Manager Mode

After having used you **Star Trac 4500 treadmill** for several workouts, you may wish to specially customize your treadmill by changing some of its settings.

To engage Manager Mode:

1. Press and hold the " 0 ", " 1 " & " START " keys together. While holding the " 0 " & " START " keys down, release the " 1 " key only.

2. The display will beep and display **Manager Mode** momentarily, then UNITS will be displayed.

Once the treadmill is in Manager Mode, you may use the following keys:
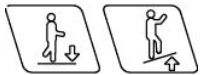
INCLINE KEY: Displays the next or previous parameter.

SPEED KEYS: Allows the variable to be changed within the parameter.

ENTER KEY: Saves the value if changed in the EPROM (software).
Note: ENTER KEY must be pressed, for each value changed.

STOP KEY: Exists Manager Mode and restarts the treadmill with a "warm start."

0 – 9 KEYS: Enters new parameter values. If **UNITS** parameter is displayed, key **5** starts DISPLAY TEST and key **8** starts MOTOR TEST.

HEART KEY: When pressed will automatically display manufactures default value.
Note: ENTER KEY must be pressed, to save the default values if changed.

Manager Mode

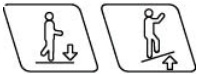The following parameters may be changed using the previous keys:

Parameters	Lowest Value	Highest Value	Option 1	Option 2	Default Value	Meaning
UNITS	---	---	English	Metric	English	English= units of lbs., miles, hours, minutes Metric= units of kg., km, hours, minutes.
MN SPD	0.1	2.5	English=0.5	Metric=1.0	0.5	Minimum speed in MPH or KM/HR
MX SPD	5.0	20.0	English=10.0	Metric=20.0	10.0	Maximum speed in MPH or KM/HR
EL OPT	---	---	ON	OFF	ON	Turns the elevation system ON or OFF.
TIME	5	99			99	Maximum time in minutes allowed for program, including warm-up/cool-down.
OP HRS	0	0	---	---	6,553.5	Total operating hours
DIST	0	0	---	---	65,635	Total treadmill miles (Units=English) or kilometers (Units=Metric)
WEIGHT	0	399	---	---	155	Defaults (to user), typical weight in lbs/kg depending on what setting (UNITS= English or Metric
SER NO	0	0	---	---	65,535	Treadmill serial number.
LANG	---	---	---	---	English	Language in English, Dutch, German, Portuguese, Spanish, Swedish, or Italian.
ENTRY	---	---	Units	Tenths	Units	This variable changes the starting speed in Units or Tenths

Maintenance Mode includes all of the items of Manager Mode, plus additional data that is automatically saved to properly troubleshoot in case of a problem. To engage Maintenance Mode:

1. Press and hold the " 0 ", " 2 " & " START " keys together. While holding the " 0 " & " START " keys down, release the " 2 " key only.

2. The display will beep and display MAINTENANCE momentarily, then UNITS will be displayed.

Once the treadmill is in Maintenance Mode, you may use the following keys:

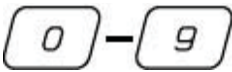INCLINE KEY: Displays the next or previous parameter.

SPEED KEYS: Allows the variable to be changed within the parameter.

ENTER KEY: Saves the value if changed in the EPROM (software).
Note: ENTER KEY must be pressed, for each value changed.

STOP KEY: Exists Manager Mode and restarts the treadmill with a "warm start."

0 – 9 KEYS: Enters new parameter values. If **UNITS** parameter is displayed, key **5** starts DISPLAY TEST and key **8** starts MOTOR TEST.

HEART KEY: When pressed will automatically display manufactures default value.
Note: ENTER KEY must be pressed, to save the default values if changed.

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The following parameters may be changed using the previous keys:

Parameters	Lowest Value	Highest Value	Option 1	Option 2	Default Value	Meaning
UNITS	---	---	English	Metric	English	English= units of lbs., miles, hours, minutes Metric= units of kg., km, hours, minutes.
MN SPD	0.1	2.5	English=0.5	Metric=1.0	0.5	Minimum speed in MPH or KM/HR
MX SPD	5.0	20.0	English=10.0	Metric=20.0	10.0	Maximum speed in MPH or KM/HR
EL OPT	---	---	ON	OFF	ON	Turns the elevation system ON or OFF.
TIME	5	99			99	Maximum time in minutes allowed for program, including warm-up/cool-down.
OP HRS	0	0	---	---	0	Total operating hours
DIST	0	0	---	---	0	Total treadmill miles (Units=English) or kilometers (Units=Metric)
WEIGHT	0	399	---	---	155	Defaults (to user), typical weight in lbs/kg depending on what setting (UNITS= English or Metric
SER NO	0	0	---	---	0	Treadmill serial number.
LANG	---	---	---	---	English	Language in English, Dutch, German, Portuguese, Spanish, Swedish, or Italian.
ENTRY	---	---	Units	Tenths	Units	This variable changes the starting speed in Units or Tenths

Maintenance Mode

Parameters	Lowest Value	Highest Value	Option 1	Option 2	Default Value	Meaning
HRT CON	---	---	ON	OFF	OFF	OFF= Heart Control disable ON= Heart Control enabled
HRT	---	---	CNT DN POLAR CONTACT BOTH	CNT DN POLAR CONTACT BOTH	CNT DN	CNT DN= Manual countdown heart rate POLAR, CONTACT or BOTH (Polar & Contact)
10 REV	22.0	74.0	30.7 = For 110v units.	35.8 = For 220v units	29.1	Inches of running belt travel for 10 flywheel revolutions, measured in inches. 1.8" pulley:30.7 (110v) 2.1"pulley:35.8(220v)
CNT/REV	1	255	31 = Magnetic RPM Sensor	125 = Optical Sensor	31	Number of counts per RPM Sensor revolution.
MN PWM	2	50	---	---	30	Minimum PWM to obtain minimum speed, automatically done.
1/2 PWM	25	170	---	---	130	1/2 Maximum PWM to obtain 1/2 maximum speed, automatically done.
MX PWM	86	255	---	---	230	Maximum PWM to obtain maximum speed, automatically done.
DATE	1.00	12.99	---	---	1.96	Treadmill manufacturing date.
NO STO	0	255	---	---	0	Number of times the Stop Switch was down or disconnected on power-up since last reset.

Maintenance Mode

Parameters	Lowest Value	Highest Value	Option 1	Option 2	Default Value	Meaning
KEY DN	0	255	---	---	0	Number of times the Stop Switch was down or disconnected on power-up since last reset.
NO RPM	0	255	---	---	0	Number of times the display did not detect a RMP signal.
SP CNG	0	255	---	---	0	Number of times a sudden change in speed was detected
EL STL	0	255	---	---	0	Number of times an elevation stall was detected.
EL RNG	0	255	---	---	0	Number of counts per RPM Sensor revolution.
EL LOST	0	255	---	---	0	Number of times no elevation was detected.
ELZERO	0	255	---	---	240	Represents the incline number for 0%.
EL MAX	0	255	---	---	57	Represents the incline number for 15%.
LSTERR	0	25	---	---	0	Indicates what display code appeared last. 18 = NO STO 19 = KEYDN 20 = NO RPM 21 = SP CNG 22 = EL STL 23 = EL RNG 24 = EL LOST
LSTELV	0	255	---	---	0	Displays the target elevation prior to the display code.
LSTPOT	0	255	---	---	0	Displays the incline number prior to the display code.

Parameters	Lowest Value	Highest Value	Option 1	Option 2	Default Value	Meaning
LSTRES	0	2	---	---	0	Displays 1 = Unit was resetting to 0%. 0 = Unit finished resetting to 0% prior to the display code.
LSTSSP	0	255	---	---	0	Displays the speed prior to the display code.
LSTPWM	0	255	---	---	0	Displays the PWM number prior to the display code.
LSTMSP	0	255	---	---	0	Display the actual measured speed prior to the display code.
LST TM	0	65355	---	---	0	Displays the elapsed time, in seconds, prior to the display code.
LSTDCK	0	65355	---	---	0	Number of miles when the deck was last waxed. After a 2000 mile (or 3000 KM) difference, "REWAX BELT" will scroll in the display until "LST DCK" miles are updated.
LSTBLT	0	65355	---	---	---	Number of miles when the last belt was replaced.

Motor Test Mode

Motor Test Mode allows the treadmill to calibrate both elevation and running belt speed. Verifies RPM Sensor feedback, Drive Motor and MCB response, and verifies Elevation Motor range (count). Also burns in the motor, by way of the controls and displays of the treadmill.

*** Caution*** : Do not stand on the running belt while performing these test.*

Engage Test Mode:

1. Press and hold the " 0 ", " 1 " & " START " keys together (or the "0" , "2"). While holding the " 0 " & " START " keys down, release the " 1 " (or 2) key only. The display will beep and display **MANAGER (or MAINTENANCE)** momentarily, then UNITS will be displayed.

2. Press and release the "8" key. Display will read: **240 3 .0** if treadmill is at 0%.

Alternative mode to enter Motor Test Mode:

1. Turn the power switch on while pressing the " 8" key simultaneously on the display.
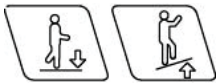
240	3	.0
A. Elevation Motor Range.	**B.** PWM Duty Cycle.	**C.** RPM Sensor Feedback

Once the treadmill is in TEST Mode, you may use the following keys:

INCLINE KEY: Adjust voltage to incline motor, inclines the treadmill in increments of 1%. When using the Incline Keys verify the elevation system is responding correctly by the following:

- As the treadmill elevates up and down verify the corresponding LEDs light up on the MCB.
- Verify that the Elevation Motor Range (see above A column) is changing in increments of 1% as the treadmill elevates up and down.

Caution: Do not elevate treadmill above 15% = 57 (110v units), 80 (220v units) or below 0% = 240 (110 & 220v units) mechanical damage may occur.

SPEED KEYS: Adjust the PWM duty cycle and motor speed up and down, respectively, in increments of 0.1 mph (UNITS=English) or 0.1km/hr (UNITS = Metric). When using the Speed Keys verify the speed control system is responding correctly by the the following:

- As the treadmill begins to increase speed, verify that the display registers RPM feedback (see above C column) in increments of 0.1 mph/km.

START KEY: Starts burn-in mode. (continuous operation of running belt and incline using program 8 at maximum speed. Press STOP KEY to stop burn-in.

STOP KEY: Exists MOTOR TEST Mode and restarts the treadmill.

HEART KEY: Starts automatic calibration of minimum, 1/2 maximum, & maximum speed.

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*****Caution*** : Do not stand on the running belt while performing these test.*

Automatic Speed Calibration:

In this mode minimum and maximum speed is automatically calibrated. Calibration lasts less than 3 minutes; belt will be in motion during this test.

Auto-calibration should be done every time MN, MX SPD & UNITS parameters have been changed in either SETTINGS or CONFIGURE Mode. Auto-calibration must be engaged when ever speed controlling components have been upgraded or replaced such as; MCB, Display Board, Drive Motor & RPM Sensor.

1. Press and hold the " 0 ", " 1 " & " START " keys together (or the "0" , "2"). While holding the " 0 " & " START " keys down, release the " 1 " (or 2) key. The display will beep and display **MANAGER (or MAINTENANCE)** momentarily, then UNITS will be displayed.

2. Press and release the "8" key. Display will read: **XXX 3 .0** if treadmill is at 0% display will read: **240 3 .0**

3. Press "HEART" key, display will read: **CAL** treadmill will go into an automatic speed calibration for less than 3 minutes. Press "STOP" key to exit Motor Test.

NOTE: If Auto-calibration fails to give the correct response refer to Section 4.

Display Test Mode

Display Test Mode allows you to test the light-emitting diodes (LEDs), 15-segment displays, and the watchdog timer of the Display Control Panel by way of its own controls and displays. It also allows EPROM version to be displayed. To enter Display Test Mode:

Caution : Do not stand on the running belt while performing these test.

1. Press and hold the " 0 ", " 1 " & " START " keys together (or the "0" , "2"). While holding the " 0 " & " START " keys down, release the " 1 " (or 2) key.

2. The display will beep and display **MANAGER (or MAINTENANCE)** momentarily, then UNITS will be
 displayed.

3. Press and release the "5 key. Observe all the LEDs light up.

4. Pressing any key once will display the EPROM version.
Alternative mode to enter Motor Test Mode:

1. Turn the power switch on while pressing the "5" key simultaneously on the display. Observe all the LEDs light up.

Once the treadmill is in Display Test Mode, you may use the following keys:
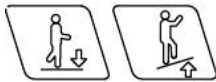
INCLINE KEYS: Lights % grade LED's one at a time, also segments of 15-segment screen one at a time.

PROGRAM SELECT KEY: Lights the six LEDs bordering the 15-segment display.

HEART KEY: Displays "HEART HEART" on the 15-segment display.

START KEY: Displays "START START" on the 15-segment display.

0 – 9 KEYS: Lights corresponding LEDs in the Number/Program Select Keys, (except for key 9), alongside the Pre-Designed Program profiles.

STOP KEY: Displays "WD TEST" on the 15-segment display. Activates the watchdog timer, resetting the processor and returning the program back to Start Mode.