
Ilco EZ[®]-Clone



English Version
D432096XA
Version 1.0

OPERATING MANUAL

ILCO TECHNICAL SUPPORT DEPT.
400 Jeffreys Rd., Rocky Mount, NC 27804

Tel: (800) 334-1381, Option 8
Fax: (252) 446-4702



© 2006 Kaba Ilco Corp. - Rocky Mount, NC
All Rights Reserved

INDEX

1	MACHINE DESCRIPTION.....	5
	1.1 Main Features	5
	1.2 Technical data	5
	1.3 Working parts	6
	1.4 Special features.....	7
	1.5 Symbols used on the display	8
	1.6 Electrical/electronic circuit	8
2	TRANSPORT.....	9
	2.1 Packing.....	9
	2.2 Transport	9
	2.3 Unpacking	9
	2.4 Machine handling	9
3	ACCESSORIES PROVIDED.....	10
4	MACHINE INSTALLATION AND PREPARATION.....	10
	4.1 Preparation for use - preliminary operations.....	10
	4.2 Checking for damage	10
	4.3 Environmental conditions	10
	4.4 Positioning	10
	4.5 Software update	11
5	REGULATION AND SETTING OF THE MACHINE	11
6	USE OF THE MACHINE	12
	6.1 Ignition	12
	6.2 Reading	12
	6.2.1 Calculation for Texas Crypto transponder (60,61,62,63,64,65,67).....	13
	6.2.2 Special cases in reading	14
	6.3 Writing	14
	6.4 Transponder identification	16
	6.4.1 Transponder IDENTIFICATION procedure	16
	6.5 Options: changing language	19
7	WARNING MESSAGES.....	20
	7.1 Messages during key reading and writing.....	20
8	MAINTENANCE.....	21
	8.1 Trouble shooting.....	21
	8.2 Checking the wiring.....	21
9	WASTE DISPOSAL.....	22
10	ASSISTANCE.....	23
	11.1 How to request service.....	23

GENERAL

The device is designed to the principles of European CE Directives. The materials used in its manufacture are not dangerous and their use complies with directives. Its design features make the machine and all its components completely safe to use.

FURTHER RISKS

There are no further risks arising from the use of the machine.

PROTECTION AND SAFETY PRECAUTIONS FOR THE OPERATOR

The operations for which the machine has been designed are easily carried out at no risk to the operator.

SAFETY REGULATIONS

To operate under conditions of maximum safety do not use the device without reading and understanding clearly the contents of this operating manual.

- Check the electrical wiring periodically; if the wires are worn they should be repaired or replaced.
- Never work with wet, greasy or oily hands.
- Disconnect the device from the mains when it is not in use or in order to carry out maintenance work.
- Never tug at the power supply wire; make sure it does not come into contact with oil, sharp edges or heat.
- It is dangerous to use the device in areas at risk (damp or wet).
- Always work in a well lighted area.
- Keep the work area clean and remove all tools before turning on the machine.
- All visitors, children in particular, must keep at a safe distance and not touch the machine or electrical wiring.
- Do not use the device for purposes different from those described in the Operating Manual.

POWER SUPPLY

The machine is supplied with electricity at 12 Vdc provided by the vehicle battery, or as an alternative can be powered from a 15 Vdc universal feeder supplied with the machine.

IDENTIFICATION OF THE ILCO EZ[®]-CLONE DEVICE

The device has an identification plate showing its serial number (fig. 1).

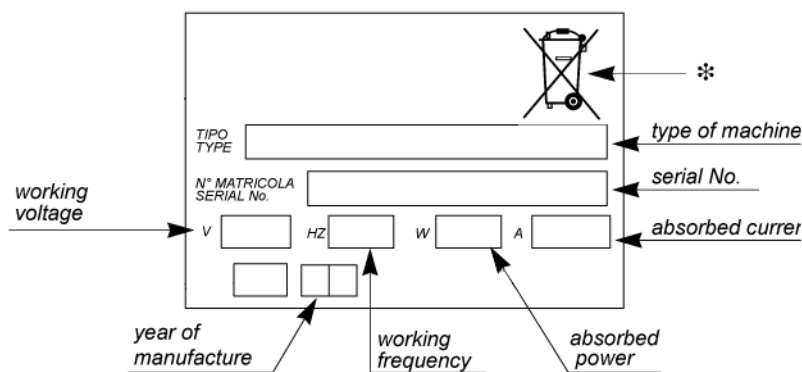


Fig. 1

(*) see chap. 10 "WASTE DISPOSAL", page 27.

1 MACHINE DESCRIPTION

The machine is designed for the making of copies of various car keys with transponders and is simple to use.

In particular, the machine is able to read and display the electronic code stored in the memory of Philips*, Megamos* and Temic* transponders used on the keys, and re-write it on a blank transponder.

The machine works alone or connected to a personal computer. A functions menu is incorporated to meet all the needs arising during operation.

For a list of car makes and models whose keys can be copied, consult the articles published in the ILCO Auto Truck Cross Reference and updates.

1.1 MAIN FEATURES

Operation Modes

- copier/detector - transponder reader/writer
- stand-alone

Special Functions

- interface with HOLDEN-COMMODORE
- program in various languages

Software Updating

- The machine can be updated by connection to a personal computer via RS232 or USB.

Power Supply

- Directly from the mains through an external universal power provider and special cable.
- 12 volt Lighter Adapter

1.2

TECHNICAL DATA

Power Supply

- Universal power provider: 100/240 Vac-50/60 Hz/15 Vdc-3A
- machine: 15 Vdc-10W

Atenna Field Frequencies

- 125 KHz

Dimensions

- Width: 9.65" (245 mm)
- Length: 6.30" (160 mm)
- Depth: 3.20" (80 mm)

Weight

- 1.4 lbs. (.60 Kg)

1.3

WORKING PARTS

The structure of the machine is extremely simple

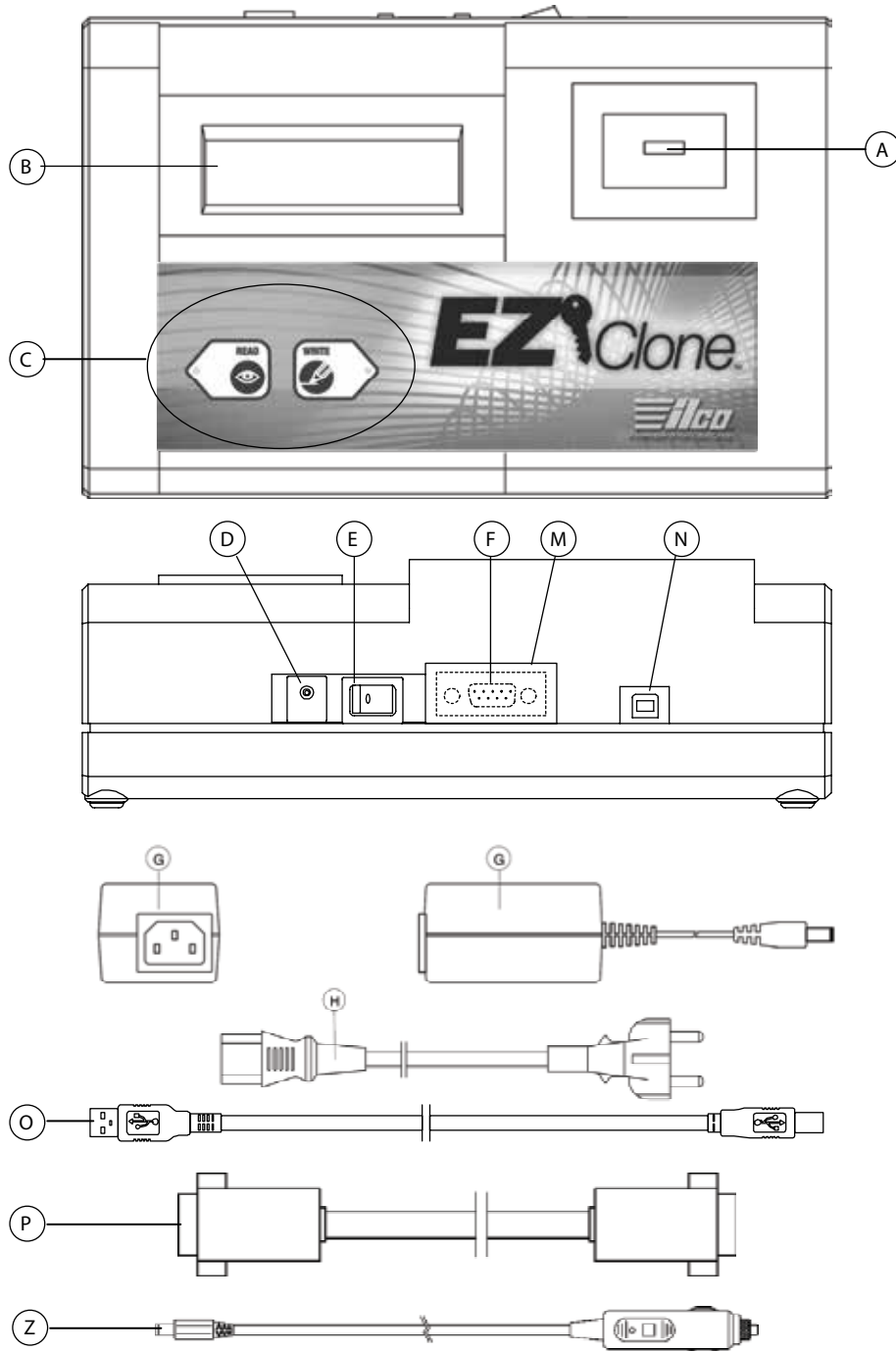


Fig. 2

- | | |
|---|--|
| A - reading/writing antenna | H - power supply cable |
| B - liquid crystal display for 20 + 20 characters (2 lines) | M - cover |
| C - 2 key keyboard | N - USB connector |
| D - 15 Vdc power supply socket | O - USB cable |
| E - master switch (POWER ON) | P - serial cable |
| F - RS232 connector (9-pole) | Z - cigarette lighter power supply cable |
| G - 15V D.C. power provider | |

1.4

SPECIAL FEATURES

Keyboard

The incorporated keyboard (Fig. 3, page 7), allows the user to interact with the machine quickly and easily at any given time the keys are enabled only for the cycle in progress.

The illuminating LED next to each key guides the operator in using the key in the way described below:

LED off	key CANNOT BE USED
LED on	key CAN BE USED
LED flashing	key CAN BE USED for optional functions

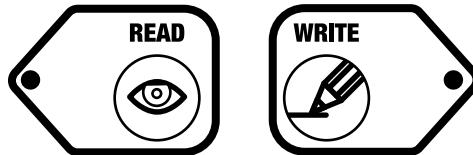
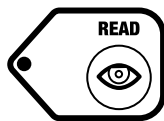


Fig. 3

The following keys are available:



READ

the key starts the transponder reading procedure or is used to go back to the beginning of the operating flow in progress



WRITE

the key starts the transponder writing procedure or is used to go to the next stage in the operating flow in progress

Liquid Crystal Display

Alphanumeric display with 2 lines of 20 characters each, illuminated from behind.



1.5

SYMBOLS USED ON THE DISPLAY

The boxes are organized to supply information about what the operator can or must do by using the keys available.

The first line may be fixed or scrolling, according to the message to be shown.

	I	N	S	E	R	T		O	R	I	G	I	N	A	L	K	E	Y						
◀	R	E	A	D																				

The second line suggests the keys to use and the function associated to them:

◀	R	E	A	D																				
◀	B	A	C	K																				

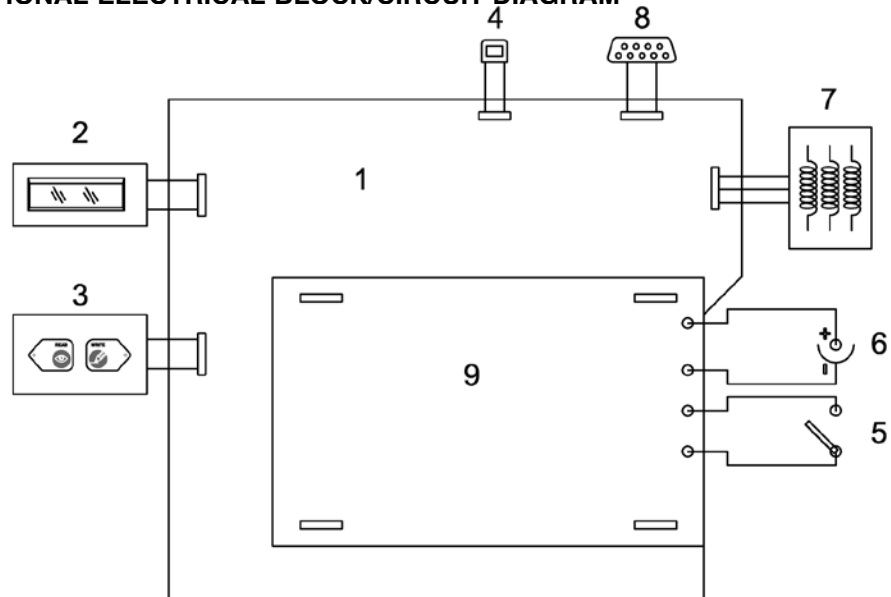
1.6

ELECTRICAL/ELECTRONIC CIRCUIT

Main Parts

1. **PRINTED CIRCUIT BOARD:** contains the microprocessor which runs the key reading/writing operations, the supply circuits, interface with the keyboard and display and the connectors between the antennas and personal computer.
2. **DISPLAY** liquid crystal, retro-illuminated, 2 lines of 20 characters.
3. Control **KEYBOARD** with 2 keys.
4. **USB RECEPTACLE**
5. **MASTER SWITCH**
6. **MAINS SUPPLY SOCKET** 15V/350 mA
7. **ANTENNAS** for reading/writing tuned to 125 kHz
8. **RS232 9 pole RECEPTACLE**
9. **CBOX expansion board**

OPERATIONAL ELECTRICAL BLOCK/CIRCUIT DIAGRAM

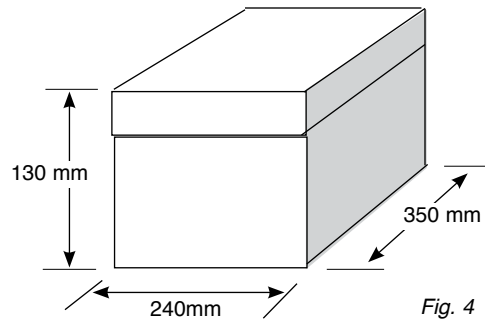


2 TRANSPORT

The machine is easily transported and is not dangerous to handle. The packed machine can be carried by one person.

2.1 PACKING

The packing is designed to ensure safe transportation and protect the machine and all its parts.



2.2 TRANSPORT

It is advisable to use the packing every time the machine is transported, as this will avoid knocks causing damage.

2.3 UNPACKING

To remove the machine from the packing box:

1. It is advisable to open the box without damaging it so that it may be used again (removals, dispatch to manufacturers for repairs or servicing);
2. Check the contents of the box, which should comprise:
 - 1 machine
 - 1 universal power provider
 - 1 power cable
 - 1 serial cable
 - 1 USB cable
 - 1 set of documents, including: operating manual and spare parts list
 - 1 cd-rom
 - 1 cigarette lighter power supply cable

2.4 MACHINE HANDLING

When the machine has been unpacked, place it directly on its workbench.

3 ACCESSORIES PROVIDED

- The machine is supplied complete with:
- universal power provider;
- power cable;
- serial cable;
- USB cable;
- user's manual;
- cd-rom for stand-alone operation (to be used only if the program installed on the machine is lost)
- cigarette lighter power supply cable

4 MACHINE INSTALLATION AND PREPARATION

The machine can be installed by the purchaser and does not require any special skills; it is supplied ready for use. However, some checks and preparation for use need to be carried out by the operator.

4.1 PREPARATION FOR USE - PRELIMINARY OPERATIONS

- turn on and select local operation (stand-alone);
- set up the language.

4.2 CHECKING FOR DAMAGE

The machine is solid and compact and will not normally damage if transport, unpacking and installation have all been carried out according to the instructions in this manual.

However, it is always advisable to check that the machine has not suffered any damage.

Should faults be found which are not due to the above mentioned risks, contact the Silca After Sales Service.

4.3 ENVIRONMENTAL CONDITIONS

To ensure that the best use is made of the machine and relative keys with transponders, the operating temperature should be restricted. **Given the characteristics of the transponder on the key blanks THE KEYS MUST BE CODED IN AN ENVIRONMENT WITH A TEMPERATURE OF 20°C OR OVER.**

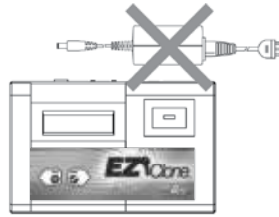
The ideal conditions for the machine are therefore:

- temperature between 20 and 40°C;
- relative humidity approx. 60%.

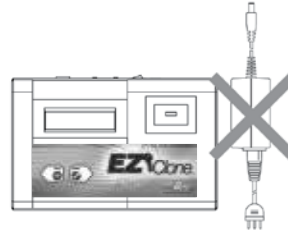
4.4 POSITIONING

The machine does not require a special location; simply place on a horizontal surface of suitable size.

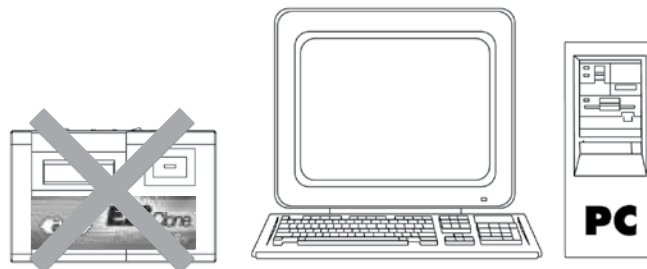
ATTENTION: The universal feeder provided with the machine and any electronic equipment should be placed at least 50 cm from the antenna to avoid their generating interference which could affect reading and/or writing of the transponder (see Fig. 5, page 12).



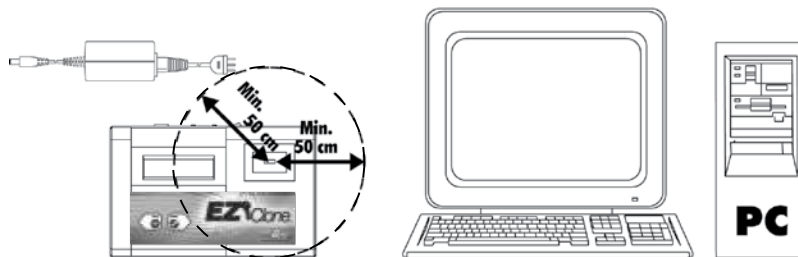
NO!



NO!



NO!



YES!

Fig. 5

4.5

SOFTWARE UPDATE

The machine must be connected to a personal computer only to update the internal software (for future expansion).

ATTENTION: The RS232 and USB inputs necessary for connection to a personal computer are placed on the back of the machine. To use the RS232 input, prise off the cover (M) with the aid of a screwdriver Fig. 2, page 6).

Use an RS232 serial cable less than 3 metres long, or the USB cable, and follow the instructions given on the update cd-rom.

5

REGULATION AND SETTING OF THE MACHINE

The machine does not need any setting or regulation.

6

USE OF THE MACHINE

This chapter describes all the operations for copying, identifying, reading and writing a transponder key. Also described is the use of the Com-Code module for coding Holden Commodore keys.

6.1

IGNITION

			V	E	R	.		X	X	.		Y	Y	.		Z	Z	Z	

The general wording "VER. XX.YY.ZZZ" indicates the version of internal program on the FAST-COPY device.

If the HOLDEN MODULE is connected to the device the ignition screen on the display will show:

			V	E	R	.		X	X	.		Y	Y	.		Z	Z	Z		
H	O	L	D	E	N			M	O	D		V	E	R		x	x	.	y	y

including the internal software version on the HOLDEN MODULE

After a few seconds (approx. 3):

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y						
◀	R	E	A	D																					

Led READ ON
 Led WRITE OFF
 ◀ FLASHING

6.2

READING

Fit the key all the way into the special hole on the front of the machine (antenna), then confirm that the key must be read by pressing the **READ** button.

The reading operation will start. For a few seconds there appears:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S						
				W	A	I	T	.	.	.															

Led READ OFF
 Led WRITE OFF

If there are problems during transponder reading (no transponder, cannot be copied, crypto, reading error, etc) a warning message will appear (see Ch. 6.1 of the RW3 manual).

Below are some examples:

	T	R	A	N	S	P	O	N	D	E	R		N	O	T		D	E	T	E	C	T	E	D	
◀	B	A	C	K																					

Led READ ON
 Led WRITE OFF

	C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E
◀	B	A	C	K								T	Y	P	E	-	-													

Led READ ON
 Led WRITE OFF

If the electronic code is read successfully, there appears:

R	E	A	D	I	N	G	S	U	C	C	E	S	S	F	U	L		
		R	E	M	O	V	E	K	E	Y								

Led READ OFF
 Led WRITE OFF

6.2.1 CALCULATION FOR TEXAS CRYPTO TRANSPONDER (60,61,62,63,64,65,67)

If a TEXAS crypto transponder is being copied, when the key is removed the display will show:

	K	E	Y		D	A	T	A		P	R	O	C	E	S	S	I	N	G		.	.	.	W	A	I	T			
◀	S	T	O	P							x	x	/	9	9		-													

Led READ ON
 Led WRITE OFF

To interrupt the operation hold the READ button down for 2 seconds.

The number shown from 00 to 99 indicates progression of the calculation. This operation may take up to 15 minutes.

If calculation is not successful, two error conditions may occur:

a)

	C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T	D	U	P	L	I	C	A	T	E	
◀	B	A	C	K																										

In this case the original key cannot be copied as it CANNOT BE COPIED.

b)

	I	N	T	E	R	N	A	L		C	B	O	X		E	R	R	O	R		C	O	D	=	X	X				
◀	B	A	C	K																										

In this case an internal error has occurred (COD = YY) in operation of the circuit board dedicated to calculating. Try again. If the problem persists contact the after-sales service, providing the error code shown.

If calculation is successful the device will proceed with the writing operation.

6.2.2 SPECIAL CASES IN READING

If the transponder is a PHILIPS CRYPTO (ID = 40,41,42,44,45) on which the ID part can be copied as for RW3:

C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E
						4	4							C	O	N	T	I	N	U	E	▶							

Led READ OFF
Led WRITE ON

When WRITE is pressed again the display will show THE FOLLOWING QUESTION:

				C	O	P	Y		O	N	L	Y		I	D		?												
◀	N	O																											

Led READ ON
Led WRITE ON

Press the READ button to return to the beginning.
Press the WRITE button to go on to writing only the transponder ID code.

6.3 WRITING

After removing the key, the display will show:

	I	N	S	E	R	T		B	L	A	N	K			K	E	Y												
◀	B	A	C	K											W	R	I	T	E	▶									

Led READ ON
Led WRITE ON
◀ FLASHING

- Press the READ button to return to the beginning
- Press the WRITE button to write

Fit the key with the uncoded transponder, then confirm that the key must be written by pressing the **WRITE** button.

This starts the operation to check whether the transponder on the key is compatible with the type of transponder previously read.

The writing operation begins. For a few seconds the display shows:

	W	R	I	T	I	N	G		I	N		P	R	O	G	R	E	S	S										
					W	A	I	T	.	.	.																		

Led READ OFF
Led WRITE OFF

If writing is successful, the display will show:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D										
					R	E	M	O	V	E		K	E	Y															

Led READ OFF
Led WRITE OFF

If writing is successful, the display will show:

After a few seconds the machine will ask if other copies must be made with the same code; the display shows:

				O	T	H	E	R		C	O	P	I	E	S	?			
◀	N	O														Y	E	S	▶

Led READ ON

Led WRITE ON

- Press the **READ** button to return to the beginning.
- Press the **WRITE** button to make another copy.

If there are problems when checking the transponder on the key blank fitted (no transponder, wrong, not writable, crypto, etc) a warning message will appear (see Ch. 8.1 of the Operating Manual).

	T	R	A	N	S	P	O	N	D	E	R			N	O	T		D	E	T	E	C	T	E	D					
◀	B	A	C	K																										

Led READ ON

Led WRITE OFF

	I	N	C	O	M	P	A	T	I	B	L	E		K	E	Y														
◀	B	A	C	K							T	Y	P	E	-	-														

Led READ ON

Led WRITE OFF

- Press **READ** to return to the beginning of the writing operation.

C) CRYPTO transponder (type 40-41-42-44-45)

C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	
T	Y	P	E	-	-									C	O	N	T	I	N	U	E	▶								

Led READ OFF
 Led WRITE ON flashing
 ▶ flashing

The WRITE button flashes to indicate that there are other data to view.
 Press the **WRITE** button again to see:

C	C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C	C		X	X
C	C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C	C		◀	▶

Led READ ON
 Led WRITE ON

XX: type of transponder.
 CCCCCCCC..= transponder ID code.

Press the **READ** button to return to the beginning.
 Press the **WRITE** button to go to writing **only the transponder ID code**.

D) CRYPTO transponder (type 48)

C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	
T	Y	P	E	-	-									C	O	N	T	I	N	U	E	▶								

Led READ OFF
 Led WRITE ON flashing
 ▶ flashing

The WRITE button flashes to indicate that there are other data to view.
 Press the **WRITE** button to see:

I	D	:	C	C	C	C	C	C	C	C											X	X
U	M	:	B	B	B	B	B	B	B	B												

Led READ ON
 Led WRITE OFF

XX: type of transponder.
 CCCCCCCC= transponder ID code.
 BBBBBBBB = specific data for the transponder

E) CRYPTO 2 transponder (type 46)

C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E
◀	B	A	C	K										T	Y	P	E	-	-										

Led READ ON
 Led WRITE OFF

Press the **READ** button to return to the beginning.

6.5

OPTIONS: CHANGING LANGUAGE

The choice of language is made in 2 ways:

- If you wish to change the language at any time, simply:
 - turn off the device
 - hold down the READ button and turn on the device

The display will show:

S	E	L	E	C	T		L	A	N	G	U	A	G	E	:				
E	N	G	L	I	S	H									S	A	V	E	▶

Every 3 seconds, or press the **READ** button to view the box with the same text in the next language.
Press the WRITE button to confirm selection of the language shown on the display; the setting will be saved.

Order of appearance of the messages in different languages:

E	N	G	L	I	S	H	
E	S	P	A	N	O	L	
F	R	A	N	C	A	I	S
I	T	A	L	I	A	N	O
D	E	U	T	S	C	H	

Led READ ON flashing
Led WRITE ON

7

WARNING MESSAGES

During normal operation, when carrying out the reading and writing procedures the machine is predisposed to detect the problems and anomalies that may occur during these operations.

The paragraphs below show all the possible problems and the warning messages they generate for the operator.

7.1

MESSAGES DURING KEY READING AND WRITING

If there are problems in reading transponders, a warning message appears.

1	T	R	A	N	S	P	O	N	D	E	R	N	O	T	D	E	T	E	C	T	E	D		

2	R	E	A	D	E	R	R	O	R	C	H	E	C	K	K	E	Y	POSITION				

1	K	E	Y	B	L	A	N	K	N	O	T	C	O	R	R	E	C	T				
												T	I	P	O	-	-					

4	C	R	Y	P	T	O	T	R	A	N	S	P	.	C	A	N	N	O	T	D	U	P	L	I	C	A	T	E

5			R	E	A	D	I	N	G	E	R	R	O	R				

6			W	R	I	T	I	N	G	E	R	R	O	R				

Message meanings

- 1) the key does not have a transponder, or it is badly positioned;
- 2) the key is not properly positioned in the device antenna;
- 3) the key blank used for the copy is incompatible with the original.
- 4) the key contains a CRYPTO transponder of the type:
40-41-42-44-45-46-48
- 5) key contains a faulty transponder or one that cannot be read properly.
- 6) the writing operation was not carried out correctly by the device.

Suggestions for solving the problem

- Case 1, try reading after placing the key in different positions.
- Case 2, try reading the key after raising it by a few millimetres.
- Case 3, change the key blank using a compatible key indicated by the Transponder Guide.
- Case 4, the key read CANNOT BE COPIED;
- Case 5, use a new transponder key that works.
- Case 6, the key blank may contain a faulty transponder or one protected from writing. This fault may be caused by electro-magnetic waves generated by electronic equipment in the vicinity. See Ch. 4.4 "Positioning".

8 MAINTENANCE

ATTENTION: For repairs or replacement of parts for maintenance, the 'CE' mark is guaranteed only if original spare parts provided by the manufacturer are used.

The machine does not need any special maintenance.

ATTENTION: Do not use compressed air

ATTENTION: Do not open the machine for any reason whatsoever

Before starting any type of maintenance (check-up or replacement of parts) read the following instructions:

never carry out any maintenance operation with the machine on;

always disconnect from the mains;

follow the instructions in the manual;

use original spare parts.

8.1 TROUBLE SHOOTING

FAULT	PROBABLE CAUSE
DISPLAY - WITH THE MACHINE ON NOTHING APPEARS ON THE DISPLAY	A) CHECK CONNECTION WIRING B) REPLACE: - DISPLAY (AFTER-SALES SERVICE) - ELECTRONIC CONTROL CIRCUIT BOARD (AFTER-SALES SERVICE)
KEY PAD – DOES NOT WORK LOCALLY (STAND-ALONE) - DOES NOT ACCEPT COMMANDS	A) CHECK CONNECTION WIRING - REPLACE KEY PAD (AFTER-SALES SERVICE)
ANTENNA - DOES NOT READ OR WRITE	A) CHECK WIRING - REPLACE KEY PAD (AFTER SALES SERVICE)
CBOX EXPANSION BOARD CBOX INTERNAL ERROR = XX (XX WITH VALUES 1 TO 20)	A) THE MESSAGE INDICATES THAT AN ERROR HAS OCCURRED ON CBOX. TURN THE DEVICE OFF, THEN ON AND TRY THE OPERATION AGAIN. B) REPLACE: ELECTRONIC CIRCUIT BOARD

The indications above relate to the probable causes of the faults described. They are to be considered indicative and not a comprehensive list of the likely causes of faulty operation.

In the event of any other problems of faulty operation, contact the After-Sales Service.

8.2 CHECKING THE WIRING

When it becomes necessary to check the internal wiring on the machine proceed as follows:

turn off the machine;

disconnect the supply cable;

remove the 4 plastic feet;

remove the 4 screws inside the housing for the feet;

remove the cover carefully, paying attention to the wiring.

Checking the wiring

Check that all the connectors are properly fitted.

WASTE DISPOSAL

EU regulations establish special arrangements for the disposal of waste*.

Waste deriving from the machine

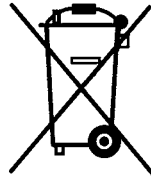
The machine produces no waste during its use.

Machine

The machine is made of re-usable materials. Re-cycling is recommended ecological practice.

Packing

The machine is consigned in a cardboard packing box which can be re-used if undamaged. When it is to be thrown away it is classified as solid urban waste and it should be placed in the special paper collecting bins.



Information for Users

*as per art. 10 of Directive 2002/96/CE of 27/01/2003
regarding waste from electric and electronic appliances (RAEE),*

- The symbol illustrated above, also found on the machine, indicates that it has been placed on the market and must be included in separate rubbish collection when the user wishes to dispose of it (including all components, sub-assemblies and consumables that are integrated in the product).
- For information about the collection system for such appliances please contact **SILCA S.p.A.** or another subject registered in the various National Rolls for other countries in the European Union. Household waste (or of similar origin) can be included in the separate collection system for urban waste.
- On purchasing a new appliance of equivalent type, the old one can be consigned to the dealer. The dealer will then contact whoever is responsible for collecting the appliance.
- Suitable separate collection of the unused appliance and its dispatch for treatment, recovery and environmentally compatible disposal, makes it possible to avoid potential negative effects on the environment and human health, and aids recycling and the recovery of the materials used.
- Unauthorised disposal of the product by users involves the application of the sanctions provided for in received Directives 91/156/CE and 91/689/CE.

* Waste is any substance or object deriving from human activity or natural cycles, thrown away or to be thrown away.

ASSISTANCE

ILCO provides full assistance to purchasers of the machine. To ensure complete safety for the operator, any job not specified in this manual should be carried out by the manufacturer or in the special Service Centres recommended by ILCO.

On the back cover of this manual there is a list of the Service Centers and relative addresses.

How to request service

The guarantee attached to the machine ensures free repairs or replacements of faulty parts within 12 months of purchase. All other service calls must be arranged by the customer with KABA ILCO CORP.

800-334-1381, take option for Customer Service.



800-334-1381
www.kaba-ilco.com