

BD Laser User Guide

*** IMPORTANT ***

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY AS IMPROPER USE MAY DAMAGE THE MACHINE AND VOID THE WARRANTY.

- **BD Laser arrives ready to use with jaws and cutters preinstalled.**
- **For best performance, calibrate the jaws prior to use. Do not calibrate cutters.**
- **To cut a key, select vehicle Make/Model/Year and follow the screen prompts.**
- **BD Laser will inform you when/how to change Jaw/cutter/tracer if required.**



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Setting up the BD Laser

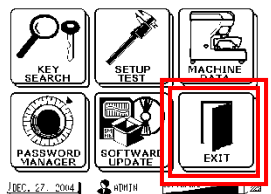
How to connect cables and turn the machine ON

1. Attach the 9-pin connector cable to the **LOWER** port on the back of the console **AND** to the back of the machine. **SECURE WITH ATTACHED SCREWS.**
2. Attach power cord to back of machine and plug into a properly grounded outlet.
3. Make sure the ON/OFF switch above the power cord is to the ON position.
4. Rotate the emergency stop button towards the back of the machine until it releases outward.
5. The machine will now begin to start-up. This process takes a few seconds. Proceed with password entry.

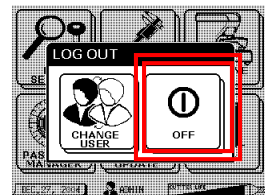
How to turn OFF the machine

1. You may select **MAIN MENU** from any screen.

2. Select: **EXIT**



3. Select: **OFF**

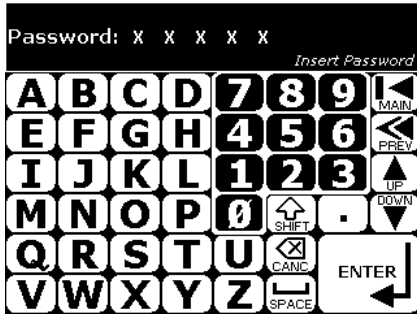


4. Screen will display **NOW YOU CAN TURN OFF THE MACHINE.**

5. Press the emergency stop button to turn OFF the machine.

Quick Start – Password Entry

1.



Touch Screen

For best results use a non-metallic stylus such as a plastic tip end of a pen, tip of brush handle, etc.

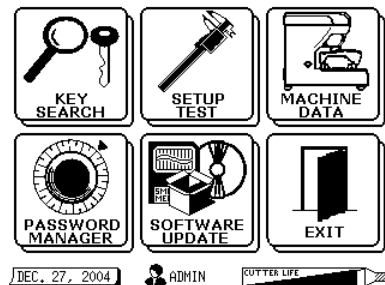
Type in Master Password: **123456**
Press: **ENTER**

2.



Press: **YES***

3.



BD LASER is now ready for use.

* If **YES** is selected the following should occur for new BD Laser installation:

- The password default is 123456, and should be changed by the assigned Administrator for continued security of the BD Laser.
 - Note: If the password is not changed, anyone will have access to secured screens using the 123456 default password.
- The new master administrator password should be documented and stored in a safe place.
- The master (Administrator) password permits access to all screens.
- All other user passwords will not have access to secure screens.
- At least one additional new password should be assigned for users other than the Administrator.
- To add additional users see page 36 of your BD Laser manual (comes in box with machine when shipped)

IMPORTANT

Before using the BD Laser for the first time, please **calibrate each jaw**. Follow the directions on pages 6 and 7 of this guide. The required template can be found in the black accessory case.

Calibration is necessary to correct fluctuations and changes that may have occurred during shipment.

Failure to follow this procedure correctly may cause damage to the tracer, cutter, and/or jaw and may result in voiding the warranty.

If you have any questions on these procedures, please contact the Program Support Center

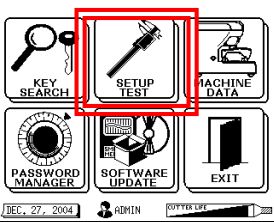
Phone: 866-438-6767 option #2

Email: KeyMachines@MSCDirect.com

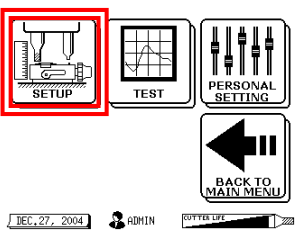
Jaw Calibration Procedure

High Security Jaws: red, green, blue and gray

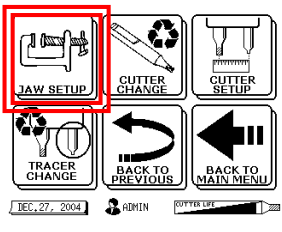
1. Select: **SETUP/TEST**



2. Select: **SETUP**

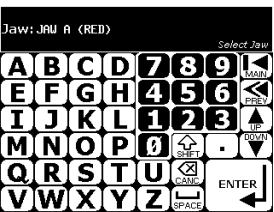


3. Select: **JAW SETUP**



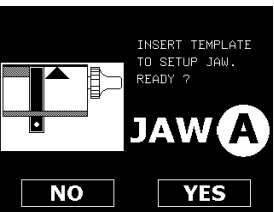
4. Select: **Desired Jaw** (use DOWN arrow to select other jaws). Press: **ENTER**

Install Jaw to far left of carriage until it stops. **CLAMP TIGHT WITH JAW LEVER.**




5. Insert the **silver jaw set-up template**. (metal bar with key ring in accessory kit). Hold template **FLAT** in jaw & press down while tightening.

Press: **YES** to calibrate jaw



6. SETUP OK – Remove template.

Press: **OK**

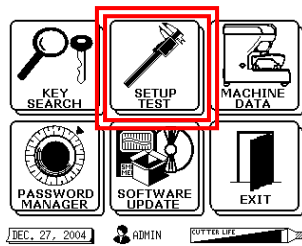


Cutter Calibration Procedure

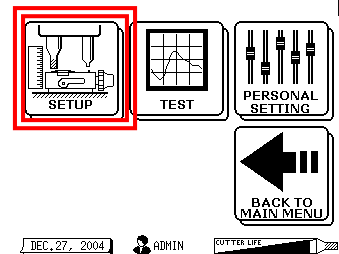
Calibrate the jaw prior to calibrating the cutter.
(See jaw calibration procedure on page 6).

DO NOT CALIBRATE THE 1.5MM DIA. CUTTER

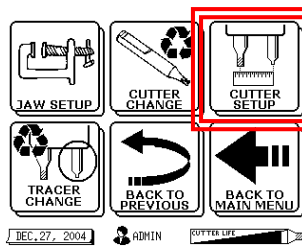
1. Select:
SETUP/TEST



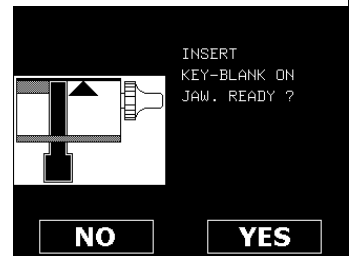
2. Select:
SETUP



3. Select:
CUTTER SETUP



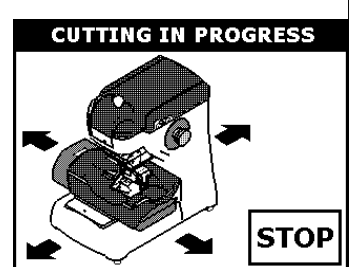
4. Insert **brass test blank** (from toolbox).
Press: **YES**



5. The tracer will locate the jaw.

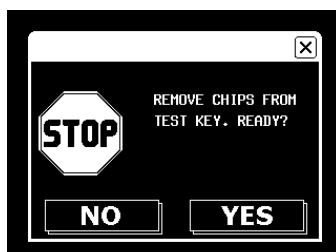


6. Cutter will notch brass blank.



7. Remove all chips from key with brush.

Press: **YES**



8. Tracer will verify calibration.

Press: **OK**.

Remove blank.



Cut by Code

WARNING: Each jaw is matched to a single tracer/cutter kit for the calibration process. The console will warn user to change tracer and/or cutter when necessary.

1. Select: KEY SEARCH

DEC. 27, 2004 ADMIN CUTTER LIFE

2. Select: CAR MODEL SELECTION

JUL. 2, 2005 ADMIN CUTTER LIFE 125

3. MAKE: (ex. Ford)
 Select desired model
 If desired make is not displayed–
 Touch: **Down Arrow** to view additional makes.
 Touch desired make.
 Press: **ENTER**

4. MODEL: (ex. Aerostar)
 Select desired model
 If desired model is not displayed–
 Touch: **Down Arrow** to view additional models.
 Touch desired model.
 Press: **ENTER**

5. YEAR: (ex.1995-1997)
 Select desired year
 If desired year is not displayed–
 Touch: **Down Arrow** to view additional years.
 Touch: desired year
 Press: **ENTER**

6. Select: CUT BY CODE
 Press: **ENTER**

DEC. 27, 2004 ADMIN CUTTER LIFE

7. Enter the desired key code
 Note: Some codes have prefix/suffix already entered on screen.
 Press: **ENTER**

8. Verify the key code is correct. If not, press PREV and re-enter. If correct, Press: ENTER

Cut by Code

9. Key blank reference list is Displayed. Press: ENTER

Make	Model	Year	App. MST
HONDA	Civic	2003-2005	
Original	ILC-35111-T5H	(M G00)	
	35113-80KA01	(M G00)	
	35113-89AA01	(M G00)	
Barnes	C28722	(M G00)	
Iico	HD01T5	(M G00)	
Jet	HD110N-PHT	(M G00)	
Keyline	-		
Silco	HON66T5	(M G00)	
Straltec	692247	(M G00)	
Transponder: MEGAMOS Fixed Code (M G00)			

10.

STOP!

Please Remove Jaw


Press: **CONTINUE**

NOTE: This screen will not display if correct cutter is already installed

11. Remove cutter from spindle and DO NOT INSTALL another cutter

Press: **CONTINUE**


NOTE: This screen will not display if correct cutter is already installed



12. Are you sure that no cutter is in the spindle?

Press: **CONTINUE**

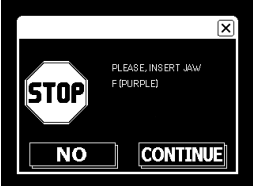
NOTE: This screen will not display if correct cutter is already installed



13. Insert F Jaw (purple)
(Be sure the tip stop tool is not on the jaw at this time.)

Press: **CONTINUE**


NOTE: This screen will not display if correct cutter is already installed



14. Remove stop tool (if not done previously)

Press: **OK** (table will move into position)


NOTE: This screen will not display if correct cutter is already installed



15. Install 1.5mm (.059") diameter cutter and lock it in contact with jaw. Ready?

Press: **YES**

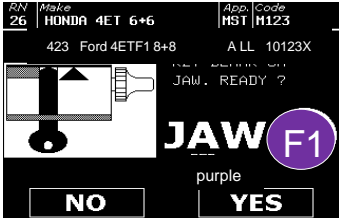
NOTE: This screen will not display if correct cutter is already installed



16. Insert tip stop (tang toward front of jaw) in groove indicated. Insert key by pressing down while holding flat until tip contacts tip stop. Tighten Clamp.

Press: **YES**

NOTE: This screen will not display if correct cutter is already installed



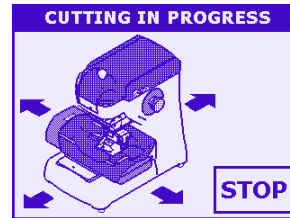
Cut by Code

17. REMOVE STOP TOOL (if not done previously)

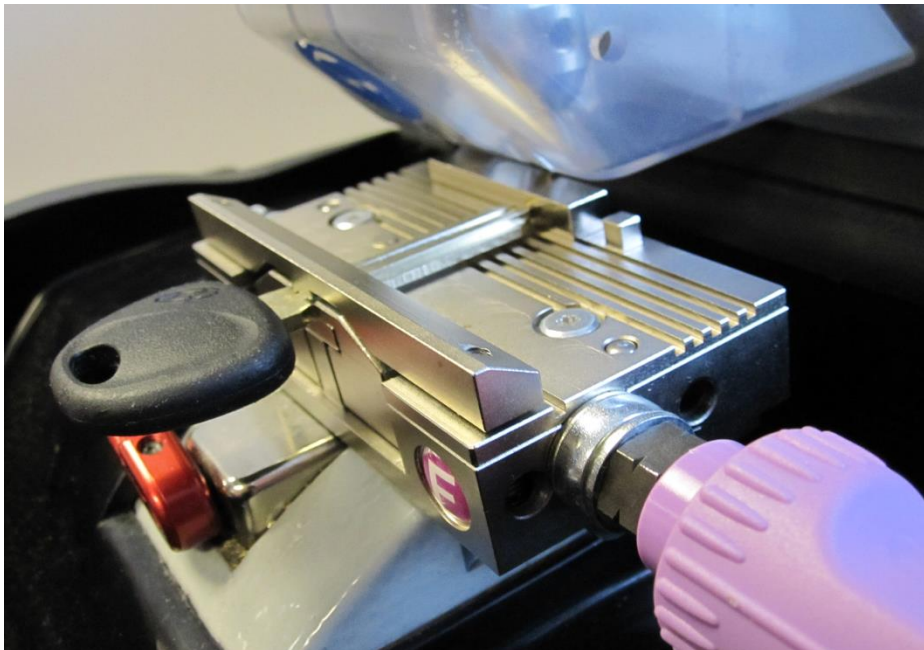
Press: **OK** (table will move into position)



18.



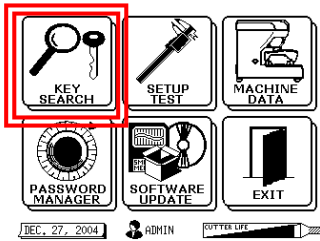
Key cutting will begin. Once complete, brush off all chips and remove the key blank.



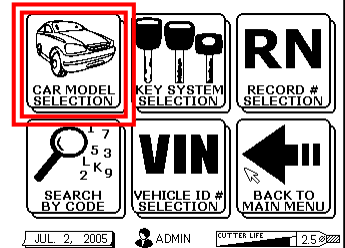
Cut by Decode

WARNING: Each jaw is matched to a single tracer/cutter kit for the calibration process. The console will warn user to change tracer and/or cutter when necessary.

1. Select: KEY SEARCH



2. Select: CAR MODEL SELECTION

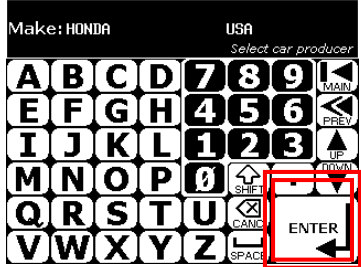


3. MAKE: (ex. Ford)

Select desired model.

If desired make is not displayed—
Touch: **Down Arrow** to view additional makes.
Touch desired make.

Press: **ENTER**

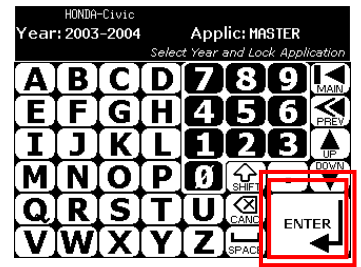


4. MODEL: (ex. Aerostar)

Select desired model

If desired model is not displayed—
Touch: **Down Arrow** to view additional models.
Touch desired model.

Press: **ENTER**

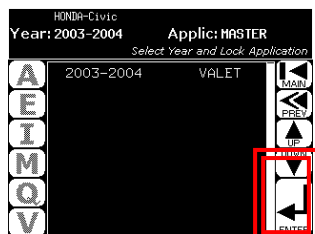


5. YEAR: (ex.1995-1997)

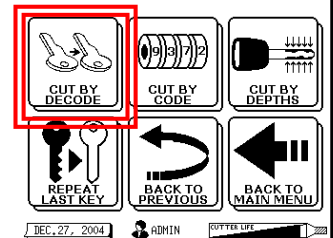
Select desired year.

If desired year is not displayed—
Touch: Down Arrow to view additional years.
Touch: desired year.

Press: **ENTER**



6. Select: CUT BY DECODE

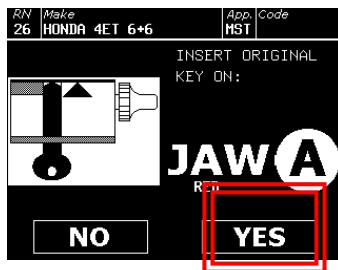


CONTINUE

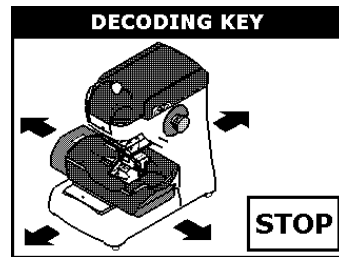
Cut by Decode

7. Insert jaw and clamp tight.
Insert original key blank, pressing down on blank while clamping jaw tight.

Press: **YES**



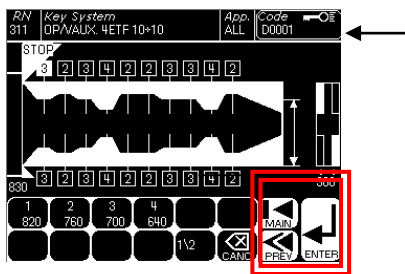
8.



Decoding in process

9. Verify decoded key.

Press: **ENTER**



10. Key blank reference list is displayed.

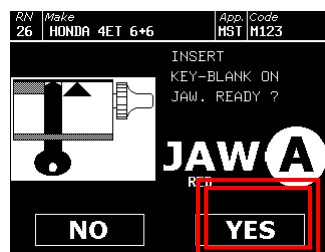
Press: **ENTER**

Make	Model	Year	App. Code
HONDA	Civic	2008-2005	MST
Original	ILC-35111-T5H		(MG00)
	35113-80K-A01		(MG00)
	35113-89A-A01		(MG00)
Barnes	C28722		(MG00)
Ilo	H00115		(MG00)
Jet	HD110-N-PHT		(MG00)
Keyline	-		(MG00)
Silca	H0N66T5		(MG00)
Strattec	692247		(MG00)
Transponder: MEGAMDS Fixed Code (MG00)			

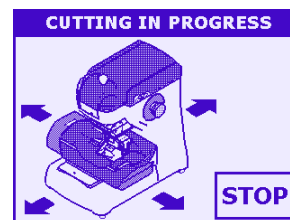
The table is shown on a screen with navigation buttons on the right: "STOP", "UP", "DOWN", "ENTER", and "PREV". The "ENTER" button is highlighted with a red box.

11. Remove original key.
Insert new key blank, pressing down on blank while clamping jaw tight.

Press: **YES**



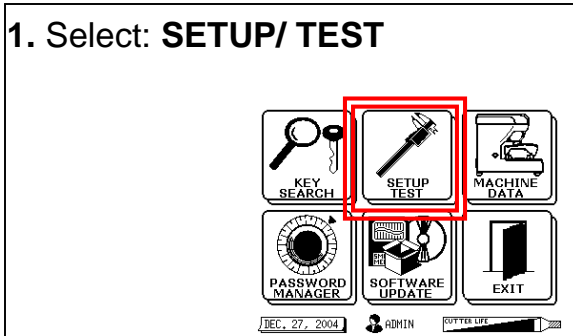
12.



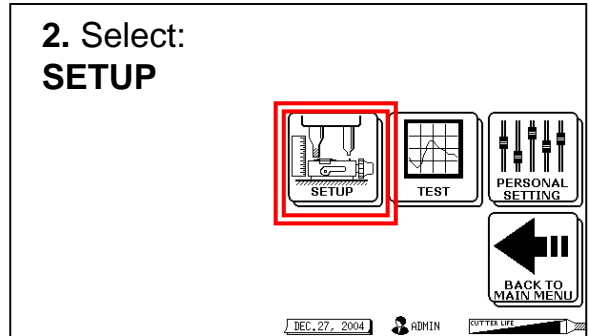
Key cutting will begin. Once complete, brush off all chips and remove the key blank.

Tracer Change

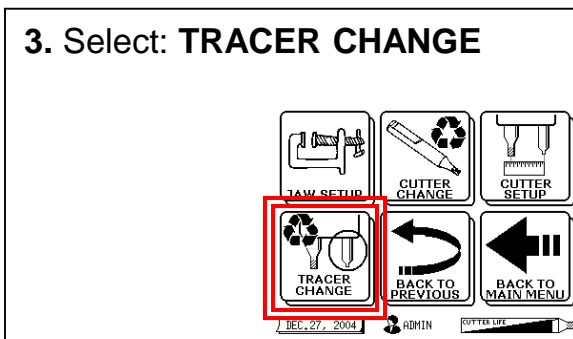
1. Select: **SETUP/ TEST**



2. Select: **SETUP**



3. Select: **TRACER CHANGE**



5.

1. Use small T-wrench to loosen tracer setscrew.
2. Insert into hole in right side of shield
3. Unscrew 4 turns
4. Pull out tracer
5. You may use pliers to remove the tracer if it is broken or bent.

4.

1. Remove Jaw
2. Make sure the **red** lever is flipped to the right
3. Remove the chip tray by lifting up the front of tray and tilting tray backward
4. **CAREFULLY** slide the tray to the left. Use caution when moving components near the tracing pin.

5. Press: **OK**

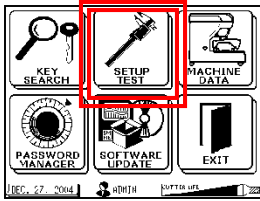


6.

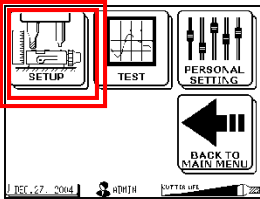
1. Install new tracer as far up as it will go - you cannot go too far.
2. Be sure flat side of tracer is to the right to allow the setscrew to seat properly.
3. Tighten setscrew. Do not over tighten.

Cutter Change

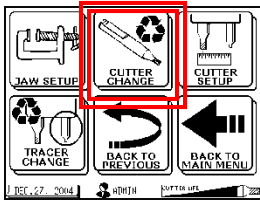
- 1.5mm dia. cutter must use F-Jaw
- 2.5 / 3mm dia. cutters use d with jaws A - D



Select: **SETUP TEST**

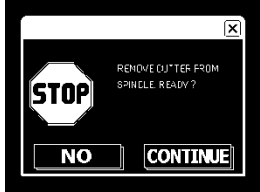


Select: **SETUP**



Select: **CUTTER CHANGE**

- BE SURE TO INSTALL THE SAME DIAMETER CUTTER AS SHOWN ON THE BOTTOM RIGHT HAND CORNER OF THE DISPLAY!**
1. Insert **red** rod through hole in top of machine
 2. Rotate rod until it drops into position
 3. Press down to lock onto cutter
 4. Rotate until arrow on **red** rod points left (9 o'clock position)
 5. Insert LONG T-wrench into black collar on left side of cutter guard
 6. Loosen 4 turns. Leave wrench in place
 7. Remove **red** rod with cutter attached
 8. **DO NOT install new cutter at this time.**
 9. Press: **CONTINUE**



**** DO NOT INSTALL CUTTER ** – Press CONTINUE**



10. Insert new cutter (**SAME DIAMETER**) on **red** rod – Pressing in until it clicks
11. Insert **red** rod with new cutter through hole in the top of the machine
12. Rotate until cutter **rests lightly** on the **silver dot** on the Jaw
13. Tighten setscrew with the long T-wrench
14. Remove T-wrench and **red** rod – Press: **YES**

Reset Cutter Counter?

Press: **YES** (only if cutter is new)

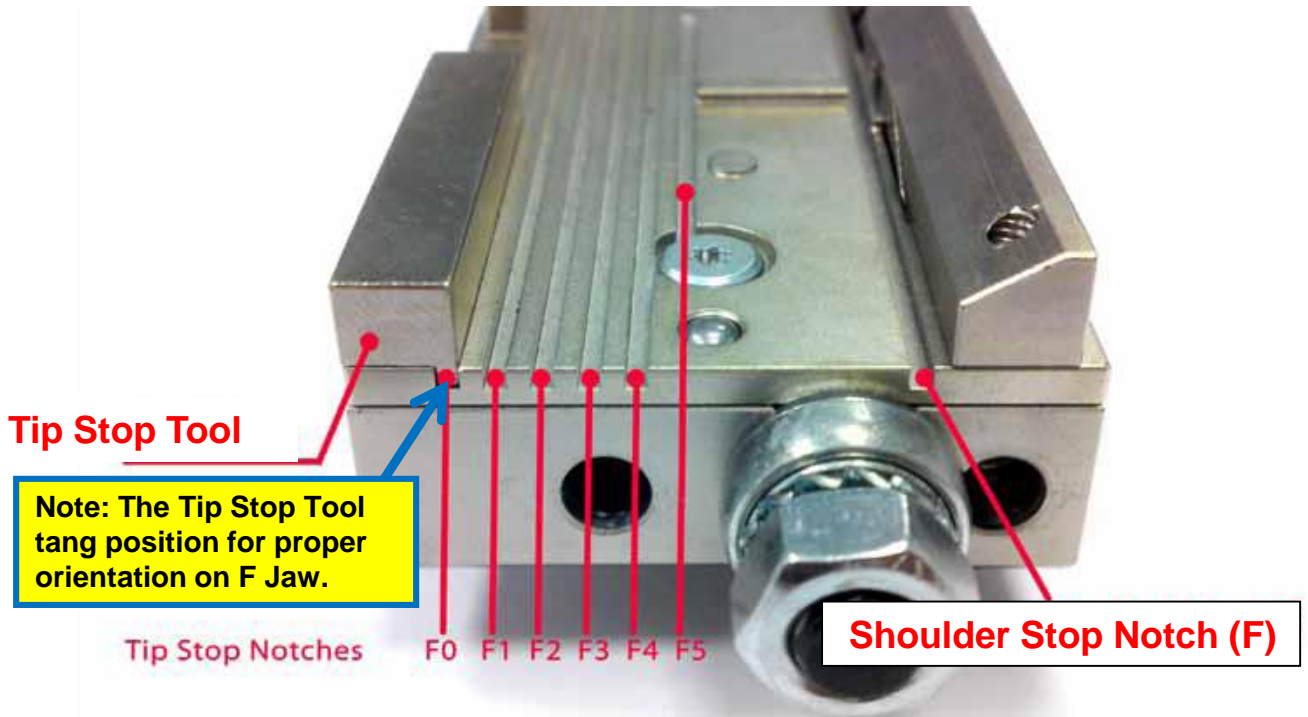
F-Jaw

Accessory for edge-cut /
traditional key cutting

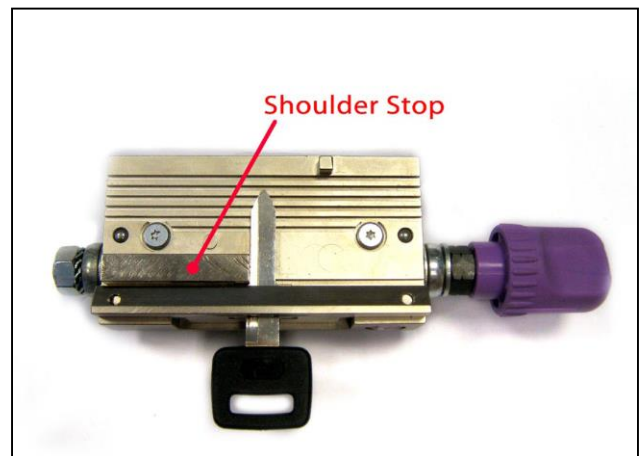
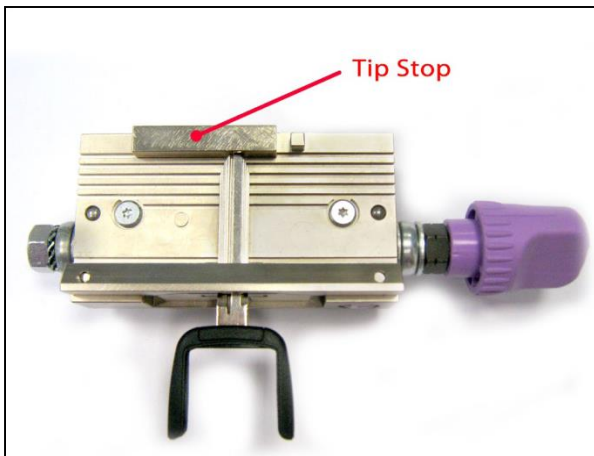
*** IMPORTANT ***

The BD Laser will provide guided instruction when switching from cutting a side milled key to an edge cut key and vice versa. Please take time to read the information on the screens to ensure properly cut keys.

F Jaw Features



Key Tip and Shoulder Stop Notch Positions



Examples of Key Tip and Shoulder stop positions

F-Jaw Checklist

Review Before Use

- ❑ Software Verification (Must be 4.0 (321) minimum)
 - SELECT: Machine Data -> Machine Data.
 - Must update software version if not 4.0 or higher.
- ❑ Jaw Verification
 - Each jaw must be calibrated to the machine before selecting them for use.
 - An * asterisk will be displayed next to each jaw displayed on the Jaw Setup screen indicating successful calibration.
- ❑ Cutter Verification
 - Cutter life meter on screens will display current cutter installed. Either 1.5, 2.5 or 3.0.
 - 1.5 mm dia. is for all Flat (edge cut keys).
 - 2.5 mm dia. is for all High Security (side mill keys) including Honda.
 - 3 mm dia. is for High Security HONDA ONLY (optional).
- ❑ Tracer Verification
 - All tracers are 1.5 mm dia.
 - STD (for High Security keys) tracer is short in length.
 - LT02 (for Flat/Traditional/Edge-cut keys) tracer is longer in length.
- ❑ Key Verification
 - High Security: side-mill, laser cut, wave, etc. (Use with Jaws A, B, C, D)
 - Edge-cut: traditional, flat, etc. (Use with Jaw F)

Helpful Reminders

Cutting by Code

If changing from high security to edge-cut key cutting or vice versa, you will only need to change the cutter.

- Regardless of which key had previously been cut, select the key that needs to be cut and follow on-screen prompts to change cutter.
- BD Laser will notify you IF and WHEN you have to change the cutter.
- Do not attempt to switch cutters without following screen instructions.

Duplicating (copy / trace)

When attempting to duplicate a key the proper TRACER MUST BE INSTALLED.

1. Select the desired vehicle by MMY (make/model/year) or RN (record number if known)
2. Continue selecting through the desired screen options to cut key
3. BD Laser will notify you **IF** and **WHEN** you have to change the Tracer.

F Jaw Key Cutting Tips

- If the BD Laser was ordered with F jaw accessory, the machine is ready for use.
- If the “F Jaw’ was an add-on option, a software update must be completed if version is less than 4.0.

❑ Cutting by Code

Easiest way to switch back and forth to cut high security and edge cut keys.

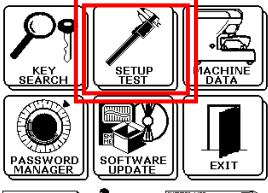
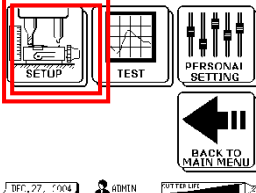
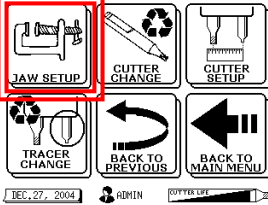
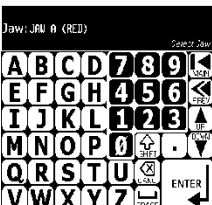
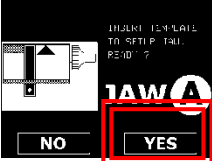

- As users selects the desired vehicle information, the screens will indicate when to change the cutter (if necessary) as you move along in the key cutting process.
- If user primarily cuts by code and has the high security cutter and (short) tracer installed, the cutter is only changed when switching from either style (edge or high security).
- To cut key:
 - Select vehicle by Make/Model/Year or enter RN (record number if known).
 - Continue selecting through the desired screen options.
 - Machine will notify IF and WHEN the cutter needs changed.
- **WARNING:** Do not attempt to switch cutters without following on-screen prompts.

❑ Duplicating (copy / trace)

- Machine will notify user IF and WHEN the tracer needs changed.
- Do the following:
 - Select vehicle by Make/Model/Year or enter RN (record number if known).
 - Tracer and cutter change will be made without having to leave the decoding or cutting process.

Disclaimer - There are multiple diameter cutters and different length tracers that may be used in the key cutting process. It is the responsibility of the user to correctly install the components when instructed. While the BD Laser will indicate which cutter and/or tracer to use, it cannot sense which cutter or tracer is physically installed.

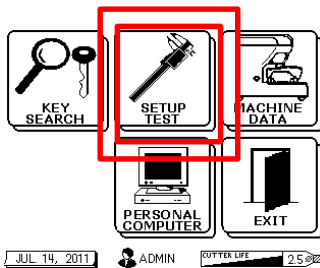
F-Jaw Calibration Procedure

<p>1. Select: SETUP/TEST</p> 	<p>2. Select: SETUP</p> 	
<p>3. Select: JAW SETUP</p> 	<p>4. Select: Jaw F (use DOWN arrow to select it) Press: ENTER</p> 	
<p>5. STOP Remove Jaw Press: CONTINUE</p>	<p>6. STOP Remove Tracer Press: CONTINUE</p>	<p>7. STOP Insert and fix TL02 (long) tracer in correct position. Press: CONTINUE</p>
<p>8. STOP Remove cutter from spindle and DO NOT install another cutter Press: CONTINUE</p>	<p>9. STOP Are you SURE that no cutter is in the spindle? Press: CONTINUE</p>	
<p>10. STOP Please insert the F Jaw (purple) Press: CONTINUE</p>	<p>11. STOP Remove tip stop tool Press: OK</p>	
<p>12. STOP Remove tip stop tool Press: OK</p>	<p>13. STOP Install 1.5mm dia. cutter and lock in contact with jaw. Ready? Press: Yes</p>	
<p>14. Insert the silver jaw set-up template (metal bar with key ring in accessory kit). Hold blank template <u>FLAT</u> in jaw & press down while tightening. Press: YES to calibrate jaw</p> 		
<p>15. SETUP OK – Remove template Press: OK</p> 		

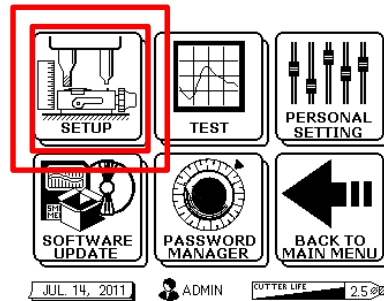
F Jaw SET-UP/Calibration



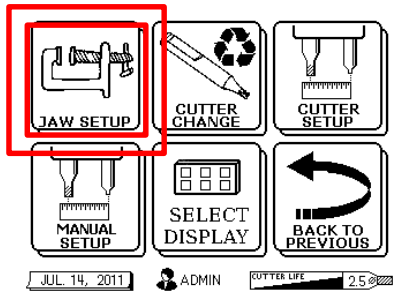
1. From the main menu, Press: **SETUP TEST**



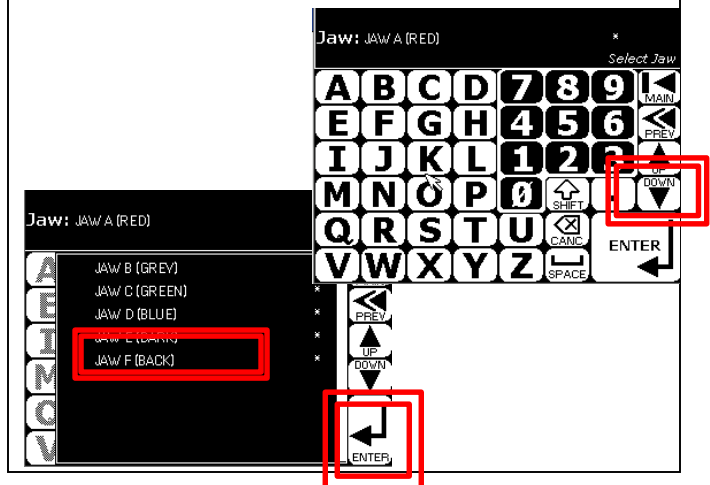
2. Press: **SETUP** button.



3. Press: **JAW SETUP**




4. Press the **DOWN ARROW** to find F Jaw. Select the **F JAW** and press **ENTER**.

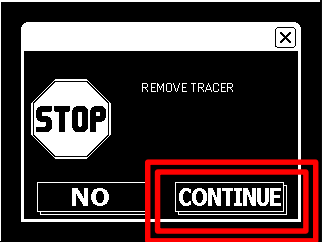


WARNING: Each jaw is matched to a single tracer/cutter kit for the calibration process. The console will warn user to change tracer and/or cutter when necessary. When prompted to change both tracer and cutter, the following screens will appear:


5. Remove jaw.
Press: **CONTINUE**



6. Remove currently installed tracer.
Press: **CONTINUE**



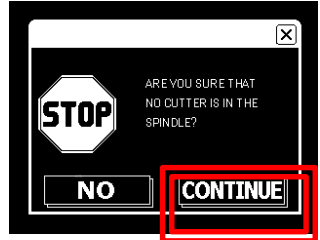
7. Install the correct tracer.
Press: **CONTINUE**




8. Remove currently installed cutter.
Press: **CONTINUE**



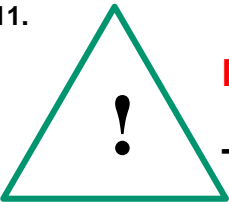
9. Make sure no cutter is currently installed in the spindle.
Press: **CONTINUE**




10. Install F Jaw (purple knob) as required.
Press: **CONTINUE**




11.



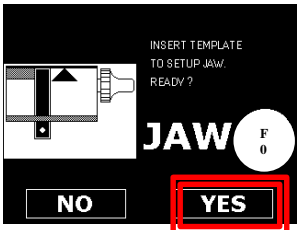
Remove Stop Tool
Then press **OK**




12. Install the required cutter (1.5 mm sized) and lock it in contact with jaw.
Press: **YES**



13. Insert template on the jaw **REMOVE the TIP STOP**, then begin calibration by pressing **YES**.



13. Calibration of F Jaw will start. When SETUP OK is displayed, remove the template and
Press: **OK**



F Jaw Cutter Calibration Procedure

It is not necessary to calibrate the 1.5mm dia. cutter

Update Software via Internet

Verify existing software version

1. Touch: **MACHINE DATA**
2. Touch: **MACHINE DATA**
3. Software version can be found under the word “console.”
4. Touch: **MAIN** to return to main screen.

To Update BD Laser Software via Internet

Process time is approximately 10-15 min.

1. Turn on BD Laser and enter the machine password
2. From main menu, select:
 - A. Touch - **Setup/test** (top center)
 - B. Touch - **Software Update** (bottom left)
 - C. Touch - **Update Software** (top left)
 - D. Touch **Internet** (top right)
3. Connect BD Laser console with working Ethernet cable
NOTE: Phone option will take approximately 1 hour and is not recommended
4. Press: **OK**
5. Then wait ...do nothing until blue screen displays: **Update Complete**
6. If the message asks if you want to start axis-firmware update?
 - A. If the original software was less than 3.1, Press: **YES**.
NOTE: By selecting yes, additional time will be added to the process.
 - B. If original software was higher than 3.1, Press: **NO**.

NOTE: You will think the process is complete on some screens because of time delay, wait until you see the blue screen stating: UPDATE COMPLETE

7. Press: **OK**
8. Disconnect Ethernet cable or phone line from BD Laser console.
9. Return to main screen.

NOTE: It is not necessary to recalibrate the jaw or the cutter.



Modem connection

Short Form Instructions

