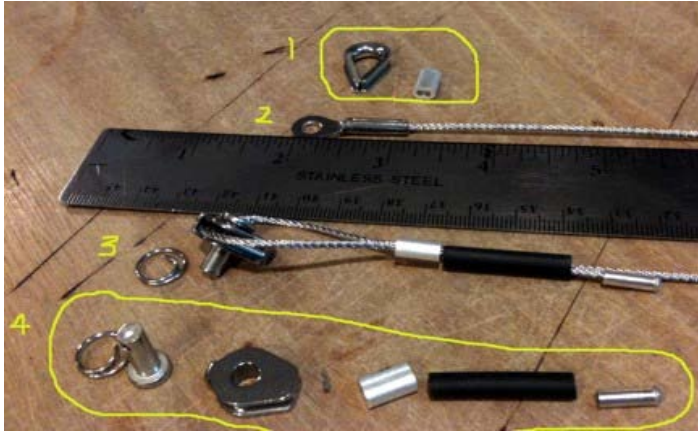


## Kayak Rudder Cable Connection Options by Tom Holtey - images by author unless noted



There are several ways to connect control cables to your rudder system.

Typically rudder cables have eyelets swaged firmly in place on one end of the cable, the other plain. Eyelet application is not something you can do at home as it takes a special tool. (See #2 in photo by Tim Walsh)

One end must be plain in order to slip into the rudder tube. The end of the cable with the eyelet can be connected to the tiller wing on the rudder body (at stern) or to the rail of the foot brace control in the cockpit.

Some cables have eyelets on both ends. This is particularly true of Wilderness Systems kayaks circa 2000. You can fasten the eyelet ends to the wings of the rudder and the free ends of the cables to the foot controls as shown in the Confluence Rudder Video Part 1 (links at end of article). Alternatively you can fasten the eyelet ends to the foot controls and use a **Thimble and Shackle Set** on the wings of the rudder (more on that below).

A **machine screw and nut**, or **clevis pin and ring** are common ways to secure this end of the cable to the rudder assembly. A screw is often used to secure the eyelet to the foot brace rail. These are all removable options on the eyelet end of the cable. (left: **Clevis Pins and Rings, 2 pack**)



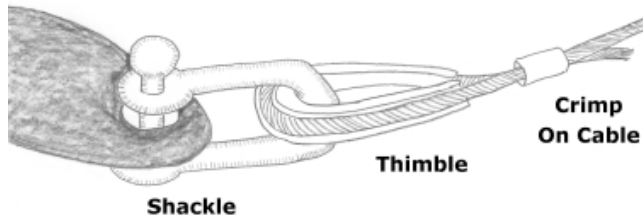
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A swage, crimp-on sleeve, or ferule, as they are called, is a soft metal bead that is meant to be squashed flat onto the cable to create a permanent loop in the cable.

Swaging the cables, or crimping as it is sometimes called, can be done well with a Swaging and Cutting tool, or you can squeeze the swage flat with standard vice grips.



### Thimble & Shackle Detail



Cutting of cable is best done with heavy wire cutters. Use standard tools if you are doing this job only one time. Get a specialized Cutting Crimping Tool if you expect to perform this task frequently.

A **Thimble** with Swage (see figure #1) can be used to secure the plain end of the cable to the rudder system. The thimble protects the cable from wear and tear. A thimble is commonly used

with a shackle, but can also be used on its own. This is a permanent install, the swage can not be un-swaged. (Drawing by Tom Holtey)

Foot controls are often adjusted with straps. Rudder control adjustment straps are common on older Wilderness Systems, Necky Kayaks and modern Old Town and Ocean Kayaks. **Necky Footbrace Straps** can be purchased as replacement parts and are generic for the most part. The rudder cable must be secured permanently to these straps with a **Thimble**. See the diagram below (provided by Wilderness Systems). The ring on the Wilderness Systems straps serves the same function as a thimble. Straps are typically **3/4 Inch Web Strap Products**.

The **Smart Track Third Hand Swage** can be used to connect rudder cables in much the same way. This kit has all the components to connect the cables to the tiller wings, or tiller arms, or to the rails of some foot brace controls. See figure #3 for the assembly and figure #4 for the component parts. This is a permanent install onto the cable. The swage can not be un-swaged.

A short length of **rudder cable tubing**, cable inserted and bent into a horseshoe shape can be used as a sort of thimble, and swaged in place. Such a piece will prevent wear and tear of the cable and the part of the rudder system it is fastened to. Poly plastic tube is not immune however from wear. It will eventually wear through and fail, probably before the rudder cable breaks.

This system can be applied to the holes in tiller wings or to the holes or screws on rails of the foot brace controls. This is a permanent install, the swag can not be un-swaged.

Connecting cables to Yakima-Werner foot controls (now from Mohawk) can be seen as very simple, or somewhat complicated. The most direct approach is demonstrated in the Hurricane Rudder Video. An elegant custom modification can be performed with the **Werner-Yakima Cable Thimble Kit**.

The **Smart Track Cool Rudder Wedgies** are a unique and innovative way to connect rudder cables to the tiller wings, or tiller arms of the rudder body.

They come with a **Smart Track Performance Blade Housing**, are also sold separately, and can be used to connect the cables that come with the **Toe Pilot Foot Controls** to any rudder assembly.



The primary advantage is that they are NOT permanent and can be adjusted, disassembled and reassembled at any time - no heavy, or special tools needed. Very handy in making sure the cables are the same length.

A set of Cool Rudder Wedgies in combination with any replacement rudder cables would be an ideal repair kit for kayak expeditions.

### Shopping for Rudders at The TopKayaker Shop:

- **Kayak Rudders & Parts - TopKayaker Shop** - For all your kayak hardware needs: strap eyes, well-nuts, brass snaps, buckles and more.

### Rudder Related Articles and Links:

- [When To Get A Rudder And How To Use It](#)
- [The Basics of Strap Eyes, Rivets & Well Nuts](#)
- [How To Install A Rudder On A Sit-on-top Kayak](#) (molded bracket)
- [Installing a Rudder on a Sit-inside Kayak and Using a Gudgeon](#)(add a bracket)
- [The SealLine Smart Track Rudder System](#)
- [Hurricane Rudder Video Part 4](#) (how to connect control cables to Yakima-Werner foot controls)
- [Ocean Kayak Video part 1](#)
- [Ocean Kayak Video part 2](#)
- [Confluence Rudder Install Video part 1](#) (rudder mount, lift line, foot braces & control cables)
- [Confluence Rudder Install Video part 2](#) (rudder tubes)
- [Smart Track Video](#) (fit guide)
- [Parts tools and supply: Kayak Parts, Rudders + Skegs](#)