

Silva Sweden AB  
Tel: +46 (0)8 623 43 00  
info@silva.se

Silva Ltd (UK)  
Tel: +44 (0)1506 406 277  
info@silva.ltd.uk

Silva France  
Tel: +33 (0)1 30 92 66 22  
silva.france@wanadoo.fr

Silva Deutschland GmbH  
Tel: +49 (0)6172 45 44 80  
info@silva-outdoor.de

Brunton (USA)  
Tel: +1 307 856 6559  
support@brunton.com

Brunton Canada  
Tel: +1 705 749 9327  
canada@brunton.com

**SILVA**  
Get out there™



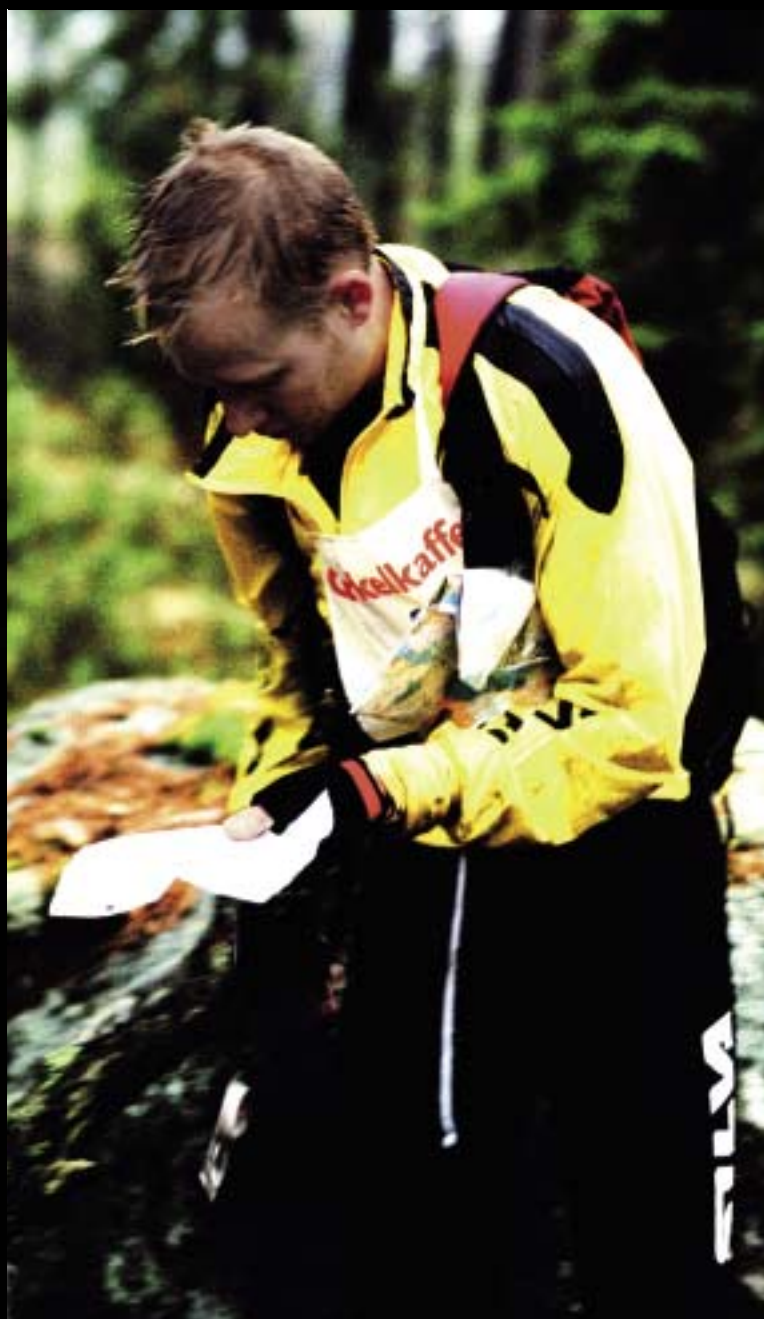
Official supplier for:



Official partner for:



Norges  
Orienterings-  
forbund



41028-1 English

[www.silva.se](http://www.silva.se)

Orienteering/Multisport

It seems that the compass was originated in China. It was there that someone long ago hammered a ball of iron into a thin, fish-formed sheet of metal that could float in a bowl of water.

A long time later the air-filled compass with its trembling needle was invented. The first water-filled compass was invented 1928 by Gunnar Tillander. The results and rumor that you could run and at the same time read the bearing was spread. This improved the ambition to find the controls at the shortest time.

For mass production Gunnar Tillander started the company Silva. Compasses from Silva has since then been a partner on many famous travels.

In the twentieth century the core activities in Silva are still the same but now we talk in terms of micro technology, mobile technology and much more. Digital navigation instruments such as GPS are one of the latest addition to the Silva product assortment.

With wanderlust and boldness reminiscent of the adventurers, Silva continues to break new ground and has a simple product philosophy, which emphasises:

- Function – superior in every detail
- Safety – more trustworthy components
- Design – appealing from every perspective
- Price – offering the best price/performance ratio

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**JET 6 Spectra**

The optimal thumb compass for orienteers.  
Now also available in a right hand version.  
The favourite among all National  
Orienteering Teams. Fast dampening of  
the needle and extremely stable while  
running. The construction of the  
internal dampening plate gives very  
good performance. Fluorescent colour  
on the needle for easy and clear reading.  
Transparent baseplate for easy reading of the  
map. Easy to read markings on the baseplate.  
Elastic thumb strap and rubber pad for safe grip.

Art.no. 35677-9901 (left)  
Art.no. 35832-9901 (right)

**NOR 6**

The classic NOR compass. With a  
straight and wide needle for easy  
and fast reading.

Art.no. 34517-9901 (left)

**NOR 6 Spectra**

The classic NOR compass now with  
the Spectra System. With a straight  
and wide needle for easy and fast  
reading.

Art.no. 34517 (left)

**Spectra Magnifier**

Magnifier for Compasses. The  
perfect accessory for detailed map  
reading! Designed for Silva model 6  
thumb compasses.  
Also works very well on base plate  
compasses.

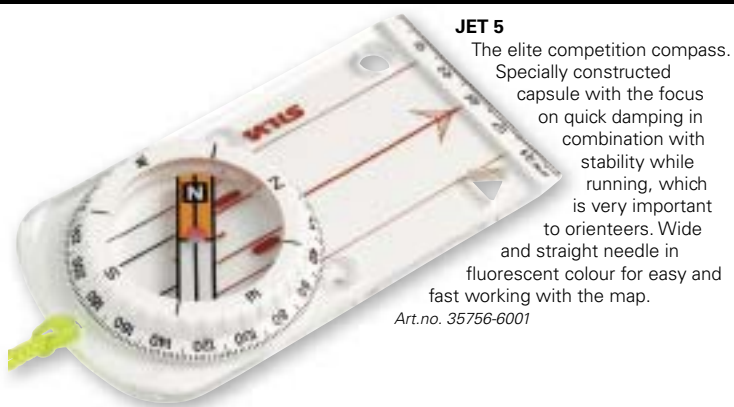
Art.no. 36640 (left)  
Art.no. 36639 (right)

**Magnifier**

Perfect help when the map is  
detailed. It gives you safe map  
contact. Elastic strap.

Size: 90 x 50 x 35 mm  
Magnification: Double  
Art.no. 55120



**JET 5**

The elite competition compass. Specially constructed capsule with the focus on quick damping in combination with stability while running, which is very important to orienteers. Wide and straight needle in fluorescent colour for easy and fast working with the map.

Art.no. 35756-6001

**JET Explorer 1S**

The competition compass with a large magnifying lens and with the fast and stable JET-needle.

Art.no. 36347-6001

**Victor 5NL**

Compass housing with stable needle which settles quickly even while running.

Art.no. 34845

**Explorer 1S**

Silva's classic competition compass with a large magnifying lens.

Art.no. 36345-1001

**Combi 8**

Unique system compass for beginners and youngsters. Combined Silva 1-2-3 System© and thumb compass technique.

Art.no. 36264-2001

**Explorer 2NL**

The allround compass for orienteering and outdoor activities.

Art.no. 34794

**Learner 19**

"Clip-on" model for easy fastening on the map. Useful for all types of map reading. Fixed liquid filled compass housing. Size: 75 x 39 mm.

Art.no. 35640

**480**

A new optimal full size (90 mm diam. reflector) halogen headlamp powered with a 10 and 20W halogen bulb. Gives a wide and 250 meter long beam. Extremely good fit thanks to the headband construction with three adjustable points and material in foam-plastic with fabric coating. Weight: 190g.

Art.no. 57102-40

Combine the headlamps from Silva with either the 8.0 Ah, 7.0 Ah or 4.0 Ah NIMH rechargeable battery and charging set.

**478**

A full size (90 mm diam. reflector) halogen headlamp powered with a 10 and 20W halogen bulb. Extremely light-weight construction with a neoprene headband for a perfect fit. Can easily be mounted on a helmet with the adhesive Velcro pads (included). This is the choice for the around user who wants to use the headlamp with and without helmet.

Weight: 160g.  
Art.no. 57058-20

**Mica**

A full size (90 mm diam. reflector) halogen headlamp powered with a 10 and 20W halogen bulb. Light-weight construction and perfect fits thanks to the ingeniously designed headset.

Weight: 160g.  
Art.no. 57059-20

**471**

A full size (90 mm diam. reflector) halogen headlamp in classic design, powered with a 10 and 20W halogen bulb. Quickly adjustable headset - just turn the knob on the back and it fits! This is probably the worlds best selling high-power halogen headlamp. Weight: 220g.

Art.no. 57055-20

**Battery Carrier Comfort**

New battery carrier with optimal fit. Material in foam-plastic with fabric coating with elastic bands and straps for fixing to the body. Adjustable fixing for the battery. All batteries from Silva fit.

Art.no. 57184

**Battery Belt**

A convenient way to carry the NIMH batteries. Especially suited for static use or while walking. Extra pocket. For all batteries from Silva.

Art.no. 57176

**Battery Waistcoat**

One of the best ways to carry your NiMH-battery close to the body. One size fits all. All batteries from Silva fit in this battery waistcoat.

Art.no. 57174-70

**Battery Case**

The perfect way to carry the 4.5Ah and 9.0Ah batteries on the waist belt. Possible to attach on a vertical strap such as on a backpack.

Art.no. 55077

**Charging Sets**

Charging sets for 7.0 - 9.0Ah and 4.0 - 4.5Ah batteries. Approx. 20 hours charging time.

Art.no. 57127-70 (7.0 Ah - 9.0 Ah)  
Art.no. 57127-44 (4.0 Ah - 4.5 Ah)

**NiMH-batteries**

Choose among 9.0 Ah (flatpack or compact) or 4.5 Ah batteries. Battery info on page 22.

Art.no. 57103-90 (9.0Ah 630g 90x70x36 mm compact)  
Art.no. 57104-90 (9.0Ah 630g 180x70x18 mm flat)  
Art.no. 57102-45 (4.5Ah 320g 90x70x18 mm)



**K100**

An advanced competition shoe for orienteers who have high demands. The material in the upper part of the shoe is

Schoeller Keprotect which provides low weight, strength and elasticity.

New rubber sole with metal cleats for good grip. The

rubber-construction around the heel counteracts pronation and gives a stable ground-contact. Reinforcement around the arch and heel for good stability and high comfort. The shoe is designed for a narrow fit but thanks to the material used in the upper part, the shoe conforms to most feet. Protected lacing with reinforcement gives perfect fitting. Maintains weight and fitting in all weather conditions. Sizes: 3,5 - 12.

Art.no. 57531-xxx

**K80**

Updated version of the popular Norway competition shoe made on a wider last.

The rubber construction under the heel helps to counteract pronation and gives a good stable running action.

Improved flexibility in the forward midsole. The upper part of the shoe is made from

durable water repellant materials and offers extra protection to the outside of the foot. Reinforcement in the arch and heel give good stability and comfort. Padded tongue and bonded toe bumper for extra protection. sizes: 3.5 - 12.0

Art.no. 57532-xxx

**K60**

A tough lightweight shoe with the same sole construction as the K80

but made on a narrower last. The upper part of the shoe is made from a durable hydrophobic nylon reinforced PVC,

which does not absorb water. Reinforcement in the arch and heel

give good stability and comfort. The wide lacing over the padded tongue helps achieve an optimum fit. Sizes UK 2.0 - 12.0

Art.no. 57533-xxx

**K40**

Probably the orienteering shoe where you get most for your money. The

upper part material in durable PVC-coated nylon-fabric. The same rubber sole as

the Norway model but without metal cleats. Narrow fitting Silva last and extremely low weight.

Art.no. 57530-xxx



The material is polyamid fabric of high Swedish quality. Durable, airy and absorbs a minimum of water. The shirts are in short (Navigator) or long sleeves (Eclipse). The short sleeved style is in mesh on the back. The trouser Eclipse has knee cord under the knee. Sizes: XS – XXL.



#### Eclipse ol-top

Navy blue, lime, white. Long sleeve.  
120-XXL

Art.no. 58237-4x



#### Eclipse ol-top

Navy blue, grey, white. Long sleeve.  
120-XXL

Art.no. 58237-2x



#### Navigator ol-top

Black, lime, white.  
Mesh shoulders back.  
S-XXL

Art.no. 58236-4x



#### Navigator ol-top

Navy blue, grey, white.  
Mesh shoulders back.  
S-XXL

Art.no. 58236-2x



#### Eclipse ol-trousers, knee cord

Sizes: 120-XXL.

Art.no. 58255-1x (Black)

Art.no. 58255-2x (Navy blue)

Art.no. 58255-4x (Lime)

#### Navigator ol-trousers

Sizes: 120-XXL.

Art.no. 58253-1x (Black)

Art.no. 58253-2x (Navy blue)

#### Tights

Black. Lycra,  
Micro.

Sizes: XS – XL.

Art.no. 58086-1x



These suits from Silva come in designs and materials which make them perfect for most climates. Black Runner for a slightly colder weather and Spectra for more pleasant weather. The fabric is polyester 100% built on microfibre technology. Weatherproof performance keeps the body dry and comfortable. Sizes: XS – XXL.

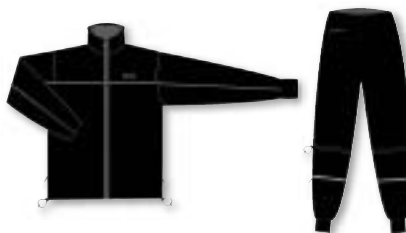


#### Spectra – Running suit

Two pockets on jacket. Short zipper on trousers. Reflex. Sizes: XS - XXL

Art.no. 58320-1x (Black jacket, black trousers)

Art.no. 58320-4x (Lime jacket, black trousers)



#### Black Runner - Running suit

- Jacket and trousers: black
- Two pockets on jacket
- Knee cords and ankle cuffs on trousers

- Reflex

Sizes: XS - XXL

Art.no. 58330-1x



© Mats Andrén



© Mats Andrén



#### Chair Rucksack 15, 30 and 45 liter

Traditional chair rucksack model with two pockets for thermos or water bottles on the outside. A large cover with pocket for valuables on the inside. Extra pocket on compartment in net-lining on the large cover and on the outside pocket. Durable polyester material with waterproof bottom pockets. Tip-up chair with padded seat-cushion. Three sizes: 15 L, 30 L and 45 L.

Art.no. 56580-5 (15L grey/blue, chair level 30 cm)

Art.no. 56580-30 (30L green/grey, chair level 40 cm)

Art.no. 56580-45 (45L blue/grey, chair level 50 cm)



#### Backpack Around

Around rucksack for active life. Polyester with Cordura strengthened base. Compression straps on each side for size regulation. A large map pocket and a smaller zipper pocket for compass/wallet etc. Carrying handle. Curved shoulder straps with adjustable breast band. Waiststrap.

Art.no. 56540-20 (20 liter, light grey/grey)

Art.no. 56540-30 (30 liter, blue/grey)



#### Sportbag

A big compartment with two parallel zippers, which makes it easier to pack. Two smaller compartments on each side of the bag and four elastic net-pockets on the outside. Stable handle with adjustable shoulder strap. Strengthening of the bottom. Material in special treated grey and black polyester. Size: 60 x 30 x 35.

Art.no. 56519



**Bottle belt, 4 bottles**

Bottle belt with 4 bottles of 0,25 liter.

Art.no. 56038

**Bottle belt, 2 bottles**

Bottle belt with 2 bottles of 0,25 liter.

Art.no. 56036

**Description holder**

For the control description when using electronic punching.

Art.no. 55081 big (180x75 mm)

Art.no. 55082 small (110x75 mm)

**Rainshield**

Headband in cotton and elastic.

Art.no. 55585

**Thermosock**

Smoothly shaped and well-fitting socks of 2 mm neoprene. Extra long leg. Keep your feet warm even though the swamps are cold.

Sizes: XS(35/36), S(37/39), M(40/42), L(43/44), XL(45/46)

Art.no. 55655-xxx

**OL-socks**

Art.nr. 55550 – 1xx black/grey (35/37, 38/40, 41/43, 44/46)

Art.nr. 55550 – 2xx blue/yellow (35/39, 40/45)

Art.nr. 55550 – 3xx red/white (35/39, 40/45)

**Gaiters**

Black, blue or red. Size XS - XL

Art.no. 55512 – 1x (black)

Art.no. 55512 – 2x (blue)

Art.no. 55512 – 3x (red)

**Reflective Waistcoat**

3M-fabric. Large, comfortable, in fluorescent mesh material with high quality reflecting stripes on chest, back and on shoulders for roller-skiers. Suitable as event officials vest.

Art.no. 56005-54 (Small)

Art.no. 56005-56 (Large)

Art.no. 56005-58 (X-Large)

**Reflective Waistcoat CE**

CE-approved reflective waistcoat

Sizes: S, L and XXL

Art.no. 56009-4 (Small)

Art.no. 56009-5 (Medium)

Art.no. 56009-6 (Large)



### Book - Exploring Nature With Map And Compass

The perfect guide to map reading, compass use, navigation techniques and tactics. Lots of illustrations and examples. 100 pages. English. Published by SISU Sport Books. ISBN Number: 91- 88940-46-2

Art.no. SEN-99



### CD-Rom - Exploring Nature With Map And Compass

Learn map reading, compass use, navigation techniques and tactics with this CD-rom. You can test your skills with an orienteering game and with quiz about the map, the compass and navigation.

Art.no. SEN-98



### Compass box, 24 pcs Field 7

Compass box with 24 pcs Field 7 (7NL-360) Compasses. Perfect for schools, Scout groups etc.

Art.no. 34849



### Demo compass

Perfect for schools etc. Two sizes - the small one can be used on an overhead projector (transparent 15x23cm). White/opaque: 25x37cm.

Art.no. 55101-360 (size, 15 x 23 cm)

Art.no. 55102-360 (size, 25 x 37 cm)



### Orienteering markers, 3 sizes

Material: Polyamide. Colour: White/orange as per International Orienteering Federation norm.

Art.no. 55000-30 (Competition, 30x30 cm)

Art.no. 55000-15 (Training, 15x15 cm)

Art.no. 55000-05 (Mini, 6x6 cm)

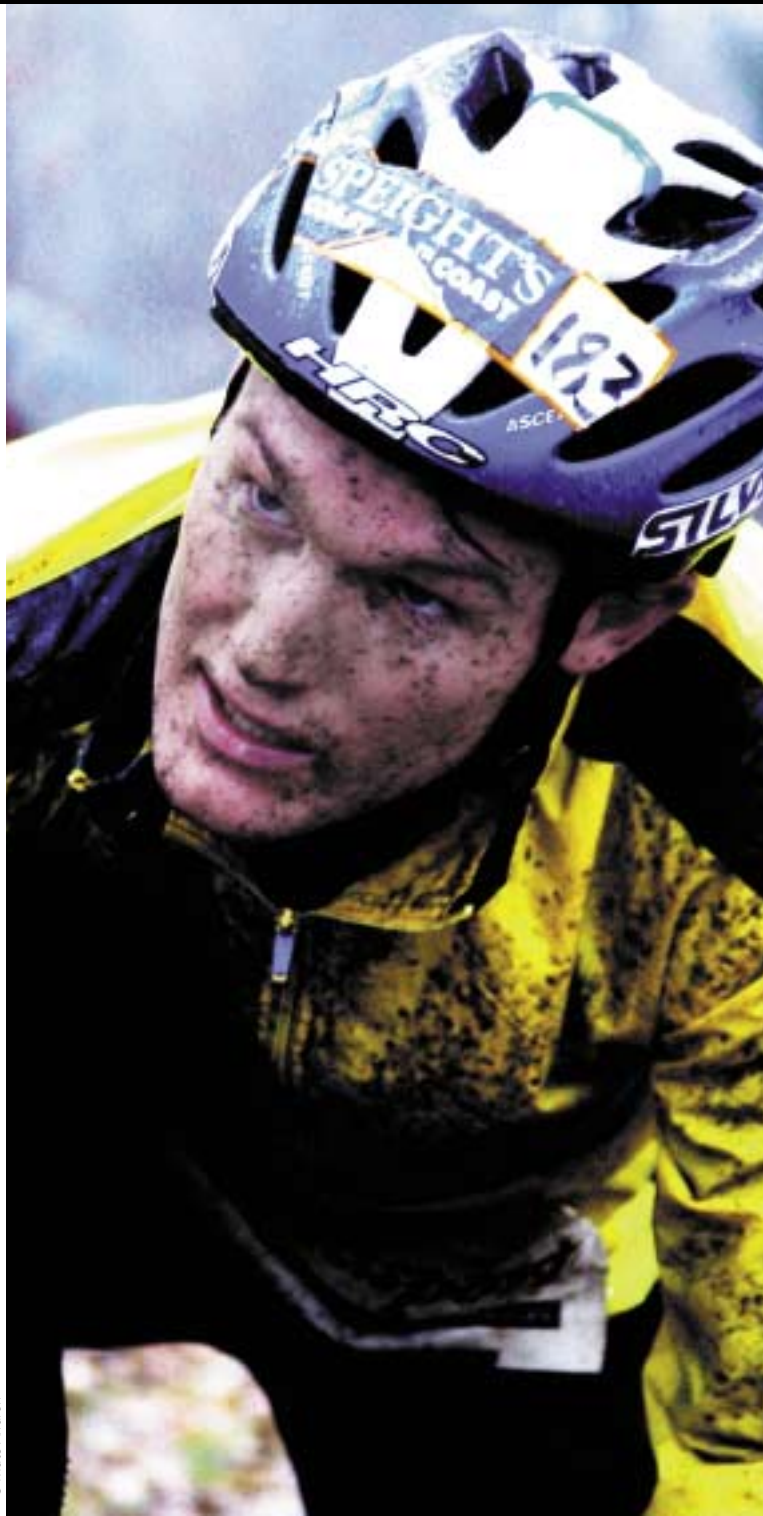
### Orienteering punches

Available in two series, A and B. Each series contains ten punches, giving twenty different symbols.

Art.no. 55030-4320 (Series A, 10pcs/box)

Art.no. 55030-4321 (Series B, 10pcs/box)

Art.no. 37008-10 (Cords 10pcs/box)



Taking a bearing from the map. Use the Silva 1-2-3 System as follows:



**1.** Place the compass on the map with the edge of the compass along the desired line of travel.



**2.** Rotate the compass housing until N on the dial points North on the map. Check that the compass housing red/black North/South lines are parallel with the maps meridians.



**3.** Hold the compass in your hand and turn yourself until the red end of the compass needle (North) coincides with the red arrow in the bottom of the compass housing. The front of the compass with the direction of travel arrow is now pointing towards your destination.



Learn more about the Silva 1-2-3 System® and compass use by watching the movies at [www.silva.se](http://www.silva.se)

### Method 1 - 6 JET Spectra and 6 NOR Spectra

The parallel steering method - Map and compass in the same hand:

1. Fold the map to a size you can comfortably handle, preferably so that the magnetic meridians are parallel with the edge of the map.
2. Here you are - there you want to go!  
Set a direction by putting the 6 JET Spectra on the map, in line with the desired direction of travel.  
From here...to there! Align the map...turn the body...Go!
3. Orientate the map - turn your body towards the right direction to travel!  
Read the position of the needle towards colour/symbol and remember which colour/symbol the needle is pointing at. For example blue, one dot.
4. GO! (One2Go!)  
The terrain features on the map will be aligned with the terrain on the ground and you have the right course straight ahead. Read the map and move the compass forward during your run.

Every time you read the map, also check your direction! Map contact and direction contact - ALWAYS simultaneously!  
Constantly maintain contact with your position on the map and your position on the ground.

### Method 2 - 6 JET Spectra and 6 NOR Spectra

This is the natural conversion for those of you who have always run with the traditional base plate compass. Use 6 JET Spectra as a base plate compass but at the same time you can use the advantages of the thumb compass:

1. Take the map in one hand and hold your 6 JET Spectra in the other.
2. Fold the map to a smooth format, preferably so that the meridians are parallel with the edge of the map. Point at your position on the map, with your thumb.
3. Here you are - There you want to go!  
Take your bearing by placing the 6 JET Spectra on the map, along the desired direction of travel.  
From here...to there! Align the map! Steer with the compass!
4. Orientate the map - turn your body towards the correct direction!  
Read the position of the needle towards colour/symbol and remember it. For example blue, one dot.
5. RUN! (One2Go!)

You can now run and steer with the compass in one hand, exactly as when using the traditional base plate compass. Hold the map in the other hand and read it as you run.

Make it a habit to check your direction and position every time you read the map.



**Discharge times NiMH batteries**

Art.no.	Ah	Discharge time	10W	20W	Weight
57104-90	9,0	20h	5h 20min	2h 40min	630g
57103-90	9,0	20h	5h 20min	2h 40min	630g
57103-70	7,0	16h	4h 20min	2h 15min	820g
57102-45	4,5	20h	2h 40min	1h 20min	320g

Above discharge times are approximate and can vary depending on the condition of the battery, the temperature in the surroundings, the state of charge before using etc.

Size: 9,0Ah - 180x70x18 mm (flat)                      9,0Ah - 90x70x36 mm  
7,0Ah - 162x33x59 mm                                      4,5Ah - 90x70x18 mm

Important information regarding the handling and care of NiMH-batteries and mains adaptors which are supplied together with headlamps from Silva:

- Each battery must be connected to the correct capacity charger. This will ensure a maximum charge, over the 16 hours. Using an incorrect charger can damage the battery!
- Charge according to manufacturers recommendation. Do not over-charge!
- No need to discharge the batteries before re-charging.
- If the battery has been used for a short time and you want to be sure that you have maximum battery life next time, put the battery on charge. When the battery gets warm (maybe after 3-4 hours) the cells are overcharged and the charging should be stopped.
- Never discharge the NiMH batteries completely! It may harm the battery!
- A fully charged battery should read 1.20V/cell or greater.
- If the battery loses capacity fast, a bad cell is probably the cause.
- Do not change cells in the battery with new ones. The consequence of this is that the worst cell will decide the capacity of the battery. Battery capacity is not higher than the weakest cell.
- Batteries may be stored charged or discharged (not completely discharged).
- Batteries should be stored to prevent accidental shorting.
- Check the wires in the connector regularly - the pins should be fixed in the housing.
- Do not pull the cables when dismantling the connectors. Pull the connector itself.
- Regularly check that the pins make contact. If they fit loosely the consequence may be bad charging/discharging.
- Do not lift the battery with the connector. The pins can fall out causing the battery to failing.
- Check regularly that the wires are in good condition, no wear. Remember the correct polarity connection.
- Check that the plastic case has not worn.
- Even if the voltage of the NiMH-batteries is low, the shorting current is high and can cause burns. Therefore regularly check the battery condition, especially if it is exposed to rough treatment. The battery has a built-in poly-switch which automatically shall cut the power at a shortcut. Note that the battery can be damaged even if this safety component normally will prevent the battery from burns.

If you act on the advice given above, you will have a battery with a long life and no accidents will occur due to short circuits of the battery.

