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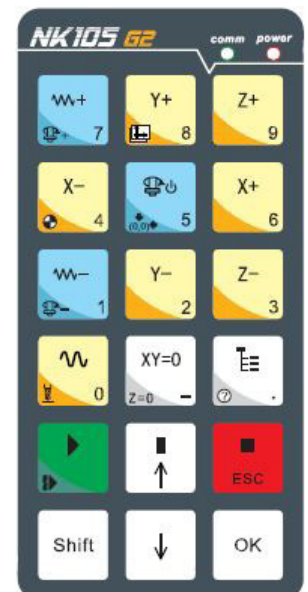
BT1212

Series CNC Router

Manual



NCstudio Controller



This document will provide a quick guide to the operation of the Techno BT1212 CNC Router equipped with a NCstudio Controller.

The BT1212 CNC Router is powered by high precision stepper motors and controlled by a hand-held NCstudio controller.

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Safety Instructions

READ THESE INSTRUCTIONS THOROUGHLY BEFORE OPERATING MACHINE. DO NOT OPERATE MACHINE IF YOU ARE UNFAMILIAR WITH THESE SAFE OPERATING INSTRUCTIONS. DO NOT OPERATE MACHINE WITHOUT KNOWING WHERE THE EMERGENCY STOP SWITCH IS LOCATED.

WARNING: IMPROPER OR UNSAFE OPERATION OF THE MACHINE WILL RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE EQUIPMENT.

1. Keep fingers, hands, and all other objects away from machine while power is on.
2. Disconnect power to all system components when not in use, when changing accessories, and before servicing.
3. Do not loosen, remove, or adjust machine parts or cables while power is on.
4. Exercise care with machine controls and around keyboard to avoid unintentional starting.
5. Make sure voltage supplied is appropriate to specifications of components.
6. Machines must be plugged into three-pronged grounded outlets. Do not remove the grounding plug or connect into an ungrounded extension cord.
7. Keep cables and cords away from heat, oil, and sharp edges. Do not overstretch or run them under other objects or over work surfaces.
8. Use proper fixtures and clamps to secure work. Never use hands to secure work.
9. Do not attempt to exceed limits of machine.
10. Do not attempt to use machine for purposes other than what is intended.
11. Use machine only in clean, well-lit areas free from flammable liquids and excessive moisture.
12. Stay alert at all times when operating the machine.
13. Always wear safety goggles.
14. Do not wear loose-fitting clothing when operating machine. Long hair should be protected.
15. Always maintain proper balance and footing when working around the machine.
16. Maintain equipment with care. Keep cutting tools clean and sharp. Lubricate and change accessories when necessary. Cables and cords should be inspected regularly. Keep controls clean and dry.
17. Before using, check for damaged parts. An authorized service center should perform all repairs. Only identical or authorized replacement parts should be used.
18. Remove any adjusting keys and wrenches before turning machine on.
19. Do not operate the machine unattended.
20. Follow all safety instructions and processing instructions in the MSDS for the material being processed.
21. Use proper precautions with dust collection systems to prevent sparks and fire hazards.
22. Make sure to have proper fire extinguishing equipment on hand at all times.

PREVENT FIRE HAZARDS by using the proper feeds, speeds, and tooling while operating your Techno machine. For example, setting feeds and speeds too low and/or using dull tool bits creates friction at the material. The friction generates heat which can result in a fire that can be drawn through the vacuum table or dust collector without warning. Fire hazard from friction heating caused by dull tools is possible when cutting certain materials, especially composite material such as wood composites, MDF and Particleboard.

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Colleting Guidelines

Assembly

SELECTING BITS

Your Bosch palm router is designed for a wide variety of routing applications that use 1/4" shank bits. These include woodworking applications such as edge forming, grooving, and sign making. This router is also ideal for trimming laminates, phenolics, and other materials that have been bonded to a substrate overhang the substrate typically by about 1/8" (3 mm).

A wide assortment of router bits with different profiles are available as accessories. Only use good quality bits.

⚠ WARNING To prevent personal injury, always remove the plug from power source before removing or installing bits or accessories.

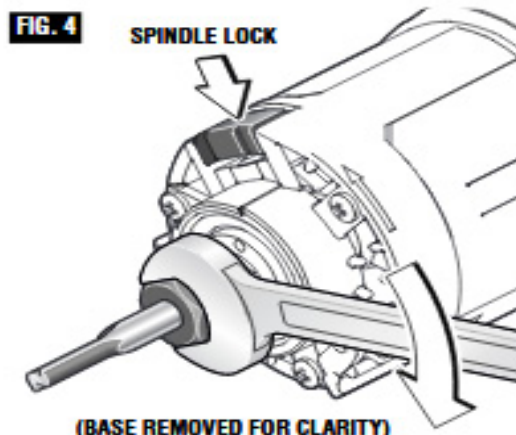
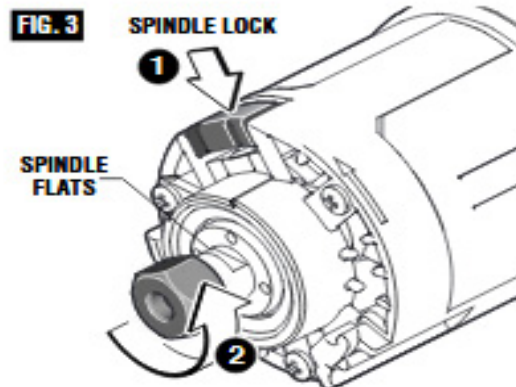
Installing a Router Bit*

1. Lay the router or motor on its side (unless router is in the plunge-base router configuration). The router can also be stood "on its head" for bit changes, such as when in the plunge-base configuration.
2. Press spindle lock to prevent rotation of collet chuck. **NOTE:** It may be necessary to rotate collet nut to engage spindle lock (Fig. 3).
3. Next, use the collet wrench to loosen the collet chuck assembly in a counter-clockwise direction (viewed from bottom of router).
4. Insert the shank of the router bit into the collet chuck assembly as far as it will go, then back the shank out until the cutters are approximately 1/8" to 1/4" away from the collet nut face.
5. With the router bit inserted and the spindle lock engaged, use the collet wrench to firmly tighten the collet chuck assembly in a clockwise direction (viewed from bottom of router) (Fig. 4).

To ensure proper gripping of the router bit and minimize run-out, the shank of the router bit must be inserted at least 5/8".

⚠ WARNING Cutter diameter must be at least 1/4" smaller than opening for the bit and cutter.

⚠ CAUTION To prevent damage to tool, do not tighten collet without a bit.



* As an alternative to the spindle lock, the thin 10mm wrench can be used on the 'flats' of the spindle.

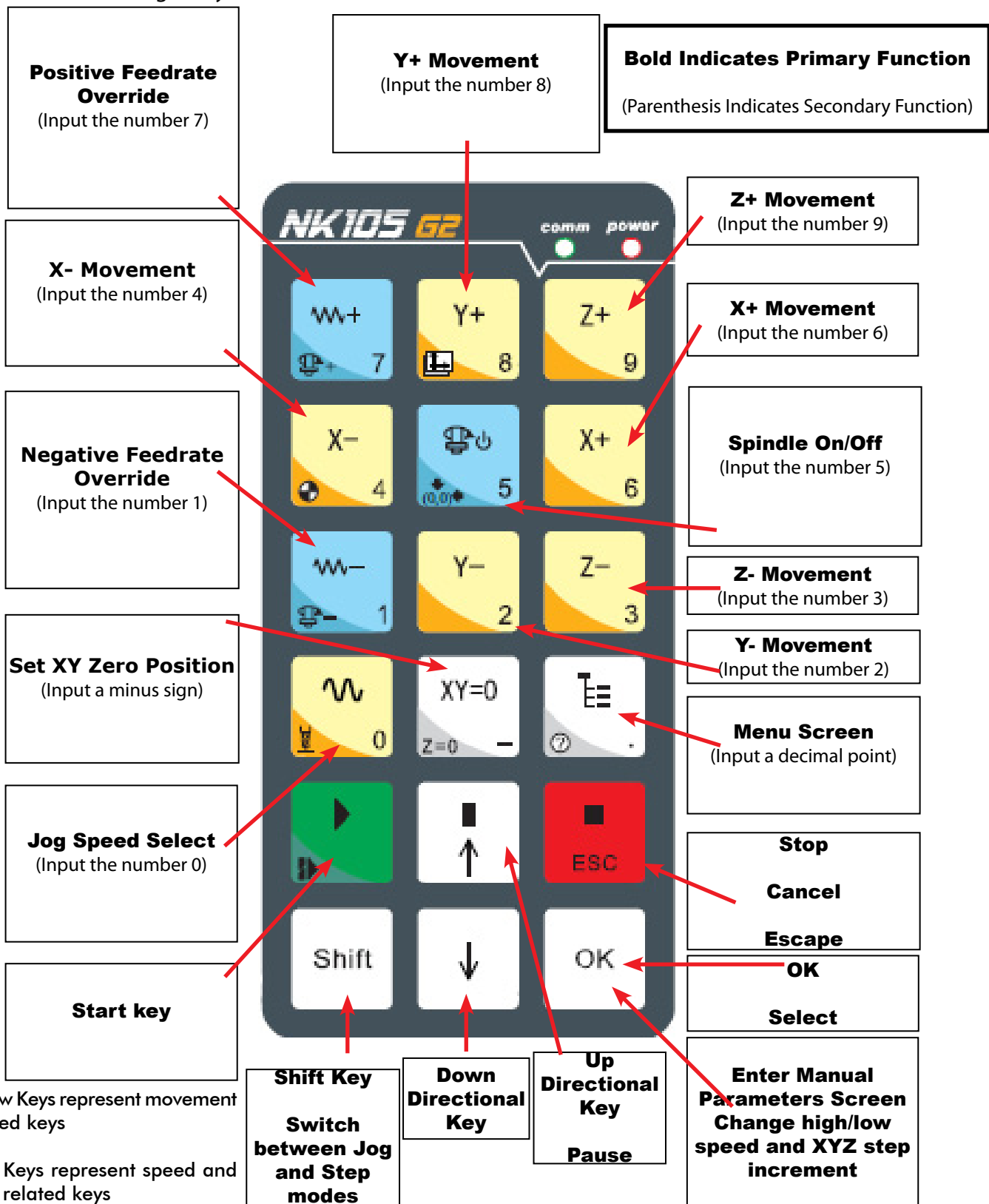
NOTE: The bit shank and chuck should be clean and free of dust, wood, residue and grease before assembling.

Removing the Router Bit*

1. Press spindle lock to prevent rotation of collet chuck, and turn the collet chuck assembly in a counter-clockwise direction.
2. Once the collet chuck assembly is loosened, continue to turn the collet chuck assembly until it pulls the collet free from the spindle, and the router bit can be removed.

NOTE: The collet chuck is self-extracting; it is NOT necessary to strike the collet chuck to free the router bit.

Single Keystroke Functions on the Handheld Pendant















Yellow Keys represent movement related keys

Blue Keys represent speed and feed related keys

Shift Commands / Combination Keystrokes

To use the shift commands, you must press and hold the shift key and then select a second key to use the Shift Command function.

Key icon	Function
 + 	Switch between work (relative) and machine (absolute)
 + 	Go to XYZ home (mechanical origin)
 + 	Go to current work (relative) origin
 + 	Set Z zero position manually not using Touch-Off pad
 + 	Resume from breakpoint M0 command
 + 	Open help screen

III Operating Tutorials.

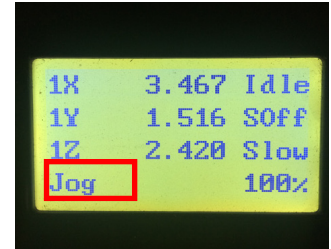
3.0- Switching Movement to Step or Jog.

There are two modes that allow the user to control the movement of the machine: Jog and Step. To switch between these modes press the "Shift" button. The mode will be displayed on the bottom left of the screen.



Jog- Also known as continuous mode. When a directional arrow is pressed, the machine will move in that direction until the button is released.

Stepping- Also known as step mode. When a directional arrow is pressed, the machine will move an exact amount, as dictated by the manual parameters page. To move again, you must release the button and press it again.



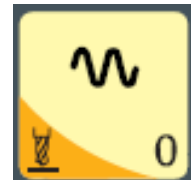
3.1- Jogging the machine and changing from High/Low Jog Speed.

To Jog the machine, hold down one of the Yellow directional keys on the keypad while in Jog mode. The keypad has X+,X-,Y+,Y-,Z+,Z- printed on the keys to indicate direction.

The machine has two speeds, High and Low. When the machine starts it will be in the Low speed.

To toggle between low and high speed press the Jog Speed Select Button. You can only toggle speed when in Jog Mode. The LCD will display High or Low on the right of the screen.

Press 'OK' to change high and low speeds, see section 3.3.



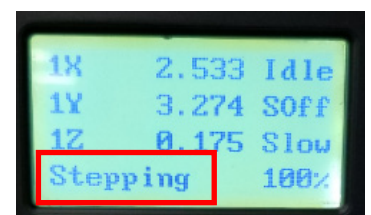
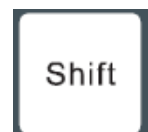
Select between high and low Jog speeds

3.2- Stepping the machine.

To move the machine in increments, press down one of the Yellow directional keys on the keypad while in Stepping mode. The keypad has X+,X-,Y+,Y-,Z+,Z- printed on the keys to indicate direction.

This will move the machine in predetermined increments in the axis selected. By default, the X and Y axes will move in .005 inches and the Z axis will move in .001 inches.

Press 'OK' to change step size, see section 3.3

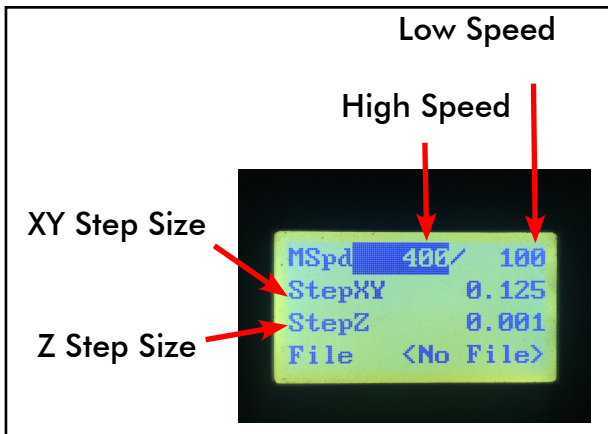


3.3- Modifying the Jog Speed and Step Size

The machine can be jogged at two speeds, low and high. You can also change the increments in which the machine will move in Step mode. These speeds are set in the Manual Parameters page.



To access the Manual Parameters page press OK from the Main Screen



To move the cursor, use the Up and Down directional arrows.

Enter a new value.

Press OK to accept that value.



Set the High and Low speed to a suitable value.
Adjust the Step value as needed.

To Exit out of this screen and return to the main menu press ESC.



Warning: Adjust the step size carefully. If you set the step size to an excessive value, the machine will move by that value and could damage the machine.

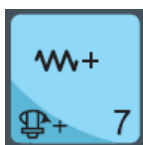
When inputting a decimal increment, you must enter the value as 0.###
Zero+decimal+(your increment)

3.4- Feedrate Override.

While running a G-Code file, the user can manually override the feedrate or cutting speed of the program. The range of the override goes from 10% to 120% of the original feedrate.

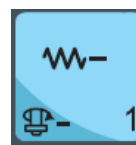
The user can override the feedrate using the following keys:

DO NOT MAKE 0% OR
THE MACHINE WILL NOT MOVE



Increase
Feedrate

OR



Decrease
Feedrate

3.5- Adjusting the XYZ Zero position/WCS/User Origin.

XYZ zero position, Working Coordinate System (WCS), and User Origin are all the same thing.

Different CAM systems and users just name the concept differently. For convenience XYZ zero position will be used in the rest of this manual.

XYZ zero position is the location point on a drawing in a CAD/CAM package where X,Y and Z all equal zero.

Generally, XY zero is on the bottom left corner and Z zero is the top of the part. In fig 3.3a the letters are located away from the XY zero, all points representing positive integers.

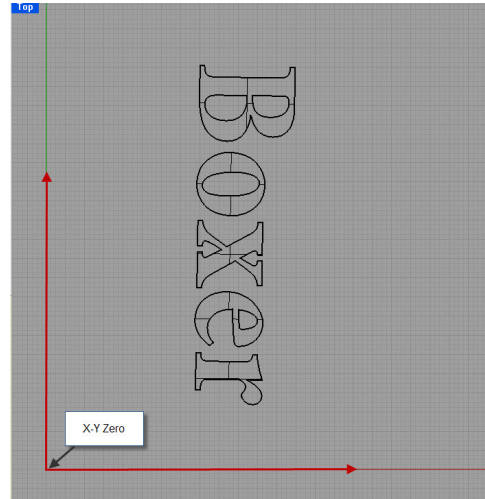


Fig. 3.3a

In Fig 3.3b the object represents the material the letters will be cut from. The machine should be jogged to the corner of the material by using the directional arrows on the keypad. Once the machine is in location press to set XY zero. The X and Y coordinates will now read 0.000. XY zero is now set.

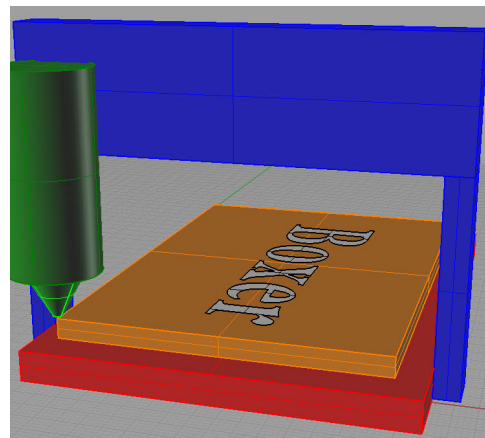
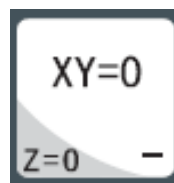
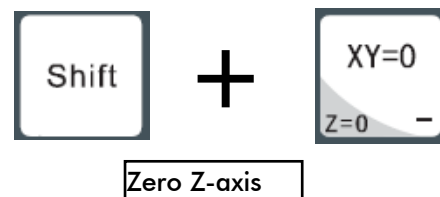


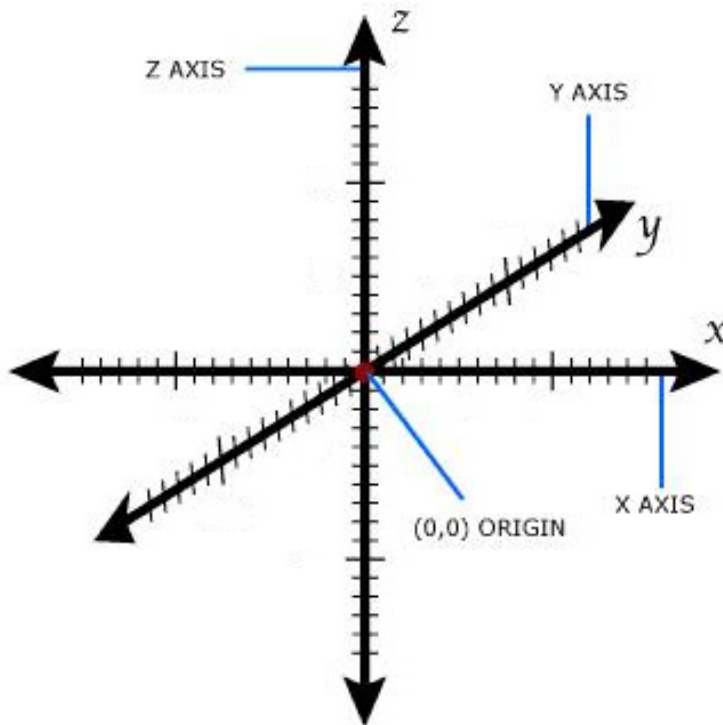
Fig.3.3b

There is one method for setting the Z-axis zero position:

Use the Z-axis directional arrows on the keypad to move the router to the top of the material. Switch to Step Mode to slowly move the machine into position. When the router bit is in position press shift/aux and the Z=0 button as shown.



The Z coordinate will now read 'Z 0.000'



3.6- Loading a G-code File.

Press the Menu button.



Select "2.USB files" to access the flash drive.
 Only a G-code file with an "nc" extension will show.

Scroll through the files with



and



Select file by pressing OK.



Then load the file by pressing 1.



Note:

Files can be copied from this USB to the controller using the "2" button
 Local disk space is limited!

Once a file is copied locally, it can also be selected from the jog speed /step size screen

3.7- Running a G-code file.

Once the XYZ origin has been set as per section 3.5 and the file has been loaded as per section 3.6 the user is ready to run the G-code file.

To run the G-code file simply press the start button



Once the spindle has reached speed the machine will move into position to start the first cut.

The file can be paused while running by pressing



To resume the file press



To abort the file at any time press



Note:

When the machine pauses, the spindle will stop and the Z axis will move to the Z clearance/ Safe height to allow inspection of the part.

If the machine is jogged off the part during a pause, it will lose its position and when the file is resumed it will start from the new position.

When using multiple tools it is best to create separate files for each tool.

The last file can be resumed at a breakpoint by pressing Shift + Start.





IV. Advanced Tutorials.




4.1- Alternating between Override and Programmed Feedrates.

The controller can run G-code files with speed set by the user on the keypad, override speed, or with speed set in the CAM package/G-code file, programmed speeds.

To determine what speed protocol will be used, do the following:

In the main screen, press menu to enter the menu screen .

Use the  and  key to scroll the cursor and highlight **4. oper param**
Press OK to select.

Use the  and  key scroll the cursor and highlight **8. ignore F code**
9. ignore S code
Press OK to select. 

Note:
The F or S Option.
F stands for Feed rates, and S stands for Spindle RPMS.

Note:
"No" means speed in the G-code file will be obeyed.

"Yes" means speed will be overrode by the controller.

4.2 Setting the Override Speed for a G-code file.

From the main screen, press Menu to access the Menu screen.



Use the arrow keys to move the cursor and highlight

4. oper param



Press OK to select this option and enter the Operations Parameters screen



Use the arrow keys to move between each option and press enter to select the option.



Press OK to edit the data and use the number keys to enter data.

Press OK to save data and Cancel to exit out of the screen.

Keep pressing cancel until you return to the main screen.



G00 Speed is the rapid speed, or the speed the machine moves when the cutter is above the material.

GXX Speed is the speed the machine moves when the cutter is in the material. This speed will vary with cutter size, material, cutter type, etc.

More parameters in

5. MFR param

4.3 Setting the Table Size.

From the main screen, press Menu to access the Menu screen.

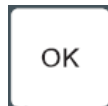


Use the arrow keys to move the cursor and highlight

5. MFR param



Press OK to select.



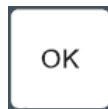
Password: 33587550

The MFR parameters screen will now open.

Use the arrow keys to move the cursor and highlight.

4. Machine stroke

Press OK to select.



Use the arrow keys to highlight a value, press OK to edit the value, and press OK to save it.

Press Cancel when the value is highlighted to abort the edit.



Use the arrow keys to scroll down the screen until the negative values are displayed.

When all the edits are complete, press Cancel to exit out of this screen. Keep pressing cancel until you return to the main screen.

The asterisk * on this setting indicates that the machine must be powered down and the axes homed in order for these new values to take affect.

If these values are incorrect it will effect the running of the machine.

If the values are too small, the machine will stall/stop when it reaches the value entered.

If the value is too big, it is possible for the machine to hit the end of travel and damage could occur.

Changing to a Different Offset (a new X Y Zero location)

There are 6 available X Y Zero locations that can be set up.

The offset number is displayed to the left of the Z X Z display 1 through 6 as shown below

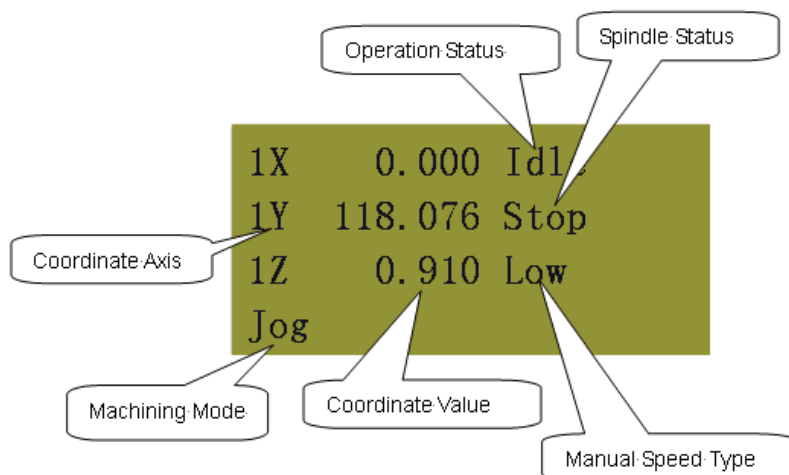
Press Menu



→ Operations

→ Select WCS

G54 Origin 1
 G55 Origin 2 . . .



Each offset can have it own X Y and Z Zero

These additional offsets can be used to locate parts on different locations on the table

however for ease of use you can use just one offset as we did in training.

If the machine ever starts to cut in what appears to be the wrong location on the table, there is a chance you have accidentally selected a different offset.

Pulse Equiv (scale factors)

X : 0.0012500
Y : 0.0012500
Z : 0.0012500

Notes On the G-code File

If a part requires multiple tools, it is best to output a different file for each part.

If the G-code file references a tool number higher than T10, then the controller will give an error at the start of the file. M6 T1 to M6 T10 are allowed.

In general it is best to remove T commands by telling the CAM package that the machine is not a tool changer machine, or insuring that the Tool number does not exceed 10.

G92 is the Axis presetting command, when this command is encountered in the G-code file the XYZ zero position is set at the position the machine is in at that time.

In general it is best to remove this from the G-code file, or if it is in the G-code file, make sure the machine is at the origin before you press start.

The controller will recognise G54 to G59 offset commands.

See the NK105 G2 manual for more details on these commands.

Acceleration Set

Under the menu MFR Params, there is a sub menu called Velocity.

This menu controls the acceleration and cutting motion of the machine.

The Defaults for these parameters are:

Jerk	310
Single Axis Acc	25
Max Turn Acc	100

A low Max Turn Acc will result in arcs that move in a jerky motion or at a slow speed.

Using the 4th Axis on the Techno BT1212 Machines

Note: The 4th axis on the Techno BT1212 machine is not a true 4th axis. You can only use this to do “wrapping” tool paths. This means that the file is designed as a regular, flat, 3-axis file, which is scaled so that the width matches the circumference of round stock. Then, instead of cutting flat, the rotary is substituted for the Y-axis and the cut follows the circumference of the stock, as if it is being “wrapped” around it.

To change from normal 3-axis operation to rotary operation, you must change some settings in the controller:

1. Press the menu button on the keypad. Go to and press OK to select “5. MFR Param”. The password is 33587550.
2. Go to and press OK to select “3. Pulse Equiv”. Make note of the Y-axis value, it should be .00125.
3. Calculate the new pulse equivalent value based on the diameter of the cylindrical stock being used through the following equation:

$$\text{Rotary Pulse Equivalent} = (25.4 * \pi * D) / 20,000$$

Where D is the diameter of the rotary stock in inches.

4. Enter the calculated value for *Rotary Pulse Equivalent* in the location for Y under Pulse Equiv. To input a decimal number, please press 0 (zero) first, then the button for the decimal point and then the numbers.
5. Exit the menu and restart the machine. The new settings will now be applied.
6. Now jog to your starting point and set your X and Y origin. This position should be above the rotary part. *Note: The Y-axis will most likely move at a different speed than normal and the coordinates will not look right.*
7. Flip the switch in the front of the machine into Rotary mode.
8. Run your part

To revert back to normal 3-axis operation, follow the first two steps and then put the original value, .00125, into the Y-axis pulse equivalent variable, then reboot the machine to apply the changes.

TECHNO CNC SYSTEMS LIMITED WARRANTY & COVERAGE

Limited Warranty On Techno Brand Products

Subject to the terms and conditions set forth in this warranty document, Techno CNC Systems LLC (“Techno”) warrants its Techno brand products (“Product” or “Products”) to the original purchaser for a period of one (1) year against defects in material and workmanship under normal use and conditions (“Product Limited Warranty”). The Product Limited Warranty commences on the date of Product shipment from Techno facilities and expires one (1) year from the ship date (“Product Warranty Period”).

Spare or replacement parts (“Part” or “Parts”) for Techno Products are warranted to the original purchaser for a period of ninety (90) days against defects in material and workmanship under normal use and conditions (“Parts Limited Warranty”). A Parts Limited Warranty commences on the date of a Part shipment from Techno facilities and expires ninety (90) day from the ship date (“Parts Warranty Period”).

A Product Limited Warranty may be validly transferred to one additional party by the original purchaser provided that a reregistration fee is paid to Techno within seven (7) days of transfer of the Product and prior to the expiration of the Warranty Period. Reregistration of any Product warranty does not extend the Warranty Period. A Parts Warranty is not transferable.

Product Limited Warranty and Parts Limited Warranty are hereinafter referred to collectively as “Limited Warranty.” Product Warranty Period and Parts Warranty Period are hereinafter referred to collectively as “Warranty Period.”

What Is Covered Under The Limited Warranty

During the Warranty Period, Products and Parts that Techno deems validly subject to a warranty claim will be repaired or replaced, in Techno’s sole discretion, without charge. Repaired items may include new or refurbished replacement parts. Replaced items may be new or may be manufactured from serviceable used parts. Items that have been repaired and/or replaced will be warranted only for the unexpired portion of the applicable Warranty Period to the original purchaser.

As a condition to this Limited Warranty, customers shall have read the operator’s manual and registered the Product or Part with Techno within 30 days of purchase.

What Is Not Covered Under The Limited Warranty

Events That Are Not Covered Under This Limited Warranty Include:

- * Normal maintenance services as outlined in the operator’s manual or other operational instructions provided by Techno (such as oil change, cleaning, lubrication and adjustments).
- * Replacement of consumable items such as oil, lubricants, belts, router bits, or other items subject to normal service replacement.
- * Product/Part damage resulting from third-party parts, accessories or systems connected to or used in conjunction with the Product/Part that have adversely affected its operation, performance or durability.
- * Product/Part damage caused by normal wear, accidents, improper maintenance, improper use or abuse, alterations, or failure to follow operation and maintenance instructions contained in the operator’s manual.

- * Products/Parts purchased from any supplier, distributor or dealer not authorized by Techno.
- * Labor costs including, but not limited to, such costs as the removal and reinstallation of a component or assembly.
- * Insurance and packing costs for a defective items returned to Techno by the customer.
- * Product/Part damage caused by electrical surges, improper venting, flooding, fire, freezing, corrosive atmospheric elements, abnormal external temperature, or any event of force majeure such as riot or act of war.
- * Noise or vibration unless it is the result of defective material or workmanship of the Product/Part.
- * Claims of defective Products or Parts not made in conformance with Techno's return policy as set forth below.
- * Transport costs for defective items that require more than one (1) shipping to remedy a claimed defect.
- * Claims for personal injuries, incidental or consequential damages, or economic loss (profit or revenue), however caused. i.e. any other incidental, consequential, indirect, special and/or punitive damages, whether based on contract, warranty, tort (including, but not limited to, strict liability or negligence), patent infringement, or otherwise, even if advised of the possibility of such damages. Some states do not allow the exclusion or limitation of certain damages, so the above exclusion or limitation may not apply to a particular customer depending on location.
- * CLAIMS FOR PRODUCT COMPONENTS OR PARTS THAT ARE WARRANTED SEPARATELY BY THEIR RESPECTIVE MANUFACTURER(S) OR SUPPLIER(S). Available warranties covering those components are furnished with each Product and Part. Techno CNC Systems does not assume any warranty obligation or liability for components covered exclusively by the stated warranty of a component's respective manufacturer(s) or supplier(s).

Techno's Limited Warranty Shall Be Void In The Event Of An Occurrence Of Any Of The Following:

- * Failure by the Original Purchaser to register the Product within thirty (30) days of its purchase.
- * Where applicable, failure to validly reregister the Product within seven (7) days of transfer of the Product and prior to the expiration of the Warranty Period.
- * Improper installation of the Product, including but not limited to, installation in violation of applicable rules, laws or building codes, and installation for non- recommended uses.
- * Accident, abuse or misuse of the Product.
- * Failure to follow or comply with the user's operational manual.
- * Modification, alteration, addition of non-approved components, or misapplication of the Product or Part in any manner.
- * Repairs and service conducted by personnel unauthorized by Techno.
- * Modifications to, and tampering with, the Product or Part.

- * Use of non-standard parts or accessories without prior written approval from Techno.
- * Use of Product or part for purposes for which the item was not designed or intended.
- * Cancellation or recall of equipment/parts payment to Techno without specific prior written authorization from Techno.

Warranty Limitations

Techno's maximum liability hereunder is limited to the original purchase price of the Product or Part.

Techno assumes no responsibility for the selection of any Product or Part for a specific application absent Techno's written approval of such application, and makes no general representations whatsoever in respect to any such selection.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHETHER EXPRESSED, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING, ARE HEREBY DISCLAIMED. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY DOCUMENT.

TECHNO SHALL NOT BE LIABLE FOR INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL, PUNITIVE OR OTHER SIMILAR DAMAGES THAT MAY ARISE, INCLUDING LOST PROFITS, DAMAGE TO PROPERTY OR INJURIES TO A PERSON, LOSS OF USE, INCONVENIENCE, OR LIABILITY ARISING FROM THE INSTALLATION, SERVICE OR USE OF THE PRODUCT OR PART.

UPON THE EXPIRATION OF THE LIMITED WARRANTY PERIOD, TECHNO'S LIABILITY UNDER THIS WARRANTY SHALL TERMINATE.

Some states do not allow the contractual exclusion or limitation of incidental or consequential damages or personal injury, so the limitations set forth herein may not apply to all customers in all locations.

How To Obtain Warranty Repair/Replacement

All defective items covered under the Limited Warranty must be properly returned to Techno for inspection. Techno reserves the right to not accept returns unless the returned item is accompanied by proof of original purchase, a return authorization number ("RAN") from Techno, and shipped in accordance with packaging and shipping instructions given to the customer by Techno. Claims and requests for a RAN must be made within seven (7) days of discovery of a defect. Proper packaging and insurance for transportation is solely the customer's responsibility. All returned items must be sent to the Techno facility located in Ronkonkoma, New York (or such other place as Techno specifically designates to the customer) with a statement of the problem and transportation prepaid. If, upon examination, Techno determines that a warranted defect exists, the returned item will be repaired or replaced in Techno's sole discretion at no charge, and shipped prepaid back to the customer. Return shipment will be by common carrier of Techno's choosing. If rapid delivery is requested by customer, then such transport expense shall be borne by the customer.

Warranty inspections and repairs are performed at Techno's New York facility, where all necessary diagnostic and repair equipment is available. This equipment is difficult to transport and field service is accordingly severely limited and will only be supplied at Techno's sole discretion. If field service is required, all service call expenses, including transportation, travel time, subsistence costs, and the prevailing cost per hour (eight hour minimum) are the responsibility of the customer.

In the event that support diagnostics of a covered Product or Part requires an item to be shipped more than one (1) time for any given claimed warranty defect, then the customer shall bear all transport costs.

If an out-of-warranty situation exists, the customer will be notified of the repair or replacement cost. At such time, the customer must issue a purchase order to cover the cost of the repair/replacement or authorize the item to be shipped back to the customer at the customer's expense. In all cases, a restocking charge of twenty (20%) percent will be charged to the customer on all items returned to stock.

Warranty claims will not be reviewed or remedied unless the warranty registration is received by Techno within thirty (30) days of the purchase date. All warranty issues must be handled through Techno.

Techno customer service can be reached by calling 631-648-7481.

Additional Terms & Conditions

TECHNO RESERVES THE RIGHT TO CHANGE DESIGNS, SPECIFICATIONS, PRICES AND ANY APPLICABLE DOCUMENTATION WITHOUT NOTICE TO THE CUSTOMER.

Techno is not liable for delay or failure to perform any obligation hereunder by reason of circumstances beyond Techno's reasonable control. These circumstances include, but are not limited to, accidents, acts of God, strikes or labor disputes, laws, rules, or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials, and any other event beyond Techno's control.

No legal action arising out of any claimed breach of this Limited Warranty may be brought by the more than one (1) year following date of purchase of a Product or Part. This Agreement shall be governed in all respects by the laws of the State of New York, United States of America. Any legal action brought by a customer against Techno must be brought in the state courts of the State of New York, Second Judicial Department. Some states do not allow the contractual limitation of time periods for bringing suit so the limitations set forth herein may not apply to all customers in all locations.

Once an order is placed by the purchaser, in no event shall purchaser cancel payment or any portion thereof (e.g. reverse charges on a credit card or stop payment on a check) without prior express written authorization from Techno. Failure to obtain prior express written authorization from Techno shall be an event voiding Techno's Limited Warranty on the Product or Part and purchaser shall be subject to liability for any damages sustained by Techno.

The terms and conditions contained herein shall constitute the entire agreement concerning the Limited Warranty described herein. No oral or other representations are in effect. No dealer, distributor, or individual is authorized to amend, modify, or extend this Limited Warranty in any manner and only the warranty expressed in this warranty document is extended herein by Techno. Statements made outside this warranty document, such as in dealer advertising or presentations, whether oral or written, do not constitute warranties by Techno and should not be relied upon.

Section headings contained in this warranty document are for informational purposes only and may not be used to limit the terms and conditions set forth in this warranty document. If any portion or provision contained in this Limited Warranty & Coverage shall to any extent be found to be invalid or unenforceable, the remainder of this coverage or the application of such portion or provision in circumstances other than those in which it is held invalid or unenforceable, shall not be affected thereby, and each remaining portion or portion of this Limited Warranty shall be valid and enforceable.