
Vision Fitness T80 Frame with Classic / Elegant / Touch Console Service Manual



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CHAPTER 1: Serial Number Location

1.1 SERIAL NUMBER LOCATION – T80



CHAPTER 1: Serial Number Location

1.2 SERIAL NUMBER LOCATION - Touch / Elegant / Classic Console



1000233538 HAPA
T437-1US S101-27

1000233538CS1208AA0007

1000233536 HAPA
T436-1US S101-27

1000233536CS1208AA0013

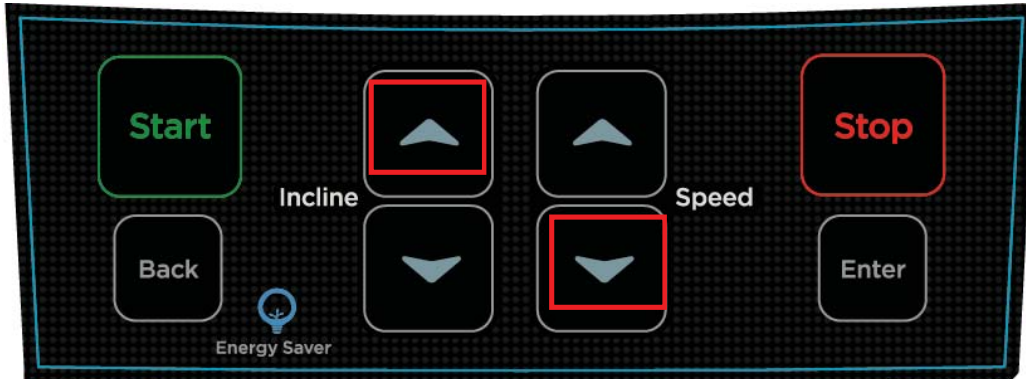
1000233534 HAPA
T435-1US S101-11

1000233534CS1208AA0001

CHAPTER 2: Engineering Mode

2.1 ENGINEERING MODE - Classic Console

- 1) To enter Engineering Mode, press & hold the INCLINE UP “▲” and SPEED DOWN “▼” keys at the same time for 3-5 seconds until Engineering Menu appears on the display.



- 2) Use the INCLINE and SPEED UP and DOWN keys to select a parameter.
- 3) Press ENTER to enter a parameter setting.
- 4) Use the INCLINE and SPEED UP and DOWN keys to change the parameter.
- 5) Press the START key to save the change to the parameter.
- 6) Press and hold the STOP key to exit Engineering Mode and return to normal operation.

CHAPTER 2: Engineering Mode

2.2 ENGINEERING MODE OVERVIEW - Classic Console

MODE	FUNCTION	DESCRIPTION
ENG 0	Display Test	Start Key – LCD/LED on Stop Key – LCD/LED off Any Other Key - Will show on the display window. Hold the STOP key for 3 seconds to return to the Engineering Menu.
ENG 1	Hardware Test	Motor, Incline Motor, & Heart Rate Test.
ENG 2	Auto Calibration	If you have a digital MCB, Auto Calibration is not necessary. Press the START key, the words “NO FUNCTION” will scroll on the screen.
ENG 3	Switch Function	- Use the INCLINE or SPEED UP and DOWN keys to switch Energy Save Mode (ESM) off or on (shown in the SPEED window). - Use the START key to select unit (Miles or Kilometers) (shown in the INCLINE window). Press the ENTER key to enter the Language setting: - Use the INCLINE or SPEED UP and DOWN keys to select the languages (English, German, Dutch, French will scroll on the middle window).
ENG 4	Information	Accumulated Time, Distance, and Aged Press and hold the START key for 5 seconds to clear all data. Remarks: Unit of Time is Hour. Unit of Distance is KM or Mile. Unit of Aged is Minute. (factory only setting)
ENG 5	Set Machine	Set the Machine Type – Options include TF20, T40, and TF40. Set the Distance Type – Options are Mile or Kilometer. Press ENTER to scroll to the other settings.
SECOND LEVEL ENG 8	Software Version	To Get to ENG 8 - Enter into ENG 3, then press and hold the SPEED DOWN and INCLINE UP key at the same time for 3-5 seconds. Press ENTER at P0 - Software version. Press ENTER at P1 - Select speed up rate (normal or quick). Press ENTER at P3 - Hold the START key to clear all data.

※ Press the “START” key to save any changes.

CHAPTER 2: Engineering Mode

2.3 ENGINEERING MODE - Elegant Console

- 1) To enter Engineering Mode, press & hold the INCLINE UP “▲” and SPEED DOWN “▼” keys at the same time for 3-5 seconds until Engineering Menu appears on the display.
- 2) The Engineering Mode parameter list will be displayed on the screen.



- 3) Press the ATM style key on either side of the screen to enter the appropriate screen settings.
- 4) Set all the information using the ATM style keys.
- 5) Press and hold the “STOP” key to exit Engineering Mode.

CHAPTER 2: Engineering Mode

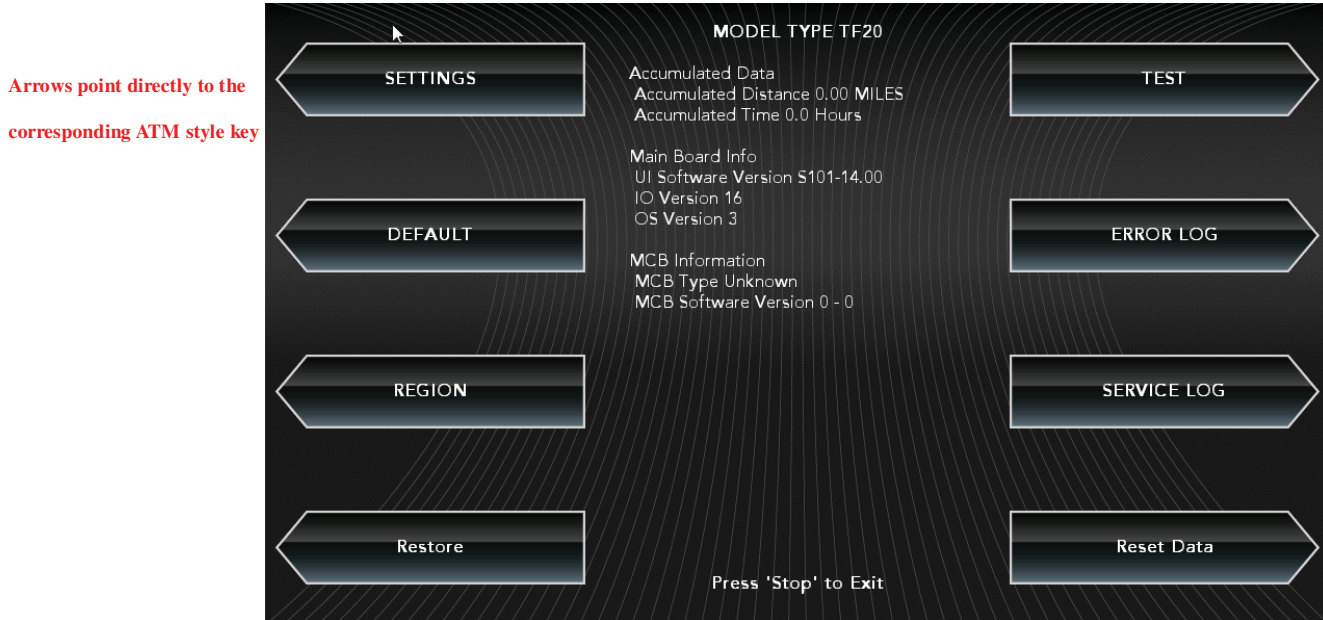
2.4 ENGINEERING MODE OVERVIEW - Elegant Console

2.4.1 ENGINEERING MODE (Elegant Console) – About

The Engineering Mode displays the basic parameters of the console, such as Model Type, Software Version, MCB Version, etc...

Use the ATM style keys located on both sides of the screen to enter into the parameter.

NOTE: Navigation of the other Engineering Mode screens is the same, instructions are not repeated.



Engineer Mode - About	Function & Default	Descriptions	Modified
Accumulated Data	Accumulated Distance	Total distance displayed in native units (miles or kilometers), not editable	Cannot be modified
	Accumulated Time	Total time, not editable	Cannot be modified
Main Board Information	UI Software Version	Application version, not editable	Cannot be modified
	IO Version	Sub UCB software version, not editable	Cannot be modified
	OS Version	Operation System Version, not editable	Cannot be modified
MCB Information	MCB Type	The frame MCB type, for example: 2.75HP digital MCB	Cannot be modified
	MCB Software Version	MCB Software Version	Cannot be modified

2.4.2 ENGINEERING MODE (Elegant Console) - Settings Tab

The Settings Tab includes options for setting Machine Type, Model Type, Energy Saver, First Boot, and Program Speed.

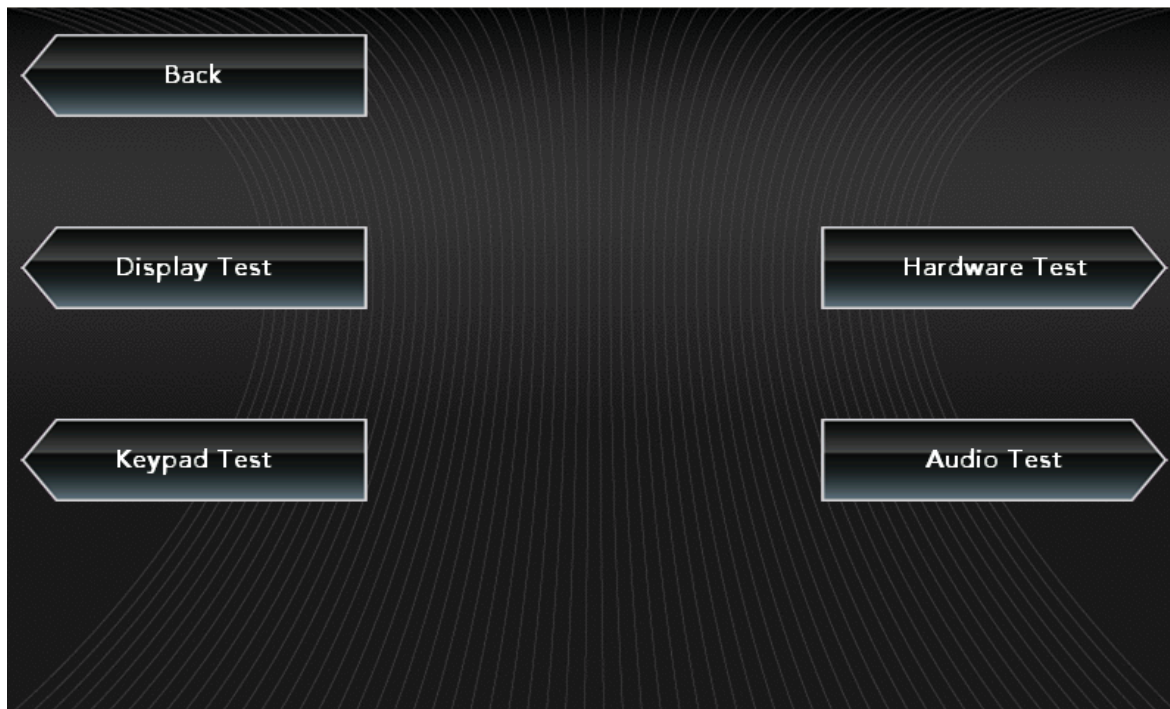


Press the key next to "Continue" to enter the next page of settings. Set these settings the same way as Machine Type.

NOTE: After changing a setting on any page, select "Finished" to complete the setup, the other items will keep the default settings, press "Restore" to restore to the factory settings.

2.4.3 ENGINEERING MODE (Elegant Console) - Test Tab

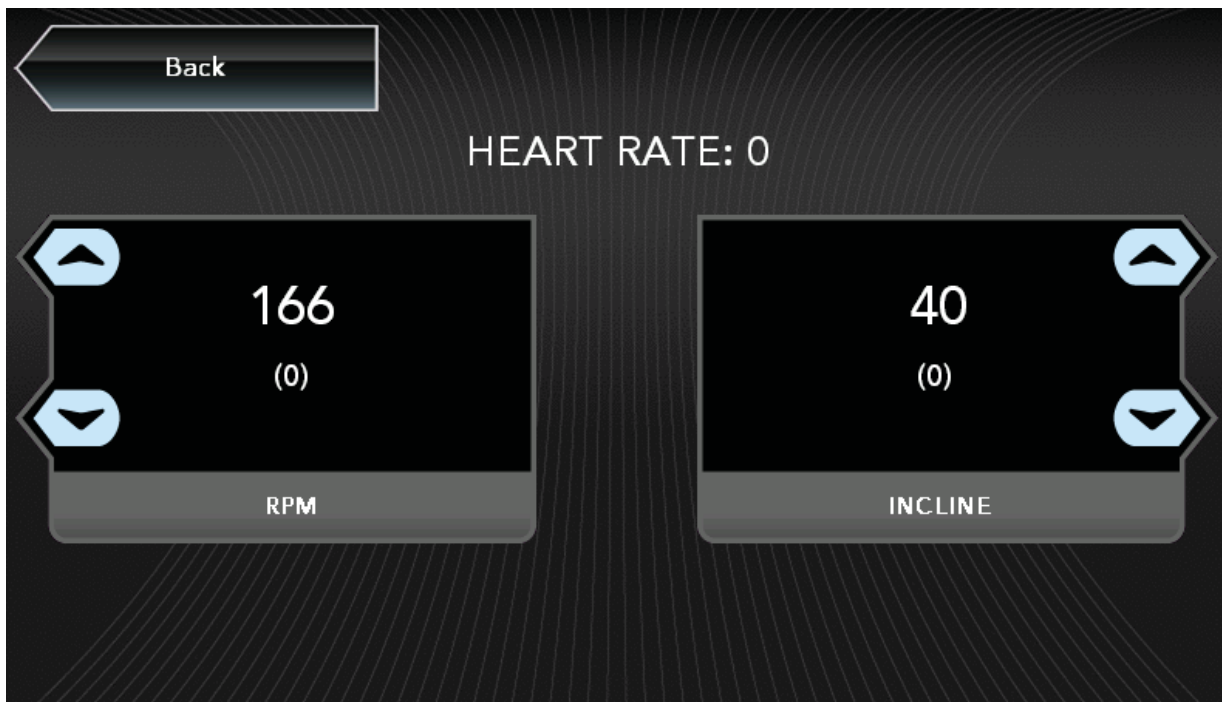
The Test Tab includes various tests of the functions of the unit.



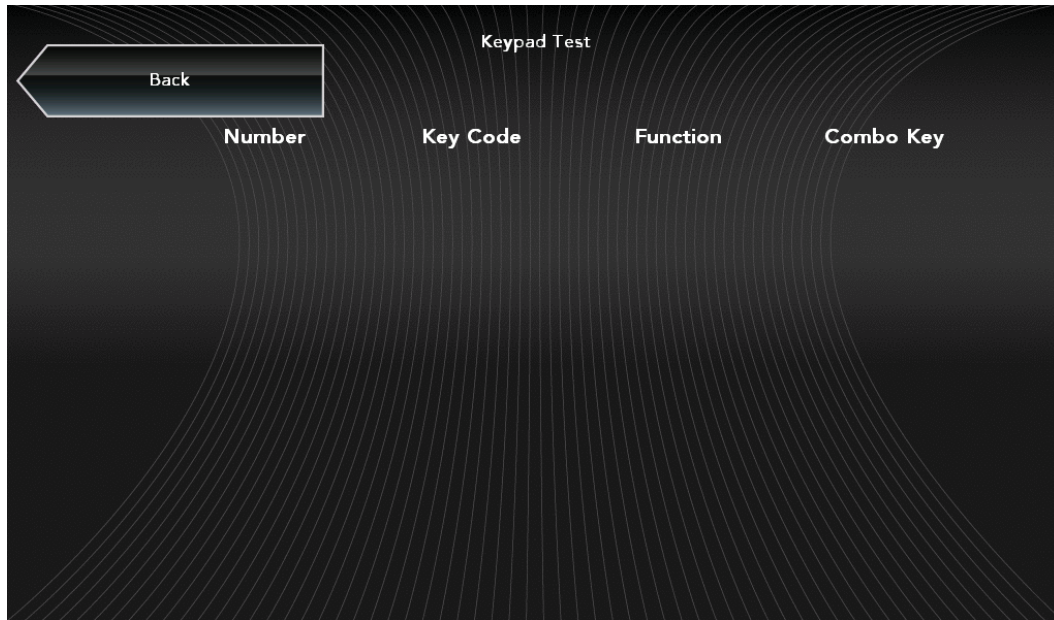
Display test – This tab tests the color settings of the console. The console will cycle between red, green, and blue when the Continue key is selected.



Hardware Test – This tab allows a service technician to test the RPM sensor and / or the incline motor. Changing a setting should cause the belt and / or the incline motor to operate.



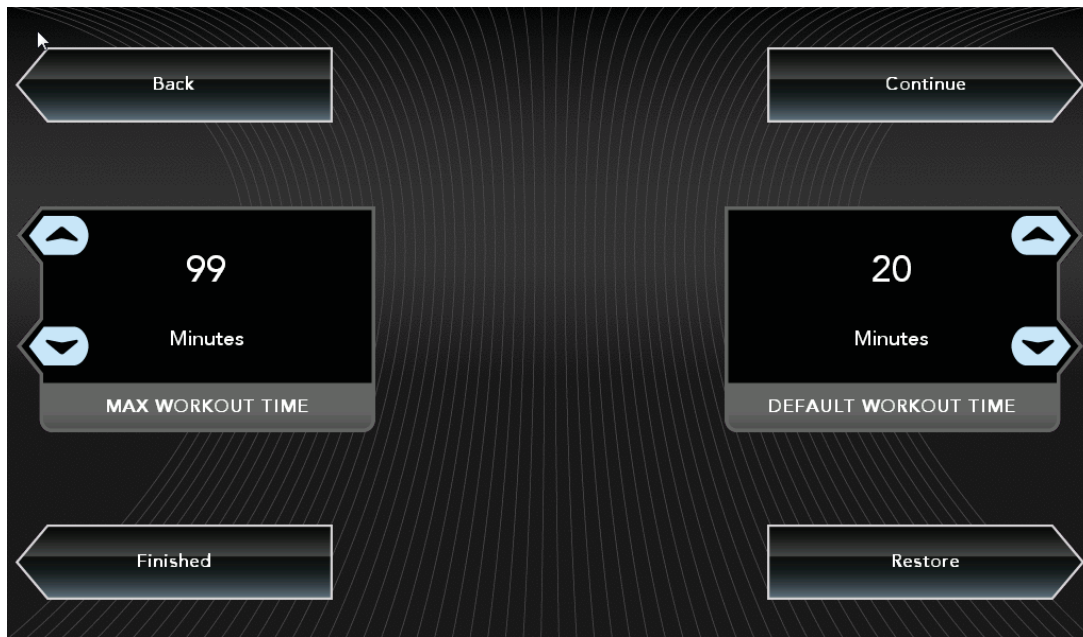
Key Test – Press any key to test the function.



Audio Test – When this test is chosen, the console chime should sound.

2.4.4 ENGINEERING MODE (Elegant Console) – Default Tab

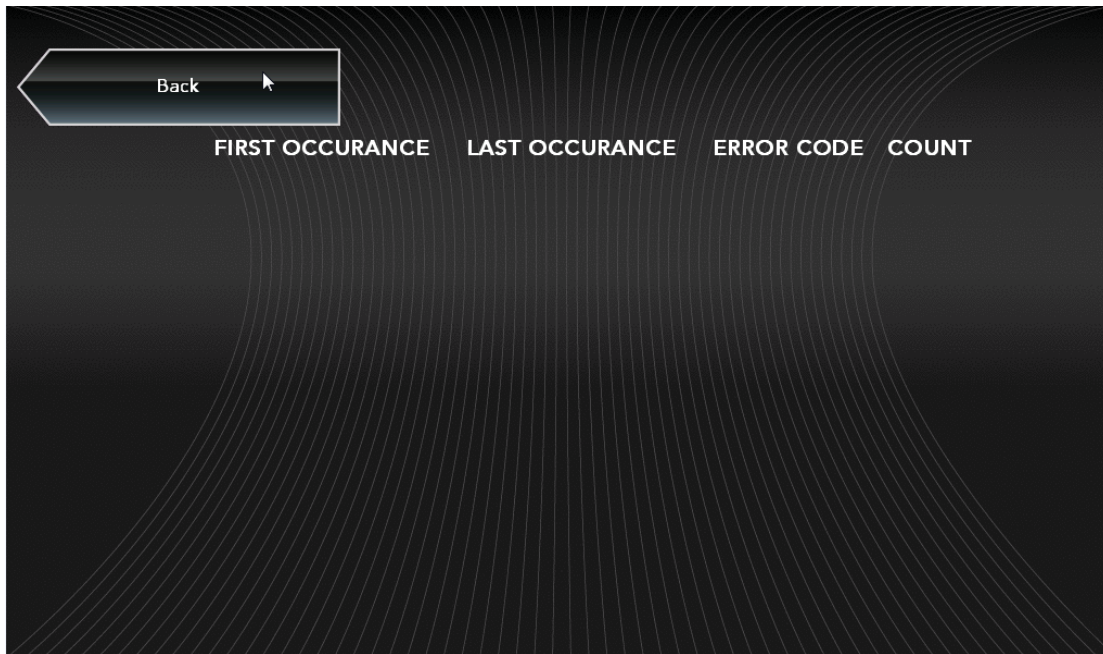
The Default Tab includes options for setting Max Workout Time, Default Workout Time, Warm-up Time, Cool Down Time, and Pause Time.



Press the key next to "Continue" to enter the next page of defaults. Set these defaults using the arrow keys. **NOTE:** After changing a setting on any page, select "Finished" to complete the setup, the other items will keep the default settings, select "Restore" to restore to the factory settings.

2.4.5 **ENGINEERING MODE (Elegant Console) - Error Log Tab**

The console will automatically show an error code history for the unit.



2.4.6 **ENGINEERING MODE (Elegant Console) – Region Tab**

The Region Tab includes settings for Month, Day, Year, Time (hour / minute), Language, Country, and Units (miles / kilometers).



Press the key next to "Continue" to enter the next page of region settings. Set these region settings using the arrow keys.

NOTE: After changing a region setting on any page, select "Finished" to complete the setup, the other items will keep the default region settings, select "Restore" to restore to the factory settings.

2.4.7 ENGINEERING MODE (Elegant Console) - Service Log Tab

The Service Log Tab allows the club / service provider to keep track of the service history.

DATE	SERVICE MESSAGE
2012-07-06 16:42:50	Replaced Motor Control Board
2012-06-06 16:35:08	Replaced Running Belt
2012-06-06 16:34:42	Replaced Drive Belt
2012-06-06 16:34:31	Replaced Drive Belt
2012-06-06 16:34:30	Replaced Drive Belt
2012-06-06 16:34:30	Replaced Drive Belt
2012-06-06 16:34:15	Replaced Drive Belt
2012-06-06 16:34:13	Replaced Drive Belt
2012-06-06 16:34:11	Replaced Drive Belt
2012-06-06 16:34:08	Replaced Drive Belt
2012-06-06 16:34:05	Replaced Drive Belt
2012-06-06 16:34:04	Replaced Drive Belt

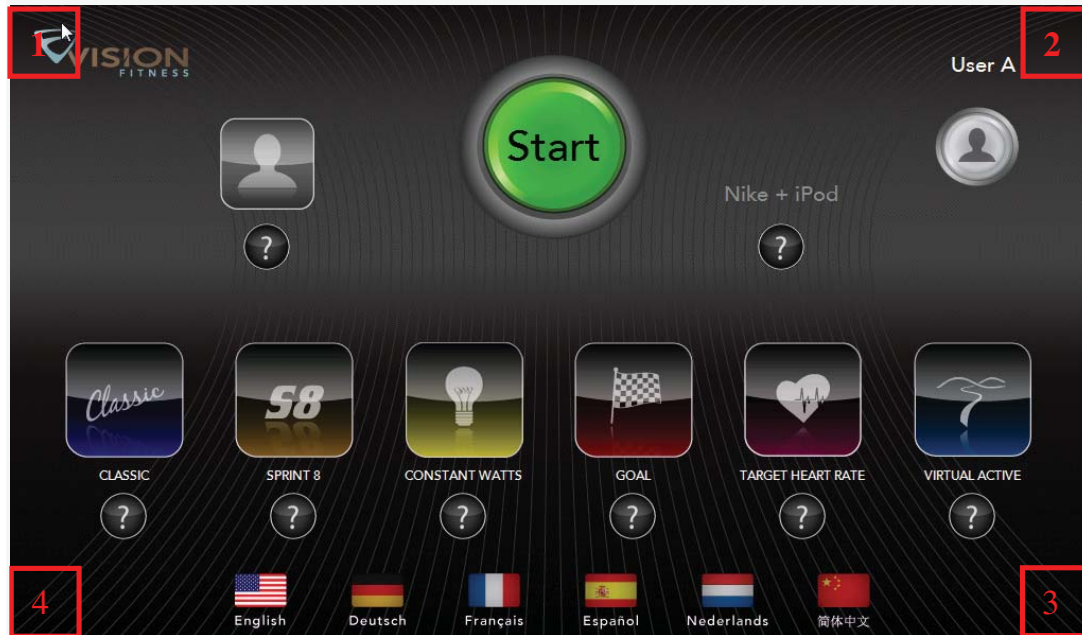
DRIVE BELT

Service Type

CHAPTER 2: Engineering Mode

2.5 ENGINEERING MODE - Touch Console

- 1) To enter Engineering Mode, touch the four corners of the touch screen from 1-4 as shown below.



- 2) An Engineering Mode parameter list will be displayed on the screen.
- 3) Select the parameter by touching the parameter list.
- 4) Set all information using the Touch panel.
- 5) Press the Home key to save the change to the parameter and exit the Engineering Mode.

CHAPTER 2: Engineering Mode

2.6 ENGINEERING MODE OVERVIEW - Touch Console

2.6.1 ENGINEERING MODE (Touch Console) - About

The About Tab shows the basic parameters of the console, such as Model Type, Software Version, MCB Version etc...

NOTE: Press the Home key at any time to return to normal operation.

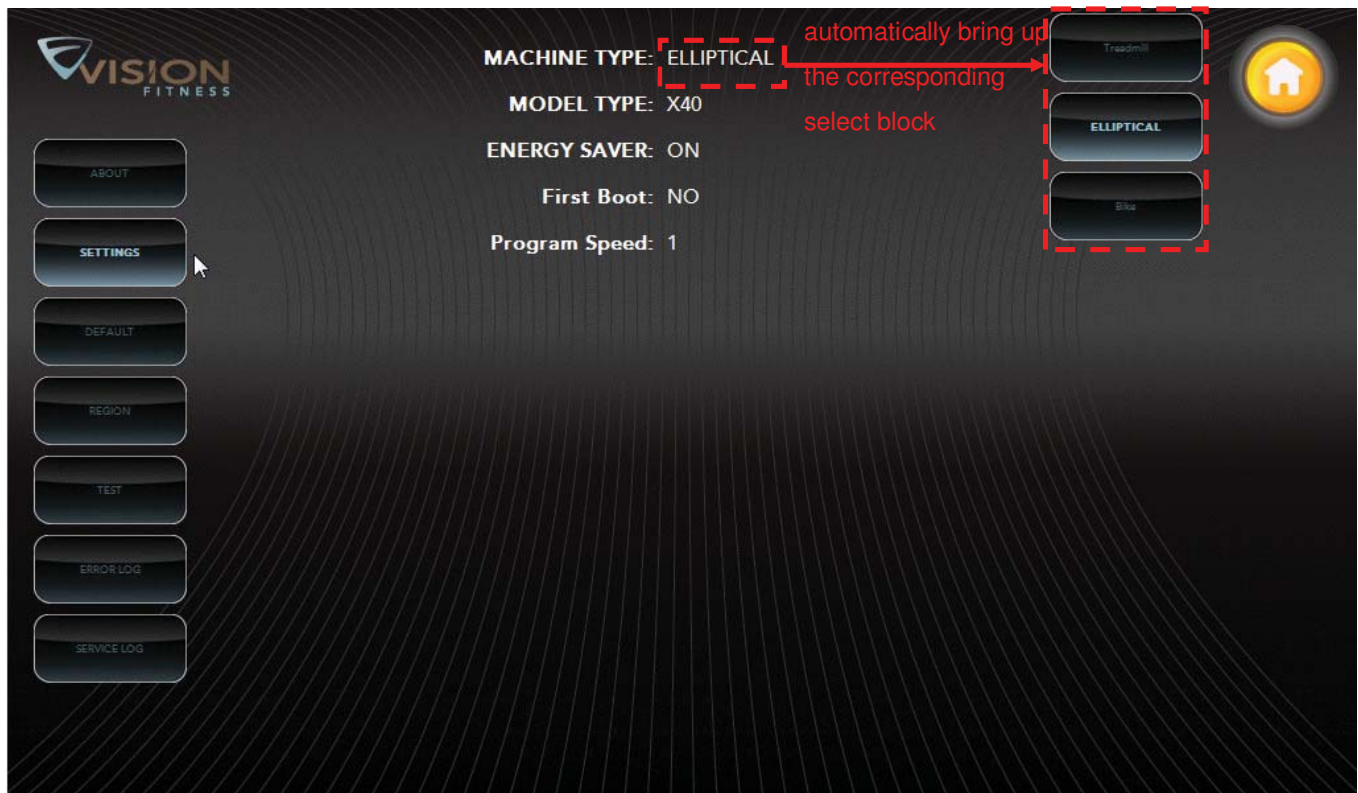


Engineer Mode - About	Function & Default	Descriptions	Modified
Accumulated Data	Accumulated Distance	Total distance displayed in native units (miles or kilometers), not editable	Cannot be modified
	Accumulated Time	Total time, not editable	Cannot be modified
Main Board Information	UI Software Version	Application version, not editable	Cannot be modified
	IO version	Sub UCB software version, not editable	Cannot be modified
	OS Version	Operation system version, not editable	Cannot be modified
MCB Information	MCB Type	The frame MCB type, for example: 2.75HP digital MCB	Cannot be modified
	MCB Software Version	MCB Software Version	Cannot be modified

2.6.2 ENGINEERING MODE (Touch Console) - Settings Tab

The Settings Tab used to set the Machine Type, Model and if the Energy Saver is turned on.

Setting: Pressing the **MACHINE TYPE: ELLIPTICAL** will automatically bring up the corresponding select block, according to the frame type to select the appropriate machine, TREADMILL, ELLIPTICAL or BIKE.

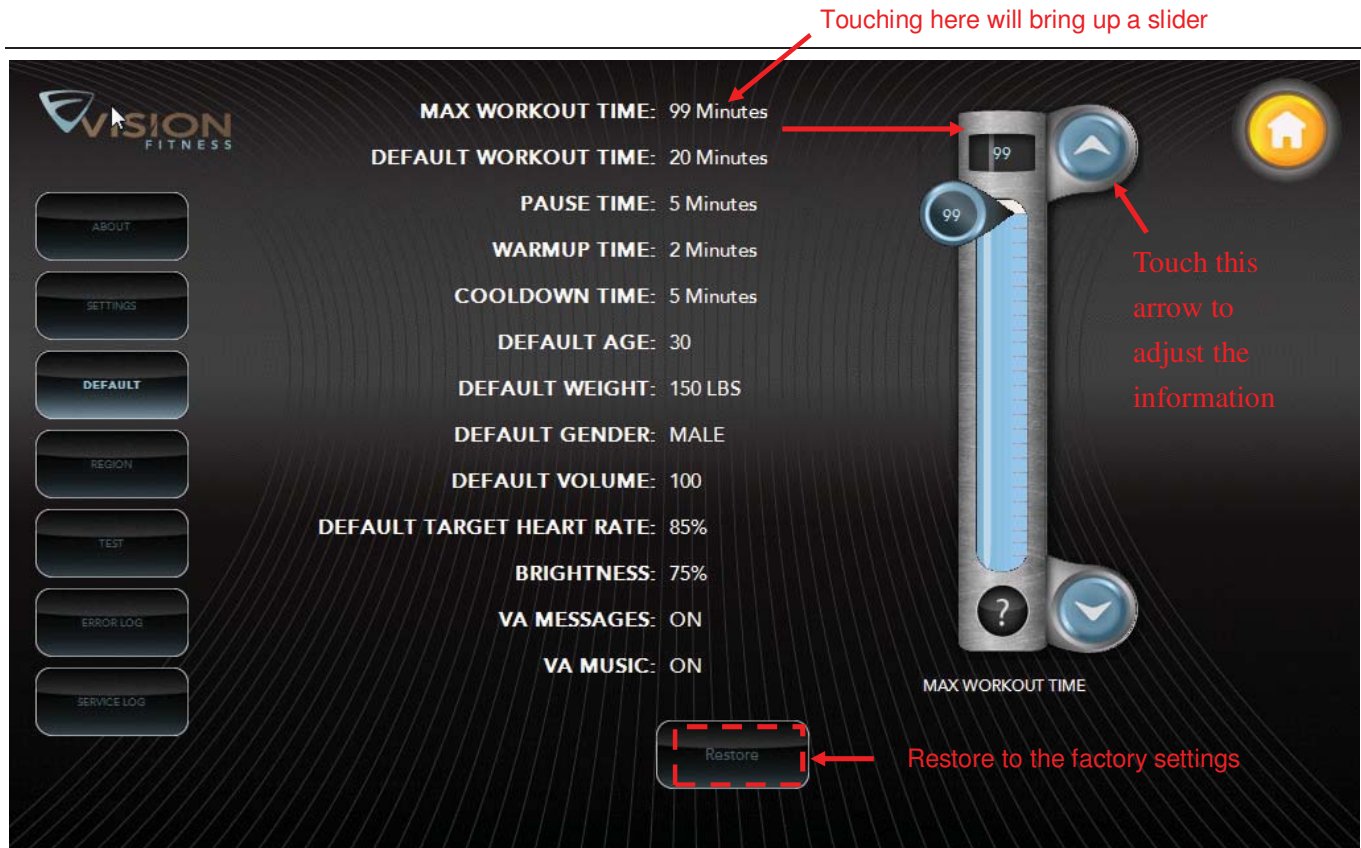


Use the same procedure as Machine Type to set the Model Type, Energy Saver, First Boot and Program Speed.

2.6.3 ENGINEERING MODE (Touch Console) – Default Tab

The Default Tab displays the default information of the console, such as Workout Time, Weight, Age etc...

Selecting the data that needs to be set will bring up a slider to adjust the corresponding information. Refer to the figure below:



Engineer Mode - Default	Function & Default	Descriptions	Modified
Time	Maximum Workout Time Default: 99 minutes	This option enables you to set the maximum workout duration limits	Maximum: 99 Minutes Minimum: 5 Minutes
	Default Workout Time Default: 20 minutes	This option enables you to set user default workout time	Maximum: 99 Minutes Minimum: 5 Minutes
	Pause Time Default: 5 minutes	This option enables you to set workout pause time, the console will reset when this time expires	Maximum: 99 Minutes Minimum: 5 Minutes
	Warm Up Time Default: 2 minutes	This option enables you to set user's warm up time	Maximum: 99 Minutes Minimum: 5 Minutes
	Cool Down Time Default: 5 minutes	This option enables you to set users Cool Down Time after a workout	Maximum: 99 Minutes Minimum: 5 Minutes
Age	Default Age Default: 30	This option enables you to set the user's default age if not selected during setup	Maximum: 99 Minimum: 13
Weight	Default Weight Default: 150LBS	This option enables you to set user's default weight if not selected during setup	Maximum: 375LBS Minimum: 55LBS
Gender	Default Gender Default: Male	This option enables you to set user's gender if not selected during setup	Male/Female
Volume	Default Volume Default: 20	This option enables you to set speaker or earphone volume	Maximum: 20 Minimum: 0

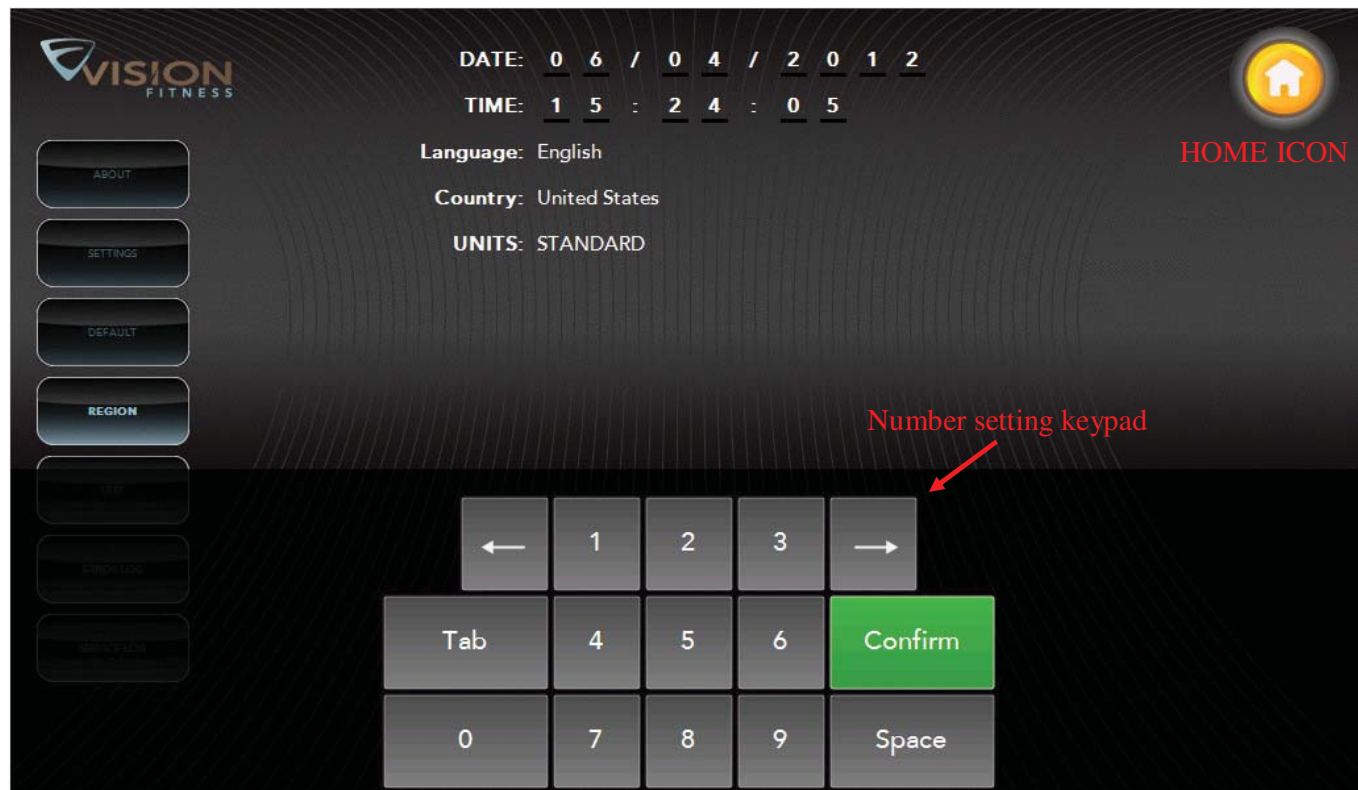
Heart Rate	Default Target Heart Rate Default: 85%	This option enables you to set target heart rate for some heart rate programs	Maximum:100% Minimum: 0
Brightness	Brightness Default: 75%	This option enables you to set the LCD panel brightness level	Maximum:100% Minimum: 0
Virtual Active Message	VA Message Default: on	This option enables you to set the VA, user can choose the VA message displayed on the screen or not	On/off
Virtual Active Music	VA Music Default: on	This option enables you to set the VA, user can choose the VA music played or not	On/off

Use the same operation as Max Workout Time to adjust the other Default information.

Press "Restore" to restore to the factory settings.

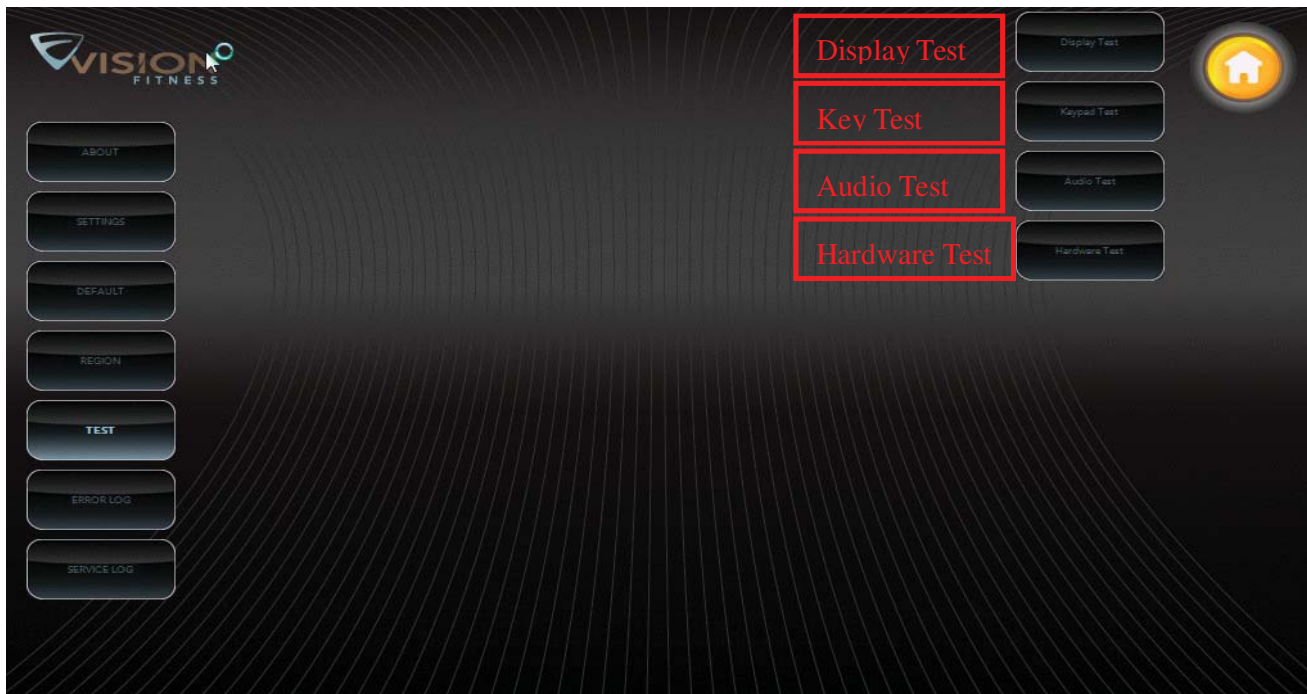
2.6.4 ENGINEERING MODE (Touch Console) – Region Tab

The Region Tab is used to set Date, Time, Language, Country, and Units. Touch the item that needs to be set, the screen will display a number keypad. Use the keypad to set the information, and press "Home" to save the information. Refer to the figure below:

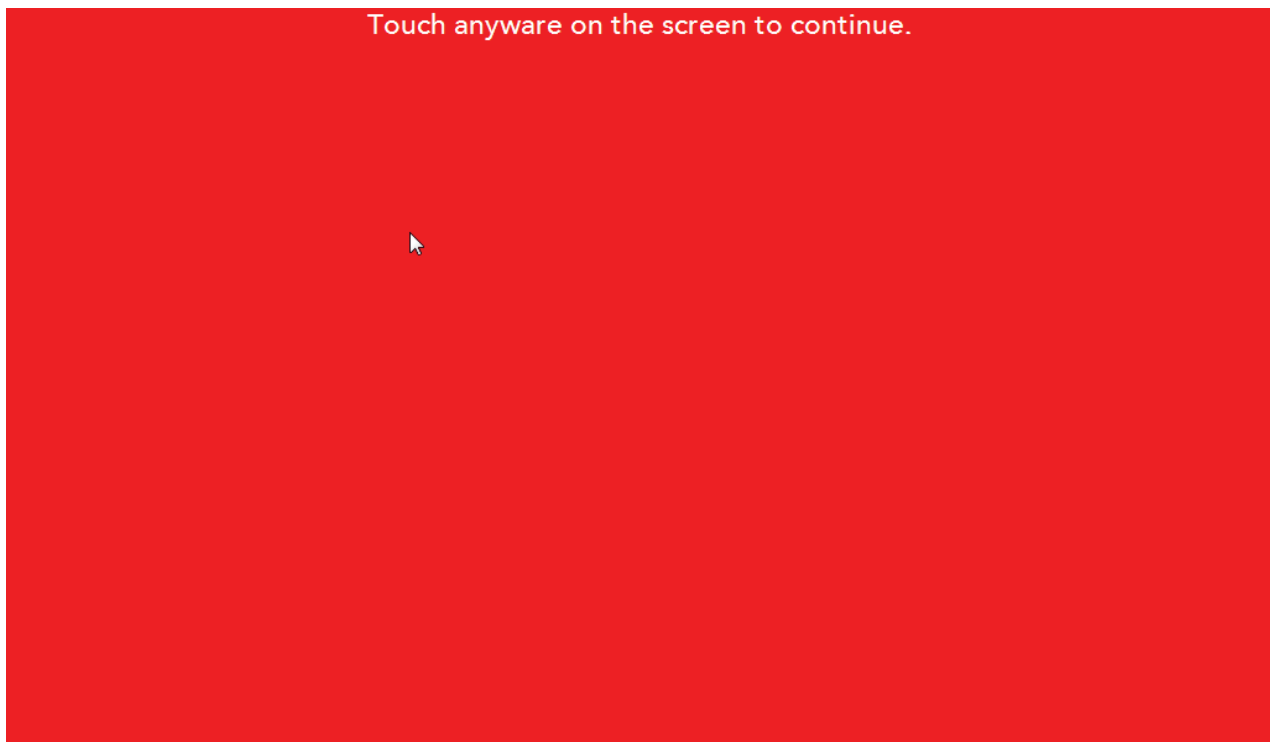


2.6.5 ENGINEERING MODE (Touch Console) - Test Tab

The Test Tab is used to test the corresponding hardware.

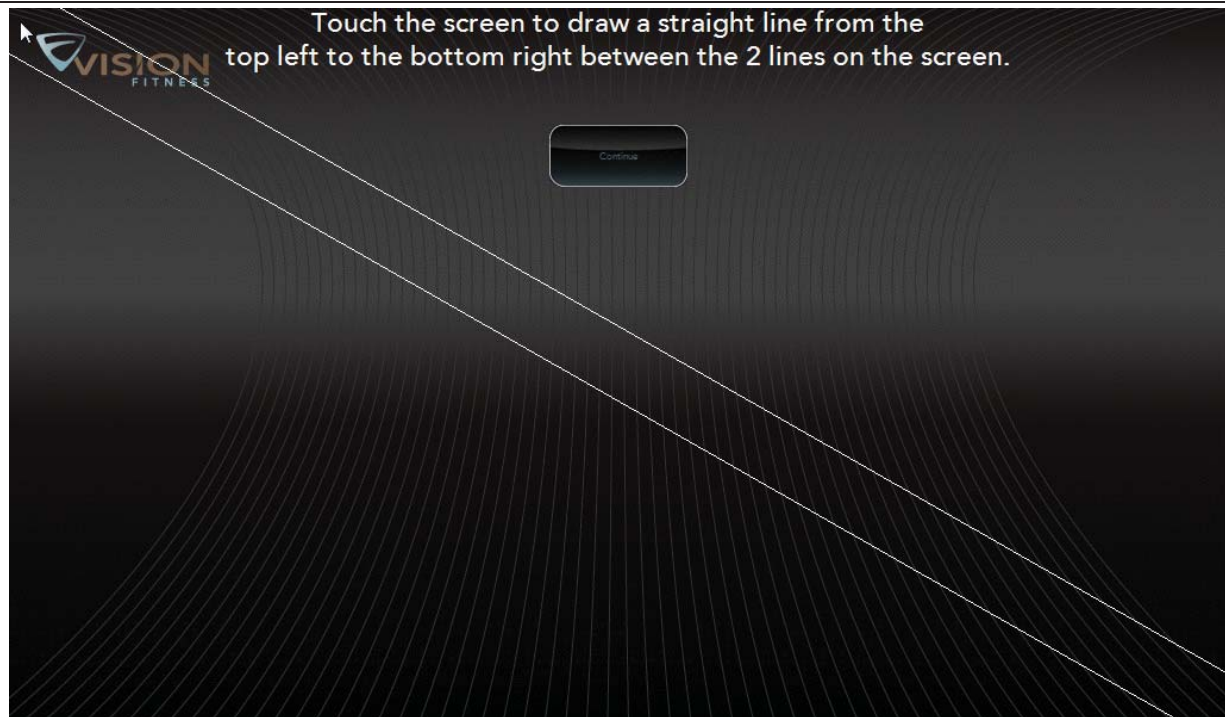


Display Test – Tests the reliability of the LCD and Touch panel.

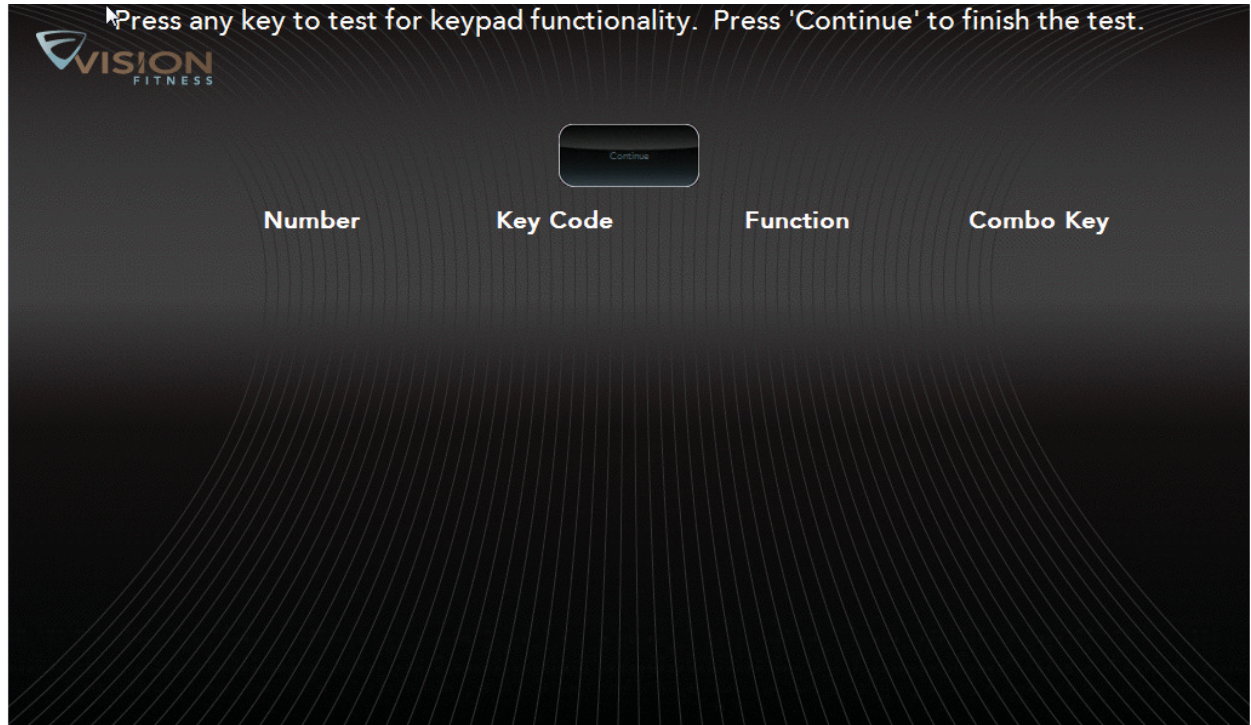


Display Test - Touch panel Test

Use your finger to draw a line following the instructions on the screen. If the test fails, selecting "continue" will bring the user directly into the calibration screen. Refer to the figure below:

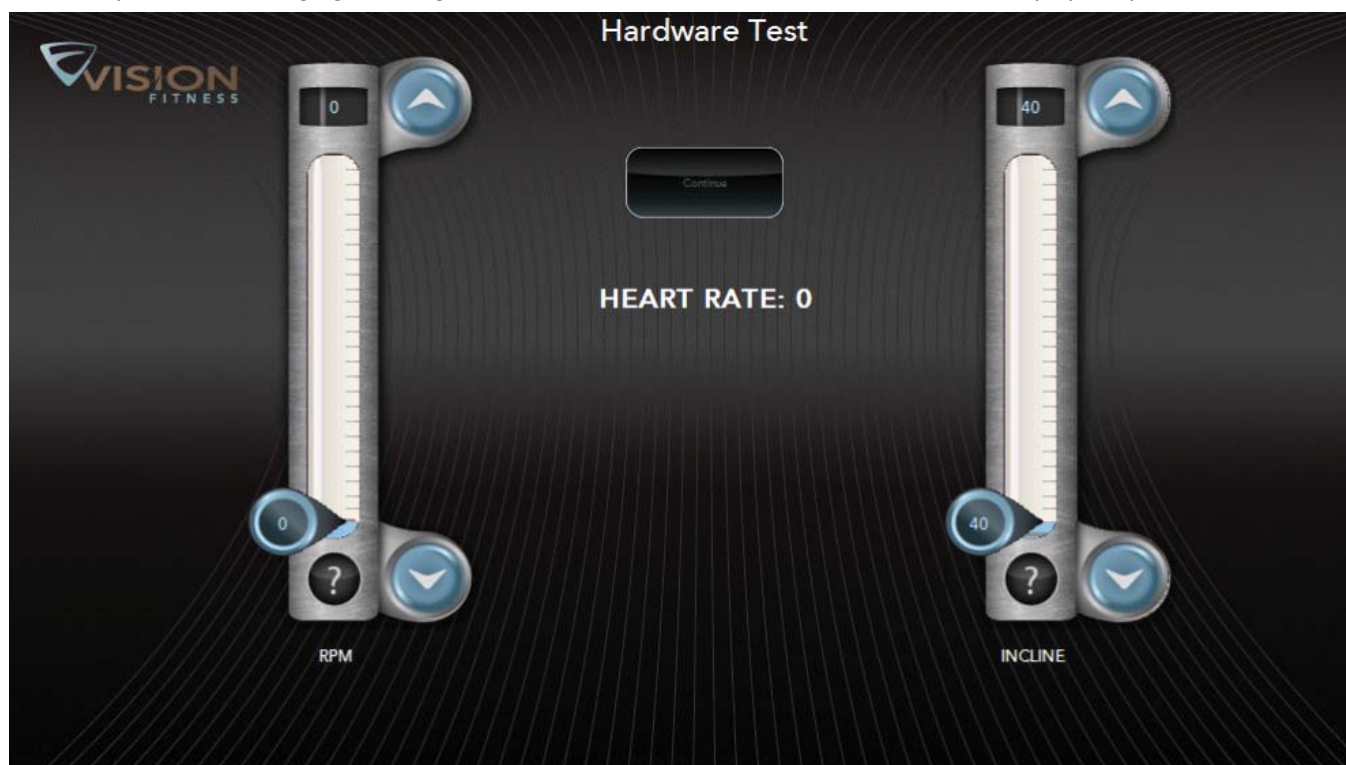


Key Test – Tests the functionality of the keys. Select any key on the keypad to display the definition, the function, and the code of the key. If there is no feedback, check the keypad connection with the UCB. Select Continue to exit the test.d



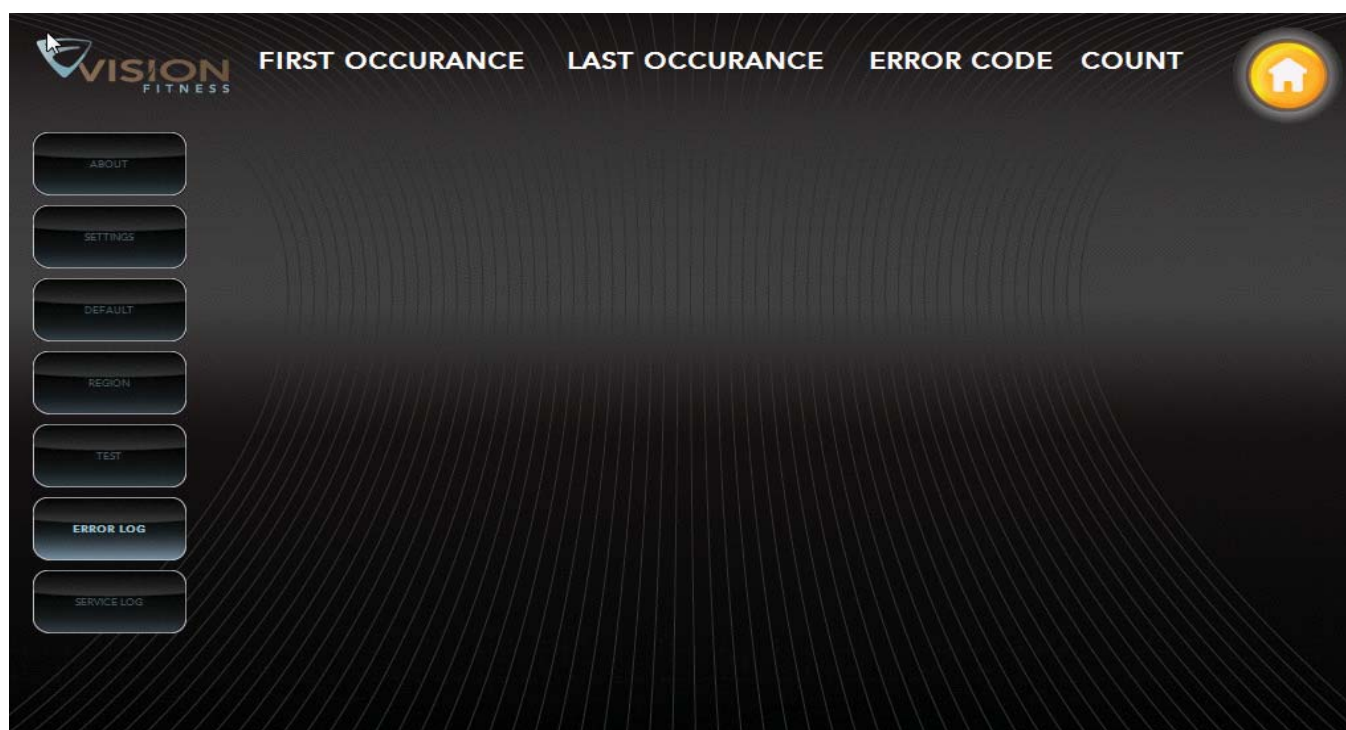
Audio Test – When the Audio Test key is pressed, the console should chime.

Hardware Test – This tab allows a service technician to test the RPM Sensor, Incline Motor and Heart Rate components. Changing a setting should cause the belt, incline motor, or heart rate display to operate.



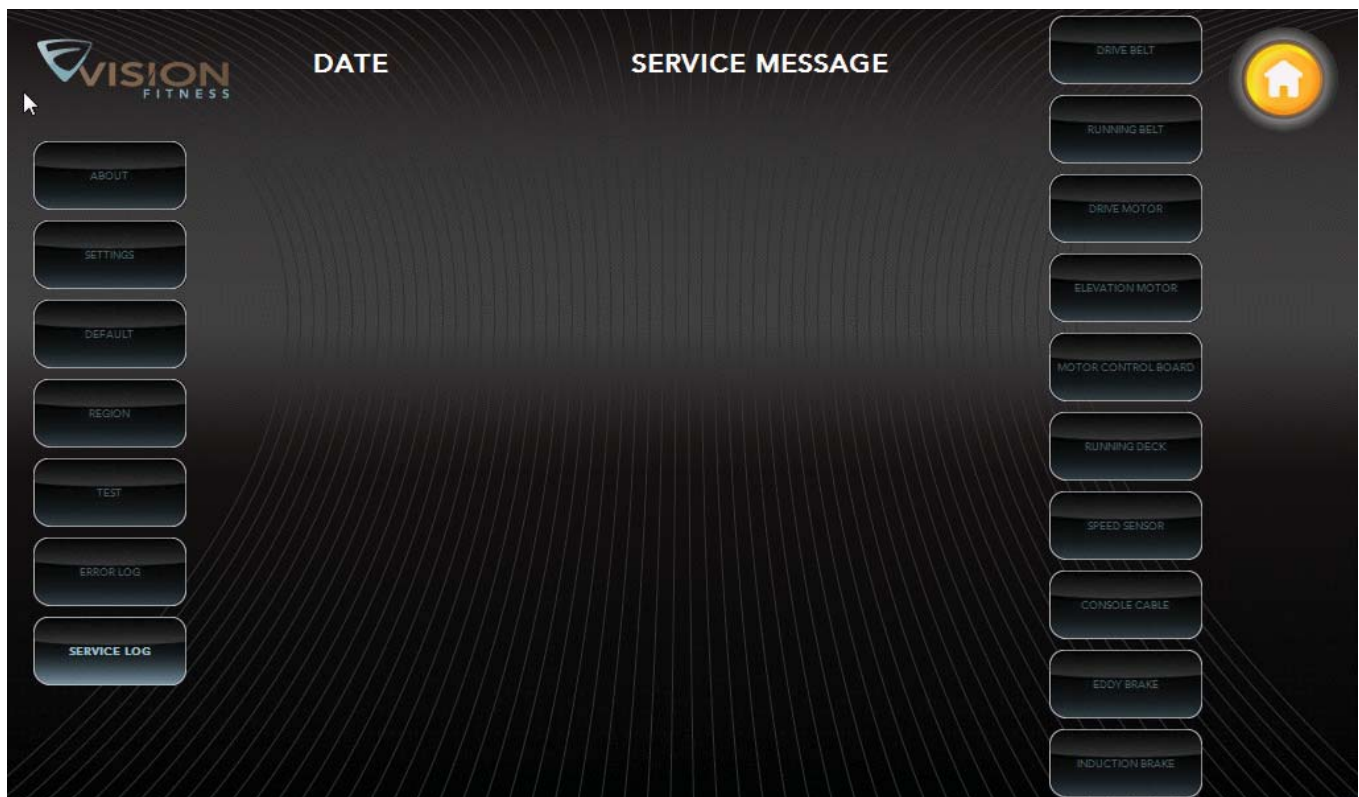
2.6.6 ENGINEERING MODE (Touch Console) - Error Log Tab

The console will automatically show an error code history for the unit.



2.6.7 ENGINEERING MODE (Touch Console) - Service Log Tab

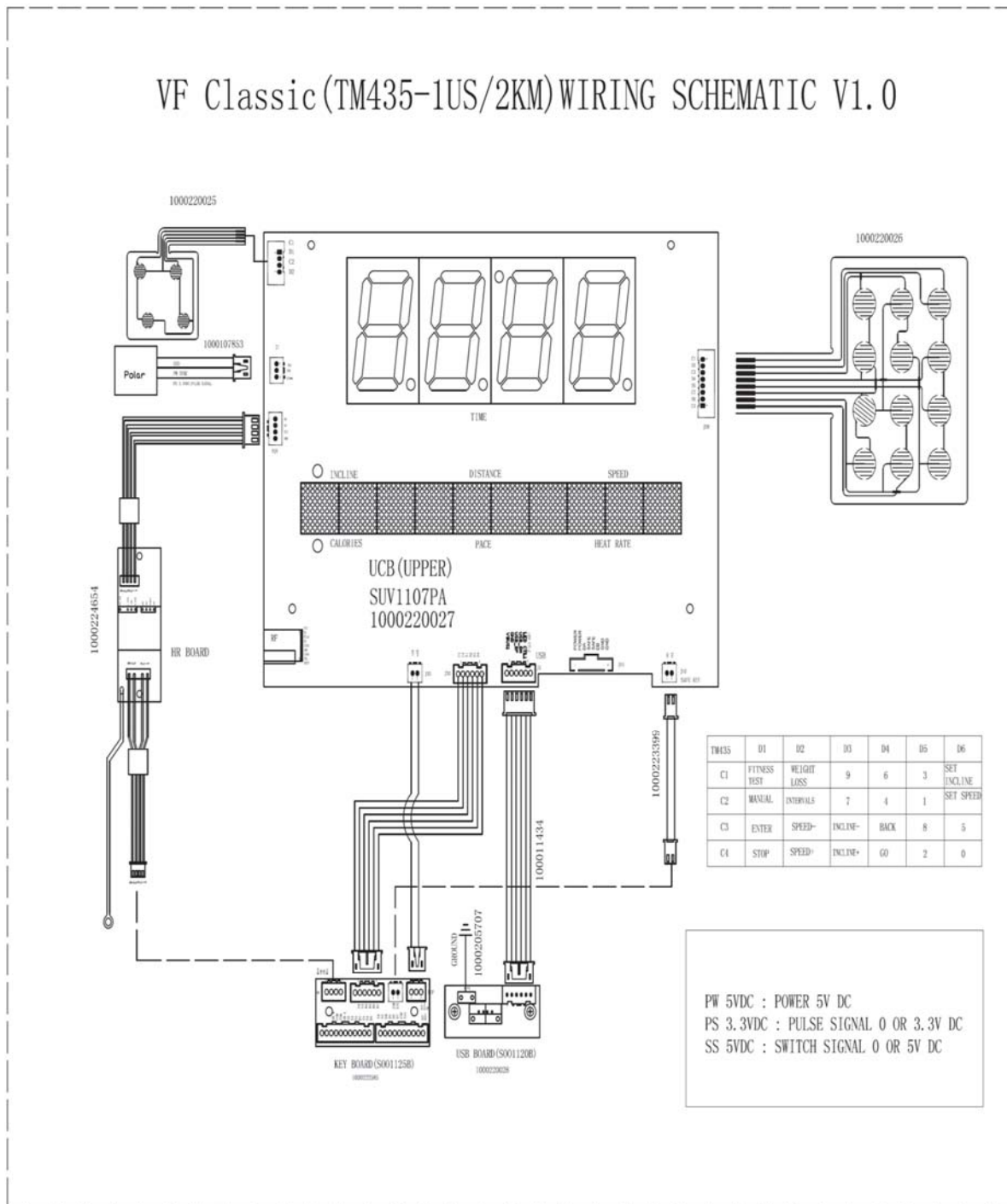
The Service Log Tab allows the club / service provider to keep track of the service history.



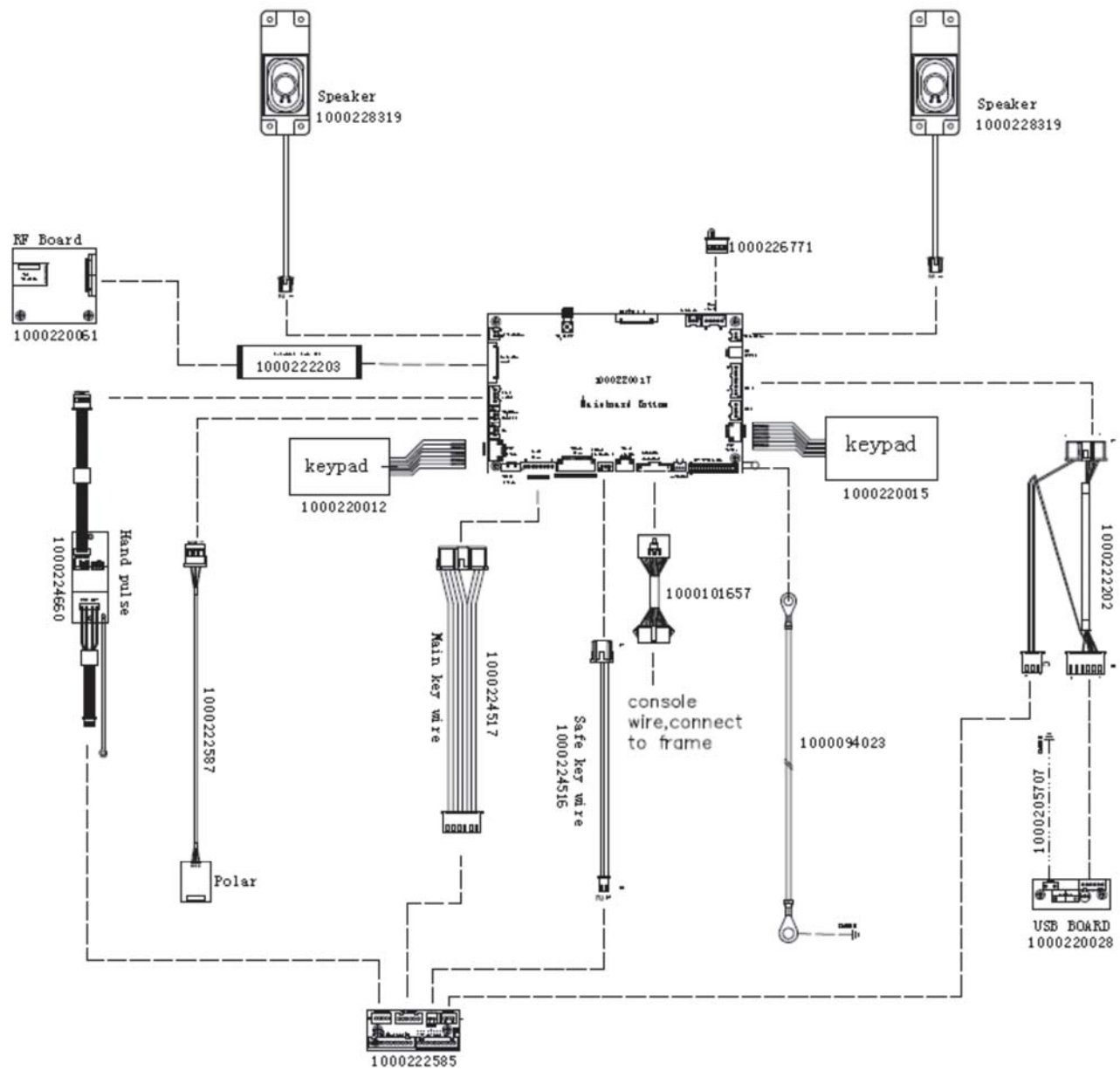
CHAPTER 3: Troubleshooting

3.1 ELECTRICAL DIAGRAMS

3.1.1 Electrical Diagram –TM Classic Console

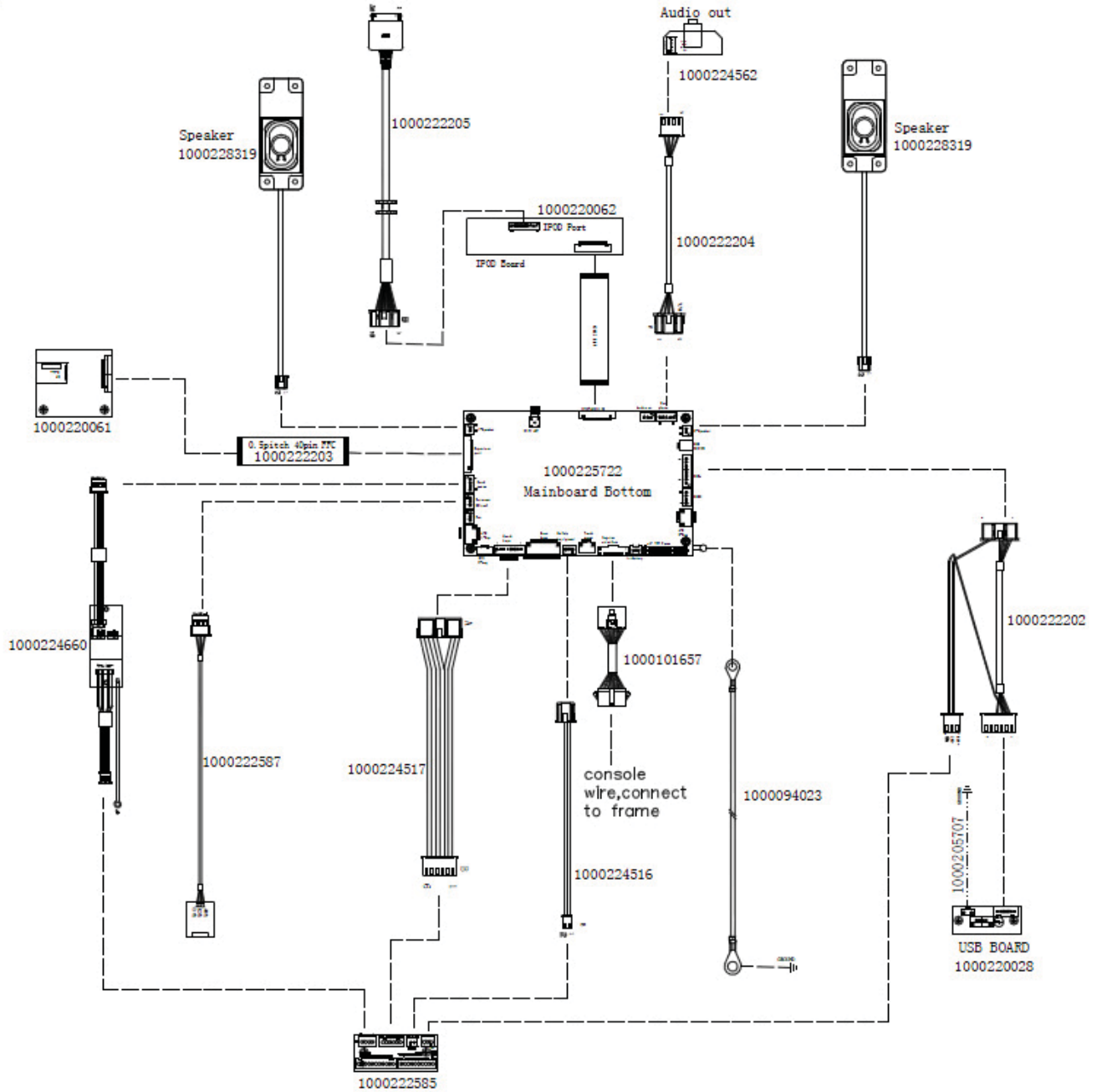


3.1.2 Electrical Diagram - TM Elegant Console (10inch LCD Console; No Touch Panel)



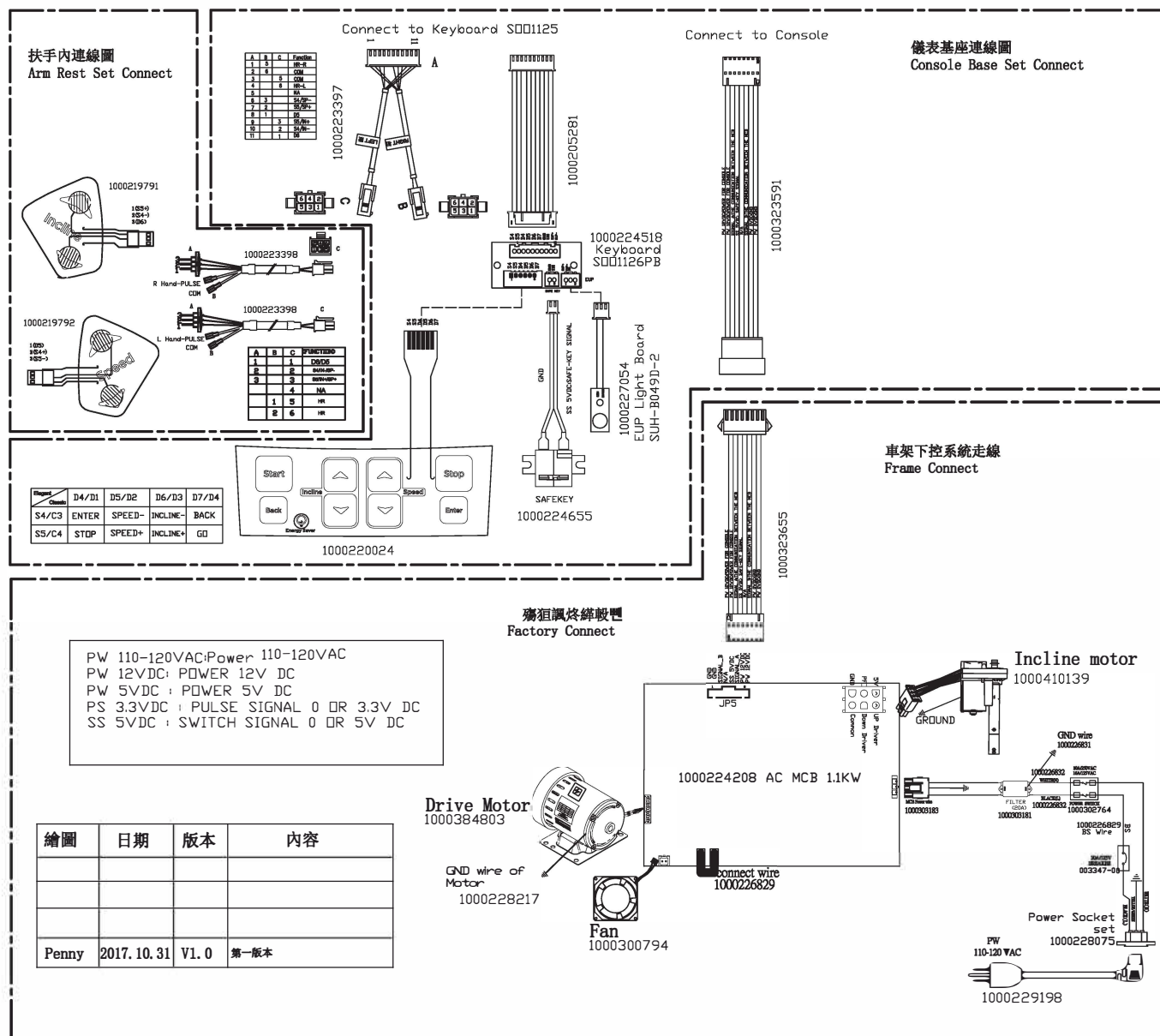
3.1.3 Electrical Diagram - TM Touch Console (15inch LCD Console; Touch Panel)

WS



3.1.4 Electrical Diagram - T80 Frame

T80(TM445-1US)WIRING SCHEMATIC V1.0



3.2 MCB CIRCUIT BOARD INSTRUCTIONS

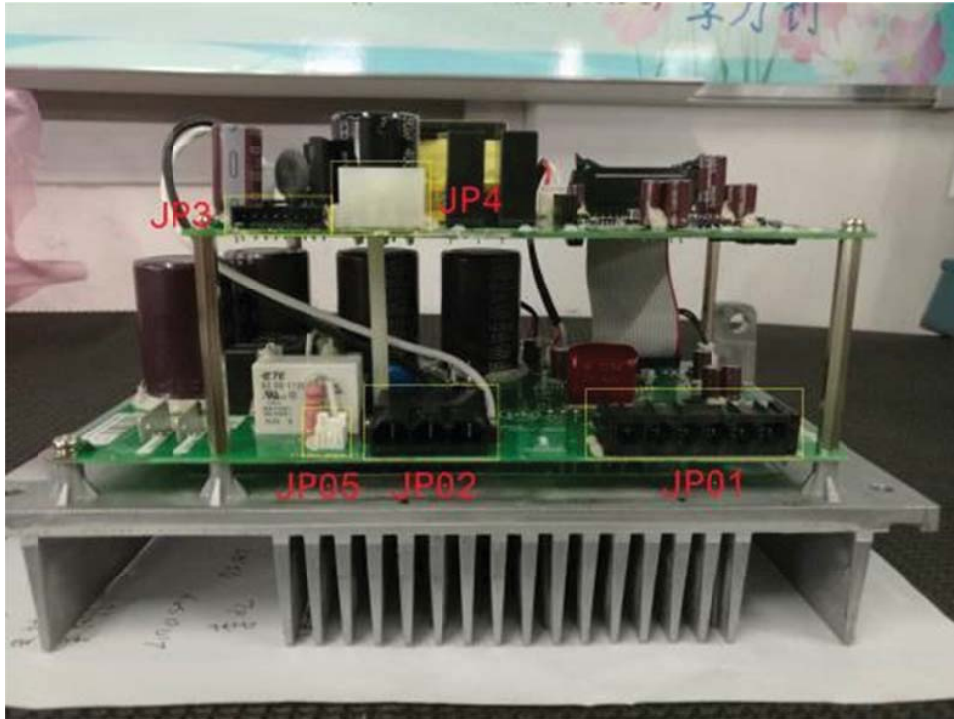


Fig-1

JP01	Drive motor cable socket
JP02	Power Line in socket
JP3	Console set cable socket
JP4	Incline motor cable socket
JP05	Fan cable socket

CHAPTER 3: Troubleshooting

3.3 MCB LED's function indicator (Fig1&Fig2)

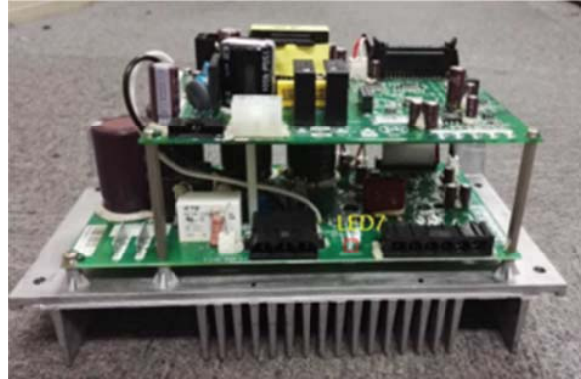


Table1-MCB LED FUNCTION

LED No.	Color	Active	Inactive	Function	Symptom
LED 1	Red	Light on	Light off	Incline up indicator	Relay not active MCB fail
LED 2	Red	Light on	Light off	Incline down indicator	Relay not active MCB fail
LED 3	Green	Light on	Light off	12V power indicator	No voltage output.
LED 4	Green	Flash	Light on	PWM indicator	Commands from UCB
LED 5	Green	Light on	Light off	Communication indicator	Abnormal internal communication
LED 6	Red	Light on	Light off	Fault indicator	System error when red LED turns on
LED 7	Red	Light on	Light off	Machine power indicator	No voltage

3.5 TROUBLESHOOTING – System Will Not Start

1) SYMPTOM:

- a. LCD displays back light, but the system does not start up.
- b. The LCD backlight is lit, but the Vision Logo never clears, the LCD displays nothing.

2) SOLUTION:

- a. Replace the console.

3.6 TROUBLESHOOTING – Touch Panel Issues

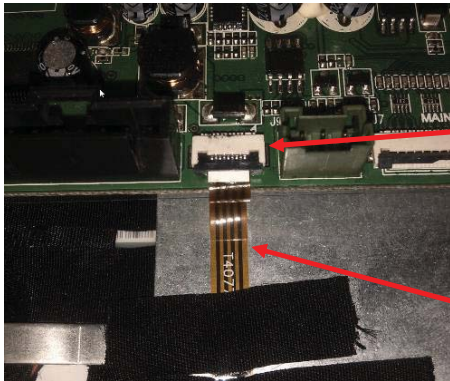
Touch panel issues

1) SYMPTOM:

- a. Touch screen is not accurate or invalid.

2) SOLUTION:

- a. If the touch screen is not accurate, or has a slight deviation, simply press the "Enter" and "Stop" keys to enter the screen calibration mode.
- b. If the touch screen calibration does not work, check the touch screen for visible damage, indentation, or deformation. If so, replace the entire console.
- c. If not, confirm whether the touch screen, FPC wire is well-connected with the main board.



- d. If well-connected, recalibrate the touch screen (same steps as (a)), if the screen cannot be calibrated, replace the console.

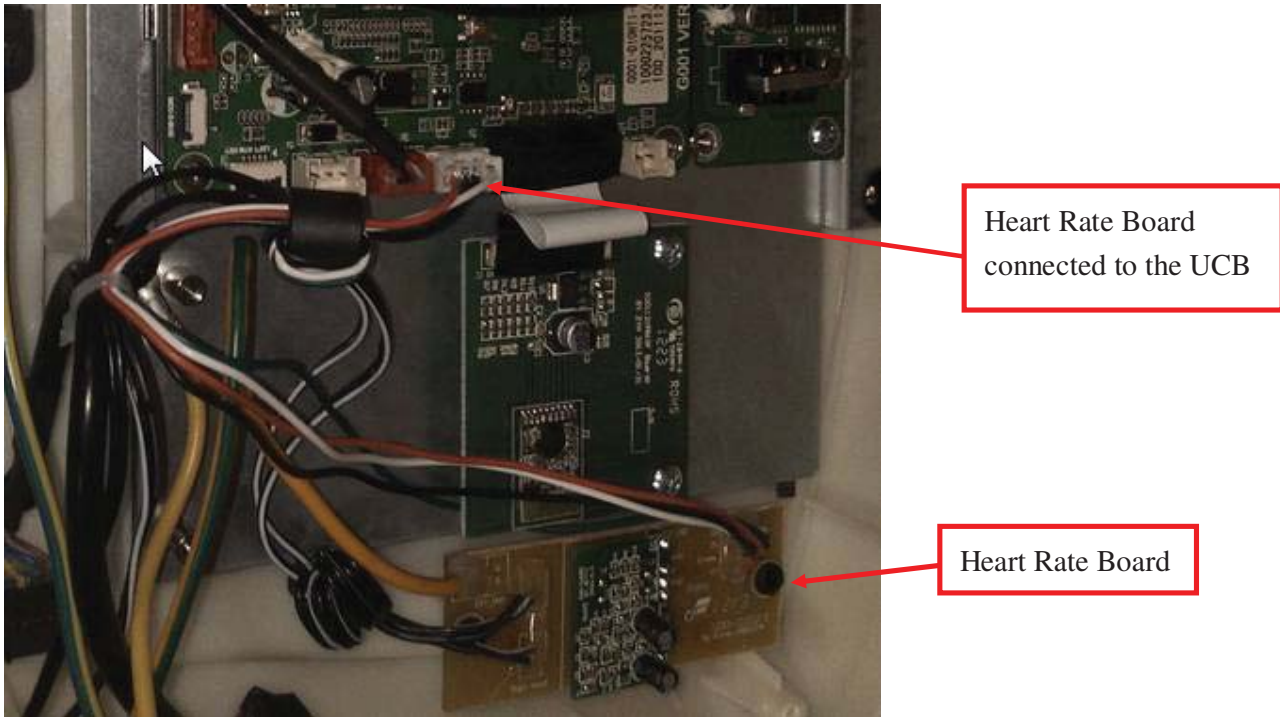
3.7 TROUBLESHOOTING – Heart Rate Issues

1) **SYMPTOM:**

- a. The console does not display the heart rate when holding the heart rate grips.

2) **SOLUTION:**

- a. First check if the heart rate grip is well-connected, not broken / damaged. Replace the HR grip / wiring as needed.
- b. Confirm whether the heart rate board is well-connected with the UCB.



- c. If well-connected, replace the heart rate board. If heart rate still does not work, replace the console.

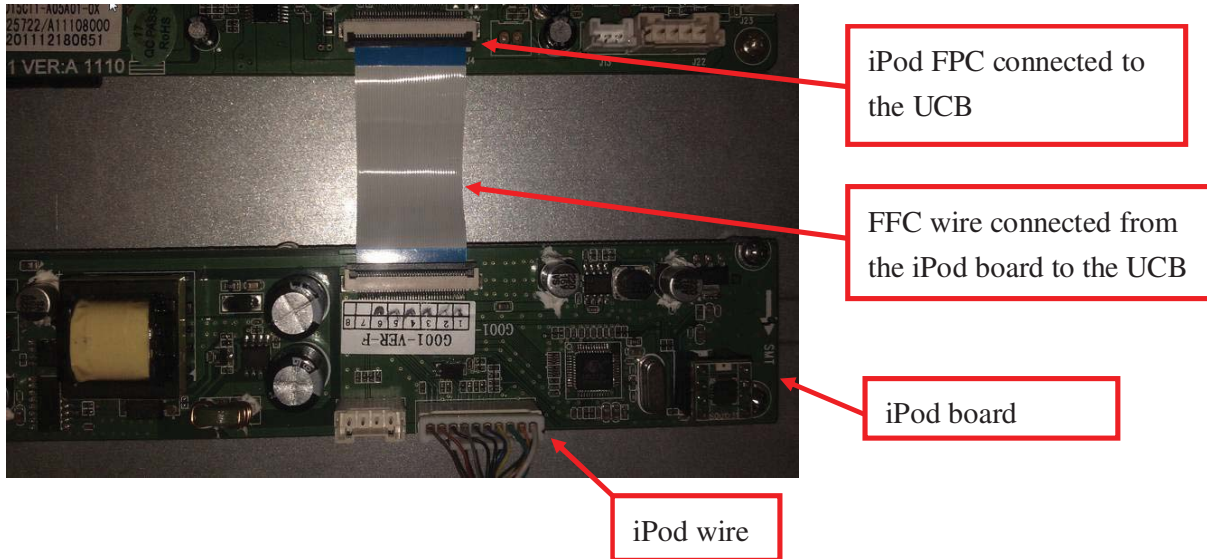
3.8 TROUBLESHOOTING – iPod Issues

1) SYMPTOM:

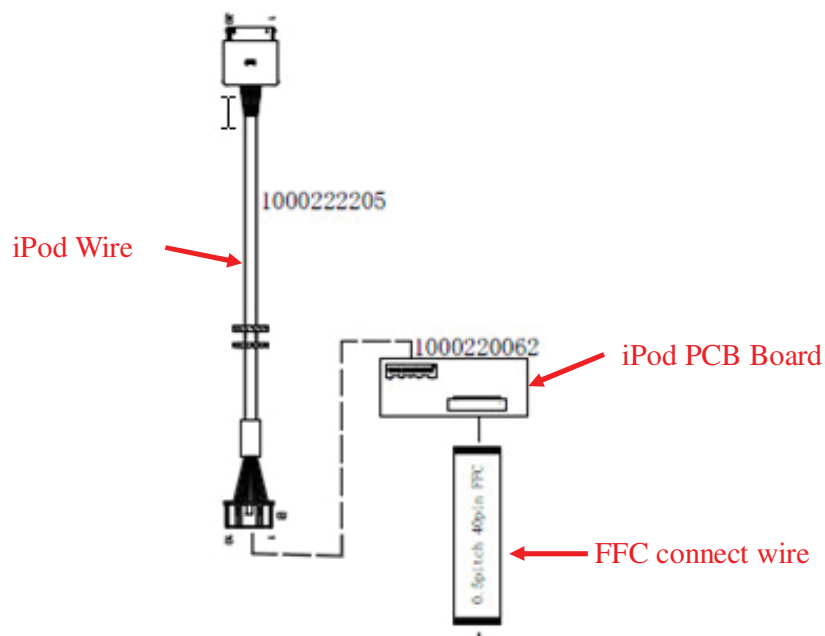
- a. Cannot connect the iPod prompt shown on the screen (Touch console only).

2) SOLUTION:

- a. Confirm whether the iPod cable is well-connected, not broken or damaged.



- b. Replace the iPod cable and try again. Refer to the figure below regarding the iPod cable and the iPod board.



- c. Check the FFC connect wire for damage. If any is found replace the FFC wire.
- d. If the iPod still cannot connect, replace the iPod PCB board.
- e. If the iPod still cannot connect after the iPod board was replaced, replace the UCB.

3.9 TROUBLESHOOTING – Speaker / Audio Issues

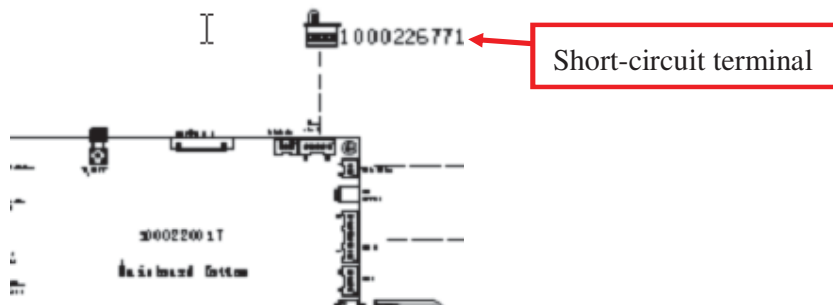
1) SYMPTOM:

- a. The speaker has no sound output; the headphones have no sound output.

2) SOLUTION:

3.8.1 Elegant

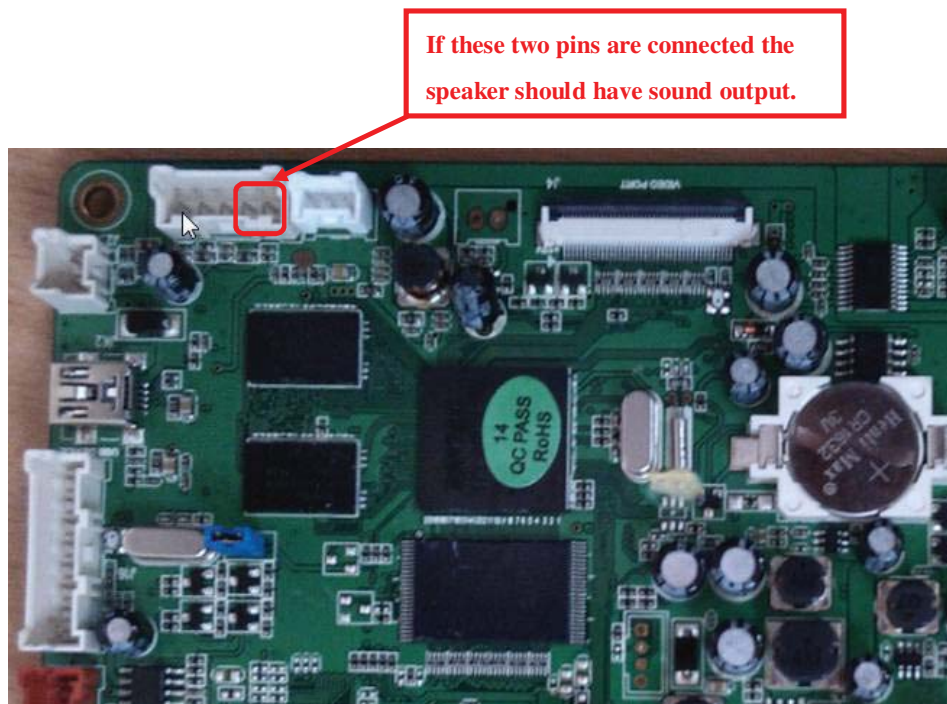
- a. If the speaker has no sound output, confirm whether the speaker wire is well-connected with the UCB.
- b. If well-connected, make sure that the audio output short-circuit terminals are tight. Refer to the electrical diagram to see where the audio output short-circuit terminals should be plugged in at.



- c. If all are well-connected, update the OS, Software and IO Versions. If the problem persists, replace the UCB.

3.8.2. Touch

- a. If the speaker has no sound output, confirm whether the speaker wire is well-connected with the UCB.
- b. If well-connected, use a multi-meter to confirm whether the audio output terminal switch is connected. Refer to the figure below:



- c. If all wiring is well-connected, update the OS, Software and IO Versions. If the problem persists, replace the UCB.
- d. If the speakers have sound output, but headphones have no sound output, replace the headphone board. If the problem persists, replace the headphone wire.

CHAPTER 3: Troubleshooting

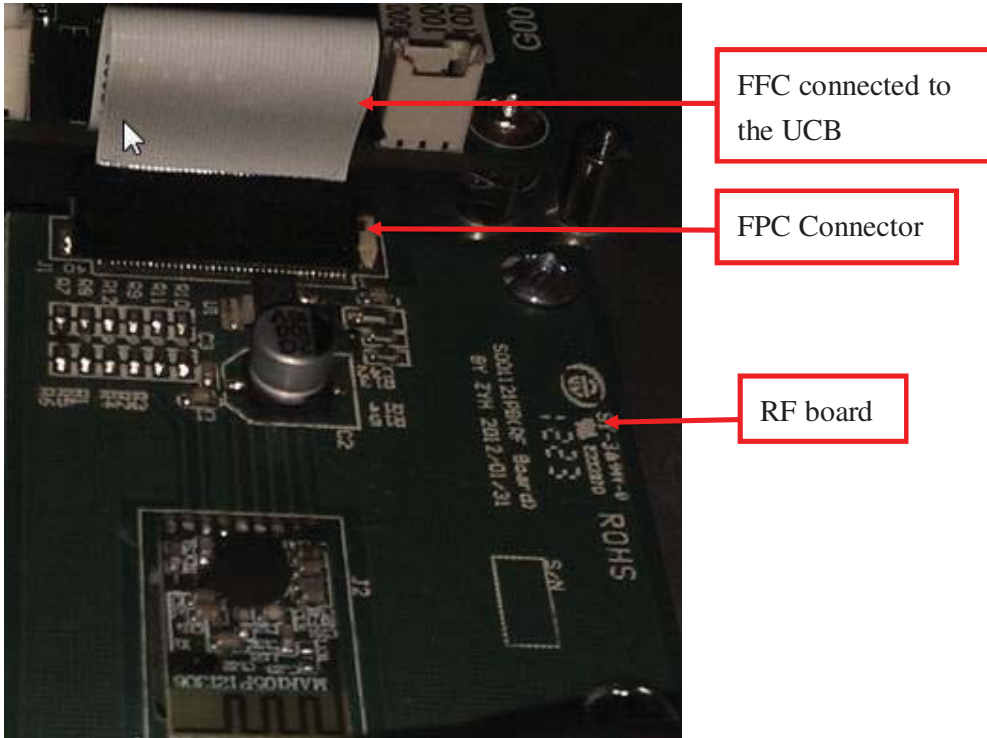
3.10 TROUBLESHOOTING –Radio Frequency Board Issues

1) SYMPTOM:

- a. The Radio Frequency (RF) board cannot connect with the Passport.

2) SOLUTION:

- a. Make sure that the RF and Passport connection key are functional (see Key Test in Section 2.3.5). TM (STOP & Incline+), EP (STOP & Resistance).
- b. Confirm again whether the FFC connect wire is damaged.



- c. If above connections are all confirmed ok, replace the RF board.

CHAPTER 3: Troubleshooting

3.11 TROUBLESHOOTING – Virtual Active (VA) Issues

1) SYMPTOM:

- a. Cannot play the Virtual Active (VA) files.

2) SOLUTION:

- a. Confirm if the SD card is firmly seated on the UCB, if not, please re-insert the SD card and use adhesive tape to fix it in place.



No Good



OK

- b. If the SD card is inserted correctly, update the Software Versions.
- c. If the VA still cannot be played, replace the UCB.

CHAPTER 4: Update OS & Software & IO

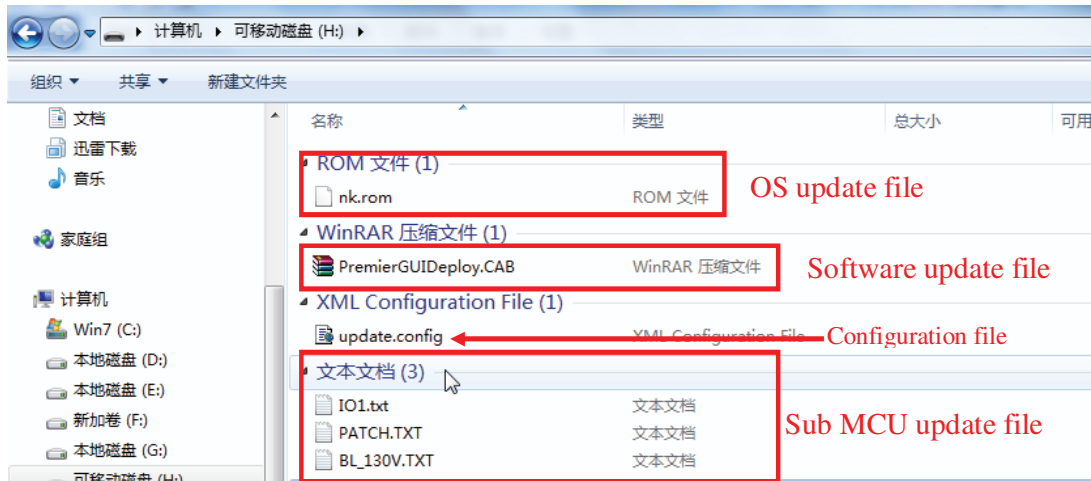
4.1 UPDATING OS, SOFTWARE, AND IO VERSIONS

4.1.1 Update File Description

OS Update File: NK.rom;

Elegant Console Update Software File: DeluxeGUIDeploy.CAB;

Touch Console Update Software File: PremierGUIDeploy.CAB



* Note: update the software after the OS is updated.

4.1.2 Update OS & Software

* Note: OS files need to distinguish between 7, 10, and 15 inch displays. The OS file names are the same.

1. Choose the correct OS nk.rom file according to the LCD size, and place the file on a USB flash drive.
2. Update the software version on the USB.
 - Elegant console choose "eluxeGUIDeploy.CAB".
 - Touch console choose "PremierGUIDeploy.CAB".

* Note: The two files can not be placed together at the same time under the USB

3. Place the "update.config" file on the USB flash drive.
4. Start up the console, and insert the USB flash drive into the slot in the front of the console. The files will update automatically.

4.2 UPDATING IO

1. IO Update Files: BL_130.TXT, PATCH.TXT, and IO1.TXT.
2. Place the three files above on the USB flash drive.

* The name of the update file for the Elegant and Touch consoles are the same, no need to distinguish.

3. Also place the "Update.config" file on the USB flash drive.
4. Start up the console, and insert the USB flash drive into the slot in the front of the console. The software will update automatically.