

# 1. Introduction

Congratulations! You have purchased a complete training system to tailor-fit your training needs. This user manual includes complete instructions, helping you get the most out of your Training Computer.

## COMPLETE TRAINING SYSTEM

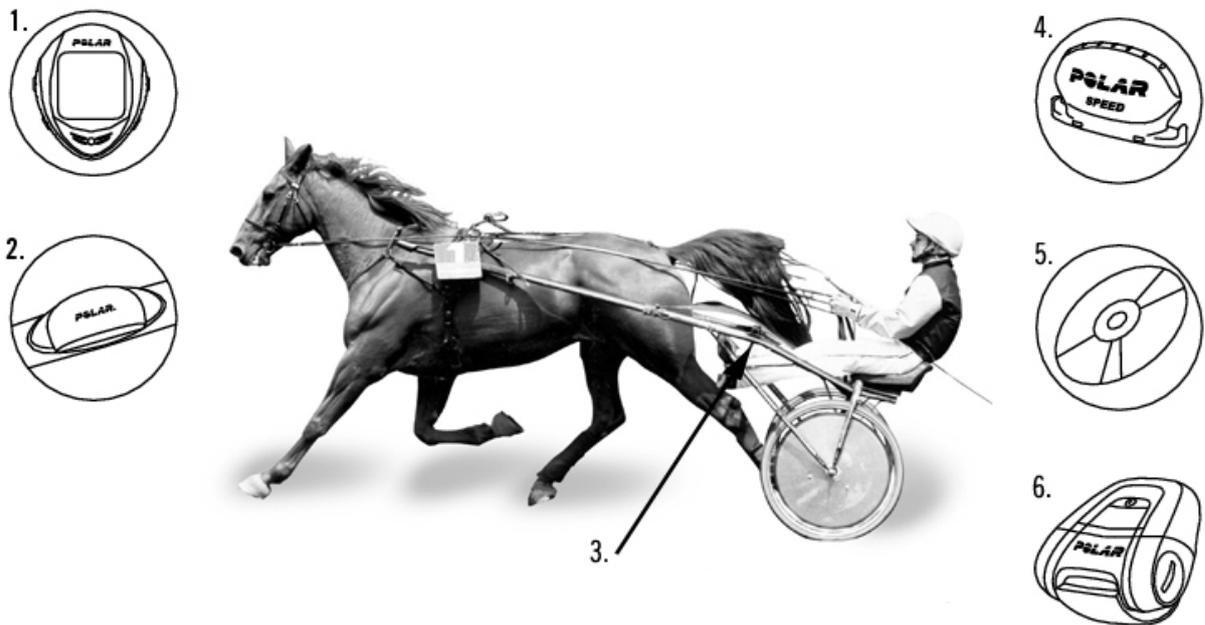
Plan your exercise with Polar ProTrainer 5 Equine Edition. Transfer your plans to your horse exercise computer.

See details information of your exercise. Store your training data for long term follow-up and analysis in the Polar ProTrainer 5 Equine Edition.



Your horse exercise computer guides you through your exercise and stores your training data. After the exercise, transfer your results to the Polar ProTrainer 5 Equine Edition.

## 2. Polar Equine CS600X Training System Components



1. Polar CS600X Training Computer: riding and exercise data are recorded and displayed during exercise.
2. Polar WearLink® W.I.N.D. Transmitter: The transmitter sends the heart rate signal to the Training Computer. The transmitter consists of a connector and a strap.
3. Polar Bike Mount™: Secure the bike mount to your sulky and attach the Training Computer to it.
4. Polar Speed Sensor™ W.I.N.D.: A wireless speed sensor measuring speed and distance during riding.
5. CD-ROM: Including Polar ProTrainer 5 Equine Edition and a complete User Manual to help you make the most out of your Training Computer.
6. **Optional Accessory** : Polar G3 GPS sensor W.I.N.D.: Provides speed, distance, and location data, as well as tracks information in all outdoor sports using Global Positioning System (GPS) technology. You can transfer your track data to the Polar ProTrainer 5 software to view in Google Earth or to convert into a GPX file. For more information, see software help.

 *When using the Polar G3 GPS sensor with a Polar speed sensor, the GPS will only be used for location and route tracking. However, when the speed sensor is not in range (e.g. the type of sport changes during training), the cycling computer automatically retrieves speed and distance data from the GPS sensor. This way the speed and distance measurement is secured throughout your training session. To start using the speed sensor again, long press LIGHT and select Seek sensor.*

### 3. Getting Started

Before activating your Training Computer, measure the wheel size of your sulky.

#### Measuring Wheel Size

Wheel size settings are a prerequisite for correct riding information. There are two ways of determining the wheel size of your sulky:

##### Method 1

Look for the diameter in inches or in ETRTO printed on the wheel. Match it to the wheel size in millimeters in the right column of the chart.

ETRTO	Wheel size diameter (inches)	Wheel size setting (mm)
25-559	26 x 1.0	1884
23-571	650 x 23C	1909
35-559	26 x 1.50	1947
37-622	700 x 35C	1958
47-559	26 x 1.95	2022
20-622	700 x 20C	2051
52-559	26 x 2.0	2054
23-622	700 x 23C	2070
25-622	700 x 25C	2080
28-622	700 x 28	2101
32-622	700 x 32C	2126
42-622	700 x 40C	2189
47-622	700 x 47C	2220

Wheel sizes on the chart are advisory as wheel size depends on the wheel type and air pressure.

##### Method 2

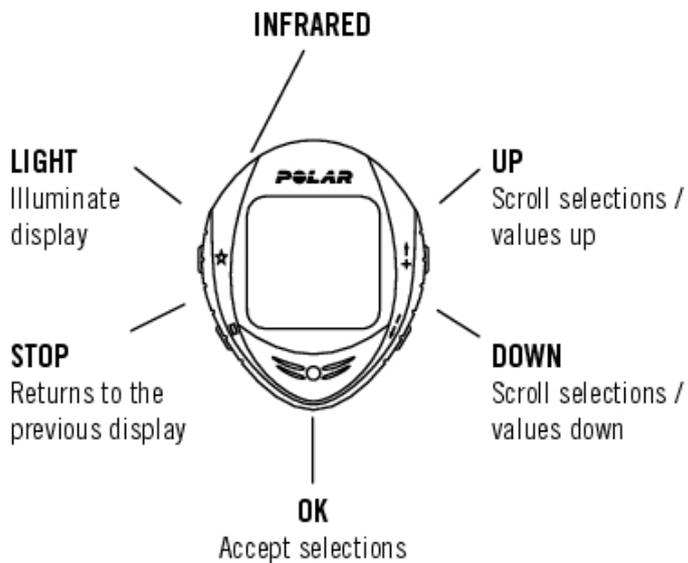
Measure the wheel manually for the most accurate result.

Use the valve to mark the point where the wheel touches the ground. Draw a line on the ground to mark that point. Move your sulky forward on a flat surface for one complete rotation. The tire should be perpendicular to the ground. Draw another line on the ground at the valve to mark a full rotation. Measure the distance between the two lines.

Subtract 4 mm to account for your weight on the sulky to get your wheel circumference. Enter this value in the Training Computer.

## Basic Settings

Before using your Training Computer for the first time, customize the basic settings. Enter as accurate data as possible to ensure correct feedback based on your performance.



To adjust the data, use UP, DOWN and accept with OK. The values scroll faster if you press and hold UP or DOWN.

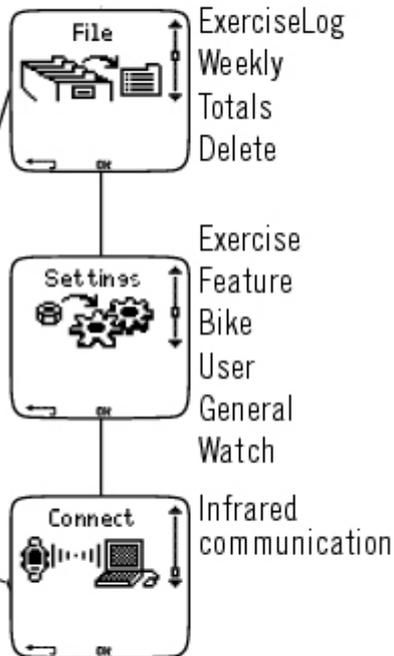
1. To activate your Training Computer, press OK twice. Once activated, it cannot be switched off!
2. Welcome to Polar World! is displayed. Press OK.
3. Language: Select English, Deutsch, Español, Français or Italiano. Press OK.
4. Start with sulky settings is displayed. Press OK.
5. Number of sulkys: Select 1, 2 or 3 depending on how many sulkys you will be using. If you only use one sulky, settings for sulkys 2 or 3 sulkys can be entered later. For further information see [sulky settings](#).
6. Wheel: Enter the wheel size (mm) for each of your sulkys. For further information, see [Measuring Wheel Size](#).
7. Start with basic settings is displayed. Press OK and adjust the following data:
8. Time: Select 12h or 24h. With 12h, select AM or PM. Enter the local time.
9. Date: Enter current date; dd = day, mm = month, yy = year. If you use imperial units, set the date; mm = month, dd = day, yy = year.
10. Units: Select metric (kg/cm/km) or imperial (lb/ft/mi) units.
11. Settings OK? is displayed. Select Yes or No. Select Yes to accept and save settings. The Training Computer will display time of day. Select No if settings are incorrect and need to be changed. Press STOP to return to the data you want to change.

Use the Polar ProTrainer 5 Equine Edition to enter all basic settings.

# Menu Structure

Menu visible when you have transferred programmed exercises from software to the horse exercise computer.

To scroll the menu, press UP and DOWN.

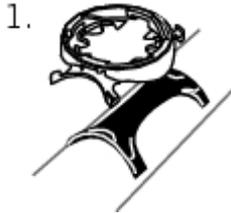


To return to time of day display, press and hold the STOP button.

## Installing the Polar Bike Mount

You can install the bike mount and the Training System on the left or right side of the sulky bar.

1. Place the rubber part on the bar and insert the bike mount on top of it.



2. Pass the cable ties over the bike mount and adjust them around the bar. Secure the bike mount firmly. Cut off any excess cable tie ends.



### Attaching the Training System to the Bike Mount

- 1) Position the Training System on to the bike mount. Turn it clockwise until you hear a click.
- 2) Release the Training System by pressing it down and simultaneously turning it counter clockwise.

## 4. Prepare for Training

### Installation of the sensor

#### Polar Speed Sensor

For instructions on how to install the sensor, consult the separate Speed Sensor user manual.

### Plan your training

#### Exercise Types

The Exercises menu shows a list of exercises.

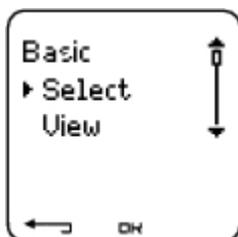
Navigate through the options with UP or DOWN



- Free: Free exercise with no settings.
- Interval: Interval training starts with a 15-minute warm-up, followed by a 5 km interval (work phase) and a 5-minute recovery period, repeated 3 times. The session ends with a 15-minute cool-down.

Select the desired exercise (Free or Interval), and press OK, the following options are displayed:

- Select the exercise as a default exercise.



The next time you train, your Training Computer will offer this exercise as default.

- View the exercise settings. Scroll UP or DOWN to view.
- Edit exercise to fit your needs. You can also edit exercise created with the Training Computer.

If you created exercise with the Polar ProTrainer 5 Equine Edition that includes phases, you cannot edit them with the Training Computer.

- Rename Interval or other exercise created with the Training Computer.
- Default Return to default settings of Basic, Interval or OwnZone exercise.
- Delete exercise you created using the Training Computer or the Polar ProTrainer 5 Equine Edition.

## 5. Training

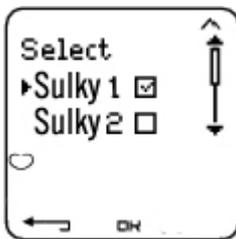
### Adjust the Equine Transmitter

For instructions on how to install the Polar Equine Transmitter, consult the transmitter user manual.

### Start Training

Adjust the transmitter and attach the Training Computer to the bike mount.

1. Start heart rate measurement by pressing the OK button. The Training Computer goes into pause mode.
2. Select the sulky you are going to exercise with. sulky 1 is set as a default. Select Settings > sulky > sulky 1 > OK. Select Other if you only want to record heart rate.



 Only the sulkys that are switched **ON** are shown on this selection list. For further information see sulky Settings.

 The number on the bottom, right hand corner indicates the sulky that is going to be used. By pressing and holding the DOWN button, you can switch the sulky quickly or switch to heart rate recording only. By pressing and holding the UP button you can switch the exercise quickly.

3. Within 4 seconds, your heart rate appears on the display. The frame around the heart symbol indicates that transmission is coded. The hoof symbol on the bottom, right hand corner of the display, flashes until all the sensors are found.
4. Start exercising by pressing OK. The exercise type is displayed in the upper left-hand corner.

In Settings, you can change or view different settings before exercise. The Settings menu lists the following options :

- Exercise: Select Free or Interval.
- GPS: Set the GPS function ON/OFF (optional)
- Altitude: Calibrate altitude.
- Rec.rate: Set the recording rate.
- RR data: Switch the RR recording on or off.

- TZ Alarm: Switch target zone alarm sounds on or off.
- HR view: Choose to view heart rate in beats per minute (bpm), as a percentage of maximum heart rate (HR%).
- sulky: Select sulky 1, 2 or 3.
- A.Lap (Automatic Lap): Switch the automatic lap function On/Off.
- Arr. time: Set the arrival time function On/Off and set the distance of your ride.
- Display: Modify the display. For further information, see Personalize the Training Computer Display.

In Reset trip, you can reset the trip distance before starting an exercise session.

In Location (optional GPS required), you can check your current location. The training computer will pinpoint your location using the latest GPS coordinates. Latitude and longitude are expressed in degrees and minutes. Number of satellites visible on lowest row.

 *To further analyze the track information, transfer the data to Polar ProTrainer 5 Equine Edition. See Software help for instructions.*

Here are some shortcuts you can use, when in Exercise pause menu:

- Press and hold UP to quickly change training session type. The default training session type is Free exercise.
- Press and hold DOWN to quickly change the sulkys.
- Press BACK to enter to Time mode.
- Press and hold LIGHT to view the Settings menu

 *If you activate the AutoStart function, the Training Computer will automatically start and stop exercise recording when you start and stop riding. For further information on AutoStart, see Autostart: On / Off. The Training Computer automatically chooses the sulky you have used during the previous exercise.*

 *If the following message is displayed: (Exercise name) requires Speed sensor. Turn Speed sensor on, your exercise requires this sensor to display speed data (e.g. you have defined speed zones for the exercise). Select Yes to turn the sensor function on. If Exercise displays updated is displayed, speed data will be shown during exercise.*

## Information on the Display

Your Training Computer offers you a simultaneous view of three different lines of exercise information. By pressing UP or DOWN, you can view different displays. The name of the display appears for a few seconds. The name indicates the lower row information. The display varies depending on the sensors you have installed, which features are set ON and what kind of exercise you are performing.

 *Customize the Training Computer display easily with Polar ProTrainer 5 Equine Edition.*

### Default Views on Your Display When Using Speed Sensor

<b><i>Speed</i></b> Exercise time Speed Heart Rate
<b><i>Heart Rate</i></b> Time of day Distance Heart Rate
<b><i>Stopwatch</i></b> Average heart rate Average speed Stopwatch
<b><i>Altitude</i></b> Heart Rate Lap distance Speed/Pace
<b><i>Graph</i></b> Heart rate graph Speed graph Stopwatch (Total duration of the exercise so far)

Customize the Training Computer display to show information you want to see. See [Personalize the Training Computer Display](#).

### Graph view

The graph view enables comparison in graphs of two values during exercise. For example, choose a graphical overview of your heart rate and speed.



The graph view can be customized. For the upper and middle rows, you can choose to view Speed, Altitude or Heart rate in graphs.

## Symbols on the Display

Text on the display	Symbol	Explanation
Time of day		Time of day
Riding symbol		All the necessary sensors are found when the symbol stops blinking.
Sulky number		The number on right, bottom corner indicates which sulky is in use during this exercise.
Key lock on		Indicates that the key lock is on.
Rec -symbol		Displayed in the exercise mode when stopwatch time is running and the recordings are on. The symbol is blinking when memory is low.
Interval icon		Indicates that Interval exercise is chosen.
Countd. Timer		Countdown timer
Lap number and time		Lap number and lap time
Lap distance		This will show the distance of the current lap. If you record a lap time by pressing OK, it will also reset the Trip distance. This will be done automatically if the Autolap function is ON.
Stopwatch		Total duration of the exercise so far
Heart rate		Current heart rate
Heart rate		Average heart rate
Distance		Distance ridden
Trip		Distance between points A and B. This distance is reset every time OK button is pressed. Pressing OK will also reset the Lap distance. This will be done automatically if the Autolap function is ON.
Arrival time		Estimated time of arrival.
RR variation		Beat to beat variation in heart beat intervals, i.e. the variation in times between successive heart beats.
Ascent		Ascended meters/ feet

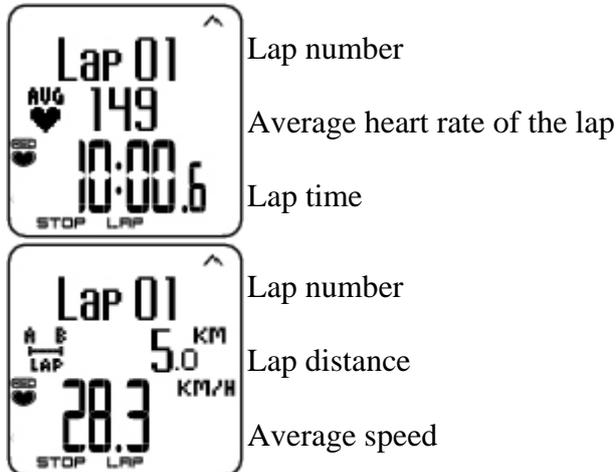
Text on the display	Symbol	Explanation
Inclinometer		Uphill/downhill steepness in percentages and grades. Estimates in numerical form how steep uphill or downhill you are riding and helps you to adjust riding effort accordingly
Altitude		Current altitude
Speed		Speed you are currently riding on
Max speed		The maximum speed during you training.
Avg speed		The average speed you are riding on.
Zone pointer (heart rate)		If the heart symbol is not visible and/or an alarm sounds, your heart rate is outside the target zone.
Time in zone		Time spent on the zone
Speed/pace*		Current speed/pace. The data comes from the G3 GPS sensor. The amount of bars above the letter G indicates the GPS signal strength.
Max speed*		Maximum speed/pace so far. The data comes from the G3 GPS sensor.
Average speed*		Average speed/pace so far. The data comes from the G3 GPS sensor.

\* Optional sensor required.

# Button Functions During Exercise

## Take a Lap

Press OK to record a lap. The display will show:



## Lock a Zone

When training without preset target zones (FREE exercise), you can lock your heart rate into a sport zone. For more information see Polar Sport Zones. This way, if you haven't had time to define preset target zones prior to exercise, you can set a target zone on the go during a session.

Press and hold LAP (OK) to Lock /Unlock zone.



If, for example, you are riding with a heart rate of 130 bpm which is 75% of your maximum heart rate, and matches sport zone 3, you can press and hold LAP to lock your heart rate into this zone. Sport zone3 Locked 70-79 is displayed. An alarm sounds if you are below or above the sport zone (if the target zone alarm function is on). Unlock the sport zone by pressing and holding OK again: Sport zone3 Unlocked is displayed.

## Zoom the Display



Press and hold UP to zoom into the upper row, and DOWN to zoom into the middle row. Return to the normal display by pressing and holding the button again.

### **Illuminate the Display (Night mode on)**

To illuminate your display, press LIGHT during the exercise. Night mode is turned on, and the display illuminates automatically when any button is pressed or exercise phase is changed.

### **View Settings Menu**

Press and hold LIGHT > Settings

The Settings menu is displayed when pressing and holding LIGHT. In the settings menu you can change certain settings without pausing the exercise recording. The contents of this menu vary according to the exercise type. For further information, see 7. *Settings*.

- Keylock: Lock/unlock buttons to prevent accidental button presses.
- Autoscr.: Select the Auto scroll On/ Off and displays will scroll during the exercise.
- TZ Alarm: Turn target zone alarm sound on/off.
- HR view: Select how to view your heart rate.
- Seek sensor: Searches for WearLink, Speed data, if the signal disappears during exercise due to interference.
- Arr. time: Set the arrival time On/Off.

Once you have changed the settings, the Training Computer will return to exercise mode.

### **Pause Exercise**

Pause exercise recording by pressing STOP.

In pause mode you can:

- Continue: Continue exercise recording.
- Exit: Stop exercise recording.
- Summary: View a summary of functions that were activated during exercise.
- Settings: Change all the same settings as during exercise. Additionally you can also change display personalization, which cannot be done during exercise.
- Reset: Delete recorded exercise information. Confirm with OK and press OK again to restart recording.
- Location: (optional GPS required) For current location, using the latest GPS coordinate data. Latitude and longitude are expressed in degrees and minutes. Number of visible satellites visible on lowest row.

## **Stop Exercise**

Interrupt exercise recording by pressing STOP. To stop recording completely, select EXIT.

## 6. After Training

Care for your transmitter after exercise. **Detach the connector from the strap after use.** Keep the transmitter dry and clean.

For complete care and maintenance instructions, see Care and Maintenance.

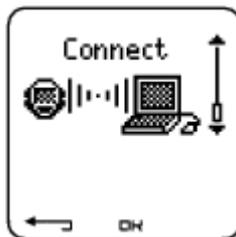
### Analyze Exercise Results



To view basic data on your performance, see File on your Training System. For more comprehensive analysis, transfer the data to Polar Equine software. The software offers you different additional analysis options to analyze data with.

The Training System and software are connected via IrDA. First, open the software. Then, select Connect from your Training System and place the wrist unit in front of the infrared window on the Polar IrDA USB Adapter or on the computer or other IrDA compatible infrared adapter. For complete instructions on transferring data, see software help.

1. Open Polar Equine software.
2. Select Connect in the Training System and place the device in front of the computer's infrared window.



3. Click Transfer Data on the software toolbar.

For more information on transferring data, consult software help.

To view file on Training System

Select File > OK for the following options:

- Exercise log lists a maximum of 99 exercise files.
- Weekly includes summaries of the past 16 weeks.
- Totals shows cumulative exercise information.
- In the Delete menu, you can delete exercise files.

## Exercise Log

Select File > Exercise log



You can view detailed information on your exercise sessions in the Exercise log. The following info will appear:

- Exercise name.
- A graphic bar representing an exercise session. The height of the bar indicates exercise duration.
- Date of the exercise.

Information appearing on the display (a - e displays below) depends on the settings and exercise type and settings (e.g. if your exercise does not include phases, phase information will not appear).

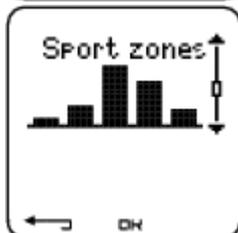
Scroll the exercise bars with UP or DOWN and press OK to view:



a. Basic information



b. sulky information



c. Sport zones information



e. Laps information

### a. Basic information

Select File > Exercise log. Scroll UP and DOWN to select the exercise and press OK. Scroll UP and DOWN to view the following information:



Name of exercise

Time when exercise began

Distance traveled

Total time of exercise

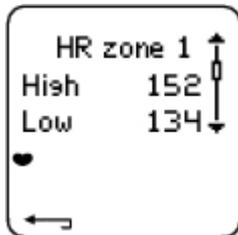


Heart rate in beats per minute (bpm), alternating with a percentage of your maximum heart rate (HR%).

Maximum heart rate

Minimum heart rate

Average heart rate



Target zones (HR) , alternating zone 1, zone 2, and zone 3.

Upper limit

Lower limit



Time in, above, and below zone 1/2/3 (phase name displayed in programmed exercise).

Time above zone

Time below zone

Time in zone

Press Back to return to the basic information view.

### Additional Basic Information

To add your own exercise information or delete the exercise from File, press and hold LIGHT in basic information view.

Select File > OK > Exercise log > OK > Basic > OK, press and hold LIGHT> Add info >OK.

- Rank: Grade your exercise.
- Feeling: Evaluate your subjective feeling during the exercise.
- Temperat.: Set the temperature with UP or DOWN.
- Distance: Set the distance for sulky 1, sulky 2, sulky 3 or Other.

If you change the distance, it will effect also on the Totals distance

### b. Sulky information

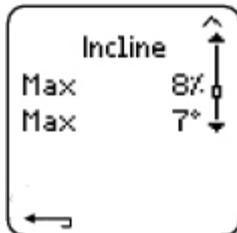
Select File > Exercise log > sulky information.



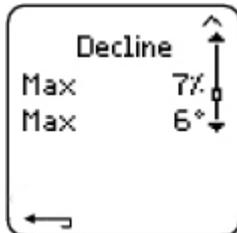
Press OK and scroll UP and DOWN to view the sulky information:



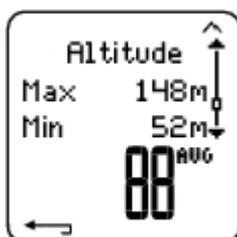
- Speed
- Maximum speed
- Average speed
- Distance



- Incline
- Maximum incline in %
- Minimum incline in degrees



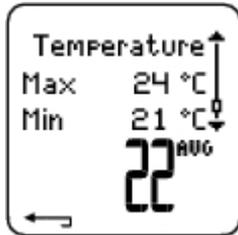
- Decline
- Maximum decline in %
- Minimum decline in degrees



- Altitude
- Maximum altitude
- Minimum altitude
- Average altitude



Ascent/ Descent  
 Ascended meters/feet  
 Descended meters/feet



Temperature  
 Maximum °C degrees  
 Minimum °C degrees  
 Average °C degrees



Odometer  
 sulky 1, 2 or 3  
 Kilometers

**c. Equine Sport Zones**

Select File > Exercise log >Free> OK



In the basic information view, press DOWN to see Sport zones information.



Press OK and scroll UP or DOWN to view time spent in each sport zone. Here, the variation of your sessions is presented in graphical format.

Press Back to return to the Sport zones information view.

**d. Laps**

Select File > Exercise log > Basic > Laps

In the Laps information view, see Laps information by pressing DOWN. Laps are shown only if more than one lap is stored in the memory.



Number of recorded laps (lap information alternates with automatic lap information)

Average lap time

Best (fastest) lap number alternating with its time

The last lap is never shown as the best lap, even if it is the fastest lap. If you are in a riding event and wish to include your last lap, press OK on the finishing line instead of STOP. You can then stop recording after the finishing line.

Scroll lap information by pressing OK.

Compare information on different laps by pressing UP or DOWN.

For easy view of lap information, transfer the exercise file to the Polar Equine software and analyze the exercise in the Curve view.



Time

Split time

Lap time



Heart rate in beats per minute (bpm) alternating with percentage of maximum heart rate (HR%).

Maximum heart rate

Average heart rate

End heart rate of lap



Speed min/km

Average speed

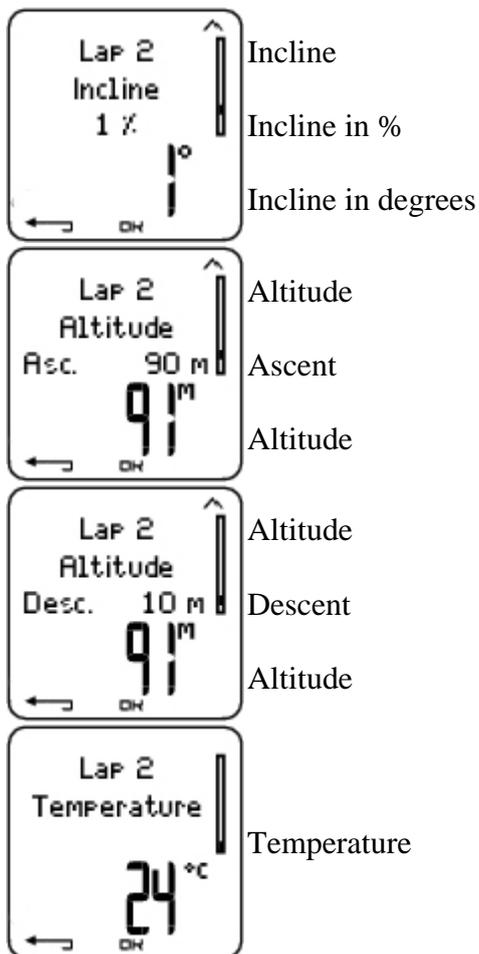
End speed of lap

Press and hold LIGHT to switch speed.



Distance

Lap distance



Press BACK to return to Laps information view.

### Weekly Summary

Select File > Weekly

In Weekly summary, you can view the accumulated data on 16 weeks of exercise. The bar on the far right named This week displays exercise summary for the current week. The previous bars are dated the Sunday of the week in question. Scroll the displayed weeks with UP or DOWN, and view total exercise duration on the lower row.



Select the week with OK to see the week's total calories, distance, and exercise time.



Press DOWN to see week's sport zones.



To see time spent in each sport zone, press OK and scroll the sport zones UP or DOWN.

## Totals

Select File > Totals

Totals includes cumulative information recorded during training sessions since the last reset. Use the Total values file as a seasonal or monthly counter of training data. The values are updated automatically when exercise recording is stopped.

Use UP or DOWN to scroll through the following information:

- sulky 1 distance (Cumulative distance with sulky 1; can be reset)
- sulky 2 distance
- sulky 3 distance
- Total distance (Cumulative distance; can be reset)
- Total duration
- Total calories(not available in equine mode)
- Total exerc. count
- Total ascent
- Total odometer (Cumulative distance; cannot be reset)
- Reset totals

To reset total values

Select File > Totals > Reset totals

Select the value you wish to reset in the menu and confirm with OK. Select Yes to confirm resetting. **The deleted information cannot be retrieved.** Select No to return to the Reset menu.

## Delete Files

Select File > Delete > Exercise

In Delete, you can delete previous exercises one by one, all exercises at the same time, or total values.

Scroll through the following information with UP or DOWN:

- Exercise: Select a single exercise to delete.
- All exerc.: Delete all exercises.
- Totals: Delete the total values one by one or all totals at the same time.

Confirm by selecting Yes.

## 7. Settings

Change settings easily by using the Polar Equine software. For further information, consult software help.

### Exercise types

Select Settings > Exercise

For more information on Exercises, see Exercise Types.

### Feature Settings

Select Settings > Features.



#### GPS\*

Activate the GPS function by selecting Settings > Features > GPS > On. Teach new sensor? is displayed.

- If your sensor is already taught, select No.
- If your sensor has not been taught yet, see 8. *Using a New Accessory* for more information on teaching.

\*Optional sensor required.

#### Altitude

The Training System measures and displays altitude. Change the settings of the altimeter in the Altitude menu. You can calibrate the altimeter manually or automatically.

#### Calibrating the Altitude Manually

Select Settings > Features > Altitude > Calibrate > set the altitude of current location

If the altitude of your location differs significantly from the displayed altitude value Calibrate to xx? is displayed.

Yes: Altitude calibrated to xx is displayed.

No: Altitude calibration canceled is displayed.

Calibrate the altitude to ensure it remains accurate. Set the reference altitude whenever a reliable reference, such as a peak or a topographic map, is available or when at sea level.

### **Calibrating the Altitude Automatically**

Select Settings > Features > Altitude > AutoCalib > On / Off

By using the altitude Automatic Calibration option, you can adjust the starting elevation to be set always the same in the beginning of the exercise. Calibrate the elevation manually and turn the Automatic Calibration (AutoCalib) on. From now on, this elevation will be always used as the base elevation in the beginning of the exercise, when automatic altitude calibration is in use. Also, if the Automatic Calibration is turned on and you calibrate the Training System manually, this new value will be used as a new starting elevation for the Automatic Calibration option.

If the elevation or air pressure changes significantly, you are prompted to confirm the change. If you change the elevation, Altitude calibrated to xx m/ft indicates that calibration has succeeded. If Altitude calibration failed is displayed, re-calibrate the altitude.

You can also set the elevation for the Automatic Calibration also by using the Polar Equine software. For more information see software help.

*Select this option if you train in the same environment. This way, altitude values are always correct. If the sport profile of the exercise includes automatic calibration, altitude measurement always begins at this elevation regardless of the general elevation settings.*

### **Recording Rate**

Select Settings > Features > Rec.rate > 1 / 5 / 15 / 60 sec

The Training System can store your heart rate, speed, cadence, power and altitude in 1, 5, 15 or 60 second intervals. A longer interval gives you more recording time, while a shorter interval allows you to record more heart and other data. This enables accurate data analysis using the Polar Equine software.

A shorter recording rate consumes the memory of the Training System more rapidly. The remaining recording time is displayed on the lower row when setting the rate. Default recording rate is 5 seconds.

When less than 30 minutes of maximum recording time is left, the recording rate changes automatically to longer recording time (1s > 5s > 15s > 60s). This will maximize recording time to record exercise data. When the session ends, the current recording rate will be used in the next training session.

The following table shows the maximum recording times for each recording rate. The maximum recording time can be shorter, if you record a large number of short exercises.

*Recording rate will change when less than 30 minutes of recording time is left. Memory low is displayed 60 minutes before the memory runs out.*

RR Data	Speed	GPS	Rec. Rate 1s	Rec. Rate 2s	Rec. Rate 5s	Rec. Rate 15s.	Rec. Rate 60s
Off	Off	Off	22h 30min	45h 00min	112h 40min	338h 10min	1352h 55min
Off	Off	Off	9h 30min	19h 10 min	48h 10min	144h 50min	579h 40min
Off	Off	Off	16h 50min	33h 40min	84h 30min	253h 40min	1014h 40min
Off	Off	Off	8h 20min	16h 50min	42h 10min	126h 50min	507h 20min
Off	On	Off	11h 10min	22h 30min	56h 20min	144h 50min	579h 40min
Off	On	On	4h 40min	9h 30min	24h 00min	67h 30min	270h 30min
Off	On	Off	6h 40min	13h 30min	33h 40min	92h 10min	368h 50min
Off	On	On	3h 40min	7h 30min	18h 40min	53h 20min	213h 30min
Off	On	Off	9h 30min	19h 10min	48h 10min	126h 50min	507h 20 min
Off	On	On	4h 30 min	9h 00 min	22h 30min	63h 20min	253h 40min
Off	On	Off	6h 00min	12h 10min	30h 40min	84h 30min	338h 10min
Off	On	On	3h 30min	7h 00min	17h 40min	50h 40min	202h 50min
On	Off	Off	18h 20min	25h 20min	32h 40min	37h 30min	39h 50min
On	Off	Off	8h 40min	14h 20min	23h 30min	32h 40min	38h 20min
On	Off	Off	14h 20min	21h 20min	29h 50min	36h 10min	39h 20min
On	Off	Off	7h 40min	13h 00min	22h 00min	31h 40min	38h 00min
On	On	Off	10h 00 min	16h 10 min	25h 20min	32h 40min	38h 20min
On	On	On	4h 30min	8h 10min	15h 50min	26h 00min	35h 40min
On	On	Off	6h 20min	10h 50min	19h 30min	29h 00min	36h 50min
On	On	On	3h 30min	6h 30min	13h 20min	23h 30min	34h 20min
On	On	Off	8h 40min	14h 20min	23h 30min	31h 40min	38h 00min
On	On	On	4h 10min	7h 40min	15h 00min	25h 20min	35h 10min
On	On	Off	5h 40min	10h 00min	18h 20min	28h 10min	36h 30min
On	On	On	3h 20min	6h 20min	12h 50min	23h 00min	34h 00min

*Durations in the table are estimates. For RR data, maximum recording time depends on heart rate and variation of heart rate. If you record laps and/or create an exercise that includes phases with the Polar Equine software, maximum recording time will decrease.*

## RR Data Function

Select Settings > Features > RR data > On / Off

The RR data recording function measures and records heartbeat intervals with one millisecond resolution. This enables the analysis of heart rate variability (HRV) using the Polar Equine software. The RR data function consumes the memory of the Training System and when setting the function, the remaining recording time is shown on the lower row of the display.

## **Automatic Lap Recording**

Set the automatic lap recording

Select Settings > Features > A.Lap > On > set the lap distance

The Training System will automatically record laps. Choose Off to deactivate.

## **Heart Rate View**

Choose a format to view your heart rate

Select Settings > Features > HR view > HR / HR%

## **Equine Sport Zones**

Define Polar Equine Sport Zones in the Training System

Select Settings > Features > Sport zones > Sport zone low limit

Set the lower limit of sport zone 1 by pressing UP or DOWN. Then press OK. Set the lower limits of each sport zone in the same way. When setting the lower limit, the upper limit of the previous zone is set automatically.

Press and hold LIGHT to switch between sport zone views: HR% (percentage of maximum heart rate) or BPM (beats per minute).

You can change settings easily by using the Polar Equine software. For further information, consult software help.

*You can lock/unlock sport zone by pressing and holding the LAP button during your ride.*

# Sulky Settings

Select Settings > sulky

You can set three sulky preferences for the Training System. Prepare the settings for the bikes and when you start training,select sulky 1, 2 or 3. sulky 1 is set as a default.



Select Settings > sulky > sulky 1, sulky 2, sulky 3 or Other.sulky 2 and sulky 3 can be turned on or off. Select Other to deactivate speed and to measure only heart rate, altitude, temperature or data provided by the GPS Sensor.

## Wheel Size

Select sulky > sulky 1 > Wheel

Wheel size settings are a prerequisite for correct riding information. For more information on measuring the wheel size, see Measuring Wheel Size.

## Autostart: On / Off

Select Settings > sulky > sulky1 > Autostrt

The Autostart function starts or stops automatically the exercise recording when you start or stop riding. The Autostart function requires Polar Speed Sensor or Polar Speed Sensor W.I.N.D.

## Arrival time

Select Settings > sulky > sulky 1 > Arr. time

Set the distance you are going to ride, and the Training System will calculate and display the estimated time of arrival based on riding speed. Install the Polar Speed Sensor on your sulky to measure speed and distance. For further information on installing the speed sensor, consult Polar Speed Sensor user manual.



- Select by pressing OK
- Select On/Off to set the feature on or off.
- Select Set dist. to set the distance you are going to ride.

## Speed: On / Off

Select Settings > sulky > sulky 1 > Speed > On/Off

As default the speed is On for sulky 1.

Select On and Teach new sensor is displayed. For further information on teaching the new sensor see Teach New Speed Sensor.

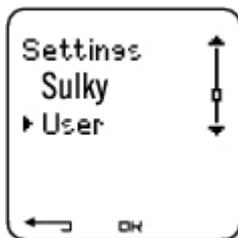
Select Off and the computer will select the Speed sensor that already has been taught. Next time you will have to teach the speed sensor again.

*Speed settings are either done manually or with the Polar Equine software.*

## Horse Settings

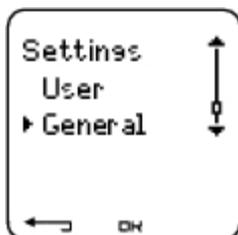
Enter accurate user information in the Training System to receive the correct feedback on your performance.

To set user information in the Training System, select Settings >Horse



- Heart Rate:  $HR_{\max}$

## General Settings



### Sound

Select Settings > General > Sound

### Volume

Select Settings > General > Sound > Volume > On / Off

Volume settings control button sounds and activity sounds during exercise. This does not affect the watch or target zone alarms (TZ Alarm).

### **TZ Alarm (Target Zone Alarm)**

You can set the TZ Alarm On/ Off:

Select Settings > General > Sound > TZ Alarm > On /Off

If the target zone alarm is deactivated, the heart rate reading will flash when you are outside the target zone.

### **Keylock**

To define keylock settings

Select Settings > General > Keylock > Manual / Automatic

Keylock prevents accidental button presses.

Manual: Activate the manual keylock.

Automatic: Keylock is activated in time mode when buttons have not been pressed for one minute.

To turn the keylock On/Off, press and hold the LIGHT for at least a second and press OK.

### **Units**

Set preferred units in the Training System

Select Settings > General > Units > kg/cm/km or lb/ft/mi

### **Language**

Select language

Select Settings > General > Language > English / Deutsch / Español / Français / Italiano

### **Sleep**

Activate the sleep function

Select Settings > General > Sleep > Activate sleep mode? > Yes

Activating the sleep mode will help save the battery when the Training System is not in use for a long period of time. The watch alarm will still function in sleep mode.

To reawaken the Training System

Press any button > Turn display on? > Yes / No

Yes: the Training System is activated.

No: the Training System returns to sleep mode.

## Watch Settings



### Reminder

Set a reminder for different tasks or exercises

Select Settings > Watch > Reminders > Add new

Date: Enter the date of the task, dd=day, mm=month, yy=year.

Reminder time: Enter the time for the reminder.

Alarm: Set alarm to sound on time, or 10 min / 30 min / 1 hour prior to the task.

Sound: Select alarm sound Silent / Beep / Normal.

Repeat: Select reminder to repeat Once / Hourly / Daily / Weekly / Monthly / Yearly.

Exercise: Select an exercise to link to the reminder. When the reminder goes off, the Training System will present this exercise as default. Select NONE if you do not want to link the reminder to an exercise session.

Rename: To rename the reminder, select letters with UP or DOWN, and accept with OK.

You can program seven reminders in the Training System.

To see active reminders and modify them:

Select Settings > Watch > Reminders

Select a reminder to view, edit, rename or delete.

### Event

To set an event countdown in the Training System

Select Settings > Watch > Event

Event day: dd=day, mm=month.

Rename: To rename the event, select letters with UP or DOWN, and accept with OK.

To modify the event countdown

Select Settings > Watch > Event

You can view the event countdown, set a new date, rename or delete it.

In time mode, hide or view the event countdown again by pressing and holding UP.

## Alarm

Set an alarm on your Training System

Select Settings > Watch > Alarm > Off / Once / Mon-Fri / Daily

You can set the alarm to go off either once (Once), everyday between Monday and Friday (Mon-Fri), daily (Daily) or you can set it Off. The alarm sounds in all modes except in exercise mode, and will do so for a minute unless you press STOP. The watch alarm also functions in sleep mode and even if you have turned the sound off in the General settings.

To snooze the alarm an extra 10 minutes, press UP or DOWN buttons or OK: Snooze is displayed and the snooze time starts counting. To exit the snooze alarm, press STOP.

If a battery symbol appears in the display, the alarm cannot be activated.

## Time

Set time 1 in the Training System

Select Settings > Watch > Time 1 > 24h / 12h

Set time 2 in the Training System

Select Settings > Watch > Time 2

Set the desired time difference between time 1 and time 2 in hours with UP/ DOWN buttons.

## Time zone

Switch between time zones

Select Settings > Watch > Time zone > Time 1 / Time 2

Select a time zone

In time mode, change the time zone by pressing and holding DOWN. Number 2 on the lower right corner of the display indicates that Time 2 is in use.

## Date

To set the date in the Training System

Select Settings > Watch > Date

dd=day, mm=month, yy=year

Change settings easily by using the Polar Equine software. For further information, see software help.

## Personalize the Training System Display

In time mode, select OK > Settings > Display > Edit

Personalize your Training System display to show information you want to see during training. Adjust the displays also by using the Polar Equine software. An exercise attached to the training program has its own display settings that cannot be modified. The information on the display depends on the features that are activated. For example, if speed measurement is not activated, speed information can not be shown in the display.

For further information on display symbols, see Symbols on the Display.

Select the display you want to change by pressing UP or DOWN, and press OK. Set the information for the blinking upper row with UP or DOWN, and press OK. The information on the display depends on the features that are activated. For further information, see Feature Settings.

Repeat the same for the middle and lowest rows. Each display is named after the information shown on the lower row. To return the default settings of the display, press and hold LIGHT when the rows are blinking.

Activate Titles to view the name of the display while changing displays during exercise: In time mode, select OK > Settings > Display > Titles

The display settings are separate for each sulky (sulky 1, 2, 3). If you change the displays for one sulky, the changes do not affect the other sulky displays. The display views depend on the features that are activated. For further information see Feature Settings and sulky Settings.

## **Shortcut Button (Quick Menu)**

Some settings can be changed with a shortcut button in time mode.

Press and hold LIGHT > Quick menu

- Keylock
- Reminders
- Alarm
- Time zone
- Sleep

## 8. Using a New Accessory

### Teaching

Your CS600X Training System has been synchronized, or “taught” to work together with the Polar WearLink W.I.N.D. transmitter and to measure heart rate, speed and distance. In other words, your Training System receives signals from your transmitter and speed sensor only, and enables disturbance-free exercise in a group.

If you purchase a new transmitter or speed sensor as a separate accessory, they have to be introduced to the Training System. This is called teaching and takes only a few seconds.

To prevent interference during a riding event, make sure you perform the teaching process prior to the event.

#### Teach New Transmitter

Wear the transmitter and make sure that you are not near (40 m/131 ft) other Polar WearLink W.I.N.D. transmitters. In time mode, press OK. The Training System starts searching for the transmitter signal.

Once the new transmitter is identified, New WearLink found, Teach new WearLink? is displayed.

- Select Yes to confirm teaching. Completed! and Exercise displays updated are displayed. Start exercise recording by pressing OK.
- Select No to cancel teaching.

#### Teach New Speed Sensor

Make sure that there are no other speed sensors or Training Systems nearby (40 m/131 ft). The teaching procedure only takes a few seconds.

You can teach one Speed sensor for each sulky setting.

Select Settings > sulky > sulky1 > Speed > On/Off

Select > On > Teach new sensor? is displayed

- Select Yes to confirm teaching > Start test drive is displayed. Rotate the wheel a few times to activate the sensor. A flashing red light indicates that the sensor is activated.  
  
Completed! and Exercise displays updated are displayed. The Training System is now ready to receive speed and distance data.
- Select No to cancel teaching and the already earlier taught speed sensor is taken into use.

If you haven't taught speed sensor to recognize a certain sulky before, speed information will not be shown.

Select > Off and the display returns to the previous menu display.

To return to time mode, press and hold the BACK button.

*Once the speed sensor is taught to recognize the Training System, it will do so even if the sensor has been turned off. When the speed sensor is turned back on Teach new sensor? is displayed. Select No and Exercise displays updated appears. If Yes is selected, the monitor goes into teaching mode.*

### **Teaching a New G3 GPS Sensor\***

Turn the G3 GPS sensor on and then select Settings > Features > GPS > On in your cycling computer. Teach new sensor? is displayed.

- Select Yes to confirm teaching. Completed! is displayed.
- Select No to cancel teaching. The Training System will not be able to measure GPS data.

\*Optional sensors required

## 9. Background Information

### Polar Equine Sport Zones

Polar equine sport zones offer a new level of effectiveness in heart rate-based training. Training is divided into five sport zones based on percentages of your maximum heart rate. With sport zones, you can easily select and monitor training intensities and follow Polar's sport zones-based training programs.

Target zone	Intensity % of HR <sub>max</sub> , bpm	Example durations	Training benefit
<b>MAXIMUM</b>			
	90–100%	0-2 minutes	<ul style="list-style-type: none"><li>• Tones the neuromuscular system</li><li>• Increases maximum sprint race speed</li></ul>
<b>HARD</b>			
	80–90%	2–10 minutes	<ul style="list-style-type: none"><li>• Increases anaerobic tolerance</li><li>• Improves high speed endurance</li></ul>
<b>MODERATE</b>			
	70–80%	10–40 minutes	<ul style="list-style-type: none"><li>• Enhances aerobic power</li><li>• Improves blood circulation</li></ul>
<b>LIGHT</b>			
	60–70%	40–80 minutes	<ul style="list-style-type: none"><li>• Increases metabolism</li><li>• Increases aerobic endurance</li><li>• Strengthens body so that it tolerates higher intensity training</li></ul>
<b>VERY LIGHT</b>	50–60%	20–40 minutes	<ul style="list-style-type: none"><li>• Helps and speeds up recovery after heavier exercises</li></ul>

Target zone	Intensity % of HR <sub>max</sub> , bpm	Example durations	Training benefit
			

Exercising in sport zone 1 is done at a very low intensity. Training with very light intensity helps accelerate the recovery process.

Endurance training in sport zone 2 features an easy aerobic exercise. Long duration training in this light zone is effective for energy expenditure.

Aerobic power is enhanced in sport zone 3 with mainly aerobic exercise. Training can consist of intervals followed by recovery, for example. Exercising in this zone is especially effective for improving the efficiency of blood circulation in the heart and skeletal muscles.

If your goal is to compete at top potential, you will have to go to sport zones 4 and 5 to exercise anaerobically, in intervals of up to 10 minutes. The shorter the interval, the higher the intensity. Sufficient recovery between intervals is very important.

When running in a certain sport zone, the mid-zone is a good target, but it is not necessary to keep your heart rate at that exact level all the time.

The response of the heart rate varies according to training, recovery, environmental, and other factors. This is why it is important to pay attention to other signs of exhaustion and adjust the training program accordingly.

# Maximum Heart Rate

Maximum heart rate ( $HR_{\max}$ ) is the highest number of heartbeats per minute (bpm) during maximum physical exertion. It is individual and depends on age, hereditary factors, and fitness level. It may also vary for different types of sports.  $HR_{\max}$  is used to express exercise intensity.

## Determining Maximum Heart Rate

*Extract of: Equine Sport with Feeling and Know How*

*A GUIDELINE FOR HEALTH CHECK-UPS, EXERTION CONTROL AND CONTROLLED TRAINING BY C. HEIPERTZ-HENGST*

*COPYRIGHT 2002 BY POLAR ELECTRO EUROPE BV ISBN 952-5048-71-3*

Before explaining how HRmax is determined, let us mention some important facts concerning it.

The maximum heart rate of any horse - as of any human being - is genetically determined as it is a hereditary factor and cannot be altered with training. There are great differences between breeds and from one horse to the other. In human beings, heart rate diminishes in old age, more or less according to the formula: **220 minus age = maximum heart rate.**

Such an easy rule of thumb does not exist for horses, at least not yet, but it is quite realistic to count about  $230 \pm 10$  bpm as a theoretical maximum. The maximum heart rate of a horse is caused by physical effort and varies according to exercise, it is different for sprint training, for hill work or swimming. Medication can also alter HRmax, overtraining and fatigue can lower it. It is not connected with performance potential. It would be totally wrong to suppose a better performance potential with an elevated maximum heart rate value, just as it would be mistaken to believe that a low HRmax value is a sign of lesser performance potential. Extreme endurance training may hinder reaching HRmax in speed testing.

Therefore maximum heart rate is not an absolute value but the individual highest number of beats per minute under certain forms of strain and effort. For a healthy horse, reaching maximum heart rate due to physical effort does not present a health hazard but rather indicates full use of its natural performance potential. It allows us to establish a reference value, that is, a value to control exertion and to measure the difficulties of exercises. At the beginning and until you are sufficiently knowledgeable yourself, you should ask an experienced trainer or veterinarian for advice. They will check your horse's general state of health before determining its HRmax. Then you can rest assured that your horse will run no health risk through exercise and effort.

### **Test a):**

Full use of performance potential over 1000 to 1600 meters: It is unlikely that such a distance test will induce a horse to peak performance when under training, it needs a real race with real competitive atmosphere. If you manage to monitor the heart rate during a race, or rather during the 20 seconds when your horse is at its maximum speed, the top value will be its maximum heart rate.

### **Test b):**

Speed test with progressive increase: this test requires a slow step by step increase of the

galloping speed, for instance every 400 m over a period of time of 2 - 3 minutes, until exhaustion. The following table is a representative example but it must be remembered that the speeds and distances chosen by you depend on the type and fitness of your own horse! Untrained horses will start relatively slowly! All the same, don't start too low, otherwise the test will last a long time before reaching maximum speed. Horses used to more training and thoroughbreds start straight away at a higher departure speed of 500 - 700 metres per minute. The first tests serve to establish the appropriate steps when to increase speed, and to set down your individually adapted test requirements.

Only the last three steps should really be strenuous, and peak performance should only be maintained for 5 to 10 seconds. In our example below highest performance lasts for 6.5 secs. Maximum heart rate is reached at the last step which lasts only for a few seconds before the end of the test.

**TABLE 5: Speed test: example of a continuous progressive speed test, increased in 6 steps of 400 m each:**

Step	Speed m./min.	Speed min/km	time to cover 400 m	Accumulated time	heart rate per min.
1	500 m/min.	2.00 min/km	48.00 s	48.00 s	174
2	550 m/min	1.50 min/km	43.50 s	91.50 s	188
3	600 m/min	1.40 min/km	40.00 s	131.50 s	193
4	650 m/min	1.32 min/km	37.00 s	168.50 s	201
5	700m/min	1.26 min/km	34.00 s	202.50 s	210

#### **Test c): hill test**

In hilly country it is often difficult to find a suitable flat track, so a different test may be helpful. However, the horse must be used to training in hilly environment before using such a track for a test. Easy, regular climbs call for longer test tracks, steep climbs necessitate shorter stretches. Preferably, you should reach the hill at a good basic speed which will be gradually increased until you reach the top, or until your horse gets tired. It would be ideal if the top value of the horse's performance would coincide with reaching the top of the hill. The heart rate at the end of the climb indicates HRmax.

It does not matter whether you decide to use one or the other test possibilities - it is much more important to follow the following indications: To achieve **standardization**, rules concerning warm-up and cool-down (see next chapter) must be kept to and the **feeding routine** maintained, that is, the last feed should consist in the usual food and be given 3 to 5 hours prior to testing.

**Only well-rested horses are able to reach their maximum heart rate.** On the day before the test, exercises should be easy; if your horse worked hard for one or two days before the test, or if it even ran a race, there is little hope to establish the correct maximum heart rate value.

If you have any doubts about the result, or if you want to be absolutely sure about your horse's Max HR, repeat the test under the same conditions some days later to double-check the data.

# Heart Rate Variability

Heart rate varies with every heartbeat. Heart rate variability (HRV) is the variation of beat-to-beat intervals, also known as R-R intervals.



HRV indicates the fluctuations of heart rate around an average heart rate. An average heart rate of 60 beats per minute (bpm) does not mean that the interval between successive heartbeats would be exactly 1.0 sec, instead they may fluctuate/vary from 0.5 sec up to 2.0 sec.

HRV is affected by aerobic fitness. HRV of a well-conditioned heart is generally large at rest. Other factors that affect HRV are age, genetics, body position, time of day, and health status. During exercise, HRV decreases as heart rate and exercise intensity increase. HRV also decreases during periods of mental stress.

HRV is regulated by the autonomic nervous system. Parasympathetic activity decreases heart rate and increases HRV, whereas sympathetic activity increases heart rate and decreases HRV.

## R-R Recording

R-R recording rate saves heartbeat intervals, i.e. intervals between successive heartbeats. This information is also shown as instantaneous heart rate in beats per minute in recorded samples.

When recording every single interval, extra systoles and artefacts can also be seen. We recommend using contact gel (ECG gel) to optimize contact between the skin and the transmitter. Readings interpreted as incorrect in the heart rate data can be adjusted and corrected with the Polar Equine software.

## Polar Article Library

For more facts and know-how to enhance your riding, visit [www.polar-equine.com](http://www.polar-equine.com).

## 10. Customer Service Information

### Care and Maintenance

Like any electronic device, the Polar Training System should be treated with care. The suggestions below will help you fulfill guarantee obligations and enjoy this product for many years to come.

#### Caring of Your Product

**Detach the transmitter connector from the strap after use.** Clean the connector with a mild soap and water solution. Dry it with a towel. Never use alcohol or any abrasive material (steel wool or cleaning chemicals).

**Rinse the transmitter strap with water after every use.** If you use the strap more than three times a week, wash it at least once every three weeks in a washing machine at 40°C / 104°F. Use a washing pouch. Do not soak, and use neither detergent with bleach nor fabric softener. Do not dry-clean or bleach the strap.

Wash the strap before long-term storage, and always after use in pool water with high chlorine content. Do not spin-dry or iron the strap. Never put the connector in a washing machine or a drier! **Dry and store the strap and the connector separately.**

Keep your Training System, transmitter and sensors in a cool and dry place. Do not keep them in a damp environment, in non-breathable material (a plastic bag or a sports bag) nor with conductive material (a wet towel). The Training System, transmitter and sensors are water resistant, and can be used in rainy weather. To maintain the water resistance, do not wash the Training System or the sensors with a pressure washer or sink them under water. Do not expose to direct sunlight for extended periods

Keep your Training System clean. Clean the Training System and sensors with a mild soap and water solution and rinse them with clean water. Do not immerse them in water. Dry them carefully with a soft towel. Never use alcohol or any abrasive material such as steel wool or cleaning chemicals.

Avoid hard hits to the Training System and speed sensor, as these may damage the sensor units.

#### Service

If your Polar Training System requires service during the first two-year guarantee/warranty period, we recommend that it is carried out by authorized Polar Service Centers only. The warranty does not cover damage or consequential damage caused by service not authorized by Polar Electro. For further information, see Limited Polar International Guarantee.

For more information on local after sales services, consult Polar Customer Service Card.

## Changing Batteries

Have the battery replaced by an authorized Polar Service Center. Avoid opening the sealed battery cover, but if you choose to change the battery yourself, follow the instructions carefully on the next page.

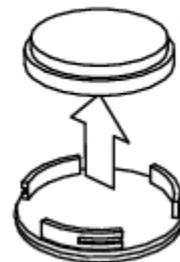
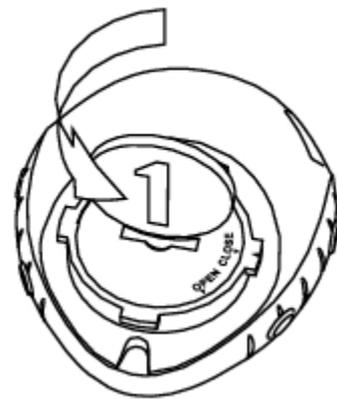
To change the batteries of the Training System and transmitter yourself, carefully follow the instructions in Changing Training System Battery. Instructions apply for all batteries.

If you would prefer Polar to replace the battery, contact an authorized Polar Service Center.

## Changing Training System Battery

To change the Training System battery, you need a coin and battery(CR 2354).

1. Using the coin open the battery cover by pressing slightly and turning counter clockwise.
2. Remove the battery cover. The battery is attached to the cover, which should be lifted carefully. Remove the battery and replace it with a new one. Be careful not to damage the threads of the back cover.
3. Place the positive (+) side of the battery against the cover and negative(-) side toward the Training System.
4. The sealing ring of the battery cover is also attached to the cover. Replace the sealing ring if it is damaged. Before closing the battery cover, make sure that the sealing ring is undamaged and is placed correctly in its groove.
5. Put the battery cover in its place and turn the cover clockwise with a coin to CLOSE position. Make sure that the cover is closed properly!



Excessive use of the backlight drains the Training System's battery more rapidly. In cold conditions, the low battery indicator may appear, and disappear again when you return to a warmer environment. To ensure the maximum lifespan of the battery cover, open it only when changing battery. When changing the battery, make sure the sealing ring is not damaged, in which case you should replace it with a new one. Battery kits with sealing rings are available at well-equipped Polar retailers and authorized Polar Service Centers. In the USA and Canada, sealing rings are available at authorized Polar Service Centers only.

Keep batteries away from children. If swallowed, contact a doctor immediately. Batteries should be properly disposed of according to local regulations.

# Precautions

## Interference During Exercise

### Electromagnetic Interference and Exercise Equipment

Disturbance may occur near high-voltage power lines, traffic lights, overhead lines of electric railways, electric bus lines or trams, televisions, car motors, sulky computers, some motor-driven exercise equipment, cellular phones, or at electric security gates. Microwave ovens, computers and WLAN base stations may also cause interference when exercising with CS600. To avoid erratic readings, move away from possible sources of disturbance.

Exercise equipment with electronic or electrical components such as LED displays, motors and electrical brakes may cause interfering stray signals. To solve these problems, try the following:

1. Remove the transmitter from your chest and use the exercise equipment as you would normally.
2. Move the Training System around until you find an area in which it displays no stray reading or does not flash the heart symbol. Interference is often strongest directly in front of the display panel of the equipment, while the left or right side of the display is relatively free of disturbance.
3. Put the transmitter back on your chest and keep the Training System in this interference-free area as much as possible.

If the Training System still does not work with the exercise equipment, it may be electrically too noisy for wireless heart rate measurement.

## Technical Specifications

### Training System

The wrist unit is a class 1 Laser Product

Battery life: Average 1 year (1h/day, 7 days/week)

Battery type: CR 2354

Battery sealing ring: O-ring 20.0 x 1.0 Material: silicone

Operating temperature: -10 °C to +50 °C / 14 °F to 122 °F

Materials: Thermoplastic polymer

Watch accuracy: Better than  $\pm 0.5$  seconds / day at 25 °C / 77 °F temperature.

Accuracy of heart rate monitor:  $\pm 1\%$  or 1 bpm, whichever larger. Definition applies to stable conditions.

Heart rate measuring range: 15-240

Current speed display range: 0-127 km/h or 0-75 mph

Altitude display range: -550 m ... +9000 m / -1800 ft ... +29500 ft

Ascent resolution: 5 m / 20 ft

### **Training System limit values**

Maximum files: 99  
Maximum time: 99 h 59 min 59 s  
Maximum laps: 99  
Total distance: 999 999 km / 621370 mi  
Total duration: 9999h 59min 59s  
Total calories: 999 999 kcal  
Total exercise count: 9999  
Total ascent: 304795 m / 999980 ft

### **Transmitter**

Battery life of WearLink W.I.N.D. transmitter: Average 2 years (3h/day, 7days/week)  
Battery type: CR2025  
Battery sealing ring: O-ring 20.0 x 1.0, material silicone  
Operating temperature: -10 °C to +40 °C / 14 °F to 104 °F  
Connector material: Polyamide  
Strap material: Polyurethane/ Polyamide/ Polyester/ Elastane/ Nylon

### **Polar WebLink using IrDA Communication, Polar ProTrainer 5™ Equine Edition**

System Requirements: PC  
Windows® 2000/XP (32bit)  
IrDA compatible port (an external IrDA device or an internal IR port)  
Additionally, for the software your PC must have a Pentium II 200 MHz processor or faster, SVGA or higher resolution monitor, 50 MB hard disk space and a CD-ROM drive.

The Polar Training System displays your performance indicators. It indicates the level of physiological strain and intensity during exercise. It also measures speed and distance when riding with a Polar Speed sensor.

The Polar Training System should not be used for obtaining environmental measurements that require professional or industrial precision. Furthermore, the device should not be used to obtain measurements when engaged in airborne or underwater activities

Water resistance of Polar products is tested according to International Standard ISO 2281. Products are divided into three different categories according to water resistance. Check the back of your Polar product for the water resistance category and compare it to the chart below. Please note that these definitions do not necessarily apply to products of other manufacturers.

Marking on case back	Wash splashes, sweat, raindrops etc.	Bathing and swimming	Skin diving with snorkel (no air tanks)	SCUBA diving (with air tanks)	Water resistant characteristics
Water resistant	x				Splashes, raindrops etc.
Water resistant 50m	x	x			Minimum for bathing and swimming*.
Water resistant 100m	x	x	x		For frequent use in water but not SCUBA diving.

\*These characteristics also apply to Polar WearLink W.I.N.D. transmitters marked Water resistant 30m.

## Frequently Asked Questions

**What should I do if...**

**...the battery symbol and Battery low is displayed?**

The low battery indicator is usually the first sign of an expired battery. However, in cold conditions the low battery indicator may appear. The indicator will disappear as soon as you return to a normal temperature. When the symbol appears, the Training System sounds and backlight are automatically deactivated. For further information on changing the battery, see Care and Maintenance.

**...I do not know where I am in the menu?**

Press and hold STOP until the time of day is displayed.

**...there are no reactions to any buttons?**

Reset the Training System by pressing all the side buttons simultaneously for 2 seconds. After the reset, press the red button, Start with sulky settings is displayed. You can either accept the sulky settings with OK or change the sulky settings. Then Basic Settings is displayed. Set the time and date, all the rest of the settings are saved. For more information see Basic Settings and Measuring Wheel Size. If you do not want to change the rest of the settings you can skip them by pressing and holding STOP. All the exercise data is saved.

**...another person with a Training System or a heart rate monitor is causing interference?**

See Precautions.

**...the heart rate reading becomes erratic, extremely high or shows nil (00)?**

- Make sure the Training System is no further than 40 m/131 ft from the transmitter.
- Make sure the transmitter belt has not loosened during exercise.
- Make sure that the electrodes of the transmitter are moistened.
- Make sure the transmitter is clean.
- Make sure that there is no other heart rate transmitter within 40 m/131 ft.
- Strong electromagnetic signals can cause erratic readings. For further information, see Precautions.
- If the erratic heart rate reading continues despite moving away from the source of disturbance, slow down your speed and check your pulse manually. If you feel it corresponds to the high reading on the display, your horse may be experiencing cardiac arrhythmia. Most cases of arrhythmia are not serious, but consult your veterinarian nevertheless.
- A cardiac event may have altered the ECG waveform. In this case, consult your veterinarian.

**...Check WearLink! is displayed and your Training System cannot find your heart rate signal?**

- Make sure the Training System is no further than 40 m/131 ft from the transmitter.
- Make sure the transmitter belt has not loosened during exercise.
- Make sure that the electrodes of the transmitter are moistened.
- Make sure the transmitter / electrodes are clean and undamaged.
- If you have done all of the above-mentioned actions, and the message still appears and heart rate measurement does not work, the battery of your transmitter may be empty. For further information, see Care and Maintenance.

**...New WearLink found. Teach new WearLink? is displayed?**

If you have purchased a new transmitter as an accessory, it will have to be introduced to the Training System. For further information, see Teach New Transmitter.

If the transmitter you are using is included in the product set, and the text appears on the display, the Training System may be detecting the signal of another transmitter. In that case, make sure you are wearing your own transmitter, that the electrodes are moistened, and that the transmitter belt has not loosened. If the message still appears, the battery of your transmitter is empty. For further information, see Care and Maintenance.

**...Check Speed! is displayed?**

For further information, consult Speed Sensor W.I.N.D. user manual.

**...the altitude keeps changing even if I am not moving?**

The Training System converts measured air pressure into an altitude reading. This is why changes in the weather may cause changes in altitude readings.

**...the altitude readings are inaccurate?**

Your altimeter may show faulty altitude if it is exposed to external interference like strong wind or air conditioning. In this case, try to calibrate the altimeter. If the readings are

constantly inaccurate, dirt may be blocking the air pressure channels. In this case, send the Training System to a Polar Service Center.

### **...Memory low is displayed?**

Memory low is displayed when there is approximately one hour of memory space left. Once the memory has been depleted Memory full is displayed. To free memory space, transfer exercise data to Polar Equine software, and delete from the Training System memory.

\*Optional sensor required.

## **Limited Polar International Guarantee**

- This limited Polar international guarantee is issued by Polar Electro Inc. for those consumers who have purchased this product in the USA or Canada. This limited Polar international guarantee is issued by Polar Electro Oy for those consumers who have purchased this product in other countries.
- Polar Electro Oy/Polar Electro Inc. guarantees to the original consumer/purchaser of this device that the product will be free from defects in material or workmanship for two years from the date of purchase.
- **Please keep the receipt or stamped Polar Customer Service Card, which is your proof of purchase!**
- The guarantee does not cover the battery, damage due to misuse, abuse, accidents or non-compliance with the precautions; improper maintenance, commercial use, cracked or broken cases and elastic strap.
  
- The guarantee does not cover any damage/s, losses, costs or expenses, direct, indirect or incidental, consequential or special, arising out of, or related to the product. During the guarantee period, the product will be either repaired or replaced at an authorized Service Center free of charge.
- This guarantee does not affect the consumer's statutory rights under applicable national or state laws in force, or the consumer's rights against the dealer arising from their sales/purchase contract.

**CE 0537**

This product is compliant with Directives 93/42/EEC. The relevant Declaration of Conformity is available at [www.support.polar.fi/declaration\\_of\\_conformity](http://www.support.polar.fi/declaration_of_conformity).



This crossed out wheeled bin marking shows that Polar products are electronic devices and are in the scope of Directive 2002/96/EC of the European Parliament and of the Council on waste electrical and electronic equipment (WEEE). These products should thus be disposed of separately in EU countries. Polar encourages you to minimize possible effects of waste on the environment and human health also outside the European Union by following local wastedisposal regulations and, where possible, utilize separate collection of electronic devices.

Polar Electro Oy is a ISO 9001:2000 certified company.

Copyright © 2007 Polar Electro Oy, FIN-90440 KEMPELE, Finland.

All rights reserved. No part of this manual may be used or reproduced in any form or by any means without prior written permission of Polar Electro Oy. The names and logos marked with a™symbol in this user manual or in the package of this product are trademarks of Polar Electro Oy, except for Sound Blaster, which is a trademark of Creative Technology, Ltd. The names and logos marked with a ® symbol in this user manual or in the package of this product are registered trademarks of Polar Electro Oy, except that Windows is a registered trademark of Microsoft Corporation.

## **Polar Disclaimer**

- The material in this manual is for informational purposes only. The products it describes are subject to change without prior notice, due to the manufacturer's continuous development program.
- Polar Electro Inc./Polar Electro Oy makes no representations or warranties with respect to this manual or with respect to the products described herein.
- Polar Electro Inc./Polar Electro Oy shall not be liable for any damages, losses, costs or expenses, direct, indirect or incidental, consequential or special, arising out of, or related to the use of this material or the products described herein.

This product is protected by one or several of the following patents:

FI68734, US4625733, DE3439238, GB2149514, HK81289, FI110303, WO96/20640, EP 0748185, US6104947, FI112028, EP 0984719, US 6361502, FI 111801, US 6418394, EP1124483, WO9855023, US6199021, US6356848, FI114202, US 6537227, FI110915, FI 113614.

Other patents pending.

Manufactured by:  
Polar Electro Oy  
Professorintie 5  
FIN-90440 KEMPELE

Distributed by:  
Polar Electro Europe BV, Fleurier Branch  
Av. D.-Jeanrichard 2  
CH-2114 Fleurier

Tel +358 8 5202 100  
Fax +358 8 5202 300

Tel +4132 8629050  
Fax +4132 8629055

[www.polar.fi](http://www.polar.fi)

[www.polar-equine.com](http://www.polar-equine.com)