATRIX\FW\LCB - Figure B).

3. Turn on the power to the Climb Mill, wait until the home screen has come up.

4. Insert the USB flash drive into the USB port on the console.

5. When the display is in home screen, press ENTER, 1, 0, 0, 1, ENTER to enter Manager Mode. Press the UP or DOWN LEVEL keys to choose the "Software" (Figure C) and press ENTER key -> Press the UP or DOWN LEVEL keys to choose the "Update" and press ENTER key -> Press the UP or DOWN LEVEL keys to choose the "LCB" (Figure D) and press ENTER key -> Press the UP or DOWN LEVEL keys to choose the correct software (if there are more than one versions on the USB drive). Once the correct software is found, press ENTER key and the upgrade procedure will start.

6. After the console beeps and comes back home screen, please remove the USB drive and reset machine power.

7. Enter into Manager Mode and make sure the software version and Machine Type is correct.

8. If the console beeps and display shows 04A0, please remove the USB drive, turn off & turn on the machine again, and the display will go back to standard operation.

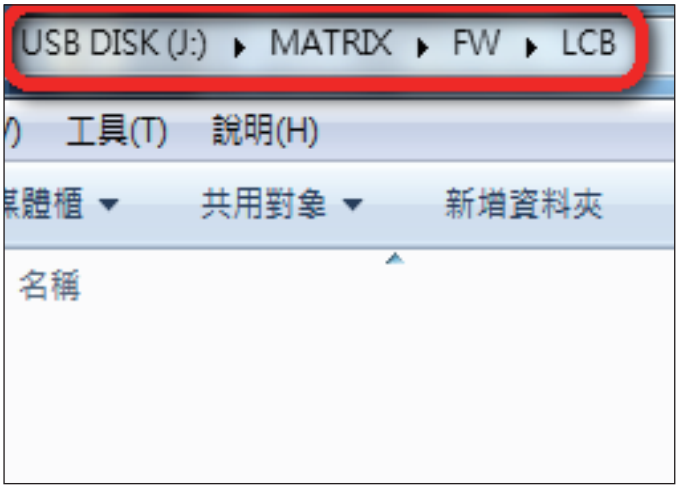


FIGURE A

FIGURE B

FIGURE C

FIGURE D

NOTES

MATRIX FITNESS SYSTEMS CORP.
1610 LANDMARK DRIVE COTTAGE GROVE WI 53527 USA
TOLL FREE 866.693.4863 www.matrixfitness.com FAX 608.839.1717

REV. 01

KO