HINTS FOR NEW TANDEM PILOTS

Major differences between tandem and single cycling

Longer	Complicates steering and negotiating bumps and hills
Heavier	Bigger bike and two riders
Slower	For braking, starting off and going up hills.
Faster	in a straight line and can be much faster going downhill so be confident that you can brake when you need to and are not going dangerously fast.
Balance	Riders must be well paired – the rider at the front should not be much smaller than the stoker, otherwise the bike will be unbalanced and dangerous.

Types of tandems

We have ten tandem bikes.

Four bikes are Hillbrick 27 speed drop bar road bikes with STI levers (brakes and gear shifters in one mechanism). The Hillbricks have high bars at the back that the stoker has to climb over. 2 bikes are 30 speed Cannondale road bikes. These bikes are fast and light. They have thin tyres and the pilot is generally leaning forward and down more while riding.

Two bikes are Raleigh flat handlebar recreational bikes with 24 speeds. These have nice fat tyres and an upright riding position. Two bikes are older 24 Speed Apollo tandems which are our heaviest bikes but have very easy gears for going up hills. Some pilots who have not ridden road bikes or who don't like riding in a road bike position may prefer these bikes.

Each bike is a different size. We will try and match you with a bike that you fit most comfortably as pilot. However the fit may not be perfect. If the fit is very bad on all bikes you may not be able to ride comfortably.

This is why it is important to practice riding these bikes (both as pilot and stoker) to be sure you can ride them confidently and safely before riding with a vision impaired stoker.

Rider preparation

Remember to bring:

- your helmet
- shoes you prefer to ride in – we have a range of flat and clip pedals so can probably accommodate you
- water – the bikes have water bottle holders
- Use sunscreen on any exposed skin and sunglasses
- Money to buy morning tea or breakfast
- If you ride your own bike to the meeting place it may be possible to lock it in a vehicle while you are riding tandem
- If you are riding before dawn in winter light clothing and lights if you have them will be useful.

Bike set up

You may need to get to the ride a bit early to set up properly. Check:

- correct type of pedals for you and your stoker
- seats height for both riders
- tyre pressure

- spare tube and levers in the seat bag

Practice riding solo if you have not ridden the bikes before to become familiar with the gears and brakes on the bike.

Make sure seats are at the right height for both riders. Support the bike and apply both brakes while the stoker sits on their seat and finds the pedals and checks seat height. One suggestion is that they put the heel of their foot on the pedal, with the pedal at the 6 o'clock position, and their leg should be straight. This will mean when they pedal with the ball of their foot on the pedal they will have a slight bend in their knee. Make sure their hips are not rocking when pedalling. Pedalling backwards may help to determine if the seat height is comfortable.

Some inexperienced riders may think they need to be able to put their feet flat on the ground when seated. Explain that this is normally for the safety of little kids learning to ride. However a more nervous stoker may need their seat lower until they develop confidence.

Different types of vision impairment

Vision impairment can range from totally blind (not even able to see much difference between night time or daytime), to vision impaired / partially sighted. For example, some people may have no central vision but some peripheral vision. They can see ok at the side and by turning their head if they need to see forward. Some people can't see anything in daylight, but can see a bit at night. Some people can see blurry shapes or bright lights. Some people can't see anything further than 6 metres away but can read print.

Many people gradually loose their sight as they age. A few have never had any sight.

How much you help your vision impaired rider will depend on how much they are happy to do themselves. Ask a few questions and learn from experience.

It is invaluable to ride as a stoker and keep your eyes shut during the ride even when stopping and starting – taking all your instructions from your pilot and watching the world go by through their eyes. This will help you to understand how you need to communicate with your stoker when you are piloting and how your stoker is relying on you to participate confidently in tandem riding.

Communication

2 brains 2 bodies - Coordination and communication are critical, especially with a vision impaired stoker.

Your safety is in your partner's hands and yours in theirs. Take nothing for granted. Tell your partner everything that is happening simply and clearly:

- starting
- Stopping
- Turning right / left
- Negotiating bumps, bollards, or branches
- speeding up to negotiate hills
- slowing down to wait for a car to pass without needing to stop the bike
- changing up and down gears if it will cause a significant change in chain / pedal tension and speed that may cause their feet to slip

Over time you and your stoker will work out what communication is needed when. If you become a good riding pair, less communication will be needed.

Ask your stoker, if they are vision impaired, if they would like you to tell them more about what is happening on the ride, where you are going and what places you are passing.

When describing features being passed say which side of the path it is on, in case the stoker has some vision and can see it.

Talk with your vision impaired stoker about what assistance they may need when off the bike, for example, if you are with a group at a coffee shop, moving around tables and ordering food.

Vision impaired people benefit from being introduced to others when meeting a new person or talking in a group or they may not know who they are talking with. Say your own name to start off with if your stoker cannot see you clearly.

Each person's needs will be different.

When riding you are facing away from your stoker. Make sure you give instructions clearly enough for your stoker to hear.

Starting and stopping

Stopping and starting are the time when tandems are most likely to unbalance and the stoker and pilot crash to the ground. The weight of the two riders and the bike often means that unless the pilot and stoker can both get a leg off the pedals to brace against the fall they will not be able to avoid hitting the ground. Fortunately the bike is generally not in motion and the fall does not cause an injury.

Try and always stop and start on flat ground away from curbs, railings, ditches, rough road edges or other obstacles that your stoker may not be able to see. Never try and stop to get one foot on to the curb. Your stoker may not see the curb. Never try to stop and grab a railing or post to lean on. The weight of two riders on the tandem means you are unlikely to be able to stop and hold the weight against the railing without falling.

Starting off (Two methods)

It is best to mount and dismount from left (curb side) of bike. If you unbalance when stopping or starting the bike is more likely to fall to the left (away from traffic).

1) Simultaneous push off while standing

   Pilot stands over the bike, applies the brakes, and stabilises bike. Stoker stands over the bike at the back. Pilot leans the bike slightly to the left and takes the weight on their left leg.

   While taking the weight on their left leg, using their right foot the stoker moves the pedals until the right hand pedal is pointing forward in the 2 or 3 o'clock position.

   On the count of 3 take off with a firm push with slight delay/slow peddling so both pilot and stoker can slide their bottoms backwards on to the seat and get their left feet on the pedals.

2) Stoker sitting with feet on pedals

   Pilot stands over the bike, applies the brakes, and stabilises bike while stoker mounts and puts their feet on both pedals. Stoker moves the pedals until the right hand pedal is pointing forward in the 2 or 3 o'clock position.

   Pilot leans the bike slightly to the left and takes the weight of the bike and stoker on their left leg. Puts their right foot on the pedal ready to push off.

   On the count of 3 take off with a firm push with slight delay/slow peddling so you can slide your bottom backwards on to the seat and you can get your left foot on the pedal.

Remember when you are setting up your pedals to start off, that your vision impaired stoker may not be able to see the pedals. Take care that you do not turn the pedals suddenly and bash your stoker in the legs. One idea is for the stoker to set the pedals up for starting off, as you, the pilot, can see them turning and avoid them.

With clip pedals, clipping in while your partner continues to pedal can be challenging – talk to your partner about the pause to clip in – and then continue pedalling.

Your stoker may also push off too hard and upset the balance or steering of the bike – give them some advice and practice on smooth and gentle starts.

With flat pedals, you or your stoker may also not be able to get your feet on the pedals accurately when starting off. Be aware if your stoker is struggling to find the pedals. You will probably be able to coast without moving the pedals for some metres until their feet are on the pedals.

Pedalling and gears

If your stoker has little or no cycling experience you can explain about maintaining a steady and easy pedalling rhythm (cadence) by selecting the right gear for the gradient so that you do not have to overstrain yourself when pedalling.

If you are going up a hill and need your stoker to pedal harder, tell them. You can describe the length and grade of a hill so that the stoker knows how much energy to exert, and whether or not they need to pedal standing up (if you have practised this skill).

You need to drop to a lower gear for hills earlier with a tandem than with a single bike. Also, be careful you are not trying to use the outside back cog with the inside front cog (small with small) or vice versa. Otherwise you may loose the chain.

You can also explain that at times you do not need to pedal and can rest, or you and your stoker should lift your weight from the seat regularly when not pedalling. You only need to raise your bottom an inch off the seat with your weight through your straight leg to restore circulation.

It can be useful to let your stoker know if you are changing up or down gears. If you are climbing a hill, they will need to ease off pedalling while you change gears. Depending on your gear change they may need to pedal more quickly or slowly to maintain cadence and ensure that you are not trying to pedal at different speeds.

If your stoker pedals too hard unexpectedly it may cause the bike to wobble or veer off course. Prompt them to pedal with less downward force if needed.

Balance

The first time your stoker rides a tandem, especially if they haven't ridden for a while, they may feel tense and hold on to the handlebars very tightly. Keeping very tense can cause some problems:

- your stoker's movements transfer to the bike and may make it wobble or make your pilot's seat move as the handlebars are attached to your seat post.
- if your stoker is tense for a long time, their muscles may get strained and sore

Remind your stoker to relax their grip on the handlebars.

Take care to maintain your balance if your stoker moves unexpectedly, eg, to get more comfortable. You will feel the change of balance and the bike is likely to wobble. If you or your stoker want to try standing and pedalling practise this in a flat safe location first as it will cause a big change in balance until you are both used to it. Both people trying to stand up could be very dangerous for an inexperienced tandem team. Take time to become more confident first. With practice you will also be able to jointly lean into corners, but initially you may stay more upright.

On a single bike you will confidently grab your water bottle while riding but do this carefully on a tandem. Your stoker may need some guidance and practise to do this.

Stopping

1. It is best to dismount on the left side of the bike. If something goes wrong this means you will overbalance towards the left (generally the side of the road or footpath) rather than to the right (on to the road).
2. Announce that you will be stopping. If you are riding with cleats unclip. Make sure your stoker has unclipped. You can both still pedal with your feet just resting on top of the pedals.

3. Gently brake so that you slow down completely. It can be disconcerting or uncomfortable for your stoker if you suddenly come to a stop from a higher speed and they get thrown towards their handlebars.
4. Put the right hand pedal in the down position (6o'clock) so that when you stop both your left and right foot are near to the ground and your bodies are nicely balanced. It will then be just a little step to put the left foot down while maintaining good balance with the right foot still on the pedal.
5. Count down (1,2,3) or say when you stop so that you and your stoker both step off at the same time. At the end of the count your brakes must be fully on and the bike must be completely stopped. Do not allow the bike to roll on after your "stop".
6. At the same time as you get the left foot down, make sure you get the right foot off the pedal and on to the ground. You need to do this in case the bike overbalances and you suddenly find yourself falling to the right. Both feet need to be on the ground and ready to brace your legs to prevent a fall.
7. A pilot with a vision impaired stoker may allow the stoker to step away from the bike first before the pilot.

It is best to always stop in the same way, and to put the same foot down each time. If you need to stop unexpectedly in a different way than normal this can be a very big surprise for your stoker and should be avoided to prevent falls.

If you are stopping and know that you will be starting again and immediately going up an incline or hill, as part of stopping, get into a low / easy gear. If you have just rocketed down a big hill in a high / difficult gear, as part of stopping, get into a medium or low gear so that you don't try and start off in a really hard gear.

The brakes on a tandem bike have to work very hard as they are stopping a much heavier bike with two passengers. If you are going down a very long hill and have your brakes on all the way they can get very hot and may not work well anymore. On very long downhills where you need to apply the brakes all the way, you may need to stop part way down to let the brakes cool.

Steering

- Plan cornering well in advance as it will take longer.
- "Enter wide- Exit wide"
- Slow your speed of approach
- Avoid leaning into corners unless you are experienced.

Before starting riding check the seat post clamps and handlebar adjustments for the stokers to be sure all the fittings are tight and are not going to move when the stoker puts weight on their handlebars. Remind a new stoker not to try to twist their handlebars around.

Negotiating bumps and obstacles

An experienced cyclist, when going up a curb or over a bump or hole, will generally stand up a little off the seat so that the impact of the bump is not transferred through the seat to their body.

If the stoker cannot see a bump coming, they will stay seated and will feel the full force of the bump when they hit it. Therefore advise them that a bump is coming so they can lift their bottom a little off the seat (just a few inches) for a few seconds till the bump has passed, then sit down again.

At times on your ride you may have to do slow speed manoeuvring, for example, when riding along a cycle path with a 90 degree corner, negotiating bollards or posts, riding at slow speed in a group of other bikes or amongst pedestrians or doing a U turn. It is important to master slow speed riding on the tandem. It is possible to ride very slowly with your stoker. When you have to negotiate such tricky parts of a ride let your stoker know and ask them to ease off on their pedalling, or simply coast so you can slow your speed and get round the obstacles, and start pedalling again. Depending on the situation, if riding with cleats, you can both unclip just in case you need to stop the bike if it proves that you cannot get around the obstacle safely.

Walking with the bike

Some streets may need to be crossed on foot. Consideration should be given to your stoker's ability to run with you across a road with the tandem.

Your stoker may find it convenient to walk with the bike by simply placing one hand on the back seat and walking a little behind the seat. The pilot can hold the bike by the handlebars and guide the bike. The stoker can follow along by keeping contact with the bike seat but does not actually need to hold the bike up and guide it as this is being done by the pilot.

If you are walking with the bike and your stoker remember to alert them to gutters, sloping pavements, holes or bumps, bollards and tight corners. You can also advise if the surface is flat and even so they feel able to walk with more confidence.

Remember, your vision impaired stoker may not be able to see the bike. Explain that they should take care to walk a little away from the bike so that their legs do not hit the protruding pedals.

You will need longer to cross the road with a tandem guiding a stoker than you would on a single bike.

Accidents and injury

As you know, cycling involves the risk of injury or accidents. Some unexpected situations just can't be dealt with in time even by an experienced rider. You will also be riding a bike which may not fit your body size perfectly well. Your riding position on the bike may not be ideal.

As a result, it is possible that:

- you may strain some muscles or feel soreness after a ride if you are riding in a different position to normal
- you both may fall off, including on to concrete or bitumen. Generally falls are at low speed (while stopping and starting). So you may have some bruises or grazes which will heal quickly. But an injury could be more serious (such as a broken bones).
- If you are able, please help your stoker to safety (others in the group will also assist you).

To try and minimise injury you should think about:

- Always wear a correctly fitted helmet. If your helmet is really old or has been dropped heavily it may have deteriorated. Replace your helmet every couple of years.
- Set up your seat height in the most comfortable riding position
- Speak with a health professional or coach about warm-up stretches you can do before riding (or even better - each day) so that your body becomes more flexible and you will be less likely to get muscle strain.
- Use sunscreen, sunglasses and suitable clothing to give sun protection
- Membership of Pedal Power ACT includes comprehensive personal injury insurance and 3rd party liability insurance. This covers men and women, and also families. Information is available at www.cyclecover.com.au/webcontent24.htm. Information on how to become a member of Pedal Power, and the benefits of membership, is available at www.pedalpower.org.au.
- Membership of FIT (for women only) includes the same type of comprehensive personal injury insurance and 3rd party liability insurance particularly for the tandem riding project. There are details on how to become a member at www.fitact.org.au/membership.htm.
- Membership of other cycling bodies may include suitable insurance.
- FIT-Ability members (pilots, stokers, volunteers) are covered by public liability insurance and limited coverage for non-Medicare expenses through Visact.
- It is strongly recommended that you become a Pedal Power or FIT member to ride pilot with the FIT-Ability program. This insurance will be critical should anything go wrong when you are piloting.

- By becoming a member either of Pedal Power or FIT you not only receive insurance but you also support local cycling groups and receive benefits such as cycle shop discounts, advice about upcoming events you can participate in, and newsletters or magazines.

Before riding tandem you are asked to fill in a form acknowledging that you choose to take part in tandem riding and that you are aware of the risks.

Guiding people with little or no sight - General Guidelines

Getting underway:

Ask if assistance is needed. If so, touch the back of your hand with the back of theirs. They then should hold your arm at the elbow region.

Walking:

While walking, the person should be to one side and slightly behind you, about half a pace behind. Walk at a secure pace for both parties. Make sure that you are continually looking for obstacles in all directions.

Narrow spaces:

When guiding into narrow spaces, firstly tell the person what is about to happen. Slowly move your arm behind you, they should follow. Once the narrow space has passed, return your arm to its normal position.

Changing sides:

For a certain reason, if the person needs to change sides, it is best to remain standing still. The person will find your other arm and move across.

Doorways:

When entering a doorway, ensure that the person is on the hinged side of the door, using the previous methods. Explain which way the door opens to the blind person. Open the door and walk through, allowing the person to hang onto the door and close the door with their free hand.

Steps:

Stop at the first step, and tell the person whether the steps are going up or down. Ensure that they are on the handrail side if possible. Take the pace slowly, and when you are both ready, start, staying one step ahead. Once you reach the bottom or top, stop and tell them this.

Seating:

Approach the chair, placing your hand on a part of the chair. The blind person will slide their hand down. Explain where about the chair is in relation to the rest of the room and yourselves and tell them what part of the chair they are touching.

Getting into a car:

Tell the person which way the car is facing and which door they will be getting into. Place your guiding arm onto the door handle and ask the person to move their hand down your arm. Allow them to open the door and to take a seated. Particularly if the car is unfamiliar, place your arm on the roof to ensure they do not bump their head, and have something a guide. Allow them to close the door.

Describe your surrounds:

Be sure to use as much detail as possible to describe your surroundings. Use an item in relation to another and give a perception of space.

Proudly supported by
ACT Health Promotion Grants