Roland

# EGX-30

## DESKTOP ENGRAVER

## USER'S MANUAL

Thank you very much for purchasing the EGX-30.

- To ensure correct and safe usage with a full understanding of this product's performance, please be sure to read through this manual completely and store it in a safe location.
- Unauthorized copying or transferral, in whole or in part, of this manual is prohibited.
- The contents of this operation manual and the specifications of this product are subject to change without notice.
- The operation manual and the product have been prepared and tested as much as possible. If you find any misprint or error, please inform us.
- Roland DG Corp. assumes no responsibility for any direct or indirect loss or damage which may occur through use of this product, regardless of any failure to perform on the part of this product.
- Roland DG Corp. assumes no responsibility for any direct or indirect loss or damage which may occur with respect to any article made using this product.

Roland DG Corporation

## For the USA

**FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.

The I/O cables between this equipment and the computing device must be shielded.

## For Canada

**CLASS A NOTICE**

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

**CLASSE A AVIS**

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## NOTICE

**Grounding Instructions**

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Check with qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn out cord immediately.

**Operating Instructions**

KEEP WORK AREA CLEAN. Cluttered areas and benches invites accidents.

DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.

DISCONNECT TOOLS before servicing; when changing accessories, such as blades, bits, cutters, and like.

REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure the switch is in off position before plugging in.

USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.

NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.

**ROLAND DG CORPORATION**
**1-6-4 Shinmiyakoda, Hamamatsu-shi, Shizuoka-ken, JAPAN 431-2103**
**MODEL NAME** : See the MODEL given on the rating plate.
**RELEVANT DIRECTIVE** : **EC MACHINERY DIRECTIVE (98/37/EC)**
**EC LOW VOLTAGE DIRECTIVE (73/23/EEC)**
**EC ELECTROMAGNETIC COMPATIBILITY DIRECTIVE (89/336/EEC)**

**WARNING**

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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# To Ensure Safe Use

## About ⚠WARNING and ⚠CAUTION Notices

| | |
|---|---|
| **⚠WARNING** | Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly. |
| **⚠CAUTION** | Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly.<br>* Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets. |

## About the Symbols

| | |
|---|---|
| | The △ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. The symbol at left means "danger of electrocution." |
| | The ⃠ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. The symbol at left means the unit must never be disassembled. |
| | The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. The symbol at left means the power-cord plug must be unplugged from the outlet. |

## ⚠WARNING

**Do not disassemble, repair, or modify.**
Doing so may lead to fire or abnormal operation resulting in injury.

**Do not use with any electrical power supply that does not meet the ratings displayed on the unit.**
Use with any other power supply may lead to fire or electrocution.

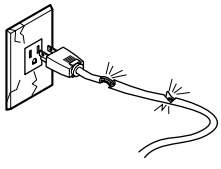
**Use only with the power cord included with this product.**
Use with other than the included power cord may lead to fire or electrocution.

**Ground the unit with the ground wire.**
Failure to do so may result in risk of electrical shock in the even of a mechanical problem.

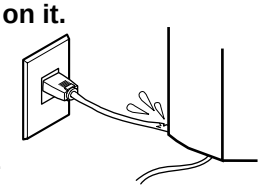
**Do not use while in an abnormal state (i.e., emitting smoke, burning odor, unusual noise, or the like).**
Doing so may result in fire or electrical shock.
Immediately switch off the power, unplug the power cord from the electrical outlet, and contact your authorized Roland DG Corp. dealer or service center.

## ⚠CAUTION

**Do not use with a damaged power cord or plug, or with a loose electrical outlet.**
Use with any other power supply may lead to fire or electrocution.



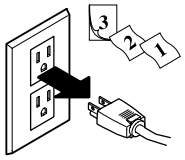
**Do not injure or modify the electrical power cord, nor subject it to excessive bends, twists, pulls, binding, or pinching, nor place any object of weight on it.**
Doing so may damage the electrical power cord, leading to electrocution or fire.



# ⚠CAUTION

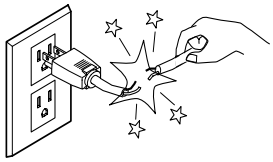
**When not in use for extended periods, unplug the power cord from the electrical outlet.**

Failure to do so may result in danger of shock, electrocution, or fire due to deterioration of the electrical insulation.



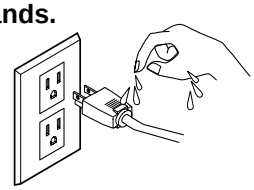

**When unplugging the electrical power cord from the power outlet, grasp the plug, not the cord.**

Unplugging by pulling the cord may damage it, leading to fire or electrocution.



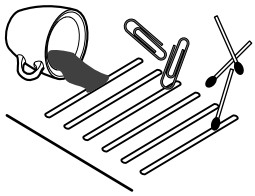
**Do not attempt to unplug the power cord with wet hands.**

Doing so may result in electrical shock.



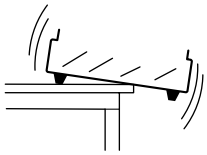
**Do not allow liquids, metal objects or flammables inside the machine.**

Such materials can cause fire.



**Install on a stable surface.**

Failure to do so may result in falling of the unit, leading to injury.



**Do not inadvertently allow the hands, or hair near the rotating parts while in operation.**

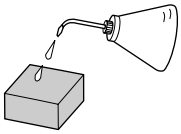
They may become caught in the tool, resulting in injury.

**Wash hands when finished.**

Wash hands with water to remove any adhering cutting chips.

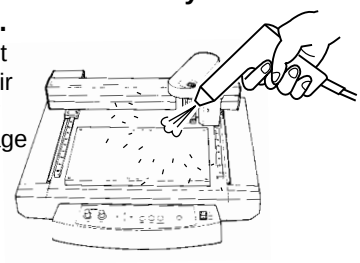
**Do not use cutting oil when performing cutting.**

Perform dry cutting with no cutting oil. Use of cutting oil may result in fire or machine failure.



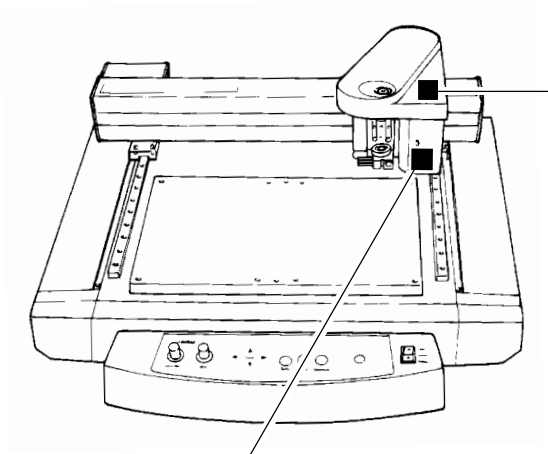
**Use a vacuum cleaner to remove cutting dust. Do not use any blower like airbrush.**

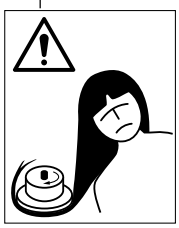
Otherwise, dust spread in the air may harm your health or damage this machine.



# About the Labels Affixed to the Unit

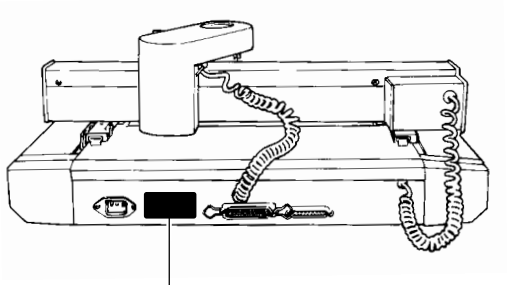
These labels are affixed to the body of this product.
The following figure describes the location and content of these messages.





**Do not inadvertently allow the hands, hair, or necktie near the rotating parts while in operation.**

**Keep fingers away from the tool while the tool is rotating.**



**Model name**
**Rating label**
Use a rated power supply.

In addition to the ⚠**WARNING** and ⚠**CAUTION** symbols, the symbols shown below are also used.

**NOTICE** : Indicates information to prevent machine breakdown or malfunction and ensure correct use.

: Indicates a handy tip or advice regarding use.

# Pour utiliser en toute sécurité

## Avis sur les avertissements

| | |
|---|---|
| ⚠ATTENTION | Utilisé pour avertir l'utilisateur d'un risque de décès ou de blessure grave en cas de mauvaise utilisation de l'appareil. |
| ⚠PRUDENCE | Utilisé pour avertir l'utilisateur d'un risque de blessure ou de dommage matériel en cas de mauvaise utilisation de l'appareil.<br>* Par dommage matériel, il est entendu dommage ou tout autre effet indésirable sur la maison, tous les meubles et même les animaux domestiques. |

## À propos des symboles

| | |
|---|---|
| | Le symbole △ attire l'attention de l'utilisateur sur les instructions importantes ou les avertissements. Le sens précis du symbole est déterminé par le dessin à l'intérieur du triangle. Le symbole à gauche signifie "danger d'électrocution". |
| | Le symbole ⃠ avertit l'utilisateur de ce qu'il ne doit pas faire, ce qui est interdit. La chose spécifique à ne pas faire est indiquée par le dessin à l'intérieur du cercle. Le symbole à gauche signifie que l'appareil ne doit jamais être démonté. |
| | Le symbole ● prévient l'utilisateur sur ce qu'il doit faire. La chose spécifique à faire est indiquée par le dessin à l'intérieur du cercle. Le symbole à gauche signifie que le fil électrique doit être débranché de la prise. |

# ⚠ATTENTION

**Ne pas démonter, réparer ou modifier.**
Le non-respect de cette consigne pourrait causer un incendie ou provoquer des opérations anormales entraînant des blessures.

**Utiliser seulement avec une alimentation de mêmes caractéristiques électriques que celles indiquées sur l'appareil.**
Une utilisation avec toute autre alimentation électrique pourrait provoquer un incendie ou une électrocution.

**N'utilisez que le cordon d'alimentation fourni avec ce produit.**
L'utilisation avec un autre cordon d'alimentation que celui fourni pourrait entrainer un risque d'incendie ou d'électrocution.

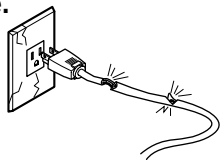
**Mettre l'appareil à la masse avec une prise de terre.**
Le non-respect de cette consigne pourrait entraîner des décharges électriques en cas de problème mécanique.

**Ne pas utiliser si l'appareil est dans un état anormal (c'est-à-dire s'il y a émission de fumée, odeur de brûlé, bruit inhabituel etc.).**
Le non-respect de cette consigne pourrait provoquer un incendie ou des décharges électriques.
Couper immédiatement l'alimentation secondaire et ensuite l'alimentation principale. Débranchez le fil électrique et contacter votre revendeur ou votre centre de service de la société Roland DG autorisé.

# ⚠PRUDENCE

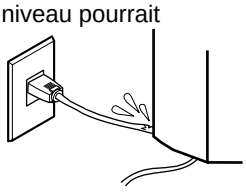
**Ne pas utiliser avec une fiche ou un fil électrique endommagé ou avec une prise mal fixée.**

Une négligence à ce niveau pourrait provoquer un incendie ou une électrocution.



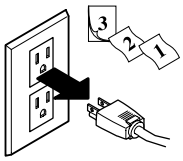
**Ne pas endommager ou modifier le fil électrique. Ne pas le plier, le tordre, l'étirer, l'attacher ou le serrer de façon excessive. Ne pas mettre d'objet ou de poids dessus.**

Une négligence à ce niveau pourrait endommager le fil électrique ce qui risquerait de provoquer une électrocution ou un incendie.



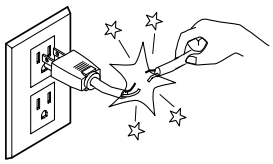
**Débrancher le fil lorsque l'appareil reste inutilisé pendant une longue période.**

Une négligence à ce niveau pourrait provoquer des décharges électriques, une électrocution ou un incendie dû à une détérioration de l'isolation électrique.



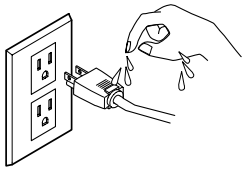

**Saisir la fiche et non le fil électrique lorsque vous débranchez.**

Débrancher en tirant sur le fil pourrait l'endommager et risquer de provoquer un incendie ou une électrocution.



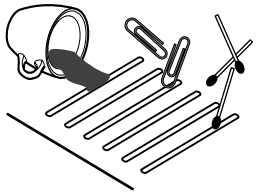
**Ne pas essayer de débrancher le fil avec des mains mouillées.**

Une négligence à ce niveau pourrait provoquer des décharges électriques.



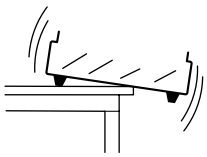
**Ne pas introduire de liquide, d'objet métallique ou inflammable dans l'appareil.**

Ce genre de matériel peut provoquer un incendie.



**Installer l'appareil sur une surface stable.**

Une négligence à ce niveau pourrait provoquer la chute de l'appareil et entraîner des blessures.

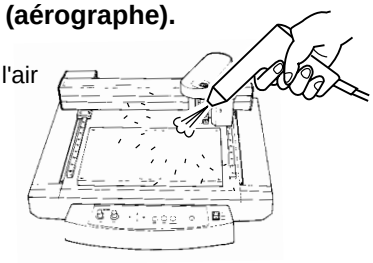


**Garder les mains, cheveux et cravates éloignés des pièces tournantes pendant que l'appareil fonctionne.**

Sinon ils peuvent se prendre dans l'outil, ce qui causera des blessures.

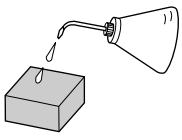
**Retirer la poussière de coupe à l'aide d'un aspirateur. Ne pas utiliser d'appareil soufflant, par exemple un pinceau à air (aérographe).**

La poussière répandue dans l'air par un appareil soufflant est un risque pour la santé et peut endommager l'appareil.



**Ne pas utiliser d'huile de coupe.**

Faire des coupes à sec, sans huile de coupe. Utiliser de l'huile de coupe risque de provoquer un incendie ou une panne de l'appareil.

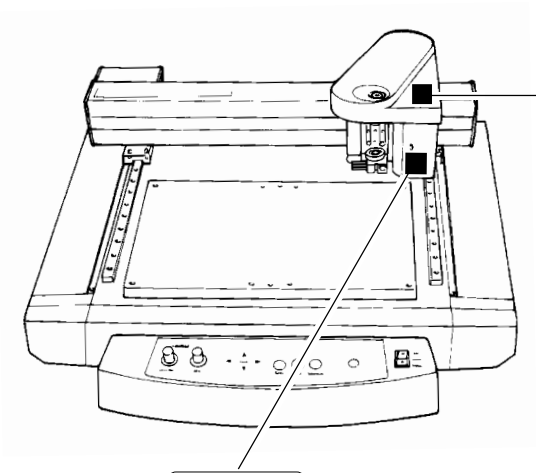


**Se laver les mains après la coupe.**

Se laver les mains à l'eau pour en enlever toutes les rognures de coupe qui peuvent y adhérer.

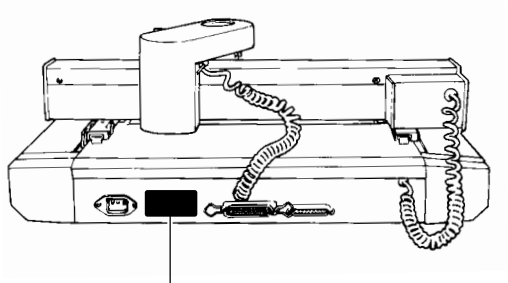
# À propos des étiquettes collées sur l'appareil

Ces étiquettes sont collées à l'extérieur de l'appareil.
Les dessins suivants indiquent l'endroit et le contenu des messages.



**Garder les mains, cheveux et cravates éloignés des pièces tournantes pendant que l'appareil fonctionne.**

**Garder les doigts loin de l'outil pendant qu'il tourne.**



**Nom du modèle**
**Étiquette des caractéristiques électriques**
Utiliser l'alimentation appropriée

# 1 Great Features

## ●Engraving - ENGRAVER

You can engrave nametags and other plastic plates.
The character cutter is usually used for engraving.

## ○Scoring - SCORE

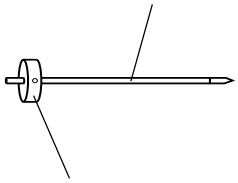
This scribes the surface of materials such as aluminum or brass. An optional diamond scraper that has diamond chips embedded in its tip of the cutter is used to engrave the surface of the material by scraping. This produces a lustrous engraved area and an attractive finish, especially when aluminum is used.

Tools that can be used with the EGX-30 are optionally available from Roland DG Corp. For details, see "Appendix A List of Options"

# 2 Confirmation of Included Items

This product is packed with the following accessory items in addition to the EGX-30. Before using the EGX-30, check to make sure that all items are included.

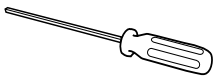
Character cutter -- 1



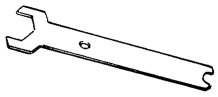
Engraving-tool holder -- 1

Diamond scraper adapter -- 1

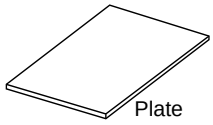
Hexagonal screw-driver -- 1



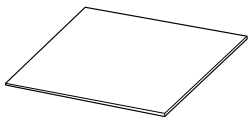
Spanner -- 1



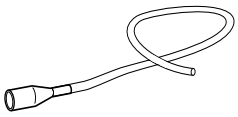
Test material -- 1




Adhesive sheet for securing material -- 1 sheet



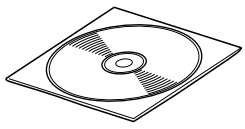
Dust collector hose and duct -- 1



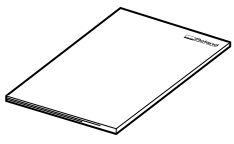
Hexagonal wrench -- 1

Power cord -- 1

Roland Software Pakage CD-ROM -- 1

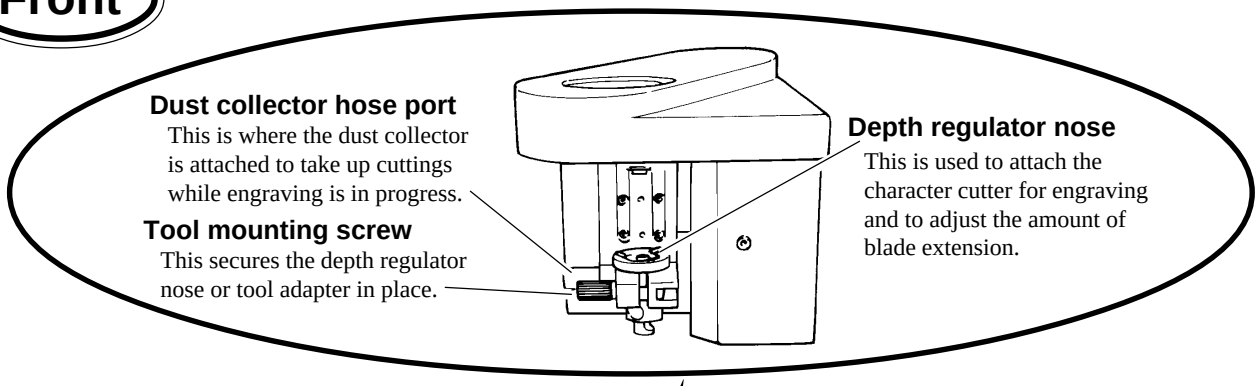


User's manual -- 1



# 3 Part Names

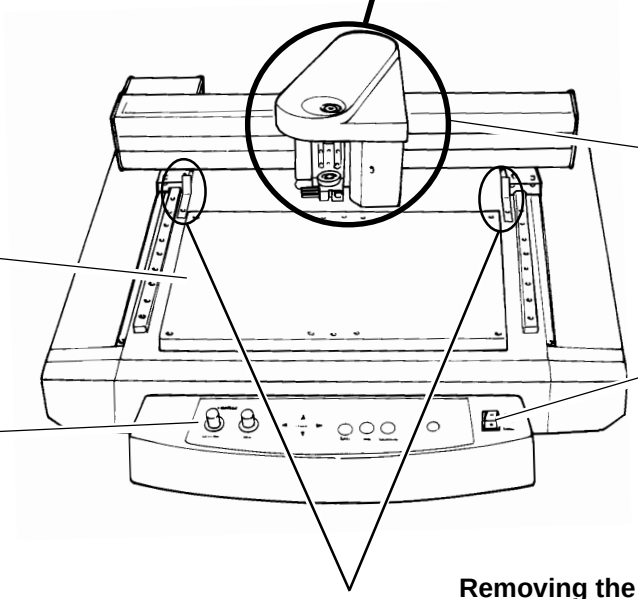
## Front



**Dust collector hose port**
This is where the dust collector is attached to take up cuttings while engraving is in progress.

**Tool mounting screw**
This secures the depth regulator nose or tool adapter in place.

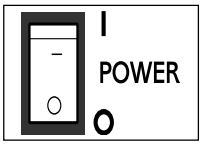
**Depth regulator nose**
This is used to attach the character cutter for engraving and to adjust the amount of blade extension.



**Tool carriage**

**Table**
The table grips the workpiece to be cut.

**Power switch**

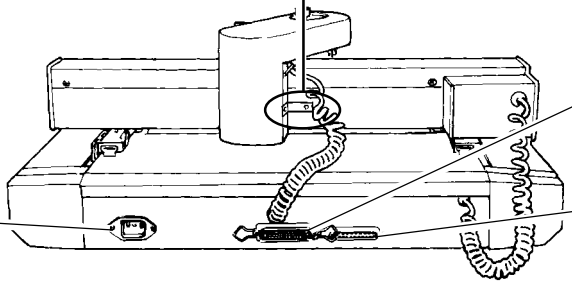



**Control Panel**
(Described on the following page.)

**Safe-transport Retainer**

**Removing the Safe-transport Retainers**
Retainers are attached at the locations shown in the figure to ensure safety when transporting this product.
Use the hexagonal wrench included with the unit to remove the retainers before use. (Once removed, the retainers should be stored in a safe place because they are needed again when repacking the product.)

## Rear



**Parallel connector**
A parallel (printer) cable is connected here.

**Serial connector**
A serial (RS-232C) cable is connected here.

**Power connector**
The power cord included with the machine connected here.

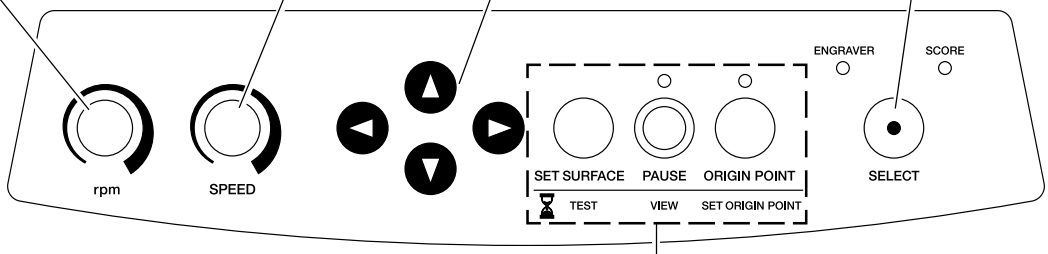
## Control Panel

**ARROW keys**
These are used to move the tool carriage in the direction of the arrow.
Hold down the key for faster movement.

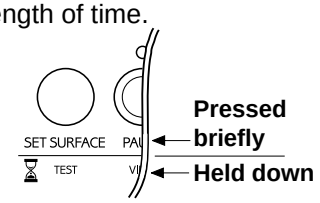
**rpm knob**
This sets the spindle speed (in rpm).

**SPEED knob**
This sets the cutting speed.

**SELECT key**
This selects the cutting mode.
The LED for the selected mode lights up.




The functions of these keys differ depending on whether the key is pressed briefly and immediately released or held down for a certain length of time.




**SET SURFACE / TEST key**
**Pressed briefly:** When the character cutter has been installed, this moves the tool up or down.
**Held down for one second or longer:** Performs test cutting.

**PAUSE / VIEW key**
**Pressed briefly:** Pauses operation.
**Held down for two seconds or longer:** Moves the tool carriage to the rear right (the VIEW position) and pauses operation.

**ORIGIN POINT / SET ORIGIN POINT key**
**Pressed briefly:** Moves the tool carriage to the origin point.
**Held down for two seconds or longer:** Makes the present position of the tool carriage the origin point.

# 4 Task Flow

Follow the steps shown below to work with materials on the EGX-30.

1. Install and connect the computer and the EGX-30.
2. Install the driver software and set up the interface.
3. Use a software application to create the data.

4. Switch on the power to the EGX-30.
5. Load the material and install the tool.
6. Set the origin point.
7. Set the cutting conditions (test cut).

8. Send the data from the computer to perform machining.

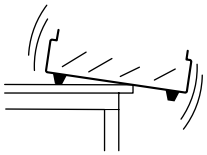
9. End operations.
10. Switch off the power.
11. Clean up.

# 5 Installation and Connections

## Installation

### ⚠CAUTION

**Install on a stable surface.**
Failure to do so may result in falling of the unit, leading to injury.



**NOTICE** Never install this unit in any of the following situations, as it could result in damage:

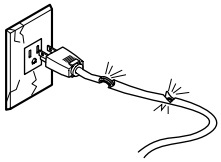
- Places where the installation surface is unstable or not level.
- Places with excessive electrical noise.
- Places with excessive humidity or dust.
- Places with poor ventilation, because the EGX-30 generates considerable heat during operation.
- Places with excessive vibration.
- Places exposed to strong illumination or direct sunlight.

When arranging setup space for the EGX-30, make sure you have a space that is at least 800 mm (32 in.) wide, 800 mm (32 in.) in depth, and 600 mm (24 in.) in height.

## Connections

### ⚠WARNING

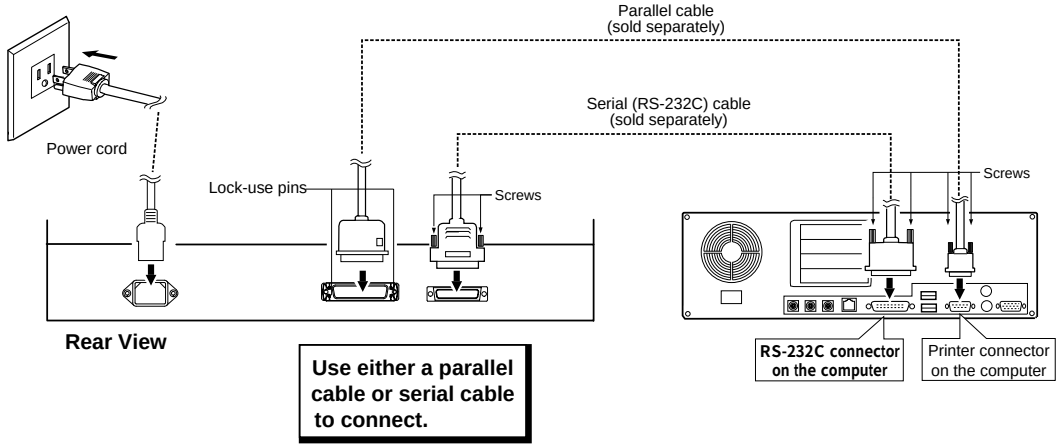
**Do not use with a damaged power cord or plug, or with a loose electrical outlet.**
Use with any other power supply may lead to fire or electrocution.



**NOTICE** Always make sure that the power is off on both the computer and the EGX-30 whenever any cables are connected or disconnected.

Securely connect the power cord, computer I/O cable and so on so that they will not be unplugged and cause failure during operation.

Cables are available separately. One which you are sure matches the model of computer being used should be selected.



# Installing the Software

The included CD-ROM contains several pieces of software for operating the EGX-30.

## Operating environment

| | Dr. Engrave |
|---|---|
| Computer | Personal computer running Windows 95, Windows 98, Windows Me, Windows NT 4.0, or Windows 2000 |
| CPU | Recommended CPU for your Windows operating system |
| System Memory | Recommended memory for your Windows operating system |
| Hard Disk | 10 MB or more of free space |

## Setting Up the Program

* If you are installing under Windows NT 4.0 or Windows 2000, you need full access permissions for the printer settings.
Log on to Windows as a member of the “Administrators” or “Power Users” group.
For more information about groups, refer to the documentation for Windows.

**1** Switch on the computer and start Windows.

**2** Place the CD from the Roland Software Package in the CD-ROM drive.
The Setup menu appears automatically.

**3** When the screen shown below appears, click the ▼ in [Click here], then choose [EGX-30].
Click [Install].
To view the description of a program, click the button. To view the manual, click the button.
(There are manuals in PDF format for the programs that the button references. Acrobat Reader is required to view PDF files.)

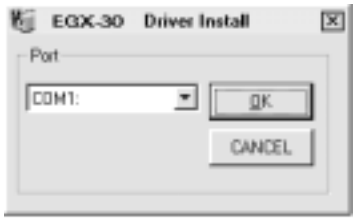
If there are programs you don't want to install, then clear their check boxes before you click [Install].

**4** The Setup program starts. Follow the messages to carry out setup and finish setting up the program.

* When the setup for one program finishes, the setup for the next program starts.
In the interval until the next setup starts, a dialog box showing the progress of processing is displayed.

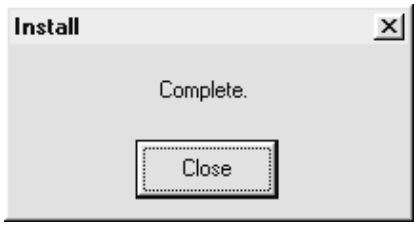
**5** If the following screen appears while installing the driver, click the drop-down arrow and choose the port for the cable connected to the computer.

When using an RS-232C (serial) cable
[COM1:] or [COM2:]
When using a printer (parallel) cable
[LPT1:] or [LPT2:]




**6** The driver settings appear.
When you make the settings for the communication parameters of EGX-30, make the parameters match the values displayed here.
Click [Close] to finish installing the driver.

**7** When all installation finishes, the screen show below appears.
Click [Close].




**8** After returning to the menu screen for installation, click [×].

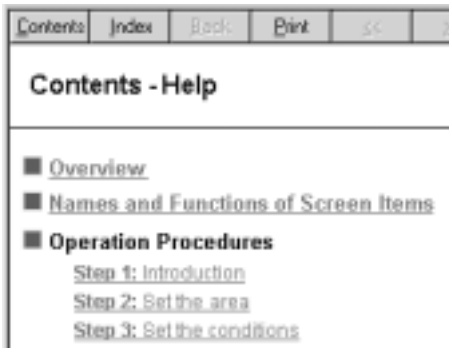
**9** Remove the CD-ROM from the CD-ROM drive.

## How to use Help

If you have trouble using the program or driver, see the help screens. Help contains information such as descriptions of software operation, explanations of commands, and tips for using the software more effectively.

**1** From the [Help] menu, click [Contents].

**2** Clicking on text that is green and underlined (by a solid or dotted line) displays an explanation.




**3** Clicking on an image area that contains an explanation displays the explanation.

### Tip

- When the pointer moves over green underlined text, it changes to a pointing hand ( ).
- When the pointer moves over a location where an explanation is included, it changes to a pointing hand ( ).

## When there's a [?] button on screen

Clicking [?] in the upper-right corner of the window makes the mouse pointer change to a question mark ( ). You can then move the pointer over any item you wish to learn more about, then click on the item to display an explanation of it.

## When there's a [Help] button on screen.

Clicking [Help] lets you view help for the window or software.

# Interface Setup

EGX-30 automatically detects the type of interface (parallel or serial) from the first batch of data sent from the computer after the power is switched on.
When using a serial connection for the interface, however, the communication parameters on the computer should be set as follows.
The communication parameters for the EGX-30 are locked in and cannot be changed.

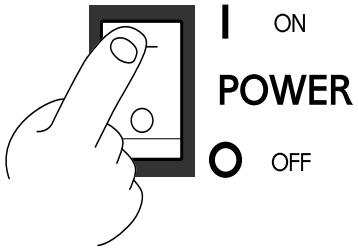
**Communication parameters for a serial connection**

| | |
|---|---|
| Stop bit | 1bit |
| Data bit | 8bit |
| Parity | None |
| Baud rate | 9600bps |
| Handshake | Hardware |

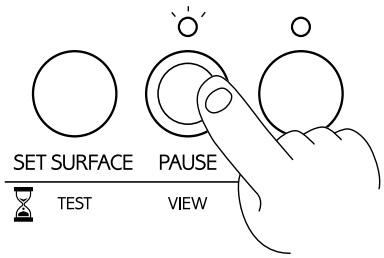
# Powerup

To ensure safety, operation of the EGX-30 is paused when the power is switched on.
Press the **PAUSE/VIEW** key to end the paused state.

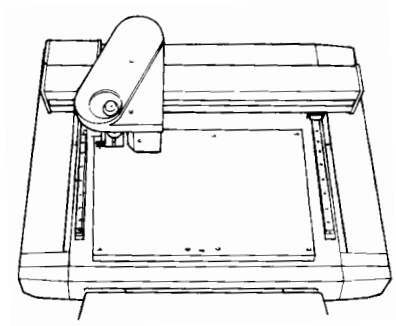
**1** Switch on the EGX-30 power switch.
(The PAUSE LED flashes at this time.)



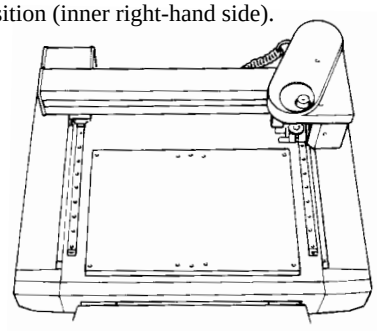

**2** Press the **PAUSE/VIEW** key.




**3** The tool carriage moves to the left rear.



**4** The tool carriage stops when it reaches the VIEW position (inner right-hand side).



The EGX-30 is now ready to receive data.

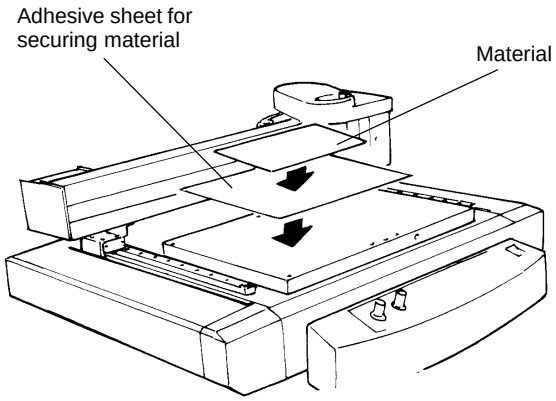
# 6 Before Starting to Cut

## Loading the Material

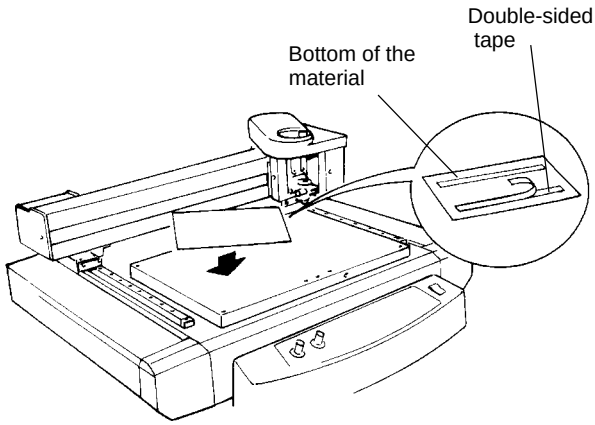
If the material is not secured correctly, it may not be cut as intended.
Some examples of material loading are shown below. Refer to these to use the appropriate method for the material at hand to secure it in place.

* Be sure that the tool carriage is at the VIEW position ( inner right-hand side ) before loading material.

### Using the included adhesive sheet...




### Using commercially available double-sided tape...



# Installing a Tool

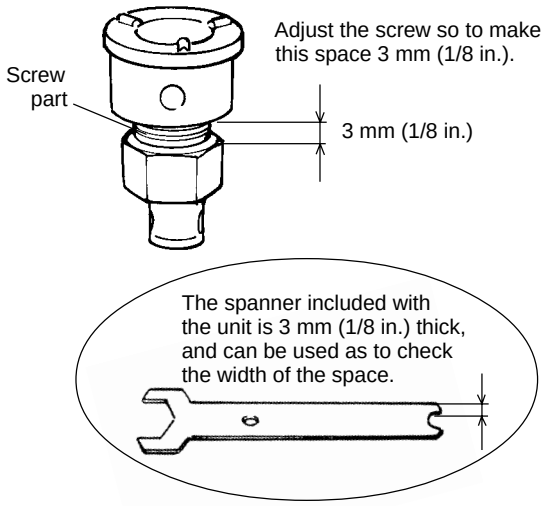
The steps for installing a tool are shown below. Follow these steps to install the appropriate tool for the task.

## For Engraving (Character Cutter)

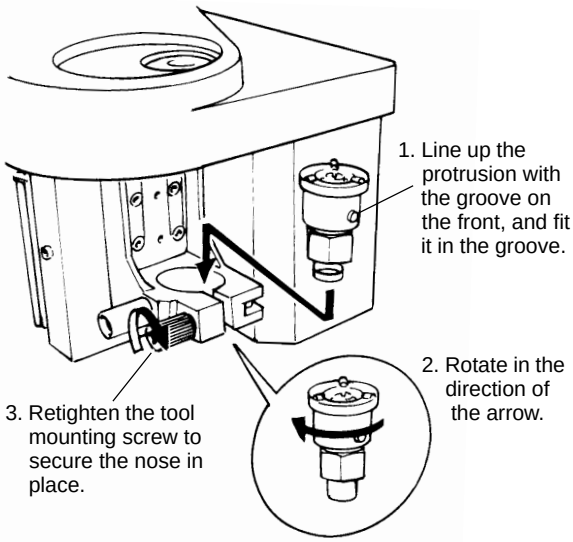
* Use **SELECT** key to choose "**ENGRAVER**" as the mode.

When installing a cutter for engraving, make sure the tip of the cutter protrudes beyond the surface of the material by an amount equal to the depth of engraving to be performed.
Move the tool carriage to a position over the material surface, then install the cutter.

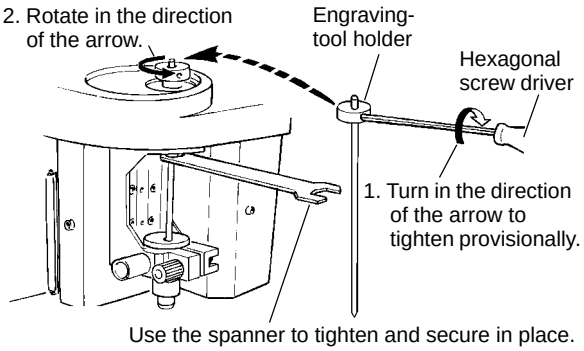
**1** Install the depth regulator nose as shown in the figure.



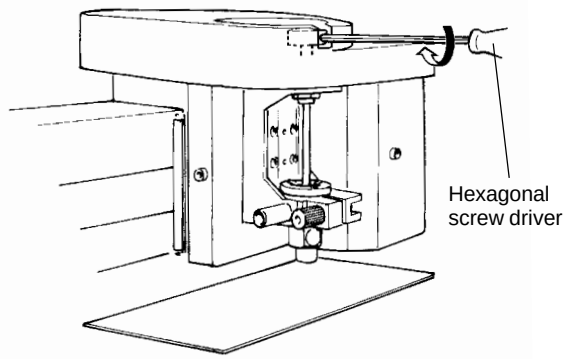

**2** Loosen the tool mounting screw and insert the depth regulator nose in the tool carriage.



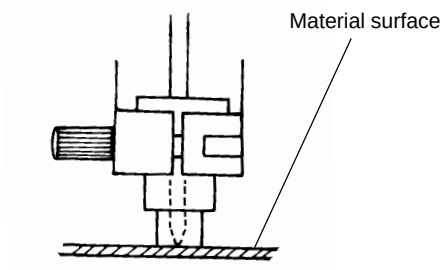

**3** Provisionally tighten the character cutter in the engraving-tool holder, and install the engraving-tool holder on the tool carriage.



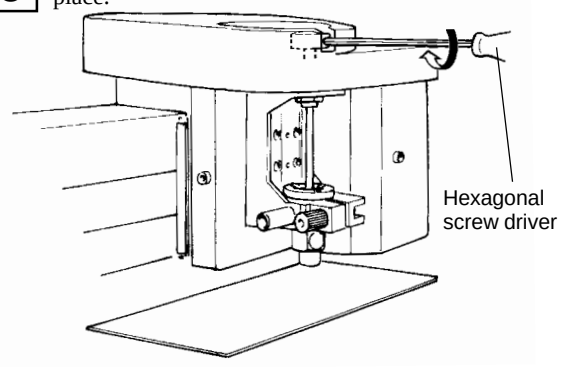

**4** Press the **SET SURFACE** key to lower the tool, then loosen the screw for the engraving-tool holder.



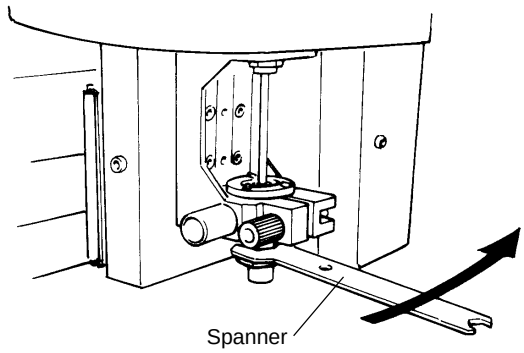

**5** Gently lower the cutter until the tip of the cutter touches the surface of the material.

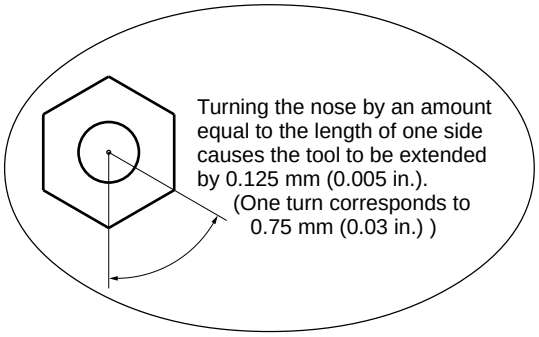



**6** Tighten the screw securely to secure the cutter in place.



**7** Press the **SET SURFACE** key to raise the cutter.
Use the spanner to turn the depth regulator nose in the direction of the arrow to extend the blade depth to the desired engraving depth.

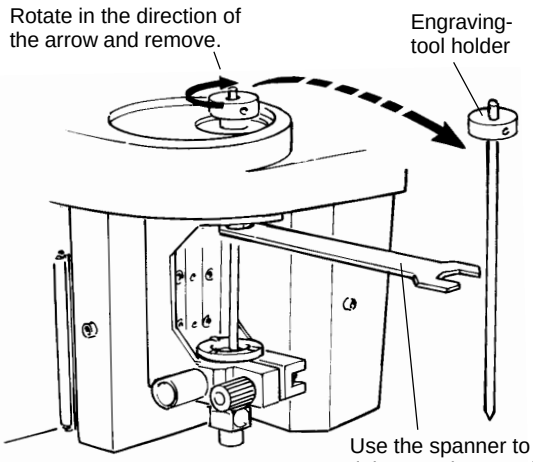


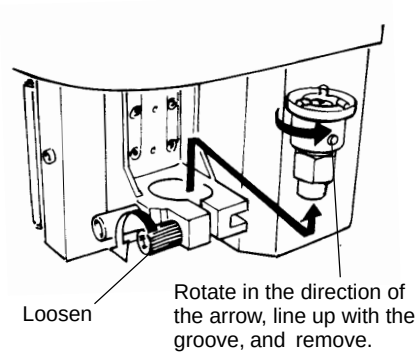

When engraving an acrylic panel, the depth that can be engraved at one time is about 0.25 mm (0.01 in.). To engrave to engrave to a greater depth, repeat the same engraving several times, increasing the amount of blade extension with each pass until the desired engraving depth is reached.

**Example**: Engraving to a depth of 1 mm (0.04 in.)
[Number of engraving passes] : 4
[Amount of blade extension]
1st pass: 0.25 mm (0.01 in.) -> 2nd pass: 0.5 mm (0.02 in.) ->
3rd pass: 0.75 mm (0.03 in.) -> 4th pass: 1 mm (0.04 in.)

## How to Remove the Cutter for Engraving




## How to Remove the Depth Regulator Nose



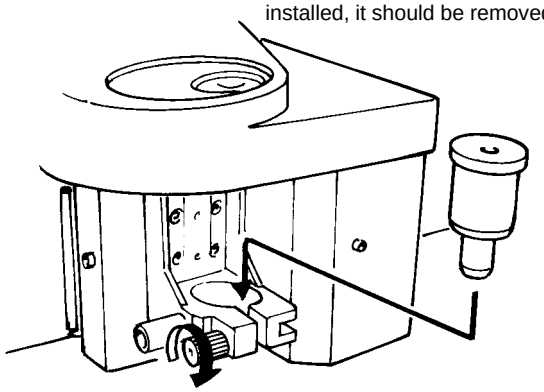
## For the Scoring (Diamond scraper)

* Use **SELECT** key to choose "**SCORE**" as the mode.

When performing scoring, be sure to purchase the diamond scraper (optionally available).

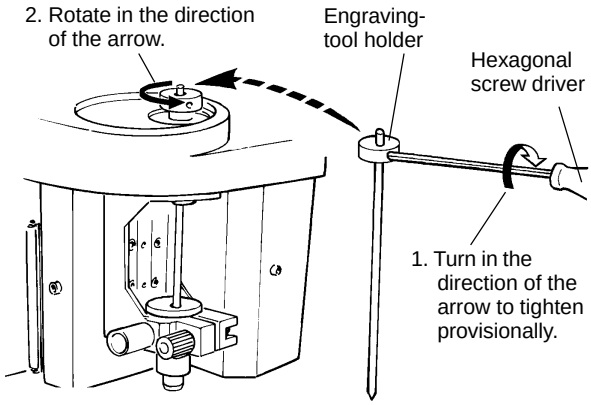
**1** Loosen the tool mounting screw and insert the special adapter into the tool carriage.

* If the depth regulator nose is installed, it should be removed.

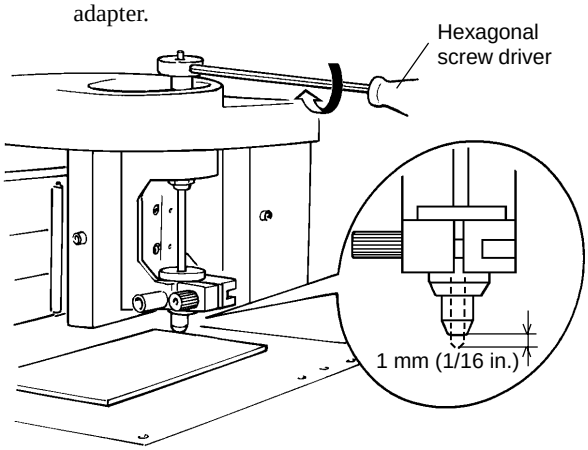


Retighten the tool mounting screw to secure in place.

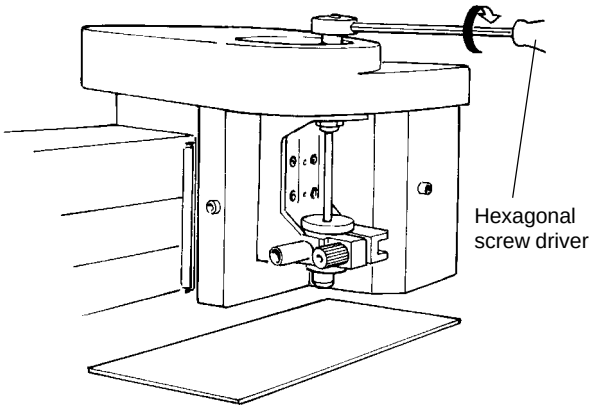
**2** Provisionally tighten the diamond scraper in the engraving-tool holder, and insert it into the tool carriage.




**3** Loosen the screw for the engraving-tool holder and lower the blade of the diamond scraper until it protrudes about 1 mm (1/16 in.) from the tip of the adapter.



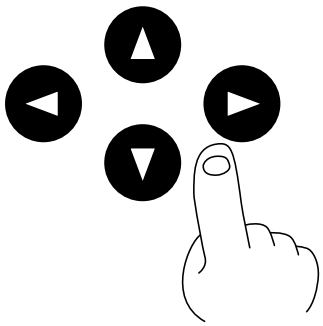

**4** Tighten the screw securely to secure the tool in place.



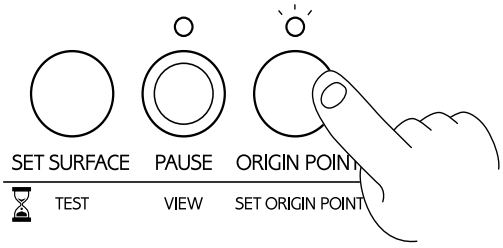
# Setting the Origin Point

The origin point set with the software determines the position on the EGX-30 that is set.
Usually, the origin on the EGX-30 is set to a location at the front left of the material secured in place.
This section explains how to set the origin point at the front left of a piece of material.

**1** Use the arrow keys to move the tool to the front left area of the loaded material.



**2** Hold down the **SET ORIGIN POINT** key until its LED lights up (about two seconds).




The origin point has now been set.

* The origin point that is set here remains in memory even when the power is switched off.

# About Tools and Materials

The combinations of appropriate tools and materials for the different modes are shown below. Please refer to this to make the correct selections.
Please be aware that conditions may vary depending on factors such as the sharpness of the tool and the hardness of the material.

| Mode | Tool name | Model number | Material |
|---|---|---|---|
| Engraving<br>**( ENGRAVER )** | Character cutter<br>(Used with the depth regulator nose - included) | ZEC-A2025<br>(others) | Resin materials (nameplates, etc.) |
| Scoring<br>**( SCORE )** | Diamond scraper<br>(Diamond scraper Adapter - included) | (ZDC-A2000) | Aluminum<br>Brass |

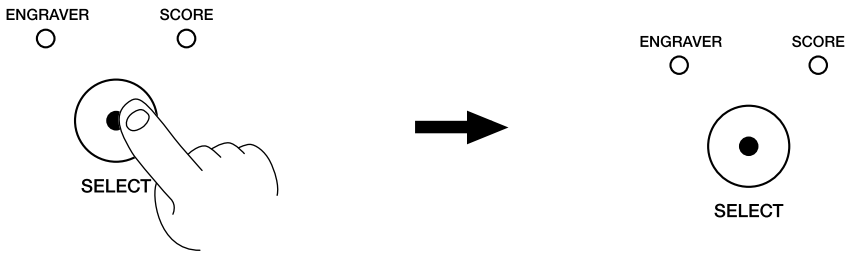
Model numbers in parentheses ( ) are for optional items.

*Material thickness -- Up to 5 mm (3/16 in.)
*Engraving depth ---- Varies according to the type of material.
To achieve deep engraving on a hard material, repeatedly carry out engraving at the same location, extending the tip of the cutter slightly with each pass.

# Test Cutting

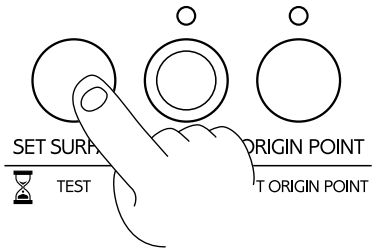
The EGX-30 can perform test cutting to check whether cutting conditions are correct. Test cutting is also recommended to determine optimal cutting conditions, such as the compatibility of the material and tool, and the cutting speed.
If the results of test cutting are less than satisfactory, refer to " About Tools and Materials" and " Setting Cutting Conditions" and redo the settings.
It may be a good idea to use a blank area of a piece of material or an extra scrap for test cutting.

**1** Use the **SELECT** key to choose the cutting mode. The LED for the selected mode lights up.

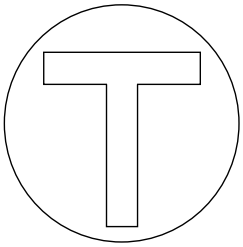



**2** Check again to make sure that the correct material and tool for the selected mode have been loaded and installed.

**3** Hold down the **SET SURFACE / TEST** key for one second or more.




**4** Test cutting starts.



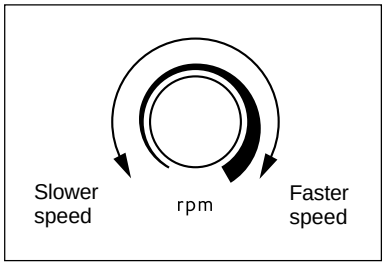
Required Area
15 x 15 mm (5/8 in. x 5/8 in.)

# Setting Cutting Conditions

## Spindle Speed

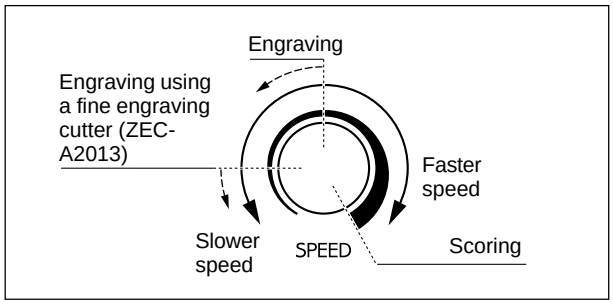
**NOTICE** Adjust the spindle speed to match the material being engraved. Depending on the material, a spindle speed that is too fast may cause the material to melt.

Turn the **rpm** knob on the control panel to change the spindle speed.



## Cutting Speed

Turn the **SPEED** knob on the control panel to change the cutting speed (tool-movement speed.) The tool-lowering speed also changes accordingly.

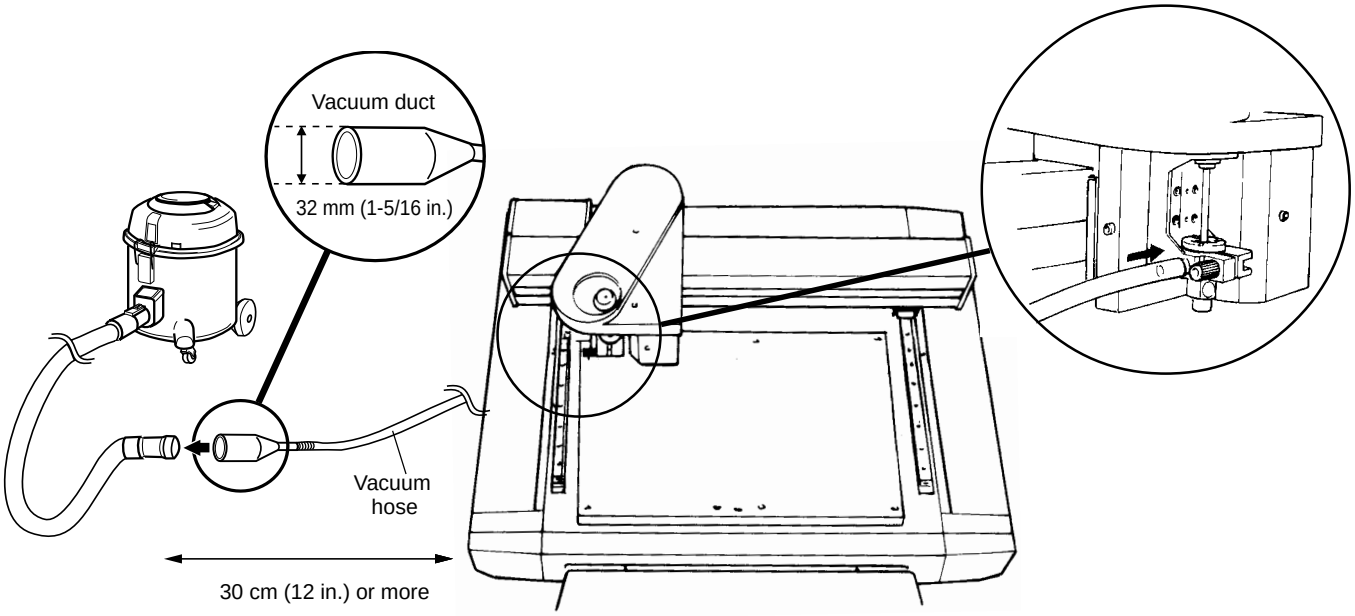



When the values set within the application software or the driver are sent after adjusting the cutting speed on the EGX-30, the software and driver values are changed.
Conversely, you can also change the cutting speed by rotating the knobs on the EGX-30 after starting a cutting operation using the software and driver values.

# Attaching a Vacuum Cleaner

The dust-collector hose and duct included with the EGX-30 can be attached to an ordinary household vacuum cleaner to remove cutting chips during operation.

**NOTICE** Always allow a minimum gap of 30 cm (12 in.) on the side where the vacuum hose exits. The vacuum hose must have sufficient space in which to move. When the vacuum hose cannot move smoothly, it can cause malfunctions or errors in operation.




When the fitting diameters do not match or when the vacuum duct cannot be inserted into the suction opening of the vacuum cleaner, use strong commercial tape (cloth or electrical) to join the fittings.

# 7 Sending Cutting Data

Cutting is performed when data is sent from the computer (software application).
Refer to the manual for the software and drivers you are using for an explanation of how to output cutting data.

## Changes That Can Be Made While Cutting

### Pausing Operation

**PAUSE** . . . . . Pressing the **PAUSE/VIEW** key causes operation to pause, even when cutting is in progress. Press the **PAUSE/VIEW** key a second time to continue cutting.

**ESCAPE** . . . . . Holding down the **PAUSE/VIEW** key for one second or longer causes the tool carriage to move to the VIEW position and stop.
Press the **PAUSE/VIEW** key a second time to continue cutting.

**STOP** . . . . . Press the **PAUSE/VIEW** key to pause operation.
Stop sending data from the computer, then switch off the power to the EGX-30.
To restart the cutting operation from the beginning, switch the power back on, and send the data from the computer again. (The origin-point setting remains in memory even when the power is switched off.)

### Spindle Speed

Changes the **rpm** knob on the control panel.

### Cutting Speed

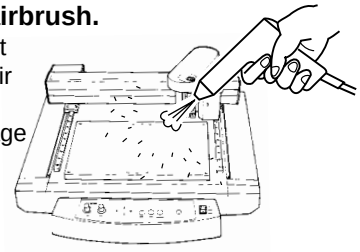
Changes the **SPEED** knob on the control panel.

# 8 Ending Cutting Operations

## ⚠CAUTION

**Wash hands when finished.**
Wash hands with water to remove any adhering cutting chips.

**Use a vacuum cleaner to remove cutting dust. Do not use any blower such as an airbrush.**
Otherwise, dust spread in the air may harm your health or damage the machine.



**1** Press the **PAUSE/VIEW** key to move the tool carriage to a position where the tool and material can easily be removed.

**2** Move the tool carriage to the inner-right area of the table, make sure operation is stopped, then remove the material.
- If the material is secured by an adhesive sheet or double-sided tape, peel the adhesive sheet off of the table and store it in a location free from dust.

**3** Remove the tool and put it away.
- If the day's operations are finished, remove the cutter, depth regulator nose. Use a dry cloth to wipe away any grime, cap the cutter, and put it away.

**4** Switch off the power to the EGX-30.

**5** Close the software application and switch off the computer.

**6** If engraving was performed, vacuum up any cuttings.

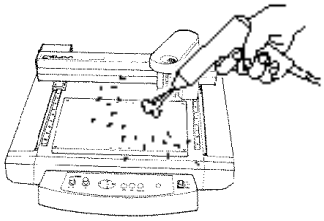
# 9 Maintenance

## These are maintenance tasks that should be performed by the user.

### Cleaning the Unit

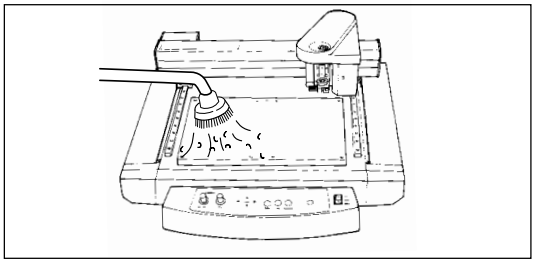
#### ⚠CAUTION

**Use a vacuum cleaner to remove cutting dust. Do not use any blower like airbrush.**
Otherwise, dust spread in the air may harm your health or damage this machine.



**NOTICE** When cleaning the EGX-30, make sure that the main unit's power OFF.

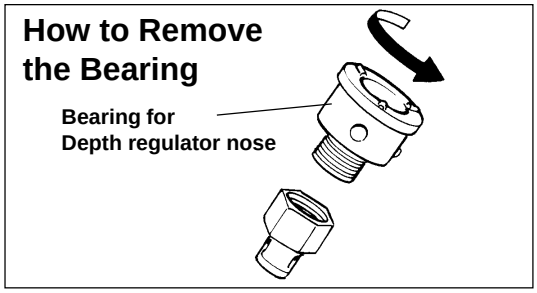
Use a dry cloth to clean the unit.
When engraving has been performed, use a whisk broom or a vacuum cleaner to clean up any cuttings.



### Replacing the Bearing for the Depth Regulator Nose (Option: DRN-20)

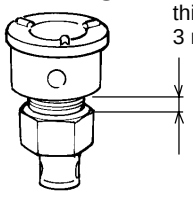
When engraving is performed, cuttings may get inside the bearing, resulting in a strange noise.
Because this can also degrade the quality of engraving, replacement of the bearing after every 100 hours of engraving is recommended. (New bearings can be purchased from your vendor.)

**How to Remove the Bearing**




**How to Install the Bearing**

Screw on the bearing for the depth regulator nose until this space is approximately 3 mm (1/8 in.).




## Recommended Service Checking

Please be aware that the following maintenance tasks are charged, even when performed within the unit's warranty period.

### Replacement of spindle motor

The spindle motor is a part that will eventually wear out. After extended use, strange noises may be heard from the motor, or the motor may fail to turn.
As a guideline, the spindle motor should be replaced after every 2000 hours of use.

### Replacement of spindle belt

Like the motor, the belt is a part that wears out.
As a guideline, the spindle belt should be replaced after every 2000 hours of use.

# 10 If There's a Problem...

If operation of the EGX-30 becomes abnormal, immediately switch off the power to the unit.

## No Power

Is the power cord plugged in correctly?

Make sure the power cord is plugged in securely.

Is the power switch set to ON?

Make sure the power is turned on.

## No Operation When Commands Are Sent from the Computer

Are the computer and the EGX-30 connected correctly?

Make sure the cable to the computer is securely connected.

Is the power switch set to ON?

Make sure the power is turned on.

Is the application software functioning correctly?

Check the state of the computer and software.

Are the computer (software) settings correct?

Refer to the documentation for the computer and software application to make the correct settings.

## The Material Is Not Cut Correctly

Is the cutter broken?

Replace the cutter with a new one.

Are there any cuttings scraps adhering to the tip of the cutter?

Remove the cutter and wipe the tip with a soft cloth.

Is the right combination of tool and material being used?

Refer to **"About Tools and Materials"** and choose the appropriate tool for the material to be cut.

Has the correct cutting mode been selected?

Check the **SELECT** setting on the operation panel.

Is the material secured in place so that it will not move or come loose?

Refer to **"Loading the Material"** and use the appropriate method for the material type to secure the material in place.

Is the tool securely tightened so that it will not move or come loose?

Refer to **"Installing a Tool"** to install the tool securely.

## Output Results Are Shifted from the Desired Location

Has the origin point been set correctly?

Refer to **"Setting the Origin Point"** to set the material's origin point correctly.

If the material has been changed, is it positioned differently than before?

Check the position where the material is loaded.

# Appendix A List of Options

| Item | Model number | Description | |
|---|---|---|---|
| Character cutter | ZEC-A2013 | High speed steel | ϕ 3.175 x 114(L) x 0.127(W) |
| | ZEC-A2025 | | ϕ 3.175 x 114(L) x 0.254(W) |
| | ZEC-A2051 | | ϕ 3.175 x 114(L) x 0.508(W) |
| | ZEC-A2076 | | ϕ 3.175 x 114(L) x 0.762(W) |
| Flat cutter | ZEC-A2150 | High speed steel | ϕ 3.175 x 114(L) x 1.52(W) |
| | ZEC-A2190 | | ϕ 3.175 x 114(L) x 1.91(W) |
| | ZEC-A2230 | | ϕ 3.175 x 114(L) x 2.29(W) |
| | ZEC-A2320 | | ϕ 3.175 x 114(L) x 3.175(W) |
| Diamond scraper | ZDC-A2000 | Diamond | ϕ 3.175 x 127(L) |
| Bearing for the depth regulator nose | DRN-20 | 3 pieces | |
| Adhesive sheet for securing material | AS-10 | 210 x 140 mm (8-1/4 x 5-1/2 in.) 10 sheets | |

Unit : mm
ϕ : Cutting tool diameter
L : Cutting tool length
W : Blade width
D : Blade diameter

# Appendix B Instruction Support Chart

The EGX-30 comes with CAMM-GL II, and supports the following commands.
However, these commands are not supported in mode 1.
A "CAMM-GL II Programmer's Manual" is available for separate purchase for those wishing to create their own programs for this machine. For further information, please contact the nearest Roland DG Corp. dealer or distributor.

### mode 2

| Instruction | Compatibillity | Instruction | Compatibillity | Instruction | Compatibillity | Instruction | Compatibillity | Instruction | Compatibillity | Instruction | Compatibillity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AA | ○ | DR | ○ | IP | ○ | OI | ○ | PU | ○ | SS | ○ |
| AR | ○ | DT | ○ | IW | ○ | OO | ○ | RA | ○ | TL | ○ |
| CA | ○ | EA | ○ | LB | ○ | OP | ○ | RR | ○ | UC | ○ |
| CC | ○ | ER | ○ | LT | ○ | OS | ○ | SA | ○ | VS | ○ |
| CI | ○ | ES | X | OA | ○ | OW | ○ | SC | ○ | WD | ○ |
| CP | ○ | EW | ○ | OC | ○ | PA | ○ | SI | ○ | WG | ○ |
| CS | ○ | FT | ○ | OE | ○ | PD | ○ | SL | ○ | XT | ○ |
| DF | ○ | IM | ○ | OF | ○ | PR | ○ | SM | ○ | YT | ○ |
| DI | ○ | IN | ○ | OH | ○ | PT | ○ | SR | ○ | | |

### Others

| Instruction | Compatibillity | Instruction | Compatibillity | Instruction | Compatibillity |
|---|---|---|---|---|---|
| !VZ | ○ | !ST | ○ | !NR | ○ |

Compatible. ..... ○
Ignored. ..... ●
Incompatible. ..... ×

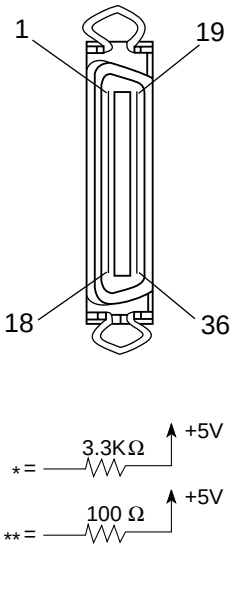
# Appendix C Specifications

| | |
|---|---|
| Table | 305 mm (X) x 205 mm (Y) (12 in. x 8-1/16 in.) |
| Max. Operation area | 305 mm (X) x 205 mm (Y) (12 in. x 8-1/16 in.) |
| Feed rate | X, Y-axis: Max. 3.0 m (118-1/16 in.)/min. (50 mm (1-15/16 in.)/sec.) |
| Mechanical resolution | 0.01 mm (0.000394 in.)/step 0.00125 mm (0.0000492 in.)/step ( micro-step control ) |
| Software resolution | 0.01 mm (0.000394 in.)/step |
| Distance accuracy | Whichever the greater value of ±0.1 mm (±0.00394 in.) or ±0.5% of moving distance |
| Right-angle accuracy | ±1 mm (305 mm) (±0.0394 in. (12-1/16 in.)) |
| Spindle motor | 15 W ( DC motor ) |
| Revolution speed | 5,000 to 10,000 rpm. |
| Engraving tool mounting diameter | 3.175 mm (1/8 in.) |
| Number of tool up/down | 1 per sec. |
| Interface | Parallel (in compliance with the specification of Centronics)<br>Serial (under RS-232C standard) Automatic switching |
| Buffer size | 2 KB |
| Instruction system | CAMM-GL II mode2 |
| LED | Operation indicators 2 (PAUSE/VIEW, ORIGIN POINT/SET ORIGIN POINT)<br>Mode indicators 2 (ENGRAVER, SCORE ) |
| Control keys | ▲, ▼, ►, ◄, SET SURFACE / TEST, PAUSE / VIEW,<br>ORIGIN POINT / SET ORIGIN POINT, SELECT |
| Power consumption | 0.6 A / 117 V 0.4 A / 220 to 230 V 0.4 A / 230 to 240 V |
| Acoustic noise level | Operation mode: 70 dB (A) or less Standby mode: 40 dB (A) or less<br>(According to ISO 7779) |
| External dimensions | 513 mm (W) x 491 mm (D) x 217 mm (H) (20-1/4 in. (W) x 19-3/8 in. (D) x 8-9/16 in. (H) ) |
| Weight | 15.5 kg (34.2 lb.) |
| Operation temperature | 5 to 40 °C (41 to 104 °F) |
| Operation humidity | 35 to 75% ( no condensation ) |
| Accessories | Power cord: 1, Dust collector hose and duct: 1,<br>Character cutter: 1, Engraving-tool holder: 1, Diamond scraper adapter: 1,<br>Hexagonal screw driver: 1, Spanner: 1, Hexagonal wrench: 1,<br>Test material: 1, Adhesive sheet for securing material: 1,<br>Roland Software package CD-ROM: 1, User's manual: 1 |

# Interface specification

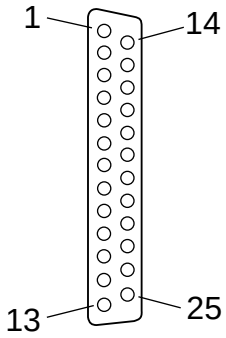
| | |
|---|---|
| [Parallel] | |
| Standard | In compliance with the specification of Centronics |
| Input signal | $\overline{\text{STROBE}}$(1BIT), DATA(8BIT) |
| Output signal | BUSY(1BIT), $\overline{\text{ACK}}$(1BIT) |
| I/O signal level | TTL level |
| Transmission method | Asynchronous |
| [Serial] | |
| Standard | RS-232C specification |
| Transmission method | Asynchronous, duplex data transmission |
| Transmission speed | 9600 |
| Parity sheck | None |
| Data bits | 8 bits |
| Stop bits | 1 bit |
| Handshake | Hardware |

## Parallel connector (in compliance with specifications of Centronics)

| Signal number | Terminal number | | Signal number | Pin connection |
|---|---|---|---|---|
| NC | 36 | 18 | HIGH** |  |
| HIGH* | 35 | 17 | GND | |
| NC | 34 | 16 | GND | |
| GND | 33 | 15 | NC | |
| HIGH* | 32 | 14 | NC | |
| NC | 31 | 13 | HIGH* | |
| GND | 30 | 12 | GND | |
| GND | 29 | 11 | BUSY | |
| | 28 | 10 | ACK | |
| | 27 | 9 | D7 | |
| | 26 | 8 | D6 | |
| | 25 | 7 | D5 | |
| | 24 | 6 | D4 | |
| | 23 | 5 | D3 | |
| | 22 | 4 | D2 | |
| | 21 | 3 | D1 | |
| | 20 | 2 | D0 | |
| | 19 | 1 | STROBE | |



## Serial connector (RS-232C)

| Signal number | Terminal number | | Signal number | Pin connection |
|---|---|---|---|---|
| NC | 25 | 13 | NC |  |
| NC | 24 | 12 | NC | |
| NC | 23 | 11 | NC | |
| NC | 22 | 10 | NC | |
| NC | 21 | 9 | NC | |
| DTR | 20 | 8 | NC | |
| NC | 19 | 7 | SG | |
| NC | 18 | 6 | DSR | |
| NC | 17 | 5 | CTS | |
| NC | 16 | 4 | RTS | |
| NC | 15 | 3 | RXD | |
| NC | 14 | 2 | TXD | |
| | | 1 | FG | |

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