



CBR's Swiss Made Ink Jet Remanufacturing Equipment



ShopTester 200

Eliminate the "wall of test printers". The **ShopTester 200** is an all-in-one industrial-grade circuit and print tester that is perfect for retail environments. The small footprint unit quickly tests more than 150 of the most popular HP, Lexmark, Canon and Dell thermal inkjet cartridges and even converts and resets many of them as well. The ShopTester 200 is available in different stages of expansion.

ShopTester 200 capabilities include:

- Electrical testing of each nozzle
- TSR thermal sensor test (responsible for many of the remanufactured cartridge printer errors)
- Free software upgrades of firmware through an internet portal
- Integrated USB Port
- Self-detection or manual selection of cartridge type
- Self-learning cartridge recognition mode for upcoming new types (slot 5/9)
- Integrated cartridge conversion (slot 1/3/5/8/10/11)
- Production code reset capability (slot 3/8)
- Ink-level indicator shut-off on Canon PG cartridges (slot 8/10/11)
- Statistics of the remanufactured cartridges
- Detailed printout from every single nozzle (incl. ladders and grey steps)
- Setable parameters for nozzles values and TSR
- 4-20 second test cycle time is much faster than using a printer
- Gold-spring contacts



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Cartridge types tested:

Cartridge types converted:

Modules with COMBINED electronic – the modules have ONE shared electronic board:

<p>Slot 1 HP 15N, 15D, 45G, 45A, 17, 23, 41</p> <p>Slot 2 HP 78D, 78A</p> <p>Slot 3 HP 21, 22, 27, 28, 54, 56, 57, 58, 59</p> <p>Slot 4 Lexmark 16, 17, 26, 27, 28, 80 bk/col + comp. Dells</p>	<p>HP 45A -> 45G, 45A ->15D, 45A -> 15N, 45G -> 15D, 45G -> 15N, 15D -> 15N, 23 -> 17 HP78D -> 78A</p> <p>HP27 -> 21, 27 -> 56, 28 -> 22, 28 -> 57, 28 -> 58, 28 -> 59, 57 -> 58/59/22, 56 -> 21</p> <p>None</p>
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Modules each with independent electronic board:

<p>Slot 1 HP 15N, 15D, 45G, 45A, 17, 23, 41</p>	<p>HP 45A -> 45G, 45A ->15D, 45A -> 15N, 45G -> 15D, 45G -> 15N, 15D -> 15N, 23 -> 17</p>
<p>Slot 3 HP 21, 22, 27, 28, 54, 56, 57, 58, 59</p>	<p>HP27 -> 21, 27 -> 56, 28 -> 22, 28 -> 57, 28 -> 58, 28 -> 59, 57 -> 58/59/22, 56 -> 21</p>
<p>Slot 5 HP74, HP74XL, HP75, HP75XL, HP93, HP94, HP95, HP96, HP97, HP98, HP100, HP101, HP102, HP110, HP129, HP130, HP131, HP132, HP134, HP135, HP136, HP138, HP336, HP337, HP338, HP339, HP342, HP343, HP344, HP348, HP350, HP351, HP350XL, HP351XL, HP850, HP851, HP852, HP853, HP854, HP855, HP857, HP858, HP860, HP860XL, HP861, HP861XL, HP921, HP932, HP943, HP954, HP965, HP976, HP987, HP998 + self learning cartridge types</p>	<p>HP92 -> HP94, HP93 -> HP95, HP336 -> HP338, HP342 -> HP343, HP92 -> HP850, HP92 -> HP852, HP98 -> HP851, HP93 -> HP854, HP93 -> HP855, HP95 -> HP855, HP97 -> HP857, HP99 -> HP858, HP135 -> HP855, HP134 -> HP857, HP138 -> HP858, HP850 -> HP852, HP854 -> HP855, HP132 -> HP131, HP136 -> HP135, HP132 -> HP850, HP134 -> HP857, HP136 -> HP854, HP129 -> HP851, HP132 -> HP852, HP136 -> HP855, HP339 -> HP350XL, HP344 -> HP351XL</p>
<p>Slot 6 Lexmark 1, 23, 24, 28, 29, 31, 32, 33, 34, 35, 82, 83, 88 LEX bk 10 generic type, LEX color and blk generic type, Dell and compatible cartridges</p>	<p>None</p>
<p>Slot 7 Lexmark 41, 42, 43, 44 series and Dell series 7 cartridges</p>	<p>None</p>
<p>Slot 8 Canon PG/CL 30, 31, 37, 38, 40, 41, 50, 51, 52</p>	<p>Canon PG/CL 40->50, 40->37, 41->51, 41->38, 50->37</p>
<p>Slot 9 HP 60col, HP60colXL, HP60bk, HP60bkXL, HP300col, HP300colXL, HP121col, HP121colXL, HP121bk, HP121bk XL, HP300bk, HP300bkXL, HP901col, HP901bk, HP901bkXL</p>	<p>None</p>
<p>Slot 10 Canon PG210, PG210XL, PG510, PG512, PG810, PG810XL</p>	<p>Canon PG 210XL -> 210, 512 -> 510, 810XL -> 810</p>
<p>Slot 11 Canon CL211, CL211XL, CL511, CL513, CL811, CL811XL</p>	<p>Canon CL 211XL -> 211, 513 -> 511, 811XL -> 811</p>
<p>Slot 12 HP61col/XL, HP61bk/XL, HP301col/XL, HP301bk/XL, HP122col/XL, HP122bk/XL, HP662col/bk, HP650col/bk, HP704col/bk, HP301colB and HP61colB inverted color MYC</p>	<p>None</p>

Disclaimer:
 Converting functionality, function and the rate of possible converting on cartridges is not guaranteed! Cartridges may get defect by trying to convert. Cartridges may give error messages in some OEM applications! OEM cartridges may have different types from different production batches and dates. Online printer updates and expiration dates (age of the cartridges) restrict the using of converting of refilled/converted cartridges.
 Converting ID codes is at your own risk and peril.

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Easily readable paper print-test strip uses color mixing to verify the print quality of the tested cartridges.



Modular design makes it easy to upgrade when new cartridge models are introduced.



StartUp model incl. 2 slots

What does the ShopTester 200 actually test and measure?

Circuit testing the electronics of an inkjet cartridge is not just checking for faulty nozzles, measuring the Ohm resistance/Mho conductivity, or testing for circuit continuity. The ST200 has a wide array of other unique, yet valuable features such as cartridge resetting, cartridge converting, TSR thermo sensor testing, ink counter deactivating, new cartridge self-learning and recognition and production code self-learning.

Certain types of inkjet cartridges can be reprogrammed or reset from their original factory settings (example: changing of the "0/1 BIT code"), while others can not be changed due to physical reasons. This guide offers a better explanation of some of these functions as well as their limits and possibilities of the ST 200 displayed values.

Recognition Code (RC)

The RC identifies the cartridge model for the printer. It exists on most HP cartridges with an integrated print head (examples: HP 21 or 22, 27 or 28 cartridges). If the RC is defective or not recognized by the ST200, the cartridge recognition can be selected from a list of possible cartridge types and still be tested.

Older printers like the HP 5/6/800 printers do not read the RC, so a faulty RC is not a problem. However, a defective or non-recognized RC may generate an error message or may not work on some Multi-Function Printers (MFP). If a common cartridge type is not recognized by the ST200 the RC may be faulty.

Self Learning

The OEMs tend to introduce new cartridge types in existing cartridge families. On Slot 5 or 9 of the ST 200, if a new cartridge is introduced and the RC code on the cartridge is compatible the new cartridge type can be learned and saved on the ST200 going forward.

Cartridge Converting

Some RCs can be modified to read as a different cartridge altogether, for example a Canon PG 40 to PG 50 etc. There are several possibilities for the HP and Canon cartridges, e.g. 27>56+21, 28>57+22, 56>21 etc. See the ST 200 brochure for more converting possibilities.

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Production Code (PC)

The PC of an inkjet cartridge is essentially the identification or serial number of that specific cartridge. When a cartridge has been refilled and replaced into a different printer there are generally no issues. However, most printers save the PC of the last three cartridges that were installed. If the refilled cartridge is replaced in the same printer that it was taken out of, the printer may not accept that cartridge (it reads it as empty). In many of the newer printers, if the same cartridge is to be reinstalled into the same printer, the PC should be reset by the ST 200 to resolve the issue. This code can only be reprogrammed as far as the 0/1 Bits exists.

TSR

The TSR is a thermo sensor that regulates the print head speed on most HP cartridges to prevent them from overheating. The TSR reduces the print speed if the print head temperature increases too much when printing full coverage prints or pictures. A MFP may refuse to run a cartridge with a defective TSR. Older printers may run with a defective TSR but this could be problematic. If a cartridge overheats while printing it may print unevenly; therefore, cartridges with damaged or defective TSRs should not be used. Typically this affects between < 5% of the HP electrical defects.

Ink counter Status New – Used - Empty

The ST 200 displays following information on the HP 9x/3xx series:

NEW = cartridge is new or was not used in a MFP printer.

USED = cartridge was used in printer, but not printed totally empty.

EMPTY = cartridge was printed totally empty.

MFPs enter this status into the cartridge by switching off the "0/1 bits". This could cause an MFP to display that the cartridge can not be used further or the ink level is shown as empty or the MFP may even refuse a cartridge because of an error message. The OEM has modified the code so that this cartridge cannot be reset to new (at this point in time!).

Canon PG series

The ST 200 can deactivate the ink counter of the Canon PG cartridges, but not reset the counter to FULL. The advantage of the ink counter switch off is that the cartridge has a defined status after the switch off so that the user just needs to confirm this change by pressing a button on the printer.

Number of nozzles

Cartridge nozzles fail primarily for two reasons — Electrostatic Discharge (ESD) and nozzle burn-out. ESD occurs when bursts of electricity hit the cartridge print head or circuit strip. Typically, this happens in charged environments and/or with handling by ungrounded employees. Burn-out of a nozzle generally occurs when a cartridge prints long periods of time after the ink has run out.

The ST200 displays both the total number of nozzles and those that are bad. The user can determine whether to process the cartridge further if a small percentage of nozzles are not good.



Software/Firmware Upgrades

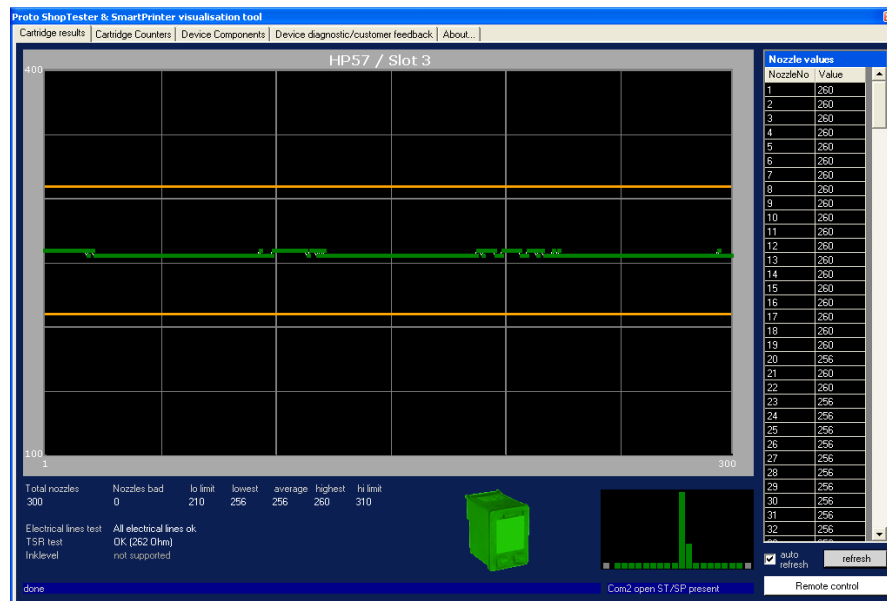
The ST200 has a built-in USB port for free downloadable software upgrades. OEMs make unexpected changes to cartridges from time to time (e.g. new recognition codes in existing cartridge families) and the owner can keep their machine current remotely with the latest programs and developments.

General

We strongly recommend cleaning ALL contacts of a cartridge BEFORE testing it on the ST200! Dry pigmented ink, toner, dirt etc. are electrically conductive and can cause "undefined" cartridge evaluations.

Analytical Tools

The **ShopTester 200** now offers analytical tools for in-depth inkjet cartridge evaluation. With the ability to measure specific nozzle performance, ink-level sensor and cartridge statistics, the new **ShopTester 200** can also offer a virtual printout (locally or remotely) **from any computer with a USB port**. For example:



Cartridge type, specific nozzle measurements, temperature sensor, and ink-level setting.

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Other features include:

Window Remote Control:

Shows machine display on the PC

Daily cartridge counters:

Internal cartridge counter (not resettable) of each cartridge type tested is displayed

Proto ShopTester & SmartPrinter visualisation tool

Cartridge results | Cartridge Counters | Device Components | Device diagnostic/customer feedback | About...

Slot name	Cartridge name	Vendor	Cartridges tested	Cartridges overall
SLOT6	LEX 1	Lexmark	0	0
SLOT6	LEX 2	Lexmark	0	0
SLOT6	LEX 82	Lexmark	0	0
SLOT6	LEX 83/88	Lexmark	0	1
SLOT6	LEX 88	Lexmark	0	0
SLOT6	LEX 31	Lexmark	0	0
SLOT6	LEX 32	Lexmark	0	0
SLOT6	LEX 33/35	Lexmark	0	3
SLOT6	LEX 34	Lexmark	0	0
SLOT6	LEX 35	Lexmark	0	0
SLOT6	gen.black	new/generic	0	0
SLOT6	gen.co/ph	new/generic	1	1
SLOT6	DELL bk	DELL	0	0
SLOT6	DELL c/ph	DELL	0	0
SLOT6	LEX23	Lexmark	0	0
SLOT6	LEX24	Lexmark	0	0
SLOT6	LEX28	Lexmark	0	0
SLOT6	LEX29	Lexmark	0	0
SLOT7	LEX41	Lexmark	0	0
SLOT7	LEX42/44	Lexmark	12	12
SLOT7	LEX43	Lexmark	1	1
SL1-4	HP15N	Hewlett-Packard	0	0
SL1-4	HP15D	Hewlett-Packard	0	0
SL1-4	HP45G	Hewlett-Packard	0	0
SL1-4	HP45A	Hewlett-Packard	0	0

Total cartridges tested: 26
Overall cartridges tested: 30



Component Device List:

Displays installed slots, their software versions and the cartridge count per slot.

General counters and logs:

With the general debugging function the ShopTester 200 can quickly troubleshoot most issues. The information from this section can also be sent remotely to CBR-E for quicker diagnostic assistance. This is especially helpful when new cartridges are introduced and firmware upgrades need to happen quickly.

Contents included:

4 large paper rolls (size 10" OD (25 cm), 24V power supply, manual, transport box

Warranty:

One year (excludes wear parts — such as contact pins and springs sold as spare parts as required)

Electrical connection and power consumption:

100-240 VAC 50/60 Hz 24V/ 3 Amp

Cycle time:

4-20 sec., depending on mode

The ShopTester 200 is the professional's choice for inkjet testing

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SmartPrinter Series

Professional testing of HP, Lexmark and Canon cartridges for high volume remanufacturing!

The SmartPrinters are the right choice for all test applications in higher volume remanufacturing, able to test up to 100 different HP, Lexmark and Canon cartridges. The new generation provides a USB port for free software upgrades of firmware according to latest technical developments through an internet portal. The unique spring loaded gold contacts (>1'000'000 operations) give a perfect control of the electronic condition of every single cartridge.

Even more important for HP cartridges are the new testing possibilities of the TSR (temperature sensor) as well as the recognition code for HP models. The printer will show test results according to the measured values. Paperless printing is another feature of this testing system as it allows printing full A4 pages without wasting any paper! They print into a washable suction pad which is easy to clean and replace!

Our products are worldwide in use and we give support to all kind of remanufactures with our almost 20 years of experience in InkJet remanufacturing.

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SmartPrinter capabilities include:

- Electrical testing of each nozzle circuit and T.S.R thermal sensor
- Tests up to 1000 cartridges per day, perfect for all test applications in higher volume remanufacturing from 200 to 1000 cartridges/day
- Self-detection or manual selection of cartridge type
- Self-learning cartridge recognition mode for upcoming new types (SmartPrinter 828/838)
- Integrated cartridge conversion/reset
- Statistics of the remanufactured cartridges
- Detailed printout from every single nozzle (incl. ladders and grey steps)
- USB connectivity for free software upgrades of firmware
- Converting function (SP 818/828/929/939/949)
- Programmable text on paper strip (20 signs)
- 4-20 second test cycle time (depending on test mode) is much faster than using a printer
- Gold-spring contacts – this is a rugged pin version tester

Following SmartPrinters are available:

Testing:

Converting:

SmartPrinter 929 USB

Canon PG/CL 30, 31, 37, 38, 40, 41, 50, 51, 52

Available (details see website)

SmartPrinter 939 USB

Canon PG210, PG210XL, PG510, PG512, PG810, PG810XL

Available (details see website)

SmartPrinter 949 USB

Canon CL211, CL211XL, CL511, CL513, CL811, CL811XL

Available (details see website)

SmartPrinter 818 USB

HP21, HP22, HP27, HP28, HP54, HP56, HP57, HP58, HP59

Available (details see website)

SmartPrinter 828 USB

HP7x series, HP9x series, HP 1xx series, HP3xx series
HP8xx series, HP9xx series + self learning cartridge types

Available (details see website)

SmartPrinter 838 USB

HP 60col, HP60colXL, HP60bk, HP60bkXL, HP300col,
HP300colXL, HP121col, HP121colXL, HP121bk, HP121bk XL,
HP300bk, HP300bkXL, HP901col, HP901bk, HP901bkXL

None

SmartPrinter 848 USB

HP61bk/col +XL, HP301bk/col +XL, HP122bk/col +XL,
HP662bk/col, HP650bk/col, HP704bk/col, HP301colB,
HP61colB inverted color MYC

None

SmartPrinter 727 USB

LEX 1, 23, 24, 28, 29, 31, 32, 33, 34, 35, 82, 83, 88
LEX bk 10+col : generic type Dells etc.
HP61colB inverted color MYC

None

SmartPrinter NP25

Neopost franking cartridge IJ25

None

SmartPrinter NP35

Neopost franking cartridge IJ35

None

Functionality of converted cartridges is not guaranteed to all printers! Converted cartridges may give error messages in some applications!

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