

# HOLDSWORTH

HANDBUILT ENGLISH BICYCLES





## QUICKSILVER

Frame Sizes	19" 21" 23" 25"
Frame Angles	73°
Frame Material	Reynolds 531 Competition Double Butted Tubes
Forks	Reynolds 531 Forged Dropouts Sloping Crown
Headset	Shimano Dura-Ace Sealed
Derailleurs	Dura-Ace
Chain	Shimano Dura-Ace UG
Crankset	Shimano Dura-Ace 53 x 42 Biopace Ring
Pedals	Shimano New Dura-Ace Sealed
Tires	Wolber Tubulars
Rims	Rigida SC 200 Tubular Hard Anodised
Brake Set	Shimano Dura-Ace
Hubs	Shimano Dura-Ace Q.R.
Saddle	Allez
Seat Pillar	Shimano Dura-Ace
Handle Bar	G.B. Avanti
Stem	Shimano Dura-Ace
Weight	21.5 lbs
Color	Red and White

## TRIATHALON CLASSIC

Frame Sizes	19" 21" 23" 25"
Frame Angles	73°
Frame Material	Reynolds 531 Competition Double Butted Tubes
Forks	Reynolds 531 Forged Dropouts Sloping Crown
Headset	Allez Headset
Derailleurs	Shimano 600 EX S.I.S.
Chain	Sedis Sport
Crankset	Shimano 600 EX 52 x 42 Biopace Ring
Pedals	Shimano 600 EX Sealed
Tires	Panaracer Vertex 700 x 23c
Rims	Rigida Score Hard Anodized
Brake Set	Shimano 600 EX (Aero Levers)
Hubs	Shimano 600 EX
Saddle	Allez
Seat Pillar	Ital Manubri Fluted Alloy
Handle Bar	G.B. Avanti
Stem	Sakae
Weight	23 lbs
Color	Red and Black

## HORNET

Frame Sizes	19" 21" 23" 25"
Frame Angles	73°
Frame Material	Reynolds 501 Double Butted Tubes
Forks	Cromalloy Sloping Crown
Headset	Allez Headset
Derailleurs	Shimano 105 S.I.S.
Chain	Sedis Sport
Crankset	Shimano 105 52 x 42 Biopace Ring
Pedals	Shimano 105
Tires	Panaracer Vertex 700 x 23c
Rims	Rigida Anodized (Black)
Brake Set	Shimano 105 Linear Response (Aero Levers)
Hubs	Shimano 105
Saddle	Allez
Seat Pillar	Ital Manubri Fluted Alloy
Handle Bar	G.B. Avanti
Stem	Sakae
Weight	23.5 lbs
Color	Black and Yellow

## BLUE STREAK

Frame Sizes	19" 21" 23" 25"
Frame Angles	73°
Frame Material	Reynolds 501 Double Butted Tubes
Forks	Cromalloy Sloping Crown
Headset	Allez Headset
Derailleurs	Shimano L. 525 S.I.S.
Chain	Sedis Sport
Crankset	Shimano 525 52 x 42 Biopace Ring
Pedals	Lyotard
Tires	Panaracer Vertex 700 x 23c
Rims	Rigida Anodized (Black)
Brake Set	Shimano L. 525 Light Action
Hubs	Maillard Normandy
Saddle	Allez
Seat Pillar	Ital Manubri Fluted Alloy
Handle Bar	G.B. Avanti
Stem	Sakae
Weight	24 lbs
Color	Blue and Black

## GEMINI

Frame Sizes	21.5"/20" 22.5"/21" 23.5"/22"
Frame Angles	73°
Frame Material	Reynolds 531 Double Butted Tubes
Forks	Reynolds 531 Forged Dropouts
Headset	Allez Headset
Derailleurs	Sun Tour Cyclone II 18 speed
Chain	Sedis Traveller
Crankset	Triple Alloy/Alloy
Pedals	Lyotard 460D clips and straps
Tires	Worthy H.P.
Rims	Rigida
Brake Set	Dia Compe Arai RX Drum
Hubs	Suzue 48 H
Saddle	Allez Anatomic
Seat Pillar	Ital Manubri Fluted Alloy
Handle Bar	G.B. Avanti
Stem	Alloy
Color	Pink



## *Blue Streak*

If you are getting serious about cycling and are in the market for a great looking bicycle, here it is – The Blue Streak.

The frame is made of lightweight Reynolds 501 tubing which retains its strength at the points that matter.

It features top quality components such as the Shimano light action 525 S.I.S. system, computer

designed Biopace chain wheels which make pedalling easier through optimum use of leg power, Panaracer tires for smooth cornering and extra grip, quick release wheels, color co-ordinated black rims. It all adds up to outstanding value for a great looking bike.



SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



## HORNET

The Holdsworth Hornet heralds a new generation of cycling performance.

The frame is made from the renowned Reynolds 501 lightweight tubing.

The revolutionary Shimano 105 components signal the creation of a new class of bicycle.

The advanced new features include:

The Shimano Index System (S.I.S.) that provides light precise shifting with a foolproof "click stop" index mechanism.

Biopace chain wheels to make pedalling easier with greater efficiency.

The Shimano Linear Response (S.L.R.) brakes

provide better modulated braking control with a light lever feel.

All tried and tested Shimano components combined with Panaracer tires and anodised rims add up to a bicycle few can match in its class.

In competition – the Hornet has no competition.



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## TRIATHALON *Classic*

The Classic is the ultimate triathlon bicycle for 1987. It features the handbuilt Reynolds 531 competition frame which is double butted manganese molybdenum tubing with a specification normally associated with far more expensive machines and

specifically designed for top performance in triathlon competition.

It has a race proven Shimano 600 EX S.I.S. derailleurs and a Biopace to maximise pedal power. Aerodynamic levers, anodised rims, Panaracer

tires, great efficiency combined with eye-catching fully co-ordinated colors, truly a classic bicycle for today's triathlete.





## ▶ QUICKSILVER ▶ >>>

The Quicksilver allows true competitors to win their races and this is what great bicycles are all about. The Shimano Dura Ace group set offers a state of the art components system that helps racers reach their ultimate goal... winning. The Advanced S.I.S. system ensures no more missed shifts, no more fine tuning and less time spent shifting, leaving you free

to concentrate on racing. The Dura Ace brakes inspire confidence with a positive feeling of control and ease of operation - the response is so smooth, you'll think that they are power assisted. The pedals offer a winning design and give more cornering clearance and pedal load-handling

capability. The wheel rims are Rigida with tubular tires. The frame is constructed from Reynolds 531 competition tubing which gives quick and responsive handling when you need it... racing. All things considered, you are riding a winner with the Holdsworth Quicksilver.





## ★ GEMINI ★

Maybe you've always wanted a high quality tandem, but have found the price of custom made models too high.

Holdsworth now offer you the opportunity to share your cycling experience with the Gemini English Touring Tandem.

The rigid design of the frame, hand built from Reynolds 531 frame tubing combined with the extra rigid 48 spoke wheels results in a very lively and responsive machine which really stands out in a crowd.

The pink Gemini features Suntour cyclone gears – ideal for touring as they make light work of hill climbing, and extra safe rear wheel disc brake for efficient stopping. Altogether a great handbuilt tandem at the right price.



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FOR SIXTY YEARS, THE HOLDSWORTH COMPANY HAS BUILT UP A FULLY JUSTIFIED REPUTATION FOR PERFECTION IN DESIGN AND MANUFACTURE OF BICYCLES USING TRADITIONAL METHODS OF BRITISH HAND WORKMANSHIP. EMPLOYING SKILLS HANDED DOWN THROUGH GENERATIONS, OUR CRAFTSMEN HAND BUILD THE FRAMES WHICH ARE THE VERY ESSENCE OF A HOLDSWORTH BICYCLE.



HANDCUTTING TUBES

GREAT CARE AND ATTENTION TO DETAIL IS REQUIRED TO ASSEMBLE THE FAMOUS REYNOLDS 531 OR 501 TUBING. EACH TUBE IS

FULLY MITRED FOR A PERFECT FIT AND THEN SKILFULLY HANDBRAZED BY THE FRAME-BUILDERS WHO HAVE THE EXPERTISE TO GAUGE THE EXACT TEMPERATURE AT WHICH TO BRAZE, THUS GIVING THE MAXIMUM STRENGTH AT THE MAXIMUM STRESS - THE LUG POINT.

THE FRAME IS SHOTBLASTED, PHOSPHATED, BONDLERISED AGAINST RUST, HAND FETTLERD, ALIGNED AND FINISHED, THEN PRE-PAINT

INSPECTED BEFORE BEING EXPERTLY HAND SPRAYED IN ONE OF OUR EXCITING NEW COLOR SCHEMES AND STOVE ENAMELLED IN ONE OF THE MOST MODERN PAINT PLANTS IN BRITAIN.

BEFORE FINAL ASSEMBLY, THE DECALS ARE ACCURATELY APPLIED BY HAND TO ENSURE JUST THE RIGHT LOOK AND THEN THE FRAME IS LACQUERED TO GIVE THE FINISH WHICH IS ADMIRERD WHEREVER BICYCLES ARE RIDDEN. IT IS DUE TO THIS LABORIOUS CARE AND ATTENTION THAT HOLDSWORTH BICYCLES HAVE AN ENVIABLE REPUTATION FOR LONG LIFE AND RELIABILITY.

BRAZING THE FORKS



BRAZING THE FRAME





HANDFINISHING THE FRAME

AS WELL AS PRIDING OURSELVES IN OUR HAND BUILT METHODS OF MANUFACTURE - ROBOTS HAVE NO PLACE AT HOLDSWORTHY, WE EMPLOY A RIGOROUS PROGRAM OF QUALITY CONTROL AT EVERY STAGE OF THE PRODUCTION, THE BICYCLE IS TESTED TO CHECK THAT IT IS UP TO OUR HIGHEST STANDARDS.

SETTING THE FRAME



FRAME CONSTRUCTION, FRAME ALIGNMENT, HAND PAINTING AND FINAL ASSEMBLY ARE ALL CHECKED BY OUR HIGHLY TRAINED AND CONSCIENTIOUS TEAM OF QUALITY CONTROLLERS.

IT IS THIS CARE, DEDICATION AND PRIDE IN OUR WORKMANSHIP THAT HAS RESULTED IN A UNIQUE WINNING FORMULA IN BRITISH ROAD RACING - SIX GOLD MEDAL WINNING CHAMPIONSHIPS IN TEN YEARS.

BECAUSE WE CARE ABOUT OUR BICYCLES, WE ALSO CARE ABOUT WHO SELLS THEM. WE CAREFULLY SELECT THE STORES THAT SELL THEM, ONLY CHOOSING DEALERS WHO HAVE THE CORRECT EXPERIENCE, ABILITY TO SERVICE AND EXPERT KNOWLEDGE.

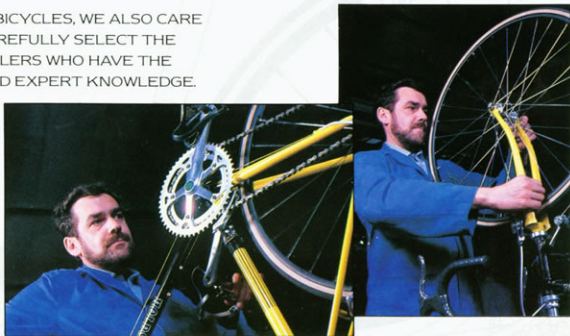
YOU CAN BE SURE THAT WHEN YOU BUY ONE OF OUR BICYCLES, YOU ARE BUYING THE BEST THAT MAN CAN MAKE - A BIKE TO GIVE YOU YEARS OF USE AND RIDING PLEASURE.



HAND SPRAYING



SETTING THE WHEELS



HAND ASSEMBLY

As you have seen, we take great care in the manufacture of our bicycles, and because of this we only use the finest cycle tubes in the world.

Since 1898 when Alfred Milward Reynolds produced his first butted tube set, the name Reynolds has stood for quality and superb performance throughout the cycling world. No less than 25 winners of the much esteemed Tour de France have ridden to victory on Reynolds frames, and numerous top professional and amateur cyclists, in road racing, track racing, cyclocross pursuit or light weight touring have found that Reynolds tubes give them precision manufacture, and feather light weight with real strength.

The most important part of a bicycle is the frame. If it is too rigid, you will find that your body aches, with you fighting every bend and hill climb. If it is too springy, all your strenuous pedal power will be absorbed with less forward motion benefit.

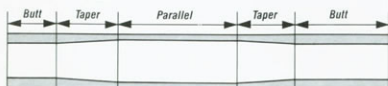
Reynolds tubes are butted together in a process which enables us to build a stronger, lighter frame.

A shaped 'mandrel' is placed inside the tube and is then passed through a 'die'. The exterior of the tube is pressed onto the mandrel forcing the interior wall of the tube to take on the shape of the mandrel while leaving the outside shape of the butted part of the tube basically unaltered – apart from a reduced diameter and a locally increased internal wall thickness at the tube ends.

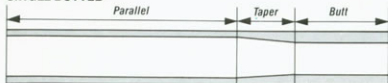
The increased wall thickness of the butted end means that the strength is where the most stress is. By accurate hand brazing we achieve a frame which is stronger at the joints leaving the center part of the tube thinner to optimise on weight saving.

This diagram shows how the wall thickness varies between the middle of the tube and its butted ends.

#### DOUBLE BUTTED



#### SINGLE BUTTED



Even the smoothest road can cause problems if a frame's front forks are too rigid. Not only is the ride uncomfortable but so much energy-absorbing vibration is caused that mileages and speeds both suffer.

That's why front forks are curved to a carefully planned 'rake' which helps to give them resilience, and so smooth out the roughness of the road.

Obviously the weakest point of a fork is the brazed joint in its crown, where it meets the frame. The joint must be rigid, which means using a tube with a thick enough wall to provide the necessary strength.

A problem arises, however, when the fork is tapered away from the crown. As the diameter of the tube decreases, so the thickness of the tube wall (the 'gauge') increases. And that leaves you with a typical fork blade, where the top is thick enough to give rigidity, but the bottom is much thicker, killing the fork's resilience and partly defeating the effect of the rake.

The Reynolds solution is taper-gauge fork blades.

At Holdsworth we take a single-butted tube and use the butted end at the fork crown. Then we taper the tube. So even though the tapering process does increase the thickness of the tube wall towards the drop out end, it never becomes thicker than it is at the Butt. (See diagram).

That's why Reynolds forks are strong and rigid at the crown, but still give you all the resilience you need.



#### REYNOLDS 531 COMPETITION

- Manganese molybdenum alloy frame tubes with 802 N/mm<sup>2</sup> tensile strength.
- 15% stronger 'after brazing' than competitive materials.
- Double Butted main tubes for strength and lightness.
- Lighter gauge tubes for increased racing performance (0.81/0.55/0.81mm).
- Manganese molybdenum seat and chain stays.



#### REYNOLDS 501 CROMALLOY-M

- Specially manufactured Cromalloy-M steel frame tubes with 802 N/mm<sup>2</sup> (52 tons) tensile strength.
- Double butted main frame tubes for strength and lightness.
- Lightweight gauge, precision manufactured and cold worked tube, 20/23 gauge (0.91/0.61/0.91mm) for competitive performance.
- 'Wide Oval' style fork blades.
- Specially manufactured Cromalloy-M seat and chain stays.
- Standard taper seat stays and round-oval-round chain stays.

#### REYNOLDS 531 TANDEM

The latest Reynolds tandem frame introduced in 1983 features the double lateral stay configuration in line with modern design philosophy. Reynolds 531 provides torsional strength with responsiveness and resilience together with surprising lightness.



- Manganese molybdenum alloy frame tubes with 802 N/mm<sup>2</sup> tensile strength.
- 15% stronger 'after brazing' than competitive materials.
- Reynolds 531 Taper gauge fork blades for strength and resilience.
- Manganese molybdenum seat and chain stays.
- Standard taper seat stays and round-oval-round chain stays.

# SHIMANO

It is crucial to have the right components, and we have chosen to use Shimano for our range of sports and racing bicycles. Shimano have pioneered new technology to make great advances in bicycle componentry.

The Shimano Index System has made shifting of the derailleur bicycle faster and easier than ever before. The S.I.S. utilizes an index shift lever that is synchronized with rear derailleur movement. You shift each gear into perfect alignment with a positive "click" that you can hear and feel at the lever. The result is fast, positive adjustment free shifting.

Racers whose goal is to win races will find the Dura Ace S.I.S. on the 'Quicksilver' gives them more time to concentrate on pure racing and not shifting. Triathletes will find the 600 EX S.I.S. on the 'Triathlon Classic' or 105 S.I.S. on the 'Hornet' gives fast precise shifting which does not detract from rider concentration, and difficult searching for gears is now eliminated.

Enthusiast riders will find uphill shifting much easier with the L525 S.I.S. on the 'Blue Streak' which means less shifting effort and safer riding.

We believe that S.I.S. allows all cyclists to ride with more enjoyment and confidence, knowing that the next gear is only a "click" away.

Shimano applied computer analysis to the biomechanics of human pedalling and discovered the ideal chainring shape for greatly rationalized use of the legs muscle power and improved pedalling efficiency. Biopace was developed to realize more efficient power transfer from the riders legs to the rear wheel.

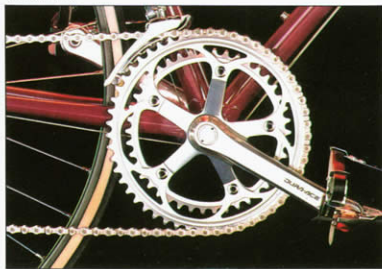
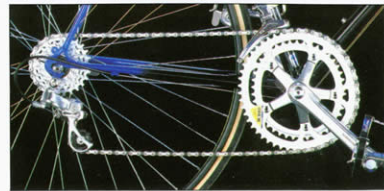
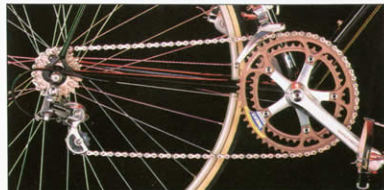
The chain wheels' shape has been computer designed to help vary the speed of crank rotation and eliminate the 'dead spot' at the bottom of the crank. Now pedalling action more closely resembles human leg movement when walking or running.

Each of our sports bicycles has a Biopace to offer more benefits to riders: lighter, more rhythmic pedalling, more efficient use of power and reduced knee strain, better circulation because leg extension is quicker and muscle contraction less severe. We believe that Biopace gives that extra edge to take hills and headwinds in your stride whilst all the time you are pedalling more efficiently.

It is our belief at Holdsworth, that Shimano components on a Reynolds frame offer all riders the perfect balance of efficiency and reliability. Here is the opportunity to possess a bicycle with history, tradition, Reynolds tubes and modern Shimano components.

Up until now, this has been a hard package to find. We invite you to ride a Holdsworth and feel the difference.

QUICKSILVER - TRIATHLON CLASSIC - HORNET - BLUE STREAK



## HOLDSWORTHY LIFETIME WARRANTY

Holdsworth warrants the replacement of any original part due to defect in material and/or workmanship of this Holdsworth bicycle. This warranty shall continue in full force and effect for the duration of the original ownership following the date of purchase. Such purchase to be documented by original sales slip or other proof of purchase by such owner.

Holdsworth will replace without charge any original part that is determined by Holdsworth to be defective under the terms of this warranty. However, transportation and dealer labor charges are not covered hereunder.

Claims under this warranty must be made through an authorized Holdsworth bicycle dealer who must also install the replacement part.

Failure due to accident, abuse, neglect, normal wear, improper assembly, improper fit, maintenance by other than an authorized Holdsworth dealer or use of parts inconsistent with the use originally intended for the bicycle as sold, are not covered by this warranty.

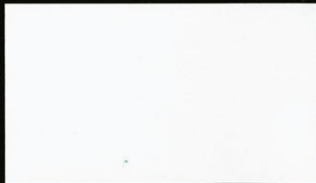
There are no other warranties or guarantees expressed or implied made by Holdsworth on this bicycle.

The sole and exclusive liability of Holdsworth and/or any of its authorized dealers, affiliates or agents pursuant to this warranty shall be for the repair or replacement of the defective part; incidental or consequential damages are expressly excluded hereunder.

**NOTICE:** The user assumes the risk of any personal injuries, damage to or failure of the bicycle and any other losses if Holdsworth bicycles are used in any competitive event, including bicycle racing, dirt biking or similar activities or training for such competitive activities or events.

This bicycle is not manufactured, marketed, designed or intended to be altered for use at any time in stunt riding or similar activity nor is it intended to be used with motors or any power driven apparatus. Holdsworth, its authorized, affiliates or agents shall not be liable under this warranty nor under any state or federal law or the common law or otherwise for any damage or failure, including personal injury, resulting from such use and/or alteration. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

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# HOLDSWORTH

THE HOLDSWORTHY CO. LTD.  
ALMA WORKS DARLASTON ROAD DARLASTON  
WEST MIDLANDS WS10 7TR  
ENGLAND