

3D Pro *XTREME*

User Guide

The 3-D Pro will only operate as instructed on clean power.
Please make sure that the correct cutter and jaw combination are in place before cutting the key!!!!



It is recommended that Safety Glasses be worn at all times when operating this machine.

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Checking your new 3D Pro upon arrival

Please check for any damages caused during shipping, if any damage is found, please report it immediately. If damage is not reported on the day of arrival, the customer will be responsible for any repair costs. Calibrate the machine when your finished setting up the software as instructed on the following pages. The tracing function for duplicating keys works only on metal; don't try to duplicate plastic keys.

- Make sure the plastic covers on the 3D Pro are not cracked or broken.
- Check that the tracer swing arm flips up and down properly
- The machine should have no major scratches or markings
- All missing parts should be reported upon day of arrival

Contents	
1 x 3-D Pro Machine	1 x Stylus
1 x Jaw 1 (High security Jaw)	1 x Tip Stop
1 x Jaw 2 (Standard Jaw)	1 x USB Cable
1 x Jaw 3 (VW Jaw)	1 x AC Power Cord
1 x TR 2.5 Single Ended Cutter	
<i>Optional Parts: Bolt-Down Kit - Laptop Mount - Tibbe Adapter – Tubular Jaw</i>	

Newer 3D Pro Xtreme key machines have a hard wired motor control cable but on older machines the 9 pin serial cable exiting the left side of the machine case should only be plugged into the 9 pin serial plug on the left side of the X table. (see pics below) Be sure to tighten down the two small flathead attaching screws. Do not plug the 9 pin serial cable into a computer, this will short out the control board.



Computer Hardware Requirements

- Windows XP - SP2 or higher, Windows Vista, 7 and 8 with 2 GB of RAM
- We recommend a 1,500 watt pure sine wave inverter to extend the life of your 3D Pro and laptop.
- If using an inverter to power the 3D Pro, make sure the inverter is *properly grounded* to the vehicles chassis otherwise you may experience problems with the operation of the machine. Please follow your inverter manufactures installation instructions and refer to the "Using an Inverter" page of this manual.

When cleaning key shavings from the machine, please use a brush, please **do not use compressed air** as doing so will likely blow shavings into the machine and over time causing problems such as gumming up the axis' to where the tables could seize up or cause electrical shorts.

The Emergency Stop (On/Off) Button

The Emergency Stop acts as the On/Off Switch. The “Emergency Stop Button” is situated on the left hand side of the machine. In an emergency, hit the button to turn off the machine. To turn the machine on, twist the button clockwise and it will pop out. To turn the machine off, press the button. Note that if you simply want to cancel a key cutting process that using the stop button on the software is a better option.



Software Installation

Installing the Software:

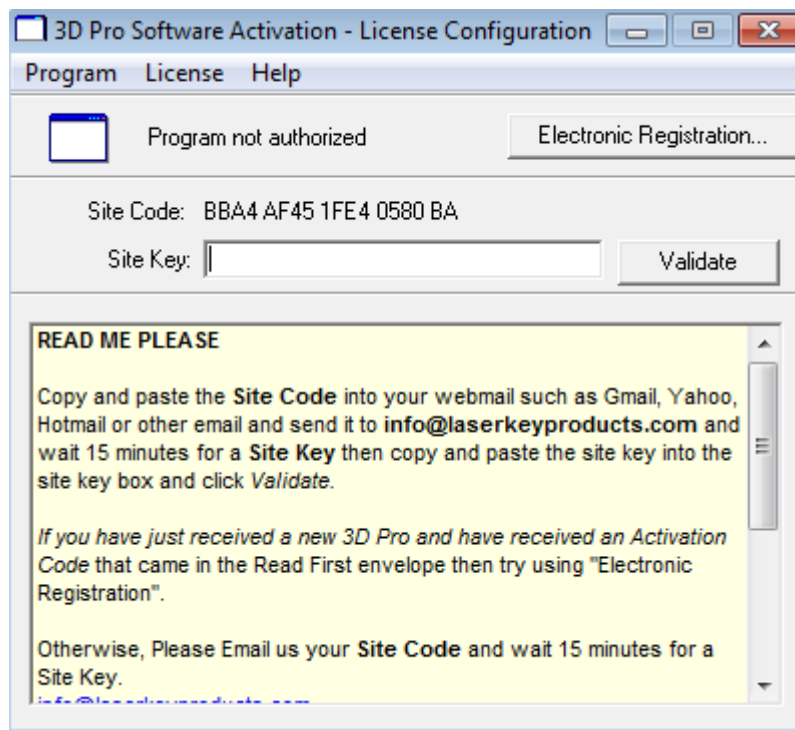
1. Go to LASERKEYPRODUCTS.COM and on the right side of the main home page under Popular Downloads click 3D Xtreme Software.
2. Next to v15 Click ‘Purchase and Download Now’ then click ‘Add to Cart’ then click ‘Checkout’ then provide Company and other information and click ‘Submit the Information’ and in the ‘Discount Coupon’ box use the coupon code provided in the white envelope received with new machines and select ‘Use Coupon’ payment method and click ‘Continue’ and then ‘Confirm Order’ and then ‘Download Now’.
3. The coupon Code will be in the white envelope received with new machines.
(Contact us to purchase codes and obtain the codes download password)
4. Download, extract and Run the downloaded file and follow the on screen instructions

(A video of this procedure can be found on the Xtreme download page)

Software Activation

After installation, Double-click your new desktop icon and the License Configuration appears.

(Some downloaded versions will only ask to activate after 3 runs. This is because we allow users to trial the software and also to let users operate the machine in case they can't get an activation code quickly such as if the software is installed after hours.)



1. Read and follow the activation instructions. You will be instructed to email us your site code and wait for a site key. Site codes are released Monday through Friday 9am – 5pm Central Standard Time
2. If in the activation window 'Electronic registration' or 'Email Registration Request' doesn't work then copy and paste the site code to your webmail such as Gmail, Yahoo, or Hotmail and wait for a site key to be sent back to you, then copy and paste the site key in the activation window and click 'validate'
3. Once the software is activated you will likely get an error stating that the software cannot connect to the machine. Follow the steps on the next page to configure your Device Manager.

Driver Installation

After installing the 3D Pro software, follow these steps to get the machine communicating with the computer. These steps can also be used if you get a “Motion board not connected” Error. It is important make sure the machine is hooked up to the computer, powered on and configured in the device manager properly before starting the software for the machine.

1. Connect power cord to the left side of the 3D Pro and twist out the Red Emergency Stop.
2. Connect USB cable to the back of your 3D Pro and to any USB port on your computer.
3. Your computer should at this point install the driver automatically, if not the “Found New Hardware Wizard” will appear. Click install from specific location and Browse to “c:\laser key products\3d pro windows drivers” and click next and finish. If an unsigned driver warning appears then select “Continue Anyway”
4. If the “Found New Hardware Wizard” didn’t appear, then open the Device Manager from the desktop icon labeled “Device Manager” and look for “Other Devices > Motion Controller” Right Click “Motion Controller” and Click “Update Driver” Choose install from specific location and Browse to “c:\ laser key products\3d pro windows drivers” and click next then finish. If an unsigned driver warning appears then select “Continue Anyway”
5. If the driver installed correctly you will see “Ports > SSUSB-RS422 Serial Communication Converter board”. Move onto “Finding the correct COM port” on the next page.



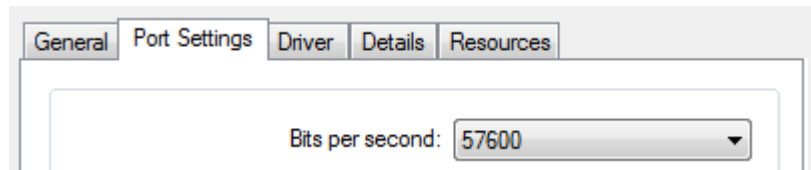
(This is what your device manager should look like after installing the drivers)

Driver Configuration

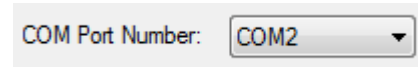
After installing the 3D Pro software and drivers, follow these steps to get the machine communicating with the computer. These steps can also be used if you get a “Motion board not connected” Error.

1. Open “Device Manager” from the desktop icon and look under “Ports” for “SSUSB-RS422 Serial Communication Converter board” then right-click it and click properties.

2. Under “Port Settings” **change the Bits per second to 57600**



3. Click the “Advanced” button and **set the COM number to 2** and press OK, and OK again on the Properties page and exit the Device Manager



4. Close the Device Manager window, then push in the red button on the left side on the machine and **unplug the USB** cable going to the computer from the machine, **wait 30 seconds** then twist the red button out **and plug the USB cable back** into your computer and **wait 30 more seconds** and then **start the software**.



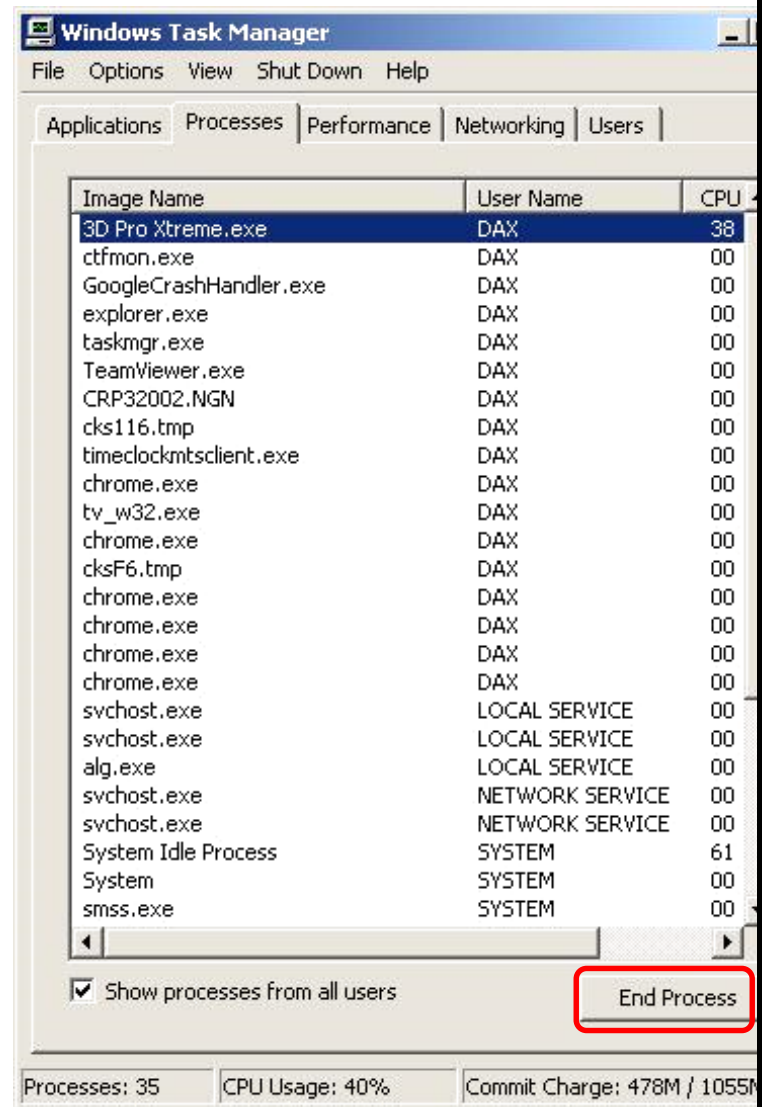
(This is what your device manager should look like after setting the COM port)

Error Connecting

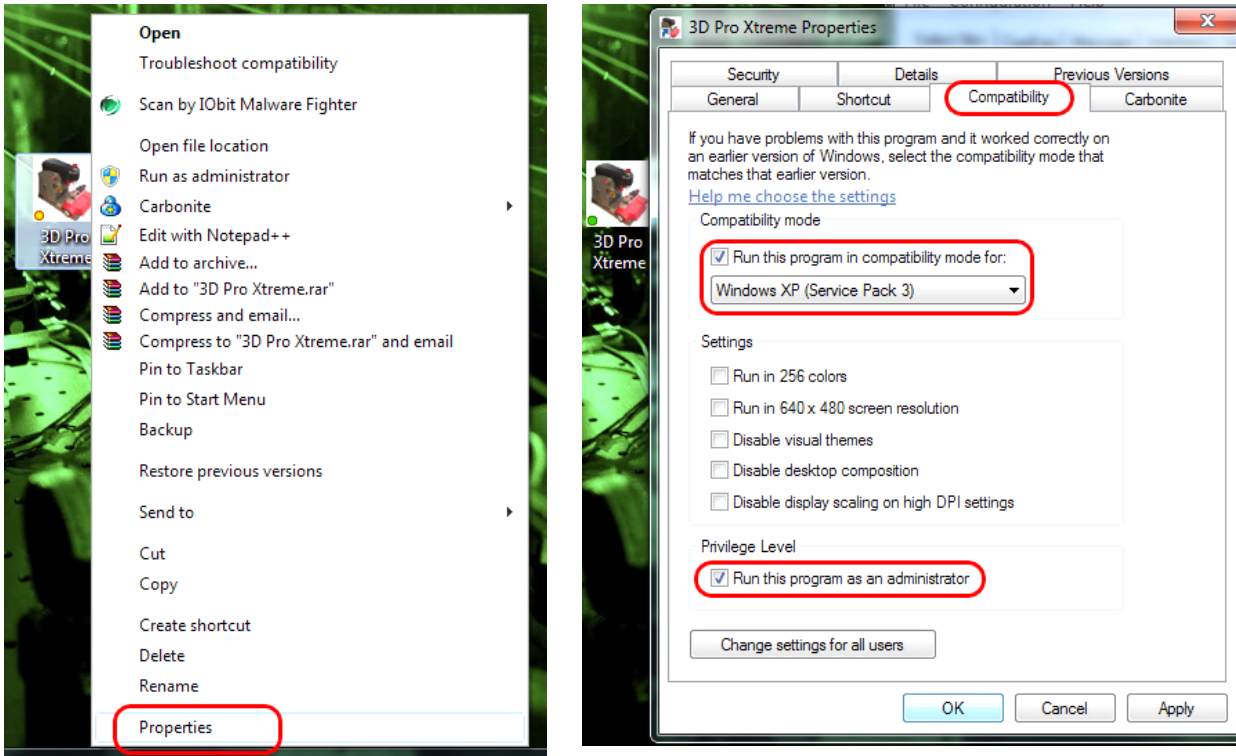
COM Error

If you start your software and the software says “Communications Error” or “Board Not Found” check these options:

1. Power is going to your 3D Pro from the power outlet.
2. The emergency stop button is disengaged (twisted out according to the arrows)
3. The USB cable from the 3D Pro is plugged into a USB port on your computer.
4. Multiple instances of the 3D Pro software may be running causing a conflict, check this by opening Task Manager (Control Alt Delete on your keyboard and then clicking start Task Manager.)
Select any items labeled “3D Pro Xtreme.exe” and then click “End Process”
5. Unplug the USB Cable for 15 seconds, plug it back in and wait 15 more seconds and then start the software for the machine.
6. Repeat the Driver Installation and Configuring COM Port instructions on the previous pages.



If you still get error connecting then right click the desktop icon for the 3D Pro, click Properties and then click the compatibility tab, set the settings shown below and press ok. Try to start the software again.



Changing the Cutter and Calibration Stylus

“The Collet” Holds the Cutter or Stylus in the spindle. To remove the cutter or stylus, first hold the red knurl knob on the top of the machine sticking up through the lid. Then press in “spindle stop button” on the front of the head unit. Now turn the knob on top with your hand until you feel the spindle stop button press all the way in. Turn the knob counter clockwise and you will feel the collet loosen. The cutter or stylus can now be removed. Machines that do not have the “spindle stop button” will have a red “knurl knob” underneath the head unit that you will use together with the top knurl knob to loosen the “Collet” and remove the cutter.



When replacing the cutter or stylus, insert it into the collet and slide it up until it stops. Press the spindle stop button in until it catches so you can tighten the collet back up on the cutter, it

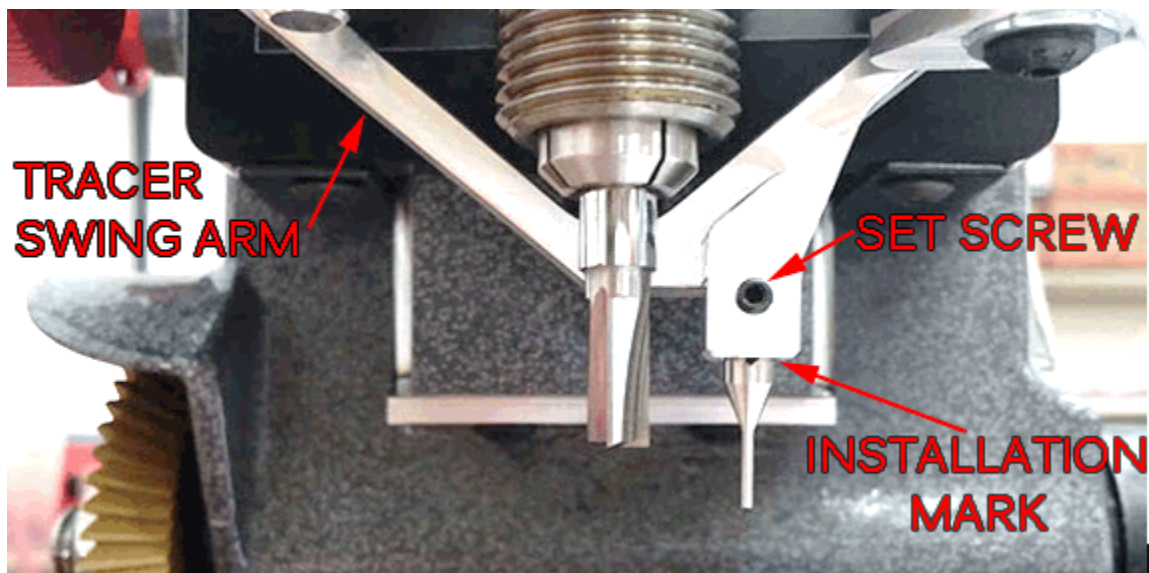
does not have to be extremely tight, hand tight should be sufficient. If one of the ends of your TR62.2 double ended Jaw 2 cutter is broken, you will notice that it inserts further into the collet than normal. This is fine but if it had just broke be sure to click on “Enter” before clicking on the “Start” button so it will compensate for the new length. Pressing the “Enter” button causes the machine to recalculate the cutting path.

Changing Tracer

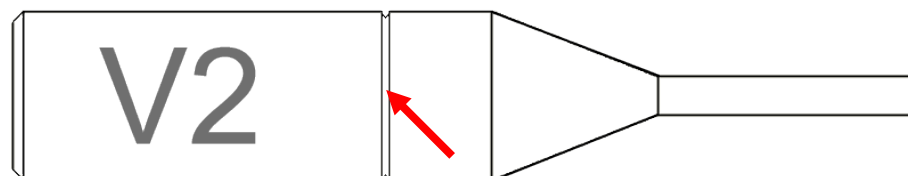
When changing the tracer, tighten the set screw that holds the tracer tip in place in between the two dimples. The tracing function for duplicating keys works only on metal; **don't try to duplicate plastic keys.**

Single ended tracer tip installation:

1. Loosen Set Screw on tracer Swing Arm and remove current tracer



2. Install the Tracer into the Tracer Swing Arm to the installation mark and tighten the set screw.



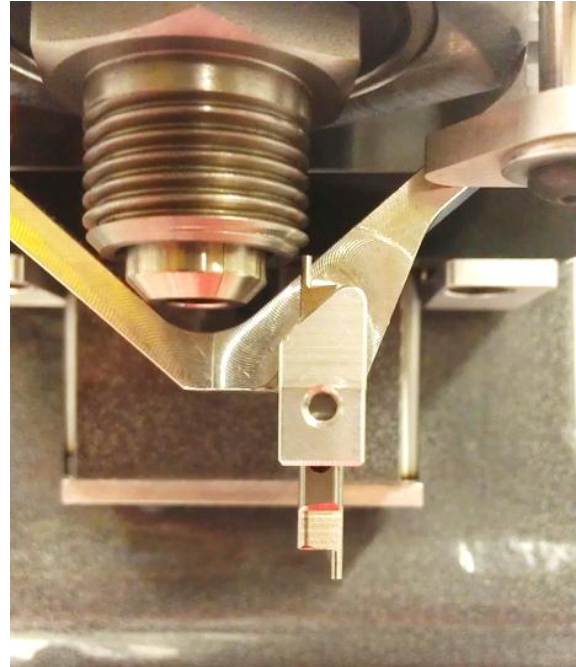
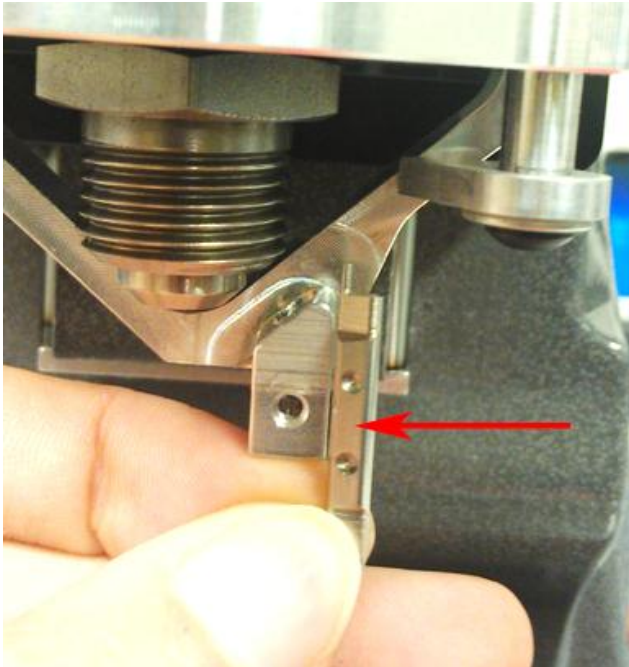
(Installation mark indicated by the arrow)

The mark should not be visible after installation

3. Calibrate the tracer after changing tracer tips.

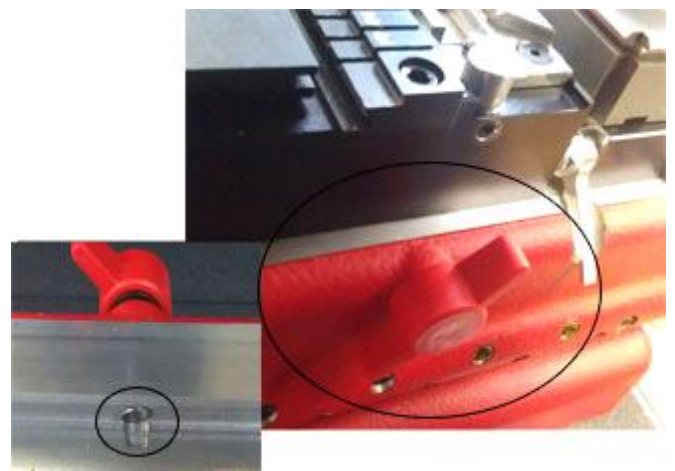
Double Ended tracer tip installation:

When installing a double ended tracer, tighten the set screw that holds the tracer tip in place in between the two dimples. The tracing function for duplicating keys works only on metal; **don't try to duplicate plastic keys.**



Changing Jaws

Jaw 1 is for High Security keys and the Jaw 2 is for standard security keys. When changing a jaw, look behind where the jaw is attached, you will notice a red "T knob" Turn the "T knob" counter clockwise to release the lock pin, the jaw can be now be removed from the table by sliding it off to the right. Replacing the jaw is the same operation in reverse order, if the jaw will not slide into place, make sure the angle of the lock pin matches the angle of the dovetail, and lock pin is not protruding (like the one in the pic)



Calibrating the 3D Pro Xtreme

If you get “Obstruction Detected” errors you may need to calibrate, make sure you are calibrating with the stylus and not the cutter when calibrating.

Calibrating Cutter for Jaw 1:

1. Clean any shavings or debris from jaw (Any metal shavings, dirt or grease that the stylus touches will take an incorrect reading). And open Jaw 1 all the way!

2. Put the Stylus in the collet. The Stylus must be used to calibrate.

Do not use cutters to calibrate or else your keys will cut wrong.

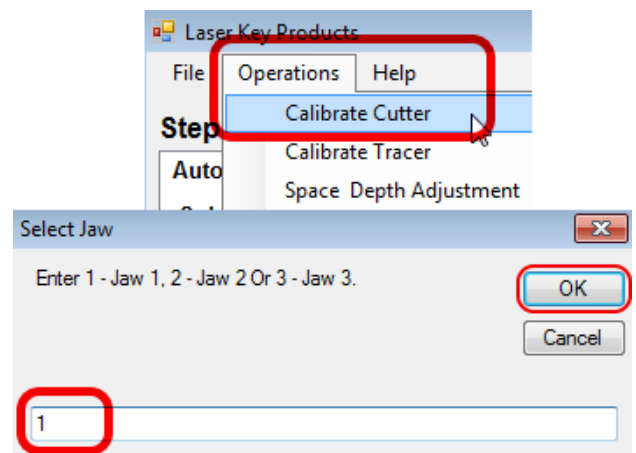
This is the Stylus.



3. Make sure the tracer arm is up, if the tracer arm is down, you will receive an error message.

4. On the main screen, click on the “Operations” menu and choose “Calibrate Machine”

5. When the window appears asking to “Select Jaw” insert the correct jaw number in the window, 1 (1, 2, or 3 depending on which jaw you want to calibrate) as we are calibrating Jaw “1” we would enter “1” and click “OK”



6. The stylus will touch the jaw in three places. After the procedure is complete, at the lower left portion of the software, it will say “Update in Progress Please Wait” give it a moment and don’t click anything or it can possibly freeze the software and you will have to restart it.

Calibrating Tracer for Jaw 1:

1. Always have a “Cutter” or “Stylus” installed while calibrating the Tracer, do not leave the collet empty or it will get in the way of the Tracer.

2. Flip the tracer arm down with the “red knurl knob” on the left side of the head.

3. On the main screen, click on the “Operations” menu and choose “Calibrate Tracer”

4. When the window appears asking to “Select Jaw” insert the correct jaw number in the window, (1, 2, or 3 depending on which jaw you want to calibrate) as we are calibrating Jaw “1” we would enter “1” and click “OK”

5. The tracer tip will touch the jaw in three places.

After the procedure is complete it will read,

“Update in Progress Please Wait” give it a moment and don’t click anything or it can possibly freeze the software and you will have to restart it.

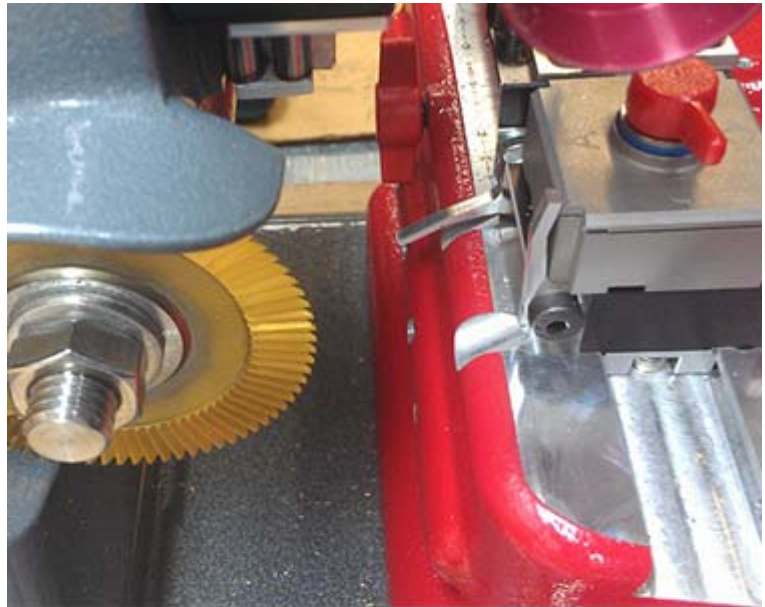


Calibrating Cutter for Jaw 2:

1. Clean any shavings or debris from jaw (Any metal shavings, dirt or grease that the cutter touches will take an incorrect reading)

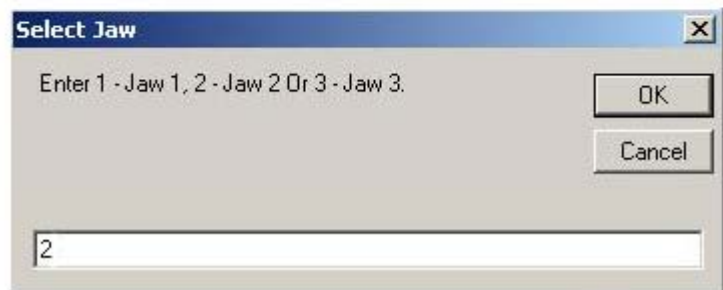
2. Close the Jaw 2 so that it is completely shut with the 'A' side facing the cutter wheel

3. Flip the Shoulder stop up and the Tip stop down as pictured.



4. On the main screen, click on the "Operations" menu and choose "Calibrate Cutter"

5. When the window appears asking to "Select Jaw" insert the correct jaw number in the window, (1, 2, or 3 depending on which jaw you want to calibrate) as we are calibrating Jaw "2" we would enter "2" and click "OK"



6. The cutter wheel touches the front of the A side of the Jaw 2 and then moves to the left and touches the shoulder stop then goes home.

After the procedure is complete it will read "Update in Progress Please Wait" give it a moment and don't click anything or it can possibly freeze the software and you will have to restart it.

Jaw 2 may need minor adjustments to space or depth after calibrating to be correct. Refer to the section "Checking and Adjusting the "Tracer" for instructions.

There is no tracing for Jaw 2

Calibrating Cutter for Jaw 3:

1. Clean any shavings or debris from jaw (Any metal shavings, dirt or grease that the stylus touches will take an incorrect reading). And open Jaw all the way!

2. Put the Stylus in the collet. The Stylus must be used to calibrate.

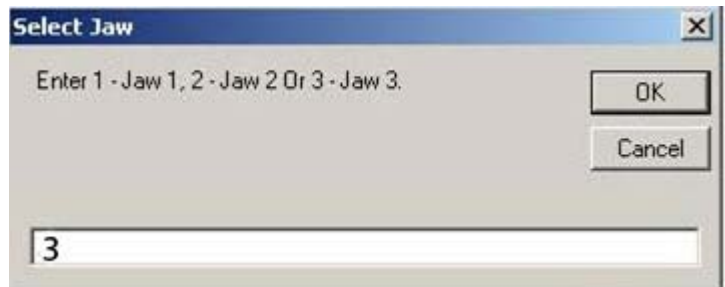
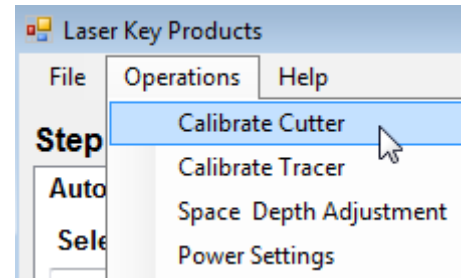
Do not use cutters to calibrate or else your keys will cut wrong.

3. Make sure the tracer arm is up, if the tracer arm is down, you will receive an error message.

4. On the main screen, click on the “Operations” menu and choose “Calibrate Machine”

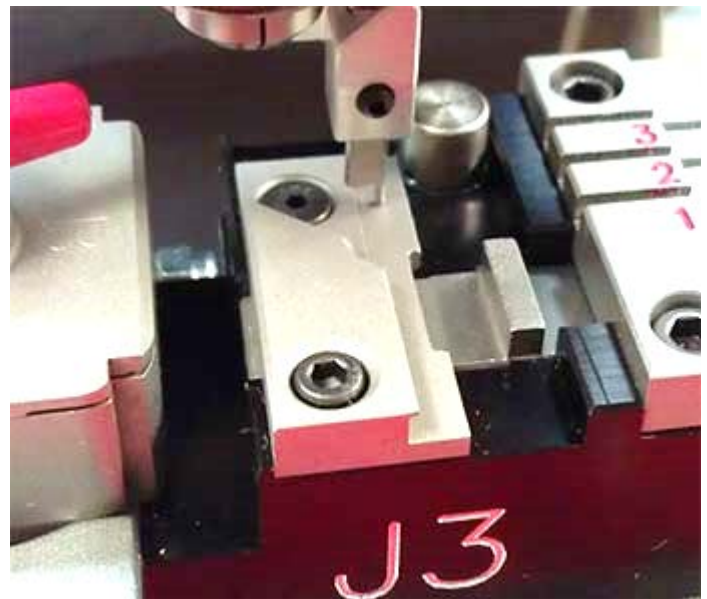
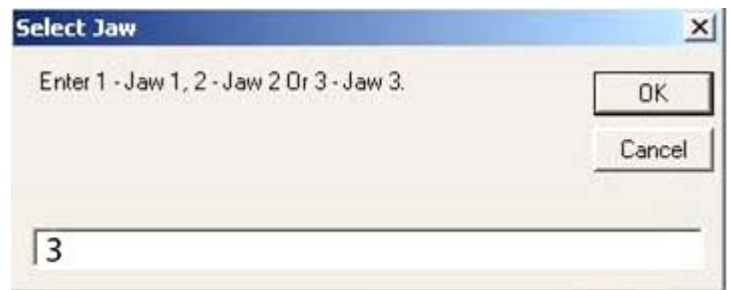
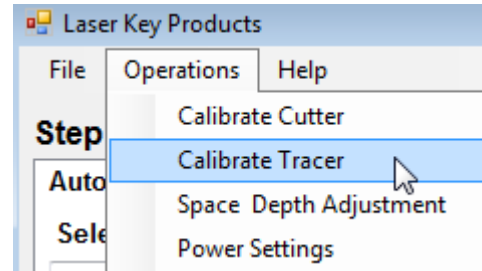
5. When the window appears asking to “Select Jaw” insert the correct jaw number in the window, 1 (1, 2, or 3 depending on which jaw you want to calibrate) as we are calibrating Jaw “3” we would enter “3” and click “OK”

6. The stylus will touch the jaw in three places. After the procedure is complete it will say “Update in Progress Please Wait” give it a moment and don’t click anything or it can possibly freeze the software and you will have to restart it.



Calibrating Tracer for Jaw 3:

1. Never have a “Cutter” or “Stylus” installed while calibrating the Tracer, leave the collet empty or it will get in the way of the Tracer and cause an error.
2. Flip the tracer arm down with the “red knurl knob” on the left side of the head.
3. On the main screen, click on the “Operations” menu and choose “Calibrate Tracer”
4. When the window appears asking to “Select Jaw” insert the correct jaw number in the window, (1, 2, or 3 depending on which jaw you want to calibrate) as we are calibrating Jaw “3” we would enter “3” and click “OK”
5. The tracer tip will touch the jaw in three places. After the procedure is complete it will read, “Update in Progress Please Wait” give it a moment and don’t click anything or it can possibly freeze the software and you will have to restart it.



USING JAW 1

“Jaw1” is always used for ALL high security (laser style keys) except Volkswagen (VW)

The Cutter used most with Jaw1 is always the TR2.5 single ended Cutter:

This is the “Jaw 1 Tip Stop”



Clamping High Security Keys in Jaw 1 Using the “Tip Stop”

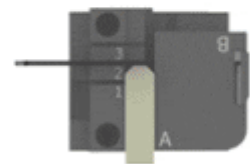
When you selecting High Security keys, the software will tell you which slot to place the “Tip Stop” After selecting the key, look under the “Step 2” column on the home screen, you will find the tip stop number next “Stop” under the cutter image.

It will read “Tip 1”, “Tip 2”, or “Tip 3”

Place the tip stop in the correct slot, lay the key flat in the jaw and slide the key forward until it touches the tip stop then tighten the jaw using the red knob on the right side of the Jaw 1 and then remove the tipstop.

Warning: Do not forget to remove the tip stop before tracing or cutting a key. The tracing function for duplicating keys works only on metal; don't try to duplicate plastic keys.

DSD:	3
Key Blank:	H001-P
Manufacturer:	HONDA/ACURA
Spaces:	6
Depths:	6
Track:	Four
Cut:	External
Jaw:	Jaw 1

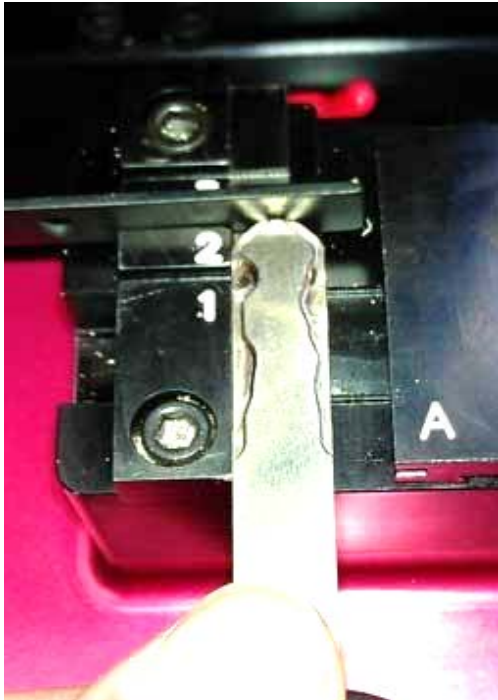


Jaw Clamp:	N/A
Cutter:	Cutter 1



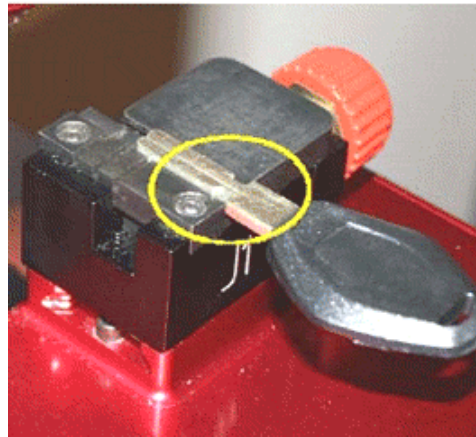
Stop:	Tip 2
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Jaw 1 Tipstop Example:



Using the Jaw 1 “Shoulder Stop”

When selecting keys that calls for a “Shoulder” stop, place the key in the jaw and slide it forward until the shoulder of the key is touching the front of the jaw. Tighten the red knob to lock the key in place.

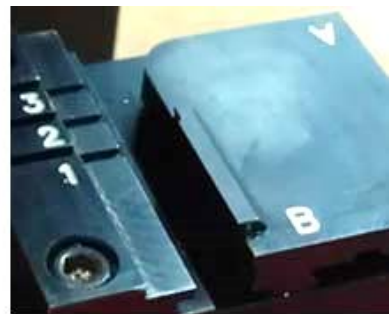


DSD: 1
Key Blank: S7BW
Manufacturer: BMW
Spaces: 6
Depths: 4
Track: Four
Cut: External
Jaw: Jaw 1



Jaw Clamp: N/A
Cutter: Cutter 1
Stop: Shoulder

Jaw 1 “B” Side



When a Mercedes 2 Track or BMW HU92 2 Track key is selected, it requires that the Jaw 1 “B” side be used. Open the Jaw 1 and slide the movable side of the Jaw 1 top off the Jaw 1 and slide it back on with the B side on the left.

Using Jaw 3

(Jaw 3)

When a VAG (HU66) key is selected, it requires Jaw 3 to be used. Insert the key into Jaw 3 and slide the key forward until the shoulder of the key and tighten the red knob on the right of Jaw 1.

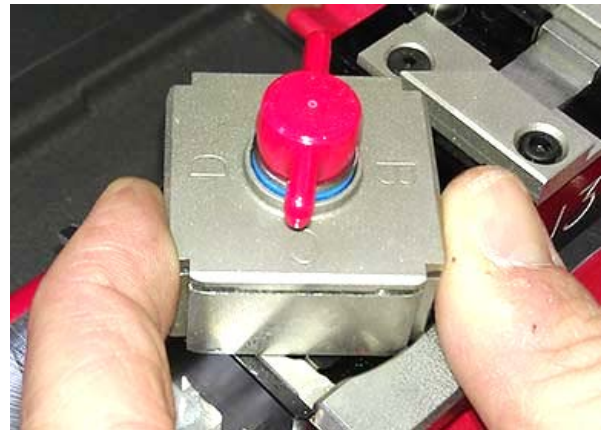


USING JAW 2

When loosening the Jaw 2 clamp be careful not to unscrew the red T knob too far, doing will cause the moving Jaw 2 top to slide out of the fixed Jaw 2 inner base and will require special instructions to reassemble.

Changing Jaw 2 Clamp

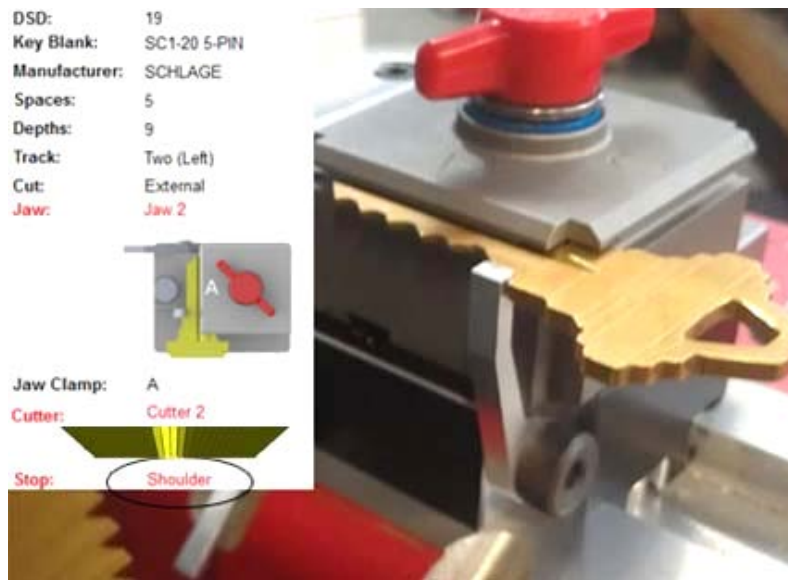
To change which jaw clamp faces the cutting wheel all you have to do is loosen the jaw 2 and firmly twist the jaw 2 in any direction until the desired jaw clamp is facing the cutting wheel.



Clamping Non-High Security “Shoulder Stop” Keys in Jaw 2

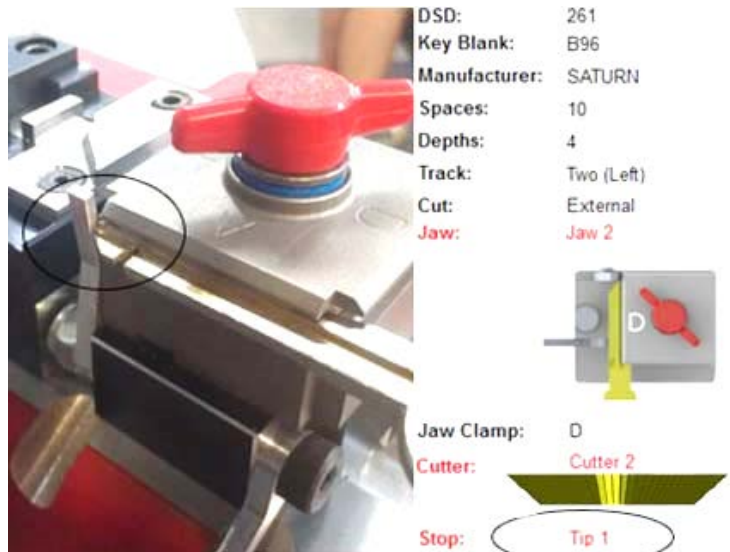
When you select a standard security key from the menu, the software will tell you which “Stop” to use, “Shoulder” or “Tip”

This is an example of a Shoulder Stop key. Slide the key forward until it stops on the shoulder of the key. Tighten the red knob on top until the key is clamped firmly.



Clamping Non-High Security “Tip Stop” Keys in Jaw 2

This is an example of a Tip Stop key. Insert the key into the jaw and raise the “Tip Stop” slide the key forward until it touches on the stop.



Remember to fold the “Shoulder” or “Tip” Stop back down before you start to “Trace” or “Cut” a key

Manufacturer Info:

CLAMP KEY ON MILLING

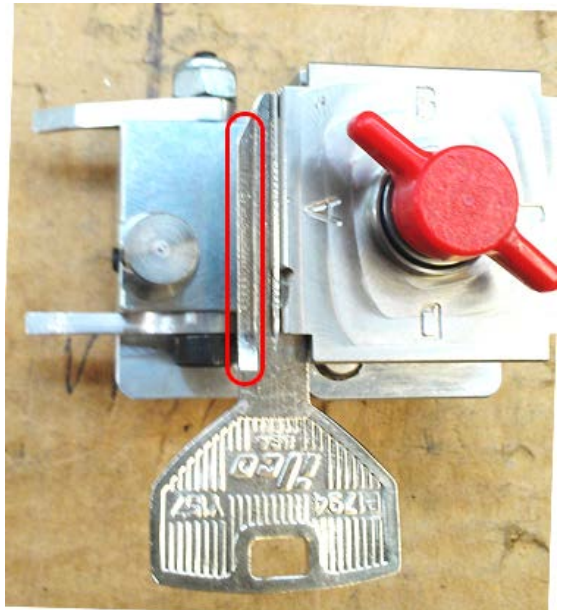
User Info:

Refer to page 10 in the 3D Pro instruction manual for details

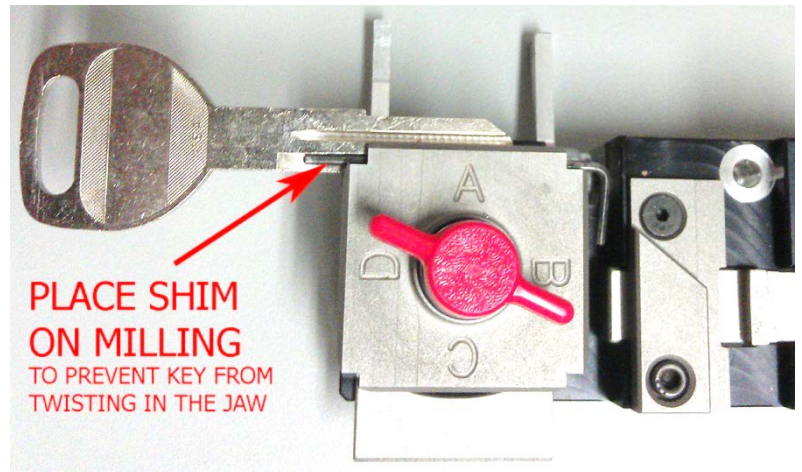
Be sure that all keys are inserted completely into the back (bottom) of the Jaw unless otherwise specified in the text box on bottom of the home screen.

The message will appear once the key is selected, if there are any notes like “clamp key on milling” it will appear here.

Circled in RED is the milling of this Y157 Key.
It is the thinnest part of the key along the edge.



Sometimes, depending on the blank used, the key will try to twist out of the jaw or otherwise not clamp properly. A shim can be used to hold the key tight as illustrated. In the example to the right we are using a hex wrench to shim the key.



Cut Types

- | Cut Type | |
|-----------------------|-------------|
| <input type="radio"/> | Laser Cut |
| <input type="radio"/> | Plunge Cut |
| <input type="radio"/> | Slotted Cut |

Slotted Cuts are not available at this time.

Laser Cut



Plunge Cut

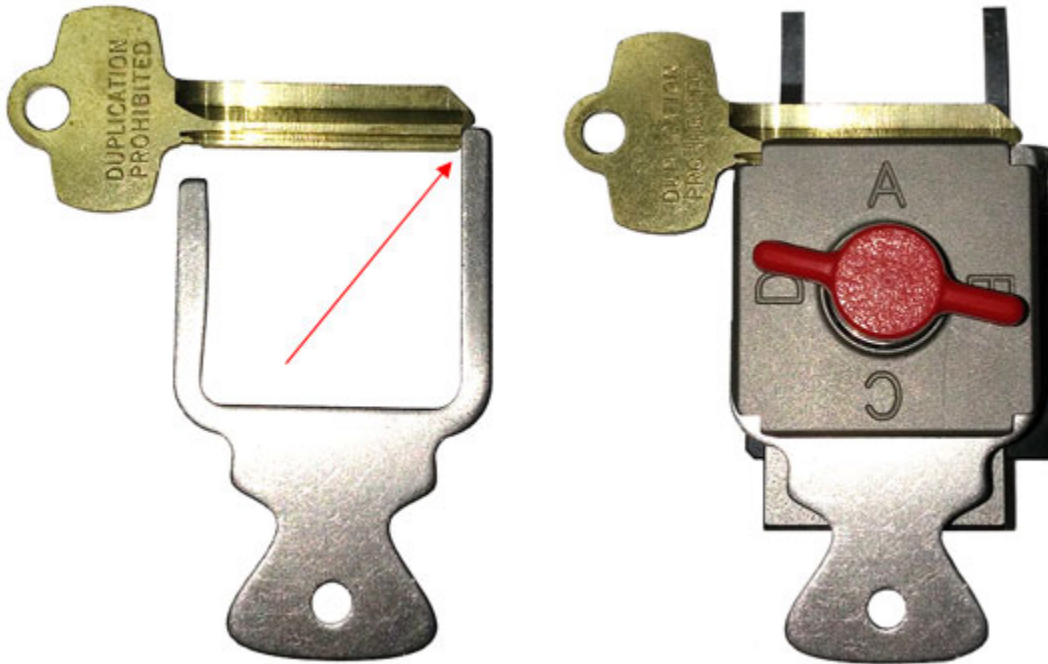


Double sided keys will not automatically align in the Jaw 2 if there is no 1 depth toward the tip of the key. To keep the key correctly aligned in the jaw, you must align the key by eye.

The best way to do this is to line up the milling marks on the key to the straight edge of the jaw.

Best Adapter

For Jaw 2



Slide the Best Adapter into the front of the Jaw 2 and stop Best keys on the recessed tip

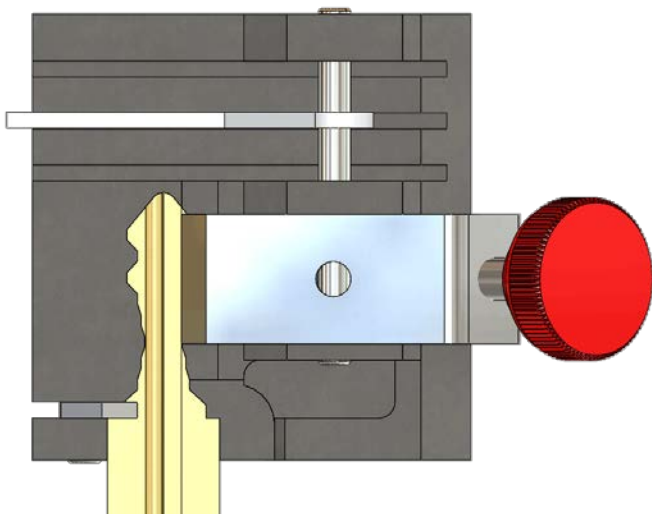
Using the Standard Tracing Adapter

The Standard Tracing Adapter holds standard security keys in Jaw 1 for tracing with the high security tracer. Once the key is traced the cuts are filled in and a standard key can then be cut using Jaw 2. Slide the lip on the bottom of the Standard Tracing Adapter up to the front of the Jaw 1 and clamp the adapter flat into Jaw 1 where a high security key would clamp.



When clamping Standard Security keys in the Standard Security Adapter it doesn't matter if you clamp on the milling or on the top of the key. The machine detects how the key is clamped and traces accordingly. Clamp whichever way works best.

Clamping Shoulder Stop Keys



Press down on the red knob to open the key clamp.

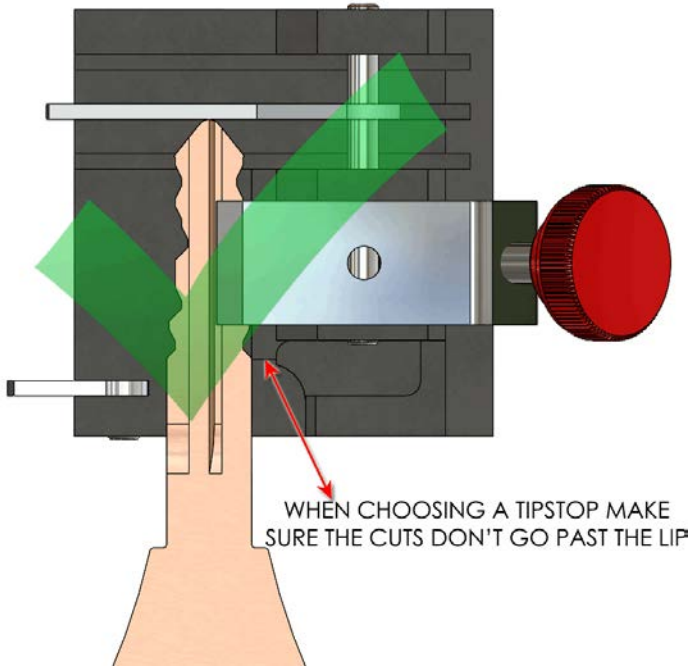
This is an example of how to clamp a double sided shoulder stop key.

The clamp is spring loaded and can be tightened with the knob. Since this adapter is only used for tracing it is not necessary to clamp keys very tight.

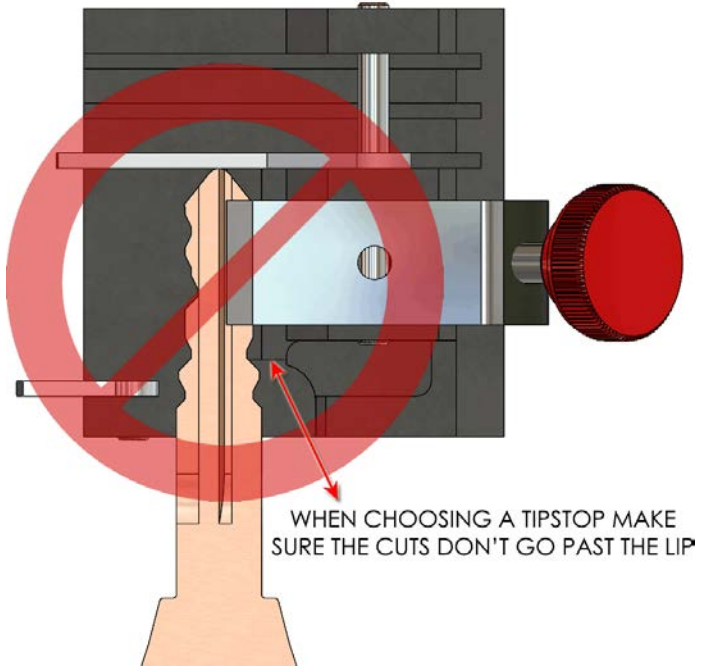
Clamping Tip Stop Keys

Clamp tip stop keys so that they don't go past the lip that the keys clamp on. Clamp on milling when possible. Leave tipstop down touching the tip of the key when tracing tipstop keys.

Correct Clamping:



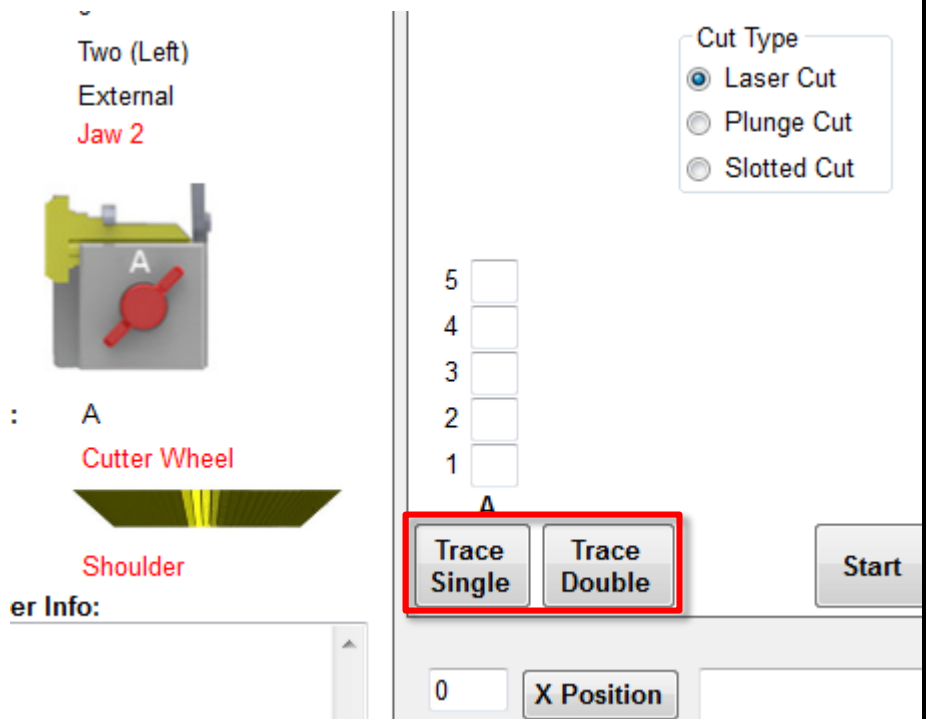
Incorrect Clamping:



Initiating a trace from the software

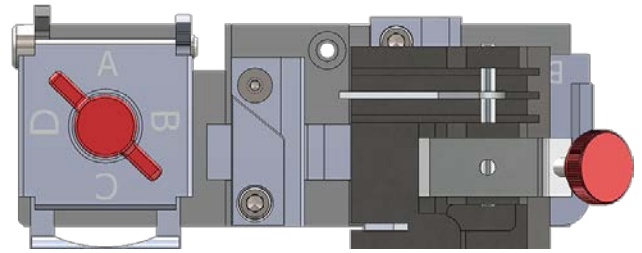
After the key is clamped, select the key to be duplicated in the 3D Pro software and click Single Trace or Double Trace.

Single trace will work for most keys most of the time but Trace Double can be more accurate by getting parameters from a blank, software will ask you to insert a key blank first, trace the blank, and then trace the cut key that you want to duplicate.

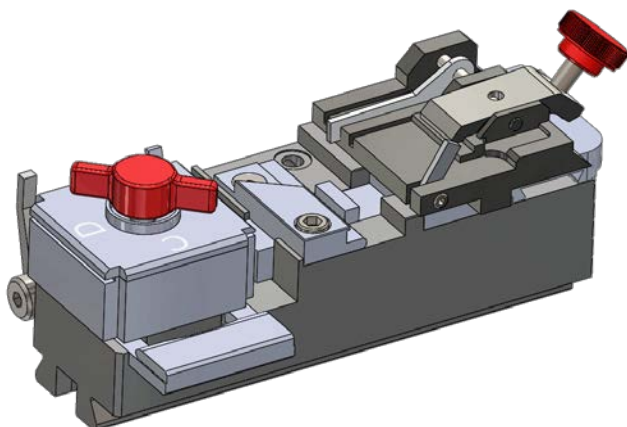


Troubleshooting the Standard Tracing Adapter

If you are having trouble working with the Standard Tracing Adapter then check to make sure the software is setup properly. With the machine powered on and connected and go to File > Setup at the top left of the main software screen. Look under the middle column for Jaw 2 and find the Tracer section under the Cutter section.



Jaw 1			Jaw 2			Jaw 3		
Cutter:			Cutter:			Cutter:		
X-Start	Y-Start	Z-Start	X-Start	Y-Start	Z-Start	X-Start	Y-Start	Z-Start
1756	1790	762	479	2223	0	561	1778	883
Step 1(x)	Step 1(y)	Step 1(z)	Step 1(x)	Step 1(y)	Step 1(z)	Step 1(x)	Step 1(y)	Step 1(z)
-50	1400	125	300	-700	0	-300	900	200
Calibration X1	Calibration Y1	Calibration Z1	Calibration X1	Calibration Y1	Calibration Z1	Calibration X1	Calibration Y1	Calibration Z1
1950	1350	35	1800	2000	0	700	900	20
Calibration X2	Calibration Y2	Calibration Z2	Calibration X2	Calibration Y2	Calibration Z2	Calibration X2	Calibration Y2	Calibration Z2
1950	2100	40	1800	1960	0	400	2100	-100
X-Start Offset	Y-Start Offset		X-Start Offset	Y-Start Offset		X-Start Offset	Y-Start Offset	
0	0		0	0		0	0	
Tracer:			Tracer:			Tracer:		
X-Start	Y-Start	Z-Start	X-Start	Y-Start	Z-Start	X-Start	Y-Start	Z-Start
1278	1825	582	1278	1825	582	85	1790	702
Step 1(x)	Step 1(y)	Step 1(z)	Step 1(x)	Step 1(y)	Step 1(z)	Step 1(x)	Step 1(y)	Step 1(z)
-50	1400	90	0	0	0	120	1400	100
Calibration X1	Calibration Y1	Calibration Z1	Calibration X1	Calibration Y1	Calibration Z1	Calibration X1	Calibration Y1	Calibration Z1
1450	1400	35	600	60	0	255	800	10
Calibration X2	Calibration Y2	Calibration Z2	Calibration X2	Calibration Y2	Calibration Z2	Calibration X2	Calibration Y2	Calibration Z2
1450	2100	20	-400	800	0	20	2100	-90
X-Start Offset	Y-Start Offset		X-Start Offset	Y-Start Offset		X-Start Offset	Y-Start Offset	
0	0		0	0		0	0	



Jaw 2 Tracer settings must match Jaw 1 Tracer settings for X, Y and Z Start. If not, then **copy the Jaw 1 Tracer settings to the Jaw 2 Tracer settings for X, Y and Z Start.**

Check that your settings for **Jaw 2 Tracer** match those in the above image for:

Calibration X1 (600), Calibration Y1 (60)
 Calibration X2 (-400), Calibration Y2 (800)

Make any necessary changes and click the **“Master Update”** button at the top right. Click File > Exit to exit when finished.

If you are getting consistently wrong readings when using the Standard Tracing Adapter you may have to adjust the tracer angle, a video of the procedure can be found in the 3D Xtreme help section at LASERKEYPRODUCTS.COM. Also, it is important that the Standard Tracing Adapter be completely flat on Jaw 1.

Tubular Jaw

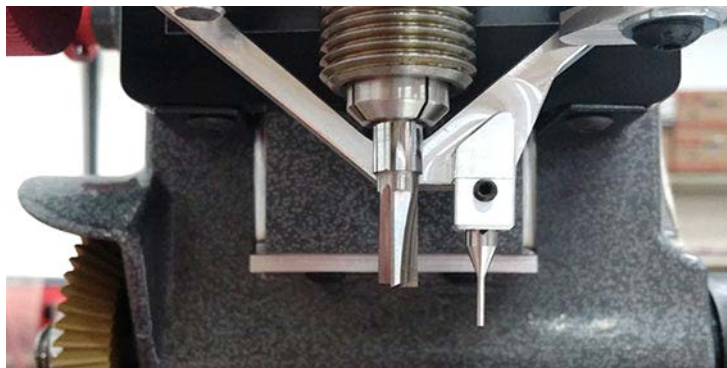


Tubular Cutter (Cutter 4)



Tubular Tracer

Make sure the single ended tubular tracer is installed into the Tracer Swing Arm just under where the mark was made to where the tracer tip is just under half an inch sticking out of the swing arm. Insert the Tubular Cutter.

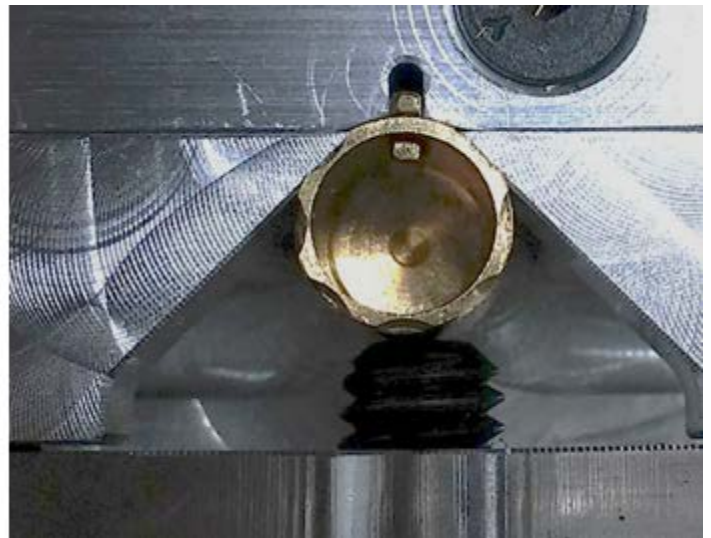
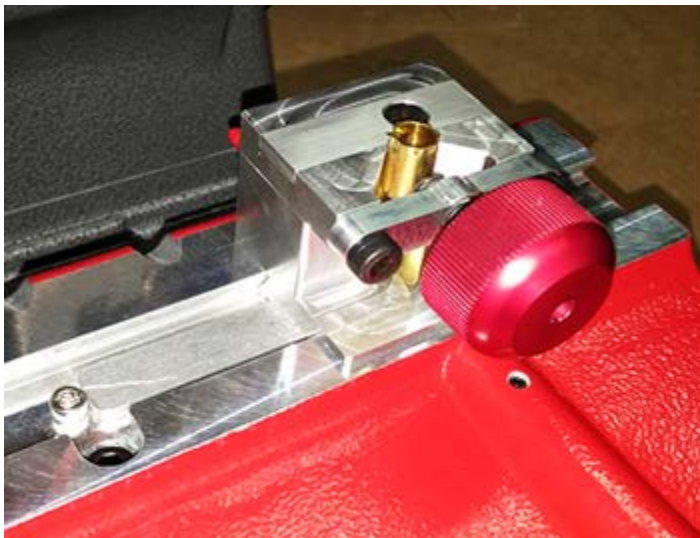


After installing the Tubular Tracer CALIBRATE THE TUBULAR TRACER ON JAW 1
(Tubular settings are shared with Jaw 1 calibration settings)

The Tubular tracer can be used to trace all keys, it is not necessary change out the tracer when changing jaws. If you alternate between tracers you will have to calibrate each time You will have to calibrate the new tracer for Jaw 3 also unless you plan to alternate between tracer types then you only have to calibrate for Jaw 1

Using the Tubular Jaw

Loosen the red t-knob behind the main jaw assembly, slide off the main jaw assembly, and slide on the Tubular Jaw. There is a spacer on the left side of the Tubular Jaw that stops on the silver screw. Tighten the red t-knob to lock the Tubular Jaw into place.



Supported

Blanks:

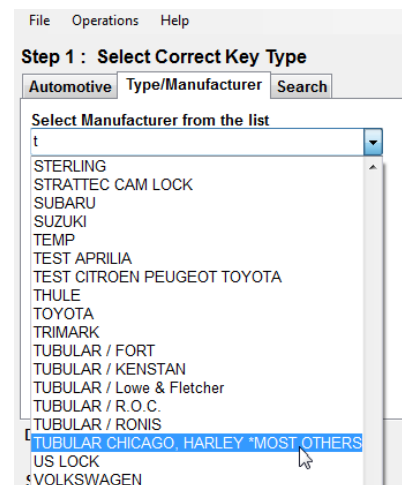
- ILCO 1137B
- LSDA 1137B
- JMA CHI-1T



Clamp keys in the jaw with the notch of the key placed into the cut out at the back of the jaw. Tighten the red knob on the front until the screw is firmly holding the key in place.

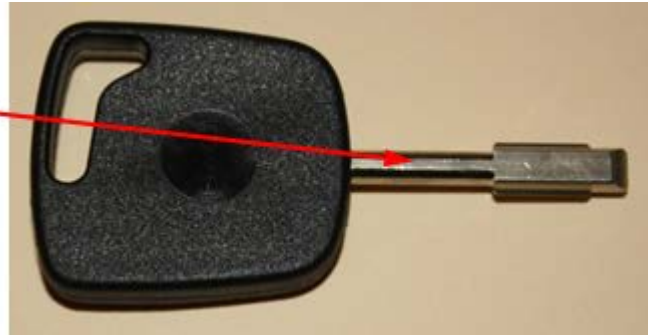
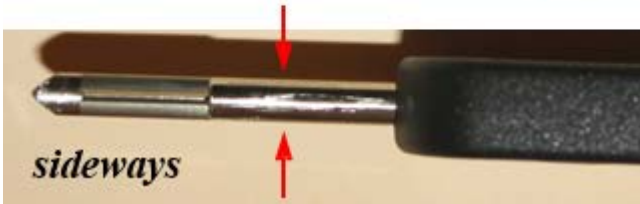
Selecting Tubular Keys in the Software

To select A Tubular key click the 'Type/Manufacturer' tab under 'Step 1: Select Correct Key Type' and choose the type of Tubular to use.



Tibbe Key and Tibbe Adaptor

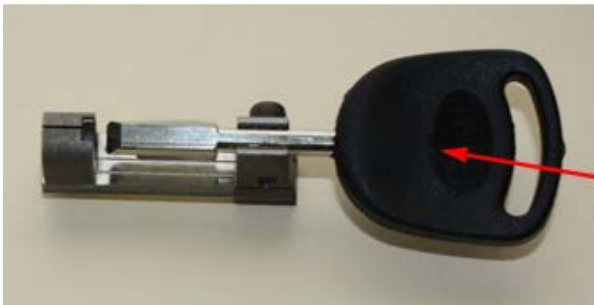
You will notice that the Tibbe Key has a flat section on the side



This enables us to insert the key blank into the adaptor “*sideways*” and rotate 90° into place.

Cutting a FORD “Tibbe” Key - Silca FO21 (DSD 358)

Insert the Key Blank “*sideways*” into the Tibbe Adaptor

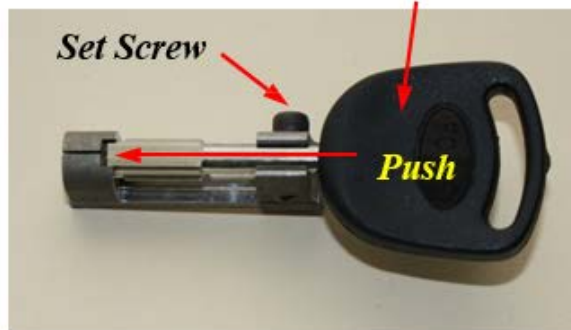


Then rotate the key 90°,
And push home into the tip of the adaptor

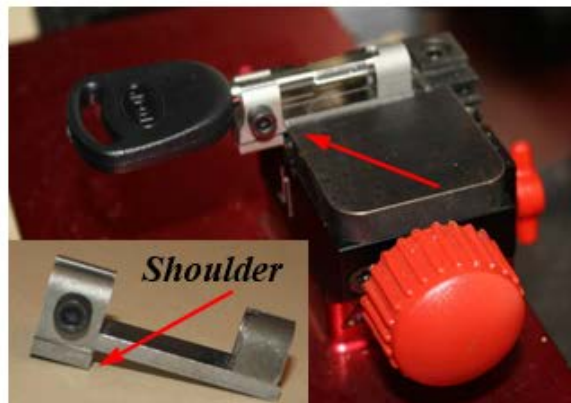
Make sure that the key is sitting square in the adaptor.



Then lock the key in place by tightening the “*Set Screw*”
(do not over tighten)



The Adaptor is then clamped into “*Jaw 1*” making sure the “*Shoulder*” is sitting against the jaw.



On the main screen you will see three tabs **“Automotive”** **“Type/Manufacturer”** and **“Search”**

Step 1 : Select Correct Key Type

Automotive Type/Manufacturer Search

Select Manufacturer from the list
FORD

Click on the Key Blank below:


- 1127
- FO21 TIBBE
- FO34
- H50
- H51
- H54
- H60
- H70

Enter Key Code (optional):
Find


Reconnect

Step 2 : Confirm Settings

DSD: 358
Key Blank: FO21 TIBBE
Manufacturer: FORD
Spaces: 6
Depths: 4
Track: Four
Cut: External
Jaw: Jaw 1



Jaw Clamp: E
Cutter: Cutter 1 TR2.5



Stop: Shoulder

Manufacturer Info:
FOR INSTRUCTIONS ON THE TIBBE JAW CLICK ON THE HELP TAB

Step 3 :

6 3
5 4
4 1
3 2
2 3
1 4
A
Trace
0

Click on **“Commercial/ Domestic”** and choose **“Ford”** from the drop down menu.

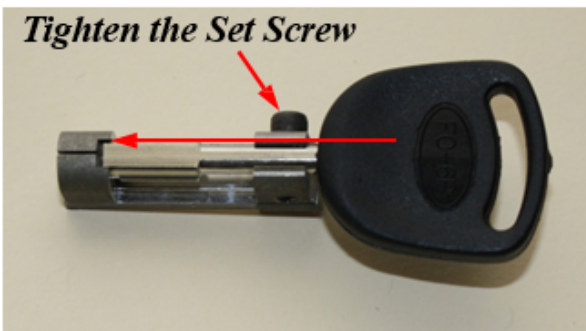
Now click on **“FO21”** (DSD 358) to open up the **“Main cutting screen”** Enter the depth of your cuts starting with **“1”** as the cut nearest the shoulder of the key.

Once you have entered the cuts, click **“Enter”** and the **“Start”** button will appear.

Click on the start button and you will get a check box **“Click OK if Jaw 1 and TR2.5 cutter installed”** If you have the correct jaw and cutter installed, click **“OK”** to cut the key.



When the first side of the key has been cut, loosen the **“Set Screw”** and slide the key back out of the tip of the adaptor just far enough to rotate it a full 180°. Push the key back into the adaptor tip and lock the key in place by tightening the **“Set Screw”** (do not over tighten)



When the key has been cut, loosen the **“Set Screw”** and slide the key back out of the tip of the adaptor, rotate 90° and remove the finished key.

Cutting a JAGUAR “Tibbe” Key - Silca TBE1 (DSD 356)

Inserting the Jaguar Tibbe Key into the “Tibbe Adaptor” is exactly the same as inserting the Ford Tibbe Key and choose the Jaguar from the “Type/Manufacturer” tab.

Step 1 : Select Correct Key Type

Automotive Type/Manufacturer Search

Select Manufacturer from the list
JAGUAR

Click on the Key Blank below:

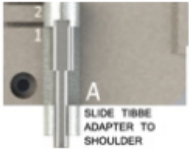
BL6
FT6R
S32FJ
S32YSP TIBBE

Enter Key Code (optional):
 Find


Depths:
24, 37,
Side A Spaces:
780, 701, 622, 543, 465, 386, 307, 226,
Side B Spaces:
780, 701, 622, 543, 465, 386, 307, 226,
Status
Reconnect

Step 2 : Confirm Settings

DSD: 356
Key Blank: S32YSP TIBBE
Manufacturer: JAGUAR
Spaces: 8
Depths: 3
Track: Four
Cut: External
Jaw: Jaw 1



Jaw Clamp: E
Cutter: Cutter 1 TR2.5



Stop: Shoulder
Manufacturer Info:
FOR INSTRUCTIONS ON THE TIBBE JAW CLICK ON THE HELP TAB

Step 3 :

8 2
7 3
6 1
5 2
4 3
3 1
2 2
1 3
A

Trace

0

Click on “Commercial/ Domestic” and choose “Jaguar” from the drop down menu and click on “S32YSP” (DSD 356) to open up the “Main cutting screen”

Enter the depth of your cuts starting with “1” as the cut nearest the shoulder of the key.

Once you have entered the cuts, click “Enter” and the “Start” button will appear.

Click on the start button and you will get a check box “Click OK if Jaw 1 and TR2.5 cutter installed”

If you have the correct jaw and cutter installed, click “OK” to cut the key. The “first side” of the key will now be cut.



When the first side of the key has been cut, loosen the “Set Screw” and slide the key back out of the tip of the adaptor just far enough to rotate it a full 180°.

Push the key back into the adaptor tip and lock the key in place by tightening the “Set Screw” (do not over tighten) When the key has been cut, loosen the “Set Screw” and slide the key back out of the tip of the adaptor, rotate 90° and remove the finished key.

Selecting keys in the software

There are three ways to select keys in the 3D Pro software, if you can't find a key one way then try another. If you try to select a key from the year make and model selector only to find the year you have is not listed then try the closest year or make of vehicle or select the key from one of the other two key selection tabs.

Step 1 : Select Correct Key Type

Automotive | **Type/Manufacturer** | Search

Select Manufacturer:

Select Model:

Select Year:

Enter Key Code (optional):

Step 1 : Select Correct Key Type

Automotive | **Type/Manufacturer** | Search

Select Manufacturer from the list

Click on the Key Blank below:

- B62 VATS MECH
- B68
- B69
- B80
- B82 \B86 \B89 \B102
- HU100**
- X143
- X145

Enter Key Code (optional):

The Type/Manufacturer tab allows you to select a key by blank name. After clicking this tab select a manufacturer

The Search tab allows for selecting keys by DSD number, blank name, year make and model name and more.

Step 1 : Select Correct Key Type

Automotive | Type/Manufacturer | **Search**

Enter Search Term or DSD:

Click on selected item to display additional info.

```
269;GM;HU100
BUICK;LACROSSE;2010;13504199 (remotestart TB
CHEVROLET;CAMARO;2010 - 2012 +;13504199 (re
CHEVROLET;EQUINOX;2010 - 2012;13504199 (rem
CADILLAC;XTS;2013;,,,,;NA;;;2track;
```

Enter Key Code (optional):

Saving and Loading Customer Keys Database

Keys can be saved in the 3D Pro software for later use. Say, when a customer locks their keys in their car or lost their keys you would be able to load keys you saved from the 3D Pro software to cut and deliver to the customer.

The Customer Keys Database does not come installed with the main 3D Pro software and is downloaded and installed separately. The Customer Keys Database is stored in the "C:\Laser Key Products" folder on computer running the machine. This file must be backed up periodically to prevent data loss.

Backing up the Customer Keys Database:

Go to the "C:\Laser Key Products" folder and copy the "Customers.mdb" to a USB Drive or Online Backup.

Restoring the Customer Keys Database:

Copy the backed up "Customers.mdb" from the USB Drive or Online Backup to the "C:\Laser Key Products" folder.

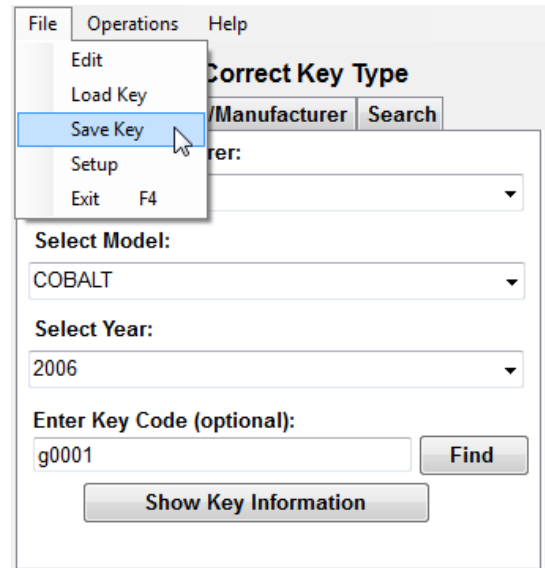
Installing the Customer Keys Database:

Go to the downloads section for the key machine at LASERKEYPRODUCTS.COM and download the Customer Keys Database and install once finished downloading. This installation will place a file labeled "Customers.mdb" into the "C:\Laser Key Products" folder.

Saving Keys:

Select a key as normal and fill in the cuts by using a code, tracing a key, or entering the cuts manually.

Then click File and Save Key.



Step 1: Add or Select Customer

ID:	<input type="text"/>	<input type="button" value="Reset"/>
Last Name:	Bob	
First Name:	Grey	
Company:	Radar Lock	
Address Line 1:	783 Egret Rd	
Address Line 2:	<input type="text"/>	
City:	Salami	
State:	Montana	
Zip Code:	32908	
Day Time Phone:	246	135 3579
Evening Phone:	421	643 8731
Mobile:	907	608 8835
<input type="button" value="Add"/> <input type="button" value="Delete"/> <input type="button" value="Edit"/> <input type="button" value="Search"/>		
<input type="text"/>		

Enter the available customer data into "Step 1:" on the left side on the Customer Keys window.

Leave ID blank, this is used by the program.

Click "Add" and another button will appear labeled "Done" click it to finish adding the customer.

The ID will be generated by and can be used to search for this customer when loading a key.

Next, on the right side on the customer keys window click the “Add” then “Done” buttons to add the key to the selected customer.

Step 2: Save or Load Key

	15	0	0
	14	0	0
	13	0	0
	12	0	0
	11	0	0
	10	1	0
	9	1	0
	8	2	0
	7	3	0
	6	5	0
	5	4	0
	4	2	0
	3	3	0
	2	2	0
	1	2	0
		A	B

DSD: 141

Key ID:

Key Blank:

Manufacturer: CHEVROLET

Model: COBALT

Year: 2006

Code: g0001

Loading customers and their keys:

To load a previously saved key click “File” and “Load Key”

File Operations Help

Correct Key Type

/Manufacturer Search

er:

Select Model:

Select Year:

Enter Key Code (optional):

Step 1: Add or Select Customer

ID:

Last Name:

First Name:

Company:

Address Line 1:

Address Line 2:

City:

State:

Zip Code:

Day Time Phone:

Evening Phone:

Mobile:

8;bob;fragle;.....
 9;bob;juble;Crud Mud;739 Glib;;Slice;Missouri;23132;2;
 10;bob;tucker;LL Bean;980 Reinhertz;;Hulagurl;Illinois;3
 11;bob;tucker;LL Bean;980 Reinhertz;;Hulagurl;Illinois;3
 12;bob;asdf;.....

Type a search term into any of the customer data fields and click the “Search” button.

All fields are searchable including the generated ID.

Click the requested customer from the search results box at the bottom of the customer information box.

After selecting a customer, the keys box will show keys that are saved to the selected customer. Click on the key that you want to load.

Then click the “Load Key” button at the bottom.

Step 2: Save or Load Key

45-141;CHEVROLET;COBALT;2006;g0001

15 0 0
 14 0 0
 13 0 0
 12 0 0
 11 0 0
 10 1 0
 9 1 0
 8 2 0
 7 3 0
 6 5 0
 5 4 0
 4 2 0
 3 3 0
 2 2 0
 1 2 0

A B

DSD:

Key ID:

Key Blank:

Manufacturer:

Model:

Year:

Code:

This key will then become selected in the main part of the 3D Pro software with the cuts filled ready to cut. Load the key blank as instructed in Step 2 of the 3D Pro software and cut the key.

SPACE AND DEPTH ADJUSTMENTS

The following pages will show you how to check and set your machine to cut and trace perfectly.

Explaining the X, Y, Z Axis for Jaw 1 and Jaw 3

1. Jaw 1 uses three axes which are X, Y, and Z
2. The X axis is the movement from left and right and controls the depth.
3. The Y axis is the movement from front to back and controls the spacing.
4. The Z axis is the movement up and down and controls the height at which the cutter is lowered.

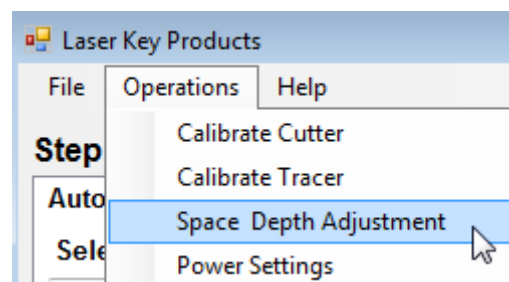
Explaining the X, Y, Z Axis for Jaw 2

1. Jaw 2 uses two axes which are X and Y.
2. The X axis is the movement from left and right and controls the spacing.
3. The Y axis is the movement from front to back and controls the depth.

All adjustments are in .001" (one thousandths of an inch)

The "Space" or "Depth" on either the "Tracer" or the "Cutter" can be adjusted by a maximum of ".020" (20 thousandths) either way (+ or -) plus or minus. **You will need to know how to measure keys with calipers.**

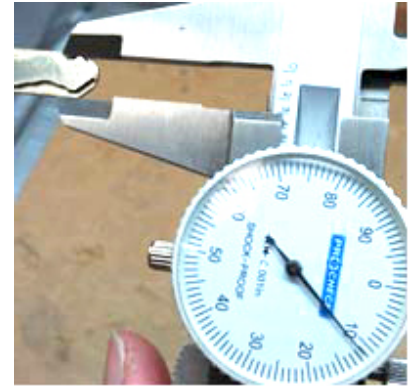
Adjustments are made by going to "Operations > Space and Depth Adjustment" and the typing 1, 2 or 3 for Jaws 1, 2 and 3 and clicking OK.



To measure the spacing on a tip stop key like the high security Honda key set a caliper to the space that you want to measure using the space data on the edit page and the measure from the tip toward the bow. For a shoulder stop key, measure from shoulder to tip.



To measure a depth on a high security Honda key, find the space for the depth you want to measure and measure from the edge of the key to the edge of the cut. Compare the reading against the Cut Depth info on the edit page.



Now trace either a blank or OEM cut high security Honda key. It's best not to use an aftermarket key because it may not be cut to spec. In this example we are tracing an OEM cut key.

At the bottom right hand corner of your 3D Pro software is a text box, and at the bottom of this box are the readings for the trace, one line per cut. The readings show the space, cut and tracer measurement. The readings are shown in the order in which they have been traced.

A blank will read all zeroes measuring 352 all the way down the key.

An OEM key should always read ones in both 6th spaces measuring 311.

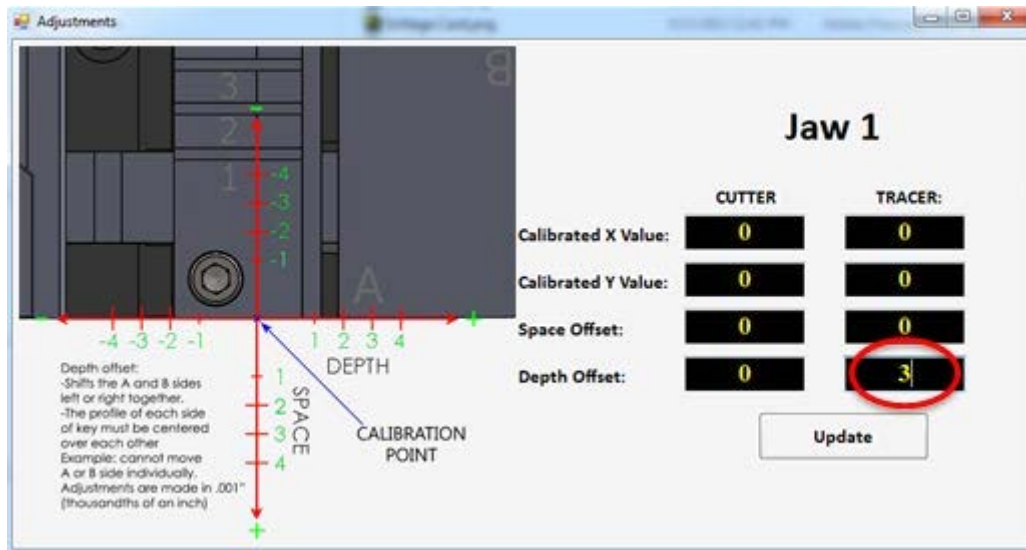
The 6th spaces will show in the middle of the readings list and we see in the example that the key profile is off to the left by 3 thousandths of an inch. The trace reading shows that the 6th space on side A measured to 308 thousandths of an inch when it is supposed to be 311 thousandths of an inch. This in turn causes the 6th space on side B to be off as well. To correct this we will make a space and depth adjustment to move the cut profile to the right by 3 thousandths of an inch. This will make the 6th space on side A measure 311 and the 6th space on side B measure 310.

[Trace Reading Example]

- (1,3);283
- (2,5);253
- (3,5);253
- (4,4);268
- (5,5);253
- (6,1);308

- (6,1);313
- (5,5);256
- (4,1);312
- (3,5);256
- (2,6);242
- (1,4);269

To make this adjustment go to “Operations > Space and Depth Adjustment” type “1” and press “OK”



You will see the window shown above. Type “3” under “Tracer” next to “Depth Offset:” and then press “Update”

Adjusting space and depth for the Jaw 1 cutting is the same as adjusting Jaw 1 Tracer accept that you will have to cut a key, measure it, and make the adjustment. Cut a high security to a random code or all ones and measure as shown below. The tip of this high security Honda key will have ones on both 6 space cuts (or along the whole key if you cut to all ones) and should measure to 311.

Shown to the right is an example of how to measure a cut high security Honda key at the 6th space on side A.

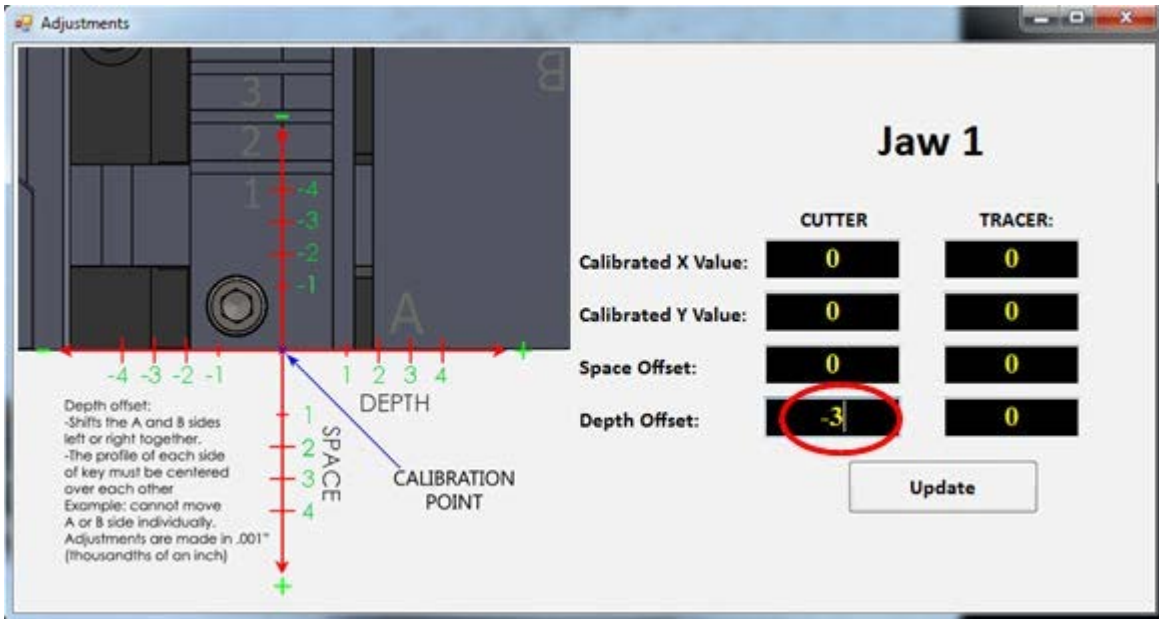
If the 6th space on side A measures less than 311 the make a positive adjustment to move the keys profile to the right if the measurement is more than 311 than make a negative adjustment to move the key profile to the left.

Making adjustments affects all cuts.

Let us say that 6th space on side A is measuring to 314 then the adjustment will be made as shown below.



To make this adjustment go to “Operations > Space and Depth Adjustment” type “1” and press “OK”



You will see the window shown above. Type “-3” under “Cutter” next to “Depth Offset:” and then press “Update”. Repeat the same process for spacing.

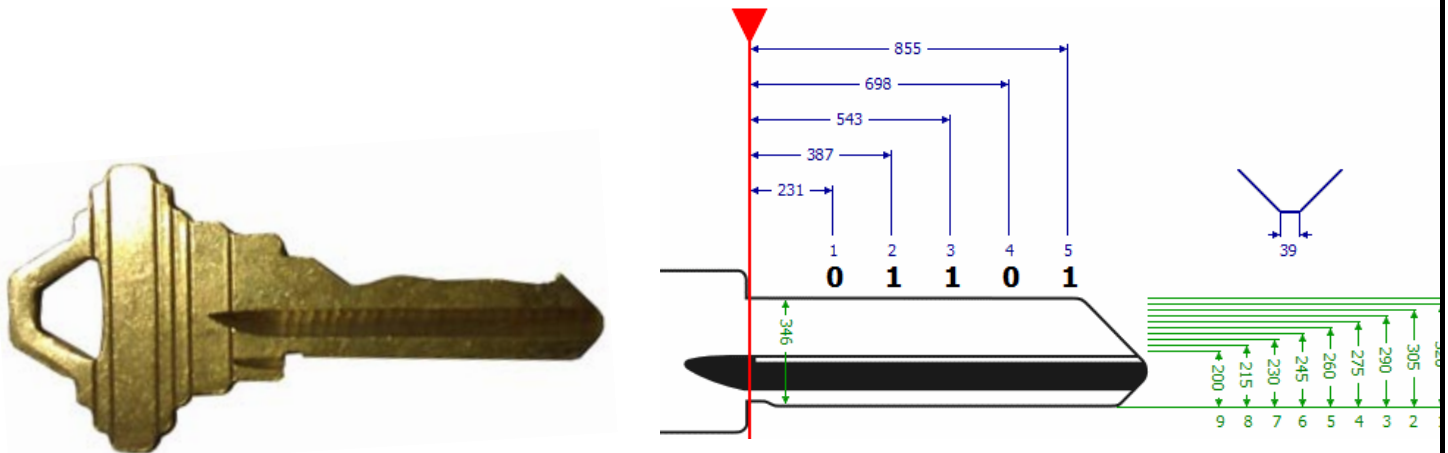
Adjusting Space and Depth on Jaw 2

We will use a Schlage key as an example of how to adjust Jaw 2.

In the 3D Pro software with this Schlage key selected go to: ‘File > Edit’ and at the bottom is the Depth and Space Data (DSD)

	0	1	2	3	4	5	6	7	8	9
Side A Spaces		231	387	543	699	855	0	0	0	0
Side B Spaces	0	0	0	0	0	0	0	0	0	0
Cut Depth	335	320	305	290	275	260	245	230	215	200
Half Cut Depth	335	320	305	290	275	260	245	230	215	200

Below is a visual representation of this key DSD:



To measure the spacing on a shoulder stop key like the Schlage key, set a caliper to the space that you want to measure using the space info on the edit page and the measure from the shoulder toward the tip. For a tip stop key, measure from tip to bow.



To measure a depth on a Schlage key, find the space for the depth you want to measure and measure from the edge of the key to the edge of the cut. Compare the reading against the Cut Depth info on the edit page.



Cut a Schlage key to all ones and measure the depth with calipers. According the edit page for the Schlage key, one depths should measure to 320 thousandths of an inch. If your key measures too shallow, say 325 then make a negative adjustment to the cutter depth offset. If your key measures too deep, say 315 then make a plus adjustment to the cutter depth offset. Negative adjustments are made by putting a minus sign in front of the number used in the adjustment box.

Adjustments

Adjustments are made in .001" (thousandths of an inch)

DEPTH: 4 3 2 1

SPACE: 4 3 2 1

CALIBRATION POINT

Jaw 2

	CUTTER	TRACER:
Calibrated X Value:	0	0
Calibrated Y Value:	0	0
Depth Offset:	5	0
Space Offset:	0	0

Update

To adjust the spacing, cut a Schlage key to all ones with a 3 in the third space set your calipers to .543 inches and measure from the shoulder to the tip and see if the 3 cut meets the measurement. If the 3 cut is too far toward the shoulder of the key then enter a negative number in the Depth Offset under CUTTER. If the 3 cut is too far toward the tip of the key then enter a positive number in the Depth Offset under CUTTER.

Show Key Information

The “Show Key Information” button, you can select this to read available information or add additional information to the key database. See Below

When you have finished with this information you can click the “Hide Key Information” button.

Key ID	3	OBP New	NO
DSD	21	OBP Copy	NO
Make	ACURA	Program Tool	HDS / TCODE
Model	CL	System/Dongle	2A / GREEN or BLA
Year	2000	Pin Code	
Key Type	H001-P	OEM Chip Type	MEGAMOS 13 / MC
Dealer Key	35113-SY8-A03	Chip Reusable	YES
Dealer Key 2	35114-SY8-A02 (vali	Chip Logic	FF81-232C-4D22-B2
ILCO Blank	HD106PT (fixed)	Code Series/Card	5001-8442 / F74
STRATTEC Blank	692246 (fixed)	Tumbler Locations	IG 1-8 / DR 1-7 / TR
JMA Chip/Blank	TP05 / HOND-21.P	Max Keys	5
HATA Blank		Notes	code on most locks
Other Blank	HD106PT5 (clone)	Remote Tool	OBP
Other Blank 2	692057 (clone)	Remote Part #	72147-SY8-A01
NON-XPNDR SUB	X214 / HD103	Remote FCC #	A269ZUA108
Cloneable	YES	Remote2 Part#	72147-SY8-A03
Silca Blank		Remote2 FCC#	OUCG8D-387H-A
		Remote Notes	

Explaining the software: Buttons and Menus

Half Cut

The button “Half Cut” refers to cutting 1/2 depths when using Determinators. When half cut mode is entered, 1=1-1/2 (one and a half) and 3=3-1/2 (three and a half) etc. You must still follow the procedures to choose the correct key blank type first.

When using the half cuts you must first click on the “Half Cut” button and the button will blink red, this assures you that you are in half cut mode. Now you can enter your depths into the spaces and click “Enter” and then “Start”.

To exit half cut mode, click the “Half Cut” button and the red blinking will stop. Change the spaces to the correct numbers and click “Enter”.

If you press “Start” without clicking “Enter”, half cut mode will not be disabled.



Reset

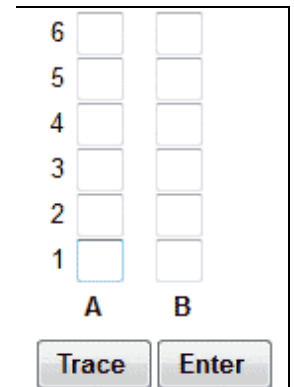
Clears all entry boxes to make starting over easier.

Trace

The Trace button is used for duplicating keys.

Enter

If any input data is changed, you must press this button for the changes to take effect, if data is changed after the “Enter” button has been pressed, the software will require you to press the button again.

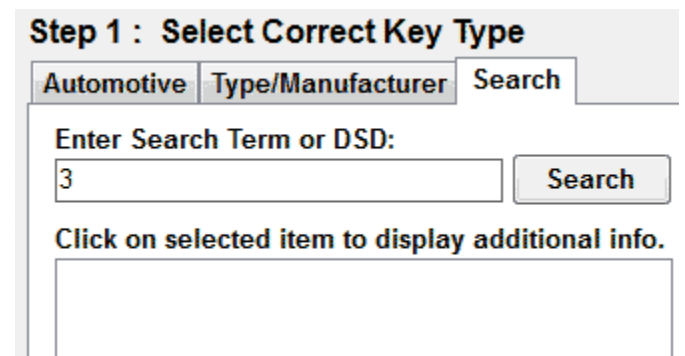


Start

The “Start” button will only appear after the “Enter” button has been clicked. If any data is changed, this button will disappear.

DSD (Depth and Space Data)

Every key has its own DSD number. When clicking on the “Search” Tab, you can enter any DSD number in the database. Once the DSD has been entered, press the “Search” button. This will bring up the key you have selected in the “Step 2” column.



Key Blank

Tells you what key blank you should be using.

Manufacturer

The manufacturer gives you reference to the current car you are working on.

Spaces

This value tells you how many spaces are on the key you are working with.

Depths

This value tells you how many depths are on the key you are working with.

Track

This tells you how many edges of the key will be cut. There are 3 different types: Four, Two (Left), and Two (Right).

Cut

This location explains how the key will be cut, internally or externally.

Jaw

There are 3 types of jaws: Jaw 1, Jaw 2, and Jaw 3. Once the key is chosen, the software will indicate which jaw should be used.

Jaw type & Cutter

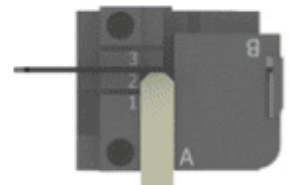
Jaw type & Cutter displays a picture of the jaw type and cutter that should be used to cut the key.

Jaw Clamp

This indicates which side of Jaw 2 you should clamp the key with, A, B, C, or D.

Step 2 : Confirm Settings

DSD:	3
Key Blank:	H001-P
Manufacturer:	HONDA/ACURA
Spaces:	6
Depths:	6
Track:	Four
Cut:	External
Jaw:	Jaw 1



Jaw Clamp:	N/A
Cutter:	Cutter 1



Stop

There are 4 different types of “Stop”: Shoulder, Tip 1, Tip 2, and Tip 3. Make sure that you insert the key to the correct tip stop. If not done properly, you may cut the key wrong or damage the cutter.

Comment Boxes

There are two comment boxes. The top box displays default comments about the key, while the bottom box displays comments that you set in the edit screen.



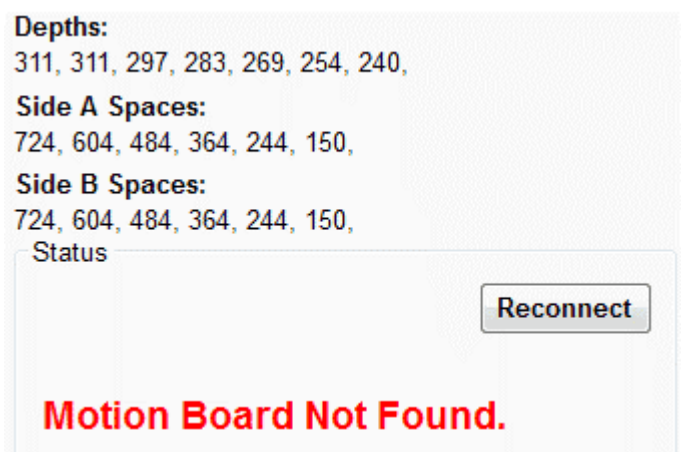
The bottom box allows the user to enter notes for a specific key type or comments about the car type. To edit user comments, you go to the “File” menu and click on “Edit”. Once in the “Edit” screen, click on the “Edit” button and a dialog box will appear asking you to verify yourself as an authorized user. Press “Yes” and another box will appear. You do not have to enter a password. In the “Domain” drop-box, press the down arrow key and choose “This Computer”, then press “Submit”. After editing the comments, you MUST click on the “Done” button that has appeared. Failing to do so may cause the software to not recognize the database.

Side A / Side B Spaces

The spaces that are needed will show up according to the type of key blank that is being cut. “Side A” will be a left-hand cut to the key, and “Side B” will be a right-hand cut. If “Side A” and “Side B” are present, it will cut both sides of the key.

Status

This box displays what the 3D Pro is currently working on. It also shows the status of the connection board, whether it has been found by the software or not. The status box will also give you the next step in the process of cutting a key and lets you know when the process of cutting a key is complete.



Re-Connect

The re-connect button is only used when the board cannot be found. To use this button you must cycle the power on the machine off and then on again. You may now press the reconnect button to refresh it with the software. The software can only be refreshed once. If it loses the connection after it has already been refreshed you must restart the software.

Tech Box

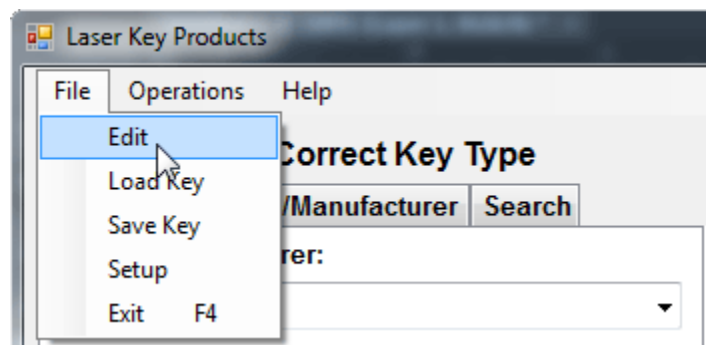
This box is located at the bottom right-hand corner of the software interface. If you are having trouble cutting or tracing a key, this box displays data that the service tech will use to fix the problem. This also shows the parameters in which the cutter is going to cut a key and what the **tracing parameters ARE measured at in thousandths of an inch.**



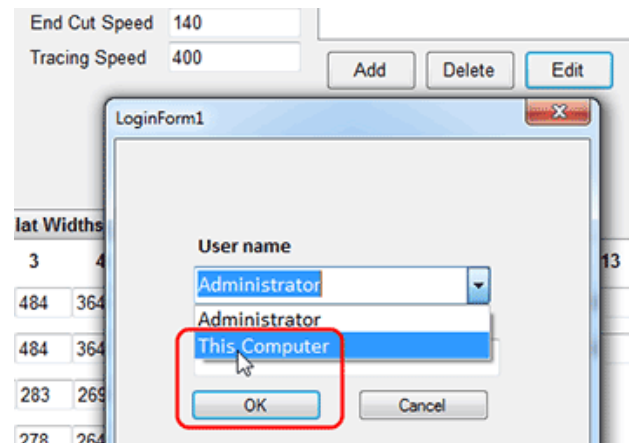
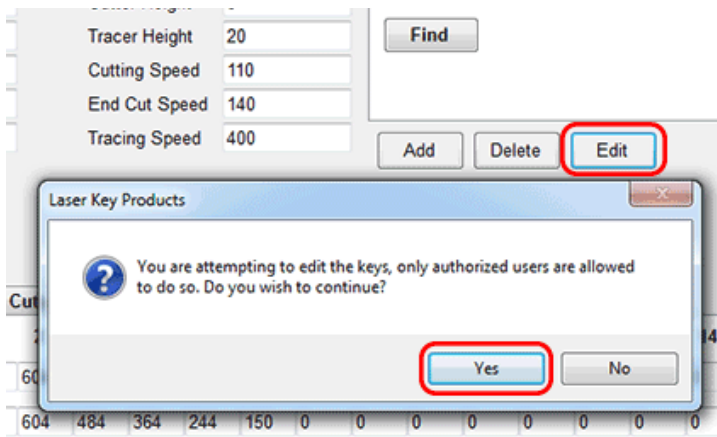
Key Editor

The Edit screen is for displaying all of the information about a key and can be used to edit key cutting and tracing parameters. The key editor can be used to view and edit key data. The key editor can be used to edit the Center Distance, Flat Width, Cutter Height, Tracer Height, Cutting Data tab, Tracing Data tab, and the Flat Widths tab on key DSD's.

To make a change to a key using the Key Editor, select the key you want to edit and click File then click Edit.



Click “Yes” to the authorized user warning and Choose “This Computer” as the user name, leave the password blank and press OK.



Center Distance: Controls where the center of a high security internal cut key is located from the left edge of the Jaw 1 clamp in thousandths of an inch. Performs the same as a space and depth adjustment but only effects

Flat Width and Flat Widths Tab: Controls size of key flat widths. If all flat widths are zero in the Tab the all flat widths will be whatever is entered in the Flat Widths box

Cutter and Tracer Height: Controls how high the cutter and tracer cuts and traces high security keys. Controls webbing thickness when cutting.

Cutting and Tracing Data: Control spaces and depths.

Other: Create user notes.

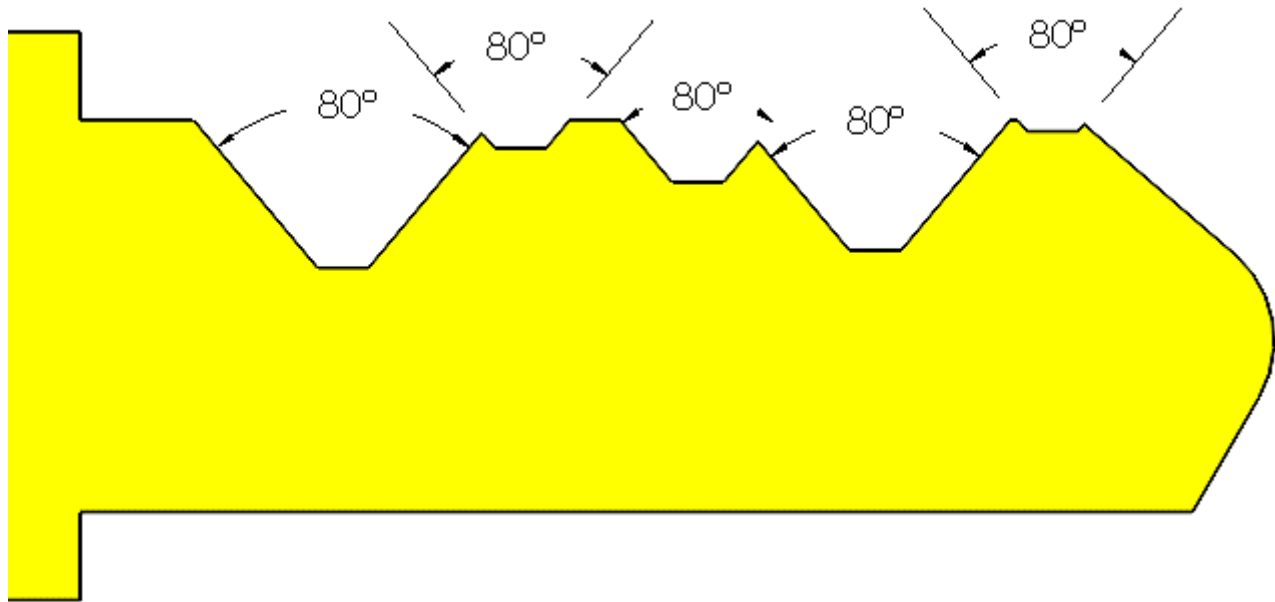
Cut Angles: In the “Flat Widths” tab are the controls for angles on plunge cut keys. Below is an illustration of the angles on a plunge cut Schlage 5-Pin.

Manufacturer DSD	3	Stop	Tip 2
Manufacturer	HONDA/ACUR	Track	Four
Key Type	H001-P	Cut	External
Key Blank	H001-P	Jaw	Jaw 1
Key Length	0	Jaw Image	J1 T2
Key Thickness	352	Jaw Clamp	N/A
Depths	6	Step	1
Spaces	6	Cutter Height	3
Center Distance	0	Tracer Height	20
Flat Width	40	Cutting Speed	110
Cut Width (*1)	0	End Cut Speed	140
Step Over (*2)	0	Tracing Speed	400

(*1) - For Tibbe Keys Only
(*2) - For Internal Cut Keys Only

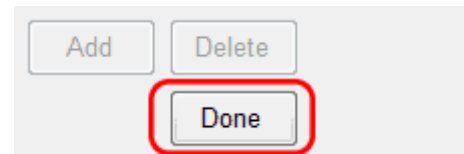
	Cutting Data	Tracing Data	End Cuts	Flat Widths	Cutter & Tracer	Other			
	0	1	2	3	4	5	6	7	8
Side A Spaces		724	604	484	364	244	150	0	0
Side B Spaces	0	724	604	484	364	244	150	0	0
Cut Depth	311	311	297	283	269	254	240	0	0
Half Cut Depth	305	305	292	278	264	249	235	0	0

Cutting Data	Tracing Data	End Cuts	Flat Widths	Cutter & Tracer	Other				
	0	1	2	3	4	5	6	7	8
Flat Width A		47	47	47	47	47	0	0	0
Flat Width B	47	47	47	47	47	47	0	0	0
Cut Angle A		80	80	80	80	80	0	0	0
Cut Angle B	0	0	0	0	0	0	0	0	0



To widen the angles, increase the angle number. To narrow the angles, decrease the angle number.

After editing click the Done button at the bottom left of the software to save changes.



Half Cut Depth

This is for use with Determinators. When clicking on the “Half Cut” button on the main screen, it will flash red to indicate that it has been selected. Whatever parameters you have filled in the “Half Cut Depth” boxes, it will use these instead of the default parameters once the button has been selected.

Tracing Data

Tracing Data should normally match the “Cutting Data”, but in some cases it will not.

End Cuts

These are pre-defined parameters of how the tip of each key will be cut, these are not in any way adjustable by the user.

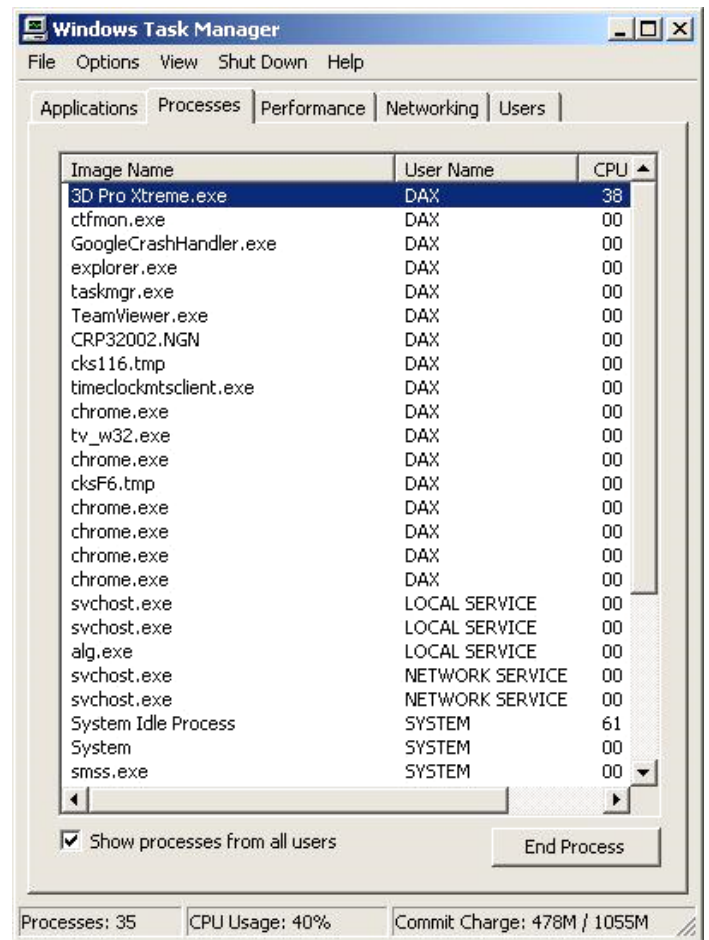
Troubleshooting

COM Error

If you start your software and the software says “Communications Error” or “Board Not Found” check these options:

1. Power is going to your 3D Pro from the power outlet.
2. The emergency stop button is disengaged (twisted out according to the arrows)
3. The USB cable from the 3D Pro is plugged into a USB port on your computer.
4. Multiple instances of the 3D Pro software may be running causing a conflict. Open Task Manager by pressing Control Alt Delete on your keyboard and then clicking Task Manager. Look for ‘3D Pro Xtreme.exe’, click it, then click “End Process”

Then start the 3D Pro software again.

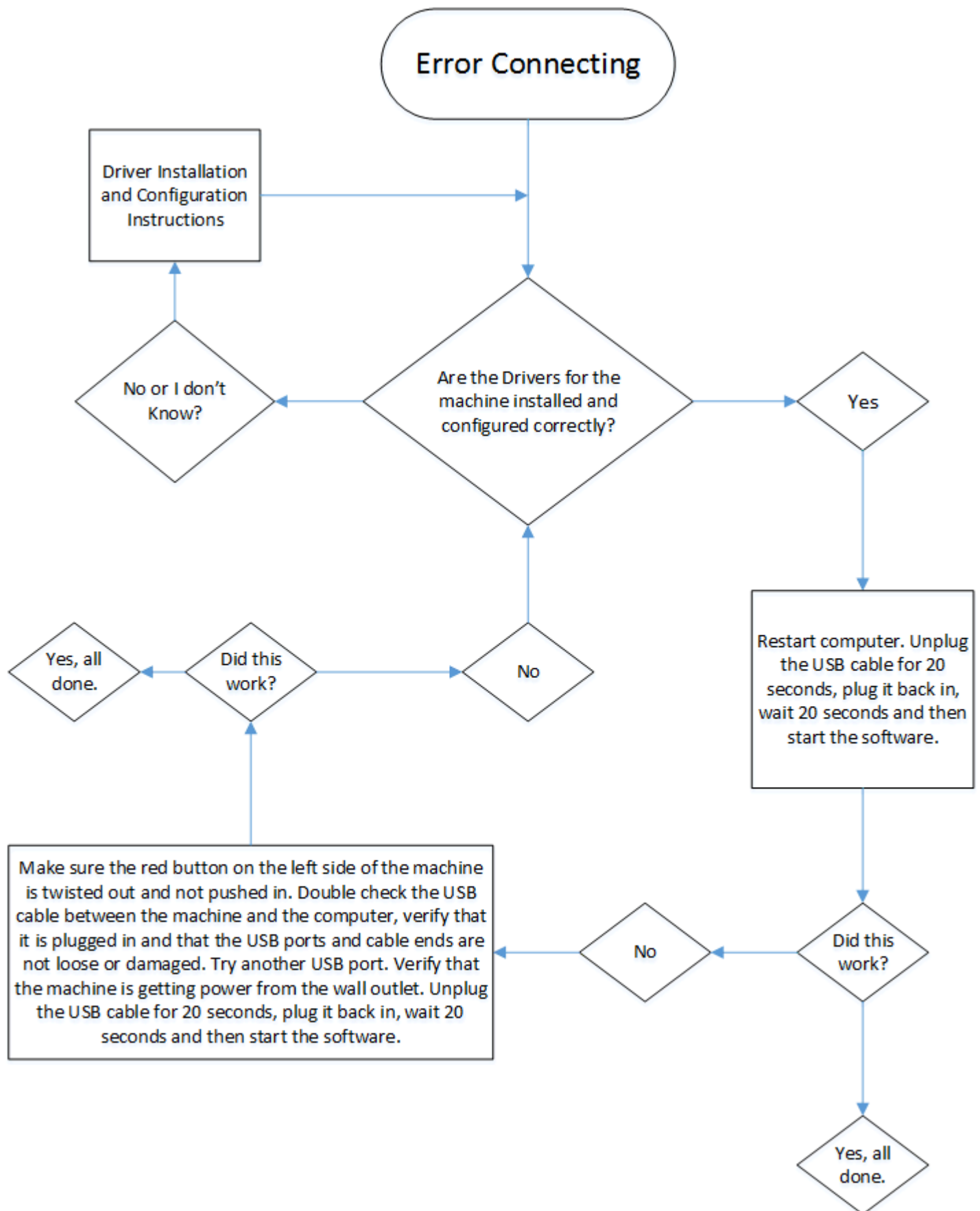


Humming

If when you start the software for the 3D Pro and the machine continuously hums, check that the motor drive cable is plugged into the motor on the left of the main jaw table. You can also try pressing firmly on the red spindle know sticking out the top of the 3D Pro.

Freezing Load Bar

If while opening the software the load bar freezes, and the software doesn't respond, check and make sure that the X motor is plugged in and screwed down. This cable is not connected when the machine is shipped. Also make sure that you are on the latest version of software, some of the earlier versions had issues freezing up on the load bar. If you open your software and it freezes on the blue load bar, check and make sure your version is current.



Using an inverter

When using an inverter to power the 3D Pro, make sure the inverter is properly grounded to the vehicles chassis otherwise you may incur problems with the operation of the Machine. If a problem occurs that you are unable to repair yourself, please seek the assistance of a qualified vehicle electrician.

If you plan to use an inverter to power your 3D Pro Xtreme key machine, it is recommended that you use only a PURE SINE WAVE INVERTER with a CONTINUOUS output rating of at least 1500 - 2000 watts. This is the MINIMUM output rating.

Although Modified Sine Wave inverters have been known to work, Pure Sine Wave inverters produce a much 'cleaner' power signal than Modified Sine Wave inverters and as a result, will extend your equipment's life and are much less likely to cause problems with your computer or 3D Pro Xtreme key machine's functionality.

It is recommended that you PRECISELY follow your inverter manufacturer's wiring and connection instructions when installing your inverter and preparing it for use with your 3D Pro Xtreme key machine.

However, here are some important points to remember and apply to your installation:

- THIS IS NOT THE PLACE TO START CUTTING CORNERS OR SAVING A DOLLAR!!!
- Unless you are completely confident in your electrical and wiring skills, we recommend allowing a trained RV electrician or equivalent perform this installation for you.
- Only use an inverter with a minimum continuous power output rating of 1500 - 2000 watts. This is the minimum rating for powering ONLY your 3D Pro Xtreme key machine and computer. If you plan on powering other lights, devices, machines, etc. at the same time as your 3D Pro Xtreme key machine, you should add the total power consumption, in watts, of all the devices you will be powering at once and multiply by 1.25 to determine the output rating of the inverter that will supply enough power for your needs. A power measurement device such as a Kill-A-Watt can help you determine your power requirements.

Amperage rating of the powered device X Volts = Watts X 1.25

- Properly grounding your inverter to the vehicle CHASSIS is absolutely essential for trouble free operation.
- Shorter and fatter is better! Keep your wiring and cabling as short as reasonably possible. When selecting wire and cable gauges, err on the side of larger diameter rather than smaller. Your inverter's manual should have a cable size & length vs. current load chart included. Follow the manufacturer's recommendations.
- The instructions included with your inverter should also include 'supply side power' wiring diagrams detailing wire/cable routing for several different configurations, i.e., one battery, two batteries, etc. Again, follow the inverter manufacturer's recommendations.
- It is possible to power your inverter using the vehicle starting battery but is not advisable. An auxiliary battery system is recommended.
- Use the best deep cycle batteries for your auxiliary battery system that you can afford. Commercial golf cart batteries give the best performance and longest life.
- Upgrade your alternator to a higher output unit.
- When using the vehicle's alternator to charge the auxiliary battery system, it is always best to isolate the auxiliary batteries from the starting battery with either a mechanical or solid state isolator to prevent draining the vehicle's starting battery. This should be covered in the inverter manufacturer's instructions as well.
- Always use fuses where applicable! Don't burn your rig to the ground because you didn't think you needed a fuse!
- Remove any paint, under coating, dirt, etc., from connection surfaces before securing the connection. Establish clean, solid, and reliable connections.
- Double check all of your connections to make sure they are solid and secure. Check them periodically to make sure they remain tight.

Follow these tips and the inverter manufacturer's instructions and you'll be rewarded with a long lasting, trouble free system.

Example of Inverter Chassis Grounding



Changing the Fuses

!!Please Disconnect Machine Before Proceeding to Change Fuses!!

Insert a small tipped screwdriver into slotted area in the front face of the fuse box located on the left side of the 3D Pro key machine and pull fuse cartridge toward you.



Once fuse cartridge is open slide out until fuses are fully visible



Install new 6amp 250v fuses into cartridge and push back into fuse box until cartridge snaps into fuse box.



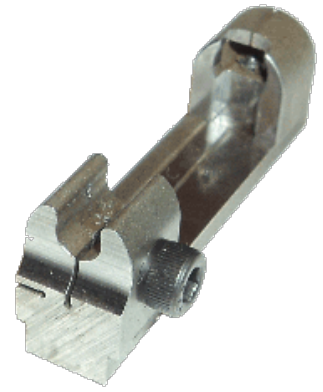
Optional Accessories



Bolt Down Kit



Lexus 80000 Code Series Cutter



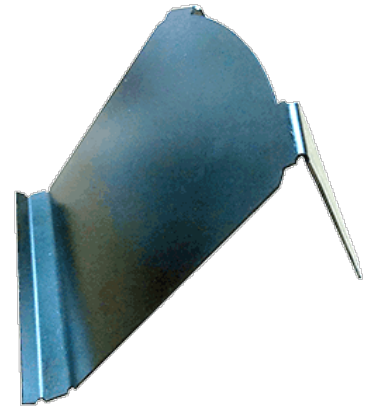
Tibbe Adapter



Preloaded Laptop



Genericode for 3D Pro



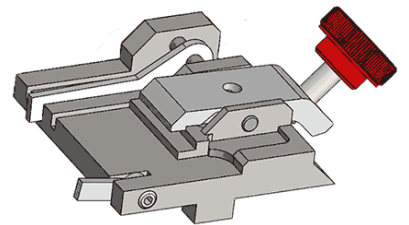
Laptop Mount



Tubular Jaw



Tubular Cutter



Standard Tracing Adapter