Overview:
This document will walk you through the process of configuring a Yaskawa Sigma7 Servopack and Servomotor for use with a Centroid Acorn based control.

The following items are needed:

- Computer with the Yaskawa SigmaWin+ Ver.7 software installed.
- A to Mini-B type USB cable (Yaskawa part number JZSP-CVS06-02-E) – connected between the laptop and the Yaskawa drive you wish to setup.

Servopack Configuration Process:

- Launch the Yaskawa SigmaWin+ software. Select the Home Icon > Start > Connect to SERVOPACK

You will see the following screen:
• Ensure "USB Connection" is selected as shown above
• Select "Search for SERVOPACKS" This search must be done every time you power up the software or connect to a different Servopack because the SigmaWin+ software remembers the last drive that was connected to it and displays that rather than what is currently connected.
• Select the drive that appears and click "Connect".
• SigmaWin+ will then open to the main screen as shown below:
• Click "Menu Icon" to open the menu.

The best way to configure the Servopack is by using the Setup Wizard as highlighted above.

The “Setup Wizard(W)” window is shown below:
• To run the setup wizard you will click on the buttons at the left of the window. Starting at the top and working down the list.
• Start by clicking the "Encoder Selection" button.

• Nothing is displayed in the window under "Encoder Selection" until you click on "Apply" at the lower right corner.
• The encoder type will then be shown under the Encoder Selection button.

• Click "Control Mode Selection".
• Select "Position Control (pulse train reference)" from the drop down menu:
• Click "Apply".
• Click "Reference Input Setting". Note: the "Control Mode Selection" setting is now highlighted in green, signifying that it has been completed.
• Select "SIGN + PULSE" and click "Next".
• You will then need to select pulse configuration logic type.
• Select "Negative logic" as shown below:

• Click "Next".
• You will then be asked to Select the electronic gear setting method. Select "Enter the electronic gear ratio directly" as shown below:
• Click "Next".
• You will then need to enter the gear ratio. Enter 2048 on top and 1 on bottom as shown in the image below:

• Verify the "Positioning Completed Width" is set to 7 and click "Apply".
• The "Reference Input Setting" will now be green.
• Click "Motor Encoder Settings".
• On the right side of the screen you will see the option “Set the dividing output according to the electronic gear ratio” as shown below. Click “Apply” to set the number of output pulses per motor rotation to 2048.
• Sometimes due to availability, you may receive a servomotor with an absolute encoder instead of an incremental encoder. The wizard will detect this and allows you to set the following option. If the servomotor does have an absolute encoder installed the “Absolute Encoder Setting” must be changed to “Uses absolute encoder as an incremental encoder.” as shown below:

![Absolute Encoder Setting](image)

Note: The "Absolute Encoder Setting" option is grayed out if you have an incremental encoder.

• Click "Next".
• Select "Standard Setting".

![Motor Encoder Settings](image)

• Click "Apply".

• The "Motor Encoder Settings" will now also be green.
• Click "Motor Stop Method".
• Pn001.0 should be set by default to the settings in the picture below. If not, make sure they are set accordingly.
• Set "Servo OFF" to "0 : Stops the motor by applying DB (dynamic brake).".
• Set "Overtravel" to "0 : Same setting as Pn001.0 (Stops the motor by applying DB or by coasting).".
• Set "G2 alarm" to "0 : Stops the motor by setting the speed reference to "0".".
• If the Servomotor you are setting up has a brake, you will need to check the "Use the Holding brake" option as shown below:

![Brake setting](image)

• Click "Apply".
• "IO Signal Settings" will be greyed out and unavailable. These options are now found in a different section of the software. This is one difference from older versions of the software.
• click "Save/Write".
• Select "Write with a backup file" then press "Write". This will save the current configuration and then write the current configuration to the Servopack:

![Write options](image)

• Click "Finish".
• Click "Yes" when prompted to complete the Setup Wizard.
• The ServoPack may have an A941 error. This indicates that a reset is required to apply the configuration changes.
• To reset the ServoPack you must click the "Software Reset" button in SigmaWin or remove power from the Servopack. Before clicking the “Software Reset” button push in the E-stop button on the control. This avoids putting the control into an error state when the drive and motor go offline.
• Back in the main Menu, Click "I/O Signal Allocation"

• First Click "Change Method", Then select "User Allocations" from the drop down menu. Click "Change/Software Reset"

• Under the Input Signal tab, change "P-OT" and "N-OT" to "Always inactive" Do this by double clicking the Pin Number and selecting "Always inactive" from the drop down menu.

• Under the Output Signal tab, change "/COIN" and "/V-CMP" to "Disabled" in the drop down menu. Change "/BK" to "CN1-25,26"
• Click "Write", then Click "Change/Software Reset" to save these settings.

• Your Yasakawa Servopack should now be configured for use with Acorn CNC controller. Connect your drive to the Acorn following the Yasakawa wiring schematic.
• In the Acorn Wizard or CNC12, Set the Steps per Rev to 8192.