

Bench / Pro Router User Manual



Contents

Terms and Conditions.....	4
WARRANTY.....	4
DISCLAIMER OF CONSEQUENTIAL DAMAGES.....	5
Policies and Procedures	5
SERVICE POLICY.....	5
SHIPPING POLICY (TO CUSTOMER)	5
GENERAL SAFETY SYMBOLS:	6
Personal Safety Rules	6
Work Area Safety Rules.....	7
System Use and Care.....	7
Electrical and Mechanical Service Rules	7
Installing & Handling CNC Equipment.....	9
Final Positioning of Equipment	10
Leveling CNC Equipment.....	11
Location of the Control PC	11
Computer connections.....	11
Connecting to Electricity	12
Connecting to Compressed Air	12
CNC System Operation	13
CNC System Start Up.....	13
CNC System Shut Down.....	13
Testing the CNC System Operation	13
System Maintenance.....	14
Daily / As Needed.....	14
Monthly:.....	14
Extended Idle (Over 2 Months):.....	14
Additional Information.....	15

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Terms and Conditions

The terms and conditions set forth below and on the face side hereof constitute a complete and exclusive statement of the agreement between buyer and seller. All representations, promises, warranties, or statements by an agent or employee of seller that differ in any way from the terms and conditions hereof shall be given no force or effect, no modifications, or additions there to shall be binding upon seller unless expressly consented to in writing. Any conflicting warranty terms and conditions in the purchase order or any other buyer's document are specifically rejected by the seller. No course of prior dealing or usage of trade shall supplement or explain any term used in this agreement.

WARRANTY

Seller warrants Goods manufactured by it will be free of material defects and will conform and function consistent with the appropriate Seller specification(s) for a period of 1 year from the shipping date. If any of the Goods are found by Seller to be defective, such Goods will, at Seller's option, be replaced or repaired at Seller's cost. No defective goods are to be returned without written authorization of seller. The sole purpose of the stipulated exclusive remedy shall be to provide the Buyer with free repair and replacement of defective Goods in the manner provided herein. This exclusive remedy shall not be deemed to have failed of its essential purpose so long as the Seller is willing and able to repair or replace defective Goods in the prescribed manner. The foregoing warranty is in lieu of all other warranties, express or implied, including those of merchantability or fitness for any purpose not expressly set forth herein. No affirmation of Seller, by words or action, other than as set forth in this Section shall constitute a warranty. Seller's warranty does not apply to any Goods which have been subjected to misuse, mishandling, misapplication, neglect (including but not limited to improper maintenance), accident, improper installation, modification (including but not limited to use of unauthorized parts or attachments), or adjustment or repair performed by anyone other than Seller or one of Seller's authorized agents. When returning products to Seller packaging must be adequate or all warranty is null and void. Buyer will pay for the cost of shipping to and from the Seller for all warranty repairs. In the event travel is necessary for warranty repairs, Buyer will pay for the cost of all travel expenses to and from the Seller's location. Any claim by Buyer with reference to the Goods sold hereunder shall be deemed waived by the Buyer unless submitted in writing to seller within the earlier of (i) thirty (30) days following the date Buyer discovered or by reasonable inspection should have discovered, any claimed breach of foregoing warranty, or (ii) 12 months following the date of shipment. Any cause of action for breach of the foregoing warranty shall be brought within one year from the date the alleged breach was discovered or should have been discovered, whichever occurs first.

LIMITATION OF LIABILITY

Seller's liability (whether under the theories of breach of contract or warranty, negligence, or strict liability) for its Goods shall be limited to repairing or replacing Goods found by Seller to be defective, or at Seller's option, to refunding the purchase price of such Goods or parts thereof.

DISCLAIMER OF CONSEQUENTIAL DAMAGES

In no event shall seller be liable for consequential damages arising out of or in connection with this agreement, including without limitation, breach of any obligation imposed on seller hereunder. Consequential damages shall include without limitation, loss of use, income or profit, or loss sustained as the result of injury (including death) to any person, or loss of or damage to property (including without limitation property handled or processed by the use of the goods). Buyer shall indemnify seller against all liability, cost or expense which may be sustained by seller on account of any such loss, damage, or injury.

Policies and Procedures

RETURN PROCEDURE POLICY

Before returning any equipment in or out of warranty, the customer must first receive authorization number and packing instructions from Intelitek. No claim will be allowed nor credit given for products returned without such authorization. Proper packaging and insurance for shipping is solely the responsibility of the customer. Upon receiving approval from Intelitek, the product should be returned along with statement describing problem or defect with the Intelitek product with shipping prepaid. If upon examination by Intelitek, warranted defects exist, the product will be repaired or replaced at no charge and returned, prepaid, to the customer. Return will be by common carrier (e.g. UPS). Should the need for rapid, next day, or any other special shipping arise, this will be at customers' expense, not at that of Intelitek. Should an out of warranty situation exist, the customer shall be notified of any repair cost. At such time, the customer must issue to Intelitek a payment in full to cover the repair cost or authorize the return shipping of product as-is to the customer. A restocking fee of 30% will be charged on items returned to stock.

SERVICE POLICY

Repairs are ordinarily done at the Intelitek facility in Derry, NH where all necessary instrumentation is available. Service equipment is difficult to transport, and thereby limit these services to be performed at the discretion of Intelitek. Should Services be required and provided at the sole discretion of Intelitek, any and all relevant expenses incurred, including transportation, travel time, subsistence costs, and prevailing cost per hour (8 hour minimum) are the responsibility of the customer.*see Technical Support policy for details.*call for current pricing.

SHIPPING POLICY (TO CUSTOMER)

Shipments to customer will be received during regularly scheduled business hours unless other arrangements are necessary. Upon delivery to agreed customer location, it is solely the responsibility of the customer to **inspect the shipment for any damages incurred during transport. Damages to shipment must be noted on the bill of lading at the time of delivery.** Intelitek is not responsible for any damages to shipment during transport to the customer. The full value of the shipment must be recorded on the bill of lading in order to receive full compensation for damages incurred during transport to the customer.

TECHNICAL SUPPORT POLICY

Intelitek provides technical support service and assistance for its customers by (1) telephone (2) E-mail (4) technician on site. Technical support is no substitute for CNC System, or software training that is purchased separately by the customer. Technical support is provided at no charge to customer for diagnosing and assisting in the remedy (1) of mechanical problems. (2) Of electrical problems (3) of preventative maintenance issues, up to 1 hour per incident for any problem arising with Intelitek products which are covered by product the limited warranty. Customer will be charged if technical support or assistance is required if the problem is not covered by product limited warranty. For technical service by telephone the customer will be required to provide information about the Intelitek product and the problem. The technician will ask questions concerning the (1) nature of problem. (2) Age of product or system. (3) Type of product. Customers in need of technical service or assistance on product or system that not covered by the limited warranty will be required to provide the technician with a valid credit card number to cover technical support or assistance service charges. A base charge of \$US (call for pricing) will be billed for the first 15 minutes of the service call. A charge of \$US (call for Pricing) / minute will be billed after the first 15 minutes of the service call. Pricing will be explained at the time of service rendered. E-mail service will be provided without charge at the discretion of Intelitek. If technician on site service is required for customers less than 2 hours driving distance from the Intelitek factory, the customer will be billed a charge of \$US (call for pricing) / hour. If technician on site service is required for customers more than 2 hours driving distance from the Intelitek factory, the customer will be billed a charge of \$US (call for pricing) /day on site with a minimum of 4 hours service, and with maximum of 8 hours service for one day. All rooming, travel, and subsistence costs + \$US (call for pricing) per diem will be at the customer expense. All parts will

be billed in addition to service charges.

CNC SYSTEM AND SOFTWARE TRAINING

Intelitek offers to its' customers, training on Current Product Intelitek CNC Systems and Software. These training sessions do NOT attend to unsupported software. Training classes are provided at the offices of Intelitek. in Derry, NH or at the customer's facility given the following circumstances: (1) the customer is financially responsible for all travel expenses, included rental car, food, motel, airfare, etc. (2) The customer understands the training session is exactly as stated, NOT equipment installation. The equipment must be in full working condition before the trainer arrives at the facility.

General Information:

- This manual has been prepared by the technical staff of Intelitek exclusively for its customers and contains reserved information. Therefore, any partial or total reproduction and/ or disclosure to third parties of the content herein are strictly prohibited without the prior written consent of Intelitek.
- This manual is supplied as an integral part of the CNC system and constitutes, at the time of printing, the latest edition of documentation pertaining to the product.
- This manual is to be used by suitably trained personnel only. The information contained in this manual offers no guarantee against risk. The use of the content of this manual is the sole responsibility of the user. Intelitek cannot be held responsible or liable for any damage or injury resulting from incorrect use of this document.
- This manual describes the procedures for correct installation of the CNC system. In the case of conflict between these instructions and safety, electrical, or other standards/ codes, please contact L A Enterprise CNC Inc for any corrective and or adaptive measures. Under no circumstances can the instructions contained in this manual substitute technical, electrical, or safety standards/ codes.

GENERAL SAFETY SYMBOLS:

- Important instructions or precautions are marked with the following symbols.



Warning: Identifies situations that could lead to personal injury.



Warning: Live electrical parts.

Safety Warnings and Rules

Fully read and understand this and any manual or other instruction provided with the CNC System. Become familiar with the function, operation, and hazards of the CNC System, its' parts, and accessories.

Personal Safety Rules

- Only qualified personnel should operate the CNC System.
- Stand clear of moving machinery.
- Never run CNC equipment unattended.
- Stay alert, watch what you are doing and use good sense when operating the CNC System.
- Do not use the CNC System while tired or under the influence of drugs, alcohol, or medication.
- Keep long hair, clothing, jewelry and gloves away from moving parts.
- Always keep body parts away from cutting head.
- Always use personal protective equipment

- (PPE) as required by law including – Safety glasses, hearing protection, dust or vapor protection, nonskid shoes, and hard hat.
- Remove collet wrenches before operating the CNC System.

Work Area Safety Rules

- Keep work area clean and well lit.
- Do not operate the CNC System in the presence of flammable liquids, gas, or dust.
- Keep bystanders, visitors, and children away while operating the CNC System.
- Remove unnecessary articles from work surface before operating the CNC System.
- Observe any caution or warning signs supplied with the CNC System.

System Use and Care

- Use clamps or other practical way to firmly secure and support the work piece.
- Maintain the CNC System with care.
- Always use recommended cutting speeds and feed rates.
- Keep all cutting tools sharp and clean.
- Do not force a tool.
- Always use the correct tool for the job.
- Check for misalignment or binding of moving parts, and any other condition that may affect the systems operation.
- Always keep the CNC System controls clean, and free from dirt, debris, grease, and oil.
- Always know locations of E-stop or other emergency features on the CNC System.
- Always keep cable and wire carriers clean from dust, dirt, debris, metal chips, oil, grease, water and other materials or fluids.



Warning: Some dust or fumes, created by power sanding, sawing, grinding, routing, burning, and other construction activities performed on certain materials, are known to be harmful. Personal risk from exposure to these can be significantly reduced by working in well ventilated area, using an adequate dust or fume removal system, working with approved safety and protection equipment.

Electrical and Mechanical Service Rules

- Always disconnect power to the CNC System before performing any maintenance procedure.
- Repair or maintenance service must be performed only by trained, qualified, service technicians.
- Always know the location of service disconnect breaker.
- Always keep electrical guards and covers in place while power is supplied to the CNC System.



Warning: Care must be taken not damage any exposed electrical cabling (or connector), compressed air fitting (or line), vacuum piping, dust collection, fume extraction hoses, or any other connection during loading, unloading, or relocation of CNC equipment. All electrical cables, compressed air lines, vacuum piping, dust collection or fume extraction hoses must be disconnected before moving or relocating the CNC equipment.

Installing & Handling CNC Equipment



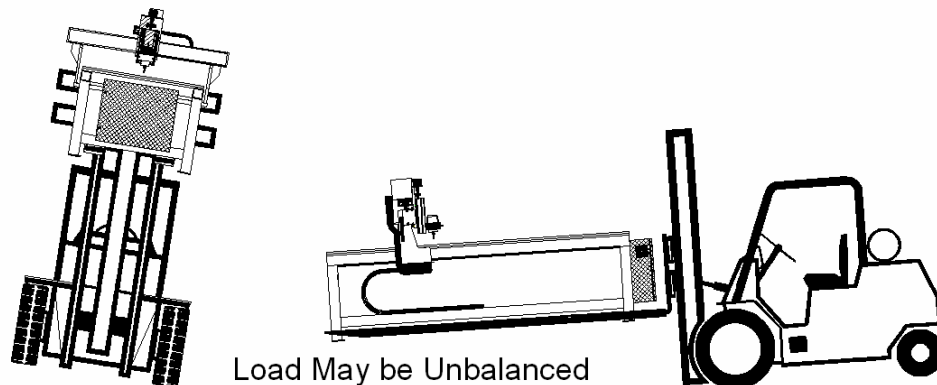
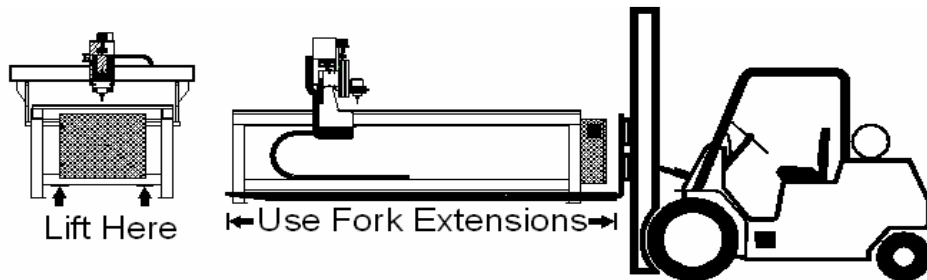
Warning: Forklift or other equipment should be operated by trained, operating personnel only with good understanding of materials handling safety policy, and procedures. Any forklift or other equipment operator should be completely familiar with the equipment, its operation, and functions before unloading or moving any CNC system or equipment.



Important: Use fork lift with fork extensions for unloading and moving the CNC equipment when required. See picture.



Warning: CNC equipment may not be balanced. Use caution when moving or unloading so as not to damage CNC equipment, fork lift, or operator. See picture.



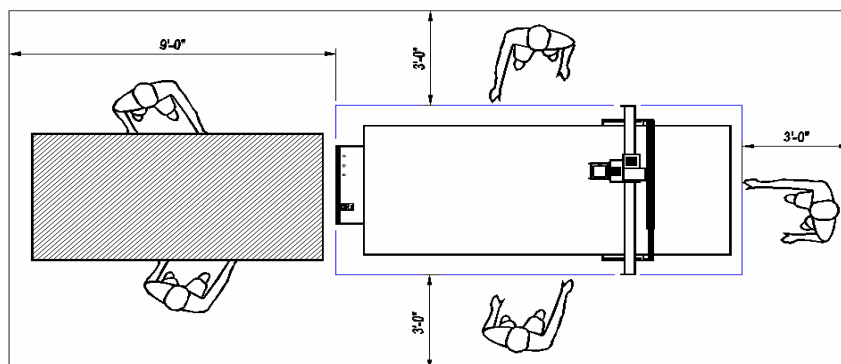
Warning: Team lift desktop equipment when moving from the shipping container to and from the tabletop. The table should be rated for 300lbs / 135kg or better.



Final Positioning of Equipment

The final position of the equipment will depend greatly on customer's location. Allow for adequate spacing around the equipment for loading / unloading of materials, clamping material, access to vacuum valves. Intelitek recommends an access path of at least 3 feet on three sides of the CNC Equipment and a material staging area extending 8 or 9 feet from the loading end of the equipment.

- All moving parts must be clear of any obstruction to always allow free movement during system operation.
- Emergency stop(s) should be always accessible during system operation. Do not cover, block, or obstruct access to the Emergency Stop or any system controls.
- Service disconnect (when applicable) should be always accessible during system operation. Service disconnect should never locked in during system operation.



Leveling CNC Equipment

The CNC machine must be leveled at several points across the machine. Shims of steel, plastic, or rubber may be used to bring machine to level across its span. The table should have no teeter in any direction. Should leveling feet be necessary, the customer may purchase these separately. Leveling feet are available from various machinery supply houses, or hardware centers.

Note: Each Pro Machine table leg arrives with factory drilled ½” holes for leveling feet which are not included with the CNC System.

Important: Tabletop surface may not be true. Milling is normally required for truing the table’s surface. The customer is responsible for table milling, and truing on any of the equipment working surfaces. Table milling files are not included with the purchase of the CNC System.

Location of the Control PC

The control PC is part of the CNC system that requires an area for access by the system operator. The control PC, keyboard and mouse should be always easily accessible and functional during system operation. The control PC monitor should also be in plain view by the system operator. The control PC should be kept in a ventilated environment to prevent overheating, and/or malfunction. The USB ports should be easily accessible to the operator.

Important: Your new CNC Machine includes a USB Drive, create a copy of this recovery drive before running the machine. Store the drive in a safe place or inside the machine control box.

- Protect and secure any cables, hoses or parts of the CNC system crossing any access path around or near the CNC equipment.
- The PC should be occasionally checked and cleaned to prevent dust buildup inside.
- The PC should be dedicated to only running the piece of equipment.

Computer connections

- Connect the network or USB cable on to the control panel mounted on the machine. (Cable may be integrated depending on type of machine)
- Connect the other end of the cable to the PC.
- Connect the remainder of the PC (monitor, mouse, keyboard, etc...) as recommended by the PC manufacturer.

Important: Do not connect network cables to a switch or hub. Network cables should be connected to the machines onboard the network port. Add-on adapters are not supported.

Important: Your new CNC Machine includes a USB Drive, create a copy of this recovery drive before running the machine. Store the drive in a safe place or inside the machine control box.

Connecting to Electricity

Electrical power to the CNC system is provided by the customer. System power should be supplied through an easily accessible fused service disconnect switch or circuit breaker. All system accessories such as vacuum hold down, dust collection, etc. should also be connected with an adequate service disconnect or breaker and on dedicated circuits. Input locations may vary by model and type.

Important: U.L. approved or equivalent over current, spike, or surge protection should always be used to connect equipment such as the Control PC and other accessories.

Important: The CNC system should be properly grounded. (Dedicated grounding is recommended on floor standing units)

Connecting to Compressed Air

Compressed air connections are supplied by customer. Standard CNC Systems do not require compressed air for operation. Compressed air is required for Automatic Tool Change Systems (ATC), and some accessories. Compressed air for use on the CNC System should be dry, filtered, and regulated. The CFM rating and PSI will vary depending on the Model and Type of CNC system.

Important: Drain all moisture traps daily to prevent damage equipment and other system components. A separate compressed air line is necessary for general equipment maintenance. An air nozzle should be used to blow off the equipment after each use. Exposed mechanical parts such as the geared rack and pinion gear require special attention to keep equipment clean and operating properly. The table cutting surface should be cleared after each cutting job.

CNC System Operation

This information is not intended as a substitute for training on how to use this equipment. This information is provided only as a recommended overview. Intelitek offers training materials and on-site training for an additional fee.

Important: Your new CNC Machine includes a USB Drive, create a copy of this recovery drive before running the machine. Store the drive in a safe place or inside the machine control box.

CNC System Start Up

- Power on the PC.
- After the PC has finished booting, open Mach3.
- Turn on compressed air valve if the system requires compressed air.
- Release Main Disconnect(s), if equipped.
- Pull out the Emergency Stop button. (Notice Picture)
- Turn the control box on/off button to the on position.
- Rotate the Dust collection switch to Automatic if equipped.
- Click the reset button on the Mach3 control screen.
- Jog each axis a few inches away from their home positions.
- Click the Reference All Home
- Wait until the reference routine has completed.



CNC System Shut Down

- Make sure all files have stopped running.
- Turn off Vacuum pump, if equipped.
- Turn off the compressed air valve, if equipped.
- Turn the control box on/off switch to the off position
- Push in the Emergency Stop button.
- Exit the Mach3 Program.
- Shut down the Control PC.
- Lockout Main Disconnect(s), if equipped.
- Turn off the main power to the Control PC after it has completely shut down.

Testing the CNC System Operation

- Jog the X and Y axis using the keyboard Arrow keys.
- Jog the Z axis using the page up and page down keys for Z up and down movement.
- Set the X, Y, axis to the part zero and Z axis to zero 1in / 25mm above the part.
- Open your G-Code
- Click Cycle Start to begin a dry run of your part.
- Once satisfied with the dry run, lower the Z axis to the part and reset the Z zero.

System Maintenance

System maintenance should be performed regularly to keep any CNC System in good operating condition. Between cutting jobs clear the cutting area of debris, chips, and unused scrap material.

Daily / As Needed

- Check the condition of the bit or cutting tool and replace if needed.
- Use air nozzle to blow off the equipment especially exposed mechanical parts on all axis and the spindle motor if air cooled.
- Clean-up work area and access area around the CNC System.
- Inspect Clean or replace all dust filters as necessary.
- Lightly oil any exposed steel surfaces such as bearings, guide rails, geared racks, pinion gears, and ball screws. Use only light machine oil applied with a clean rag. Aluminum and painted surfaces do not require oiling.

Machines with Air

- Drain moisture traps on compressed air lines.
- Inspect all compressed air regulators for correct air pressure regularly.
- Use air nozzle to clean out chips, dust, and debris from the wire and cable carriers.
- Check Air Regulator oil Level

Monthly:

- Back up the C:\Mach3 Folder on the PC
- Check PC for dust and use canned air to clean out. Do not use compressed air.
- Inspect all equipment for excessive wear, or damage.
- Remove caked grease and other build ups of lubricants / material buildup.
- Apply grease to any grease fittings located on the CNC system or accessories (vacuum pump, Drills, etc...)
- Open and inspect the control box for chips, dust, and debris. If chips, dust, or debris are present, clean out with vacuum (not compressed air). Use care not to damage wires, or any electrical components in the control box.

Extended Idle (Over 2 Months):

Important: Your new CNC Machine includes a USB Drive, create a copy of this recovery drive before running the machine. Store the drive in a safe place or inside the machine control box.

- Back up the C:\Mach3 Folder on the PC
- Check PC for dust and use canned air to clean out. Do not use compressed air.
- Record the PC Password
- Unplug the PC Power from the Wall
- Inspect all equipment for excessive wear, or damage.

- Remove caked grease and other build ups of lubricants / material buildup.
- Apply grease to any grease fittings located on the CNC system or accessories (vacuum pump, Drills, etc...)
- Open and inspect the control box for chips, dust, and debris. If chips, dust, or debris are present, clean out with vacuum (not compressed air). Use care not to damage wires, or any electrical components in the control box.
- Lightly grease or apply rust preventative to any exposed steel surfaces such as bearings, guide rails, geared racks, pinion gears, and ball screws.
- Remove Tooling
- Remove old Stock.
- Send Machine to Reference Position
- Perform Lockout Tagout on all disconnects.

Additional Information

The full users manual for Mach 3 can be found at: <https://www.machsupport.com/software/mach3/>

USB Smooth Stepper Information can be found at: <https://warp9td.com/index.php/documentation/doc-uss>

Ethernet Smooth Stepper Information can be found at:
<https://warp9td.com/index.php/documentation/doc-ess>

