

Professional Disc Repair Machine

Operation Manual





Revision # v8.1.2015



Thank you for purchasing the EcoPro2. Please take a few minutes to read through this manual to become familiar with your new machine and achieve the best results.

WE WOULD LIKE TO PREFACE THIS MANUAL WITH: It is important to use your ECO Pro2 on a regular basis to prevent the compound lines from drying. Try and run at least 2 discs through per week.

Important Safeguards

Please read through this entire manual and retain it for future reference. To prevent personal injury or equipment damage, the following precautions should be observed:

- Always ground this unit. A surge protected power bar is recommended.
- Use only the AC adapter provided with the EcoPro2. Do not try to use a different cord if the
- Keep the AC inlet and adapter dry. DO NOT USE if wet.
- Do not use the Power cable if it is bund led or tang led. Never use the power cable if it is damaged. It can over heat and a fire may result.
- Do not alter, bend, or stretch the power cable forcibly, or unplug by pulling on the cord.
- Keep the power plug clean. If the power plug is dirty, clean it with a dry cloth after unplugging the unit.
- Do not use this equipment during a thunderstorm. Turn the machine off completely until the storm has passed.
- WARNING: Do not turn this unit OFF during operation, unless there is an emergency.
- If smoke or a strange odor should occur, please turn OFF the Main Power Switch. Immediately
 contact a service technician for assistance. If this procedure is not followed, fire or electrical
 shock may result.
- Use only the specified consumable materials. The use of substitute consumables may damage the machine and void the warranty.
- Do not disassemble or modify this unit unless instructed to do so by a trained technician.
- Never per form repair work yourself. It is dangerous and not recommended.
- Do not use this unit in an area where there is flammable or explosive gas.

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Set up Instructions

Choose a proper place for installation

Before you unpack and setup your EcoPro2, please ensure you have a flat, level surface on which to unpack, situate and operate the machine. There is the possibility that water may leak from the machine if installed incorrectly, so keep any water sensitive material away from unit operational area.

Use a correct power receptacle for the unit's electric capacity.

EcoPro2 Electric Capacity: 100-240V AC,50/60Hz,120W (Max)

Environmental conditions

Do not use the EcoPro2 in areas exposed to:

- Direct sunlight
- Excessive humidity
- Dust
- Vibrations
- Corrosive or flammable gas

Specifications

Operation ambient Temperature range	40 to 95 degrees F.
Operation ambient	
Humidity range	15 to 85% (Non-condensing)
Power supply	100 VAC to 240 VAC,120W
(50/60Hz)	
Dimensions	8*10 (13)*11.5
(W *D *H inches)	(With bottles)

Unpacking Guide

The unit weighs 13 lbs (6kg), so please use caution when unpacking.

Carefully lift the unit out of the box and set on a flat, stable location.

If unit is accidently dropped, contact ELM USA. Do not attempt to use the machine until you check with ELM USA Service Department.

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Contents of Package

EcoPro2 Machine

Bottle Holder

AC Adaptor and Power Cable







Water Bottle

Pads (4 pieces)



KEY CARD (located in key card slot of machine)



Compound Bottle



Description and function of each part

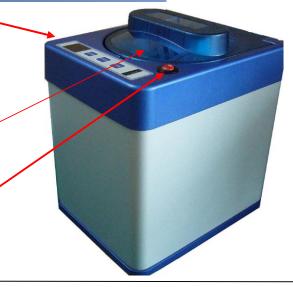
Operation Panel

LCD indicates status of the machine, Push buttons operate the machine KEYCARD slot for time card.

Lid

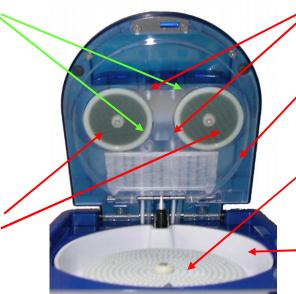
Opens automatically when Main Power switch is turned on.

Main Power Switch



Front of Machine

Water Nozzles



Compound Nozzles

Splash Cover Inside lid

Platen TableDisc placed label side down.

Polish Basin

Pad Holders

Place Pads properly.

Water Supply Tube

Compound Supply Tube

Compound Bottle Cap Attaches the Compound Bottle

Water Bottle Cap

Attaches the Water Bottle

AC Inlet

Connect the cable of AC Adapter

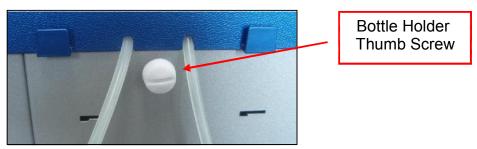


Back of Machine

Setting up the ECOPRO2

Attach the Bottle Holder

1. Loosen and set aside the bottle holder thumbscrew from the back of the machine.

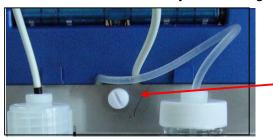


2. Hook up the Bottle Holder to the back of the Unit by inserting the hooks of the Bottle Holder into The slits in the back and then slide the holder to the left to lock it in place.



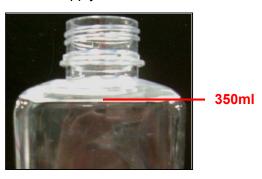


3. Secure the Bottle Holder by re-installing and tightening the Bottle Holder Thumb Screw.



Prepare the Water and Compound Bottles

4. Pour 350 ml of water into the Water Bottle. Attach the Water Bottle Cap, tighten the lid, and push the Water Supply Tube into the bottle.





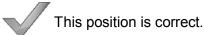
IMPORTANT:The Water Supply Tube should reach the bottom of the bottle.

Prepare the Water and Compound Bottles cont'd.

Shake the Compound Bottle

5. Uncap the Compound Bottle and attach the bottle to the Compound Bottle Cap.







This position is INCORRECT.
The compound pump will not prime properly with the tube in this position.

6. Attach the Compound Bottle and the Water Bottle to the Bottle Holder as shown.



Using the KEY CARD

Installing the KEY CARD

Caution! Be sure the Unit is turned OFF before inserting / removing the KEY CARD.

1. Insert the KEY CARD so that the label side faces to the right (when viewing from the front of the machine).



The KEY CARD should be inserted With arrow pointing down.



Be sure the KEY CARD is fully inserted into The KEY CARD slot by pushing it down and forward to lock it in place.

WARNING: Always turn off the machine when taking out the KEY CARD

Removing the KEY CARD:

1. Pull the tab forward to release the card.



Starting the EcoPro2

- 1. Connect the Power Cable to the AC Adaptor securely.
- 2. Connect the cable of the AC Adaptor to the AC Inlet at the backside of the Main Unit.
- 3. Plug the power plug into a grounded outlet or power bar.



4. Turn ON the Main Power Switch.

The LCD displays "Starting", the Hatch opens automatically, and then the LCD displays "CD/DVD" and the Remaining time of the KEY CARD.





If the LCD displays "No KEY CARD" message, turn OFF the Main Power Switch, insert the KEY CARD to the KEY CARD Slot properly, and then turn ON the Main Power Switch again.





IMPORTANT: Before repairing disc, the water and polish tubing must be filled with water and polish compound. Failure to do so may cause damage to the disc and pads! See next page for instructions.

Operating the Compound and Water Pumps

Before you prime the pumps, remove the black water nozzle caps and set them aside. They are for shipping purposes. Do not discard. Keep them for future use.



NOTE: The Polish nozzles have a built-in valve so they seal when not in use. Do not remove these nozzles.

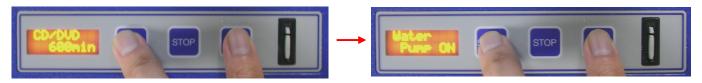
1. Find a small container or use a piece of paper towel to catch water and compound from the nozzles during the priming process.



Operating the Water Pump

2. <u>Press and hold "START" button, and then press "FUNC" button</u>. The LCD displays "Water Pump ON", and the Water Pump begins running.

NOTE: You will hear a rhythmic clunking sound each time the water pump operates. This is normal.



It may take several minutes for water to come out of the nozzles. If you do not see water after that time, gently squeeze the sides of the water bottle to push water into the tubing and clear the air.

If the water still does not come out, press Stop. Remove the lid from the water bottle and use a can of compressed air to blow some air through the tubing until you feel air coming out of the nozzles. Repeat step 2.

Operating the Water Pump Cont'd.

The water will not come out in a steady stream, but a few drops should come out each time the pump engages.

3. Press any button on the Operation Panel to stop the pump after confirming that water is coming from Both Water Nozzles. The display on the LCD returns to "CD/DVD" or "BD" with the remaining time of the KEYCARD.

Operating the Compound Pump

1. <u>Press and hold "STOP" button, and the press "FUNC" button</u>. The LCD displays "Compound Pump ON", and <u>the Platen Table begins rotating clockwise</u> to run the Compound Pump.



It may take several minutes for the compound to fill the lines and drip out of the nozzles.

2. Press any button on the Operation Panel to stop the Platen Table after confirming that compound Comes out from both Compound Nozzles. The display on the LCD returns to "CD/DVD" or "BD" with the remaining time of the KEYCARD.

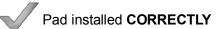


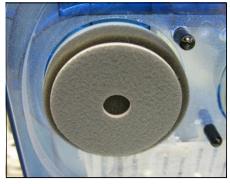
IMPORTANT: Occationally you may need to run these tests to confirm that water and compound are coming out from each nozzle before using the machine. This is only if the machine has sat unused for long periods of time.

Installing the Pads

The pads have a polishing side, and a Velcro side that attaches to the pad holder.







Pad installed INCORRECTLY

1. Place each pad to be sure it is centered within each pad holder.



Bend the Pads lightly with fingertips, and fit the hole in the middle of the pad over the center pin of the Pad Holder



2. Press the center of the Pad lightly after placing it into the Pad Holder to attach the Velcro.

If the pads have been used before, make sure they are clean and dry before reusing them. See How to Clean the Pads on page 16.

NOTE: If the pads are not dry, the final disc finish will be hazy.

Helpful Hint: Buy another set of pads for quicker change overs. This way you have a clean. set of pads ready to be used.

Repairing Discs

1. Place a disc on the white Platen Table, with the label side down.

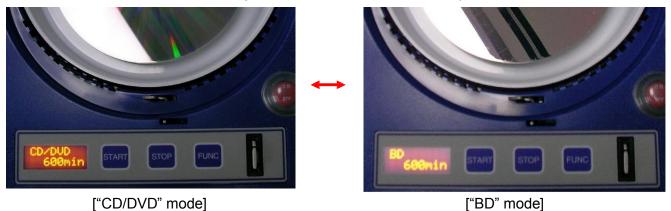




2. Select the Disc mode depending on the kind of the disc to repair.

Pressing "FUNC" button changes "CD/DVD" mode and "BD" mode alternately. BD refers to Blu-ray discs.

When the machine is in standby, the LCD displays "CD/DVD" on the first line with "CD/DVD" mode, and "BD" with "BD" mode. The remaining time of the KEY CARD is displayed on the second line.



Select "CD/DVD" mode for repairing CDs and DVDs, or "BD" mode for repairing BD (Blu-ray Discs) and Hard-Coat Discs.

3. Close the lid; the disc repair process will begin automatically.



Caution! Closing the Lid without a disc on the Platen Table may cause pad damage.

Repairing Disc Cont'd.

4. The LCD display shows the remaining time during the repair process.



5. The LCD displays "Drying" on the second line and the characters blink when the disc drying process begins.



6. After finishing the disc drying process, the Lid opens automatically, and then the Platen Table stops.



Caution! Take out the disc <u>only</u> after the Platen Table has stopped completely.

If there is compound residue left on the disc, wipe it gently with a soft cloth.

All Blu-ray discs will need to be wiped after repair to remove compound residue.

Stopping the Repair Session

Pressing the "STOP" button during the disc repair terminates the process.

The lid will open and the Platen will stop spinning.



IMPORTANT: Do not use the Main Power Switch to stop the repair. If switch is turned Off mid-repair, it could corrupt the KEY CARD.

Increasing the Disc Repair Time (for more heavily scratched discs)

Pressing "START" button during the disc repair extends the repair time.

The first time you press the START button, the repair time increases by 1 minute. The second time you press the START button, the repair time increases by an additional 2 minutes.

(Before extending repair time)



(After pressing START Button once)



(After pressing START Button twice)



Cleaning the Pads

The LCD will display a "Clean Pads" message after every 20-minutes of disc repairs.



Exchange the pads for a clean dry pair and **press any button on the Operation Panel to clear the message**.

Rinse used pads with warm water.

Squeeze the pads several times to help remove any polish.

Once no more polish comes out of the pads, squeeze the pads again to remove extra water. At this point, you can either re-install them on the machine, or let them air dry overnight.

Each set of pads is good for 300 minutes of disc repair.

"Add Water" Message

The LCD displays the "Add Water" message every time the Water Pump in the Main Unit runs 2000 times.



Add water to the Water Bottle, and then press any button on the Operation Panel to clear the alert indication.

"Change KEY CARD" Message

The LCD displays "Change KEY CARD" message when the KEY CARD has no remaining time for disc repair.



Turn OFF the Main Power Switch, exchange the KEY CARD (see page 9 for removal tips)

Add water to the Water Bottle, and exchange the Compound Bottle.

Purchase new kits from ELM USA (see Consumables on page 24)

WARNING! Only use pads and compound manufactured and supplied by ELM. Using generic compound and pads can damage your machine and will void your warranty.

Cleaning Your ECO PRO2

Keeping your ECO Pro2 clean is an essential maintenance ritual to keep your machine running flawlessly for many years.

The ECO Pro2 should be cleaned when you notice there is an accumulation of residual cleaning materials left in the cleaning tray and platen table area.

Depending on how often you use your ECO Pro2, cleaning may be needed daily, weekly or even monthly if there is minimal use.

1. Hold onto the platen table assembly and lift it straight up to remove it from the machine.



2. Take the polish tray out of the machine and wipe it with a damp cloth. You may also wash it in the sink, If needed.



3. Spray the whole inside of the machine with glass cleaner including the lid. Avoid spraying the front panel and Key Card area. Wipe front panel with a damp cloth if needed.



4. Wipeout the machine with a soft cloth to remove any polish build up.



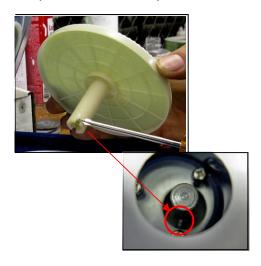
5. Spray the platen table assembly with glass cleaner and scrub with a toothbrush to clean it.



6. Put the polish tray back in the machine.



7. When you put the platen table assembly back into the machine, align the groove in the base with the pin on the motor spindle.





IMPORTANT: Once the platen table Assembly is in the machine, rotate the platen gently until you feel it drops lightly, then push Down firmly in the middle to make sure it is securely connected to the motor.

Check list for the EcoPro2





- 1.Prime compound and water pumps; make sure compound and water are coming out of the nozzles.

 Compound pump—hold Stop and press Function Button.

 Water pump—hold Start then press Function Button.
- 2.Install a clean, dry set of pads.

After a Disc Repair Session:

- 1.If needed, clean the machine.

 Spray inside with gentle cleaner like Windex and wipe out with soft cloth. Lift out disc Platen and clean polish tray.
- 2.Rinse the pads, wring them out and let them dry overnight.
- 3.Gently wipe the tips of the polish nozzle to remove and compound build-up.

LCD Display Summary Table

Condition	Character display on the LCD (2-line by 8-character)		Note
Initialization		Starting	After power turned ON.
Ready ("CD/DVD" mode) Ready ("BD" mode)		CD/DVD XXXXmin BD XXXXmin	Pressing " FUNC " button changes the Disc mode setting from CD to BD. The second line displays the remaining time on the KEY CARD.
Water Pump operation Compound Pump		Water Pump ON Compound Pump ON	Refer to pages 11 &12.
operation Compound Pump operation (Rev)		Compound Pump Rev	USED FOR TROUBLE SHOOTING ONLY Refer to page 26.
Disc repairing		CD/DVD XXm XXs	The first line displays the Disc mode, and the second line displays the time remaining for the disc repair process.
Finishing the disc repair		CD/DVD Drying	The first line displays the Disc mode Characters on the second line flash.
Error	Error message (Flashing)		Refer to page 22.
Alert	Alert message (Flashing)		Refer to page 23.

Error Messages

Error LCD	messages	on the	Contents and Check		Action
	No Pad		Contents	There are no pads on the pad holder	
			Check	Install or reposition the pads.	С
	P.Motor WireDown		Contents	The Platen Table is not rotating properly. The wiring of the Platen Motor is broken, the motor is out of order or the Main Board that controls the Platen Motor may be out of order.	A
	Invalid KEY CARD		Contents	The Unit can not read the data or write data on the KEY CARD. The KEY CARD may be out of order, or have a poor connection with the KEY CARD Interface Board.	В
	EEPROM Load Err		Contents	Data can not be read from the EEPROM. The EEPROM may be out of order.	A
	EEPROM WriteErr		Contents	Data can not be written to the EEPROM. The EEPROM may be out of order.	A

Actions

Α	Contact Technical Support for assistance.
В	Turn OFF the Main Power Switch, and then remove and insert the KEY CARD. If the same error occurs, contact Technical Support for assistance.
С	The pad may be worn out, or there are no pads on the Unit. Confirm the condition of the Pads — replace them with new pads, if they are worn out. If the same error occurs with new Pad, contact Technical Support.

Alert Messages

Alert messages on the LCD	Note and Action
No KEY CARD	Turn OFF the Main Power Switch, insert the KEY CARD to the KEY CARD Slot properly, and then turn ON the Main Power Switch again.
Clean Pads	The message appears after every 20-minutes of disc repairs. Exchange Pads, and then press any button on the Operation Panel to clear the alert indication. Pads are reusable for 300-minutes of disc repairs. Remove pads before cleaning—do not wash while on machine.
Add Water	The message appears every time the Water Pump in the Main Unit has run 2,000 times. Add water to the Water Bottle, and then press any button on the Operation Panel to clear the alert indication.
Change KEY CARD	Turn OFF the Main Power Switch, exchange the KEY CARD, add water to the Water Bottle, exchange the Compound Bottle and replace pads.

Consumables

Part Name	Part Number	Contains:
PRO-KIT 800 min No compound		PRO-Pad (4 pieces) 800 min KEY CARD (1 piece)
PRO-KIT 600 min		Compound 200ml (1 Bottle) PRO-Pad (4 pieces) 600 min KEY CARD (1 piece)
PRO-KIT 800 min		Compound 200ml (1 Bottle) PRO-Pad (4 pieces) 800 min KEY CARD (1 piece)
EcoPro PADS (PAIR)		00

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Maintenance Parts

Platen Table Module Part#: EDR-PRO-C100C
Under Splash Cover Part#: EDR-PRO-A400
Compound Tube Module Part#: EDR-PRO-C400C
Water Bottle Cap Module Part#: EDR-PRO-F310A
Compound Bottle Cap Mod- ule Part#: EDR-PRO-F312A
Pad Holder Velcro Part#: EDR-PRO-D202A
Gas Spring Module for Lid Part#: EDR-PRO-B510A

Troubleshooting

Compound is not flowing from nozzles when Compound Pump is turned on:

Main cause: There is a clog in the polish tubing.

Step 1:

Remove any dried polish from the nozzles in the lid. Gently wipe off tip of nozzle with a wet cloth.

Turn Compound Pump on again, and let it run for a few seconds.

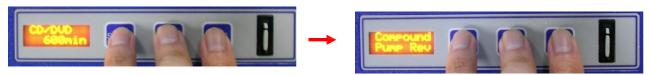
If compound doesn't start flowing, stop the Compound Pump and go to Step2.

Step 2:

Reverse the Compound Pump:

Press and hold "START" and "STOP" button, and then press "FUNC" button.

The LCD displays "Compound Pump Rev", and the Platen Table begins rotating counter clockwise to run the Compound Pump in reverse, so the compound will flow back into the bottle.



Let the Compound Pump run in reverse for a few minutes.

If the clog in the tubing clears, you will see the compound flowing into the bottle through the clear tubing in the back of the Unit.

Even if you do not see the compound flowing into the bottle, turn the Compound Pump off after a few minutes, and run it in the forward direction to see if the compound now flows from the nozzles.

If there is still a cloq in the tubing, please call ELM USA +1 847-243-4150 for assistance.

Servicing or repair of the EcoPro2 disc repair machine:

Please have the following information available:

- •Approximate date you received the machine
- Model name of product
- Serial Number
- •Description of Problem (as much detail as possible)

PAY AS YOU GO CUSTOMERS: If You have a problem with your ECO Pro2, please call our service department immediately for help

ELM USA, INC.

1611 Barclay Blvd. Buffalo Grove, IL 60089 +1 847-243-4150

WWW.ELM-USA.COM

Warranty

Product Warranty

ONE YEAR LIMITED

ELM USA warrants the EcoPro2 to be free from defects in material and workmanship under normal use for a period of one (1) year from the date of purchase, except as noted. There is no warranty with respect to the following, which may be supplied with the EcoPro2 polishing pad sand/or polish and/or cartridge sand/or supplementary products. This warranty extends only to the original consumer and does not cover damage from abuse, neglect, or any other use not specified in the printed directions. The warranty does not cover problems caused by fire or other natural calamities. The warranty voids immediately if an improper repair or adjustment is made by anyone other than an ELM USA-authorized service center; if the consumer does not clean or perform regular maintenance at the intervals recommended in the printed directions; and/or if the consumer uses any cartridge and/or polishing pad sand/or polish and/or any supplementary products not authorized for use by ELM USA in the printed directions. The warranty applies the product from the original date of purchase and the owner must furnish proof of original purchase from ELM USA. This product is intended for commercial use only. The unit must be shipped, freight prepaid or delivered at the consumer's expense to the nearestauthorizedrepaircenterineitheritsoriginal packaging or similar package affording an eluivalent degree of protection. The repaired unit will be returned to the customer at the customer's expense. Please contact ELM USA for details.

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ELM USA EXPRESSLY DISCLAIMS ALL RESPONSIBILITY FOR CONSEQUENTIAL DAMAGES OR INCIDENT ALL OSSES CAUSED BY THE USE OF THIS PRODUCT AND UNDER NO CIRCUMSTANCES SHALL ELM USA BE LIABLE FOR ANY AMOUNT GREATER THAN THE ACTUAL PURCHASE PRICE OF THE UNIT.

If you have a claim under this warranty, please call our toll free CUSTOMER SERVICE NUMBER: 1-844-750-8628 or +1-847-243-4150.

LIMITATION OF USE

This machine will not repair cracked, warped, or foil damaged discs. If there is damage to the data within the disc, this machine cannot repair or restore the data. Attempting to repair cracked or warped discs may damage the machine and void the warranty. +1-847-243-4150

DISCLAIMER

Reasonable care has been taken in the preparation of this information, but ELM USA and the product distributors extend no warranties, make no representations and assume no responsibility as to the accuracy or suitability of information. Judgments as to the suitability herein are the purchaser's responsibility.