T.I.E.
ALPHA 150

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TUNTURI®
THE MOTOR – *it's you.*

WELCOME TO THE WORLD OF TUNTURI EXERCISING!

Your choice shows that you really want to invest in your well-being and condition; it also shows you really value high quality and style. With Tunturi Fitness Equipment, you've chosen a high-quality, safe and motivating product as your training partner.

This guide is an essential part of your exercise equipment. Start familiarising yourself with the Tunturi T.I.E. interface by carefully reading this manual. It offers the information you need for both the use and maintenance of your equipment. This manual is well worth keeping, as you may need these instructions later on.

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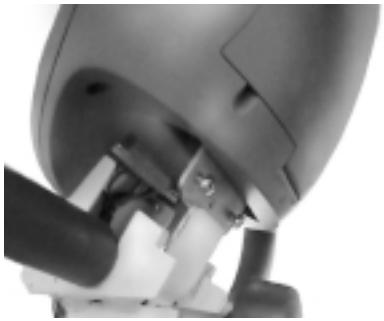
1. INSTALLATION ::

Push the T.I.E. interface module carefully into place at the top of the handlebar support tube. The loose screws hanging from the metal fastening plate on the bottom of the T.I.E. module must enter the holes at the top end of the handlebar. Make sure that the module is correctly in place and tighten the fastening screws.



1.1 TURNING THE USER INTERFACE ON AND OFF

The user interface turns itself on when the device is connected to the mains current. When the user interface has not been used for five minutes (no heart-rate registered, no keys pressed, no pedalling), it automatically switches itself to energy-saver state. Alpha 150 is returned to its active state by pressing any key, starting to pedal or sending heart-rate signals to the unit. When you restart, Alpha 150 automatically starts from Mode function.

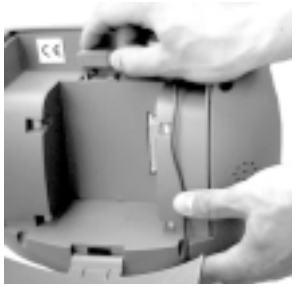
:: **Protect Alpha 150 from excess sunlight, because that may fade the interface box and surface membrane colours. Please also be careful not to allow Alpha 150 to come into contact with water. A sharp blow may damage the interface.**

2. PULSE MEASUREMENT ::

You can buy the ear sensor needed for pulse measurement from your Tunturi dealer or importer as an accessory.

Measure your pulse as follows:

1. Open the cover at the back of Alpha 150 and pushing the ear sensor connector into the interface connector. Lead the ear sensor wire out through the hole between the cover and the box, and close the cover.
2. Attach the ear sensor to the earlobe.
3. Attach the sensor wire to your shirt with the clip provided. This prevents the sensor and wire from moving.



If there are problems in pulse measurement:

:: Check how the sensor works while not pedalling.
:: A disturbance may be caused by the physiological properties of the earlobe. Try measuring on the inside surface of the ear or on the tip of your finger.
:: Rub the earlobe with your fingers to quicken circulation.
:: If pulse values rise above 150 beats/min., earlobe measurement may be affected by the faster circulation.
:: Sometimes a strong light source in the immediate vicinity of the user may cause disturbances.

Please clean the ear sensor after use with a damp cloth. Do not use solvents.

NOTE! Always detach the ear sensor connector from the user interface when you use the heart-rate belt. The ear sensor disturbs heart-rate measurement.

3. USER INTERFACE ::

3.1 FUNCTION KEYS

MODE includes constant resistance, constant effort and constant heart-rate workouts. The user interface automatically starts from the constant resistance workout. Use the operation key **SET** to make settings and adjustments to the user interface options. **PROG** includes pre-programmed exercise profiles, memory positions for your self-designed exercise profiles and measurement of recovery pulse.

3.2 REC AND OK

Use the Rec key to save your own workouts. Press Rec before beginning the workout you wish to save. Press OK to confirm.

3.3 RESET

Press the Reset key for more than one second to display the cumulative values. Pressing Reset always resets the value on the display.

3.4 SETTING KEYS -/+

Use the setting keys (-/+) to adjust resistance, effort and heart rate for the workout.

4. MAIN DISPLAY ::

When you turn the user interface on, the display shows the following exercise parameters:

1. **Efficiency (W)**
:: Figure indicates exercise efficiency in Watts, which depends on pedalling speed and resistance adjustment.

2. **Energy consumption (kcal / kJ)**
:: Displays cumulative energy consumption (0-999); default setting is kcal.

3. **Speed (rpm / km/h / mph)**
:: Default setting is rpm (pedal revolutions / minute).

4. **Pulse**
:: Heart rate transmitter belt or an ear sensor is required.
:: If the user interface does not receive a heart-rate signal, - - is displayed instead of the heart rate.

NOTE! Always disconnect the ear sensor from the user interface if using a heart rate transmitter belt; the ear sensor will interfere with the heart rate transmitter.

5. **Time**
:: Displays the exercise time elapsed between 0:00 - 59:59 minutes and between 1:00 - 10:00 hours in 1 minute increments.
:: Time display stops if speed falls to zero.

6. **Distance (km / miles)**
:: Default display setting is km.
:: Displays the distance travelled during the workout in km (or miles) to two decimal points up to 9.99 km (or miles) and with one decimal point up to 99.9.

5. FUNCTIONS ::

5.1 ADJUSTING RESISTANCE

Resistance in constant resistance workouts is adjusted with the - / + keys. The text SET and setting value are displayed when you adjust resistance. The meter returns to the main display 2 seconds after setting the value.

5.2 RESET

Press RESET to reset the values on the display. Cumulative training values are displayed by pressing RESET for more than one second. They remain on the display for as long as the key is pressed.

5.3 MODE

MODE includes constant resistance, constant effort and constant heart-rate workouts. In all workouts, one parameter is set as a constant, after which your exercise equipment automatically maintains the level. Constant heat-rate exercise requires your using the heart-rate measurement system.

1. Press MODE key to select the workout.
:: Resistance = constant resistance exercise at the same resistance level throughout. Faster pedalling means an increase in effort.
:: Watt = constant effort exercise; the interface adjusts resistance automatically so the training effort set, e.g. 100 W, remains the same independent of pedalling rate.
:: Pulse = constant heart-rate exercise; the interface adjusts effort automatically and keeps your heart-rate at the desired level, e.g. 120 beats per minute, independent of pedalling rate.

2. Set the target level with the - /+ keys. You can adjust the target level with the - / + keys during the workout whereupon the text SET and the setting value (Nm, W, heart rate) are displayed. The meter returns to the main display 2 seconds after setting the target value.

5.4 PROG

PROG includes pre-programmed exercise profiles, memory positions for self-designed profiles and measuring recovery pulse. The resistance level varies in a pre-determined way and has three options: Health = fitness improvement, Slim = weight control, Fit = profile designed for the physically fit. The level of difficulty of the selected profile can be scaled from 1 to 9. Level 1 is the easiest and longest and level 9 the most challenging and shortest. A full description of the profiles is given at the end of these instructions.

Pre-programmed profiles (Health, Slim, Fit)

1. Press PROG until the desired profile (Health, Slim, Fit) appears on the display. Press OK to confirm.

2. Use the - / + keys to select the level (Level 1-9). Press OK to confirm.

3. Start pedalling to begin the workout.

Designing your own exercise profiles

You can save three self-designed exercise profiles. Although the profile can be any of the MODE programs (Resistance, Watt, Pulse), the program cannot be changed during saving. A total of 30 changes can be saved in each profile. There is no time limit in the profiles.

1. Press REC to start saving your self-designed workout. During saving the text REC is displayed. Press OK after completing your profile. The text REC on the display is cleared and replaced by memory position “User 1”. The flashing numeric value indicates that a profile has already been saved in the memory position. Previous profiles can be replaced by new ones, or use the - / + keys to move to other memory positions (User 1, 2, 3). Press OK to save the profile in the desired memory position.

2. To use a self-designed exercise profile press PROG until User appears on the display. Use the - / + keys to select a memory position (User 1, 2, 3). If the memory position is empty the reading 0:00 is displayed. Press OK to confirm your choice.

3. Start pedalling to begin the workout.

5.5 RECOVERY

Measure your recovery pulse rate at the end of the workout. To measure recovery pulse rate press PROG until the text “Recovery” appears on the display. Press OK to confirm.

:: The measurement of recovery pulse takes two minutes, during which time the current heart rate is displayed. During measuring the text “Recovery” flashes on the display.

:: At the end of the measurement period the recovery ratio percentage is displayed. The smaller the reading the fitter you are. Note that results are individual and not directly comparable with those of others.

NOTE! If there is a problem in pulse measurement, the display will show - - instead of the heart rate, and measurement of recovery pulse will automatically restart when the user interface once again receives a heart-rate signal.

:: Press OK to move from recovery pulse measurement to the main display. The main display will appear automatically 1 minute after the measurement.

5.6 PAUSE

When the user interface has not been used for three minutes (no heart rate registered, no keys pressed, no pedalling), it automatically switches itself to energy-saver state. The interface is returned to its active state by pressing any key, starting to pedal or sending heart-rate signals to the unit. The values in a workout that has been interrupted are saved in the memory of the user interface for 10 minutes, after which they are reset. The values on the display are always reset when the RESET key is pressed.

5.7 SET

1. To set the heart-rate limit press SET once. The lower heart rate limit is indicated by the text LO and the upper limit by HI. If desired, the user interface indicates when your heart rate falls below the lower limit or exceeds the upper limit with an alarm. To set heart rate limits procede as follows:

:: The lower limit (LO) may be set between 50 and 220 beats per minute. Use the - or + keys to set the value and press OK to confirm. Set the upper heart-rate limit (max. 220) in the same way as for the lower limit. Press OK to confirm.

:: To delete heart-rate limits use the - or + key to move the values above the permitted upper or lower limit. The value is then replaced by — on the display.

2. To select the alarm press SET twice. The text Ind OFF indicates that the alarms are switched off and Ind ON that they are switched on. Use the - or + keys to select OFF or ON and press OK to confirm.

3. To set units of measurement press SET three times.

:: Default units are rpm, km and kcal.

:: To change the units press the + or - key until the desired units are displayed.

:: To measure speed you can set either revolutions per minute, (rpm), kilometres per hour (km/h) or miles per hour (mph). Energy consumption measurement can be set for kilocalories (kcal) or kilojoules (kJ).

:: In addition to rpm you can also select either kilometres (km) or miles as distance measures. If km/h is selected as the unit to measure speed, km will automatically be the unit for distance. The same applies to the units mph and miles.

:: Press OK to confirm your selections, which are then saved and indicated on the main display.

:: Press the RESET key to exit the setting function without saving the adjustment. This resets the readings on the main display.

6. MAINTENANCE ::

:: In training, T.I.E. interface tolerates an environment measuring +10°C to +35°C. A T.I.E. interface can be stored in temperatures ranging between -15°C and +40°C. Air humidity in the T.I.E. interface training or storage environment must never exceed 90 %.

:: Press the keys with the tip of the finger; your nails may damage the key membrane.

:: Do not let the T.I.E. interface come into contact with water. Always dry the surface of the interface, if there are any drops of sweat on it. Use a soft, absorbent cloth. Do not use solvents to clean the user interface surface.

:: Protect the user interface from excess sunlight: it may fade the colours of the user interface box and surface membrane.

:: Please contact your dealer immediately if you notice any defects or malfunctions while using your T.I.E. interface. Please state the nature of the problem, conditions of use, purchase date and serial number of your T.I.E. interface. The location of the serial number sticker is shown on the inside cover.

:: At the end of this manual, you'll find a diagram and list of spare parts for the Alpha 150.

:: T.I.E. user interfaces meet the requirements of the EU's EMC Directives on electromagnetic compatibility (89/336/EEC) and electrical equipment designed for use within certain voltage limits (73/23/EEC). This product therefore carries the CE label.

NOTE! The instructions must be followed carefully in the assembly, use and maintenance of your equipment. The warranty does not cover damage due to negligence of the assembly, adjustment and maintenance instructions described herein. Changes or modifications not expressly approved by Tunturi Oy Ltd will void the user's authority to operate the equipment!

Due to our continuous policy of product development, Tunturi reserves the right to change specifications without notice.

We wish you many enjoyable training sessions with your new Tunturi training partner!

PROFILES ::

	Health	Slim	Fit
(min)	(W)	(bps)	(W)
0	80	80	80
1	90	90	90
2	90	90	100
3	100	100	110
4	110	100	130
5	120	110	130
6	130	110	140
7	140	120	140
8	140	120	140
9	140	130	130
10	140	130	130
11	140	130	120
12	140	130	120
13	130	140	150
14	130	140	150
15	120	140	170
16	120	140	170
17	130	140	150
18	130	140	150
19	140	140	140
20	140	130	140
21	140	130	140
22	140	130	150
23	140	130	150
24	140	120	180
25	140	120	180
26	130	120	150
27	130	120	150
28	120	120	140
29	120	120	130
30	130	130	130

	Health	Slim	Fit
(min)	(W)	(W)	(W)
31	130	130	140
32	140	130	140
33	140	140	140
34	140	140	150
35	140	140	150
36	140	140	170
37	140	130	170
38	140	130	170
39	130	130	170
40	130	120	150
41	120	120	150
42	110	120	150
43	110	120	120
44	120	120	120
45	130	130	120
46	130	130	130
47	140	130	130
48	140	140	140
49	140	140	140
50	140	140	140
51	140	140	130
52	140	130	130
53	140	130	120
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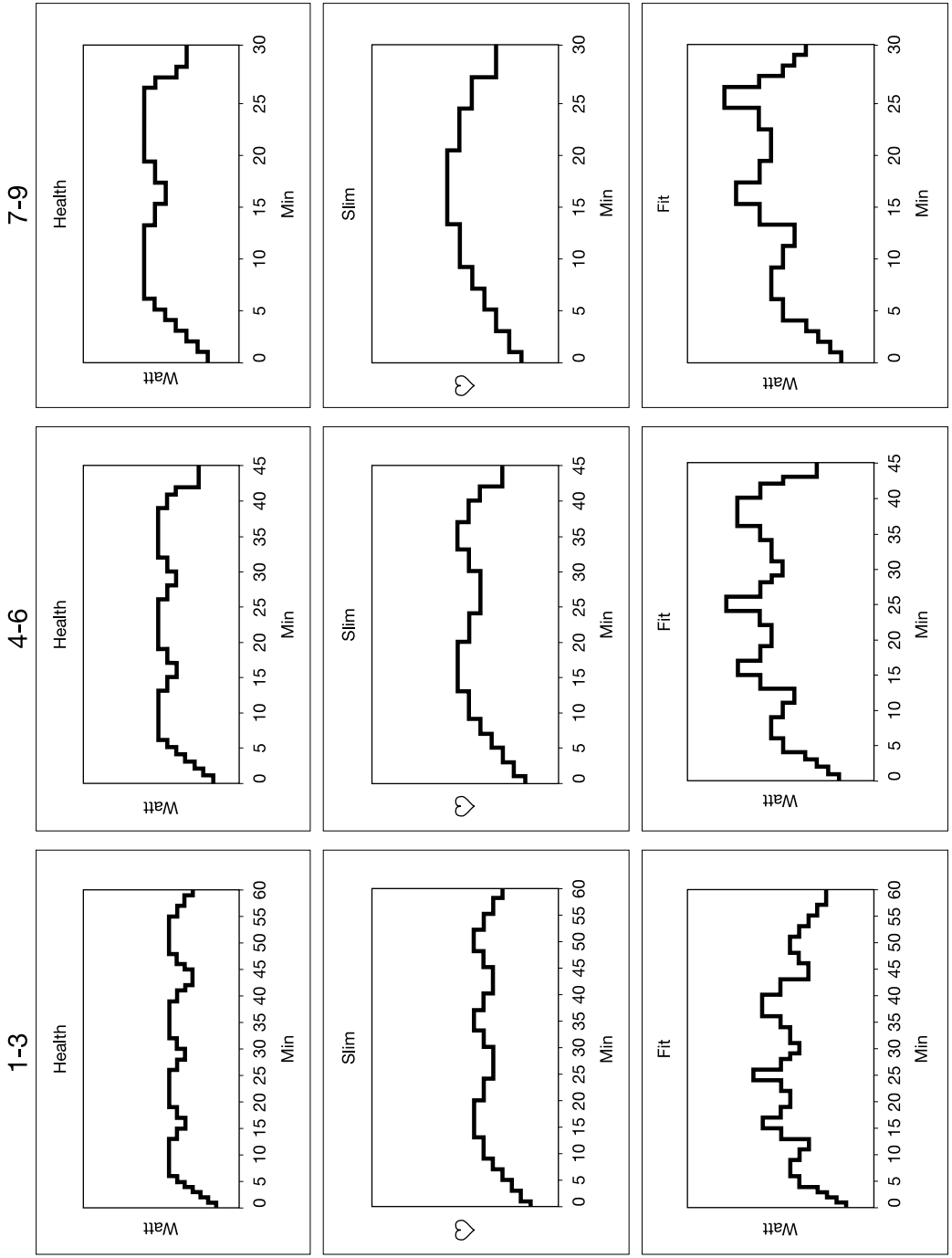
59	110	110	100

Level	1	2	3	4	5	6	7	8	9
Intensity = Level x	0,7	0,775	0,85	0,925	1,0	1,075	1,15	1,225	1,3