

WINTERgear

News and facts June 1983

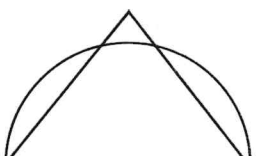
Interim Equipment Guide giving many very useful facts and points to look for BEFORE buying your gear.

A complete full colour guide will be appearing in November 1983 combined with that of WILD COUNTRY (the world leaders in climbing technology and makers of 'Friends') with whom we now have strong ties.

Tent design principles

For the same floor plan and maximum headroom of an 'A' frame, a DOME tent gives nearly DOUBLE the USABLE INTERIOR SPACE.

'N' frame compared with a dome of the same height and width.
Cramped usable space: heads forced to the centre

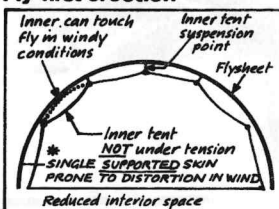


To achieve usable headroom an 'N' frame needs to be relatively higher than for a similar floor width dome tent



The more vertical walls of a dome enable you to sit much closer to the sides of the tent giving you room to take off wet clothes, put on climbing gear etc. in much greater comfort - very important for more serious use.

Fly first erection



PRO: The only one.

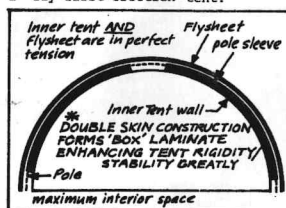
● The inner can be erected in the dry after the flysheet

CONS:

- Inner can ONLY be HUNG from the fly.
- Less interior space.
- Inner not under tension and will flap in strong winds.
- More difficult to erect due to all the inner's suspension points.

Inner-tent-1st erection

We believe this system is by far the best and offer the following explanation of why we have resisted a 'fly first erection' tent.



PROS:

- Maximum interior space.
- Constant gap between flysheet and inner tent gives an added bonus of better insulation in cold weather.
- Both fly and inner are equally tensioned and will not flap.
- Inner can be used for comfortable sleeping, by itself in hot, dry conditions.

CONS:
● Inner can get wet if it is raining when the tent is erected.

Pole materials & systems

All our poles are now made from hollow, 'super' alloy flexible tubing. They are anodised for ease of insertion through the sleeves and to prevent dirt and snow sticking to them. All the joints are shock-corded to prevent them coming apart when inserting through the sleeves. A stepped ferrule in each end of the completed pole snaps into eyeleted peg-out loops for fast, simple erection. For the tight curves of our HOOPED BIVI, KENNEL and EYRIE porch we SLIGHTLY pre-curve some of the pole sections for easier insertion. The curve is not pronounced and occupies very little extra space when the tent is packed. All our pole sets come with a slip-over section of tubing to effect an emergency repair in the case of accidental damage to a section.

Why Geodesic?

The following notes explain the VERY significant advantages of 'GEODESIC' pole configurations over 'crossover' systems used by most OTHER manufacturers.

Crossover Pole Systems

1. BASIC CROSSOVER POLE SYSTEM

Take a rectangular tent plan and crossover the poles to opposite corners, curving them to form a semi 'dome'.

PROS:

- Increased interior space over a similar floor area 'A' frame tent.

CONS:

- Long lengths of unsupported pole.
- UNLESS such a tent is kept SMALL and of a SINGLE-SKIN construction - i.e. Gore-Tex fabric - it will deform badly in windy conditions. (A double-skin tent with such deformation would leak as the risk of the fly touching the inner is very difficult to avoid.)

WINTERgear

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Telephone (0286) 2270

2. DEVELOP BASIC CROSSOVER DOME

The basic crossover pole pattern with the addition of a 3rd pole to give double the floor area.

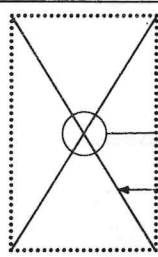
PROS:

- Large unobstructed interior.

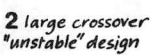
CONS:

- Still has long unsupported pole lengths needing considerable guying to hold tent stable in windy conditions.

- ONLY 1 pole crossover point. Poles can only interact to resist a DOWNWARD force which is of limited use.
- Tent deforms to sideways pressure due to wind.
- Risk of fly touching inner and noisy fabric flap.



1 simple crossover

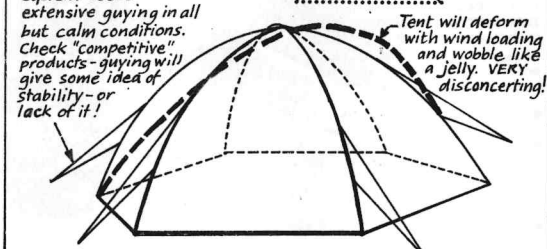


2 large crossover "unstable" design

System needs extensive guying in all but calm conditions. Check 'competitive' products - guying will give some idea of stability - or lack of it!

The only tent we produce using this pole system is our EYRIE which gains extra stability from its extra porch pole. It is also small enough and of single-skin construction not to have too great a distortion problem. SEE further comments

points where poles can interact against one another to provide stability are ringed throughout
Poles crossover corner to corner



Geodesic Pole Systems

3. 3 POLE GEODESIC SYSTEM

Same tent size and number of poles as 2., BUT OFFSETTING all the poles to give:

PROS:

- 3, intersections of the poles for greater support (see diagram).
- Shorter unsupported pole lengths.
- Pole interaction gives a more rigid structure to resist strong winds.
- Less external guying needed.
- Fabric panels under tension in ALL directions - very little flapping.
- Better shape dome with more interior space.

CONS:

- Relatively large panels and flattish roof that will need periodic clearing if used in snowfall conditions.

4. 4 POLE GEODESIC SYSTEM

Same size tent as 2. and 3. but with the addition of a 4th pole.

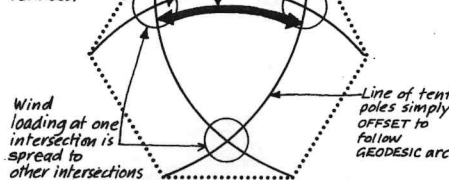
PROS:

- 5 intersections of poles for maximum rigidity. (see diagram). Poles are in outward tension AND yet COMPRESSED by the fly - the vector forces, (directional forces) are balanced, - maximum stability.
- Tent will resist very high winds due to the above.
- Lengths of unsupported pole are reduced to the minimum.
- Guying needed only in high winds.
- Small (tensioned by pole system), fabric panel areas virtually stop fabric flap.
- Maximum interior space in perfect tension.

CONS:

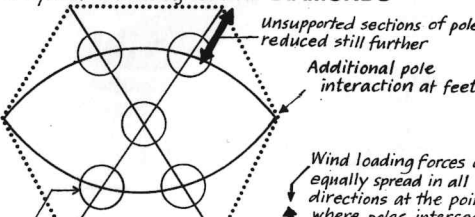
- 4th pole marginally increases the weight.

Lengths of unsupported pole greatly reduced



Wind loading at one intersection is spread to other intersections

4 System as used by both our DIAMONDS



5 points of pole intersection gives MAXIMUM INTERACTION and hence STABILITY



GORE-TEX fabrics

GORE-TEX fabrics have a PTFE membrane with 9 billion holes to the square inch, laminated between protective fabrics such as nylon. Each pore hole is too small to permit the entry of LIQUID water - i.e. rain - but is large enough to allow water VAPOUR to escape - perspiration and breath. In TENTS condensation and frosting will occur in certain climatic conditions. SEE 'PROBLEMS: THE FACTS'

There is NO material to date that is 100% condensation free and currently GORE-TEX is still the best fabric available and retains its performance the longest.

Full care instructions are included with all WINTERGEAR products.

Hot-air taped seams

ALL WINTERGEAR products with the exception of mits for technical reasons, have their seams sealed after stitching with HOT-AIR WELDED TAPE - the ONLY successful welding process to date. THIS APPLIES EVEN TO OUR PU NYLON FLYSHEETS. TO DATE NO OTHER manufacturer does this in the UK. This process offers nearly 100% waterproofing and saves YOU the messy, unsightly and necessarily frequent applications of 'dope' required on our 'competitors' products.

Waterproofing

NO tent EVER made has been 100% waterproof - don't believe any manufacturer who claims his has or is!

Current technology ensures near perfect waterproofing but at present it is impossible to GUARANTEE it in all conditions. It should be further noted that PU nylon groundsheet will NOT remain waterproof after heavy or rough usage. Here again popular demand for weight saving dictates the use of PU nylon groundsheet but we strongly recommend that for a relatively small weight penalty you should consider a NEOPRENE coated nylon groundsheet. SEE OUR DIAMONDS and SAPPHIRE. NEOPRENE is not only more waterproof than PU nylon but is considerably more durable.

Insect netting

No tent should be without a SEPARATE zipped netting door so that it can be used on its own in warm weather yet can be covered by a separate door when it is cold. WINTERGEAR have for some time used a very superior ultrafine 'no-see-um' mesh that is proof against the aptly named no-see-um bugs found in the USA. It is of course more than a match for the infamous Scottish midges which is not the case with some nettings used by other makers.

Extreme conditions

Size for size our tents are exceptionally stable in severe weather when compared to all others, but when large trees are uprooted and houses lose their roofs even at sea level, you CANNOT expect a 'light-weight' tent to always survive unscathed. Remember all the materials used DO have a finite strength even if they are the best of their kind.

To minimise problems it is perhaps obvious to pitch the tent in as sheltered a spot as possible and NOT broadside on to the wind. You would be amazed where and how some people pitch their tents! A 4 season tent is suitable for use in four seasons BUT REMEMBER WIND - the only real enemy - can be just as strong in mid-summer as mid-winter.

All sizes and weights are approximate and WINTERGEAR reserves the right to alter and improve specifications without prior notice.

WINTERGEAR's aim is to produce the best gear of its kind in the world regarding design, practicality and materials at a reasonable price.

Bivi Bags and Clothing in GORE-TEX[®] Fabric



ALL GORE-TEX Bivi Bag

The current design differs in cut from our original, offers a marginally larger bag and the hood can be completely closed by the zip which replaces the drawcord. Two zip sliders enable you to place the aperture just where you want it and when closed offers the maximum seal against spindrift. DUE TO THE GORE-TEX USED IN ITS CONSTRUCTION IT IS SAFE TO SLEEP IN A SEALED BAG WITHOUT THE RISK OF SUFFOCATION. DO NOT ATTEMPT DOING THIS IN A BAG MADE FROM PU COATED NYLON OR OTHER NON 'BREATHING' FABRIC. With our BUDGET BIVI BAG we recommend that you leave a small aperture in the opening as quite apart from the reduced area of 'breathing GORE-TEX fabric the condensation on the PU nylon base will be aggravated.

Wind and 'waterproof', breathing GORE-TEX sleeping bag cover and bivouac shelter.

Four seasons use ANYWHERE: expeditions, Alpine, backpacking, caving, weekend camping, canoe camping, emergencies etc. 3oz GORE-TEX tent fabric throughout: breathes better than nylon taffeta clothing types. Condensation free in all but VERY exceptional conditions. Self-repairing nylon coil zip closure with double pullers protected by wide flap. Mid blue or olive green; both with bright yellow scrim lining. Even lighter than previous models! 530gm (18oz) complete with stuff sac.

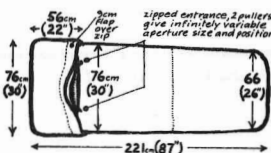
Budget Bivi Bag

This is a compromise design giving a much cheaper bag at the expense of considerable condensation on the inside of the PU nylon base panel.

WE DO NOT RECOMMEND THIS BAG FOR EXTENDED USE. (SEE 'IMPORTANT RECOMMENDATION'!).

Marginally smaller than our ALL GORE-TEX model it has a GORE-TEX fabric top panel and hood with similar zipped closure.

- PU nylon base panel. To minimise condensation use a closed cell foam sleeping mat INSIDE this bag.
- Mid blue or Olive Green. The GORE-TEX fabric section can be turned inside-out to display the bright yellow scrim lining for emergency signalling if required.
- Approx. 500gm (17.5oz) with stuff sac.



PLEASE NOTE: BOTH OUR BIVI BAGS now have all their seams sealed with hot-air applied tapes using the latest machinery. This is the only really successful way to apply these for a lasting seal that cuts out the messy 'doping' that YOU had to do in the past. This taping is applied after completion of the stitching of the seams

We would like to apologise if you have had problems obtaining our gear during the last year which has been due to demand having outstripped our production facilities. However with our new and efficient small factory we hope that this will be a thing of the past and that our quality control will be even better.

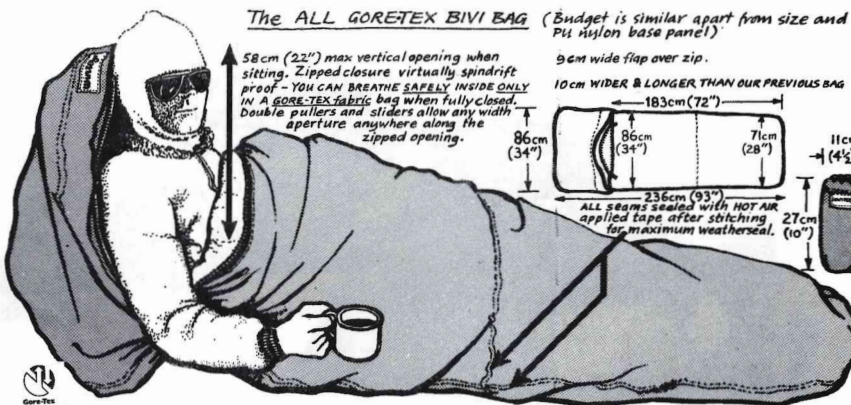
FALKLANDS CRISIS

We were very pleased to receive very complimentary reports on our ALL GORE-TEX BIVI BAG and HOOPED BIVI from the few who were lucky enough to have been supplied in time. The Bivis were used continuously for weeks on end in waterlogged winter conditions where survival from the elements went just that.

Important recommendation

When considering the purchase of a bivvy bag, whether for simple backpacking or more serious use, buy our ALL GORE-TEX fabric BIVI BAG. Although initially more expensive it more than repays itself by its virtually condensation-free performance. A damp sleeping bag is not only very uncomfortable but can be positively dangerous in bad conditions.

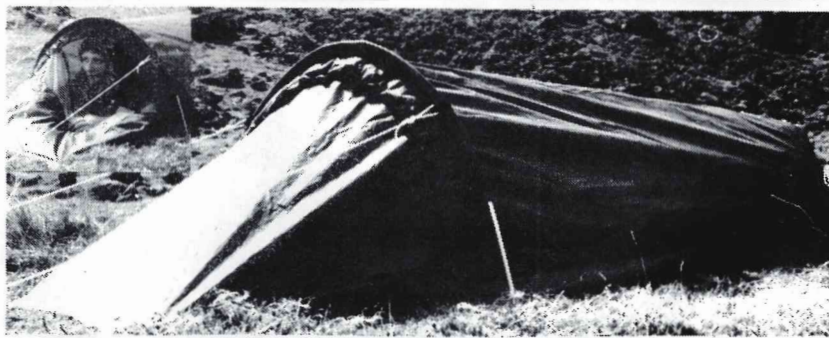
From experience we have found that purchasers of BUDGET BIVI BAGS have quickly regretted their initial cost saving after experiencing the CONSIDERABLE CONDENSATION that is generated on the PU nylon base of this bag and they have come back to us for an ALL GORE-TEX version. Perhaps this is good for our sales but we do want our equipment users to be satisfied in the first place and feel that it is only honest to list potential problems if they exist.



Hooped Bivi

Offers greater comfort than our other Bivi Bags. Designed for ultra lightweight overnight camping anywhere in all weathers.

- Single skin wind and 'waterproof' breathing GORE-TEX tent fabric tunnel and outer door with elasticated zip cover.
- PU nylon groundsheet.
- Hot-air taped seams after stitching.
- Pre-curved, sectioned, anodised alloy hoop pole.
- Double zipped outer door backed by similar no-see-um insect netting inner door.
- Sets up in 30secs. or less.
- Ultra lightweight: 0.9kg (2lbs) approx. complete with pegs and stuff sacs

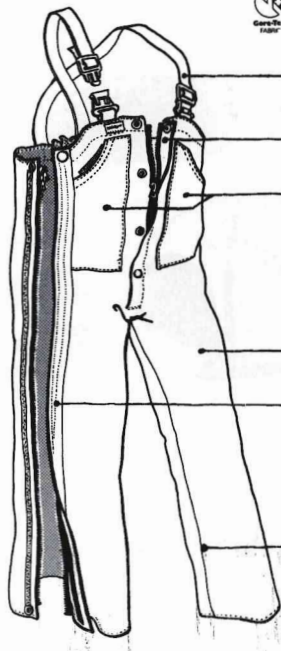
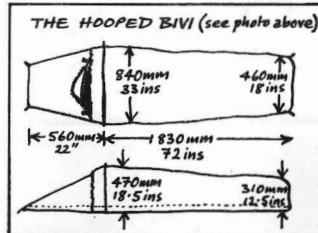


Sallopette

All GORE-TEX 4oz heavy duty sallopette. Ideal wind and 'waterproof', breathing sallopette for ice climbing, ski-ing, backpacking and sailing. Note that due to the very high wind pressures generated when riding a motorbike water can be made to pass through the GORE-TEX fabric which is not designed for this purpose.

- Full length opening side zips allow you to put them on even when wearing skis. Large flaps covering zips have velcro and popstud closures.
- Wide elasticated shoulder straps with top quality quick release nylon buckles.
- High chest is cut lower towards the back which is elasticated in the centre for ease of movement and to help eliminate cold gaps.
- Two large pockets with velcro closure.

- Hot-air taped seams after stitching. Note: it was found that putting on double knees and seat patches caused heavy condensation as the normal breathing action of the GORE-TEX was defeated.
- Weight: 0.7kg (1.5lbs) approx. Forest Green only. Sizes: S, M, L & XL.



40mm (1.5ins) wide elasticated shoulder straps with quick release nylon fixlocks.

Full length, chest high fly zip covered by wide pop-studded flap.

2 large chest pockets. Velcro closures

Legs are cut full enough to go over other clothing yet aren't too baggy.

Full length fully opening zips on each leg enable you to put on Sallopette even with skis or crampons keeping both feet on the ground at all times.

All seams hot-air taped after stitching for maximum weatherseal.

GORE-TEX is the trademark of W. L. GORE & ASSOC., INC.

Thermal Gloves



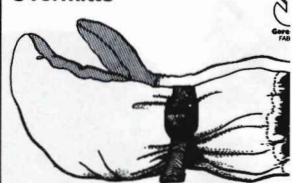
A harder wearing than normal thermal knit glove. Smooth fine knit outside and very light pile on the inside. Non absorbent, they wick away moisture and will dry very rapidly even having been soaked.

73% polypropylene, 27% acrylic. Gentle stretch fit with close fitting ribbed cuff.

Sizes: small medium large only.

NOTE: when wearing thermal gloves f hard winter climbing or expedition use which may involve considerable abseiling on iced up gritty ropes, thermal gloves will last very long. WINTERGEAR thermal gloves have however proved to last considerably longer than 'competitive' products even when used on Everest in winter

Overmitts



UNLINED

Top quality overmitt in breathing GORE-TEX, with tough Cordura nylon palm for improved wear and grip. Mid forearm length gaitlet slips over bulky clothing and the easily adjustable wrist strap gives a secure comfortable fit.

Sizes: small, medium and large.

WINTERgear

Unit A10
Cibyn Industrial Estate
Caernarfon Gwynedd LL55 2BD
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Wintermitts

As used on the 'WINTER 80/81 EVEREST WEST RIDGE EXPEDITION'. Superb Vilco pile lining now gives even better performance. Very low bulk with gre warmth.

Sizes and construction, (apart from the Vilcoft lining) as for our OVERMITT

Tents

The WINTERGEAR range of tents offers a range of solutions for all situations. However, BEFORE you make a final decision we would like you to read the following notes together with the information on the previous page in order that you fully understand the advantages and disadvantages of particular designs and materials.

Problems: the facts- Single-skin GORE-TEX tents

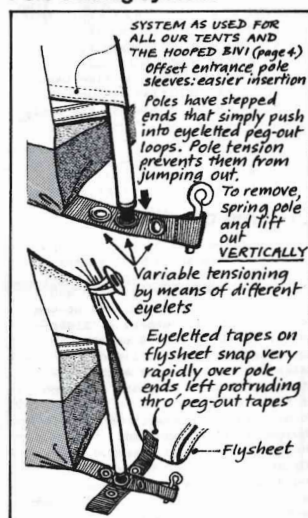
Not something you will find listed by OTHER manufacturers. WE believe in being honest and give you the facts on problems that can be encountered when using SINGLE-SKIN GORE-TEX tents. PLEASE UNDERSTAND THAT ANY TENT DESIGN IS A COMPROMISE OF SOME KIND.

If you really want the lightest and we stress LIGHTEST, 'waterproof' tent then GORE-TEX is currently still the best material available. HOWEVER, IT IS MOST IMPORTANT that you understand THAT IN CERTAIN CLIMATIC CONDITIONS - typically cold HIGH HUMIDITY winter months you will experience HEAVY condensation on the INSIDE of the tent which might collect in pools on the groundsheet. In such conditions, be it our EYRIE or ANY OTHER manufacturers tent of a similar size YOU MUST BE PREPARED TO ACCEPT THIS PROBLEM FROM TIME TO TIME. The larger the tent, the worse the problem and it is aggravated by the use of modern high efficiency sleeping bags which do not allow the temperature inside the tent to rise high enough for the GORE-TEX to function in its normal manner. With SMALLER items such as our KENNEL, HOOPED BIVI and BIVI BAGS as well as clothing where your body is much closer or in contact with the GORE-TEX fabric, this problem is virtually eliminated.

'Frosting' on the inside of the tent due to the freezing of condensation and breath in very cold conditions can also be a problem although it must be stressed that this also occurs in any tent to varying degrees no matter what its design or materials.

IF YOU REALLY WANT AN ULTRA-LIGHTWEIGHT TENT, meaning that it has of necessity to be a SINGLE-SKIN construction and hence GORE-TEX - you MUST be prepared to accept the condensation problem, although such a tent will be perfectly satisfactory for 80 to 90% of normal usage.

Pole setting system



Tent pegs

The standard 'strong wire' pegs supplied with all our tents and our HOOPED BIVI are obviously only suitable for certain conditions and others more suited to the terrain and climatic conditions expected should be taken when necessary. In deep snow no pegs are of use, so snow stakes, skis or other improvised means will have to be devised.

The Kennel

Ultra lightweight tent for one person giving more than acceptable comfort for its size and weight. Suitable for all weathers, 4 seasons in any terrain although it isn't primarily intended for expedition or Alpine use.

- GORE-TEX tent fabric tunnel; PU nylon groundsheet and porch.
- Fully opening double zipped inner door (unproofed nylon).
- Ultrafine insect netting (no-see-um) double zipped backing door.
- Porch with zipped 'semi circular' door opening to one side aids cooking.
- Pre-curved, sectioned, shockcorded anodised alloy poles for very easy insertion through the tight radius pole sleeves. (Three hoops).
- With the poles snapped into the eyeletted peg-out loops the tent can be repositioned at will. Erects in around 2 minutes.
- Approx. 1.25kg (2.75lbs) with stuff sacks and pegs.

The Eyrie

Sleeps TWO. Four seasons use where a relatively large ULTRA-LIGHTWEIGHT tent is required. Occupies minimal ground space.

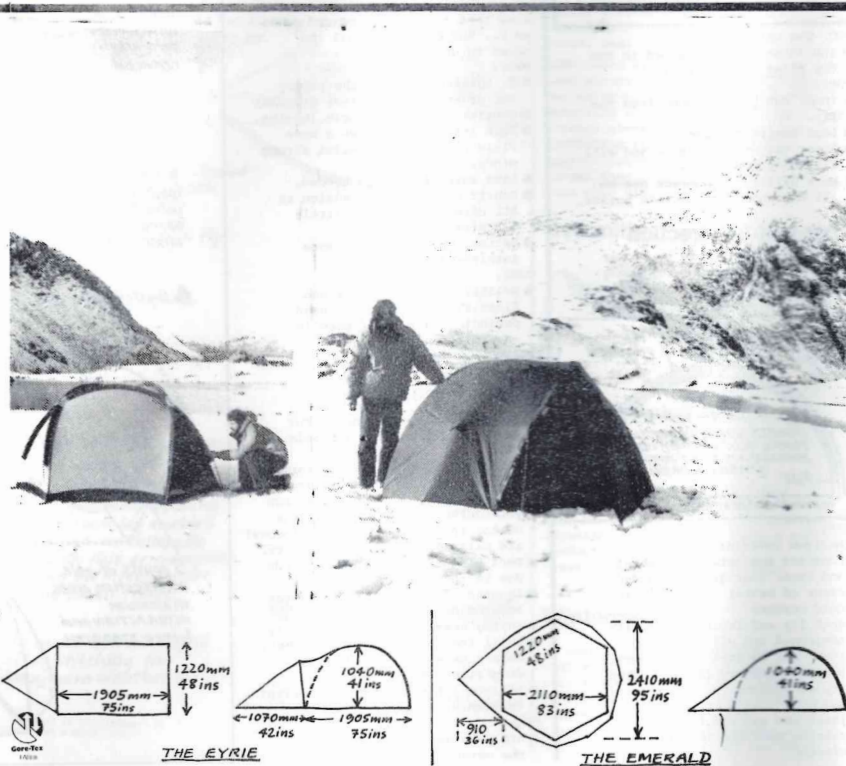
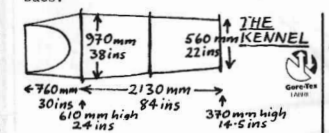
IMPORTANT: To achieve this weight and offer a 'waterproof' tent using only a single-skin construction we have used GORE-TEX fabric for the main 'dome'. Although 'waterproof' for 90% of normal usage there are certain CLIMATIC conditions where due to size of the tent you will experience HEAVY condensation on the INSIDE. SEE FURTHER NOTES ON 'SINGLE-SKIN GORE-TEX TENTS'. IT IS REALLY A QUESTION OF 'HOW IMPORTANT IS THE WEIGHT?' - CHOOSE CAREFULLY BEFORE BUYING. Perhaps our SAPPHIRE might be a more suitable choice despite being considerably heavier.

- GORE-TEX tent fabric 'dome'; PU nylon porch and groundsheet.
- Hot-air taped seams after stitching. Sectioned, shockcorded, anodised alloy poles hold tent walls flat and minimise irritating flap. (2 for tent, 1 for porch).
- Large semi circular double zipped door backed by similar no-see-um insect door.
- Large hooped porch for cooking and storage.
- Erects in about 2 minutes.
- VERY LIGHTWEIGHT for its size: approx. 2.05kg (4.5lbs) complete with pegs and stuff sacks.

The Emerald

A three season exceptionally spacious geodesic dome tent that sleeps 2 to 4 comfortably. Ideal for extended camping where severe wind, rain and snowfall are not expected. This tent has even more headroom than our remarkable DIAMONDS but at the expense of PERFECT inner/fly separation due to the large panels - we would recommend that these are guyed out at all times other than in perfect conditions.

- Three pole geodesic system. Self-supporting. When erected the entire tent can be picked up and repositioned!
- Vast interior similar to our DIAMONDS but with even more headroom. Light tan unproofed nylon.
- Large double zipped door (one), backed by similar no-see-um insect netting door.
- 2 large no-see-um vents (non opening) with zipped covers on inner tent's rear walls for effective crossflow ventilation.
- PU nylon fly with hot-air taped seams after stitching.
- Sufficient headroom allows trousers to be put on whilst standing stooped. Two-way zipped porch for cooking and storage.
- Two see through oddments pockets.
- Only 3.9kg (8.5lbs) with pegs and stuff sacks.



WINTERgear

Tents

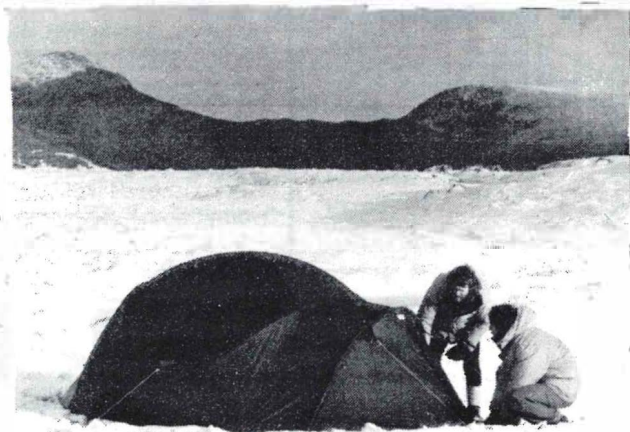


The Sapphire

Our latest gem!

A totally new double-skin geodesic 'dunnel' design - a cross between a dome and a tunnel - offering great stability and maximum interior space for its size yet occupying the minimal ground area. The SAPPHIRE is an ideal expedition tent.

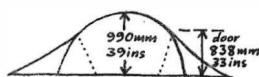
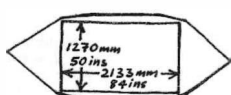
- 4 seasons use anywhere.
- Sleeps 2 comfortably 3 in an emergency.
- Self supporting. Can be picked up complete and repositioned.
- Can be set-up very rapidly.
- Four, sectioned, shock corded flexible alloy poles with geodesic configuration for maximum stability.
- PU nylon fly with HOT-AIR TAPED SEAMS.
- TWO, double-zipped porches for storage, cooking and entry/exit down wind.
- Unproofed nylon inner tent with large semi-circular double zip doors each end backed by similarly zipped ultrafine insect netting doors.
- CHOICE of PU nylon or NEOPRENE groundsheet. (SEE NOTES under 'WATERPROOFING' regarding this).
- Light tan inner, olive green fly.
- Weight approx. 3.28kg (7.28lbs) with PU groundsheet; 3.52kg (7.75lbs) with neoprene, both complete with stuff sacs and pegs.



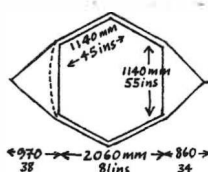
The Super Diamond

A proven and very popular, very stable geodesic tent for no compromise 4 seasons use in all terrains. Ideal expedition 'Base Camp' / long stay tent that sheds wind rain and snow almost without equal for this size of tent.

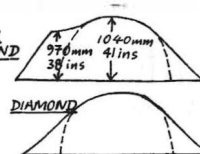
- With practise erects in about 5 mins.
- Apexed roof sheds rain and heavy snow.
- Huge interior allows stooped standing. 2 see through oddments pockets.
- PU nylon Fly with large hooped porch one side and a simple pointed porch on the other, both with 2 way zips.
- Fly has hot-air welded taped seams after stitching.
- Two very large semi circular double zipped doors on opposite sides backed by similar no-see-um doors for efficient crossflow ventilation when required.
- Snow valence Fly available to order.
- Neoprene groundsheet is standard for extra proofing and durability.
- Exceptionally light for its size and superior materials. Approx. 4.9kg (10.8lbs) complete with pegs and stuff sacs.



THE SAPPHIRE



SUPER DIAMOND



DIAMOND

The Diamond

Basically the same as our SUPER DIAMOND but lacking the advantage of the SUPER's large hooped porch flysheet. It nevertheless has porches at either end with central double slider zips that enable entry/exit, cooking and storage down wind. It is of course a little lighter and cheaper than the SUPER DIAMOND.