

# SkiTrek

## Product Manual



Fillauer®

## Intended Use

The SkiTrek was designed for several types of activities that use ski poles or walking / hiking poles. The design accommodates poles for both "Alpine" and "Nordic" skiing, as well as poles for hiking-trekking activities. This terminal device (TD) will easily connect via any USA standard prosthetic wrist (1/2-20 thread).

The device is intended for single user/patient use only.

## Performance Characteristics

SkiTrek	
Product Number	SKITREK
Length	3.6 in. (9.1 cm)
Width	2.0 in. (5.1 cm)
Height	5.5 in. (14 cm)
Weight	7.5 oz. (213 g)
Color	Black
Thread	½-20
Age	Youth through adult
Limb Description	Trans-radial & mid-length - long Trans-humeral

## Indications/Contraindications

Passive gripping TDs like the SkiTrek have limited scope and application and are oriented around performing well in very specific activities and applications as listed above. They typically provide holding control using mechanical capture mechanisms or synthetic polymers that exhibit good elasticity for clasp around handles and objects with cylindrical features. The devices may or may not provide a level of gripping force that is equivalent to the human hand, and they are designed to release during an application of excess force or by specific physical manipulation. These devices

provide for good control with a higher margin of safety and risk than other types of TDs that have true locking function.

Finally, all prosthetic terminal devices, have inherent dangers of entanglement or engagement where release can be compromised because of their physical exterior design, unique unforgiving materials, and inanimate lack of "feel". Wearing an upper extremity prosthesis does involve risk! **Training and therapy are always recommended when using a prosthesis, especially when using new or unique technology or changing prosthetic system operative controls.**

## Storage and Handling

It is recommended that the SkiTrek is stored in a cool, clean, dry environment away from harsh chemicals (chlorine, acids, acetone, etc.).

## Warnings and Precautions



**CAUTION:** Abnormal or improper environmental conditions will lead to malfunctioning and damage of the prosthesis and is not covered under the warranty of the device. This prosthetic component must not be subjected to dust/debris, liquids other than fresh water, abrasives, vibration, or activities which would damage the biological limb. Do not allow debris or liquids to remain in the prosthesis and its components during use. Rinse the TD with fresh water and dry after exposure.



**CAUTION:** Passive Gripping TDs are waterproof to 1 meter; however, if submerged, these should be rinsed with fresh water and **dried** immediately to remove salt, chlorine, or debris.

## Qualified Provider

Attachment, adjustment, alignment, and delivery of this device must be performed by or under the direct supervision of a qualified prosthetist. Unless stated in this manual, any such activities should not be attempted by the user and will potentially void the device warranty.

## Specifications and Preparations Before Use (Risk Management for Installation and Calibration)

### Preparation

Consider the following factors as you determine the most appropriate technology and prosthesis design for your client:

- Does the user understand the function and safety features of the device?
- What other terminal devices will be used with this prosthesis?
- In what types of environments will the device(s) be used?
- In what positions will the person use the device?
- How will the user switch terminal devices? Will quick-disconnect be helpful?
- For what other activities might this device be helpful?
- Will the person benefit from additional training in the use of the device?

### Installation

Passive Gripping TDs may be installed in any Fillauer wrist unit with a ½-20 thread. Follow the instructions provided with the wrist unit for best results.

### Cabling

The SkiTrek can be used with a prosthetic cable system or without. Using a body powered prosthetic cable will allow you to simply reach forward to extend the pole. Without a cable, the pole must be “pendulum” swung out in front and then will retract automatically when disengaged from the ground or snow surface. The cable attachment accepts both 9/32 and 3/16 inch diameter cable ball systems.

### Pole Modification

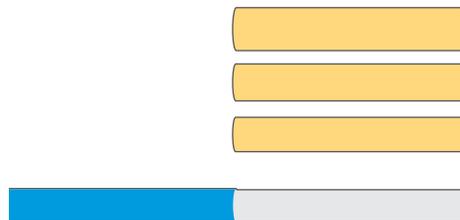
All poles will require the removal of their standard grip. Some poles will require a length adjustment to ensure that both arms are positioned equally distant from the ground or snow surface. Most poles will require re-sizing their diameter at the grip area so that a uniform mating- interface is created between the pole and the SkiTrek prosthetic terminal device. Telescoping brass tubing has been included with the SkiTrek to provide for re-sizing options. In certain instances, the surface “outside diameter” of the pole at the grip area will need to be reduced slightly to fit this brass tube system. Alternatively in certain cases simple electrical black plastic tape or equivalent can be used to increase the outside diameter of

the pole to help mate with the female pole receiver in the bottom of the SkiTrek. Suitable glue may also be used to permanently secure a modified pole into the largest diameter brass tube which is precisely sized to slide into the female cylindrical receiver on the bottom of the SkiTrek.

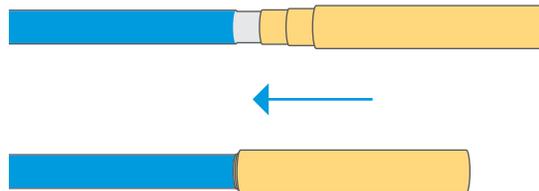
A strip of adhesive-backed “hook” Velcro (included with device) will be added onto the pole below the SkiTrek to help capture the “loop” Velcro sheath which helps secure the pole into the SkiTrek.

**Please note that the SkiTrek does not provide a ski boot type “release” of the pole. The pole will typically only release when the end of the pole gets “snagged” and the pole will pull out of the SkiTrek.**

This is also the manner in which a downhill (alpine) skier rides on a chair lift by removing the pole from the SkiTrek and carrying the pole in the manner a skier normally carries the poles during such a lift ride, held in one hand or positioned across the seat of the lift chair.



Pole grips are typically glued or bonded securely to the pole shaft. They can be removed by using a sharp razor knife but this can be a difficult process. The pole shaft must be completely free of grip material and have a smooth surface. A belt sander can be used to more quickly grind away the grip. Be careful not to grind into the pole surface and gouge the shaft if at all possible. Approximately 4 inches of pole will be used when the job is complete. Four inches is the depth of the inside of the pole receiver in the SkiTrek. The brass tubing that we provide is 5 inches long providing some excess which may need to be trimmed off for the final assembly.



Once the grip is completely removed, try to determine which of the brass tubes will fit over the pole. **The goal is to have the largest diameter brass tube be the outside surface.** Pole diameters vary in size to some extent so:

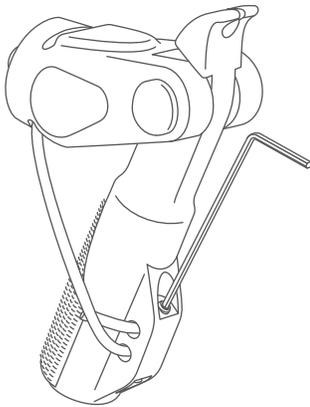
1. You may need to reduce the outside diameter (OD) slightly or build it up to fit the system. If you are reducing the OD be careful to reduce it uniformly and do not compromise the wall thickness too much.
2. ALSO, it is best to cut the pole length down before you begin changing the diameter so that when you alter the diameter it is only in the four-inch area needed to fit into the SkiTrek. This will save time and labor.

3. Once the pole is re-sized, epoxy or similar glue can be used to fuse the brass cylinder(s) to the pole permanently.
4. The “hook” Velcro can then be wrapped once around the pole just below the brass tubing. The Velcro “loop” sheath will then connect to and cover this strip securing the pole into the SkiTrek.

**Extra sets of telescoping brass tubes are available from Fillauer TRS. The SkiTrek comes with tubing for one pole modification.**

### Adjustment

The SkiTrek is provided with the retraction bungee cord already secured at one end. The bungee cord is used to keep the pole in a retracted position, clear of the snow or ground. The bungee cord may stretch or fatigue over time but is easily replaced. Most local hardware stores carry bungee cord that will fit the SkiTrek or bungee can be directly ordered from Fillauer TRS.



To adjust the tension in the system, pull and stretch the bungee cord to increase resistance. Experiment with different tensions before you finish completely and trim off the excess bungee material. We suggest leaving some excess on each end to allow you to readjust the bungee cord system to the resistance you desire. A simple Allen wrench (included) is used to tighten and secure the bungee into the body of the SkiTrek.

**PLEASE do not over-tension the set screws** and strip out the threads inside the SkiTrek. Firmly tightening the set screws will suffice.

## Compatibility

Fillauer TRS Passive Gripping TDs have been evaluated with and are recommended for use with Fillauer wrists that have a ½-20 internal thread. They may be used with any equivalent ½-20 threaded wrist units; however, damage caused by other manufacturers wrist units is not covered under warranty of this device.

## Care and Maintenance

These devices require minimal maintenance and care other than keeping them clean and inspecting them before using. Polymer rubbers can deteriorate over time so inspection for cracking or “checking” in the material is recommended. Cleaning regularly is recommended. Treat these devices like your hand from a sanitation perspective. If damage is apparent consult with your prosthetic professional for potential replacement of parts or the entire device, as might be needed. These products are highly reliable when treated and cared for properly.

## Disposal / Waste Handling

The product must be disposed of in accordance with applicable local laws and regulations. If the product has been exposed to bacteria or other infectious agents, it must be disposed of in accordance with applicable laws and regulations for the handling of contaminated material.

All metal components may be removed and recycled at the appropriate recycling facility.

## Warranty

This product has a 12-month warranty against manufacturer defects

## User Instructions

The providing health care professional must review the following information directly with the user.

### Preparation for User

Consider the following factors as you prepare for this device:

- Are you able to don and to doff the device independently?
- Are you able to switch terminal devices independently?
- Are you able to access services from a skilled occupational therapist for additional training if needed?

### Warnings and Precautions for the User



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## Serious Incidents

In the unlikely event a serious incident occurs in relation to the use of the device, users should seek immediate medical help and contact their prosthetist at the earliest possible convenience. Clinicians should contact their local Fillauer representative immediately in the event of any device failure.

## Customer Support

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