About

SSC Service Utility 4.30

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This software project is aimed to provide Epson Stylus users with maximum control other their printers.

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Waste Ink should not mean Waste Printer

All inkjet printers waste ink, and it's this waste (from priming and cleaning routines) that has to go into an absorbent pad until it reaches "full" and the printer demands a service.

In most cases this service can cost as much as £60 which is often more expensive than the printer itself. As a result, many printer owners throw their printer on the waste heap in favour of a new one, adding to an already massive electronic waste problem.

The solution has long been known to involve redirecting the waste ink flow to an external container but often these containers are easily tipped, easy to spill, badly designed or wholly inappropriate for the task. Add to that, many printer users are technically inexperienced and don't want to get messy.

This is where OctoInkjet kits come in...

Features:

We provide a well built, kit with a simple but effective valve that protects against leaks by automatically opening and closing when connected or disconnected to the waste tube.
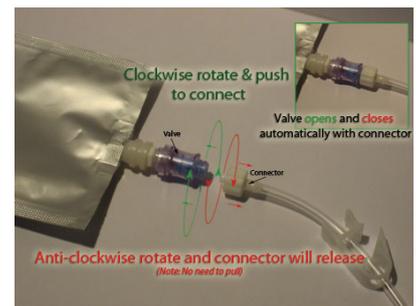
This valve is used on all kits making it easy to upgrade or re-use your kit with other printers as your needs change.

Quality parts, design and build that are tried and tested.

Choose from Standard kits or build your own according to your needs and the environment around your printer.

Clockwise rotate & push to connect

Valve *opens* and *closes* automatically with connector

Anti-clockwise rotate and connector will release
(Note: No need to pull)

**Compatible with almost all Epson
C, D, CX, DX, NX, PX, R, RX, SX, and TX printers.
Feel free to ask...**

http://www.OctoInkjet.com/

Main Program Window

Main window of this utility have three tabs: Ink Monitor, Configuration and Resetter.

No other utility functions are accessible from the main window. All of them are grouped in popup menu what can be made visible by pressing right mouse button on tray icon of this utility.

Ink Monitor Tab

Here You will see three main sections - ink monitor histograms, two radio buttons to change monitor type and button to refresh monitor to actual values.
In the bottom of this tab printer status is shown. Right part of status bar is dedicated to printer error messages.

Ink monitor - In normal mode, this section allow You to see visualised remained ink quantity.

Monitor Type - Here You can change type of visualised data. In normal mode, also called "Printer Report" mode, utility show remaining ink quantity for each color, this is identical to ink monitor used in any of Epson drivers.
But, this utility also have other mode, called "Head ink shots". This mode show ink consumed by printer in terms of number of ink shots, for each different color. This is quite hard to directly calculate remaining ink quantity from this numbers, but after some practice You could change almost empty cartridges precisely.

In second mode, this utility also can provide You with independent ink monitor. This means, what even then You use ink freezer, utility show You always actual consumed ink quantity what will be identical to quantities without ink freezer. This is very useful feature for experienced refiller.

Refresh button - By pressing this button You actualize all visualised data.

All visualised data are automatically actualized in autofreezer mode.

Configuration Tab

Here You can set all configuration parameters to allow utility to properly work with Your printer.

First, choose Your printer in **Installed Printers** drop down list.
Then You must set proper model of Your printer in **Printer Model** drop down list.

Even If Your printer is not supported, You can use some of the functions of this utility. In this case select "Unsupported model" if printer model is new (manufactured after 2000-2001 yr.), or "Unsupported model (old)" if You have very old printer with LPT interface.

Enable independent monitor checkbox provide you ability to activate independent ink monitor available in "Head ink shots" mode of ink monitor. This option is only recommended to experienced refillers.

Disable Epson Status Agent checkbox allow You to remove Epson Status Agent 2 from memory after next computer reboot. This can be useful in case of errors then working with this utility. Checkbox is not available in Windows 95/98/ME.

We recommend you to always remove Epson Status Monitor using Windows, prior using this software.

Utility can also start right after Windows startup, in this case it will start in minimized mode, so You could only see its icon in tray. Check the **Start utility at Windows startup** checkbox, if You want this utility to start automatically. This mode is very useful in combination with autofreezer.

Resetter Tab

Interface contents of this tab is dedicated to work with special add-on device connected to parallel port of Your computer.
Device can reset or fully rewrite any chip.
For more information, please, refer to Resetter section of this help file.

Utility remembers all of Your settings, except some settings for Resetter tab, so, You don't need to set them again.

If You will close main program window, utility remains in system tray. You can access all functions of this utility by using popup menu, or restore main window back to visible state by double clicking on utility icon.

Resetter

Contents of this main window tab are dedicated to work with special add-on device connected to parallel port of your computer.
This device allows reset and total rewrite of any chips.

As known, for most of fairly new printer models it is impossible to reset chip ink counters by software only methods. But starting from v4.00 this utility allows reset and total rewrite of any chip by assembling very simple device that will be connected to your computer port. Full rewrite allows, for example, to make light cyan R300 chip from black C42 chip.

Main options

After you have selected printer model on other tab, in **Available data for selected model** dropdown list you could see all cartridges compatible with you printer model. Select cartridge you want to work with.

In case of **UNSUP** abbreviation after cartridge name and color, you couldn't write chip image, because this chip *is not currently presented in program chip database*. Yet if you have this cartridge chip, you can read his image and send us normal test report to allow us to include chip data to one of the next program versions. Even before new version will be released you can work with chip data as if chip is already in database.

Dropdown list **Port** allows you to select port address you have connected your device to. You can also select automatic port determination. In case of automatic determination problems we suggest you to set printer address directly. You can find port address using Windows device manager.

Chip shows you chip type you will be working with. Old type chips, in most cases, can be resetted by software, so device described below in this section don't have support for them. But software part is tested to work with old chips. We'll provide additional information now to modify device on our site.

New type chips are connected in parallel in printer head, therefore each chip have its own **Address**. In most cases automatically set chip address don't need to be modified. In case of chip not working correctly with selected address, you can try to change it or set Auto to automatically find proper one.

We don't recommend to use Auto setting in **Address** list for writing of checking operations.

If tick is on for **Check chip presence** then software checks chip presence in contactor before performing any operation with chip. Function works only if you connected ON wire in your device.

Speed slider allows you to set speed for all main operations with chip. Too hight or too low speed can lead to errors.

Main operations with chip

Write - Fully rewrites all chip contents. Many non-original cartridges do not allow rewriting all their contents except few bytes, in this case only few first bytes will be changes.

Ink counters for all chips contained in program database are zero.

Check - Utility reads all chip contents and compares them with data contained in database for selected chip. Utility reports you number of differences found. In case of successfull write operation check must show you 0 differences.

Read - Reads all chip contents and adds them to database. his operation is possible for unsupported cartridges only (with UNSUP mark). After successful readout program asks you about resetting ink counters.

Test - Allows to feed test signals to add-on device. all chip contents and adds them to database. his operation is possible for unsupported cartridges only (with <u>UNSUP</u> mark). In more detail assembling and testing of add-on device are described below.

Add-on device (resetter)

For assembling stage you need:
- solderer and solder alloy
- multimeter instrument
- 25-conductor flat cable, 1 meter, (it is possible to use part of more wide flat cable)
- DI-25m connector (25 contacts, male, with flat cable mount)
- small wiring board
- 7 resistors (rated values are depicted on electric circuit)
- 4 Zener diodes C1-C4 (stabilitrons, use any 0.5w, 3.3v, like BZX55C 3V3)
- 1 transistor T1 (BC546C, BC547C or similar ones)
- RJ45 socket

Below you'll find electric circuit of add-on device.
Wiring board is marked by semitransparent light-green color.
On picture you'll find pinout for all used components.
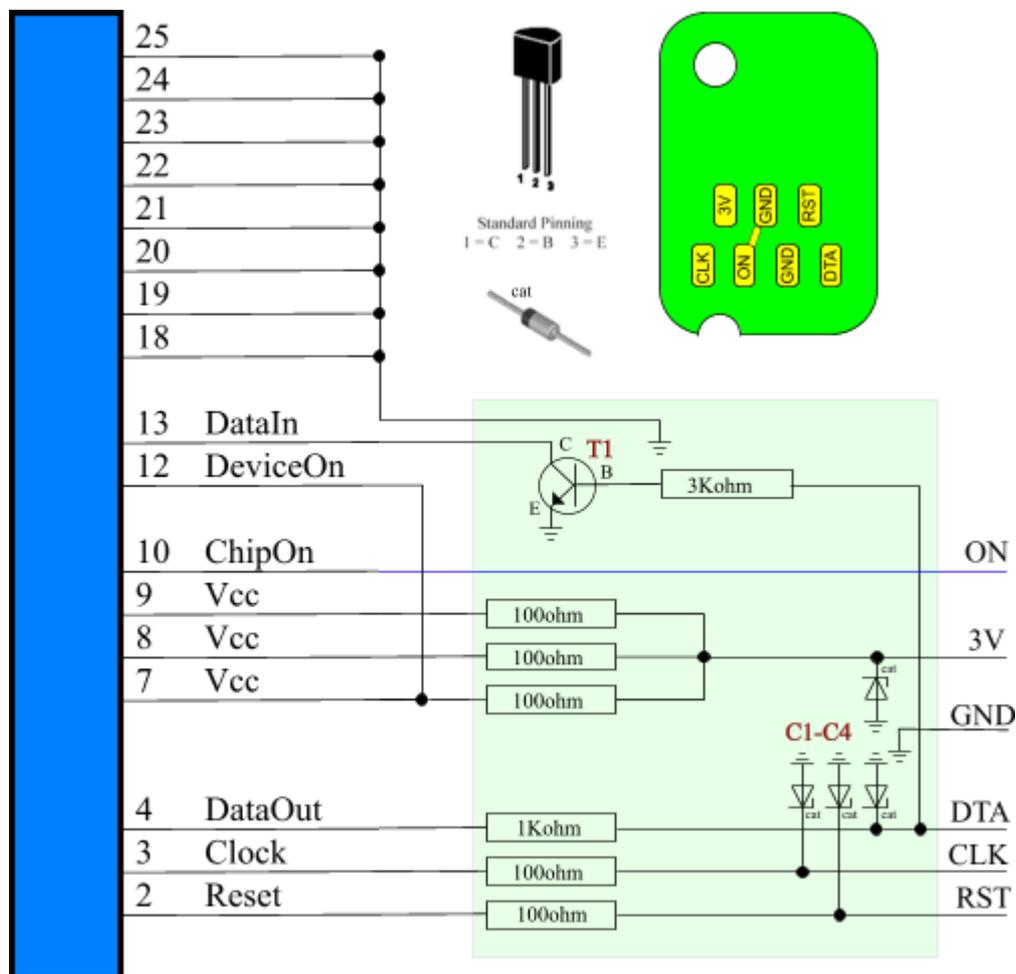
Insert flat cable (use approx. 0.5m) in connector mount and fix it.
Solder all circuit on wiring board.
Now solder flat cable from connector and small flat cable (about 0.3m) what'll lead to chip contactor.

Study how chip contactor looks like in your printer head.
Using suitable RJ45 socket it is possible to make some resemblance of original contactor by slightly

breaking socket,
then by cutting and bending necessary thin springy contacts similarly to original contactor. Then you must solder small
flat cable to contactor. Use contacts pinout shown on chip picture.

For users of C42 or similar printers, with small flat cable leading to chips. You can buy similar flexible flat cable and use your
print head as contactor by removing original flat cable and inserting yours. Pinout for C42 flat cable : 1-RST,2-3V,3-DTA,4-GND,5-CLK.
It is possible to make contactor using socket contacts and piece of transparent plastic with small holes.
You you invented some other easy and suitable way to make good contactor, write us about it, we'll add your instructions here.

How to check assembled device

Do not try to test device with chip in contactor.

Connect your device to port. Select Auto in **Port** list.

Press **Test** button. Answer positively to program question about testing procedure.

Program will show you first message and ask to press OK.

Get your multimeter and measure voltage on small flat cable wires leading to contactor.
Measure voltage between RST and GND, 3V and GND, DTA and GND, CLC and GND.
Measured voltage must be around 0 v.

Press **OK** button.

Measure voltage between RST and GND, 3V and GND, DTA and GND, CLC and GND.
Measured voltage must be higher then 2.9 v. If measured is lower then required you can get errors working with chip.
Minimum voltage is common for DTA. If it is very low try to reduce correspoding resistor value.

Press **OK** button.

Run test another time. In this time look at the value placed after Readed word.
This value must be 1 in first message and 0 in next.

All further testing must be performing with chip in contactor. Use check chip operation.
Read error indicates wrong device functioning.

Reset Counters Functions

This menu section is dedicated to functions especially helpful for refilling empty or almost empty cartridges.

As You know, Epson inkjet printers are equipped with special system to prevent manual refilling of used ink cartridges. Printer always counts consumed ink volume and periodically (during printer initialization and after cleaning procedures) it writes this info to CSIC.
What is this CSIC? CSIC is a small chip integrated in each cartridge (at least, this is true for all new models of Epson Stylus printers). This utility can work directly with this chip. For some newer printers such work isn't possible due to some architectural changes performed by Epson, but in this case You can use ink freezer or some techniques explained in FAQ section.

Reset all counters - Allow You to reset internal ink counters, as well as CSIC, for many printers (such as C60,C680, etc) this will work fine even for empty cartridges. As described in FAQ, for many newer models starting from C42, this function alone is useless. You can find suggestions for this case in FAQ section.
So, don't use items in this menu for very new models. This will result only in another head cleaning. Ink levels won't be reseted.

Reset all color counters - Reset counters and CSIC for all colors only (black cartridge level won't be touched).

Items described below are very useful then You refill cartridge for one color only.

Reset black   - Allow You to restore counters to full state in black cartridge only.

Reset matte black   - Allow You to restore counters to full state in special mette black cartridge only (for few photo printers).

Reset cyan   - Allow You to restore counters to full state for cyan color only.

Reset yellow   - Allow You to restore counters to full state for yellow color only.

Reset magenta   - Allow You to restore counters to full state for magenta color only.

Reset light cyan   - Allow You to restore counters to full state for light cyan color (for photo printers).

Reset light magenta - Allow You to restore counters to full state for light magenta color (for photo printers).

Reset gray   - Allow You to restore counters to full state for gray color (for few photo printers).

Reset red   - Allow You to restore counters to full state for red color (for few photo printers).

Reset blue   - Allow You to restore counters to full state for blue color (for few photo printers).

Reset gloss optimizer - Allow You to restore counters to full state for special gloss optimizer (for few photo printers).

Reset dark yellow   - Allow You to restore counters to full state for dark yellow color (for few photo printers).

On Your particular printer, some, or even all, menu items can be disabled, this is normal.

After resetting any of internal ink counters You must switch printer off as usual. It is advised to switch printer off just after resetting procedure.

Cartridge Exchange Functions

This is experimental functions, very useful for refilling and, sometimes, for resetting. It allows to change cartridge in non standard way, so printer won't see any sign of cartridge changing.

Suddenly, it is possible, what even with such approach, printing with "hot swapped" cartridge will be impossible; printer can just indicate some error and won't print Your document. But in many cases "hot swapping" can be very useful. For example, it can be successfully used in resetting high volumes of chips or cartridges ("hot swap" replace cartridge-reset counters-move to the next one).

In case of head blocking or if You hear some abnormal noise, or if head moved in leftmost position - **DON'T try to repeat it**. Press **Safe Move Back** to return head to the parking position. Also, inform authors by sending test report with problem description to email address provided in test report file. Describe your situation and attach test report. We are working hard to fix all problems with head movement and your report will be very useful.

Utility have three menu items in this submenu what allow You to perform "hot swapping":

Move to exchange position   - Allow You to move head to exchange position, where You can change cartridge.

Move head back to parking position   - Allow You to move head back from exchange position to parking position.
If You suddenly moved head by hand during cartridge replacement, use ONLY Move head back safely.

Move head back safely   - Allow You to move head back from ANY position to parking position.
It is much safer, but, sometimes, printer can see faked cartridge.

Read FAQ and Reset Counters Functions sections for more information about refilling and resetting techniques. You can also use these functions to try to reset cartridges on few models, please read FAQ section for details.

Head Cleaning Functions

This group of menu items allows You to perform various types of standard and tricky head cleaning.
Some of them are very useful.

Then You select Head cleaning in main menu, You will see submenu with these items:

Black head cleaning   - Allow You to save ink by cleaning black head only.
Universal black   - Identical to previous, but works for more printer models. Can be used even on unsupported printers. This option may not work on some printers.

Color head cleaning   - Allow You to save ink by cleaning color head only.
Universal color   - Identical to previous, but works for more printer models. Can be used even on unsupported printers.
Alternative color   - Also allow cleaning only color head, but this option may not work on many printers. But, on some old printers this is the only working option to clean color head only.

Try to choose one of the options listed above what works best with your printer model. On some printers all of the above cleaning methods work fine, but on others it is only possible to perform only normal cleaning. This is caused by printer construction and can't be bypassed in any way.

Normal cleaning   - Ordinal Epson inkjet head cleaning. This is identical to head cleaning available in all Epson drivers.

Powerful Cleaning   - Very powerful cleaning, it wastes much ink. Usable to clean clogged head.

Initial charge   - This is initial ink charge procedure, use it only for service purposes, not for the everyday use. About 1/3 of ink will be wasted.

On some printers this function won't work.

Print nozzle check pattern - Allow You to print simple color pattern, so You can see results of head cleaning.

On very old printers or on some unsupported new models You can have problems with printing nozzle check pattern. Problems also can arise on some of R series printers.

Protection Counter Functions

This submenu is intended to reset special type of counter used in Epson inkjet printers.

Protection counter is the counter for wasted ink; it says to printer how much space it has in special tray where all wasted ink are going during cleaning procedures. With time it became full (printer just won't print in this case) and absorbtion padding must be replaced. After replacing the padding You must reset the protection counter to zero in order to continue ordinary printing. This submenu items can help You in this task.

Show Current Value - Shows You current protection counter value. You can use it to see the result of resetting procedure.

Reset protection Counter - Allows You to reset protection counter to zero value.

Clear counter overflow - Allows You to reset protection counter to zero value. Works only then printer request maintance error service.

On old printer models both of these functions can result in error message if protection counter is already full. In this case use manual reset instructions provided below.

Do not reset protection counter if You didn't replaced ink pad! This can cause ink leakage and, as result, head damage!

Below You will find instructions to reset protection counter on older printer models manually (25 printer models).

1) Turn off printer.
2) Replace waste ink pad.
3) Perform reset instructions provided for Your printer model below.
4) Turn off printer.

EPSON CX6400/CX6600
Turn on printer holding color copy and cancel buttons.
You'll see Init EEPROM on screen. Press green color copy button.

Any multifunction:
Push the b/w + color + stop (or maybe ok button) together and hold.
Push power on button and hold, don't release all the button until you see the light indicator is blinking and then a message display on the lcd.
Release you finger from the button.
Push the color button once.

EPSON R2x0/R3x0
Turn on power.
Press and hold buttons:
R3x0: STOP, MANITENANCE and POWER;
R2x0: POWER, INK, PAPER;
Hold for 12 seconds.

EPSON R300
Turn on power.
Press and hold STOP, MANITENANCE and POWER buttons
then turn off the power when prompted.

EPSON Photo 950, 960
Turn the printer on with the Roll Paper
SW and Paper SW pressed. Paper and Ink indicators will flash for
3 seconds. During this time, momentarily release the roll paper
switch, and then press and hold the switch again for 10 seconds. When the printer
checks the maintenance error function, the front LEDs will light for 2
seconds, and the printer will then change to standby mode. Turn off printer.

EPSON RX500
Press all following buttons :Power, Load/Eject, Stop, B&W, Color,
after this printer turns on and you'll see "Init eeprom" on printer screen.
Press Color button to clear protection counter.

Alternate. Hold down "clear + setup + on"
Continue to hold the buttons until the printer had powered on, then off again, then back on. Once you noticed that the LCD had flashed a blank screen, let go of the 3 keys. In the LCD window you now have access to 3 options using the select keys.
Look for an abbreviation resembling "ink pad level" . Here is where Held down the clear button for around 10 seconds. LCD must read "Press Power to Reset."

EPSON RX600
Press all following buttons : Power, B&W, Color,
then, on demand (you'll see message on printer screen), turn off printer.

EPSON C80
Hold down both the paper and ink buttons while you turn on the power.
When the paper out LED is just flashing release both buttons and press and hold the ink-cleaning button for at least 10 seconds.
The printer will cycle through and self check for about 3 minutes and then function normally.

EPSON Stylus Color
Pressing and holding ALT+FONT+LOAD+PAUSE buttons combination, press POWER button.
Release all buttons.

EPSON Stylus Color 300
Pressing and holding LOAD/EJECT and CLEANING buttons, press POWER button and hold it until You will see blinking INK OUT and PAPER OUT leds.
Release all buttons.
In 2-3 seconds time press LOAD/EJECT and CLEANING buttons again.

EPSON Stylus Color 400, 600
Pressing and holding LOAD/EJECT and CLEANING buttons, press POWER button and hold it until You will see blinking INK OUT and PAPER OUT leds.
Release all buttons.
In 2-3 seconds time press and release LOAD/EJECT button.

EPSON Stylus Color 440, 640, 740, 460, 660, 670, 760, 860, 880, 1160
Pressing and holding LOAD/EJECT and CLEANING buttons, press POWER button and hold it until You will see blinking INK OUT and PAPER OUT leds.
Release all buttons.
In 2-3 seconds time press and hold CLEANING button, until all leds will blink.

EPSON Stylus Color 680
Pressing and holding LOAD/EJECT and CLEANING buttons, press POWER button and hold it until You will see blinking INK OUT and PAPER OUT leds.
Release all buttons.
In 2-3 seconds time press and hold LOAD/EJECT button, until all leds will blink.

EPSON Stylus Color 800, 850
Pressing and holding LOAD, CLEANING Color and CLEANING Black buttons, press POWER button and hold it until You will see blinking INK OUT and PAPER OUT leds.
Release all buttons.
In 2-3 seconds time press and release CLEANING Color button, You will see leds blinking.

EPSON Stylus Color 900, 980
Pressing and holding LOAD/EJECT and CLEANING buttons, press POWER button, You will see blinking INK OUT led.
Release all buttons.
In 2-3 seconds time press and hold CLEANING button for 10-12 seconds.

EPSON Stylus Photo 785, 895
Pressing and holding Maintenance and Roll Paper buttons, press POWER button, You will see blinking Error led.
Release all buttons.
In 2-3 seconds time until led is blinking press and hold for 10-12 seconds Roll Paper button, until all leds will blink.

EPSON Stylus Photo 890, 1280, 1290
Pressing and holding Maintenance and Roll Paper buttons, press POWER button, You will see blinking Power led.

Release all buttons.
In 2-3 seconds time until led is blinking press and hold for 10-12 seconds Roll Paper button, until all leds will blink.

EPSON Stylus 1520
Turn on printer holding the following buttons : Alt, LF/FF, Load/Eject, Micro Adjust.

EPSON 2100
Switch on the power holding buttons one and three (ROLL PAPER and SHEET FEEDER).
Then hold button one down for 10 seconds.

Stylus Photo 2200
Turn on printer holding ROLL and PAPER ADVANCE buttons.
Release buttons then you see doble blinking of indicators.
Press and hold ROLL button for 12 seconds.

EPSON Stylus Color II, IIS, 400, 600, 640.
Turn printer on and off 5 times using Power button.

EPSON Stylus Color 3000
Pressing and holding PAUSE, LF/FF and DOWN ARROW buttons turn on printer.
Release all buttons.

Stylus Pro 4000
Hold down right arrow, down arrow, and right arrow buttons during turning on.
Using right arrow button select "Clear Counters".
Select right arrow in menu.
List using up and down buttons until you find "Maint Tank"
Press right to initiate clearance.

EPSON 5000 Pro
- press cleaning sw eject sw power on
- now you are in maintenance mode 1
- press cleaning sw reset sw
- now you are in maintenance mode 2
- black ink led should be on
- press eject sw
- power off then on

EPSON 7600/9600
Turn on power pressing and holding PAPER SOURCE,PAPER FEED,CUT/EJECT.
Release all buttons. Manu should appear. Press DOWN, CLEAR COUNTER option should appear.
Press RIGHT then UP - you must see MAIN TANK.
Press RIGHT then ENTER (CUT/EJECT).

Power Clean Option. Control Panel operation sequence.
Ready. Selectype. Printer Setup. Scrool down to Maintenance. Selectype. Power Cleaning,.
Selectype. Exec. Press Eject.

Freezer Functions

This group of menu items allows You to perform special type of fooling Epson inkjet printer ink counting system.

You can read about ink counters and CSIC system, used in Epson inkjet printers, in Reset Counter Functions section of this help file.

Store counters values - This item will store all information about current state of ink counters. Note - this information is independently stored for each printer. So, it is possible to store counters for different installed printers without data loss.

It is advisable to use this function right before start of each big printer job. After this You can minimize utility to system tray and begin printing.

Restore values back - Restore all stored values back to printer, so printer won't notice any ink consumption occurred during printing jobs. This function is also printer specific, so, You can't restore data from the different printer installed in Your system.

It is advisable to use this function after each completed print job.

In conjunction, **Store counters values** and **Restore values back** can be described as ink freezer, because they don't reset anything, but allow You to maintain almost constant ink level. Using this functions imply what You must check print result by Your own eyes, and replace ink cartridges as soon as You will see any white band caused by ink out.

Since version 3.0 this utility have build in automatic ink level freezer and switchable independent ink monitor.

Automatic freezer - This option allow You to turn on/off build in automatic ink counters freezer. Utility will remember this setting, and together with enabled startup, this will allow You to perform fully automatic operation mode.

Automatic freezer will restore internal counters value back with small interval of time. If utility is started with Windows startup, automatic freezer will also store internal counters value as soon as printer is turned on. In case of manual startup, internal counters also will be stored in case of enabled automatic freezer.

If automatic freezer causes errors in normal printing process, or don't work, You must disable it and use manual functions described above in this section.

New cartridge installed - This option is only necessary to correctly measure ink consumption by independent ink monitor. Each time You change ink cartridge, You must use this menu item. After clicking this menu item, You will see window that allow You to select exact refilled colors. For example, if You refilled color cartridge with three colors You must check Yellow, Cyan and Magenta. In you don't use independent ink monitor you can ignore this option.

Extra Functions

This submenu contains items what allow You to perform various useful things.

Power on printer init   - This item allows You to reinitialize printer like it is just turned on.
Soft reset   - Allows You to reinitialize some internal printer structures and variables.

Both items described above is for experimentation purposes only.

Disable/enable CSIC   - Disable CSIC functioning in case if it is enabled (without CSIC reset). Ink counters will be freezed from this moment. On many new models this function can be disabled or ineffective. If CSIC is already disabled this menu item allows You to enable it back.

Since CSIC is disabled, printer won't report true ink quantities left in cartridges. Instead, it will show them as always full.

Make test report   - Test report allows You to inform developers of this software about any occurred problems.

Starting from version 2.0 test report can also be generated for unsupported printer models   (You must select 'Unsupported model' in the printer models list). Since v4.0 you can generate and send reports for old unsupported printers (then "Unsupported model (old)" is selected).

Creation of test report for printer models will result in appearance of popup window. For unsupported printers, this window have button to allow You to stop generation process (in case of stopping generation process You will get report, but, please, don't send it to authors). Generation of test report on unsupported printers can take as long as 2-3 hours (much less, in most cases). Do not send test report if its size is smaller then 5kb.

Sending of test report for unsupported printer with detailed information about printer in mail body allow to add its support in the next version of the utility.

Generated test report resides in program folder in the file named "testrep.txt". Please, provide detailed problem description in your mail message. In the testrep.txt file You will find proper email address to send Your report.

Please, provide us full description of occurred problems. Do not send reports or messages about your problems with printer, we are not Epson support center. All mail without detailed description of program errors or any other occurred troubles will be automatically deleted.

FAQ

Below is small collection of some common questions and answers.

Always read all questions & answers before asking authors directly by mail!

Q> Ink freezer just don't work.

A>See answer to known problems question below. If your printer is not
present in list of models having problems with freezer, then you an make test report and send it to us.
On recent models problems with freezer are very common.

Q> Can you privide us all know problems with current version?

A>Here are all problems known (and still unresolved) up to this date :
    Protection counter reset problems : RX700, PM-970C.
    Protection counter display problems : R320, Color 580.
    Head exchange bugs : R800, R1800, R2400, Color 860(880), CX6400, CX3650, CX7800, Photo 900.
    Freezer problems : R220, R320.
    Other problems : R2400 have problems with colors display.

Q> What do I need to make this program work with my Epson printer?

A>You must have connected Epson printer with correctly installed drivers.
Program works with USB and LPT printers under Windows OSR2/98/ME/2K2/XP
It is preferable to have non empty cartridge in the printer, otherwise many functions won't work.
First, use Configuration tab in main window to select proper printer from printers installed in your
Windows environment and proper printer model. You can also configure this program to start
automatically at Windows startup, and disable Epson status agent under Windows 2K2/XP.

Q> I have C4x/C6x/C8x/Photo 830/etc model, and I can't reset ink level in cartridges.
Q> I see warning "For your printer model reset counters functions are provided for special purposes only"...

A> On all such models it is impossible to reset counters by using reset counters menu items.
You can try to maintain them on current level by using "ink freezer" (see "Freezer Functions" section for more
info).
Or you can use special hardwire device described in Resetter section.

BUT, below You will find method to reset some C4x cartridges:

1) Move cartridge to exchange position using functions build in this utility.
2) Remove cartridge
3) You will see small chip with few contacts. Configuration of contacts is shown below:
 1 2 3
4 5 6 7
4) Use very thin adhesive tape to cover only first contact.
5) Insert cartridge back. Also note, what You can exchange CSIC chips in color and black cartridges.
6) Move head to parking position.
7) You can also try to use reset printer counters function here. Turn printer off.
8) Turn printer on back - it must say that black cartridge (if You covered chip contact on black one) is installed
wrongly (red light on), but color or black cartridge level can became full at this time. Red light CAN become off
after some time, but it can happen what it remain on.
9) Use normal exchange sequence (build in the Epson drivers, or use printer buttons). Remove tape from
contact.
10) Now cover only second contact. After properly inserting cartridge ink counter for this color must became full.
11) Use normal cartridge exchange build in Epson drivers (or by printer buttons) to remove adhesive tape.

This procedure can be ineffective, especially for non-original cartridges.

Q> How to work with this "ink freezer"?

A> It is very simple - "Store" counters after turning on printer, then work as normal, and always "Restore values
back" counters
before turning Your printer off. It is also advisable to restore counters after each big print job.

NOTE! Autofreezer can do it automatically for You. We strongly suggest disabling it before any cartridge exchange.

Q> I have near empty or empty (according to counters on chip) refilled cartridge, how I can use it?

A1> If Your printer is not in new models C4x/C6x/C8x/C830 etc. group, You can reset even empty cartridge by use reset counters function.

A2> Use hot swapping support (note, what You must have installed nonempty cartridge).
First, turn on Your printer and computer, prepare Your refilled cartridge.
Run this utility and use **"Move head to exchange position"** item, then change cartridge to refilled one.
Select "**Move head back to parking position**" or **"Move head back safely"**.
Print any text or photo documents (try not to use head cleaning - printer may find what You use "empty" cartridge).
Prior turning off printer always change cartridge back to "full" one (use the same procedure).
If printer is in stuck, because he realized what You give him "empty" cartridge, You must use normal exchange procedure (not this utility)

Q> Utility always report errors like "Printer off" or "Communication error", what can I do?
A> Try to remove Epson Status Monitor 3 and Epson Status Agent from memory. Try do tweak printers installed, by deleting unwanted ones. This error must be rare in version 3.0 and above. This error can be also caused by using USB to LPT converter, in this case, connect printer by normal LPT cable.

Q> Can You describe me how to include my printer to the list of supported printers?
A> You must select "Unsupported model" and use menu item **Make test report**. Then wait until test report generation will be finished (report is written in testrep.txt). Check its size, if it is more then 5kb then send report as attachment (not in the message body!) to email address written in it. If it is smaller, please, try again (check answer to previous question for possible fixes).

Q> I have problems with multiple printers of the same model connected to one computer.
A> Sometimes this is a real trouble, but such situation is very rare. At this point it is advisable to either connect one of printers to other computer or temporary turn off one of the printers.

Version History

New in 4.30:
 - support for R270
 - support for R240
 - support for R340
 - support for CX2800
 - support for CX3900
 - support for CX4900
 - support for CX5900
 - support for C58/C59
 - support for RX640
 - improved support for C2100/2200
 - improved support for RX700
 - improved support for R2400
 - improved support for 785EPX/825/895/915
 - some other improvements and bug fixes

New in 4.20:
 - support for CX4200/CX4700/CX4800/DX4200/DX4800
 - support for C47/C48
 - support for RX430
 - support for CX6500/CX6300
 - improved support for CX6400/CX6600
 - improved support for RX500/RX510
 - improved support for RX600/RX610
 - improved support for R1800
 - improved support for CX3700/CX3800/DX3800/DX3850
 - improved support for C67/C68/D68
 - improved support for C87/C88/D88
 - some other improvements and bug fixes

New in 4.10:
 - support for PM-970C
 - support for PictureMate
 - support for RX700
 - support for R2400
 - support for PM-A700
 - support for PM-G720
 - support for RX520
 - support for CX7800
 - support for CX4100
 - support for DX3800
 - support for CX3800/CX3810
 - support for CX3700
 - support for C67/C68 and Photo Editions
 - support for C87/C88/D88 and Photo Editions
 - support for R220/R230
 - support for R320
 - support for CX4500
 - support for CX3650
 - various bug fixes

New in 4.00:
 - ability to work with additional reset device
 - support for CX4600
 - support for CX5300
 - support for CX5100

- support for RX420
- support for RX425
- support for RX620
- support for R1800
- improved support for almost all other printers
- improved ink freezer
- improved ink monitor, implemented status information
- protection counter reset improvements
- various bug fixes

New in 3.80:
- support for C45/C46/C65/C85/C86
- support for CX3600
- support for CX6600
- improved support for R800
- improved support for SC-740
- improved ink freezer
- protection counter reset improvements

New in 3.71:
- support for RX600
- support for R800
- added some instructions on manual protection counter reset
- improved protection counter reset functions
- hot swapping fixes
- various bug fixes

New in 3.61:
- support for C50
- support for R200/R210
- added some instructions on manual protection counter reset
- fixes for CX models
- hot swapping fixes
- various bug fixes

New in 3.51:
- support for C63/64
- support for C83/84
- support for Photo R300, Photo RX500
- support for 830U
- support for PM-3300C
- support for CX5400, CX6400
- various bug fixes
- hot swapping fixes for some Photo models.

New in 3.10:
- support for Photo 820
- support for Photo 925
- support for CX3200 / CX5200
- hot swapping improvements for few printer models
- improved independent ink monitor
- bug fixes

New in 3.00:
- automated freezer
- ink monitor
- improved cleaning support
- works minimized to system tray
- support for multiple Epson printers on one machine
- support for LPT printers under 2K2/XP
- support for 670, Photo 900/915/785EPX/PM-890C/PM-3500C

- support for Photo 2000P/2200(PM-4000EPX)
- support for Color 400/600/800/850/1520/3000/PHOTO
- support for Color 440/640/660/740/760/1160
- support for Photo 700/PHOTO EX/IP-100
- support for Photo 750/PM-770C/1200/PM-3000C
- support for Stylus Pro 5000/PM-5000C
- support for Stylus Color 900/EM-900C
- support for Color 980, 875DC
- support for 480 LPT
- hot swapping bug fix for Photo 810
- some hot swapping improvements
- much improved test report
- reset and power init commands
- hot swapping fixes for Photo 830/Photo 895
- fixes for Photo 780/790 printers

New in 2.91:
- support for Photo 2100/1160/860/PM-950C
- nozzle check pattern printing (bug in 2.90)
- hot swap support improved
- test report improved
- other fixes and improvements

New in 2.80:
- support for C82
- fixed support for C680
- improved test report
- other small fixes

New in 2.70:
- support for C62/Photo 825/Photo 895
- improved support for C680/C70
- better support for empty cartridges: more friendly reset procedure, support for hot swap.
- much better test report
- protection counter reset fix
- many other changes and fixes

New in 2.50:
- added support for C61/Photo 810/Photo 950
- added internal ink counters reset
- now it is possible to reset any CSIC counters independently
- added ink freezer support for many printers
- improved support for C70/C80 (but some problems may persist)
- some fixups

New in 2.10:
- improved support for C80
- added support for Photo 830
- ink freezer fixups

New in 2.00:
- Major program rewrite
- LPT fixups
- XP support
- support for C20/40 (protection counter)
- SPECIAL test report for unsupported printers
- complete help

New in 1.31:
- C42 ink freezer
- no more attempts to support CSIC reset on C42 ;-)
- some bug fixes

New in 1.27:
- another attempt to fight C42

- support for Stylus Photo 820
- some errors fixes
- compatibly issues again

New in 1.20:
- fixed C42 support
- support for Stylus Photo 1290
- protection counter reset
- test report form generation
- compatibly issues fixed