When you're using EngraveStudio, the engraving machine's automatic Z-control feature cannot be used.

When you use cutting data created with EngraveStudio, actual cutting is performed with the automatic Z-control feature on the engraving machine set to "off" even if the setting for the feature is "on."

When you're using EngraveStudio's "Quick Engrave" feature, engraving may be performed using the nose unit or diamond scraper. The engraving machine's automatic Z-control feature cannot be used at this time, so use the method described below to install the cutter and make the settings on the engraving machine.

⚠**WARNING** Never inadvertently touch the computer or handy panel while performing this task.
Unintended operation of the machine may result in injury.

⚠**WARNING** Securely fasten the cutting tool and in place. After securing in place, make sure no wrenches or other articles have inadvertently been left behind.
Otherwise such articles may be thrown from the machine with force, posing a risk of injury.

⚠**CAUTION** Caution: cutting tool.
The cutting tool is sharp. To avoid injury, exercise caution.

## Quick Engrave: Cutter Installation Method (With Nose Unit)

1. Install the cutter holder, solid collet, and nose unit.
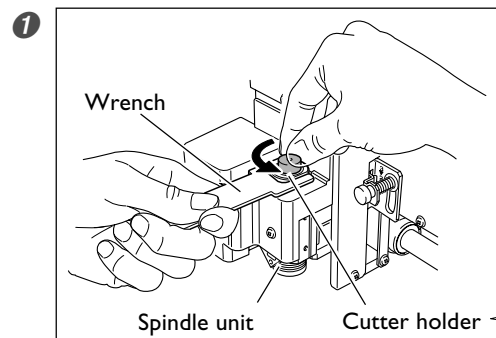
❶

Install the cutter holder.
While holding the spindle unit immobile with a wrench, tighten the cutter holder. The cutter holder is reverse-threaded (that is, you turn it counter-clockwise to tighten it). Be careful to turn it in the correct direction.

❷
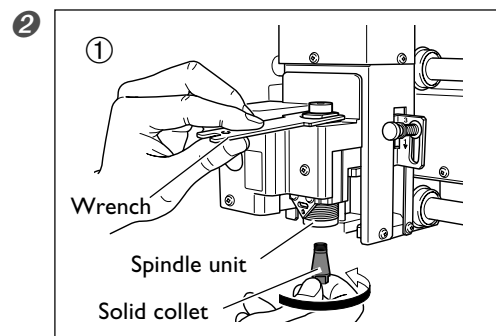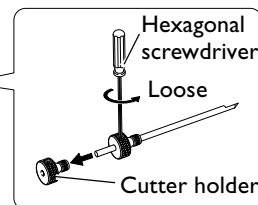
Install the solid collet.
① **Loosely tighten the solid collet.**
Insert the solid collet into the spindle unit from below, then, while holding the
spindle unit immobile with a wrench, tighten loosely.
Use an appropriate solid collet for the cutter's diameter.
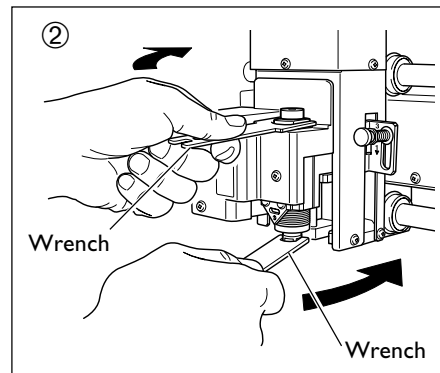
---

②

② **Fully tighten the solid collet.**
Using two wrenches, tighten the solid collet fully. The appropriate tightening torque is 3.2 N-m (32kgf-cm) .

❸
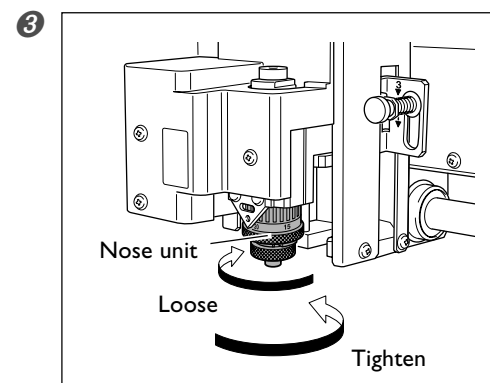
Install the nose unit.
Tighten until no further movement is possible, then loosen two turns.
☞ EGX-350 User's Manual P. 61, "Important Notes When Using the Nose Unit"

2. Set the lock lever.
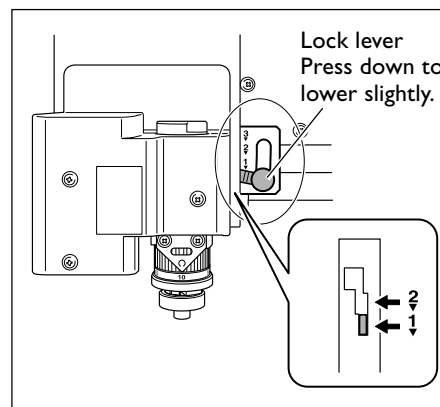
Set the lock lever at the 1 or 2 position.
For detailed information about the setting position for the lock lever, refer to the page indicated below.
☞ EGX-350 User's Manual P. 82, "The Position of the Lock Lever"

3. Make the settings for spindle speed and Z-axis control.

❶
```
I/O      OTHERS
ADJUSTMENT
```
Press MENU several times to display the screen shown at left.
Use ◄ and ► to select [OTHERS].
Press ENTER/PAUSE .

❷
```
REVOLUTION
<ON>       OFF
```
Use ◄ to select "ON."
Press ENTER/PAUSE to confirm.

❸
```
AUTO Z CONTROL
ON      <OFF>
```
Press MENU .
Use ► to select "OFF."
Press ENTER/PAUSE to confirm.

```
SET lock lever
to 3
```
The message shown in the figure at left appears, but you can ignore it.

---

❹
```
X 0      Y 23000
Z 0      5000RPM
```
Press MENU several times to return to the main screen.

4. Install the cutter and set the Z-axis origin point.

❶
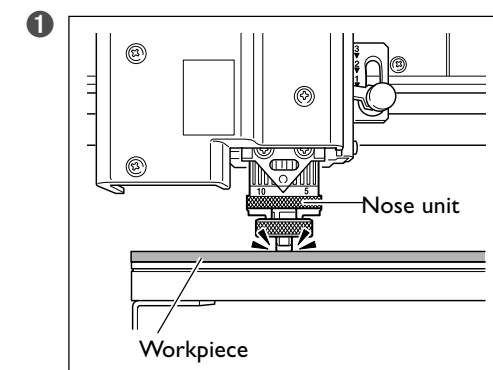
Press ◄ , ► , ▲ , or ▼ to move the spindle head to the area above the workpiece, then press -z to lower the nose unit until its tip touches the surface of the workpiece.
☞ EGX-350 User's Manual P. 44, "Manual Movement"

❷
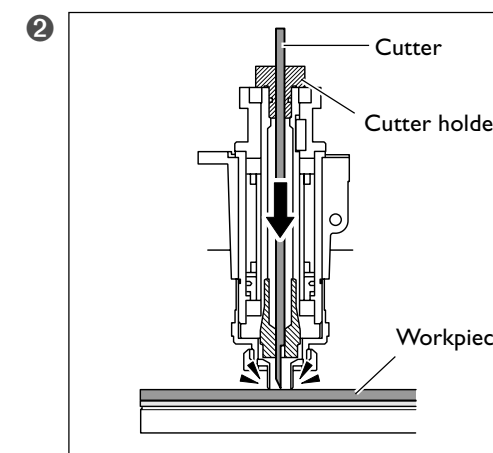
Insert the cutter into the cutter holder and bring the tip of the cutter into contact with the surface of the workpiece.
Placing a thin sheet of paper on the workpiece can prevent damage to the workpiece when the cutter touches it. However, take the thickness of the paper into account when you set the Z-axis origin.

❸
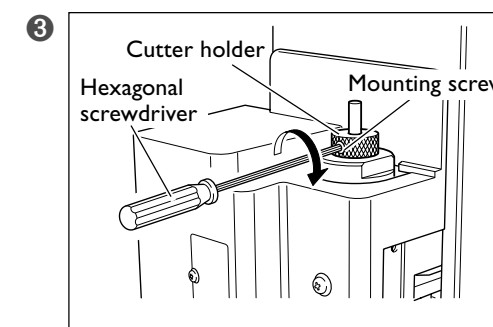
Secure the cutter in place.
Tighten the mounting screw for the cutter holder.

❹ Press z .

❺
```
SET    Z1 Z0 Z2
SURFACE -3000
```
Use ◄ and ► to select [Z0].

❻
```
SET    Z1 Z0 Z2
SURFACE 0
```
Press ENTER/PAUSE to confirm.
The Z-axis origin is set.

❼
```
X 500    Y 23000
Z 0      5000RPM
```
Press Press MENU .
The main display appears. The coordinate values for Z is set to 0.

R2-070726

1000004033

5. Make the setting for the cutting-in depth.

❶
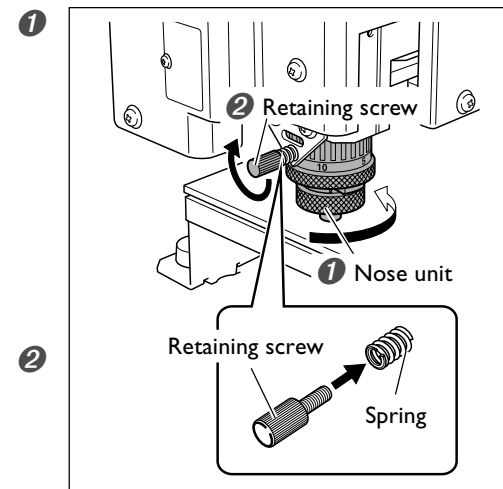
Tighten the nose unit to match the desired cutting-in depth.
The amount of extension of the cutter is the cutting-in depth.
1 scale tick = 0.0254 mm (0.001 in.)
1 full turn = 0.635 mm (0.025 in.)
An amount of 4 to 8 scale ticks corresponds to 0.1 to 0.2 mm (0.004 to 0.008 in.).

❷
**Secure the nose unit in place with the retaining screw.**

> **(A) Point**
> Set the cutting-in amount in EngraveStudio to a value about 2 millimeters deeper than the amount by which the nose unit is tightened in (the actual cutting-in amount). This enables engraving at a uniform depth at all times by increasing the force of the pressure from above.

This completes the installation of the cutter. Proceed to the EGX-350 User's Manual P. 75, "Setting the XY Origin Point (Home Position)."
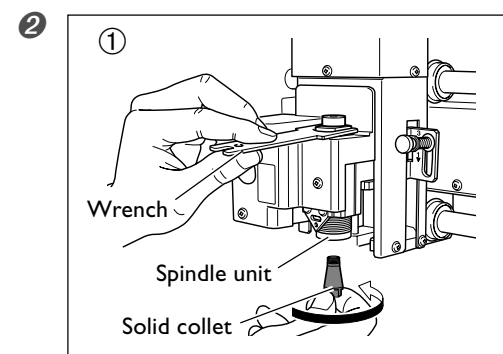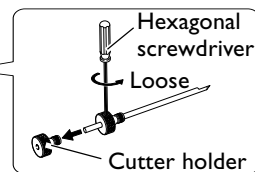

Quick Engrave: Cutter Installation Method 3 (Diamond Scraper)

1. Install the cutter holder and solid collet.
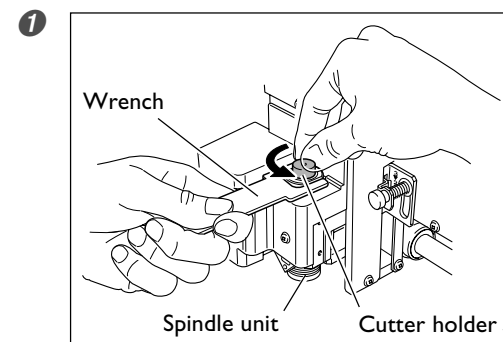
❶

Install the cutter holder.
While holding the spindle unit immobile with a wrench, tighten the cutter holder. The cutter holder is reverse-threaded (that is, you turn it counterclockwise to tighten it). Be careful to turn it in the correct direction.

❷

**Install the solid collet.**
① **Loosely tighten the solid collet.**
Insert the solid collet into the spindle unit from below, then, while holding the spindle unit immobile with a wrench, tighten loosely. Diameter-4.36 millimeter diamond scrapers cannot be used with the included solid collet. Provide a dedicated diamondscraper collet separately.
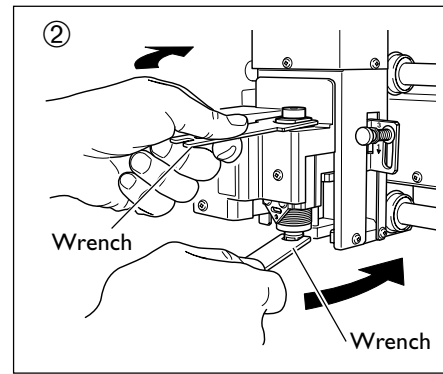
---

②

② **Fully tighten the solid collet.**
Using two wrenches, tighten the solid collet fully. The appropriate tightening torque is 3.2 N-m (32kgf-cm) .

2. Set the lock lever.
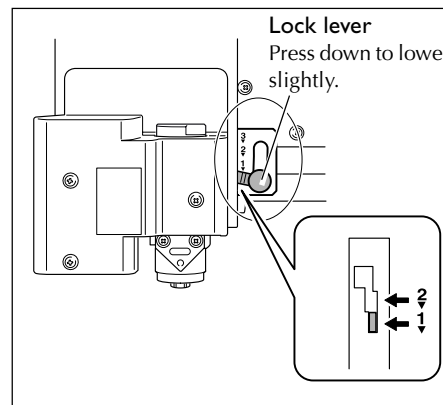
Lock lever
Press down to lower slightly.

Set the lock lever at the 1 or 2 position.
For detailed information about the setting position for the lock lever, refer to the page indicated below.
☞ EGX-350 User's Manual P. 82, "The Position of the Lock Lever"

3. Make the settings for spindle speed and Z-axis control.

❶ | I/O   OTHERS |
  | ADJUSTMENT |

Press MENU several times to display the screen shown at left.
Use ◄ and ► to select [OTHERS].
Press ENTER/PAUSE .

❷ | REVOLUTION |
  | ON   <OFF> |

Use ► to select "OFF."
Press ENTER/PAUSE to confirm.

❸ | AUTO Z CONTROL |
  | ON   <OFF> |

Press MENU .
Use ► to select "OFF."
Press ENTER/PAUSE to confirm.

| SET lock lever |
| to 3 |

The message shown in the figure at left appears, but you can ignore it.

❹ | X 0   Y 23000 |
  | Z 0   S OFF |

Press MENU several times to return to the main screen.
The spindle-speed display changes to "S OFF."

---

4. Install the diamond scraper and and set the Z-axis origin point.

❶

Solid collet
Workpiece
Approx. 10 mm
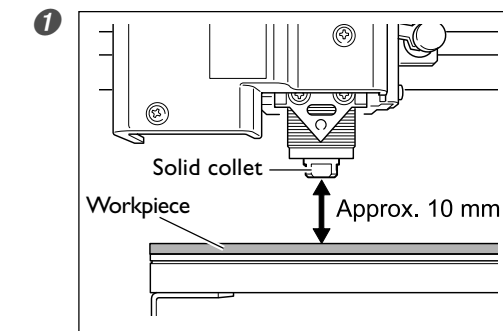
Use ◄ , ► , ▲ , and ▼ to move the spindle head to the area above the workpiece, then press −z to lower the spindle head.
Stop at a position where the tip of the solid collet is approximately 10 millimeters from the surface of the workpiece.
☞ EGX-350 User's Manual P. 44, "Manual Movement"

❷

diamond scraper
Cutter holder
Workpiece
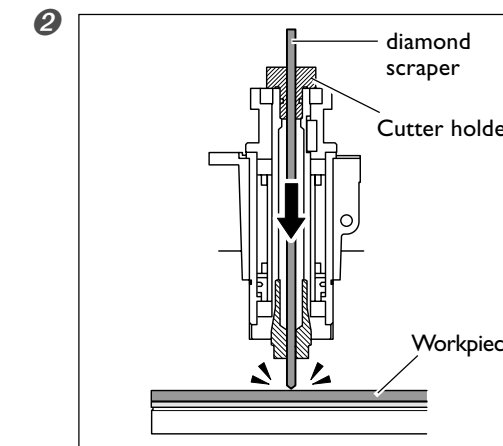
Insert the diamond scraper into the cutter holder and bring the tip of the diamond scraper into contact with the surface of the workpiece.
Placing a thin sheet of paper on the workpiece can prevent damage to the workpiece when the diamond scraper touches it. However, take the thickness of the paper into account when you set the Z-axis origin.

❸

Cutter holder
Hexagonal screwdriver
Mounting screw
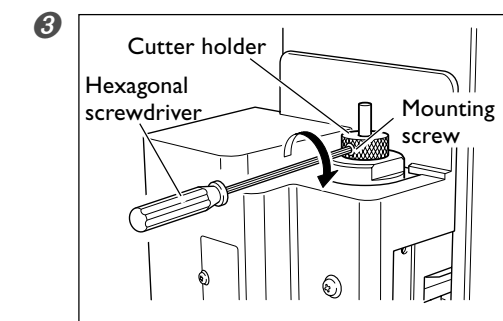
Secure the diamond scraper in place.
Tighten the mounting screw for the cutter holder.

❹ Press z .

❺ | SET   Z1 Z0 Z2 |
  | SURFACE -3000 |

Use ◄ and ► to select [Z0].

❻ | SET   Z1 Z0 Z2 |
  | SURFACE 0 |

Press ENTER/PAUSE to confirm.
The Z-axis origin is set.

❼ | X 500   Y 23000 |
  | Z 0   5000RPM |

Press MENU .
The main display appears. The coordinate values for Z is set to 0.

> **(A) Point**
> Set the cutting-in amount in EngraveStudio to a value of about 2 millimeters. This enables engraving at a uniform depth at all times by increasing the force of the pressure from above.

This completes the installation of the cutter. Proceed to the EGX-350 User's Manual page 75, "Setting the XY Origin Point (Home Position)."

Please contact the following for support.
Please visit our website to keep you up to date.
http://www.rolanddg.com/