

Model 621 Survey Cart Assembly Guide

Mobilizing your SIR[®]-2/2000 system on the GSSI Model 621 survey cart allows you to cover ground much more easily and conveniently than with the conventional system configuration. The 623 cart incorporates a survey wheel for high-precision distance measurements. The cart can accommodate the 400 MHz, 900 MHz, 1.0 GHz, 1.5/1.6 GHz and the

2.6 GHz antennas. For the 1.0, 1.6, and 2.6 GHz antenna, you will need a survey wheel adaptor cable. It is GSSI part number FG62X/5100B CBL. Contact your GSSI sales representative for more details.

GSSI can be reached at (603) 893-1109 Monday-Friday, 8:30 AM – 5:00 PM EST.

Tools Required: Phillips-head screwdriver.

Unfold Cart and Attach the Wheels

- 1** Unfold the cart frame and insert the black tips of the top assembly into the receivers on the front wheel fork. Secure with the attached pin.
- 2** Squeeze the wheel-lock clamps, and insert the wheel shaft into the axle. It will slide all the way in and lock securely. To remove wheels, squeeze the wheel-lock clamp again and pull the wheel straight out.
Note: The wheels are foam filled and do not require inflation.
- 3** Slide the front wheel onto the front wheel fork and tighten clamp. When the clamp is slightly tight, turn the handle to the locked position. This will further tighten the clamp. Exercise care not to over-tighten the front wheel as this may result in damage to the front fork. Ensure that the survey wheel encoder is correctly positioned on the inside of rear right wheel and that the survey wheel is making contact with the tire's rim.

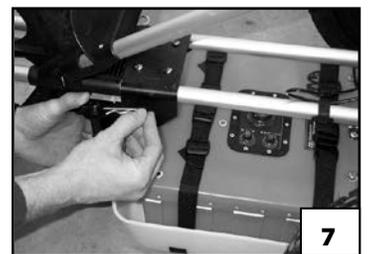
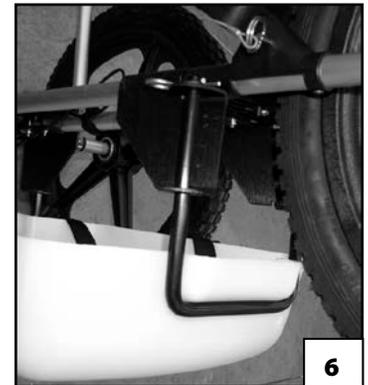
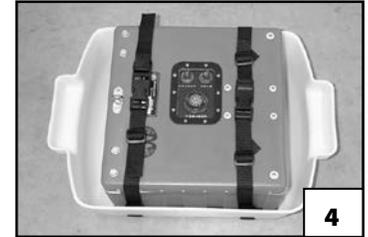


Mount the Antenna

- 4** Place the antenna into the white plastic tub and secure with the attached straps. If you are using the cart system with an antenna of higher frequency than 900 MHz, place the antenna in the bottom of the tub and stick the white plastic plate with the Velcro strips to the Velcro on top of the antenna. Secure the assembly with straps. If you are using the cart with the 400 MHz or 900 MHz antenna, the white Velcro plate is not needed.
- 5** With the arrows on the top of the antenna housing pointing toward the front of the cart, place the tub under the cart so that the tub handles face the front and the back of the cart.
- 6** Lift the tub to fit the white fiberglass brackets under the handle and insert them through the 2 double holes on the frame.
- 7** Secure with the metal pins.

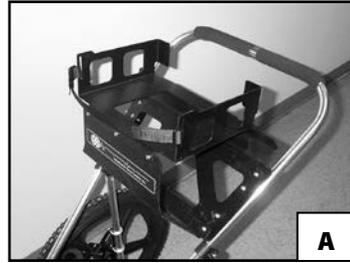
The antenna tub should just touch the ground surface. It is intended to be loose because it needs to be able to float over small obstacles. If you are using a small, higher frequency antenna, be sure that the antenna is centered in the tub.

- 8** Connect the female end of the control cable to port that is labeled CONTROL, connect the lead from the survey wheel (4 pin) to the SURVEY port. These leads should only be hand tightened.



Attach the SIR-2000

- A.** Find the control unit bracket with nylon strap on the handlebars of the cart. There is no reason to remove this bracket.

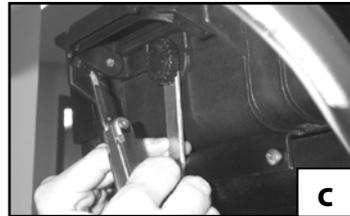


- B.** Lay the SIR-2000 in the bracket and tighten the nylon strap across the back of the box so it is snug.



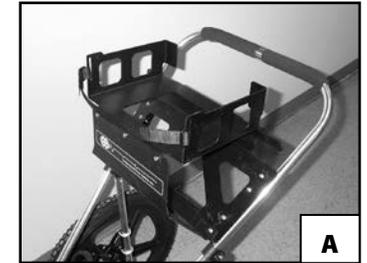
Helpful Hint: Placing a piece of rubber or cork between the bottom of the screen and the rest of the SIR-2000 will prevent the screen from swinging shut during survey.

- C.** Find the SIR-2000 securing bracket (flat piece of metal with a hole on one end and an open slot on the other). Loosen the pressure release knob on the SIR-2000, slide the open end between the knob and the box, and tighten down pressure release knob. Unscrew the center screw on the cart and screw through the open hole on the securing bracket.



Attach the SIR-2

- A.** Find the control unit bracket with nylon strap on the handlebars of the cart. There is no reason to remove this bracket.



- B.** Lay the SIR-2 in the bracket and tighten the nylon strap across the top of the connector panel so it is snug.



Attach Battery and Make Connections

- 9** Insert the battery pack into the mount. Be careful not to crimp the power cable coming out of the battery case. It may be necessary to unsnap the nylon straps on the rear of the battery case.



- 10** Attach the power and control cable to the system.

Note: Your survey wheel is only as accurate as your calibration, so be sure to calibrate your wheel often. Survey wheel calibration instructions can be found in your SIR-Systems manual.