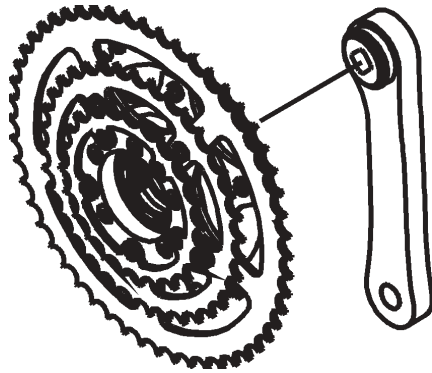


Assembling the Stokers crank.

The chainrings are easier to install if the main body is pulled apart, so remove the 6mm bolts that hold the two main body flanges together (fig. B-1). Note that the holes for the main body bolts are not symmetrical, and the two halves only can be re-assembled one way. Do not discard the lockwashers.



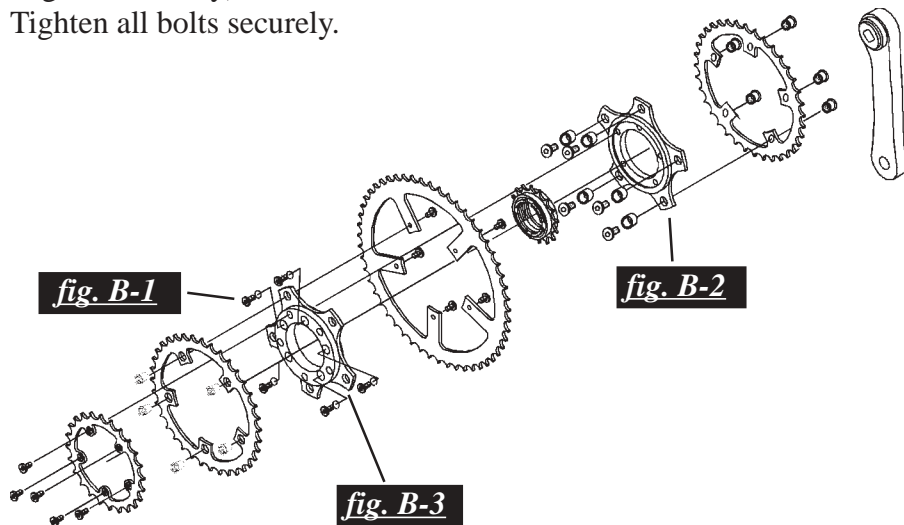
Attach the 110mm BCD timing ring to the outer body flange first (fig. B-2.) Be sure to mount the chainring to the outside (away from the bike) side of the body flange, and have the spacers installed on the chainring bolts to the inside of the outer body flange.

Mount the large and middle 130mm BCD chainrings to the inner body flange (fig. B-3) using the bolts provided.

Mount the smallest 74mm BCD chainring to the inner body flange with the bolts provided.

Bolt the two body plate flanges together, being careful to align the holes up correctly. (you can only insert all 5 bolts if the plates are aligned correctly).

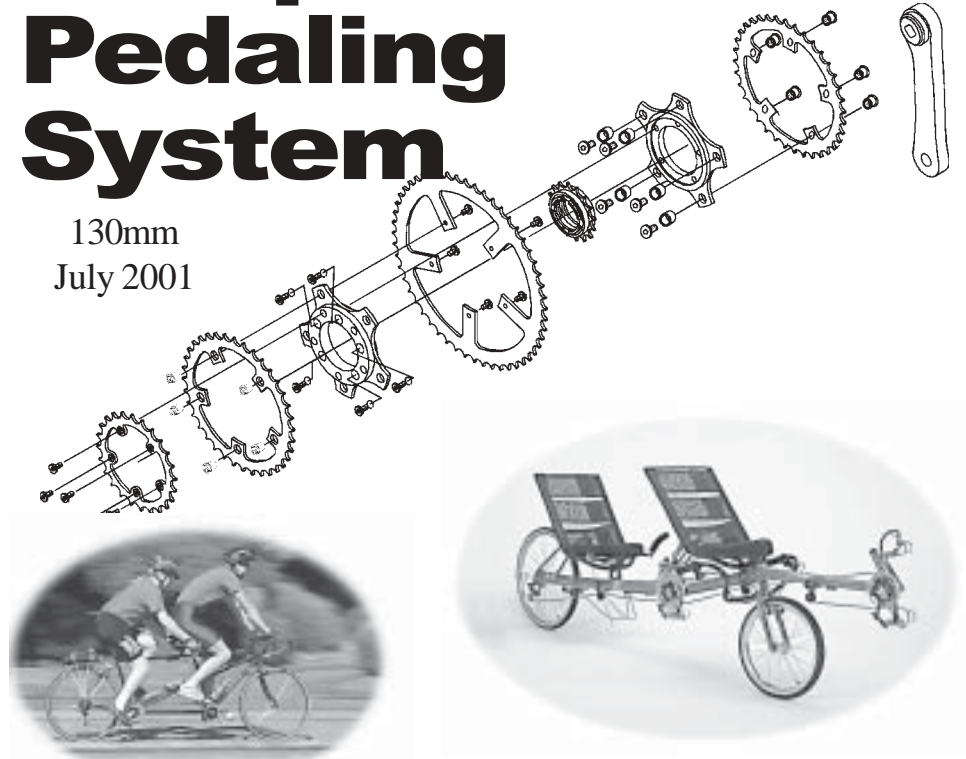
Tighten all bolts securely.



IPS

Independent Pedaling System

130mm
July 2001



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Congratulations on your purchase of the Independent Pedaling System from ATP-Vision Recumbents. This unit will allow either the captain or the stoker to coast or pedal, with complete crank independence. We do this by moving the timing chain to the right side of the bike, and then isolating the crank arm from the chainrings with a freewheel.

The IPS is designed to attach to any tandem bicycle, whether it is a recumbent or an upright. While the installation is simple, if you don't have the specific tools or skills required to work on a crank and bottom bracket set, you should see your local bike shop.

Specifications

Bottom Bracket *(not included)*

The IPS crank typically will bolt on to your bicycle with no modifications required. If chain-line or derailleur adjustment seems to far off for simple adjustments, you might need to change your bottom bracket. Please note that the BB set needs to be square taper style, NOT splined.

Chainrings *(not included)*

The IPS is designed to utilize a standard 130/74mm BCD drive chainring set and 110mm BCD timing chainring set, all very common. Any size chainring with these bolt circle diameters will work. Make sure to use **Loctite or threadlocker** on all chainring bolts when assembling chainrings to your IPS unit.

Crankarms

170 and 175mm crankarms are available, and the arms can be changed at anytime. The crankarms are matched to particular freewheels to minimize runout (wobble). If you need a new crankarm you will also need to get its matched freewheel.

Maintenance

No maintenance should be required, other than occasionally checking the chainring bolts for tightness. If the freewheeling mechanism should fail, the entire freewheel unit is available from us, and is simple to replace.

Assembling the Captains crank.

The unit comes with the main body assembled, all you need to do is add the timing chainring. Attach a 110mm BCD pattern ring to the main body (fig. A-1) with the bolts provided. Make sure the ring is mounted to the bicycle side of the main body flange (fig. A-1), and the bolts are tightened securely with a hex wrench. Typically a 38 tooth is used as a timing ring. Check the button-head bolts on the main body for tightness (fig. A-2)

Install the crank onto your bottom bracket: Make sure there is no grease on the spindle flats, be sure to grease the threads of your crank bolts, and tighten the crank bolts per the specifications that came with your BB set.

Install your pedals, making sure to grease the threads of the pedal axles and tighten securely using a pedal wrench.

