



SPIRIT FITNESS

A Heritage of Quality | The Spirit of Innovation



Treadmill

OWNER'S MANUAL

**PLEASE CAREFULLY READ THIS ENTIRE MANUAL BEFORE
OPERATING YOUR NEW TREADMILL!**

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Important Safety Instructions

WARNING - Read all instructions before using this appliance.

DANGER - To reduce the risk of electric shock disconnect your SPIRIT treadmill from the electrical outlet prior to cleaning and/or service work.

WARNING - To reduce the risk of burns, fire, electric shock, or injury to persons, install the treadmill on a flat level surface with access to a 230-volt AC, **10-amp** grounded outlet.

DO NOT USE AN EXTENSION CORD UNLESS IT IS 16AWG OR LARGER, WITH ONLY ONE OUTLET ON THE END. The treadmill should be the only appliance in the electrical circuit. DO NOT ATTEMPT TO DISABLE THE GROUNDED PLUG BY USING IMPROPER ADAPTERS, OR IN ANY WAY MODIFY THE CORD SET. A serious shock or fire hazard may result along with computer malfunctions.

- Do not operate treadmill on deeply padded, plush or shag carpet. Damage to both carpet and treadmill may result.
- Do not block the rear of the treadmill. Provide a minimum of 1 meter clearance between the rear of the treadmill and any fixed object.
- Keep children away from the treadmill. There are obvious pinch points and other caution areas that can cause harm.
- Keep hands away from all moving parts.
- Never operate the treadmill if it has a damaged cord or plug. If the treadmill is not working properly, call your dealer.
- Keep the mains cord away from heated surfaces.
- Do not operate where aerosol spray products are being used or where oxygen is being administered. Sparks from the motor may ignite a highly gaseous environment.
- Never drop or insert any object into any openings.
- Do not use outdoors.
- To disconnect, turn all controls to the off position, remove tether cord, then remove the plug from the outlet.
- Do not attempt to use your treadmill for any purpose other than for the purpose it is intended.
- The pulse sensors are not medical devices. Various factors, including the user's movement, may affect the accuracy of heart rate readings. The pulse sensors are intended only as exercise aids in determining heart rate trends in general.
- Use handrails provided; they are for your safety.
- Wear proper shoes. High heels, dress shoes, sandals or bare feet are not suitable for use on your treadmill. Quality athletic shoes are recommended to avoid leg fatigue.

Remove tether cord after use to prevent unauthorized treadmill operation. SAVE THESE INSTRUCTIONS - THINK SAFETY!

Important Electrical Information

WARNING!

NEVER use a RCD - Residual Current Device (U.S. ver.= GFCI) - wall outlet with this treadmill. As with any appliance with a large motor, the RCD/GFCI will trip often. Route the power mains cord away from any moving part of the treadmill including the elevation mechanism and transport wheels.

NEVER remove any cover without first disconnecting AC power. If voltage varies by ten percent (10%) or more, the performance of your treadmill may be affected. **Such conditions are not covered under your warranty.** If you suspect the voltage is low, contact your local power company or a licensed electrician for proper testing.

NEVER expose this treadmill to rain or moisture. This product is **NOT** designed for use outdoors, near a pool or spa, or in any other high humidity environment. The temperature specification is 40 degrees c, and humidity is 95%, non-condensing (no water drops forming on surfaces).

Circuit breakers: Some circuit breakers used in homes are not rated for high inrush currents that can occur when a treadmill is first turned on or even during normal use. If your treadmill is tripping the circuit breaker (even though it is the proper current rating and the treadmill is the only appliance on the circuit) but the circuit breaker on the treadmill itself does not trip, you will need to replace the breaker with a high inrush type. This is not a warranty defect. This is a condition we as a manufacture have no ability to control. This part is available through most electrical supply stores.

Grounding Instructions

This product must be grounded. If the treadmill's electrical system should malfunction or breakdown grounding provides a path of least resistance for electric current, reducing the risk of electric shock. This product is equipped with a cord having an equipment-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.

DANGER - Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product if it will not fit the outlet; have a proper outlet installed by a qualified electrician.

Important Operation Instructions

- **NEVER** operate this treadmill without reading and completely understanding the results of any operational change you request from the computer.
- Understand that changes in speed and incline do not occur immediately. Set your desired speed on the computer console and release the adjustment key. The computer will obey the command gradually.
- **NEVER** use your treadmill during an electrical storm. Surges may occur in your household power supply that could damage treadmill components.
- Use caution while participating in other activities while walking on your treadmill; such as watching television, reading, etc. These distractions may cause you to lose balance or stray from walking in the center of the belt; which may result in serious injury.
- **NEVER** mount or dismount the treadmill while the belt is moving. SPIRIT treadmills start with at a very low speed and it is unnecessary to straddle the belt during start up. Simply standing on the belt during slow acceleration is proper after you have learned to operate the unit. Always hold on to a handrail or hand bar while making control changes (incline, speed, etc.). Do not use excessive pressure on console control keys. They are precision set to function properly with little finger pressure. Pushing harder is not going to make the unit go faster or slower. If you feel the buttons are not functioning properly with normal pressure contact your SPIRIT dealer.

Safety Tether Cord

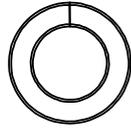
A safety tether cord is provided with this unit. It is a simple magnetic design that should be used at all times. It is for your safety should you fall or move too far back on the tread-belt. Pulling this safety tether cord will stop tread-belt movement.

To Use:

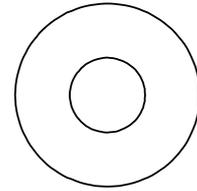
1. Place the magnet into position on the console control head. Your treadmill will not start and operate without this.
2. Fasten the plastic clip onto your clothing securely to assure good holding power. **Note:** The magnet has strong enough power to minimize accidental, unexpected stopping. The clip should be attached securely to make certain it does not come off. Be familiar with its function and limitations. The treadmill will stop, depending on speed, with a one to two step coast anytime the magnet is pulled off the console. Use the red Stop / Pause switch in normal operation.

Assembly Pack Check List

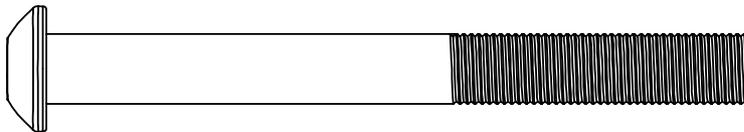
Step1



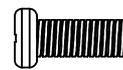
#58 - 3/8"
Split Washer (6 pcs)



#59 - 3/8"
Flat Washer (6 pcs)

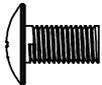


#104 – 3/8" x 3-3/4"
Button Head Socket Bolt (6 pcs)

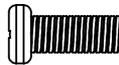


#73 – M5 x 12mm
Phillips Head Screw (4 pcs)

Step2



#110 - M5 x 10mm
Phillips Head Screw
(2 pcs)



#73 - M5 x 12mm
Phillips Head Screw
(1 pcs)

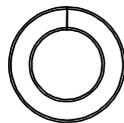


#125 - M5
Star Washer (1 pc)

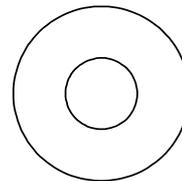


#112 - M5 x 30mm
Phillips Head Screw
(2 pcs)

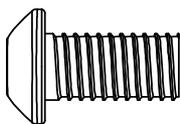
Step3



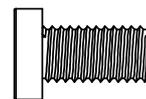
#58 - 3/8"
Split Washer (6 pcs)



#59 - 3/8"
Flat Washer (6 pcs)



#105 – 3/8" x 3/4"
Button Head Socket Bolt (6 pcs)

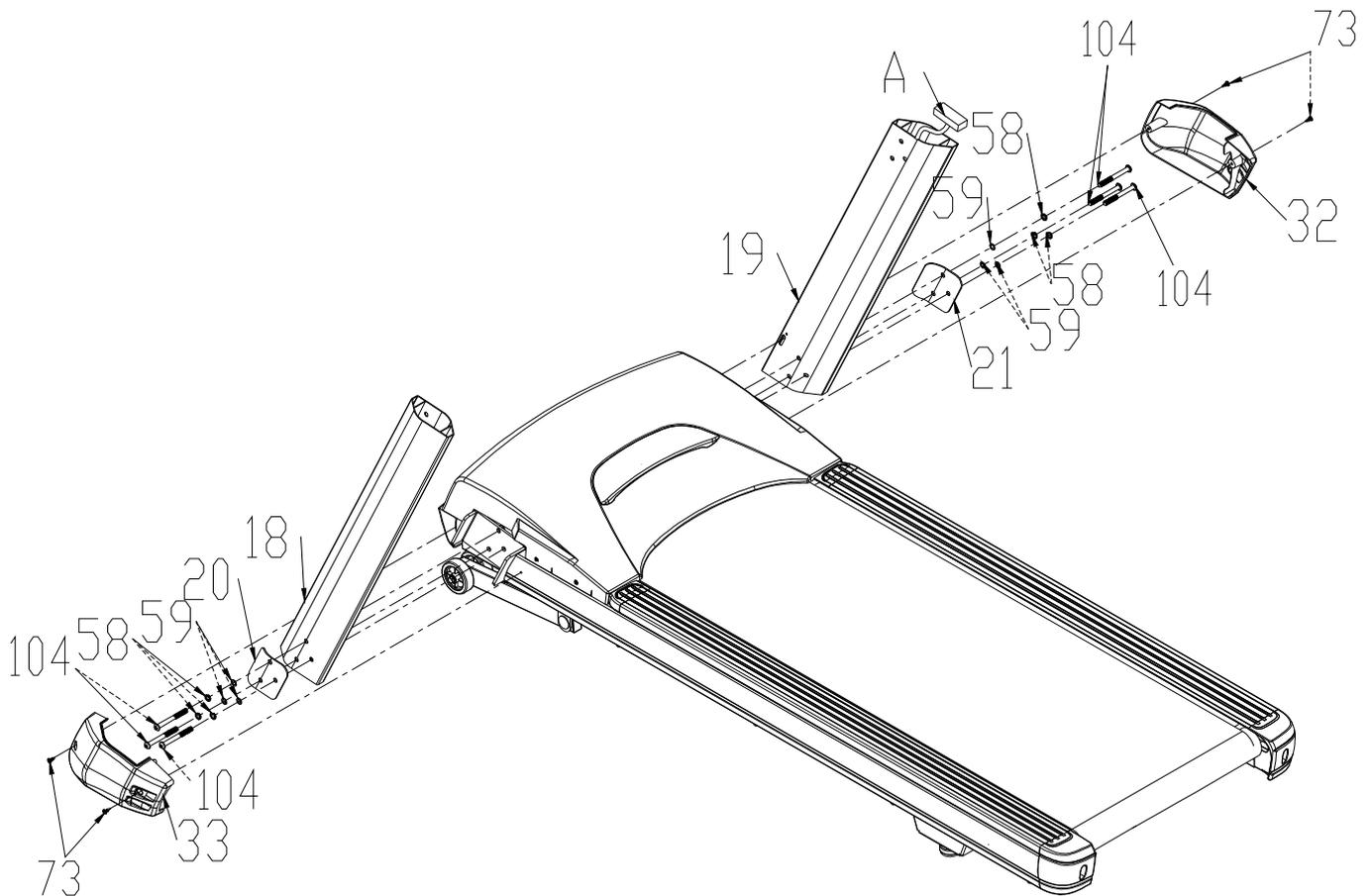


#108 – M8 x 12mm
Socket Cap Bolt (6 pcs)

Assembly Instructions

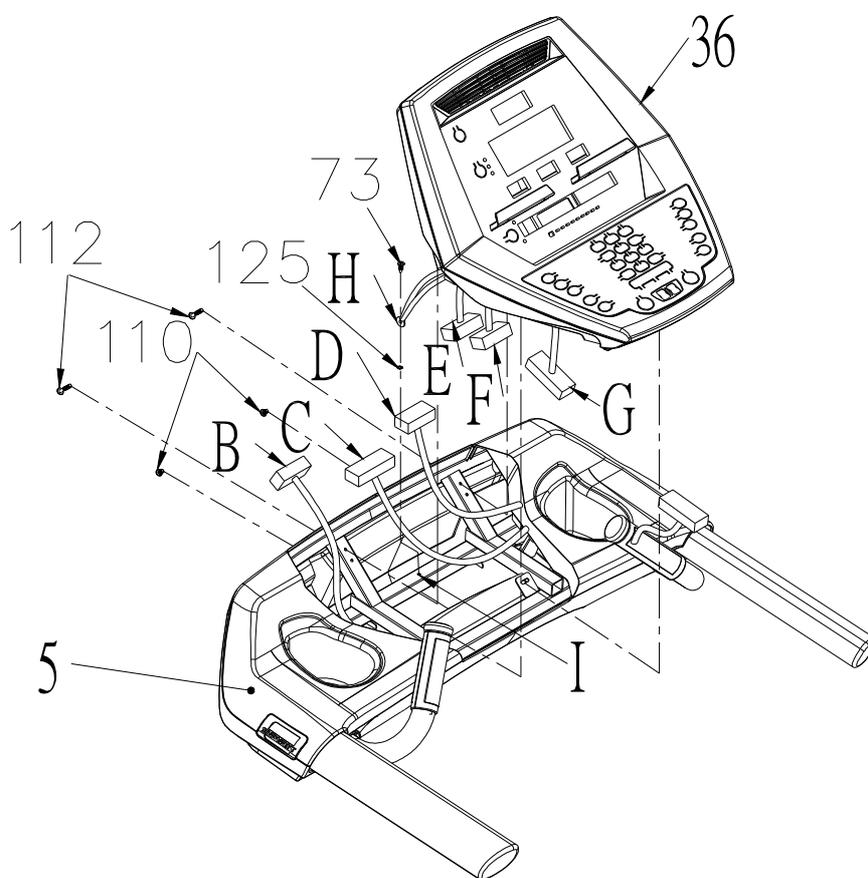
Step 1: Upright Tubes

- The right side upright tube (19) has the computer cable (A)(87) pre-installed. Lift the tube off the walking surface and attach it to the base frame. You need to gently pull on the computer cable as you line up the upright tube, taking the slack out, so the cable does not get pinched between the tube and the base frame. Assemble one 3/8" x 3-3/4" bolt (104), 3/8" split washer (58) and 3/8" flat washer (59) through the top hole in the retaining plate (21), and corresponding top hole in the upright tube, and screw into the base frame. Now install the other two bolts (104) and washers (58 & 59) and tighten all three securely.
- Install the left upright (18) in the same manner.
- Install the lower side caps (32 & 33) with four M5 x 12mm screws (73).



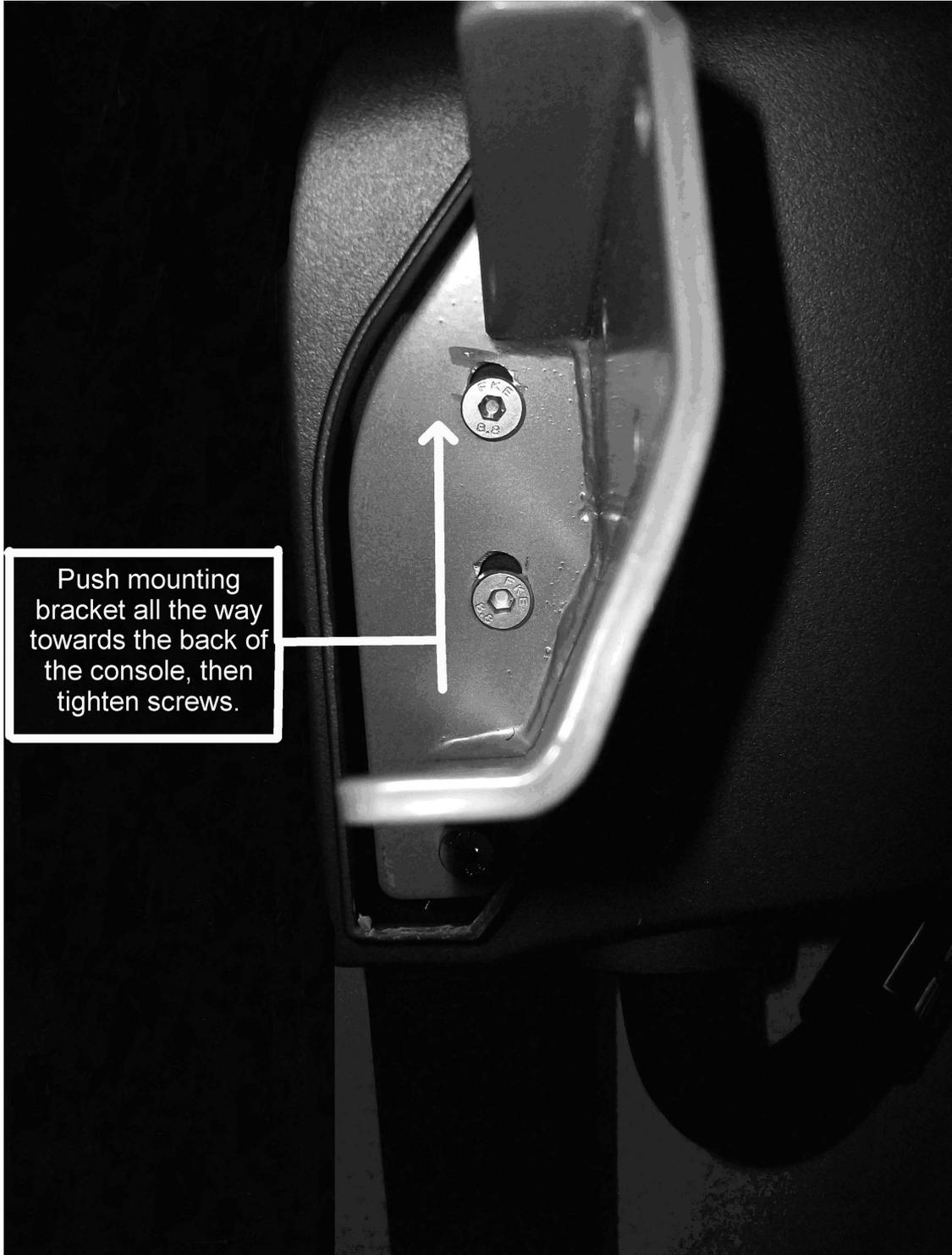
Step 2: Console Assembly

- Connect together the mating computer cables (G(86) & C(120)), hand pulse cables (D(122) & F(88), right and B(28) & E(88), Left) and attach the ground cable (H)(121) to the hole (I) in the steel frame with a M5 x 12 mm screw (73) and a M5 star washer (125) .
- Mount the console (36) to the handle bar frame (5) with two M5 x 30mm screws (112) and two M5 x 10mm screws (110).



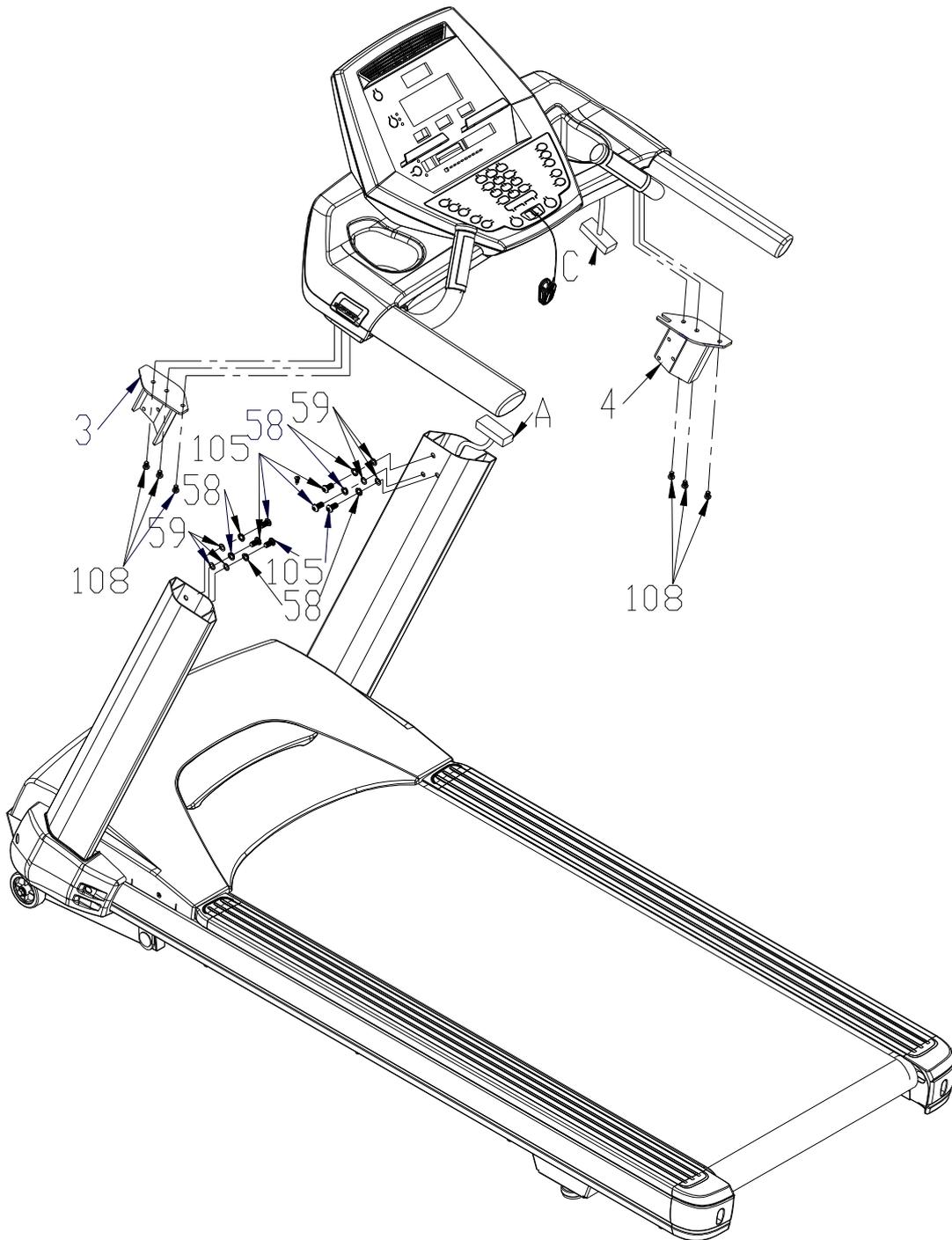
IMPORTANT ASSEMBLY INSTRUCTION

When assembling the console mounting interface brackets (Items 3&4) please be sure to slide the brackets all the way towards the back of the console before tightening the bolts.



Step 3: Console Assembly to Upright Tubes

- Attach the two interface mounts (3 left & 4 right) to the console assembly frame with six M8 x 12mm screws (108).
- Connect the console computer cable (C)(120) to the mating cable (A)(87) from the upright tube.
- Attach the console assembly to the top of the uprights with six 3/8" x 3/4" bolt (105), 3/8" split washer (58) and 3/8" flat washer (59). Be careful not to pinch the computer cable.



Operation of Your Treadmill

Getting familiar with the control panel

■ Console



Getting Started:

Power the treadmill on by plugging it into an appropriate wall outlet, then turn on the power switch located at the front of the treadmill below the motor hood. Ensure that the safety key is installed, as the treadmill will not power on without it.

When the power is turned on, all the lights on the display will light for a short time. Then the **Time** and **Distance** windows will display Odometer readings for a short time. The **Time** window will show how many hours the treadmill has been in use and the **Distance** window will show how many Kilometers (or Miles if the treadmill is set to english readings; see maintenance for changing settings) the treadmill has gone. A message will be displayed showing the current software version. The treadmill will then enter idle mode, which is the starting point for operation.

Quick-Start Operation:

- Press and release any key to wake display up if not already on.
- Press and release the **Start** key to **begin belt movement** at 0.8 kph, then adjust to the desired speed using the **Fast / Slow** keys. You may also use the rapid speed keys 3 through 9 to set to a specific speed directly.
- To slow tread-belt press and hold the **Slow** key (console or hand rail) to the desired speed. You may also press the rapid speed adjust keys, 3 through 9.
- To stop the tread-belt press and release red **Stop** key.

TREADMILL FEATURES:

Pause/Stop/Reset:

- When the treadmill is running the pause feature may be utilized by pressing the red **Stop** key once. This will slowly decelerate the tread-belt to a stop. The Time, Distance and Calorie readings will hold while the unit is in the pause mode. After 5 minutes the display will reset and return to the start up screen.
- To resume your exercise when in Pause mode, press the **Start** key.
- Pressing the **Stop** key twice will end the program and a workout summary will be displayed. If the **Stop** button is pressed a third time, the console will return to the idle mode (start up) screen.
- If the **Stop** button is held down for more than 3 seconds the console will reset.
- When you are setting data, such as age and time, for a program pressing the stop key will allow you to go back one step for each key press.

Incline:

- Incline may be adjusted anytime after the belt starts moving.
- Press and hold the **Adjust ▲ ▼** keys to achieve desired level of effort. You may also choose a more rapid increase / decrease by selecting a quick key, 2 through 6, on left hand side of console (incline).
- The display will indicate incline numbers as percent of grade (the same as grade of a road) as adjustments are made.

Dot Matrix Center Display:

Ten rows of dots indicate each level of a workout in manual mode. The dots are only to show an approximate level (speed/incline) of effort. They do not necessarily indicate a specific value - only an approximate percent to compare levels of intensity. In Manual Operation the Speed / Incline dot matrix window will build a profile "picture" as values are changed during a workout. There are twenty-four columns, indicating time. The 24 columns are divided into 1/24th of the total time of the program. When the time is counting up from zero (as in quick start) each column represents 1 minute.

Next to the Dot Matrix window are three LED lights labeled: Track, Speed and Incline, along with a display button. When the Track LED is lit the dot matrix displays the Track profile, when the Speed LED is lit the Dot matrix displays the Speed profile and when the Incline LED is lit the Dot Matrix displays the Incline profile. You may change the Dot Matrix profile view by pressing the Display button. After scrolling through the three profiles the Dot matrix will automatically scroll through the three displays showing each one for four seconds. The LED associated with each profile will blink while that view is displayed. One more press of the Display button will return you to the Track profile.

0.4 km Track:

The 0.4km track (1/4 mile) will be displayed around the dot matrix window. The flashing dot indicates your progress. In the center of the track there is a lap counter for reference.

Heart Rate Feature:

The Pulse (Heart Rate) window will display your current heart rate in beats per minute during the workout. You must use both left and right stainless steel sensors to pick up your pulse. Pulse values are displayed anytime the computer is receiving a Grip Pulse signal. You may use the Grip Pulse feature while in Heart Rate Control. The TREADMILL will also pick up wireless heart rate transmitters that are Polar compatible, including coded transmissions.

Heart Rate Bar Graph:

Displays a graphical representation of your heart rate as a percentage of your maximum heart rate. When you enter your age during programming, the console will calculate your maximum heart rate then light up the graph to show the percent of maximum heart rate you are currently achieving.

Message Window Display:

Displays messages that help guide you through the programming process. During a program the message window displays your workout data.

To Turn Treadmill Off:

The display will automatically turn off (go to sleep) after 30 minutes of inactivity. This function is called sleep mode. In sleep mode, the treadmill will power down most everything except for a minimum of circuitry for detecting key presses and the safety key so it will start up again if these are activated. There is only a tiny amount of current used in sleep mode (about the same as your TV when it is turned off) and it is perfectly fine to leave the main power switch on in sleep mode. Of course you may also remove the safety key or turn off the main power switch to power down the treadmill.

Programmable Features

The New SPIRIT TREADMILL offers five preset programs, a Custom facility defined program, two heart rate control programs, a Gerkin protocol based Fitness Test and one Manual program.

To Select and Start a Preset Program:

- Select a program then press the enter key to begin customizing the program with your personal data, or just press the start key to begin the program with the default settings.
- After selecting a program and pressing enter to set your personal data, the **Time** window will blink with the default value of 20 minutes. You may use any of the up/down keys to adjust the time. After adjusting the time, press enter. (Note: You may press start at any time during the programming to begin with only settings you have modified at that point).
- The **Incline** window will now be blinking a value indicating your **Age**. Entering the correct Age will affect the Heart rate bar graph accuracy and also needed for the HR programs. Use the Up/Down keys to adjust, and then press enter.
- The **Distance** window will now be blinking a value indicating your **Bodyweight**. Entering your correct bodyweight affects the Kcal readout accuracy. Use the Up/Down keys to adjust, and then press enter.
- The **Speed** window will now be blinking, showing the preset top speed of the selected program. Use the Up/Down keys to adjust, and then press enter. Each program has various speed changes throughout; this allows you to limit the highest speed the program will attain during your workout.
- Now press the Start key to begin your workout.
- There will be a 3 minute warm-up to begin. You can press the start button to bypass this and go straight to the workout. During the warm-up the clock will count down from 3 minutes.

Preset programs speed and incline settings

The preset program speed and incline levels are shown in the chart below. The Speed numbers shown in the chart indicate a percentage of the top speed of the program. For instance, the first Speed setting for P1 (Program 1, HILL) shows the number 20. This means that this segment of the program will have a speed that is 20% of the top speed for the program (The user sets the top speed in the procedure above). If the user sets the top speed to 10 mph, then the first segment will be 2 mph. You will notice that segment 12 shows 100 which means, the speed will be set to 100% of 10 mph or simply 10 mph.

Prog	SEG	Warm up	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Cool down				
P1	Speed	20	30	40	50	60	60	70	70	70	70	80	80	70	80	80	100	100	70	80	80	80	70	60	60	50	40	30	20		
	Incline	0	0	0	0	1	2	3	3	4	3	3	4	4	5	3	3	4	3	3	4	4	5	4	3	1	1	0	0	0	
P2	Speed	20	30	40	50	60	60	70	80	100	100	100	100	100	100	100	100	100	100	100	100	100	100	80	70	60	50	40	30	20	
	Incline	0	0	0	0	1	2	3	3	3	4	5	3	3	4	3	3	2	2	3	4	5	6	4	2	1	0	0	0	0	
P3	Speed	20	30	40	50	60	60	70	70	70	80	70	70	80	80	60	70	80	80	70	70	100	70	80	60	60	50	40	30	20	
	Incline	0	0	0	0	1	1	1	2	2	3	2	2	3	3	1	2	3	3	2	2	4	4	2	3	1	1	0	0	0	
P4	Speed	20	30	40	50	60	60	70	80	100	60	60	70	80	100	60	70	100	60	70	100	60	70	80	70	60	60	50	40	30	20
	Incline	0	0	0	0	1	2	3	5	6	2	3	5	6	7	2	3	7	2	3	8	2	3	5	4	3	1	0	0	0	

P1= Hill ; P2=Fatburn; P3=Cardio; P4=Interval

Custom Program:

- Select the Custom program then press **Enter**. Note that the dot matrix display portion will light a single row of dots at the bottom (Unless there is a previously saved program).
- The clock (Time) window will be flashing. Use the up and down adjustment keys to set the program for the desired time. Press the **ENTER** key. This is a must to continue even if the time is not adjusted.
- The **Incline** window will now be blinking a value indicating your **Age**. Entering the correct Age will affect the Heart rate bar graph accuracy. Use the Up/Down keys to adjust and then press enter.
- The **Distance** window will now be blinking a value indicating your **Bodyweight**. Entering your correct bodyweight affects the Kcal readout accuracy. Use the Up/Down keys to adjust, and then press enter.
- The first speed setting column (segment) will now be blinking. Using the **Fast / Slow** keys, adjust the speed to your desired effort level for the first segment then press enter. The second column will now be blinking. Note that the previous segment value has been carried over to the new segment. Repeat the above process until all segments have been programmed.
- The first column will be blinking again. The console is now ready for the incline settings. Repeat the same process used to set the speed values for programming the segments for incline.
- Press the **Start** button to begin the workout and also save the program to memory.

5K Run:

This program automatically sets a 5k (5 kilometer) distance as your goal. The track display will show one loop that is the equivalent of 5 kilometers and the Distance window will also show 5k to start. When the program begins the Distance will count down; once it reaches zero the program ends.

*Please note that the Speed readout is in MPH if the console is not set to Metric readings.

Fitness Test:

The fitness test is based on the Gerkin protocol, also known as the fireman's protocol, and is a submax Vo2 (volume of oxygen) test. The test will increase speed and elevation alternately until you reach 85% of your Max heart rate. The time it takes for you to reach 85% determines the test score as shown in the chart below.

Stage	Time	Speed	Grade	VO2 Max
1	0 to 1:00	4.5mph	0%	31.15
2.1	1:15	4.5mph	2%	32.55
2.2	1:30	4.5mph	2%	33.6
2.3	1:45	4.5mph	2%	34.65
2.4	2:00	4.5mph	2%	35.35
3.1	2:15	5.0mph	2%	37.45
3.2	2:30	5.0mph	2%	39.55
3.3	2:45	5.0mph	2%	41.3
3.4	3:00	5.0mph	2%	43.4
4.1	3:15	5.0mph	4%	44.1
4.2	3:30	5.0mph	4%	45.15
4.3	3:45	5.0mph	4%	46.2
4.4	4:00	5.0mph	4%	46.5
5.1	4:15	5.5mph	4%	48.6
5.2	4:30	5.5mph	4%	50
5.3	4:45	5.5mph	4%	51.4
5.4	5:00	5.5mph	4%	52.8
6.1	5:15	5.5mph	6%	53.9
6.2	5:30	5.5mph	6%	54.9
6.3	5:45	5.5mph	6%	56
6.4	6:00	5.5mph	6%	57
7.1	6:15	6.0mph	6%	57.7
7.2	6:30	6.0mph	6%	58.8
7.3	6:45	6.0mph	6%	60.2
7.4	7:00	6.0mph	6%	61.2
8.1	7:15	6.0mph	8%	62.3
8.2	7:30	6.0mph	8%	63.3
8.3	7:45	6.0mph	8%	64
8.4	8:00	6.0mph	8%	65
9.1	8:15	6.5mph	8%	66.5
9.2	8:30	6.5mph	8%	68.2
9.3	8:45	6.5mph	8%	69
9.4	9:00	6.5mph	8%	70.7
10.1	9:15	6.5mph	10%	72.1
10.2	9:30	6.5mph	10%	73.1
10.3	9:45	6.5mph	10%	73.8
10.4	10:00	6.5mph	10%	74.9
11.1	10:15	7.0mph	10%	76.3
11.2	10:30	7.0mph	10%	77.7
11.3	10:45	7.0mph	10%	79.1
11.4	11:00	7.0mph	10%	80

Before the test:

- Make sure you are in good health; check with your physician before performing any exercise if you are over the age of 35 or persons with pre-existing health conditions.
- Make sure you have warmed up and stretched before taking the test.
- Do not take in caffeine before the test.
- If using the hand pulse sensors hold the hand grips gently, do not tense up.

Fitness test programming:

1. Press the Fit-test button and press enter.
2. The message window will ask you to enter your **Age**. You may adjust the age setting, shown in the Incline window, using the Up and Down keys then press the Enter key to accept the new number and proceed on to the next screen.
3. You are now asked to enter your **Weight**. You may adjust the weight setting, shown in the Distance window, using the Up and Down keys then press enter to continue.
4. Now press Start to begin the test.

During the test:

- The console must be receiving a steady heart rate for the test to begin. You may use the hand pulse sensors or wear a heart rate chest strap transmitter.
- The test will start with a 3 minute warm-up at 4.8kph (3mph) before the actual test begins.
- The data shown during the test is:
 - a. **Time** indicates total elapsed time
 - b. **Incline** in percent grade
 - c. **Distance** in Miles or Kilometers depending on preset parameter.
 - d. **Speed** in MPH or KPH depending on preset parameter.
 - e. **Target** Heart Rate and **Actual** Heart Rate are shown in the message window.

After the test:

- Cool down for about one to three minutes.
- Take note of your score because the console will automatically return to the start-up mode after a few minutes.

What your score means:

VO2max Chart for males and very fit females

	18-25 years old	26-35 years old	36-45 years old	46-55 years old	56-65 years old	65+ years old
excellent	>60	>56	>51	>45	>41	>37
good	52-60	49-56	43-51	39-45	36-41	33-37
above average	47-51	43-48	39-42	35-38	32-35	29-32
average	42-46	40-42	35-38	32-35	30-31	26-28
below average	37-41	35-39	31-34	29-31	26-29	22-25
poor	30-36	30-34	26-30	25-28	22-25	20-21
very poor	<30	<30	<26	<25	<22	<20

VO2max Chart for females and de-conditioned males

	18-25 years old	26-35 years old	36-45 years old	46-55 years old	56-65 years old	65+ years old
excellent	56	52	45	40	37	32
good	47-56	45-52	38-45	34-40	32-37	28-32
above average	42-46	39-44	34-37	31-33	28-31	25-27
average	38-41	35-38	31-33	28-30	25-27	22-24
below average	33-37	31-34	27-30	25-27	22-24	19-22
poor	28-32	26-30	22-26	20-24	18-21	17-18
very poor	<28	<26	<22	<20	<18	<17

Target Heart Rate

• The old motto, “no pain, no gain”, is a myth that has been overpowered by the benefits of exercising comfortably. A great deal of this success has been promoted by the use of heart rate monitors. With the proper use of a heart rate monitor, many people find that their choice of exercise intensity is either too high or too low and exercise is much more enjoyable by maintaining their heart rate in the desired benefit range.

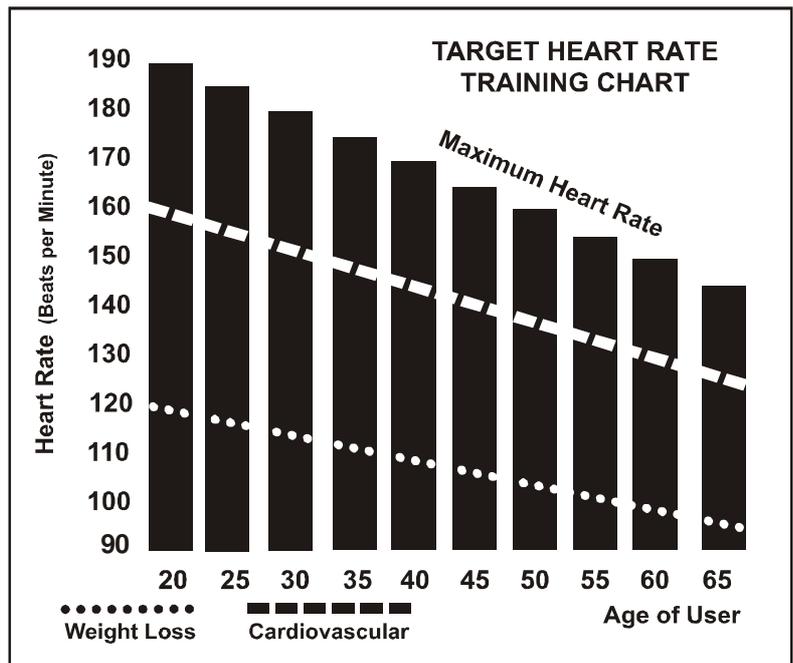
• To determine the benefit range in which you wish to train, you must first determine your Maximum Heart Rate, which is the highest your heart rate should go to. This can be accomplished by using the following formula:

$$220 - \text{User's Age} = \text{Maximum Heart Rate}$$

(If you enter your age during programming of the console the console will perform this calculation automatically).

This is used for the HR control programs and also for the Heart rate bar graph. After calculating your Maximum Heart Rate, you can decide upon which goal you would like to pursue. The two most popular goals of exercise are cardiovascular fitness (training for the heart and lungs) and weight control. The black columns on the chart above represent the Maximum Heart Rate for a person whose age is listed at the bottom of each column. The heart rate training zone for either cardiovascular fitness or weight loss is represented by two different lines, which cut diagonally through the chart. A definition of the lines' goal is in the bottom left-hand corner of the chart. If your goal is cardiovascular fitness or if it is weight loss, it can be achieved by training at 80% or 60%, respectively, of your Maximum Heart Rate on a schedule approved by your physician. Consult your physician before participating in any exercise program.

With all SPIRIT Heart Rate Control treadmills, you may use the heart rate monitor feature without using the Heart Rate Control program. This function can be used during any of the different programs. The Heart Rate Control program automatically controls incline.



CAUTION!

The target value used in HR-1 and HR-2 programs is a suggestion only for normal, healthy individuals. Do not exceed your limits! You may not be able to obtain your chosen target. If in question, enter a higher age value that will set a lower target goal.

Using a Heart Rate Transmitter (Optional)

How to wear your wireless chest strap transmitter:

1. Attach the transmitter to the elastic strap using the locking parts.
2. Adjust the strap as tightly as possible as long as the strap is not too tight to remain comfortable.
3. Position the transmitter with the logo centered in the middle of your body facing away from your chest (some people must position the transmitter slightly left of center). Attach the final end of the elastic strap by inserting the round end and, using the locking parts, secure the transmitter and strap around your chest.
4. Position the transmitter immediately below the pectoral muscles.
5. Sweat is the best conductor to measure very minute heart beat electrical signals. However, plain water can also be used to pre-wet the electrodes (2 black square areas on the reverse side of the belt and either side of transmitter). It's also recommended that you wear the transmitter strap a few minutes before your work out. Some users, because of body chemistry, have a more difficult time in achieving a strong, steady signal at the beginning. After "warming up", this problem lessens. As noted, wearing clothing over the transmitter/strap doesn't affect performance.
6. Your workout must be within range - distance between transmitter/receiver – to achieve a strong steady signal. The length of range may vary somewhat but generally stay close enough to the console to maintain good, strong, reliable readings. Wearing the transmitter immediately against bare skin assures you of proper operation. If you wish, you may wear the transmitter over a shirt. To do so, moisten the areas of the shirt that the electrodes will rest upon.

Erratic Operation:

Caution! Do not use this treadmill for Heart Rate Control unless a steady, solid Actual Heart Rate value is being displayed. High, wild, random numbers being displayed indicate a problem.

Areas to look for on interference:

- (1) Treadmill not properly grounded - **A must!**
- (2) Microwave ovens, TV's, small appliances, etc.
- (3) Fluorescent lights.
- (4) Some household security systems.
- (5) Perimeter fence for a pet.
- (6) The antenna that picks up your heart rate is very sensitive. If there is an outside noise source, turning the whole machine 90 degrees may de-tune the interference.
- (7) If you continue to experience problems contact your dealer.

WARNING!

DO NOT USE THE HEART RATE CONTROL PROGRAM IF YOUR HEART RATE IS NOT REGISTERING PROPERLY ON THE TREADMILL'S DISPLAY!

Heart Rate Control

How the Heart Rate Control Program Works:

Heart Rate Control (HRC) uses your treadmill's incline system to adjust your heart rate. Increases and decreases in elevation affect heart rate much more efficiently than changes in speed alone. The HRC program automatically changes elevation gradually to achieve the programmed target heart rate.

Heart rate Auto-Pilot feature

This unique feature allows the user to instantly enter the Heart Rate Control mode at any time with the press of a button. The HR2 program button also doubles as the Auto-Pilot button. During any program the user may press the Auto-Pilot button to enter the HRC program. Your current heart rate (the heart rate you are at when you press Auto-Pilot) will be maintained automatically by the Auto-Pilot program. You may press the elevation/incline up or down buttons to change your target heart rate while in the Auto-Pilot mode.

Selecting a Heart Rate Control Program:

You have the option, during the setup mode, to choose either the Weight Control (HR-1) program or the Cardiovascular (HR-2) program. The Weight Control program will maintain your heart rate at 70% of your Maximum Heart Rate. The Cardiovascular program will maintain your heart rate at 90% of your Maximum Heart Rate. Your Maximum Heart Rate is based upon a formula that subtracts your age from a constant of 220. Your HR setting is automatically calculated during the setup mode when you enter your age.

Heart Rate Control programming

You must receive a strong / steady value in heart rate window or the program will not start.

- Press HR1 or HR2 button.
- The Pulse window will be blinking, showing the default HR for this program. You may adjust it and press enter if you want or just press enter to accept the default value.
- The Calorie will now be blinking showing bodyweight. Adjust and press enter or press enter to accept default.
- The Pulse window will now be blinking showing age. Adjust and press enter or press enter to accept default. Adjusting Age will change the Target HR value.
- The Time window will now be blinking. Adjust the time and press enter.
- Press Start to begin program.

During the program you may increase or decrease the target heart rate by pressing the incline up or down buttons.

Auto-Pilot:

The HR2 button also serves another purpose, Auto-Pilot. This feature is used when you are in any program and will automatically switch to Heart Rate Control when the Auto-Pilot key (HR2 key) is pressed.

When to use Auto-Pilot: If you have started a program already and you reach a Heart Rate you would like to stay at, just press the Auto-Pilot key and the console will switch to heart rate control and keep you at your present heart rate.

General Maintenance

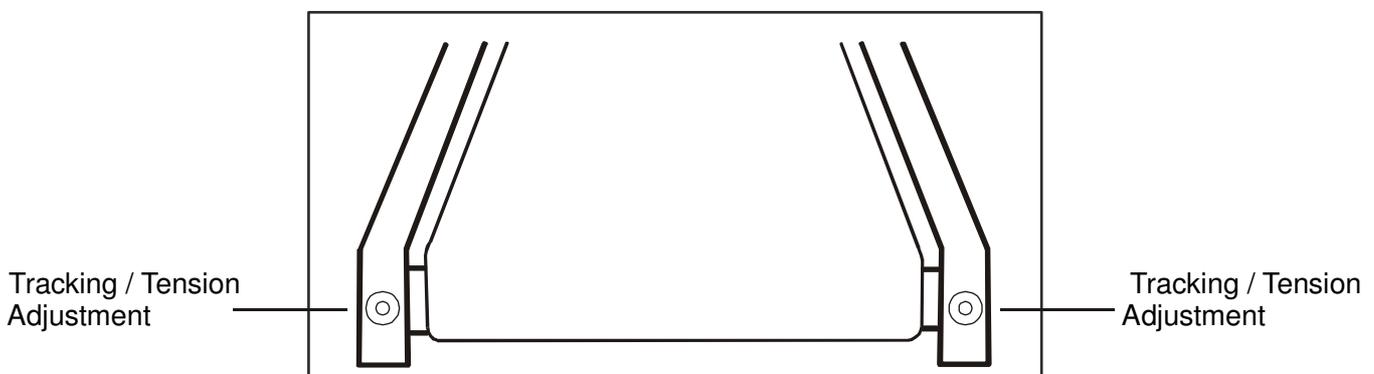
Belt and Bed - Your treadmill uses a very high-efficient low-friction bed. Performance is maximized when the bed is kept as clean as possible. Use a soft, damp cloth or paper towel to wipe the edge of the belt and the area between the belt edge and frame. Also reach as far as practical directly under the belt edge. This should be done once a month to extend belt and bed life. Use water only - no cleaners or abrasives. A mild soap and water solution along with a nylon scrub brush will clean the top of the textured belt. **Allow the belt to dry before using.**

Belt Dust - This occurs during normal break-in or until the belt stabilizes. Wiping excess off with a damp cloth will minimize buildup.

General Cleaning - Dirt, dust, and pet hair can block air inlets and accumulate on the running belt. On a monthly basis: vacuum underneath your treadmill to prevent buildup. Once a year, you should remove the black motor hood and vacuum out dirt that may accumulate. **UNPLUG POWER CORD BEFORE THIS TASK.**

BELT ADJUSTMENTS:

Tread-belt Tension Adjustment - Adjustment must be made from the rear roller. The adjustment bolts are located at the end of the step rails in the end caps, as noted in diagram below.



Note: Adjustment is through small hole in the end cap.

Tighten the rear roller bolts only enough to prevent slippage at the front roller. Turn both tread-belt tension adjustment bolts in increments of 1/4 turn each and inspect for proper tension by walking on the belt at a low speed, making sure the belt does not slip. Keep tensioning the bolts until the belt stops slipping.

- **If you feel the belt is tight enough, but it still slips, the problem may be a loose Motor drive belt under the front cover.**

DO NOT OVERTIGHTEN – Over tightening will cause belt damage and premature bearing failure.

TREADBELT TRACKING ADJUSTMENT:

The performance of your treadmill is dependent on the frame running on a reasonably level surface. If the frame is not level, the front and back roller cannot run parallel, and constant belt adjustment may be necessary.

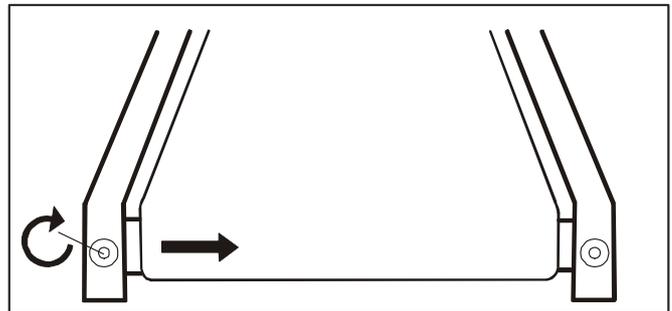
The treadmill is designed to keep the tread-belt reasonably centered while in use. It is normal for some belts to drift near one side while the belt is running with no one on it. After a few minutes of use, the tread-belt should have a tendency to center itself. If, during use, the belt continues to move toward one side, adjustments are necessary.

TO SET TREADBELT TRACKING:

A 10 mm Allen wrench is provided to adjust the rear roller. Make tracking adjustments from the **left** side only. Set belt speed at approximately 3 to 5 kph.

Remember, a small adjustment can make a dramatic difference!

Turn the bolt clockwise to move the belt to the right. Turn the bolt only a 1/4 turn and wait a few minutes for the belt to adjust itself. Continue to make 1/4 rotation turns until the belt stabilizes in the center of the running deck.



The belt may require periodic tracking adjustment depending on use and walking/running characteristics. Some users will affect tracking differently. Expect to make adjustments as required to center the tread-belt. Adjustments will become less of a maintenance concern as the belt is used. Proper belt tracking is an owner responsibility common with all treadmills.

ATTENTION:

DAMAGE TO THE RUNNING BELT RESULTING FROM IMPROPER TRACKING / TENSION ADJUSTMENTS IS NOT COVERED UNDER THE SPIRIT WARRANTY.

Service Checklist - Diagnosis Guide

Before contacting your dealer for aid, please review the following information. It may save you both time and expense. This list includes common problems that may not be covered under the treadmill's warranty.

PROBLEM	SOLUTION/CAUSE
Display does not light	<ol style="list-style-type: none"> 1) Tether cord not in position. 2) Circuit breaker on front grill tripped. Push circuit breaker in until it locks. 3) Plug is disconnected. Make sure plug is firmly pushed into 230 VAC wall outlet. 4) Breaker panel circuit breaker may be tripped. 5) Treadmill defect. Contact your SPIRIT dealer.
Tread-belt does not stay centered	The user may be walking while favoring or putting more weight on either the left or right foot. If this walking pattern is natural, track the belt slightly off-center to the side opposite from the belt movement.
Treadmill belt hesitates when walked/run on	See General Maintenance section on Tread-belt Tension. Motor drive belt may be loose.
Motor is not responsive after pressing start	<ol style="list-style-type: none"> 1) If the belt moves, but stops after a short time and the display shows "LS", run calibration (See procedure on next page). 2) If you press start and the belt never moves, then the display shows LS, contact service.
Treadmill will only achieve approximately 10 kph but shows higher speed on display	This indicates motor should be receiving power to operate. Low AC voltage to treadmill. Do not use an extension cord. If an extension cord is required it should be as short as possible and heavy duty 16 gauge minimum. Low household voltage. Contact an electrician or your SPIRIT dealer. A minimum of 220 volt AC current, 50/60 hz is required.
Tread-belt stops quickly/suddenly when tether cord is pulled	High belt/deck friction.
Treadmill trips on board 10 amp circuit	High belt/deck friction.
Computer shuts off when console is touched (on a cold day) while walking/running	Treadmill may not be grounded. Static electricity is "crashing" the computer. Refer to Grounding Instructions on page 3.
House circuit breaker trips, but not the treadmill circuit breaker.	Need to replace the house breaker with a "High inrush current" type breaker (see page 3 for details)

Calibration procedure:

- 1) Remove the safety key
- 2) Press and hold down the Start and Fast (speed up) buttons with one hand and replace the safety key with the other. Continue to hold the Start and Fast key until the window displays “Factory settings”, then press the enter key.
- 3) You will now be able to set the display to show Metric or English settings. To do this, press the up or down key to show which you want, then press enter.
- 4) Make sure the wheel size diameter is 2.98 then press enter
- 5) Adjust the minimum speed (if needed) to 0.8kph and then press enter
- 6) Adjust the maximum speed (if needed) to 20.0kph and then press enter
- 7) Adjust the maximum elevation (if needed) to 15 and then press enter
- 8) Press start to begin calibration. The process is automatic; the speed will start up without warning, so do not stand on the belt.

Adjusting the speed sensor:

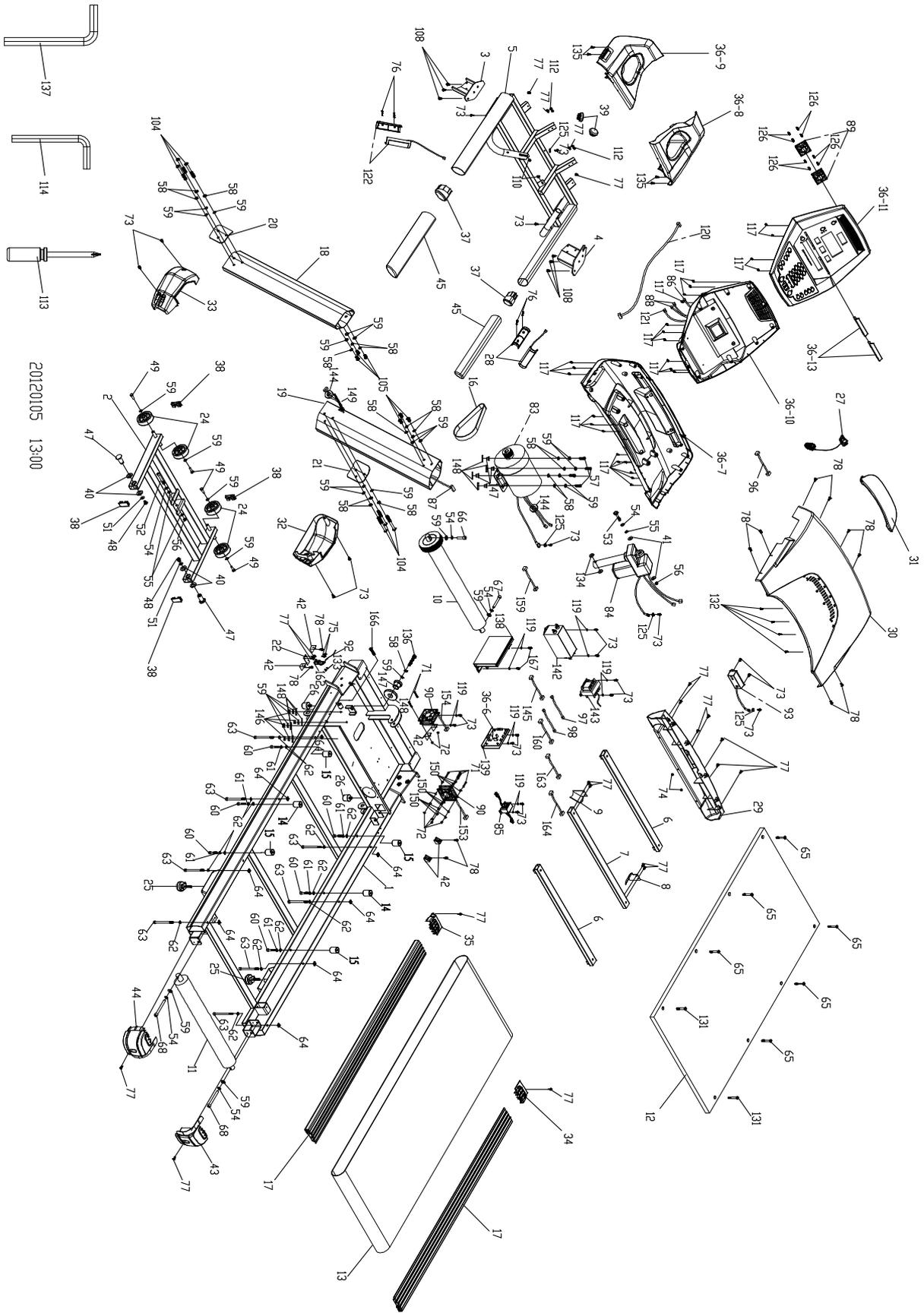
If the calibration does not pass you may need to check the speed sensor alignment.

- 1) Remove the motor cover hood.
- 2) The speed sensor is located on the left side of the frame, right next to the front roller pulley (the pulley will have a belt around it that also goes to the motor). The speed sensor is small and black with a wire connected to it.
- 3) Make sure the sensor is as close as possible to the pulley without touching it. You will see a magnet on the face of the pulley; make sure the sensor is aligned with the magnet. There is a screw that holds the sensor in place that needs to be loosened to adjust the sensor. Re-tighten the screw when finished.

Maintenance menu:

- 1) Press and hold the Start, Stop and Enter key at the same time, until the display shows “Engineering mode” (it may say maintenance menu, depending on version). Press the Enter key.
- 2) You can now scroll through the menu using the up and down keys. Use the Stop key to return to previous menu selection. The menu selections are:
 - 1) **Key Test** – Press each key to verify it is functioning correctly
 - 2) **Display test** - Lights all LED lights
 - 3) **Functions**
 - i. **Sleep** - Turns sleep mode on or off. When off, display is always lit.
 - ii. **Pause** - Turns pause mode on or off. When on, Pause lasts 5 minutes.
 - iii. **Maintenance** - Reset lube message and odometer readings
 - iv. **Units** - Set display to English or Metric readings
 - v. **Grade Return (GS Mode)** - Returns the elevation to lowest setting when pause is pressed
 - vi. **Beep** – Turns the speaker (beep sound) on or off.
 - 4) **Security** – Sets the Child Lock function. This function locks out the keypad until a pre-determined key sequence is pressed. **Key sequence = Start & Enter** held down together until unlocked.

EXPLODED VIEW DIAGRAM



PARTS LIST

Part Number	Part Description	Qty per unit
1	Main Frame	1
2	Incline Bracket	1
3	Interface Mounting Bracket, Left	1
4	Interface Mounting Bracket, Right	1
5	Console Support	1
6	Deck Cross Brace A	2
7	Deck Cross Brace B	1
8	Belt Guide Right	1
9	Belt Guide Left	1
10	Front Roller Assembly W/Pulley	1
11	Rear Roller Assembly	1
12	Running Deck	1
13	Running Belt	1
14	CushionA	2
15	CushionB	4
16	Motor Drive Belt	1
17	1380m/m_Aluminum Step Rail	2
18	Aluminum Upright (left)	1
19	Aluminum Upright (right)	1
20	Upright Retaining Plate (left)	1
21	Upright retaining Plate (right)	1
22	Hall Sensor Mounting Bracket	1
24	Transportation Wheel	4
25	Leveling Glide	2
26	Rubber Stop, Incline	2
27	Safety Key	1
28	Handpulse Sensor Assembly w/cable (B)(left)	1
29	Front Cover	1
30	Motor Top Cover	1
31	Motor Cover I.D. Plate	1
32	Motor Base Cap (R)	1
33	Motor Base Cap (L)	1
34	Step Rail Cap (R)	1
35	Step Rail Cap (L)	1
36	Console	1
36-6	Incline Interface Board	1
36-7	Console Bottom Cover	1
36-8	Console AccessoryTray, Right	1
36-9	Console AccessoryTray, Left	1
36-10	Console Case, Back	1
36-11	Console Case, Front	1
36-13	Book Rack	2
37	Oval Eye Tube Endcap	2
38	□25 × 50m/m_End Cap	4

Part Number	Part Description	Qty per unit
39	Round End Cap	2
40	Incline Carriage Spacer	4
41	Ø10 × Ø25 × 0.8T_Nylon Washer	2
42	Motor Cover Anchor	6
43	Rear Roller End Cap, Right	1
44	Rear Roller End Cap, Left	1
45	Handgrip Foam	2
47	Ø18 × Ø19 × 41L_Carriage Bolt	2
48	M8 × 1.25 × 12m/m_Hex Head Bolt	2
49	3/8"-16 × 25L_Hex Head Bolt	4
51	Ø8.5 × 20 × 3.0T_Flat Washer	2
52	M10 × 65L_Hex Head Bolt	1
53	M10 × 50L_Hex Head Bolt	1
54	Ø10 × 1.5T_Split Washer	6
55	Ø10 × Ø19 × 1.5T_Flat Washer	3
56	M10_Nyloc Nut	2
57	3/8"-16 × 1-1/2" Socket Head Cap Bolt	4
58	3/8" × 16.5 × 2.0 × 4H_Split Washer	17
59	Ø3/8" × 25 × 2T_Flat Washer	29
60	M8 × 1.25 × 40L_Socket Head Cap Bolt	6
61	Ø8 × 1.5T_Split Washer	6
62	Ø8 × 16 × 1T_Flat Washer	14
63	M8 × 1.25 × 110L_Socket Head Cap Bolt	8
64	M8 × 1.25 × 6.5T_Square shape cap nut	8
65	M8 × 1.25 × 55L_Flat Head Countersink Bolt	6
66	M10 × 1.5 × 40L_Socket Head Cap Bolt	1
67	M10 × 1.5 × 80L_Socket Head Cap Bolt	1
68	M10 × 1.5 × 100L_Socket Head Cap Bolt	2
71	M3 × 50L_Phillips Head Screw	6
72	M3_Nyloc Nut	6
73	M5 × 12L_Phillips Head Screw	22
74	M5_Nyloc Nut	2
75	3.5 × 12L_Tapping Screw	2
76	M3 × 20L_Self Tapping Screw	4
77	M5 × 12L_Tapping Screw	21
78	M5 × 15L_Sheet Metal Screw	12
83	Motor Assembly	1
84	Incline Motor	1
85	Step Down Transformer	1
86	Computer Cable(G) (Upper) _400m/m	1
87	Computer Cable(A) (Lower) 1700m/m	1
88	Handpulse Wires(E&F) (Upper) (Top) _500m/m	1
89	Console Fan	1
90	Motor Compartment Fan	2
92	Reed Sensor w/1300m/m Wire	1
93	A.C. Input Module	1
96	Power Line Cord	1
97	450m/m_Connecting Wire, White	1

Part Number	Part Description	Qty per unit
98	450m/m Connecting Wire, Black	1
104	3/8"-16 × 3-3/4" Button Head Socket Bolt	6
105	3/8"-16 × 3/4" Button Head Socket Bolt	6
108	M8 × 1.25 × 12L Socket Head Cap Bolt	6
110	M5 × 10L Phillips Head Screw	2
112	M5 × 30L Phillips Head Screw	2
113	Phillips Head Screw Driver	1
114	8m/m L Allen Wrench	1
117	M3.5 × 12L Sheet Metal Screw	26
119	M5 Split Washer	12
120	Computer Cable(C) (Middle) 600m/m	1
121	Ground Wire(H) 470m/m	1
122	Handpulse Sensor Assembly /W cable(D) (Right)	1
125	M5 Star Washer	4
131	M8 × 1.25 × 35L Flat Head Countersink Bolt	2
132	3.5 × 8L Tapping Screw	4
133	3.5 × 12L Sheet Metal Screw	2
134	Ø10 × Ø24 × 3T Nylon Washer	2
135	M3 × 15L Sheet Metal Screw	4
136	3/8"-16 × 2" Hex Head Bolt	1
137	3/8" L Allen Wrench	1
138	A.C. Inverter, Motor	1
139	L type sheet metal for control board	1
142	Filter	1
143	Choke	1
144	O ring for eliminate magnet	2
145	6P Computer Cable	1
146	3/8" × 7T Nyloc Nut	4
147	Isolation Bushing	5
148	Nylon Washer	9
149	Ending Tape	1
150	Isolation Pad	12
153	Motor Fan Connecting Cable (Black)	1
154	Motor Fan Connecting Cable (White)	1
159	300m/m Connecting Wire (White)	1
160	300m/m Connecting Wire (Black)	1
162	Sensor Rack	1
163	Motor Fan Connecting Cable (White)	1
164	Motor Fan Connecting Cable (Black)	1
166	3/8"-16 × 2" Socket Head Cap Bolt	1
167	M5 × 20L Phillips Head Screw	2