

# INFINITY ALL-ALUMINUM RECUMBENT CYCLE

Ace  
Tool & Engineering  
270 W. Harrison St.  
Mooresville, IN. 46158  
(317) 831-8798

**INFINITY**®

21st. CENTURY

Pat. Numbers  
4431203  
4527811

The eye catching INFINITY recumbent bicycle, designed and custom-built by Ace Tool & Engineering Co., is faster, more comfortable and safer than the conventional bicycle.

Recumbent is defined in the dictionary as "to recline" In the recumbent position the rider leans back in a relaxed manner, not hunched over as on a conventional bicycle. You have a better field of vision and you are on the same eye level with driver of any standard automobile. INFINITY has no handlebar in front of you which can cause injury if you would have an accident. INFINITY riders do not experience sore rear ends or necks. The pain of numb wrist or hands, or constricted air intake to the lungs so painfully known by riders of convention bicycles.

INFINITY recumbents are faster and safer than conventional bicycles, there is less wind resistance and with the lower center of gravity the INFINITY is much more stable.

INFINITY is the brain child of Dr. David Pearson, dentist an avid cyclist. He brought his idea to (Ace Tool, a third generation family owned machine shop founded in 1941) in the summer of 1980. The first INFINITY proto-types were built and tested that fall of 1980. Marketing of INFINITY began in the spring of 1981.

We at INFINITY have and will always strive to improve and provide our customers with the best of products and the finest service possible.

**Lighter, Stronger,  
Faster & More Agile.**

Rack adapter &  
safety flag  
standard

Rear tire  
27" X 1 1/2"

Seat panel made of open weave  
poly w/ nylon adjustable straps

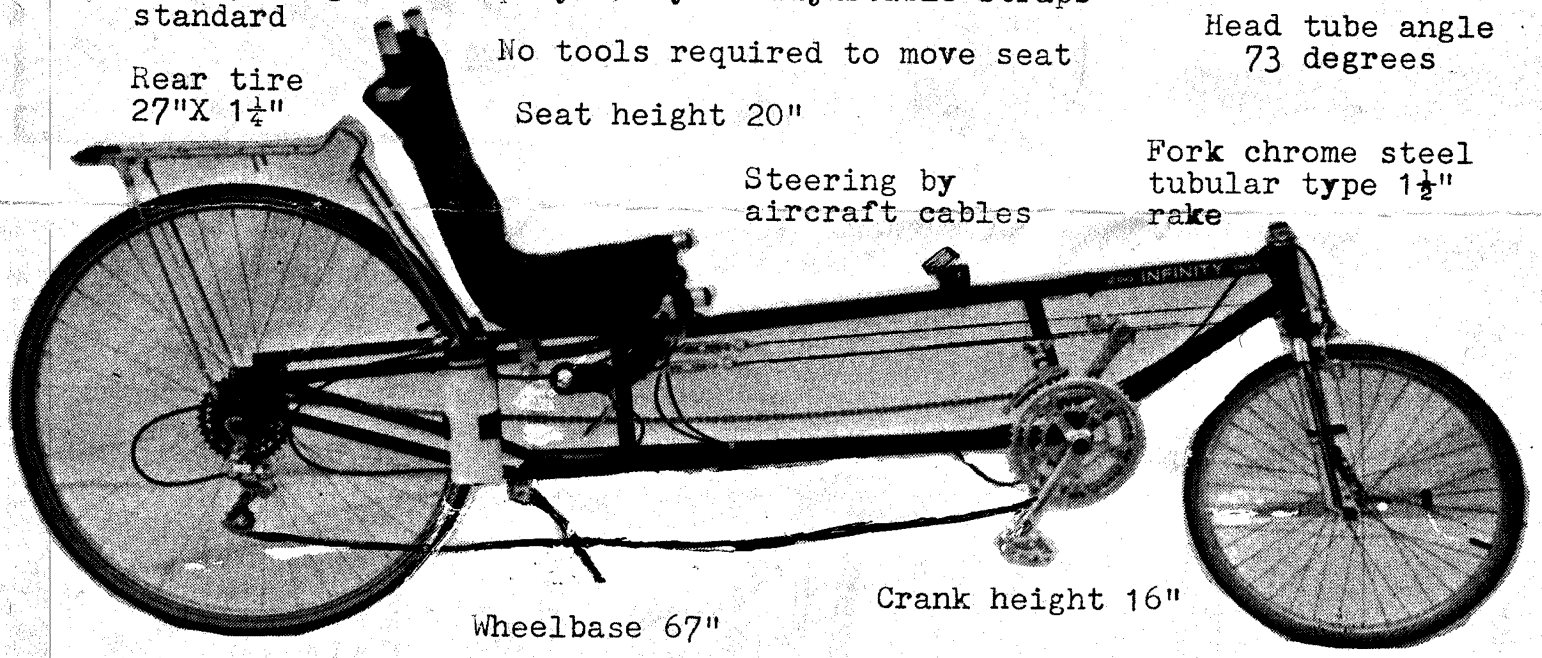
No tools required to move seat

Seat height 20"

Head tube angle  
73 degrees

Steering by  
aircraft cables

Fork chrome steel  
tubular type 1 1/2"  
rake



Weight 27 lbs

Wheelbase 67"

Crank height 16"

Photo shown w/optional components

Front tire  
20" X 1-1/8"

INFINITY recumbents are constructed of the highest quality grades of aircraft and structural aluminum, precision welded using the inert gas process with compatible filler rod. Frames are constructed using square tubing, it is used for our exclusive patented seat adjustment system. The seat will adjust 4 1/2" front to rear by mean of ball detent pins and can be removed from the frame in seconds without using any tools. This allows riders from 5'-2" to 6'-4" to ride a one size frame. The seat panel is of a black open weave poly material with nylon adjustable tension straps and also comes with an adjustable back support pad. A safety flag and rear rack adapter are standard.

INFINITY's steering is accomplished by aircraft cables from the steering adapter on the fork to the handlebar located under the seat. The patented steering system is very positive and is unaffected by rough road conditions. Cable tension and alignment of front wheel is accomplished through the use of locking turnbuckles.

Frame, seat, & handlebar  
constructed of 6061T-6  
aluminum.

INFINITY SPECIFICATIONS:

- Weight: 27 lbs.
- Wheelbase 67"
- Crank height: 16"
- Seat height: 20"
- Head tube angle 73 degrees
- Fork rack: 1 1/2"
- Gearing: 21 speed (27-100)

INFINITY PRICE LIST

INFINITY FRAME SET.....\$349.00  
INFINITY 21 speed complete.....\$599.00

Powder coat finish RED BLUE YELLOW

Replacement Parts for INFINITY

2	INFINITY seat complete w/brackets.....	\$125.00
2	INFINITY seat complete w/o brackets.....	\$110.00
2a	INFINITY seat panel kit (black).....	\$45.00
2b	INFINITY back support pad.....	\$12.00
2c	Seat detent pins.....	\$2.00@
3	INFINITY handlebar (silver,red,blue,yellow).....	\$55.00
4	Turnbuckle adjuster set.....	\$16.00
5	Steering cable set.....	\$16.00
6	INFINITY fork w/steering adapter.....	\$35.00
7	Headset (chrome).....	\$9.00
8	Bottom bracket.....	\$15.00
15	Alloy front wheel w/q.r. 20"X 1-3/8".....	\$38.00
15a	20"X 1-1/8" IRC skinwall tire.....	\$13.00
15b	20"X 1-1/8" tube.....	\$4.00
19	INFINITY computer bracket.....	\$8.00
20	INFINITY rear rack adapter(std w new INFINITY).....	\$20.00

Add 5% sales tax and \$4.95 for shipping on replacement parts.  
For item #2 (complete seats) use zone chart and figure  $\frac{1}{2}$  shipping charges. C.O.D.'s \$4.00 per box.

Recommended parts to complete a INFINITY FRAME SET.

- 3a hand grips
- 3b handlebar mounted shifters
- 9 3 piece cotterless crank set (48-38-28)
- 10 pedals
- 11 Derailleurs
- 12 Kickstand (285mm)
- 13 Chain (240 links/ 2 standard 120 link chains)
- 14 side-pull brakes, front 767 Weinmann or equal. rear 570 Weinmann.
- 15 Alloy front wheel 20"X 1-3/8" w/q.r.
- 16 Alloy rear wheel 27"X 1-1/4" w/q.r.
- 17 7 speed freewheel (13-28)

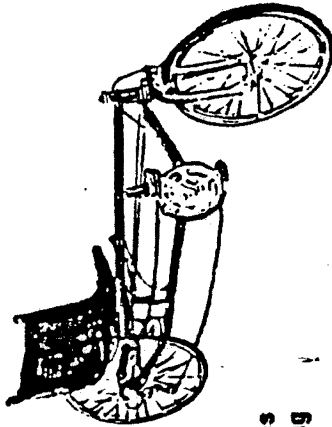
Allow 3-4 weeks for processing and delivery. We ship UPS. Due to size limitations INFINITY's are shipped in two cartons; some assembly is required. Customer pay all shipping charges.

NOTE ! The state of Indiana requires us to collect 5% sales tax on all items



RECOMMENDED PARTS to complete your INFINITY FRAME SET. May be obtained from local bike shop

- 3a Foam hand grips
- 3b Handlebar-mounted shift levers
- 3c Brake levers
- 9 Alloy crank set(three piece cotterless) double 52/42 triple 52/44/28
- 10 Alloy pedals
- 11 Front derailleur(long cage for triple crank)
- 12 Alloy kickstand(305mm)
- 13 Chain(240 links or 2 std chains)
- 14 Alloy side-pull brakes--front reach 71mm, rear reach 57mm NOTE: reverse pull on rear.
- 16 Alloy rear wheel-27"x 1 1/4"
- 17 6-speed freewheel(13-15-17 -21-26-32)
- 18 Rear derailleur(long cage)
- 20 Rear rack(most standard rack will work with INFINITY adapter. Low-rider typerack will work on the INFINITY front fork.



**INFINITY**® Bicycles

Manufactured by Ace Tool & Engineering  
Box 326, Mooresville, IN 46158  
(317) 831-8798

**INFINITY: RECUMBENT BICYCLE LIMITED WARRANTY**

The Infinity frame is guaranteed for a period of three years against defective materials and workmanship. A return authorization must be obtained from the manufacturer. Freight to and from the manufacturer must be prepaid by the owner. Other original parts determined by the authorized Infinity dealer to be defective will be replaced without charge if proper notice is given within 90 days of the original purchase from the dealer. This warranty does not apply to damage resulting from accident, misuse, neglect, normal wear, improper assembly or improper maintenance. The user assumes the risk of personal injury, damage or failure of the bicycle or any other losses if the Infinity recumbent bicycle is used in any competitive event, including but not limited to, bicycle racing, stunt riding, ramp jumping, acrobatics, or similar activities. The manufacturer makes no other warranties other than those specifically mentioned herein.

**INFINITY**®

ACE TOOL & ENGINEERING  
282 West Harrison Street, Mooresville, Indiana 46158

**INFINITY**® Bicycles

# USERS' MANUAL

## Helpful Hints

Welcome to the efficient world of recumbents. Extreme comfort and efficiency go hand in hand with the Infinity Recumbent Bicycle.

Here are a few helpful hints in order to assure your riding pleasure. As you sit down in the seat and lean back it will be of great benefit if you hold the brakes on. This will help you to stabilize the bike. Scoot down in the seat, keeping your shoulders back; relax and get comfortable. Do not lean up in the seat to start off or to ride. You are far more comfortable and the bike is more stable if you scoot down, lean back and relax.

As you start off, place either the left or the right crank arm in the 12 o'clock position. With your other foot on the ground and holding the brakes on, move the handlebars from right to left. This will enable you to get the feel of the bike. Push down firmly on the crank, release the brake and raise your other foot up to the peddle and you are on your way.

## Maintenance and Lubrication

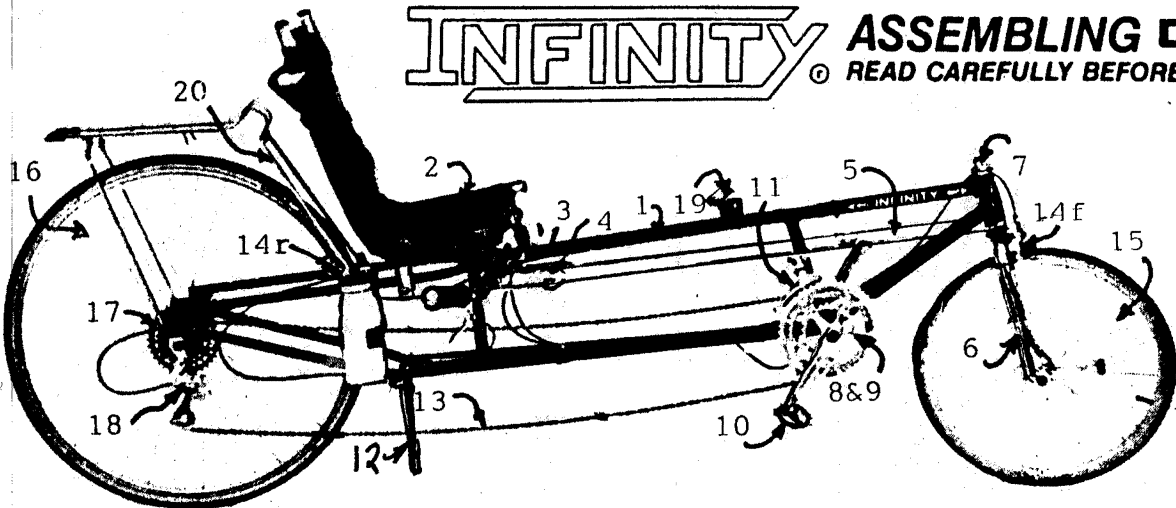
The Steering cables should not have any slack in them at all, and only a small amount of tension. The turnbuckles at each side of the handlebar maintain the alignment and cable tension. The jam nuts at each end of the turnbuckles should be retightened after any adjustments are made to tension or alignment of the steering cables.

The handlebar bearings should be regreased once a year. The area where the turnbuckle eyes contact the bar bolt and washer assembly should be cleaned and regreased two times a year. The area where the cable thimbles contact the steering pins should be greased every two months. Standard bicycle maintenance applies to everything else.

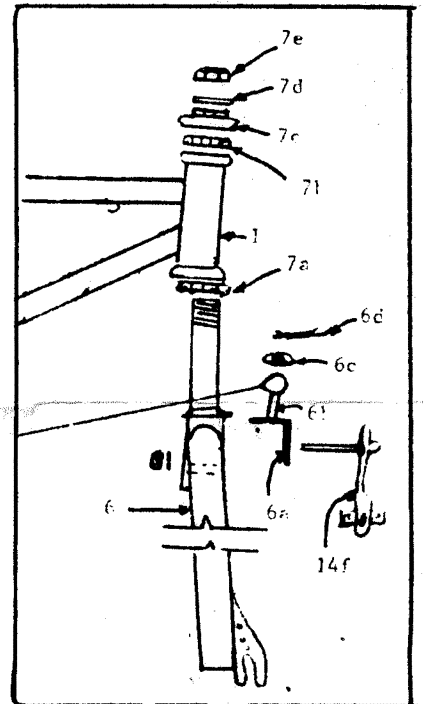
If you have the standard silver frame it can be polished with a brite pad (type used aluminum pots) !DO NOT USE STEEL WOOL!. Your INFINITY can be waxed with a good automotive wax. If you have color anodized frame use a good automotive wax !DO NOT USE BRITE PADS, STEEL WOOL OR ANY ABRASIVES AS IT WILL DAMAGE THE FINISH!. If you get a scratch on you anodized finish a permanent ink marker will touch up most scratches. If you have a powder coat color finish you need only wipe the frame with a damp cloth. Touch up scratches or chips with automotive touch up paint. After about 10 miles of riding, retension all the straps on the seat. Cleaning: use mild soap, rinse with water and air dry(DO NOT USE ADRYER).

# INFINITY ASSEMBLING DIRECTIONS

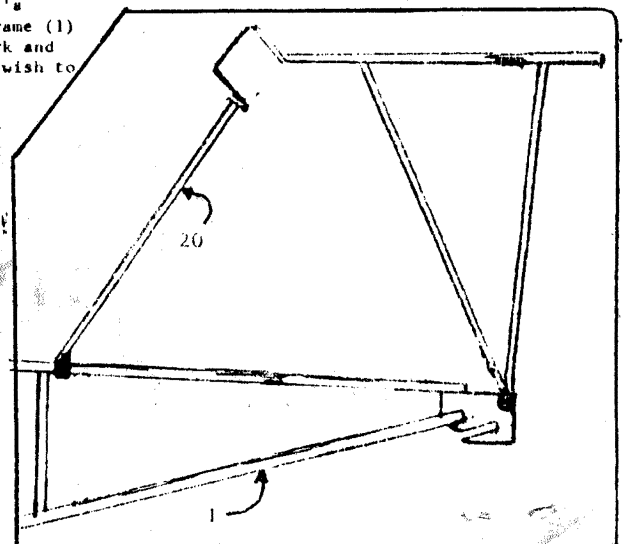
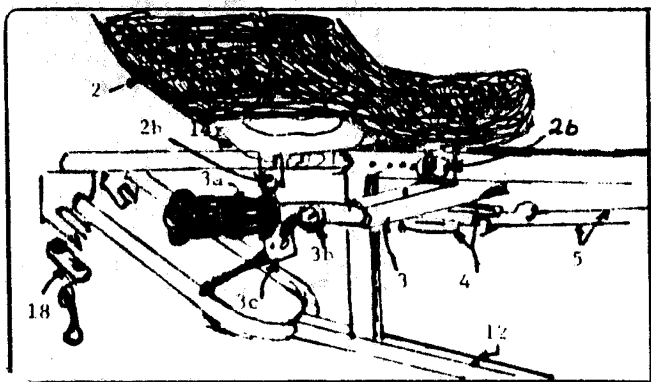
READ CAREFULLY BEFORE ASSEMBLING.



1. Check contents of boxes with instruction sheet. If any parts are missing or damaged in shipping, please notify us immediately.
2. If you have purchased an INFINITY frame set purchase the parts to complete your INFINITY from your local bike shop. A recommended parts and optional accessories list is enclosed in our catalog.
3. If you have purchased a complete INFINITY, all parts required to assemble your INFINITY are included.
4. Grease headset bottom bearing (7a) using a quality wheelbearing grease, install on fork (6) and insert in frame (1). Grease and install top bearing (7b) screw on the top bearing retainer (7c), install locking ring (7d), screw on locking nut (7e) snug (do not overtighten)
5. If you have purchased a frame set install front brake (14f) and fork steering adapter (6a) to fork.
6. Install handlebar (3) to frame (1). Grease bearings with a light oil.
7. Attach steering cables (5) to turnbuckles (4). Install cable thimbles (5a) to fork steering adapter pins (6b) grease thimbles where they contact the steering pins, place retainer washer (6c) on steering pin and secure with cotter pin (6d).
8. Install seat (2) to frame (1) with detent pins (2b). You can turn bike upside-down to complete assembly.
9. Install kickstand (12) to frame (1).
10. Install rear brake (14r) to frame (1). Front brake is factory installed on complete bike.
11. Install rear derailleur (18) to frame (1). Front derailleur is factory installed on complete bike.
12. Install crank chainwheel and crank arm (9) to Crankshaft (8). Install pedals (10) to crank arms (9).
13. Install freewheel (17) to rear wheel (16). Install rear wheel (16) in frame (1). Install chain (13) on chainwheel (9), freewheel (17) and rear derailleur (18). A chain tool is require and can be purchased at your local bike shop.
14. Install front wheel (15).
15. Inflate tire to proper pressure, adjust brakes, derailleurs, adjust cables referring to maintenance chart for pretension and alignment, install bike flag (2c) adjust seat where you are comfortable and you are ready to ride your INFINITY. (See helpful hints)
16. A rack adapter is standard with every INFINITY if you wish to install a rear rack, buy the rack of your choice at your local bike dealer. Install the rack per manufacturer's instructions to the chainstays on your INFINITY. Install the rack adapter (20) to frame (1) at the desired location. Align rack mounting with top plate of the rack adapter, mark and drill holes required in the top plate and bolt the rack to the rack adapter. If you wish to install a front rack the best type is a low rider which bolts to the fork.

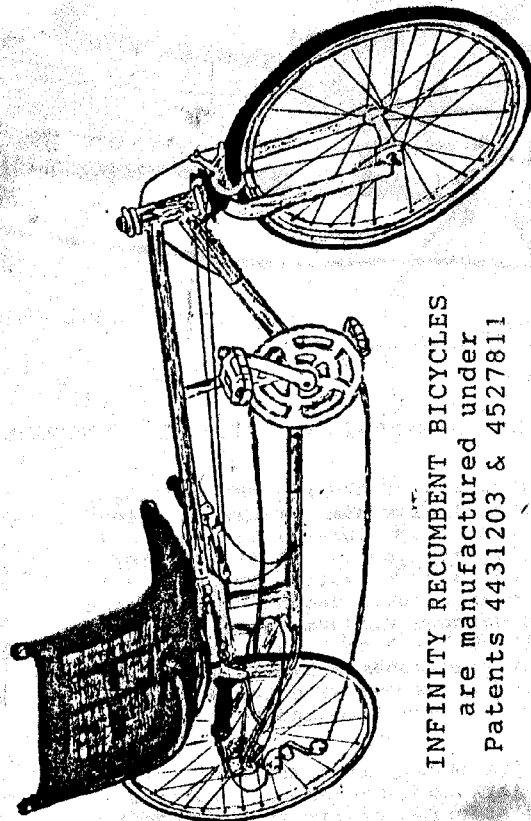


**CAUTION: DO NOT SIT ON BIKE WITH KICKSTAND DOWN**



**INFINITY FRAME SET:** includes frame, fork, headset, handlebar, complete steering assembly, rack adapter, cable housing, seat and flag. Powder coat finish is standard (colors RED BLUE YELLOW).

**INFINITY 21 speed:** comes complete with Suntour crank set, derailleurs, shifters, and freewheel. Weinmann side-pull alloy brakes and levers. Alloy pedals, kickstand and alloy wheels w/q.r. Rack adapter and flag are standard. Powder coat finish is standard (colors RED, BLUE, YELLOW)



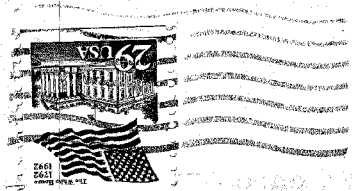
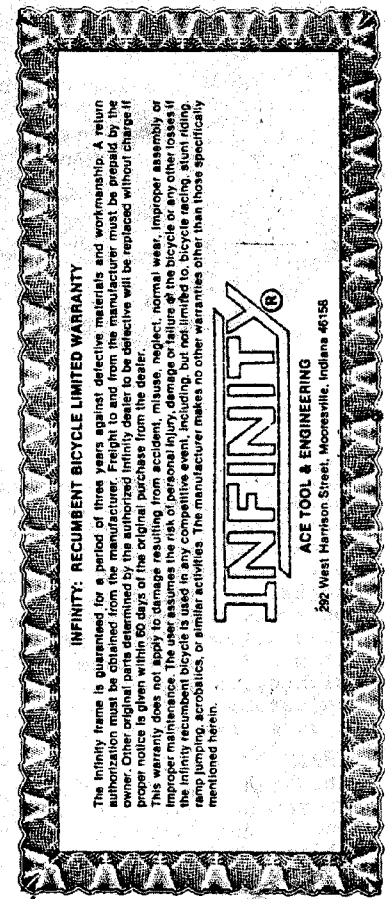
**INFINITY RECUMBENT BICYCLES**  
are manufactured under  
Patents 4431203 & 4527811

**INFINITY: RECUMBENT BICYCLE LIMITED WARRANTY**

The Infinity frame is guaranteed for a period of three years against defective materials and workmanship. A return authorization must be obtained from the manufacturer. Freight to and from the manufacturer must be prepaid by the owner. Other original parts determined by the authorized Infinity dealer to be defective will be replaced without charge if proper notice is given within 90 days of the original purchase from the dealer. This warranty does not apply to damage resulting from accident, misuse, neglect, normal wear, improper assembly or modification of the bicycle. The manufacturer warrants the Infinity recumbent bicycle is used in any competitive event, including, but not limited to, bicycle racing, stunt riding, ramp jumping, acrobatics, or similar activities. The manufacturer makes no other warranties other than those specifically mentioned herein.

**INFINITY**

ACE TOOL & ENGINEERING  
292 West Harrison Street, Mooresville, Indiana 46158



ED HASBROCK  
SAN FRANCISCO, CA 94110

**INFINITY**  
21 st. CENTURY  
ACE Tool & Engineering  
270 W. Harrison St.  
Mooresville, IN 46158  
(317) 831-8798

