

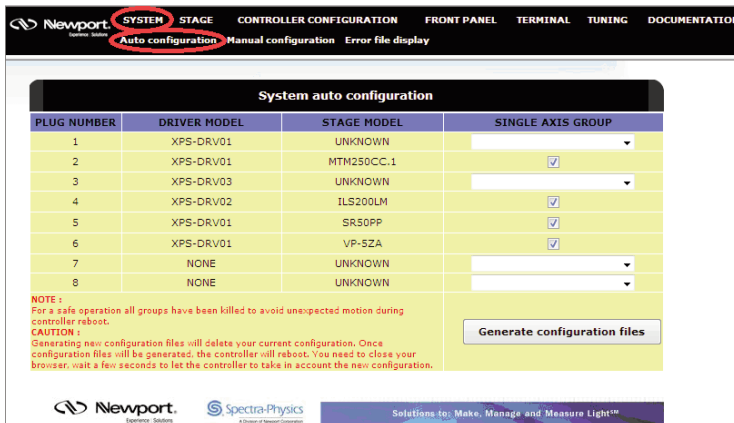
# Controlling a Newport Stage With a Missing or Damaged ESP Chip

## Introduction

If a Newport SmartStage (one with the ESP chip installed) has a damaged ESP chip, then the XPS controller will no longer recognize the stage. This makes controlling the stage impossible. This document describes the process of getting the XPS to recognize this stage even without the ESP chip. As a result, normal operation of the stage will become possible.

## Diagnosing the ESP Chip

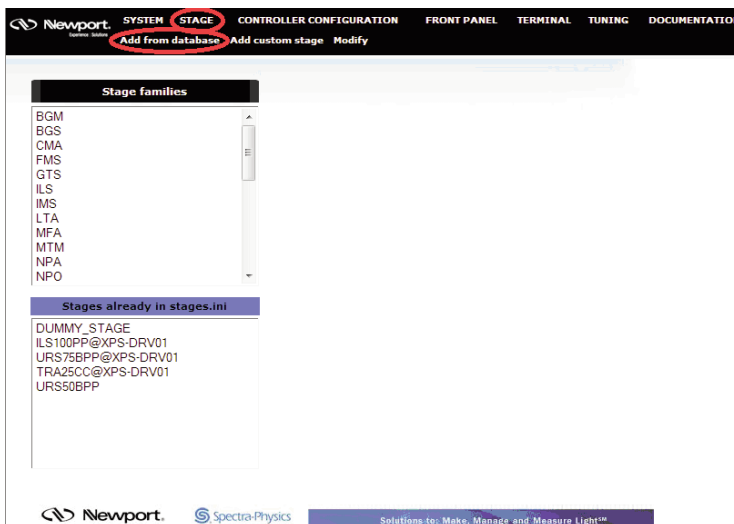
To determine the status of the ESP chip on a Newport stage, simply log-on to the XPS normally. Then select "System" and "Auto Configuration", as shown below.



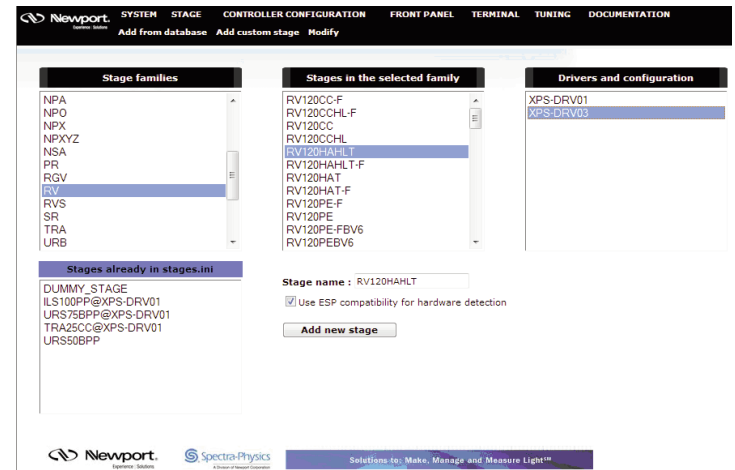
Notice in this example that the stages on plug numbers 1 & 3 are "unknown". This means that they are either missing the ESP chip or the chip has been damaged. Note that plugs 7 & 8 do not have a driver card installed, so we can ignore those axes.

## Creating a New Stage Profile

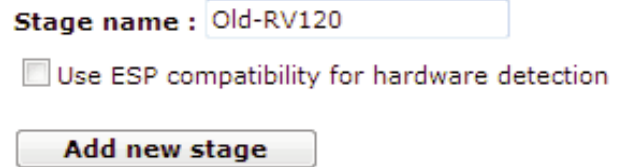
For this example we are going to assume we have an old RV120HAHLT rotation stage with a damaged ESP chip installed on Plug 3. We want Plug 3 to reference the stage parameters for a standard RV120HAHLT. This data is found in the Stage Database. So what we need to do, essentially, is create a link. Select "Stage" and "Add from database", as shown below.



Find the desired Stage Family. In this example, we are selecting the RV stage family. Select it by double-clicking on it. A new window will appear just to the right, called "Stages in the selected family." Find the desired stage and double-click on it. On the next window, find the correct driver board and double-click. In this example, the XPS-DRV03 is the correct driver board.



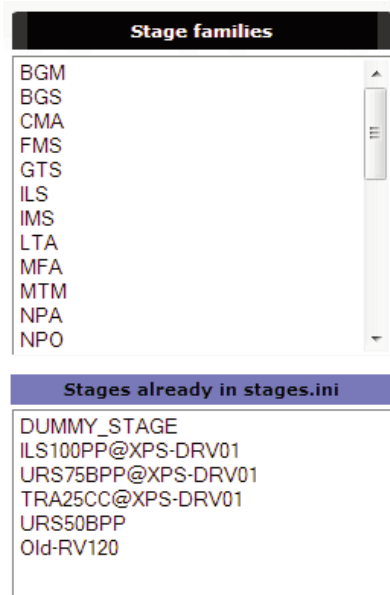
Finally, a new area will appear below these windows allowing you to change the stage name and a check-box where you can disable the XPS controller from looking for the ESP chip on the stage. Your screen will look like what is shown below.



Think of a new Stage name and type it into the box. This new Stage Name will link the stage with the correct stage parameters in the database. Don't use the existing Stage Name. In this example we are choosing "Old-RV120". Note that the Stage Name cannot have any spaces in it. Uncheck the box for ESP compatibility and then click on "Add New Stage."

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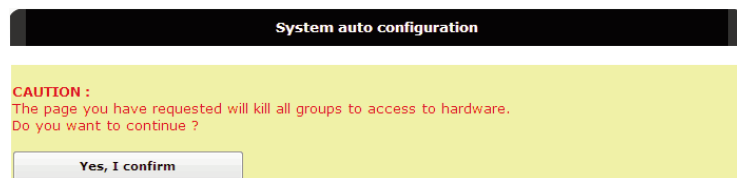
You will notice that the new stage now appears under “Stages already in stages.ini” on this screen.



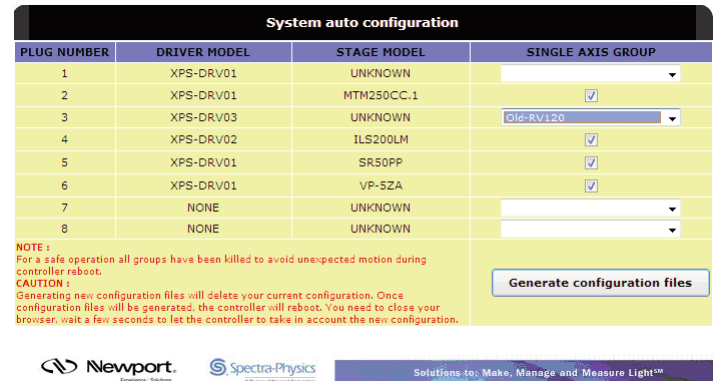
The stage “Old-RV120” will use the stage parameters for the RV120HAHLT, which the XPS will recognize.

### Final Step: Auto-Configuration

Now we must perform an Auto-Configuration. Select “System”, then “Auto Configuration.” You may get a message that cautions you that by continuing, all groups will no longer have access to the hardware. This is fine since we are going to do an Auto Configuration anyway. Select “Yes, I confirm.”



The Auto Configuration screen will now be shown, similar to that shown below.



In this example the “bad” stage is connected to Plug Number 3. Notice that the driver card is shown correctly as XPS-DRV03, but the Stage Model is still “Unknown.” So we are going to tell the XPS to use the Stage Name “Old-RV120”, which can be found by clicking on the arrow at the right. (Every stage that is currently in the stages.ini file will be available.)

Now click on “Generate Configuration Files” and the stage name will be added to the Stage Model column in Plug Number 3. The XPS will re-boot and you will be able to use the “bad” stage like a normal stage.



**Newport Corporation, Global Headquarters**  
1791 Deere Avenue, Irvine, CA 92606, USA

[www.newport.com](http://www.newport.com)

PHONE: 1-800-222-6440 1-949-863-3144 FAX: 1-949-253-1680 EMAIL: [sales@newport.com](mailto:sales@newport.com)

Complete listings for all global office locations are available online at [www.newport.com/contact](http://www.newport.com/contact)

	PHONE	EMAIL
Belgium	+32-(0)0800-11 257	<a href="mailto:belgium@newport.com">belgium@newport.com</a>
China	+86-10-6267-0065	<a href="mailto:china@newport.com">china@newport.com</a>
France	+33-(0)1-60-91-68-68	<a href="mailto:france@newport.com">france@newport.com</a>
Japan	+81-3-3794-5511	<a href="mailto:spectra-physics@splasers.co.jp">spectra-physics@splasers.co.jp</a>
Taiwan	+886 -(0)2-2508-4977	<a href="mailto:sales@newport.com.tw">sales@newport.com.tw</a>

	PHONE	EMAIL
Irvine, CA, USA	+1-800-222-6440	<a href="mailto:sales@newport.com">sales@newport.com</a>
Netherlands	+31-(0)30 6592111	<a href="mailto:netherlands@newport.com">netherlands@newport.com</a>
United Kingdom	+44-1235-432-710	<a href="mailto:uk@newport.com">uk@newport.com</a>
Germany / Austria / Switzerland	+49-(0)6151-708-0	<a href="mailto:germany@newport.com">germany@newport.com</a>

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