Performing an Online Edit

The procedure for **online editing** is very similar in the PLC-5, SLC-500, and ControlLogix. There are five basic steps in performing an online edit:

1. **Start Rung Edits** (Place the rung into edit mode)
2. **Make your changes to the rung**
3. **Accept Edits** (Send the edits to the processor)
4. **Test Edits** (Ensure your edits work how you want them to work)
5. **Assemble Edits** (Removes the old rung, and remove the editing markers)

**Note:** The ControlLogix processor allows you to accept edits to a single rung or all rungs in the program... Modern versions of RSLogix 5000 also have a “Finalize” option which allows you to Accept, Test, and Assemble all in one step!

These steps are simple, but there are a few rules:

- You cannot change the data type of existing tags. If you create a new tag with the wrong data type, you must delete the tag, and declare it again.
- You cannot make an online edit if the key switch is in Run Mode.
- You do not need to perform an online edit to directly change a value in the data table such as the preset of a timer or counter.
- If the processor is in program mode, you do not need to test and assemble after accepting.
- If the processor is in program mode, and a rung is deleted, there is no warning.

**Note:** These may vary depending on which processor you are using, and the processor version.

Let’s walk through the 5 step procedure:

Look at the rung below. Our objective is to transfer control of the output to LocalSwitch.6. If you click on bit LocalSwitch.7 and attempt to make a change, nothing happens.

**Step 1) Start Rung Edits**

The first step is to put the rung into edit mode. There are several ways this can be done:

- Double click the rung number
- Right click the rung number and start rung edits
- From ‘Logic’ on the menu bar, click On line Edits, then start pending rung edits
- Click the start rung edit icon in the on line editing tool bar just above the ladder view
Notice that RSLogix made a copy of the rung for us to work with. By looking at the power rails, you can see the bottom rung is being executed by the processor, and the top rung is the one you need to make edits to. You will also notice the e (edit) or i (insert) and r (replace) in the margin are lower case.

This means the edits are not in the processor yet. If you are adding new logic instead of modifying existing logic, this is the step where you add a new rung.

Step 2) Make Changes
Now that the rung is in edit mode, changes can be made.

If you added a new rung in step #1, this is where you need to add your logic to the new rung. Be careful not to add any logic that will fault the processor or cause damage to personnel or equipment.

Notice the i (insert) and r (replace) zones are in lower case. This means the changes are in RAM only, and have not been sent to the processor.

In this example, bit 7 is being changed to bit 6 on the input.

Step 3) Accept Edits
Now that your rung is set up as you need it, it’s time to send the edits to the processor. You can accept pending rung edits (This would just accept the rung you have selected), or you can accept pending program edits (This would accept all the edits in the current program).

There are several ways to perform the next three steps.

- Right click the rung number, and accept edits
• Click Logic | On line Edits | Accept (rung or program edits) from the menu bar
• Click one of the Accept Edits icons in the on line editing tool bar as shown below

Notice in the margin rung 1 is marked for insertion, and rung 2 is marked for removal. The I’s and R’s are capitol because the edits are now in the processor. Look at the power rails. You can see the old rung is still being executed by the processor.

You will also see that pending edits exist by looking at the on line tool bar.

**Step 4) Test Edits**
When you test edits, the new or modified rungs will become active. The old rungs will be left in the processor until we are sure our new rungs are working properly. Be aware that if you change an output address, there might no longer be logic writing to that address. This means that you could abandon a bit in the ON state.

You can test your edits by doing one of the following actions:

1) Right click the rung number
2) Choose Logic | On line Edits | Test accepted program edits from the menu bar
3) Click the Test icon in the on line edit tool bar above your logic window.
If you are modifying an input type address you should also be careful. If the rung was previously true, you may want to make sure your new logic is also going to be true at the moment you accept, or the output may shut off.

Let’s test the edits, and you will notice the new rung(s) are active. If the edits do not work the way you anticipated, you can un-test to revert to the old rung while you make other changes to the new rung.

Notice the power rails:

**Step 5) Assemble Edits**

If your logic is working properly, go ahead and assemble the edits. Assembling removes the old rung, and the edit zone markers. After Assembling, you may want to save your work to the hard drive.

You can assemble by using one of the following methods:

1) Right click the rung number, and choose accept edits (if available in your version)
2) Click Logic | On line Edits | Assemble accepted program edits from the menu bar.
3) Click the Assemble Edits icon in the on line edits tool bar.

Notice the logic now appears to be normal: