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Yes, Window Line Can Be Spliced — If You Must

Q Larry, VE3GT, asks: I have a situation in which I need to splice two lengths of window line. I wonder if the traditional Western Union wire splice would be a good choice for this application. There is also a commercial splice arrangement available that uses ring terminals and screw connections to bring together two ends of the window line — would this be a better solution?

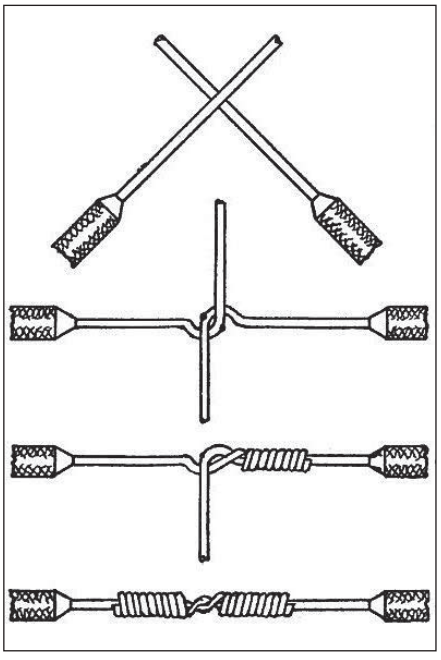

Figure 1 — The classic Western Union splice. This goes back to the wireline telegraph days. A feature is that additional tension results in a tighter connection — at least in the days before solder was used.

A Before discussing methods, let me say it is always best to use continuous lengths of transmission line, if possible, for both electrical as well as mechanical reasons. A Western Union (WU) wire splice (see Figure 1) is a good, strong way to join two wires end to end. Having a short section of line with an effectively thicker length of wire will reduce the characteristic impedance (Z_0) a bit, but it shouldn't be noticeable on frequencies below around 144 MHz, and especially won't matter at all in the typically unmatched applications most hams use window line for.

I do have a concern, however, if the splice is in an unsupported span. A soldered connection in that environment will tend to concentrate the stress at the ends of the solder joint with a potential for fatigue failures. In order to reduce the stress, a *long splice* (see Figures 2 and 3) can make use of the web between the wires to provide additional support to the connections. The overlapped region can be secured with good-quality tape or other clamping arrangements.

You may have trouble forming WU splices with window line made from copper-plated steel wire. In that case, I suggest using electrical butt-connection crimp splices appropriate for the wire size. However, instead of putting them at the same position along the line, space them 6 – 8 inches apart and use the long splice arrangement to provide additional strength, as shown in Figures 2 and 3.

Q Paul, K1CGZ, asks: I have lived the majority of my life in Maine, within the first call district. Now that I have retired, I spend several of the winter months each year in Florida. Back in the '60s when I got my first ticket, if I operated portable I had to notify the FCC of my operating location. Back then, if a ham had two stations, he would obtain a secondary station license. This no longer seems to be the practice.

At home, I operate as K1CGZ, so in Florida am I K1CGZ/4? Should I seek a second station license, or simply remain K1CGZ? How does this all work for awards such as DXCC and WAS? How about QSL cards? Should I get some printed with my Florida address?

A Thanks to ARRL Regulatory Manager Dan Henderson, N1ND, for the following information.

The FCC no longer issues secondary station licenses, and hasn't for decades. You also are no longer required to notify the FCC if you are operating portable. You can utilize a portable designator, such as K1CGZ/4, if you are operating from a station at your second home in Florida, but you are not required to do so. You can make use of modifiers to help people know where you are, if you wish. Some contests (particularly VHF contests) may require using a call area designator to indicate where you are, if not indicated by your actual assigned call sign, or in other situations in which your call sign

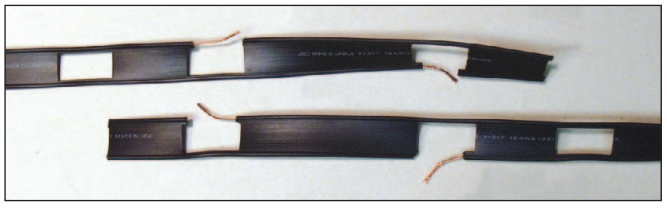

Figure 2 — Two ends of 450 Ω window line ready for a balanced-line "long splice" using a Western Union splice or butt connectors, depending on the flexibility of the conductors.

Figure 3 — A balanced line "long splice" with butt connectors, ready for crimping. By keeping much of the between-conductor web intact, it can be used to remove strain from the connections. For soft copper wire, a Western Union splice can be used, while copper-plated steel requires other measures, such as the crimp connectors shown.