# Cyborg X-300 Desktop Engraver - Table of Contents

## Introduction


- General introduction - Safety Instructions
  - Safety before all – General safety instructions
  - List of warning, mandatory and prohibition signs
  - Warning labels
  - Machine label
- Technical Specifications
- Handling and use


## Chapter 1 – Getting started


### 1.1. Features

- 1.1.1. Rotary engraving
- 1.1.2. Diamond scratching

### 1.2 Component names and functions

- 1.2.1. Front view
- 1.2.2. Rear view
- 1.2.3. Virtual keypad


## Chapter 2 – Installation and setup


### 2.1. Installation environment

### 2.2. Unpacking

- 2.2.1. Unpacking
- 2.2.2. Checking the contents of the box

### 2.3. Cable connections

- 2.3.1. Checking the supply voltage
- 2.3.2. Connecting the power cable
- 2.3.3. Connecting the X-300 to your computer or network

### 2.4. Installing and setting up the software


- 2.4.1. System requirements
- 2.4.2. Installing the Cyborg virtual pendent for a standalone computer
- 2.4.4. Registering and starting the Cyborg pendent software
- 2.4.5. Installing the “Symmetry” engraving software
- 2.4.6. Using other third party software


# Chapter 3 – Preparing and executing an engraving job

### 3.1. Switching the power on and off


- 3.1.1. Switching the power on
- 3.1.2. Switching the power off


### 3.2. Securing the engraving material onto the engraving table


- 3.2.1. Using the standard included flat engraving table
- 3.2.2. Using the “MultiMat” sheet
- 3.2.3. Using the optional “Auto centre vise”
- 3.2.4. Using the optional “Vacuum table”


### 3.3. Setting up a tool


- 3.3.1. How to use the cutter calibration stand
- 3.3.2. Installing an engraving tool
- 3.3.3. Installing a scoring tool
- 3.3.4. Installing a diamond scratch tool
- 3.3.5. How to remove a tool from the spindle


### 3.4. Setting the engraving depth


- 3.4.1. Calibrating and using the depth regulator nose
  - 3.4.1.1. Calibrating the depth regulator nose and the calibration stand
  - 3.4.1.2. Using the depth regulator nose
    - in combination with Auto Z control
    - without Auto Z control
- 3.4.2. Use of the spindle pressure spring
  - 3.4.3.1. Locking the pressure spring for engraving without depth regulator nose
  - 3.4.3.2. Auto plate surfacing with unlocked spring and engraving with locked spring
  - 3.4.3.3. Surface mapping with unlocked spring and engraving uneven surfaces with locked spring


### 3.5. How to cut materials


- 3.5.1. Materials rotation speed and feed

- 3.5.2. Two-way engraving metals
- 3.5.3. Adjusting feeds and speeds
- 3.5.4. Pause button
- 3.5.5. Cancelling the engraving job
- 3.5.6. Proximity restart
- 3.5.7. Restarting the engraving job using "job console"

### 3.6. Controlling the X-300 using the ‘virtual keypad’

- 3.6.1. Keypad overview
  - Introduction - General overview
  - Function keys
  - Settings screen
- 3.6.2. Setting and saving origin points
- 3.6.3. Choosing Z modes

## Chapter 4 – Maintenance and cleaning

### 4.1. Cleaning – a must to prolong your machine’s lifetime

### 4.2. Periodical maintenance

- 4.2.1. Daily
- 4.2.2. Weekly
- 4.2.3. Monthly
- 4.2.4. Annual

### 4.3. Basic maintenance

- 4.3.1. Replacing the spindle belt
- 4.3.2. Tensioning the timing belts
- 4.3.3. Removing the machine covers

### 4.4. Overview of maintenance activities

## Chapter 5 – Troubleshooting

### 5.1. The machine does not initialize

### 5.2. The spindle does not rotate

### 5.3. The engraving results are poor

### 5.4. No connection between machine and computer

**5.5. Symmetry has not been set up with the right driver**

# Chapter 6 – Electrical rating and identification plate

nog blanco in het Word-document - verplaatst naar Introduction (specs) en 1.2.4. (identification plate)

**(6.1. Power consumption)**

**(6.2. Identification plate and serial number)**

---

# Chapter 7 – Options


- 7.1. Vacuum converter
- 7.2. Self centering vise
- 7.3. Jigs for the clamping vise
- 7.4. Output signal for switching on and off an external device at the beginning and the end of a job
- 7.5. Output signal for switching on and off an external device at every spindle up/down move


---

# Appendices

**A. Thesaurus: a glossary with specific terms about all things computerized engraving as being used in this manual.**

**B. G-code and M-code protocol for the Cyborg controller.**

From:
https://manuals.cyborg-engravers.com/ - **cyborg-engravers**

Permanent link:
**https://manuals.cyborg-engravers.com/doku.php?id=en:x300:table_of_contents&rev=1663753213**

Last update: **2022/09/21 11:40**