ICONIC**CNC**™

i2015 CNC Router / Owner's Manual

We are *honoured* that you chose ICONIC CNC
for your all of your CNC needs.

This Owner's Manual contains everything that you will need to understand the safety requirements and functionality of your i2015. We would also encourage you to visit our website, to enjoy our *full* user experience, as we have created several training resources for our customers.

www.iconiccnc.com

Our Training Videos section is full of step-by-step tutorials for all aspects of your CNC machine, including machine setup, assembly, learning your design software, machine operation, and much more. We are continually adding resources as we receive feedback from our customers regarding what *you* would like to learn more about.

If you have any questions or concerns, you are always welcome to contact us via the Support section; our Team is always available to lend a hand in whatever you may need. We want to ensure that you get the most out of your ICONIC CNC experience.

Thank you.

- Steve & Jeremy Stevenson
Co-Founders of ICONIC Inc.

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ICONICCNC i2015 Specifications

Item	Description	Specifications
Table Size	Width x Length	23.75" x 25" (604mm x 635mm)
Travel	Max. Carving Area (XYZ)	20" x 15" x 4" (508mm x 381mm x 102mm)
Cutting Tools	Shaft Size	1/4" and 1/2" (6mm and 12mm)
	Types	Conical Bit: 1/32" Radius Ball-Nose End Mill: 1/8" Diameter V-Bit: 1/4" x 60° V-Bit: 1/2" x 90°
	Max. Cutting Depth	1" (25.4mm)
Spindle	RPM	6,000~20,000 RPM
	Motor	0.8HP, 600w Brushless DC Motor
X & Y Ball Screw	Diameter x Pitch	Diameter = 16mm x Pitch = 10mm
	Thread	Ball Thread
	Nut Number	Single Nut
	Nut Material	SCM415H
Z Ball Screw	Diameter x Pitch	Diameter = 16mm x Pitch = 5mm
	Thread	Ball Thread
	Nut Number	Single Nut
	Nut Material	SCM415H
Rail	Igus Brand	10mm
	No. of rails per X/Y/Z	2
	No. of blocks per X/Y/Z	4
Feed Speed	Max. Speed of X/Y/Z	X, Y = 236"/minute, Z = 118"/minute
	Positional Accuracy	0.002" (0.05mm)
	Reposition Accuracy	±0.002" (±0.05mm)

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ICONICCNC i2015 Specifications (Cont.)

Item	Description	Specifications
Step Motor	X/Y/Z Max. Torque	98 oz-in (0.69N-m)
	X/Y/Z Step Angle	1.2°
	X/Y/Z Voltage & Current	24V/Phase (Max.) & 3A/Phase
Control Interface	LCD	1" x 3" (26mm x 78mm)
	Display Characters	12 x 4
	Control Panel Size	5.5" x 5.7" (140mm x 145mm) (incl. LCD & Keyboard)
	Status Light	Red / Green
	Data Interface	USB Port (x1)
Limit Switch	No. of Switches per Axis	2
Dimensions	Machine Height	26.33" (669mm)
	Space (Width x Length)	34.25" x 34.5" (870mm x 877mm)
	Machine Weight	163lbs (74 kg)
Other	Power In	AC 120V 6A 60Hz
	Power	720 W
	Design Software	iPicture & ArtCAM Express

Routine Maintenance

The X/Y/Z rails on the i2015 are specially-designed rails, and are completely maintenance-free; No grease application is ever required. If any of the Axis' produce a high-pitch sound, simply apply some WD-40, and then wipe any excessive oil with a clean cloth. For X/Y/Z Ball Screws, you may use GISO68 (SAE20) or lighter grease, if you believe that it is necessary.

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Pre-Operation Warning

Please read this manual thoroughly before operating the machine. ICONIC Inc. reserves the right to alter its contents without prior notice. This machine is designed for wood/plastic carving only. Do not tamper and operate this machine for any application other than for which it is designed. Any alteration may result in a serious injury, and will void all warranties. Please read and understand all warnings and operating instructions. Basic safety precautions should be followed to avoid the risk of personal injury when operating the machine.

1.   Do not block the Emergency Stop Button.

2.   To reduce the risk of electric shock, do not operate the machine with wet hands.

3.   Do not wear gloves when operating the machine.

4.   Before turning the power on, make sure that the surroundings are clear of obstacles.

5.   Do not touch the spindle or cutting tools with bare hands before the machine has completely stopped.

6.   Read warning labels. Replace warning labels when they become illegible or are missing.

7.   Always power off the machine when machine is not in operation.

8.   Please install the software and the unit as instructed.

9.   Please contact us via phone (1.800.288.2961) or online (iconiccnc.com) for support.

Warning Labels
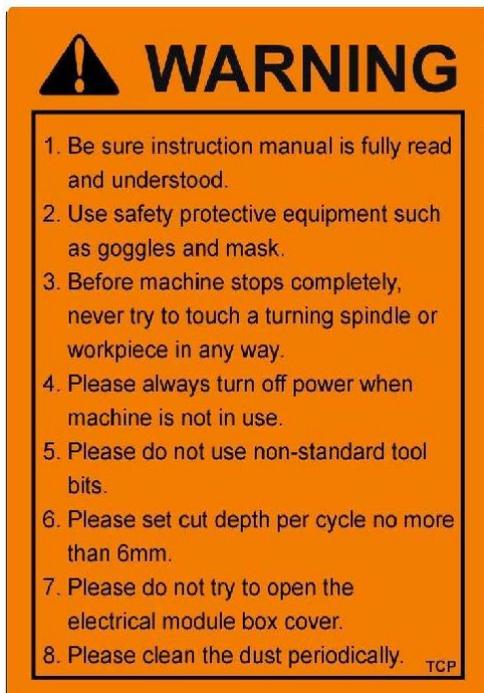
Machine Safety

1.   For support/warranty purposes, keep a record of your machine's model & serial number.

2.   Ensure the power is off before installing a new cutting tool.

3.   To avoid the risk of danger, make sure that the workpiece is properly secured.

4.   Please use a collet that match cutting tools (See Chapter 2).

5.   Be sure to apply recommended lubricant.

6.   Be sure to home X/Y/Z axes when the power source is unstable or after emergency button is pressed.

Electrical Safety

1.   To ensure safety, all maintenance should be made by a knowledgeable technician.

2.   To ensure safety, be sure ground wire is connected properly.

3.   Do not tamper with the safety cover, limit switch or any other accessories
(see 1. Safety - Components Section).

4.   To avoid electrical shock, do not contact Control Board, Power Supply Board, Motor, Control Box when the power is on.

5.   Power off the machine when power supply is unstable.

6.   To prevent electromagnetic interference, A) please avoid connecting power cord to an extension cord. Connect the power cord of the machine to an independent power supply is highly recommended. B) Not connecting dust collector power to the machine power outlet is highly recommended.

Environment Safety

1.   Ensure machine is placed in steady ground.

2.   Store machine in dry environment. Avoid exposure to direct sunlight. Suggested room temperature: 0°C ~ 45°C. Relative Humidity: 40% ~ 75%

FOR YOUR OWN SAFETY, PLEASE READ THE INSTRUCTION MANUAL BEFORE OPERATING TOOLS:

1. KEEP GUARDS IN PLACE and in working order.

2. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

3. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

4. 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.

5. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.

6. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.

7. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.

8. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

9. USE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table A shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

10. WEAR PROPER APPAREL Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

11. ALWAYS USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

12. SECURE WORK. Use clamps or a vice to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.

13. DON'T OVERREACH. Keep proper footing and balance at all times.

14. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

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Safety Guidelines (Cont.)

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

16.   REDUCE THE RISK OF UNINTENTIONAL STATING. Make sure switch is in off position before plugging in.

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

18.   NEVER STAND ON TOOL Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.

19.   CHECK DAMAGED PARTS. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function - check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

20.   DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

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

22.   NO ADJUSTMENT SHOULD BE MADE UNTIL THE TOOL HAS BEEN STOPPED.

23.   Keep the hands off cutting bit when the tool is operating.

24.   Wear eye protection at all times.

Ampere Rating		Volts	Total Length of Cord (in Feet)			
		120	25	50	100	150
		240	50	100	150	300
More Than	Not More Than		Minimum Gage for Cord			
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

(Table A)

Grounding Instructions

1.　　All grounded, cord-connected tools: In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

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

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.
Check with a 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 cord immediately.

2.　　Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150 volts: This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Sketch A in Fig. 1. The tool has a grounding plug that looks like the plug illustrated in Sketch A in Fig. 1. A temporary adapter, which looks like the adapter illustrated in Sketch B and C, may be used to connect this plug to a 2 pole receptacle as shown in Sketch B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. This adapter is not permitted in Canada. The green-coloured rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

(Fig. 1)

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Hazardous Areas

Hazardous Area

Hazardous Area

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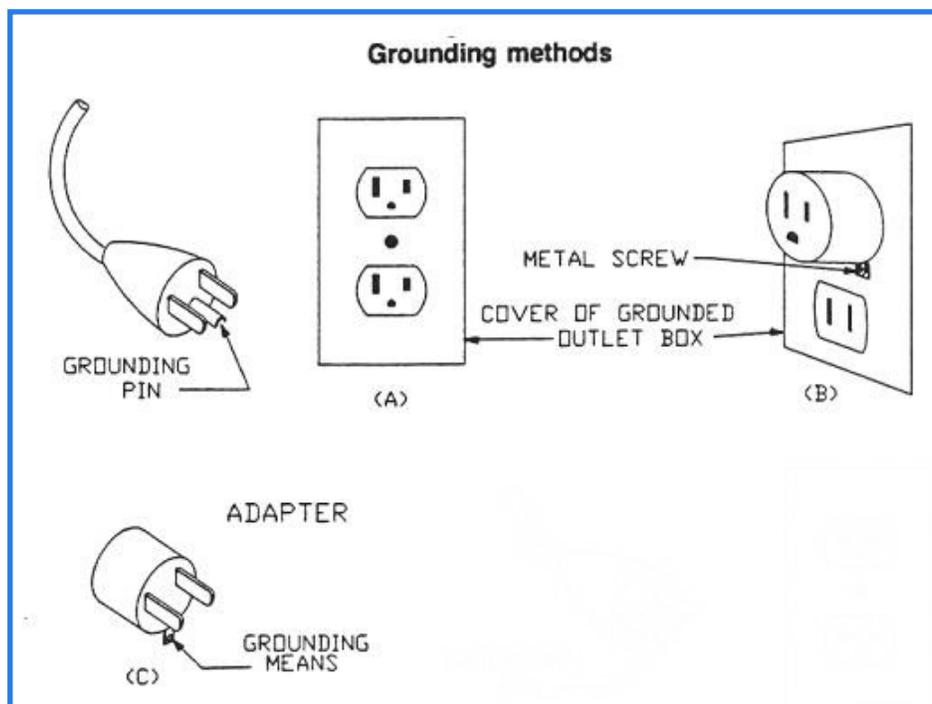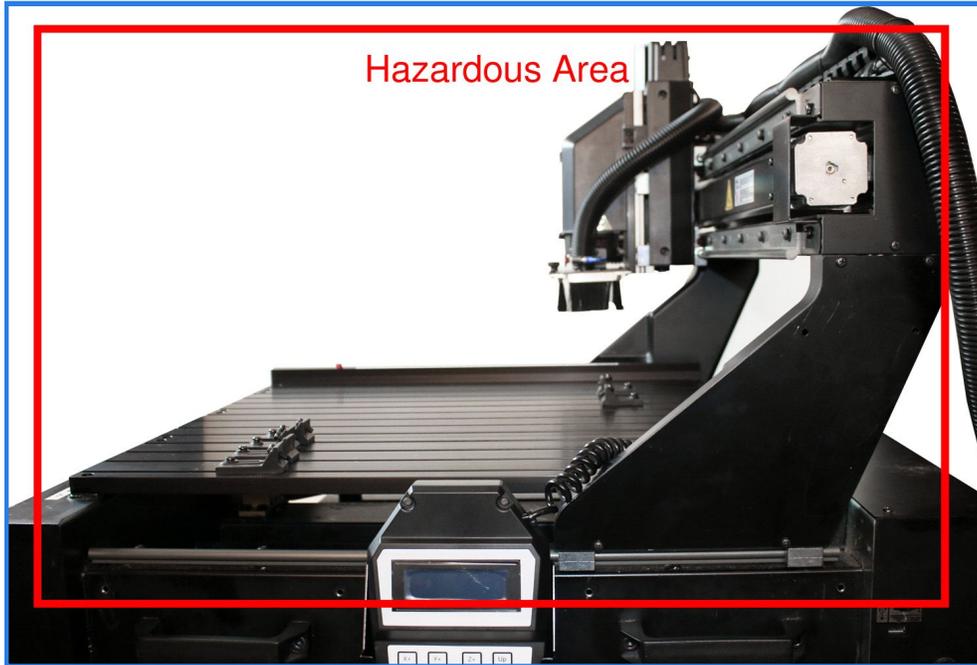
Machine Components

No.	Description	No.	Description
1	Z-Axis Stepper Motor	9	Z- Limit Switch
2	X-Axis Stepper Motor	10	Y- Limit Switch
3	Brushless DC Spindle Motor	11	Y+ Limit Switch
4	Y-Axis Stepper Motor	12	X- Limit Switch
5	USB Port	13	X+ Limit Switch
6	Main Power	14	Z-Axis Auto Tool Indexer
7	Emergency Stop Button	15	Tool Bit Change Safety Button
8	Z+ Limit Switch		

Unpacking Your ICONICCNC Machine

Please unpack your CNC machine with care. It should be removed from the packaging and set on a sturdy surface using the handle on the sides of the machine, which will require two individuals. The i2015 comes fully assembled, and is ready for operation once the Owner's Manual has been read. This machine was designed for wood and plastic carving only. Warranty voids if users intend to carve or metal (or other non-approved) material.

All instructions and tutorials for your i2015 CNC machine can be found on our website (www.iconiccnc.com) under the Training Videos section.

Decibel Levels

1.   When machine is under dry run operation, decibel level should be <85db.

2.   Decibel is measured from the front of the machine, in which the operator's distance to the spindle should be approximately 50cm. Measured Front, Back, Right, and Left of the machine.

Machine Structure

X, Y & Z-Axis Ball Screw Transmissions are driven by 3-Phase Stepper Motors. X & Z Axis Drive with Couplers, and the Y-Axis drivers with a Timing Belt (to reduce machine's overall size)

Spindle system is built with 20,000 RPM high-speed Brushless DC Spindle Motor. It is capable of operating continuously for several hours without the need to stop, or extra cooling.

Electrical Systems & Controls

1.   **Control System:** Composed of Control Circuit Board.

2.   **Power System:** Composed of Power Supply.

3.   **Transmission System:** Composed of Spindle Circuit Board.

4.   **HMI (Human Machine Interface):** For machine operation.

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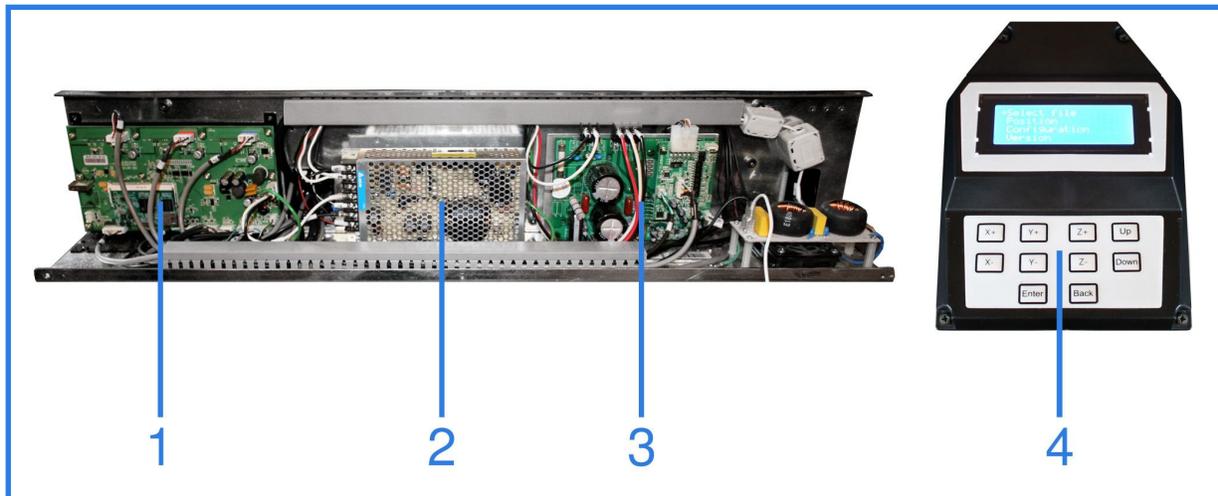
X, Y, Z Movements
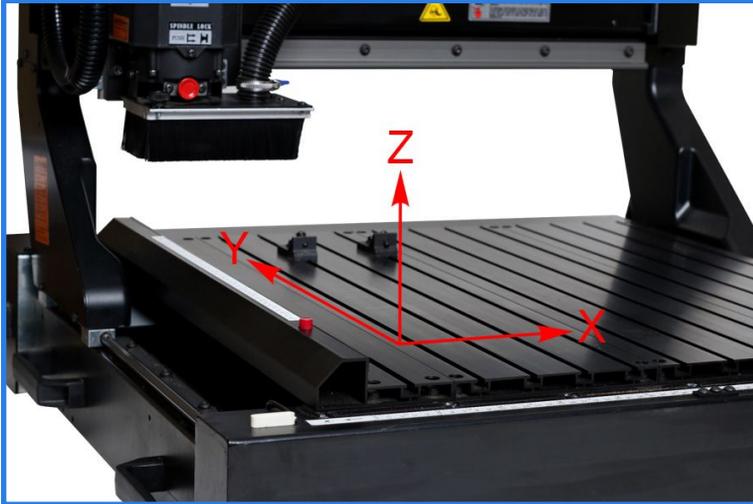
X+ Moves Spindle to the Right

X- Moves Spindle to the Left

Z+ Moves Spinde Up

Z- Moves Spindle Down

Y+ Moves Spindle Backwards

Y- Moves Spindle Forwards

Installing Cutting Tools

1. Press round pin.

2. Lock cutting tool nut manually.

3. Insert tool into the net.

4. Lock down the nut manually until bit is secure.

5. Secure nut tightly with open-end wrench.

6. Follow these instructions to remove bits.
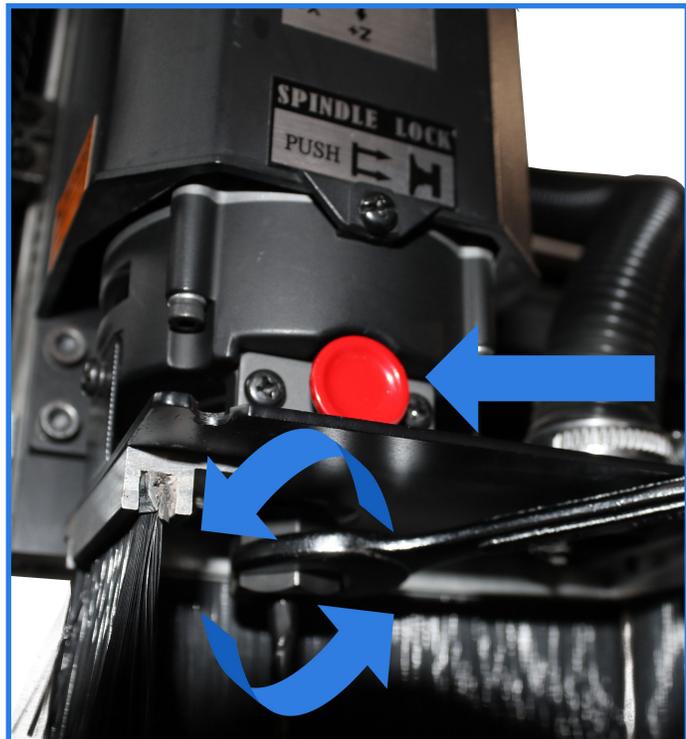
Standard Tooling

Tool	Description	Suitable For
	60° V-Bit 1/4" (6mm) 60 Degrees	Sign-making Decorative machining
	90° V-Bit 1/2" (12mm) 90 Degrees	Sign-making Decorative machining

Tool	Description	Suitable For
	Conical Bit 1/4" (6mm) R = 0.8mm	Carving 3D models Projects with fine details
	End Mill 1/4" (6mm) D = 3.2mm	Area Clearances Cutting out individual parts

Tool Box Contents

1. Conical Bit
2. End Mill
3. 60° V-Bit
4. 90° V-Bit
5. 1/4" Collet Nut
6. 1/2" Collet Nut
7. Open-End Wrench (11mm x 13mm)
8. Double-Ended Screw Driver
9. Open-End Wrench (22mm x 24mm)
10. Brush
11. 3D Greyscale Image Library DVD
12. USB Stick (with iPicture Software)

Setting Up A Project

1. Plug in your USB Stick, which contains your G-Code files. Turn on machine's power. A welcome message will appear on the LCD Screen; press the **Enter** key on your Keypad, which will move the Spindle to its default Home Position. Handheld controller will ask you to confirm that there is a USB Stick inserted. Press Enter to continue.

2. The LCD screen will display the Main Menu. Move the cursor to **Select File**, and press **Enter** to browse the files located on your USB Stick.

3. Browse the USB directory (which is able to display 48 files max.), move the cursor to select the desired file, and press **Enter**.

4. Choose **Manual Jog Mode** to set your Position of Origin.

5. Using the X+, X-, Y+, Y-, Z+, Z- keys, move the Spindle on the 3 Axis' to set your Position of Origin (the tool should be touching the top of the material on the Z Axis).

6. Move the cursor to **Enter to set ORG**, and press **Enter** to set the new Position of Origin.

7. Coordinates Confirmation message will pop up. *Mark these coordinates down if you are running the same operation multiple times, or if you are using a multi-tool operation. Refer to "Repeating Origin Setting" in this Manual.* Press **Enter** to continue. All values should change to **0.0mm**, indicating that this is the new Position of Origin.

8. Press **Back** on your handheld controller to proceed.

9. If you would like, you may choose to use the **Border** function (not required), which will run a simulation of the projects dimensions, to ensure that your project will not hit a limit switch or go beyond your material size.

10. Select **Process** to begin machine operation. Move the cursor to select machining speed:

Speed	Default Feedrate	Spindle Speed	Suitable For
Smart Low	600mm/min	20,000 RPM	Hard Materials, 5-8mm Depth Per Pass
Smart Normal	2,400mm/min	20,000 RPM	Router/Raster Carving, 3-5mm Depth
Smart High	4,800mm/min	20,000 RPM	Soft Materals, 0-3mm Depth
Custom Speed	600 - 6,000mm/min (Parameter must be set in G-Code file)	6,000 - 20,000 RPM (Parameter must be set in G-Code file)	Advanced machining

11. Operation will begin by going through Z-Axis Auto Indexer process (see Page 20). **Please follow Safety Instructions, and ensure that your material is properly secured to the table.**

Using On-Board SD Card Storage

To avoid accidental USB disconnection during operation, users may choose to transfer their G-Code files from the USB Stick to the Onboard SD Card.

1. Plug in your USB Stick, which contains your G-Code files. Turn on machine's power. A welcome message will appear on the LCD Screen; press the **Enter** key on your Keypad, which will move the Spindle to its default Home Position.Handheld controller will ask you to confirm that there is a USB Stick inserted. Press Enter to continue.

2. The LCD screen will display the Main Menu. Move the cursor to **Select File**, and press **Enter** to browse the files located on your USB Stick.

3. Locate the desired file, and press the **Y+** key to save the file to the SD Card.

4. Upon completion, move the cursor to **Configuration**, and press **Enter**, followed by **System Setting**.

5. Move the cursor to **Disk:USB**, and press **Enter**. The cursor will become a solid block, indicating that this option has been selected; press the **Down** button to change to **Disk:SD**.

6. Press **Back** to confirm selection, and move the cursor down to select **Save**. Press **Enter** to save these settings.

7. USB Stick can be safely removed.

8. Move the cursor to **Select File**, and press **Enter** to browse the files located on the SD Card. To delete these files, simply move the cursor to the appropriate file name, and press the **Y-** key to delete.

Repeating Position Of Origin Setting

When carving the same project multiple times, users may choose to re-use a Position of Origin, rather than manually setting it each time. There are two options available.

1. From the Main Menu on your handheld controller, select **Configuration**, followed by **Reset To Origin**. Select **Work Coordinate**. The LCD will display the last-used Position of Origin. Press **Enter To Continue** to repeat the origin setting. (Selecting **Machine Coordinate** within this menu will reset the machine to its default Position of Origin.)

2. From the Main Menu on your handheld controller, select **Position**, followed by **Coordinate Mode**. Select the desired Axis to adjust, and press **Enter**. The cursor will turn to a solid block, indicating that it is ready to set its coordinates. Press the **Up/Down** keys to input the coordinate setting. Once completed, press **Back**, and select **Move and Set ORG**.

Adjusting Manual Jog Speed

The default jogging speed (level 2) can be adjusted manually, from 0.6 - 3.6M/min.

1.　　From the Main Menu on your handheld controller, select **Position**.

2.　　Select **Manual Jog Mode**.

3.　　Move the cursor the the desired Axis, and press **Enter**.

4.　　The cursor will become a solid block, indicating that this Axis has been selected. Press the **Up/Down** key to change the speed (between levels 1 - 6).

5.　　Press **Back** once the appropriate speed is selected.

Setting Spindle On/Off

Users may turn the Spindle On/Off for manual jogging, and to test the Spindle. This is only recommended for advanced users, or when instructed by our Service Team.

1.　　From the Main Menu on your handheld controller, select **Position**.

2.　　Select **Spindle Motor Off**, and press **Enter**. Cursor will turn to a solid block, indicating that this option was selected.

3.　　Press **Up/Down** key to turn the Spindle Motor on/off. Press **Back** to exit. *Please use the appropriate safety measures when the Spindle Motor is on.*

Setting Imperial/Metric Unit

The default unit is Metric, and can be switched to inch (per the customer's preference).

1.　　From the Main Menu on your handheld controller, select **Configuration**, followed by **System Setting**.

2.　　Select **Unit:mm**, and press **Enter**. Cursor will turn to a solid block, indicating that this option was selected.

3.　　Press **Up/Down** key to toggle between Metric (mm) and Imperial (in).

4.　　Press **Back** to set the unit, and scroll down to **Save**. Press **Enter** to save setting.

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Activating Safety Enclosure Sensor

When the Safety Enclosure is chosen (optional accessory), users may Activate/ Deactivate the Safety Enclosure Sensor. When the sensor is activated, the Spindle Motor will come to an immediate stop when the enclosure is lifted. To resume machine operation, the enclosure must be properly closed again. If there is no Safety Enclosure installed on the machine, the sensor setting should remain Off at all times.

1.	From the Main Menu on your handheld controller, select **Configuration**, followed by **System Setting**.

2.	Select **Cover:Off**, and press **Enter**. Cursor will turn to a solid block, indicating that this option was selected.

3.	Press **Up/Down** key to toggle between Cover:On and Cover:Off.

4.	Press **Back** to set the unit, and scroll down to **Save**. Press **Enter** to save setting.

Z-Axis Auto Indexer & Tool-Change Safety

Some projects may require multiple tools, and the user will need to change the tool mid-operation. The i2015 comes with a Z-Axis Auto Indexer, which will automatically measure the length of the tools, to avoid having to reset the Z-Axis Position of Origin during operation. The machine is also equipped with a Tool-Change Safety switch, to prevent accidental injury to a tool change.

1.	Begin your G-Code operation, using standard machine operation procedures. The machine will identify that there are multiple tools in the G-Code. Machine will begin operation by moving to the Z-Axis Auto Indexer to measure the first tool. It will request that you ensure that the Auto Indexer is clean. Press **Down** and choose **Continue**.

2.	The Spindle will move to the center of the table, ready for tool change. *The machine will go through the following process for each tool, including the first tool, though it is not required that you change the tool initially.* A message will pop up to remind the user to turn on the **Tool Change Safety** switch. Choose **Yes** once the switch is set to **On**, and press **Enter**. *Please ensure that the switch is turned on, which will cut power from the Spindle Motor, prior to tool change.*

3.	The LCD will display the name of the next required tool. With the Tool Change Safety switch set to On, it is now safe to replace the tool (expect for the first tool, which should already be installed). Once properly installed, press **Continue**.

4.	A message will pop up to remind the user to turn off the **Tool Change Safety** switch. Choose **Yes** once the switch is set to **Off**, and press **Enter**. *The Spindle will not be able to activate for operation unless the switch is turned off.*

5.	Repeat process as necessary, based on the number of tool changes required.

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ICONICCNC i2015 Parts List

Part Number	Internal Ref. #	Description	Specifications	Quantity
1	490777-000	LED (Green)		1
2	490778-000	LED (Right)		1
4	000303-101	Phillips Head Screw	M5*0.8P*6	11
5	280182-000	Spring		1
6	251083-615	Spindle Front Cover		1
7	360931-908	Pin		1
8	000303-103	Phillips Head Screw	M5*0.8P*10	26
9	172744-902	Steel Plate		1
10	000103-103	CAP Screw	M6*1.0P*12	23
11 Complete	924084-000	Collet Complete		
11.1	381044-000	Conical Bit	R1/32” x 1” x 1/4” x 2.36L	1
11.2	381020-000	End Mill Bit	D1/8” x 0.47” x 1/4” x 2.36L	1
11.3	230394-000	Collet Nut	Ø1/4”	1
11.4	230378-000	Collet Nut	Ø1/2”	1
11.5	381285-000	60 Degree V-Bit	6.35x60°*60L	1
11.6	381286-000	90 Degree V-Bit	12.7x90°*60L	1
12 Complete	FM01-53	Spindle Complete		
12.1	910116-000	BLDC 120V Motor	BLDC-60(6000~20000rpm)	1
12.2	490986-000	Spindle Driver Board	DBL-A11CA11600-C03-A	1
12.3	490955-000	Power Supply	(PMT-24V150W1AA)	1
13	022501-001	KCF-130-B Cable Clamp	KCF-130-B	1
14	000301-202	Phillips Head Screw	M3*0.5P*12	1
15	490781-000	Terminal Block	PA-8DS	1
16	000302-102	Phillips Head Screw	M4*0.7P*8	33
17	006501-200	Sprocket Washer	4.3*8.5(BW-4)	10

ICONIC**CNC** i2015 Parts List

Part Number	Internal Ref. #	Description	Specifications	Quantity
18	000103-102	Cap Screw	M6*1.0P*10	11
19	310459-911	Sliding Plate For Z-Axis		1
20	173510-902	Plate for Z-Axis		1
21	310285-923	Rail for Z-Axis (L)		1
22	310270-909	Sliding Block for Z-Axis		1
23	000102-106	Cap Screw	M5*0.8P*20	16
24	922494-000	Sliding Block Complete	WJ200UM-01-10	12
25	029402-101	Button Head Screw & Washer	M6*1.0P*16/6.1*12.3/6.3*13*1.0t	32
26	310284-923	Rail for Z-Axis (R)		1
28	000302-201	Phillips Head Screw	M4*0.7P*6	17
29	174184-000	Z-Axis Steel Plate		1
30	002602-102	Loctite Cap Screw	M6*1.0P*20	4
31	000101-103	CAP Screw	M4*0.7P*12	12
32	499020-000	Stepper Motor	(103H7332-0340)	3
33	310265-909	X-Step Motor Housing		1
34	677061-000	Coupler	ψ6.35*ψ10*L31	2
35	174195-904	Cover		1
36	006402-100	Washer	5.3*9*0.5	12
37	673097-000	Z Axis Rod Screw		1
38	031004-002	Thrust Bearing	51201	6
39	310266-909	Support Block		2
40	002602-101	Loctite CAP Screw	M6*1.0P*12	18
41	310480-911	Aluminum Tube (L)		1
42	008917-100	Radial Lock Nut	MR12*1.0P	3
43	310479-911	Table		3
44	174006-904	Anti Dust Cover		1

ICONICCNC i2015 Parts List

Part Number	Internal Ref. #	Description	Specifications	Quantity
45	174194-904	Cable Tubing Bracket		1
46	174005-904	Bracket		1
47	174209-000	Adjusting Bracket		2
48	174182-000	Switch Plate		1
49	310458-911	X Spindle Bracket		1
50	490925-000	Limit Switch		6
51	000301-204	Phillips Head Screw	M3*0.5P*15	12
52	000102-103	Cap Screw	M5*0.8P*10	6
53	251082-615	Spindle Bracket Cover		1
54	021802-000	Bushing	NB-2430	1
55	021101-100	Cord Clamp	ACC-2-B	6
56	310353-909	Sliding Block		2
57	360297-000	Pin		3
58	173122-902	Plate for X-Axis		1
59	000101-107	Cap Screw	M4*0.7P*6	2
60	174004-904	Z-Axis Motor Mounting		1
61	250883-615	Z-Axis Step Motor Cover		1
62	310451-923	Rail for X-Axis		2
63	174002-000	X-Axis Motor Cover		1
64	000304-103	Phillips Head Screw	M6*1.0P*12	2
65	174001-000	X Axis Cover		1
66	002603-102	CAP Screw	M5*0.8P*16	8
67	673112-000	X-Axis Rod Screw	R16-10T4-1-XSCD-601.1-670.1-0.05-R-P0	1
68	030205-002	Ball Bearing	6201	2
69	090270-008	X-Axis Motor Housing		1
70	174007-000	Cover for Column		2

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Part Number	Internal Ref. #	Description	Specifications	Quantity
71	001802-102	CAP with Spring Wahser	M6*1.0P*20/6.1*12.3	8
72	006001-022	Washer	6.3*13*1.0t	10
73	011103-105	Pin	5*12	1
74	090272-008	Left Column		1
75	173190-000	Cover for Beam		2
76	923979-000	Chain for X-Axis	(24-links)	1
77	000401-201	Countersunk Screw	M4*0.7P*8	8
78	174003-904	Chain Bracket for X-Axis		1
79	310449-911	Beam		1
80	021709-000	Cord Protector	AMB-3 60mm	1
81	021708-000	Cord Protector	AMB-3 80mm	1
82	200096-615	Foam	60*20*1t	1
83	090271-008	Right Column		1
84	008006-100	Hexagon Nut	M8*1.25P(13B*6.5H)	4
85	174193-904	Tool Measurement Plate		1
86	001601-101	Phillips Head Screw/Washer	M4*0.7P*8/4*10*0.8t	6
87	230049-000	Foot Pad Screw		4
88	250123-615	Carry Handle		4
89	174179-000	Base		1
90	000104-108	CAP Screw	M8*1.25P*25	8
91	008002-200	Hexagon Nut	M4*0.7P(7B*3.2H)	2
92	200098-615	Foam	789*10*2.0mm	1
93	174181-000	Panel for Electrical Box		1
94	174183-000	Cover for Electrical Box		1
95 Complete	923027-000	Clamp Assembly Complete		4
95.1	130275-903	Clamp Bracket		1

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Part Number	Internal Ref. #	Description	Specifications	Quantity
95.2	173010-902	Clamp Nut	SPHC	1
95.3	000303-112	Phillip Head Screw	M5*0.8P*18	1
95.4	006302-100	Spring Washer	5.1*9.3	1
95.5	000304-107	Phillips Head Screw	M6*1.0P*16	1
99	174051-902	Wire plate		2
100	015207-000	Belt for Gear	3GT-312-12	1
101	173243-902	Plate for Y-Axis		1
102	021706-000	Cord Proctector	AMB-1.6 60mm	1
103	174180-000	Linkage for Y-Axis		1
104	174161-000	Y-Axis Steel Plate		1
105	673111-000	Y-Axis Rod Screw	R16-10T4-1-XSCD-468.6-551.6-0.05-R-P0	1
106	012002-007	Key	4*4*20	1
107	310377-909	Bearing Seat		1
108	310378-909	Bearing Seat		1
109	010102-000	R Ring	RTW-32	1
110	190218-902	Bushing		1
111	001901-101	SET Screw	M5*0.8P*5	4
112	310391-909	Timing Pulley		1
113	173535-902	Belt Plate		2
114	310450-923	Rail for Y-Axis		2
116	021375-000	Cord Clamp	MGB16-10B	1
120	006317-100	Spring Washer	6.1*10.3	3
121	173999-904	Y-Axis Motor Mounting		1
122	008301-100	Loctite Nut	M4*0.7P(7B*5H)	4
123	310454-909	Motor Pulley		1
124	174000-904	Belt Adjusting Plate		1

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Part Number	Internal Ref. #	Description	Specifications	Quantity
125	008005-100	Hexagon Nut	M6*1.0P(10B*5H)	1
126	000002-105	Hexagon Screw	M6*1.0P*25	1
127	021107-100	Cord Clamp	ACC-1.5-B	8
129	923978-000	Chain for Y-Axis	(18-links)	1
138	250144-615	Cable Clamp		2
139	000801-108	Button Head Screw	M6*1.0P*8	4
142	000301-201	Phillips Head Screw	M3*0.5P*6	4
143	490964-000	EMC Filter	15"	1
144	491010-000	Circuit Board Support	(BS-28S)	4
145	000302-109	Button Head Screw	M4*0.7P*25	4
146	490779-000	Fan	DC 24V 2.04W	1
147	250895-615	Fan Cover	ABS	1
149	048300-002	Button Head Screw	M3*0.5P*6 AS306A	2
150	200080-000	Foam	180*10*0.5t	2
151	000302-101	Button Head Screw	M4*0.7P*6	6
152	491004-000	Insulated Cable Socket	2525S*430mm	2
153 Complete	FM01-58	Controller Assembly Complete		
153.1	924266-000	Controller		1
153.2	490958-003	HMI Board	20"	1
153.3	490762-000	LCD Display	WH2004A	1
156	022501-002	Cable Clamp	WE core 742 711 31	1
157	022501-003	Cable Clamp	WE core 742 712 22	1
160	490915-000	Power Switch	HY52	1
161	490820-000	Emergency Stop	(ALE16)	1
163	023702-002	Cable Glands	MGB16-07B	1
164	490652-000	USB	USB (MLC)	1
165	174008-904	Controller Holder		1
166	250873-615	Controller Lower Cover		1

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Part Number	Internal Ref. #	Description	Specifications	Quantity
167	001202-602	Self Tapping Screw	M3*1.06P*6	4
168	001106-601	Self Tapping Screw	M2*0.63P*6L	4
169 Complete	923343-000	Cover for Right Column		1
169.1	250860-615	Right Cover		1
169.2	573676-000	Display Label		1
169.3	573677-000	Controller Key Label		1
170	001201-701	Self Tapping Screw	M4*1.59P*12L	4
171	021010-000	Cable Tie	ALT-150M-B	5
172.1	453013-020	Cord w CSA/UL Plug	SJT 16AWG*3C*3000mm	1
175	478057-001	Wire	26AWG*8C*1030mm(11*25*67cm)	1
176	660175-000	Tool Box	220*145*48	1
177	040401-000	Screw Driver	1*75	1
178	040203-000	Open Wrench	11*13	1
179	040207-000	Open Wrench	22*24	1
180	660179-000	Brush	125*54*40	1
181	250436-615	Packaging Protector		4
182	500050-300	Styrofoam Bar		1
185	610004-048	Pallete	920x908x134	1
187	540335-000	Carton for Controller	140mm*46mm*210mm	1
188	520001-762	Carton for Toolbox	220mm*145mm*125mm	1
189	491026-000	Switch	YW1S-2E11(IDEC)	1
190	029201-101	Button Head Screw/Washer	M6*1.0P*12/6.6*13*1.0t	2
191	002603-105	Loctite CAP Screw	M5*0.8P*20	4
192 Complete	924133-000	Front & Rear Clamp Set		2
192.1	130324-903	Front & Rear Clamp Brackets		1
192.2	173010-902	Clamp Nut	SPHC	1
192.3	000303-112	Phillips Head Screw	M5*0.8P*18	1
192.4	000304-107	Phillips Head Screw	M6*1.0P*16	1

ICONICCNC i2015 Parts List

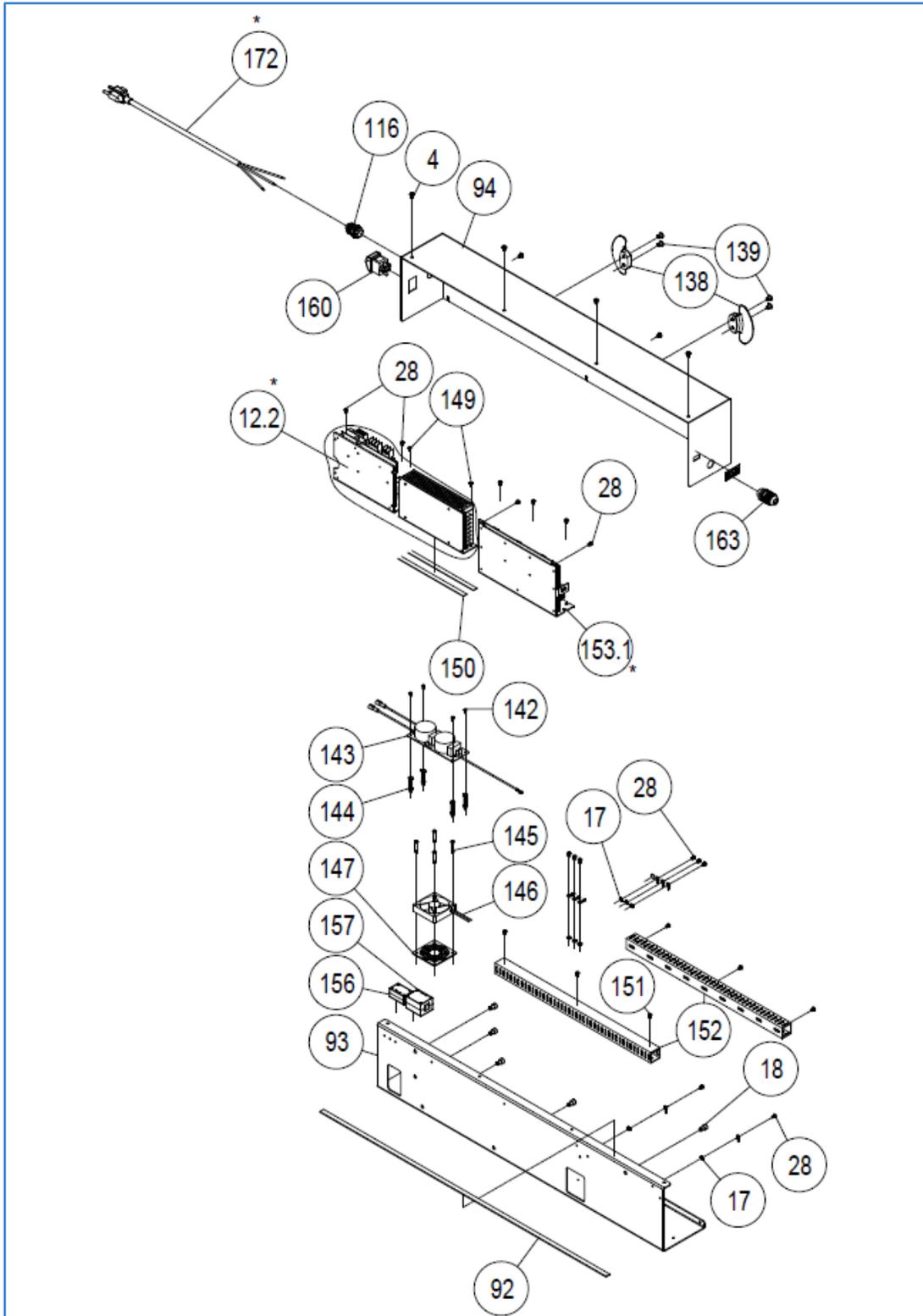| Part Number	Internal Ref. #	Description	Specifications	Quantity
192.5	006302-100	Spring Washer	5.1*9.3	1
192.6	006001-012	Washer	5.3*12*1.0t	1
193	491003-000	Tool Measurement Switch	R13-24BL-05-BR-WH (24AWG*2C*120mm)	1
194	000804-104	Button Head Screw	M5*0.8P*6	3
195	174155-000	Adjusting Plate		1
196	021711-000	Bushing	AMB-2 45mm	2

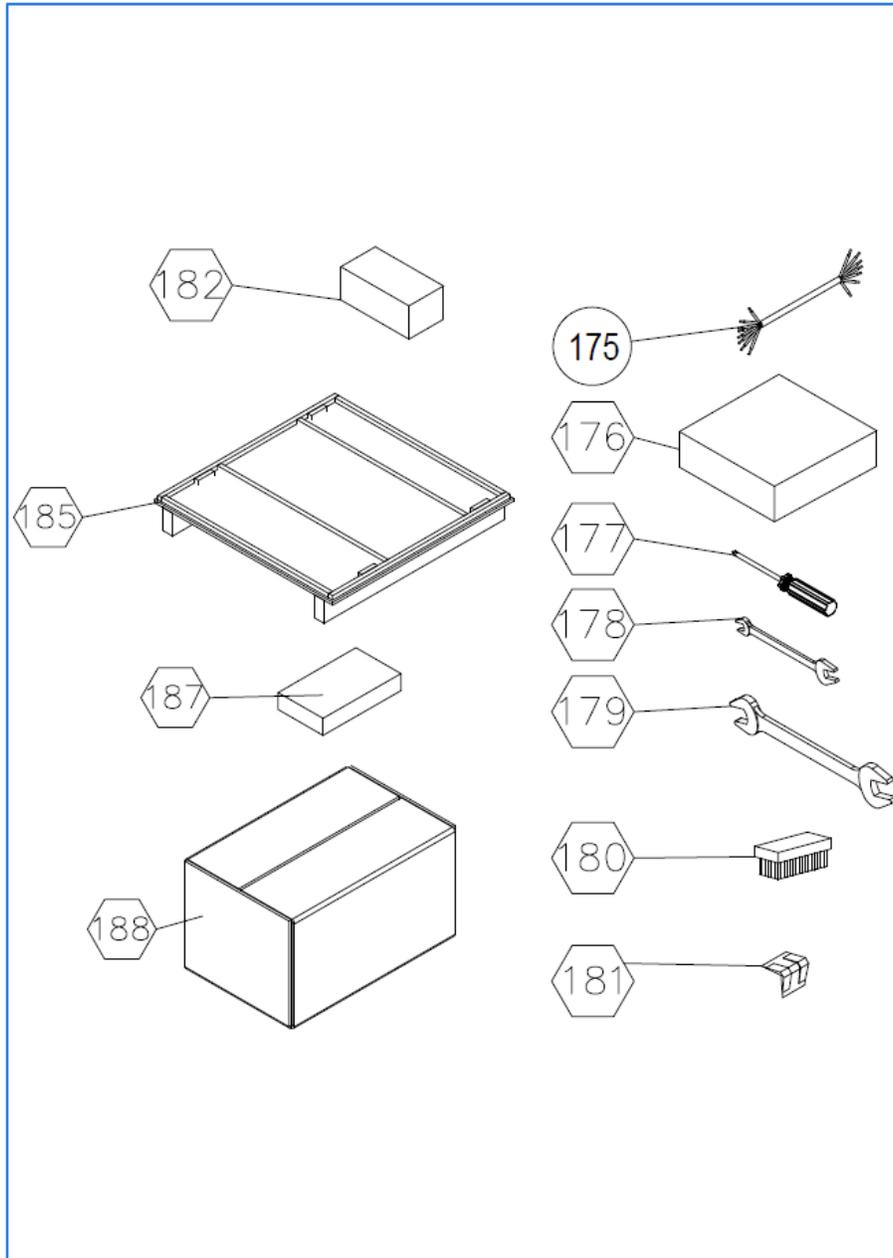# Electrical Schematic Diagram
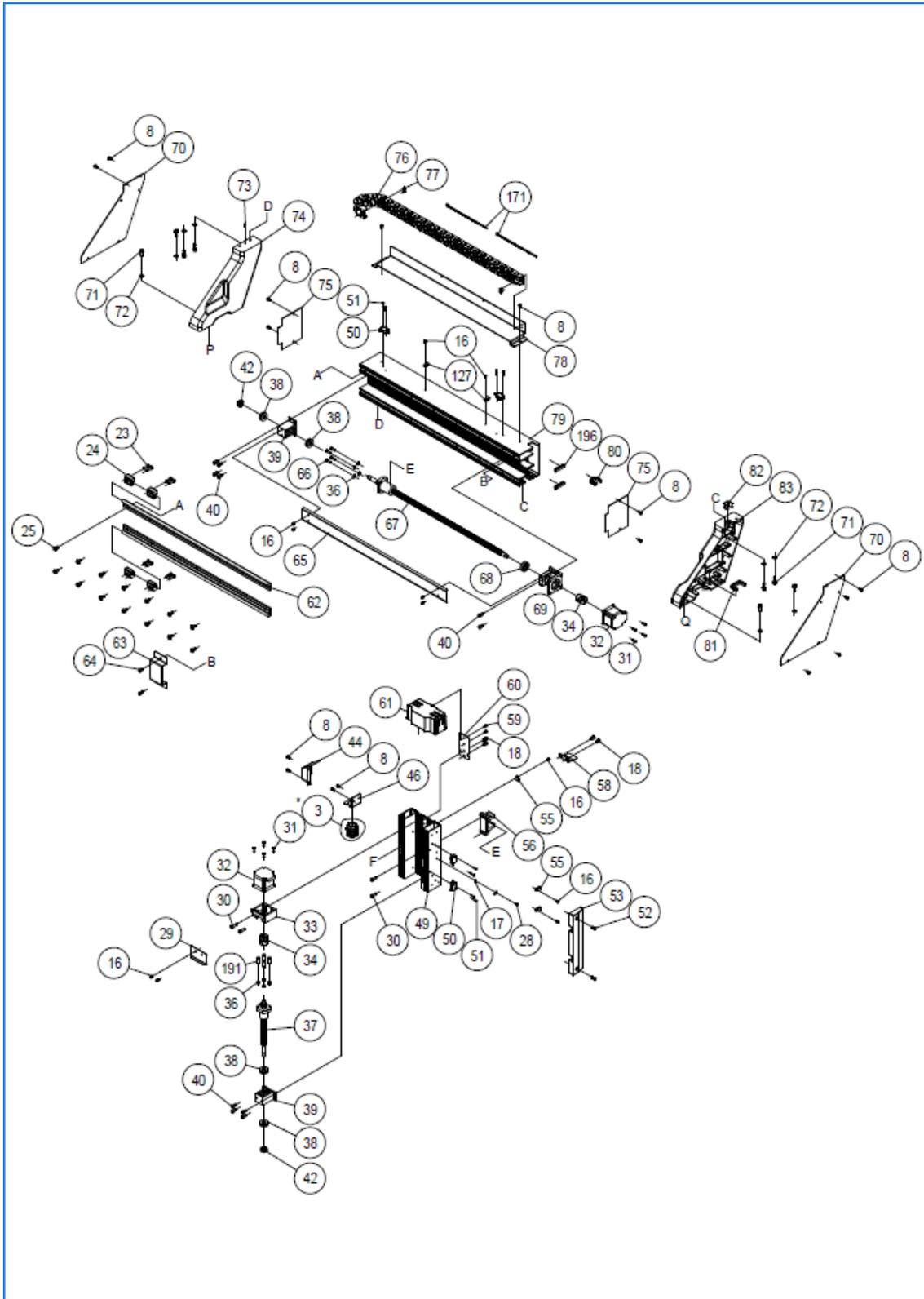
Exploded Diagrams

Exploded Diagrams (Cont.)

Let us know how we can help.

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