![YASKAWA PARTNER SUPPORT - Shared Integration Experience]

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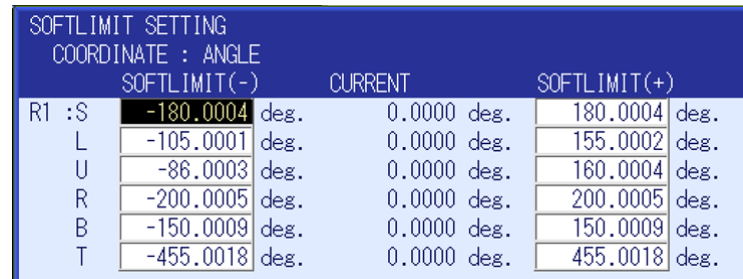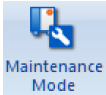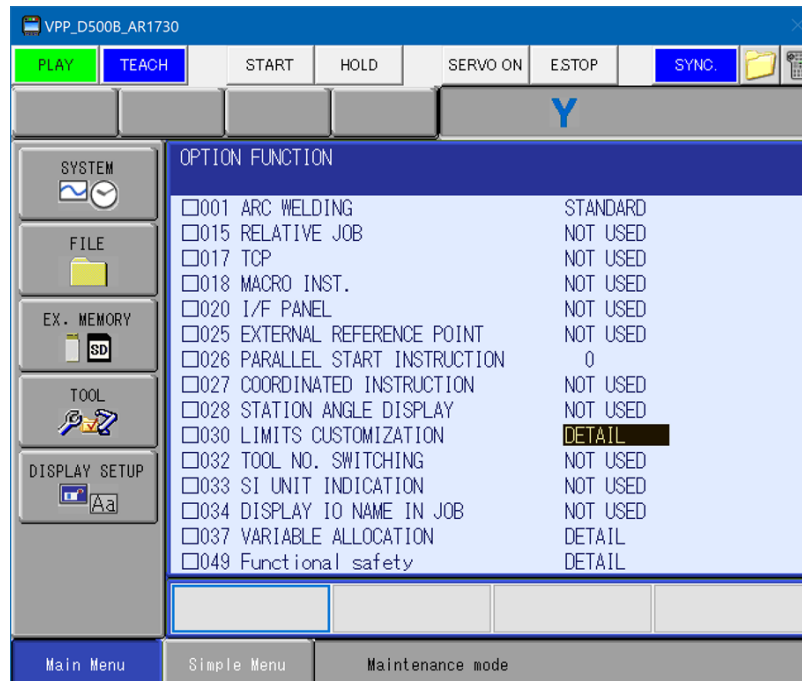
Changing Axis Limits in MotoSim for YRC1000 Welding Robots

Introduction

Certain models of Yaskawa robots are dual purpose: handling and welding. Since welding robots have a torch cable snaking through the axis', several welding robot models need their axis' range of motion reduced so as not to damage that cable. Examples would be MH12/MA1440 or GP12/AR1440.

When selecting an AR series welding robot in MotoSim (unlike the DX200 MA series) the motion range is NOT pre-configured. Instead, it matches the GP series range of motion. For example, an AR1730 motion range will be the same as a GP25. This can be an issue because it allows the MotoSim robot to reach locations that an actual robot will not.

For the AR1730, notice the default T-axis motion range is ±455°…it should be ±210°

Figure 1: Incorrect AR1730 motion range is using a GP25's range by default.

This affects the following models:

- AR1440
- AR1730
- AR2010
- AR3120

Process[1]

The process to change the axis limits is straight-forward.

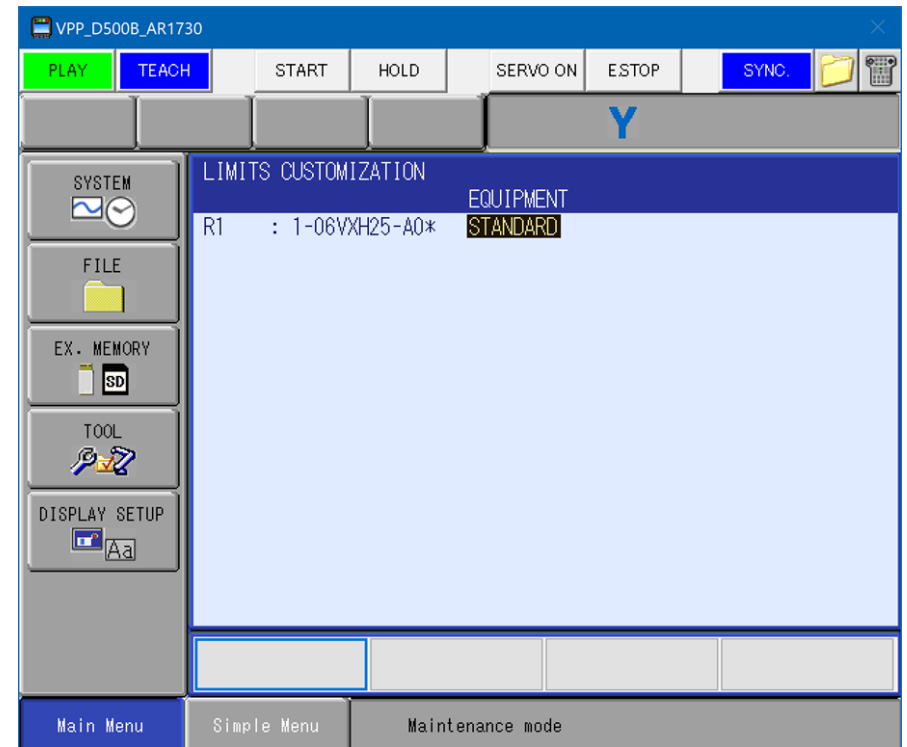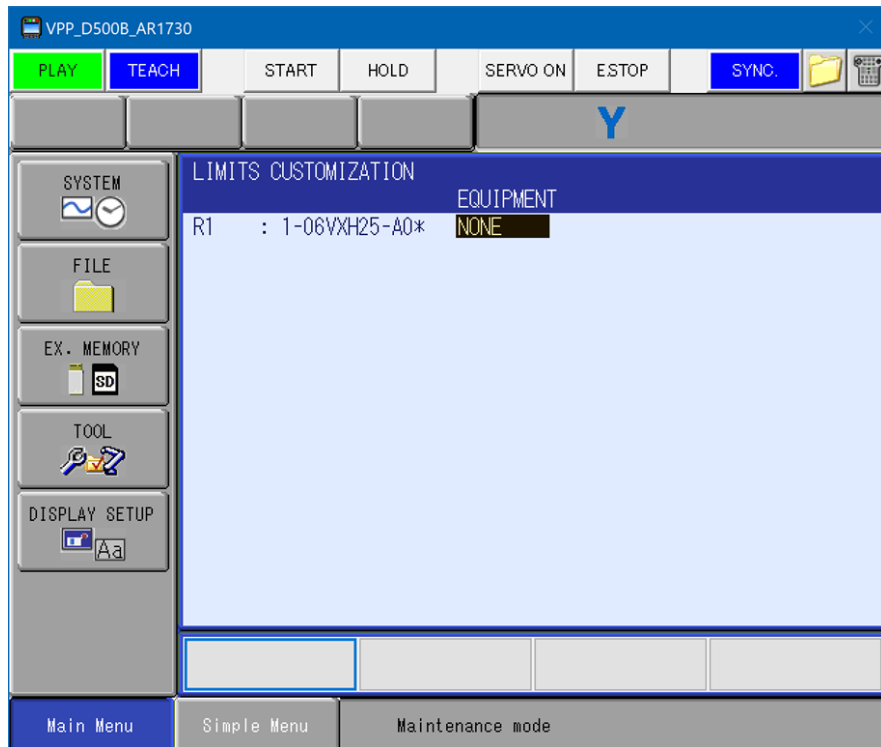1. In MotoSim go into maintenance mode
   a. Select the Controller Tab
   b. Select [Maintenance Mode] to reboot the controller.
2. In the virtual Pendant screen select System/Setup/Option Function
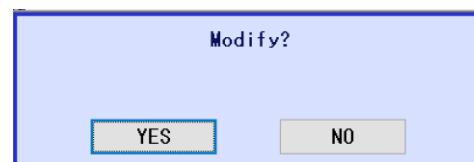3. Scroll down and Select DETAIL for "Limits Customization".

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[1] This works for all except AR3120. See below for AR3120 process.
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4. Select NONE

5. …and change it to STANDARD.

6. Select YES to modify and reboot the controller.

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7. The Soft-limit Settings (in the Robot menu) now have the correct motion ranges.
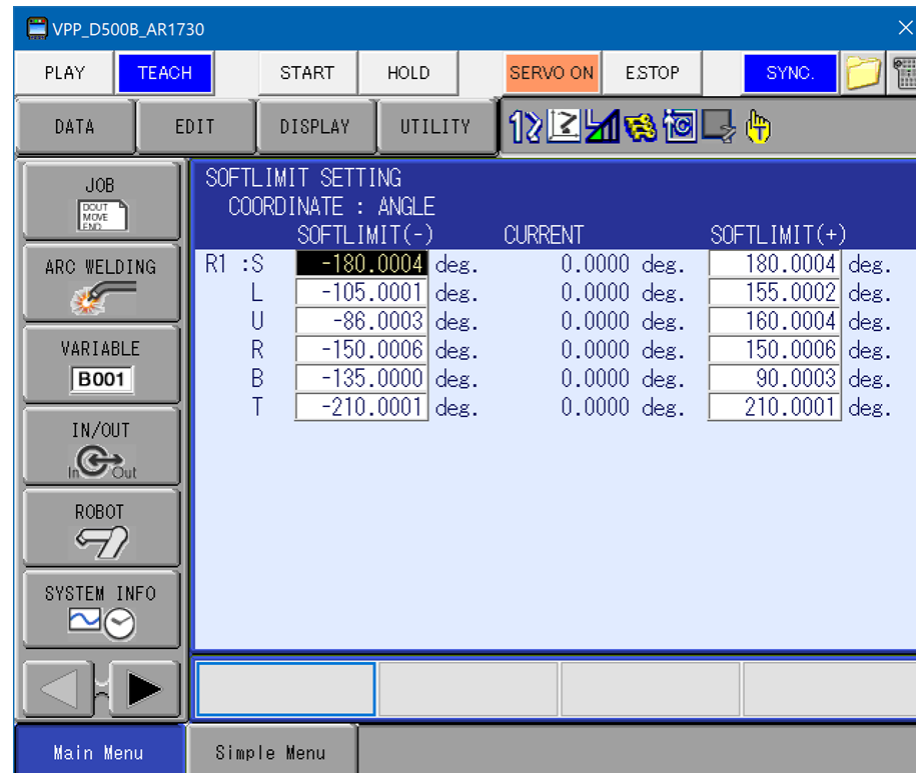
AR3120 Process

The above process does not work for the AR3120. There are currently no alternative motion ranges to select in maintenance mode.

It will need to be changed directly in the Robot Menu Soft Limits.

Use the numbers below as a reference: