MDX-40A Setup
**What’s Included**

- All items included with MDX-40A

<table>
<thead>
<tr>
<th>Power cord</th>
<th>USB cable</th>
<th>Collet</th>
<th>Hexagonal wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexagonal screw drivers</td>
<td>Spanners</td>
<td>ZO Sensor</td>
<td>Roland Software Package CD-ROM</td>
</tr>
<tr>
<td>SRP Player CD-ROM</td>
<td>User's Manual (this document)</td>
<td>SRP Player Installation and Setup Guide</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

- Please be familiar with the names of all the accessories listed here.
MDX-40A Power On

- **Turning MDX-40A on**
  - Close front cover.
  - Turn on main power on right side of machine.
    - The Power light will turn on.
  - Turn on Sub-Power to start machine.
    - Scanning and Modeling lights will flash
    - After initializing, the Modeling light will be on.

**NOTES:**
- Keep cover closed during operation.
- Opening cover during operation will cause an emergency stop condition.
MDX-40A Safety

- Press Emergency Stop button to immediately stop cutting and abort cutting job.

- To remove machine from E-Stop condition, twist button.

NOTES:

• Machine will need to be restarted after the emergency stop condition has been removed.
MDX-40A Driver Install

- **Driver Install for Windows XP**
  - Turn on machine
  - Turn on computer
  - Install USB cable
  - Place MDX-40A drivers CD into computer
    - Labeled RSP065, MDX-40A Roland Software Package
  - Follow windows based instructions for completing install.

- **Vpanel Install:**
  - Select VPanel for MDX-40A
  - Click on Install
  - Click Start button and look for the MDX-40A Vpanel to start software
Setup Basics – Installing Tool

- Follow the below steps for installing the collet, tooling, and using the two wrenches.
  - Install the collet loosely. Use the 17mm wrench to hold the spindle in place as you install the collet until it is finger tight.
Setup Basics – Installing Tool

• Insert tool into collet.

• Twist collet to temporarily hold the tool or manually support tool.

NOTES:
• Please note a tool does not come from the factory in the box. It must be ordered separately.
Setup Basics – Installing Tool

- To tighten the collet, use both spanners to tighten the collet.
- TIP: Use the 17mm wrench in the left hand and 10mm wrench in the right hand. Pull the wrenches away to **tighten** the collet. Tighten to about 3.2 N-m of force.

- TIP: To **loosen** the collet, again with the 17mm wrench in the left hand and 10mm in the right hand, pull the wrenches towards each other. Support tool to prevent the tool from dropping.
MDX-40A Adding Material

- Affix material to MDX-40A table using either AS-10 sheets or double sided carpet tape (heavy traffic type)

**NOTES:**
- Double sided carpet tape (Heavy traffic variety) can be purchased at local hardware store such as Home Depot and Ace Hardware.
- Best tape is fabric based tape not foam or fiberglass type tape as it is easily removed from the table.
MDX-40A Setting Origin Points

- Move tool to origin point selected in software.
  - Usually the center of the material

- Set origin point at this location.
MDX-40A Setting Origin Points

- Place Z0 sensor above material and connect sensor cable to the sensor and Z0 connector on the back left side of machine.
- Move tool so that it is right above the sensor about .250”.

- Click on “Set Z origin using sensor” then click on Detect to begin tool detection.
The MDX-40A is now ready to receive commands from software program.
ZCL-40A Rotary Axis

- The ZCL-40A allows you to cut objects and rotate them automatically.
  - 4.7” Diameter by 10.6” Length maximum material size.
What’s Included

- All items included with optional ZCL-40A.

<table>
<thead>
<tr>
<th>Detection bar</th>
<th>Detection pin</th>
<th>Center drill</th>
<th>Live center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cap screws</td>
<td>Rubber caps</td>
<td>Use’s manual (this document)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
- Please be familiar with the names of all the accessories listed here.
ZCL-40A Setup

- Remove 8 screws and remove table completely.

- Install ZCL-40A unit and attach using 4 screws that came with the ZCL-40A.
**ZCL-40A Setup**

- Make sure that the screw is not at an angle and that there isn’t dust or debris in the holes.

- Use included dust caps to keep area clean.
ZCL-40A Setup

- Make sure power to machine is turned off. Install cables to expansion port and secure cables as shown below.
ZCL-40A Setup

- When you turn the ZCL-40A, the rotary axis may not be level.

- Set A-Angle on ZCL-40A unit.
  - Move clamp so that it is level.
  - Set A Origin at this point.

NOTES:
- Install material into clamp and install tool.
- Use tool and material to check for correct angle.
- Just move tool in the Y axis backwards and forwards and adjust angle accordingly until flat.
ZCL-40A Setup

• Install Live center

• Install detection pin into 6mm collet.
ZCL-40A Setup

Setting Y Origin
• Install Y-origin sensor.

• Move in live center support and tighten lever.
ZCL-40A Setup

• Tighten knob to secure.

1. Turn until some resistance can be felt.
2. Tighten completely.

NOTES:
ZCL-40A Setup

• Click on Detect Jig on the MDX-40A Vpanel.

• The following screen will appear. Click on Start Sensing to begin detection process.
ZCL-40A Setup

- You will be reminded to make sure there is no dust or debris around the tool sensor. Please clean now if dusty.

- The machine will touch the sensor bar in various positions even turning the spindle by half a turn automatically to accurately setup the ZCL-40A.
- Once finished, click OK button and Close to close the Jig Setting screen.
ZCL-40A Setup

- Remove Y-Origin sensor and calibration pin.
ZCL-40A Material Setup

- Install material in clamp.

- Install center drill on tailstock and move center drill against surface of material.
ZCL-40A Material Setup

- Click on Drill Workpiece on the MDX-40A VPanel.

- Click on Rotate to start turning the rotary axis.
ZCL-40A Material Setup

- Turn tailstock spindle adjusting dial slowly until the center cuts in about 3mm (1/8”) from the tip.

- Click Stop to stop the rotation and Close to close the screen.
ZCL-40A Material Setup

- Remove center drill from material and remove center drill.

- Install Live center and move tail stock until the Live center is in the hole created by the center drill.
ZCL-40A Material Setup

- Turn tailstock spindle adjusting dial until the material is not moving freely. Tighten knob to ensure the Live center does not move during cutting.

- Do not turn the tailstock spindle excessively or the material may deform which will affect accuracy.
- Do not turn too little or the material may move during cutting.
- You want to turn until some resistance is felt.

- Tighten clamp firmly.
ZCL-40A Material Setup

- Install tooling for cutting.
- In the VPanel, select “Set Z Origin at center of rotation” and click Apply.
- Every time a tool is replaced, this procedure needs to be performed.
- If you change a tool, the machine won’t know that the tool length has changed unless this step is performed.
- You will be reminded to make sure there is no dust or debris around the tool sensor. Please clean now if dusty.
- Click Continue to begin detection.

NOTES:

- Every time a tool is replaced, this procedure needs to be performed.
- If you change a tool, the machine won’t know that the tool length has changed unless this step is performed.
ZCL-40A Material Setup

• Once finished, the following screen will appear. Click OK.

• The Z and Y Origin have now been set.
ZCL-40A Material Setup

- You CAM software, such as SRP Player, will indicate where your X Origin needs to be set. Move your tool in the X Axis (left and right) so it matches the X Origin indicated by the software.
- Once it is in the location desired, click on “Set X Origin here” and then Apply.
ZCL-40A Origin Setting

- The MDX-40A and ZCL-40A are now ready to receive commands from your computer.