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# ULTRACODE



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## QUICK START GUIDE

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**ILCO**  
UNICAN®

Please read all instructions carefully before operating your Ultracode Key Machine.

**1. Preparation**

**A.** Begin by removing the ULTRACODE machine from its cardboard box. It is advisable to save the box and packing material for future transportation. After removing the ULTRACODE machine from the packing box, check the contents of the box, which should include the following:

- 1 ULTRACODE key cutting machine
- 1 set of documents including an operating manual, a spare parts list and a warranty card\*
- 1 ULTRACODE internal Card list
- 1 ULTRACODE Quick Start Guide
- 1 power supply cable
- 1 tool kit

\*The warranty card should be filled out and returned to Ilco Unican as soon as possible.



**INCORRECT!**

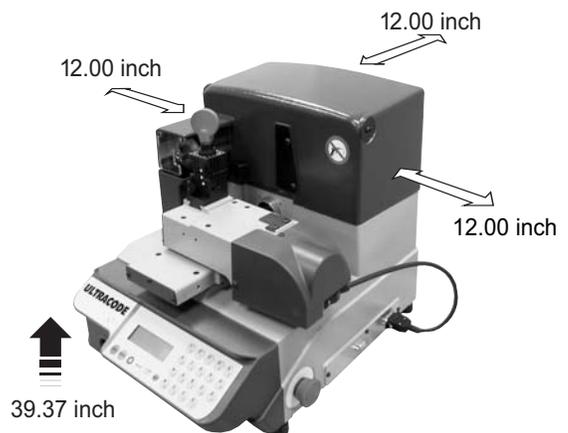


**CORRECT!**

**B.** When the ULTRACODE has been unpacked, place it directly on its work-bench; this operation should be carried out by at least two people. Carefully lift the machine, firmly holding the base and no other part. Never lift the machine by holding the keyboard stand.

**C.** Place the machine on a horizontal surface, solid enough to support the weight of 85 lbs (39kg). Ensure that the main's power supply is the same as that of the machine, 110V/AC. This supply should be properly grounded and the machine connected to a surge protected power strip.

**D.** The serial cable on the right hand side of the machine must be plugged into the (Y) port, also located on the right hand side of the machine. This allows the X & Y axis to function properly.



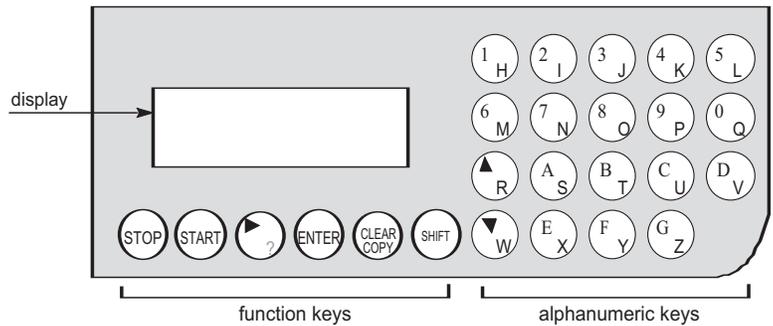
**E.** Attach the power cord to the ULTRACODE and plug it into an 110V/AC circuit. The on/off main rocker switch is located on the back left hand side of the machine. Make sure that the emergency stop button, located on the right hand side of the machine, is disengaged. To make sure that the emergency stop button is disengaged, push the button in towards the machine, to activate it, and then rotate the button 45deg clockwise, to deactivate it.



**F.** Turn the ULTRACODE machine ON.

**2. Initial Operations**

**A.** When the machine has been turned on, for a few seconds the display will show the internal software version and the machine model.



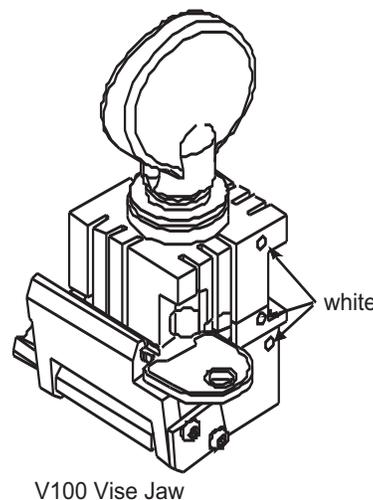
**B.** After a few seconds, the ULTRACODE’s main menu will appear on the screen. Use the ↑ & ↓ buttons to move the cursor to the required option. Once the cursor is at the desired location, press the ENTER button or directly press the numbered button corresponding to the option number.

**C.** In order to successfully cut keys on the ULTRACODE machine, it is recommended that the operator calibrate the ULTRACODE before attempting to advance with any other functions.

**3. Calibration**

**A.** Use the ↑ & ↓ buttons to move the cursor to the CALIBRATIONS options, then press the ENTER button, or directly push the #4 button. This will open the CALIBRATIONS menu.

**B.** Select the JAWS option and press the ENTER button or directly push the #1 button.



V100 Vise Jaw

**C.** Select the V100 STANDARD JAW from the menu screen and press the ENTER button. Before starting the vise jaw calibration, make sure that there are no keys and /or adaptors fitted in the V100 jaw.

**D.** The screen will show that Side A of the vise jaw is ready to be calibrated. Press the START button.

**E.** The screen will show the message, “Install Z1 & Z3 temp See operating manual”. Replace the ULTRACODE’s cutter with the Z1 template. To remove the cutter, follow the instructions on page 16, ch 4.6 “Changing the cutter”. Insert the Z3 template into the V100 vise jaw taking note of the jaw side that is shown on the machine’s display. Once the Z3 is in place, press the START button.

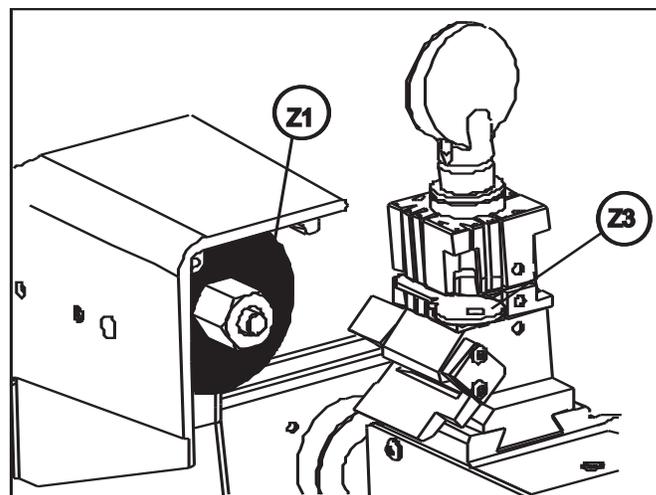
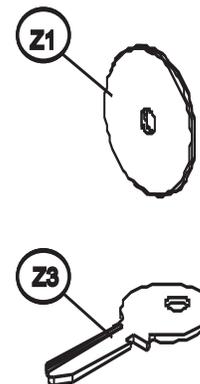
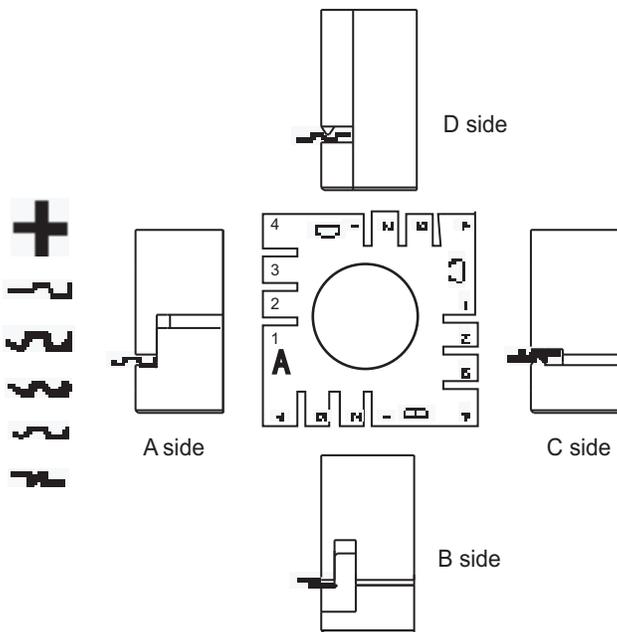
**F.** By pressing the START button, the ULTRACODE will automatically start the calibration of the V100 vise jaw by means of electric contact between the two templates.

**G.** Once the operation is complete, the screen will show the differences from the theoretical values. To save the data, press the ENTER button. At this point push the ENTER button. If the STOP button is pressed, the new settings will not be saved, and the previous settings will remain valid.

**H.** The settings will be accepted by the ULTRACODE only if the tolerances remain within a range between  $-11.8/+11.8$  thousandths of an inch.

**I.** The same procedure must be followed for all four sides (A, B, C, D) of the vise jaw.

**J.** After calibrating all sides of the V100 vise jaw, remove the Z1 template from the cutter shaft and replace it with the original cutter. Make sure that the cutter has the directional arrow facing outwards. Once the cutter has been installed, press the STOP button once. The screen will once again display the CALIBRATIONS menu.

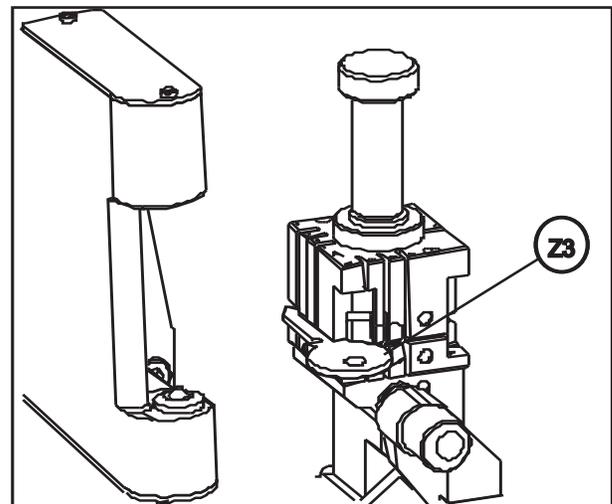


#### 4. Calibrating the Cutter

- A. Select the CUTTERS option from the CALIBRATIONS menu screen and press the ENTER button, or directly press the #2 button.
- B. Select the U01 cutter from the menu screen. Press the START button. The screen will then display the message, “Install the Z3 template. See operating manual”. It is recommended that the same Z3 template be used for calibrating the cutter and the jaw. Once the Z3 has been installed in the V100 jaw, press the START button.
- C. After the detection has taken place, the screen will display the differences from the theoretical values. Press the ENTER button to save the new data. The new data will only be accepted if the tolerance of the cutter’s diameter remains within a range between +39.3/-39.3 thousandths of an inch. Once this operation has been completed, the Z3 template must be discarded. When the cutter is calibrated, the Z3 key is marked, and cannot be used again.
- D. Press the STOP button twice to return to the ULTRACODE main menu.

#### 5. Calibrating the R100 Jaw (only if optical reader is installed)

- A. Use the  $\uparrow$  &  $\downarrow$  keys to move the cursor to the CALIBRATIONS option on the ULTRACODE’s main menu, and press ENTER, or directly push the #4 button. This will open the CALIBRATIONS menu.
- B. Select the JAWS option or the #1 option from the menu screen and press the ENTER button.
- C. Select the R100 jaw from the menu screen and press the ENTER button. Before starting the vise jaw calibration, make sure that there are no keys and /or adaptors fitted in the R100 jaw. Press the START button.
- D. Install the Z3 template into the R100 jaw on side A. Press the START button.
- E. After the detection has taken place, the screen will display the differences from the theoretical values. Press the ENTER button to save the new settings. These new settings will only be accepted if the tolerances remain within a range between  $-11.8/+11.8$  thousandths of an inch.



- F. The same procedure must be followed for all four sides (A, B, C, D) of the vise jaw. Once all four sides of the R100 jaw have been calibrated, press the STOP button twice to return to the ULTRACODE’s main menu.

### 6. Cutting Keys Using the Optical Reader

**A.** Use the ↑ & ↓ buttons to move the cursor to the COPY FROM ORIGINAL option and press ENTER, or directly push the #0 button. This will open the COPY FROM ORIGINAL menu. This option will only be available on machines that have the optical reader installed.

**B.** Insert the original key into the R100 optical reader jaw. According to the type of key to be copied, establish which side of the jaw the key must be inserted in. Press either the A, B, C, or D buttons to tell the ULTRACODE which side of the vise jaw is being used. The desired letter will replace the question mark (?) on the screen.

**C.** The next line on the screen deals with the Key Gauge Stop. Use the ↓ button to scroll down to the Pos. line. By default the ULTRACODE will always show the (0) stop position. The (0) stop position should be used with all shoulder-gauged keys. If the original key does not have a shoulder, then enter the desired tip stop value. Press either the 1,2,3, or 4 buttons to select the desired tip stop position. The desired value will replace the (0) value on the screen.

**D.** Once the jaw side and the tip stop position have been selected, press the START button.

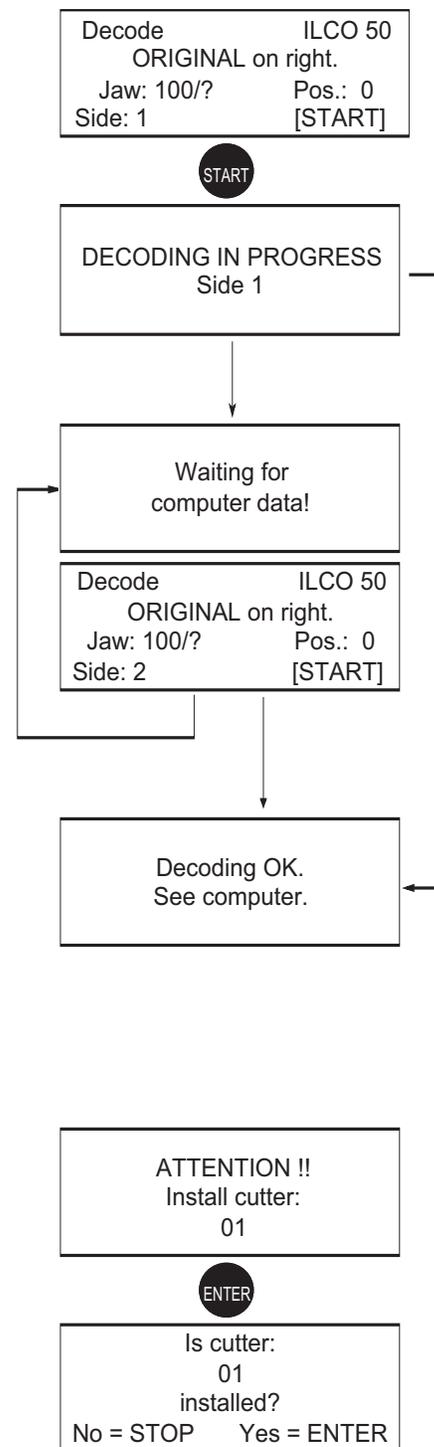
**E.** The screen will display the message “Reading in Progress”. Once the reading has taken place, the ULTRACODE will allow manual data alterations to take place. The operator may manually alter the depth and space parameters of the key that was just read. In most cases, this option will not apply to keys being cut on the ULTRACODE.

**F.** Press the START button.

**G.** Place the key to be cut in the V100 cutter side jaw. Use the same side and stop positions as the key that was fitted to the R100 optical reader side jaw. These values will already be shown on the screen, and will not have to be input by the operator. Press the START button.

**H.** If the key to be cut is present in the V100 jaw during the initial reading process, the key will be partially cut; it will be completed only at the end of the cutting process.

**I.** To return to the ULTRACODE’s main menu, push the STOP button until the menu screen appears.



### 7. Cutting Keys by Card

**A.** Use the ↑ & ↓ buttons to move the cursor to the CUT BY CARD option and press ENTER, or directly push the #2 button. This will open the CUT BY CARD menu.

**B.** A data card is a database of cutting “spaces”, “depths”, and “angles” for all of the keys in the ULTRACODE’s database. Use the ULTRACODE internal Card list to select the appropriate card number. Use the number and letter buttons, to type this card number onto the appropriate line, then press ENTER.

**C.** The screen will now display all the possible depths for that particular system. Using the number and letter buttons, enter the actual cut depths that are required for the key. Press the ENTER button.

**D.** The screen will display which side of the key is to be cut, which jaw is being used as well as which side of the jaw to use. The screen will also display which tip stop position to use, which cutter to use, and how many pieces are to be cut. Once all this information has been viewed and understood, press the START button.

**E.** When cutting keys, place the key to be cut in the jaw and push the START button. The key will then be cut. If cutting a double-sided key, turn the key over and place it back in the jaw. Once the key is back in the jaw, push the START button; the second side of the key will be cut.

**F.** To return to the ULTRACODE’s main menu, push the STOP button until the menu screen appears.

### 8. Cutting Keys by Code

**A.** Use the ↑ & ↓ buttons to move the cursor to the CUT BY CODE option and press ENTER, or directly push the #3 button. This will open the CUT BY CODE menu.

**B.** To search by code, use the number and letter buttons to enter the required code onto the appropriate line. Then press the ENTER button.

```

Enter card number:
1 - ILCO = 567
2 - HPC =
3 - USER =
    
```

ENTER

```

Side 1 x 2      ILCO 567
.....
Possible depths:
1234
    
```

ENTER

```

Side: 1
Jaw.: 100/*      Pos. : 0
Cutter: U01 STD
Pieces = 2      [START]+
    
```

START

```

CUTTING IN PROGRESS
Copy: 1 of: 2
Side 1
    
```

```

Side: 2
Jaw: 100/*      Pos. : 0
Cutter: U01
[START]+
    
```

START

```

CUTTING IN PROGRESS
Copy: 1 of: 2
Side 2
    
```

START

```

Copy: 2 of: 2
finished.
More copies?
No = STOP Yes = ENTER
    
```

