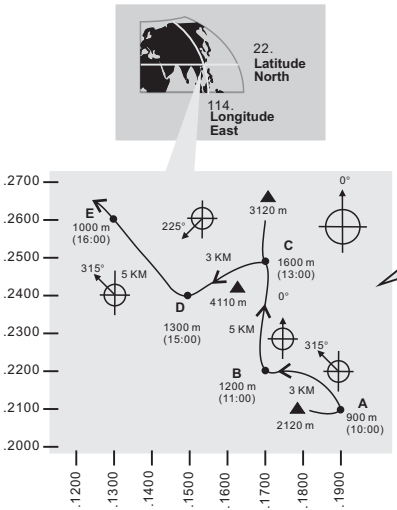
Satellite Icon	Icon look	Definitions	Positioning Accuracy
	Icon OFF	Satellite function is disabled	--
	Icon Flashing	GLOBAL NAV is searching for satelites	--
	Icon ON	Bad satellites positions or less than 3 satellites are tracked	NOT Accurate
	Icon ON with 1 bar	3 satellites are tracked	Altitude NOT Accurate
	Icon ON with 2 bar	More than 3 satellites are tracked	Fairly Accurate
	Icon ON with 3 bar	More than 5 satellites are tracked	Accurate
	Icon ON with 4 bar	More than 7 satellites are tracked	Very Accurate

Case	Objectives	Internet address *(as at 12 July 2004)*
1.	An Overview to Global Positioning System	http://www.colorado.edu/geography/gcraft/notes/gps/gps_f.html
2.	An Overview to Global Positioning System	http://tycho.usno.navy.mil/gps.html
3.	To download another mapping software	http://www.u-blox.com/products/u_center.html

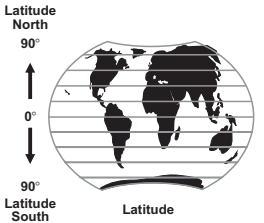


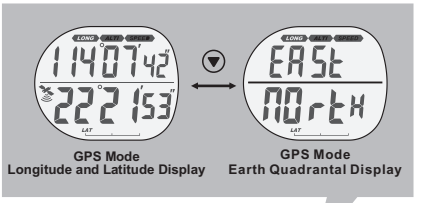
Track Travel Functions	Point A (10:00)	Point B (11:00)	Point C (13:00)	Point D (15:00)	Point E (16:00)
Latitude	22.2100°	22.2200°	22.2500°	22.2400°	22.2600°
Longitude	114.1900°	114.1700°	114.1700°	114.1500°	114.1300°
Altiude	900 m	1200 m	1600 m	1300 m	1000 m
Heading Compass Angle	315°	0°	225°	315°	--
Travel Distance	0	3 km	8km	11km	16km
Current Speed	0	2.0 km	2.0 km	1.0 km	4.0 km
Average Speed	0	3.0 km	2.5 km	1.5 km	5.0 km
Maximum Speed	0	3.5 km	4.0 km	4.5 km	4.5km
Odometer	123km	126km	131km	134km	139km

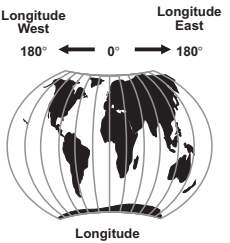
Track Travel Data (GPS Mode) recorded from Point A to E

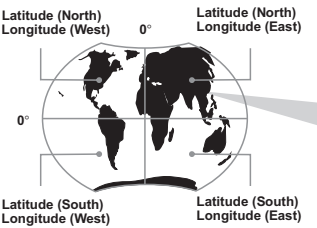
Note:

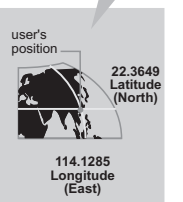
- The trek on the adjacent diagram set as an example to illustrate the Trek Travel Function. Assume the G.P.S function was enabled at Point A, and disabled at Point E, and the initial reading of the odometer is 123 km.
- The above 5 set of Trek Travel Data was taken and displayed at the point A, B, C, D and E.
- The waypoints of the trek will record automatically. The real resolution of waypoints depends on the interval setting for the waypoints recording.

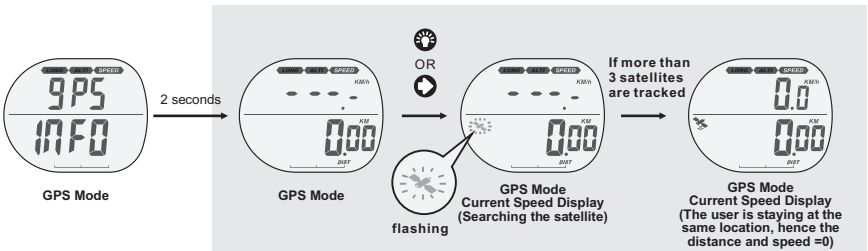

Latitude
North
90°
0°
90°
Latitude
South
Latitude

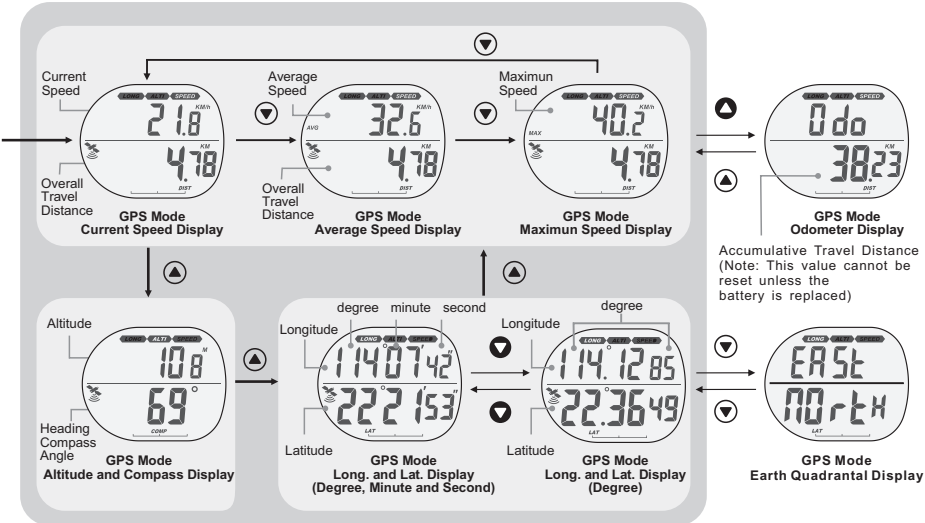

LONG
ALTI
SPEED
114°07'42"
22°21'53"
LAT
EAST
NORTH
GPS Mode
Longitude and Latitude Display
GPS Mode
Earth Quadrantal Display

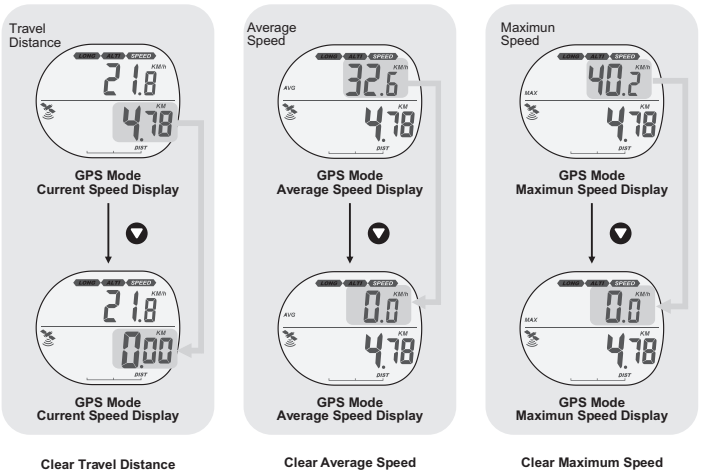

Longitude
West
Longitude
East
180°
0°
180°
Longitude

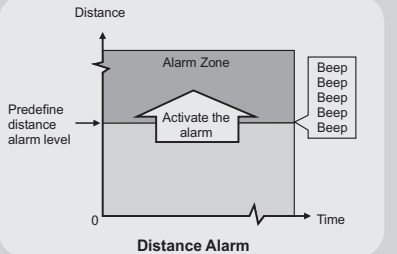

Latitude (North)
Longitude (West)
0°
Latitude (North)
Longitude (East)
0°
Latitude (South)
Longitude (West)
Latitude (South)
Longitude (East)


user's
position
22.3649
Latitude
(North)
114.1285
Longitude
(East)


GPS
INFO
2 seconds
KM/h
KM
DIST
OR
flashing
If more than
3 satellites
are tracked
0.0
GPS Mode
GPS Mode
GPS Mode
Current Speed Display
(Searching the satellite)
GPS Mode
Current Speed Display
(The user is staying at the
same location, hence the
distance and speed =0)


Current Speed
Overall Travel Distance
GPS Mode
Current Speed Display
Average Speed
Overall Travel Distance
GPS Mode
Average Speed Display
Maximun Speed
GPS Mode
Maximun Speed Display
GPS Mode
Odometer Display
Accumulative Travel Distance (Note: This value cannot be reset unless the battery is replaced)
Altitude
Heading Compass Angle
GPS Mode
Altitude and Compass Display
degree minute second
Longitude
Latitude
GPS Mode
Long. and Lat. Display
(Degree, Minute and Second)
degree
Longitude
Latitude
GPS Mode
Long. and Lat. Display
(Degree)
GPS Mode
Earth Quadrantal Display

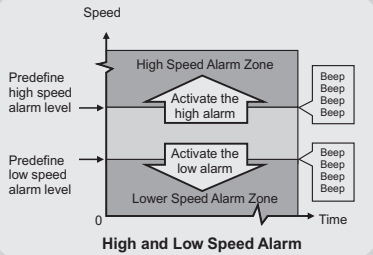

Travel Distance
GPS Mode
Current Speed Display
GPS Mode
Current Speed Display
Clear Travel Distance
Average Speed
GPS Mode
Average Speed Display
GPS Mode
Average Speed Display
Clear Average Speed
Maximun Speed
GPS Mode
Maximun Speed Display
GPS Mode
Maximun Speed Display
Clear Maximum Speed



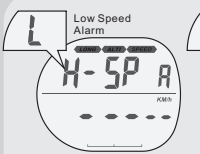
Distance Alarm

Distance Alarm OFF

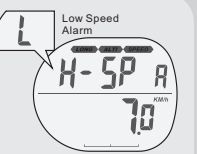
Distance Alarm ON



High and Low Speed Alarm

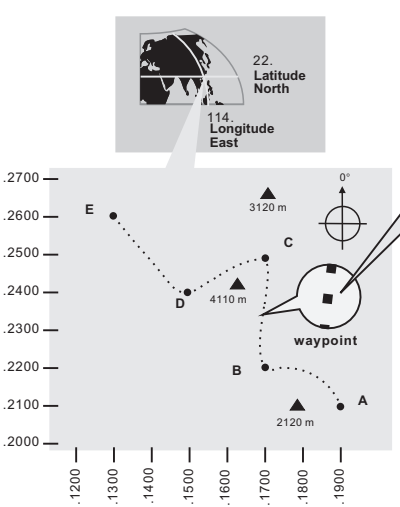


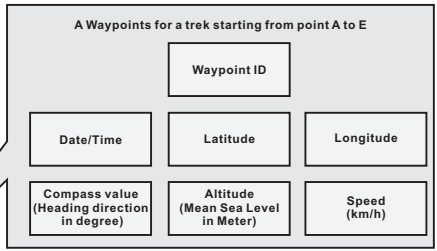
High Speed Alarm OFF



High Speed Alarm ON

F. GPS Function: *Trek Travel (Automatic Waypoints Sending/Storing Function)* ***F- 07***





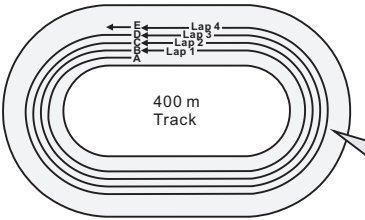
- The trek on the adjacent diagram acts as an example to illustrate the waypoint sending/storing function of the Transceiver. Assume the G.P.S function is enabled at Point A, and disabled at Point E.

Waypoint Sending (Realtime)

- The transceiver can send the realtime waypoints to PC via the PC-Link automatically. The interval for sending one waypoints is 2 seconds.
- Check the coming 'Send Real time Waypoints to PC' Section for more detail on how to send the realtime waypoints.

Waypoint Storing (Offline)

- The transceiver can store the waypoints automatically. The interval for storing one waypoint depends on the waypoints storing interval setting. Check the coming 'G.P.S. Mode Setting' Section for more detail on how to set the waypoints storing interval.
- Check the coming 'Send Offline Waypoints & Lap Travel Data to PC' Section for more detail on how to send the offline waypoints.



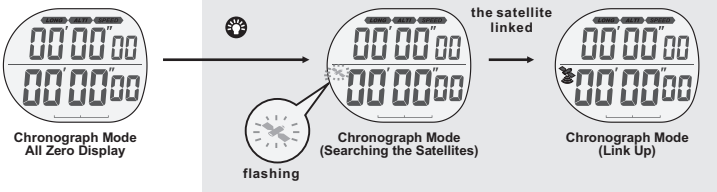
Point	A	B	C	D	E
Lap No.	--	Lap 1	Lap 2	Lap 3	Lap 4
Cumulative time	00:00 00	00:01 30	00:03 30	00:06 00	00:09 00
Lap time	00:00 00	00:01 30	00:02 00	00:02 30	00:0300
Key Operation	▲	▼	▼	▼	▲
Travel Distance	--	400 m	400 m	400 m	400 m
Current Speed	--	15 km/h*	10 km/h*	8 km/h*	7 km/h*
Average Speed	--	16 km/h	12 km/h	9.6 km/h	8 km/h
Maximum Speed	--	18 km/h*	14 km/h*	12 km/h*	10 km/h*

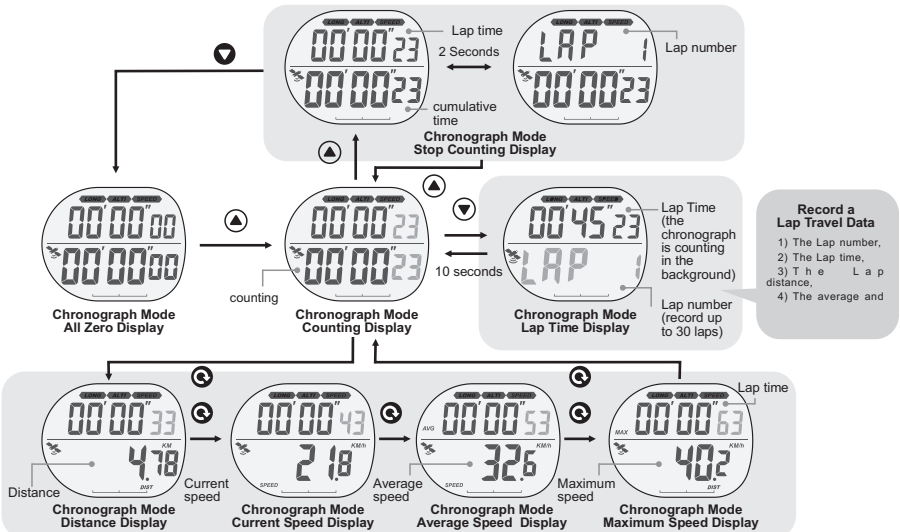
Lap Travel Data (Chronograph Mode)
Recorded for Lap 1 to Lap 4

Note:
If you intend to use the above Lap Travel (Chronograph Mode) functions, you should enable the GPS function and use the Transceiver in an open outdoor environment (with a clear view of the sky). Hence to obtain the position (satellite icon hold) before start the chronograph, otherwise, the Lap distance and lap speeds is invalid.

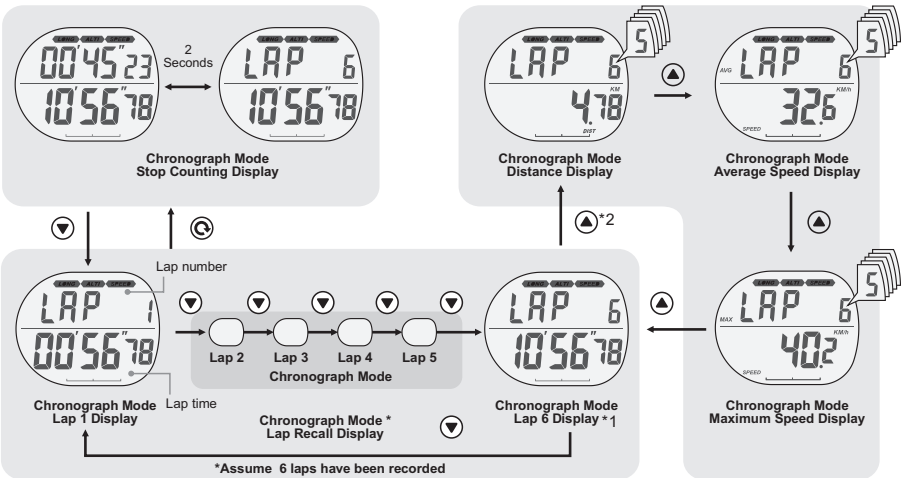
Hold down the ' ▲ ' button during running to view instantaneous lap distance, average lap speed and maximum speed.

Note*: These are dummy figures


the satellite
linked
Chronograph Mode
All Zero Display
Chronograph Mode
(Searching the Satellites)
Chronograph Mode
(Link Up)
flashing

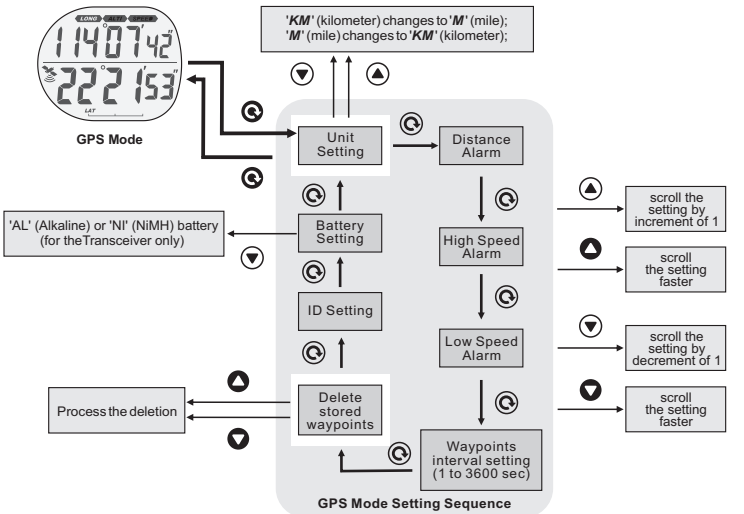


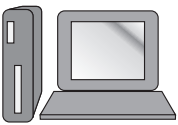
Note: This diagram illustrates the flow among different functional displays only, hence, these displays DO NOT conform to fact.



Note:

1. To select different lap among the recorded laps, press the ' ▼ ' button one by one.
2. To select the lap distance, lap average speed, lap maximum speed for a particular lap, press the ' ▲ ' button one by on in the corresponding Lap Time Display.


'KM' (kilometer) changes to 'M' (mile);
'M' (mile) changes to 'KM' (kilometer);
GPS Mode
Unit Setting
Distance Alarm
Battery Setting
'AL' (Alkaline) or 'NI' (NiMH) battery (for theTransceiver only)
High Speed Alarm
ID Setting
Low Speed Alarm
Process the deletion
Delete stored waypoints
Waypoints interval setting (1 to 3600 sec)
scroll the setting by increment of 1
scroll the setting faster
scroll the setting by decrement of 1
scroll the setting faster
GPS Mode Setting Sequence

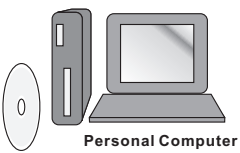


Personal Computer

To download the GPS data and Lap data to PC, it has to install the bundled PC interface software into the target PC.

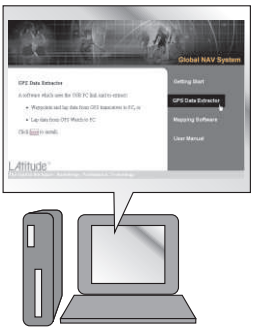
The system requirements for the PC as follows:

- Pentium II 300MHz or higher
- 64MB Main memory or higher
- 20MB hard disk space or more
- 256 color monitor or higher
- Window 98/ME/2000/XP operation system
- CD-ROM drive
- USB port



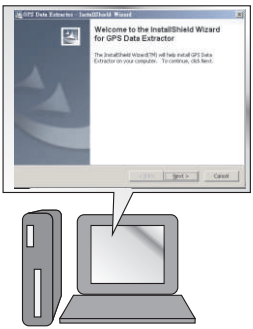
Personal Computer

1 Insert the bundled CD into the CD drive of the target PC.
A menu will show automatically.



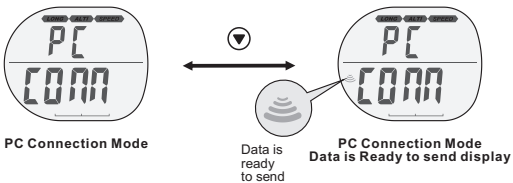
Personal Computer

2 Select the G.P.S. Data Extractor. Then click the 'here' button to execute the installation wizard.



Personal Computer

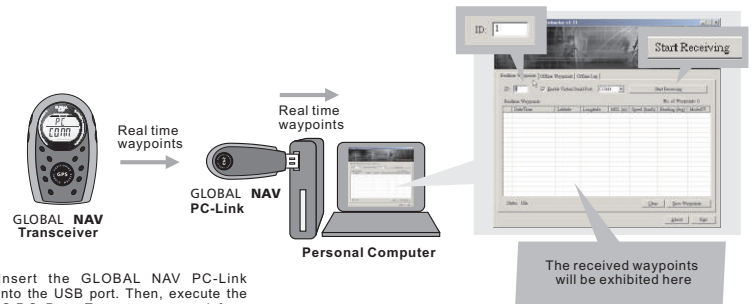
3 Follow the instructions to install the program into the target PC.



PC Connection Mode

PC Connection Mode
Data is Ready to send display

G. PC Connection Function: Send Real time Waypoints to PC



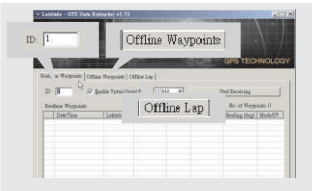
1 Insert the GLOBAL NAV PC-Link into the USB port. Then, execute the 'G.P.S Data Extractor program' from the Window start menu.

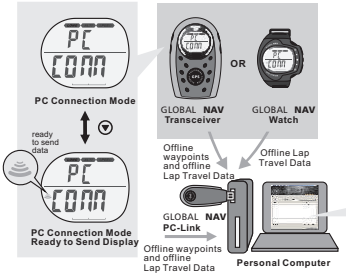
2 Click the 'Real time Waypoints' button once, then the realtime waypoints window will be exhibited. Set the ID for the connection, the ID must be identical to the one of the Transceiver.
Note: To use the Real time waypoints with a mapping software immediately, it has to enable the virtual serial port function, and set the serial port ID for the mapping software.

3 Select GPS Mode, and then press and hold the ' ⏷ ' button to enable the GPS function. The Transceiver will start sending the realtime waypoints to the PC-Link then.
Note: (1) Use the Transceiver in an open outdoor environment (with a clear view of the sky), (2) Put the Transceiver on the place within 3 meters from the PC-Link.

4 Click the 'Start Receiving' button once to receive, then, the received waypoints will be exhibited on the window. When the waypoints are being received, click the 'Stop Receiving' button once will stop the receiving. To save the received waypoints, click the 'Save Waypoints' button once to save the waypoints into 'nmea' or 'cvs'

G. PC Connection Function: *Send Offline Waypoints & Lap Travel Data to PC* **G-05**



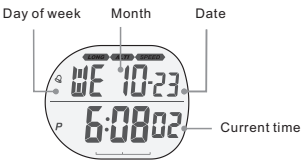


1 Insert the PC-Link into the USB port of the target PC. Then execute the G.PS. Data Extractor program from the Window 'Start' menu.

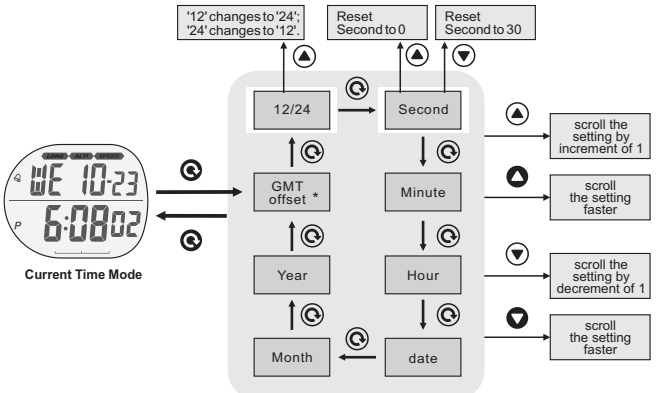
2 For download offline waypoints and offline Lap Travel Data by clicking the 'Offline Waypoints' and 'Offline Lap' button respectively. Set the ID for the connection, the ID must be identical to the one of the Transceiver or Watch.

3 Select PC Connection Mode, then press the ' ⊙ ' button once to get the data ready to send
Note: Put the Transceiver or Watch on the place within 3 meters from the PC-Link,

4 For download offline Waypoints from Transceiver by pressing the 'Download GPS Transceiver Waypoints' button once. For download Lap Travel Data from Transceiver and Watch by pressing the 'Download GPS Transceiver Lap Data' and 'Download Watch Lap Data' respectively. Then, the offline waypoints or Lap Travel Data will be send to PC, and exhibited on the window.



Current Time Mode



Current Time Mode

Current Time Setting Sequence

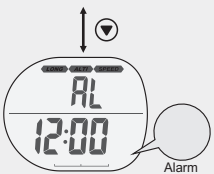
Note *:

1. The GMT offset setting is the setting to set the time offset for your local time (from Greenwich Mean Time).
2. When the GMT offset value of the Transceiver has been set, the current time (of the Transceiver) will be adjusted accordingly once the Transceiver link up the satellite.
3. The GMT offset value of the Watch cannot be set, the Watch will copy the offset value from the Transceiver once the Watch link up the Transceiver.

City Name	Code	GMT
Adelaide	ADL	9.5
Amsterdam	ATM	1
Anchorage	ANC	-9
Athens	ATH	2
Bangkok	BKK	7
Beijing	BJG	8
Buenos Aires	BUA	-3
Cairo	CAI	2
Caracas	CCS	-4
Casablanca	CAS	0
Chicago	CHI	-6
Deltas	DLS	-6
Delhi	DEL	5.5
Denver	DEN	-7
Dhaka	DAC	6
Dubai	DBI	4
Edmonton	EDM	-7
Frankfurt	FRK	1
Hong Kong	HKG	8
Honolulu	HNL	-10
Jakarta	JKT	7
Johannesburg	JOH	2
Kabul	KBL	4.5
Karachi	KHI	5
London	LON	0

City Name	Code	GMT
Los Angeles	LAX	-8
Madrid	MAD	1
Manila	MAN	8
Mexico City	MEX	-6
Miami	MMI	-5
Montreal	MTL	-5
Moscow	MOW	3
New York	NYC	-5
Paris	PAR	1
Perth	PRH	8
Riyadh	RYH	3
Rome	ROM	1
San Francisco	SAN	-8
Santiago	SAB	-4
Sal Paulo	SAO	-3
Seattle	STL	-8
Seoul	SOL	9
Singapore	SGP	8
Sydney	SYD	10
Taipei	TPI	8
Tehran	THR	3.5
Tokyo	TYO	9
Vancouver	VAN	-8
Wellington	WLG	12
Yangon	YGN	6.5

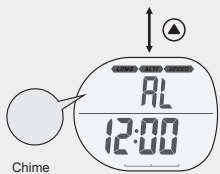
Hourly Chime ON Display



Hourly Chime OFF Display

When the hourly chime is ON, the chime will beep once on the hour every hour.

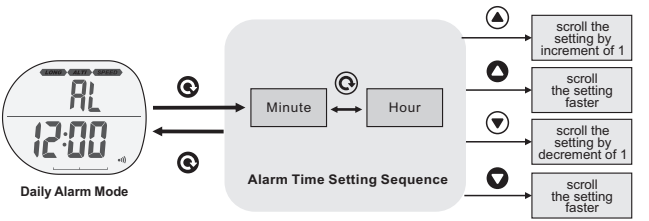
Daily Alarm ON Display

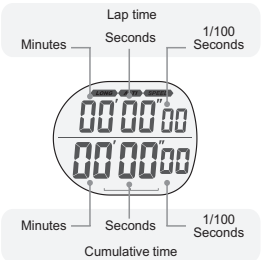


Daily Alarm OFF Display

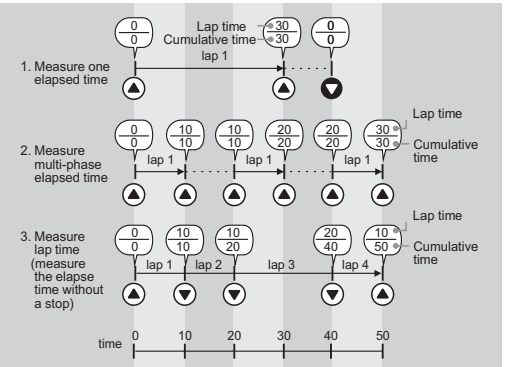
When the daily alarm is ON, the alarm will beep at the predefined alarm time for about 30 seconds.

Daily Alarm Mode


AL
12:00
Daily Alarm Mode
Minute
Hour
Alarm Time Setting Sequence
scroll the setting by increment of 1
scroll the setting faster
scroll the setting by decrement of 1
scroll the setting faster

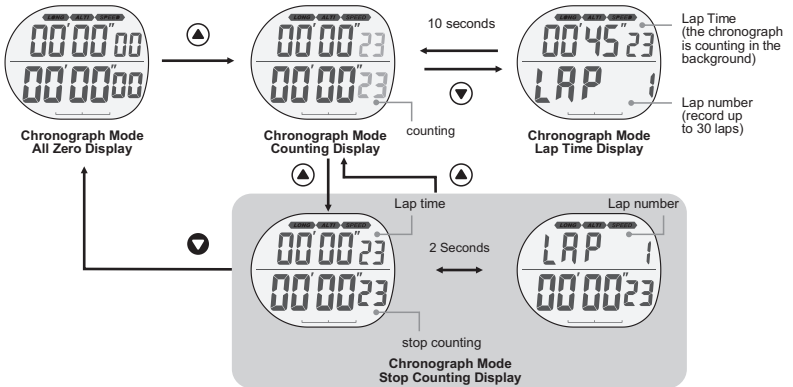


Chronograph Mode
All Zero Display

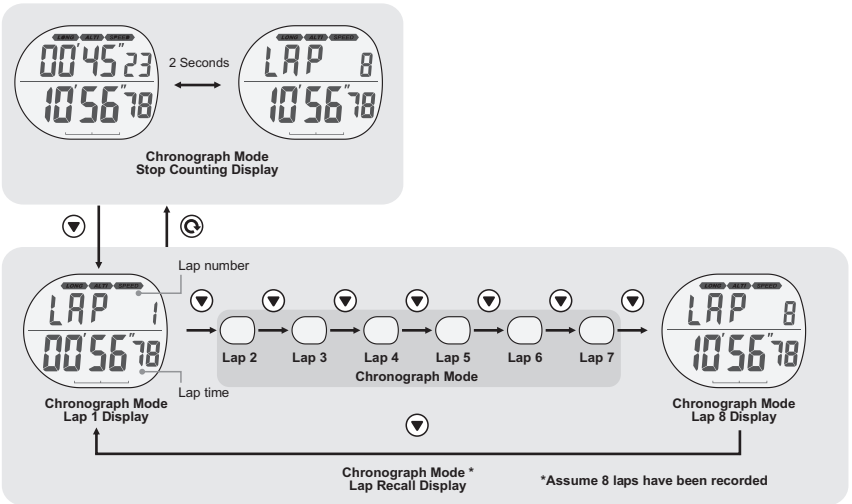


Measure Elapsed Time, Multi-Phase Elapsed Time and Lap Time

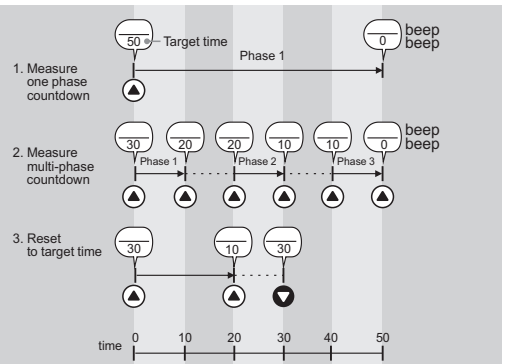
Legend: ····· **Stop Counting;** ⟶ **Counting**



Note:
This diagram illustrates the flow among different functional displays only, hence, these displays DO NOT conform to fact.

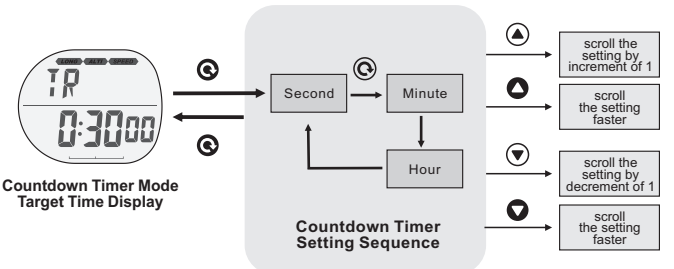

00'45"23
10'56"78
2 Seconds
LAP 8
10'56"78
Chronograph Mode
Stop Counting Display
Lap number
LAP 1
00'56"78
Lap time
Chronograph Mode
Lap 1 Display
Lap 2
Lap 3
Lap 4
Lap 5
Lap 6
Lap 7
Chronograph Mode
LAP 8
10'56"78
Chronograph Mode
Lap 8 Display
Chronograph Mode *
Lap Recall Display
*Assume 8 laps have been recorded

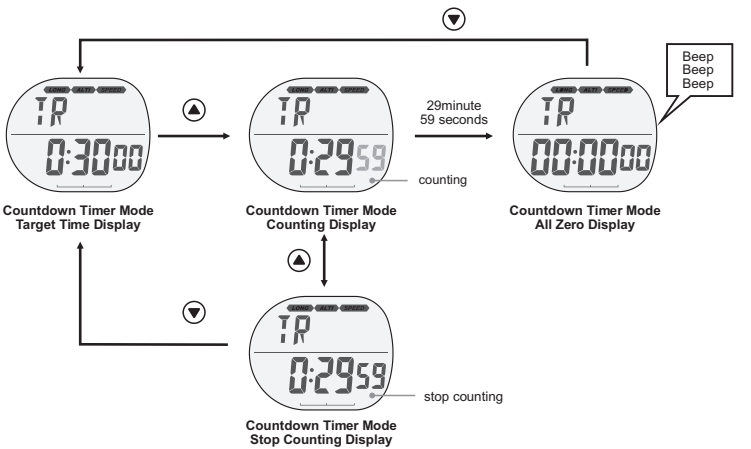
Countdown Timer Mode
Target Time Display



Measure One Phase Countdown, Multi-Phase Countdown and Reset to Target Time

Legend: ····· **Stop Counting;** ⟶ **Counting**


TR
0:30 00
Countdown Timer Mode
Target Time Display
Second
Minute
Hour
Countdown Timer
Setting Sequence
scroll the setting by increment of 1
scroll the setting faster
scroll the setting by decrement of 1
scroll the setting faster



Note:
This diagram illustrates the flow among different functional displays only, hence, these displays DO NOT conform to fact.

Current Time Mode
- Hour, minute, Second, AM, PM, Month, Day, Day of Week
- Time System: 12 hour or 24 hour
- Calendar: Auto, from 2000 to 2099
- User define time zone
- Auto adjust date and time by GPS

GPS Mode
- Real time data updated rate: 1 seconds
- Real time data transmission rate: 2 seconds
- Real time data transmission distance (Transceiver to watch) : 5 meters
- Speed, average speed, maximum speed, distance, odometer, altitude, heading compass, longitude, latitude
- Speed range: 0.0 to 400.0 Mile/h (0 to 500.0 Km/h)
- Distance and Odometer range: 0.00 to 9999.00 Mile (0.00 to 9999.00 KM)
- Altitude range: -999 to9999 meters (reference to Mean sea level)
- Heading compass range: 0° to 359°
- Longitude range: 179°59'59''W to 180°00'00'' E
- Latitude range: 90°00'00'' S to 90°00'00'' N
- User define 1 distance alarm, 1 high speed alarm and 1 low speed alarm
- User define unit (km/mile) setting
- User define waypoints logging interval, range: 1 second to 3600 seconds
- Waypoints memory erasable
- Waypoints logging: 15,000 - 22,000 points (depends on tracking continuity)

Alarm Mode
- 1 minute Resolution
- 1 daily alarm
- Hourly Chime

Chronograph Mode
- 1/100 second resolution
- 40 Lap memory (lap time, distance, average speed and maximum speed)
- Lap memory recall
- Total time
- Time range: 23 hour 59 minutes 59.99 seconds

Timer Mode

- 1 second resolution
- Count down timer
- One user-define timer up to 23 hours 59 minutes 59 seconds
- Beep at last 5 seconds and sounds for 10 seconds when count to zero

PC Connection Mode

- Data receiving (Transceiver or watch to PC-Link) : 4 meters

Wireless Communication

- Wireless (RF) communication using 869 Mhz or 915 Mhz (for US) ISM band.
- Comply with EN300220-3, EN301489-3 and FCC Part 15.

G.P.S. Engine

- Cold start time: 42 sec. (average), Warm start time: 33 sec., Hot start time: 4 sec. (average).
- 16 channels G.P.S. receiver, L1 frequency, C/A code
- SBAS (WAAS, EGNOS) support

Back light

- Electro-Luminescent (EL) back light

Battery

- Transceiver: 3 x AAA battery (alkaline type recommended)
- Watch: 1 x CR2032

Battery Life

- Transceiver: 4 years for time-keeping only operation; 18 hours for continuous G.P.S. function (using alkaline type battery).
- Watch: 10 months for 1 hour GPS function per day.

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Some countries do not allow the exclusion of incidental or consequential damages or a limitation on how an implied warranty lasts. Some exclusion or limitation of this limited warranty may not apply to you. This limited warranty gives you specific legal rights and you may have other rights vary from country to country.

The Company warrant this unit to be free from defects in material and/or workmanship for a 1-year period beginning from the date of purchase. This warranty does not cover second-hand ownership or products that are purchased for sale or lease to another. This warranty does not cover damage resulting from acts of God, lightning accident, misuse, improper installation or operation, or unauthorized repair or alteration.

If this unit has become defective within the first year of purchase, return it to the retailer where it is obtained (with all of the original packing materials and parts) for reconditioning or replacement. Whether or not to replace or recondition the unit would be decided by the retailer. The replaced / reconditioned unit will be warranted for a period of 90 days or the remainder of the original one year period, whichever is longer.

To obtain warranty service on your Watch, you must provide proof of date of purchase. We strongly recommend that you keep your sales receipt and all of the packing materials in order to take advantage of your Watch's limited warranty. Include all accessories and operational manual when returning to the retailer. A brief description of the defect and a copy or your sales receipt.