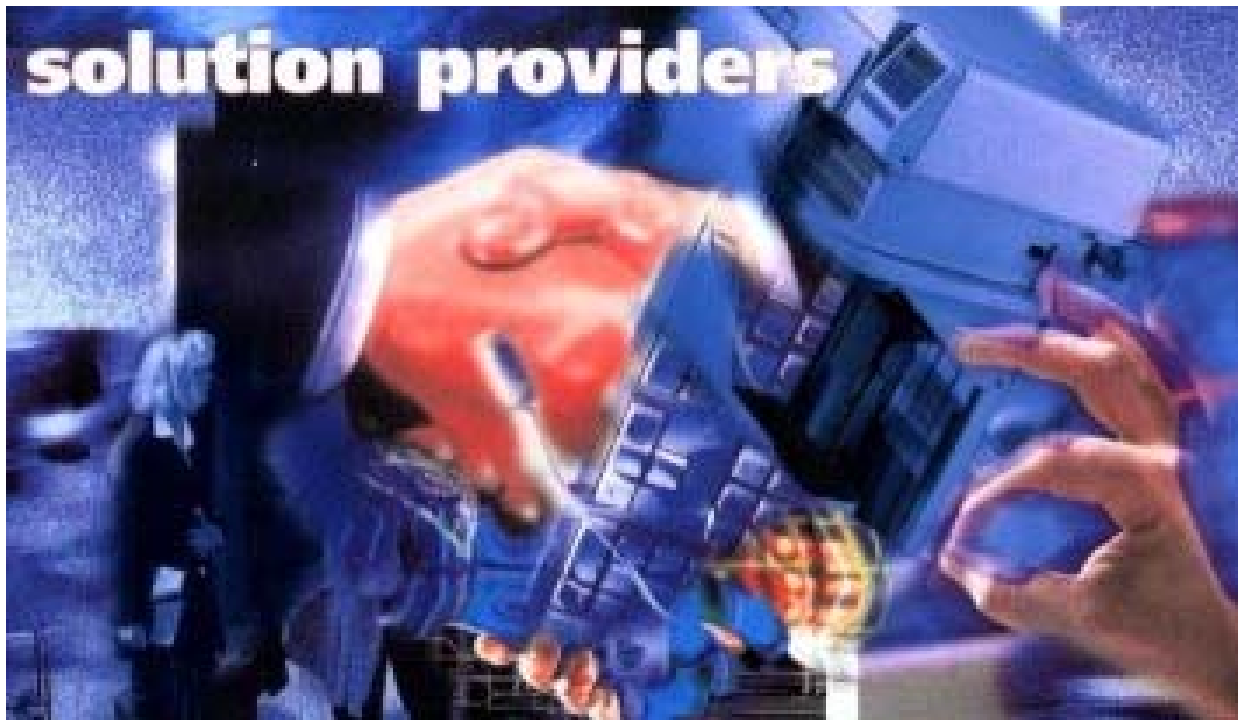


# SOLUTION PROVIDERS



TOSHIBA TEC Europe thermal printers are specifically designed to produce high quality accurate barcode labels and tickets, as required to maximise efficiency in today's highly automated society. Whether you require portable printers, low output budget printers, medium output desktop-sized units, or high output industrial strength machines, TOSHIBA TEC's extensive product range will provide the ideal solution to your printing needs. Our range of thermal printers work at optimal processing and printing speeds whilst ensuring the highest degree of reliability for business-critical applications. They are trusted worldwide to provide performance printing solutions combined with a low cost of ownership.

Robust steel-cased industrial printers with print widths ranging from 3 to 6.7 inches. All the printers in this range are dual purpose and can print in either direct thermal or thermal transfer mode. The Industrial range has earned a reputation for excellent reliability making it ideal for business critical applications. In addition, ease of operation is assured with full on-board diagnostics, LCD and LED displays, and simple to load/unload media. With print speeds of up to 10 inches (254 mm) per second, these printers are ideal for all industrial applications.

#### TEC B-SX Printers

Are you printing large volumes of barcode labels, tickets or tags? The new B-SX4 & B-SX5 printers provide superb reliability and performance at an incredibly low cost of ownership.

Constructed from heavy-duty steel, the B-SX4 is ideally suited to any high output application. TOSHIBA TEC has retained all the proven features of the very popular B-472 printer, whilst providing the latest technical innovations in functionality and performance.

Constructed from heavy-duty steel, the B-SX5 is ideally suited to any high output application. TOSHIBA TEC has retained all the proven features of the very popular B-572 printer, whilst providing the latest technical innovations in functionality and performance.



With the touch of a button the B-SX printers will be turning out labels almost instantly at speeds up to 250mm (B-SX4) and 205mm (B-SX5) a second due to the continuing advances in processor capacity. TOSHIBA TEC's innovations in ribbon-motor control also produce 'REAL' on-the-fly ribbon save without affecting the print throughput. Access to printhead, platen, paper path and sensors is now easier with the development of a new wide opening mechanism, making paper loading and cleaning quicker than ever. Using the very latest printhead technology from Toshiba, B-SX printers increase the use of in-house components to ensure dazzling print clarity at 203dpi for the B-SX4 and 306dpi for the B-SX5.

#### Specifications

Technology	Thermal transfer / direct thermal	
Print Head	Edge type	
Resolution	B-SX-4 8 dots/mm (203 dpi)	B-SX5 12.05 dots/mm (306 dpi)
Print Width	B-SX4 Maximum 104 mm	B-SX5 Maximum 127.5 mm
Print Length	Maximum 1,498 mm	
Print Speed	B-SX4 Up to 254 mm/s (10 ips)	B-SX5 Up to 203.2 mm/s (8 ips)
Interface	2 serial ports, bi-directional port, Expansion I/O*, PCMCIA I/F*, 10/100 Internal LAN I/F*, USB*	
Barcodes	UPC/EAN/JAN, Code 39, Code 93, Code 128, EAN-128, NW7, MSI, Industrial 2 of 5, ITF, Postnet, RM4SCC, KIX-code, RSS14	
2D Codes	Data Matrix, PDF 417, Maxicode, QR code, Micro PDF 417	
Fonts	Bitmap font (21 fonts), Outline font (7 font), Writable characters (132 fonts), Optional TrueType fonts (20 types)*	
Optional	Ribbon Save, swing cutter module, rotary cutter module, strip module & rewinder, USB interface, built-in LAN board, Expansion I/O, 2-slot-PCMCIA I/F board, RFID kit	
Dimensions	291 (W) x 460 (D) x 308 (H) mm	
Weight	18 & 19 kg (without media and ribbon)	
(*) Option		

### Printer Ribbons

To ensure good print quality and maximum print head life use only TOSHIBA TEC specified paper and ribbons. When specifying a new barcode label printer the question of consumables is one of the most vital to address. Poor quality ribbons can reduce print quality, and damage the printhead. For this reason TOSHIBA TEC has developed an approved ribbon product range which will guarantee high print quality, reduced wear on the print head and, as with all TOSHIBA TEC products, excellent quality.



When you have invested in a new barcode printer, why risk poor quality with non-approved products? It makes sense to buy consumables that compliment the high quality of the product you have purchased. TOSHIBA TEC has a complete range of ribbons that are designed specifically for the TOSHIBA TEC range of printers. They are approved products and the only ribbons that are recommended for use with TOSHIBA TEC printers. Failure to use TOSHIBA TEC approved consumables can result in invalidating the print head warranty.

### TEC SX and SV Verifier

#### What is Verification?

Verification is the act of checking the accuracy of a printed barcode

- Decodes the data
- Measures key characteristics
- Assures the barcode will be readable in a wide range of environments

#### Why Verify?

- Improve Productivity
  - Achieve high first time read rates
  - Minimise operator injury through RSS
- Reduce Costs
  - Less skilled labour cost (no manual entry training)
  - Minimisation of returned product with associated extra shipping and packaging costs
  - Compliance penalties and production delays
- Increase Quality (ISO 9000 standards)
- Achieve more accurate MIS information for more informed decisions
- To improve the quality of the entire AIDC system which is compromised by faulty scanning.



#### Risks of not Verifying

- Strain on Customer/Supplier relationship
- Barcode not scanning resulting in increased labour/costs for manual entry of data
- Scanning defective barcodes may result in data errors and a contamination of the database
- If the code reads after several attempts there is a waste of time and RSS
- In some cases large fines

#### Who should Verify?

- Suppliers to retail chains to avoid fines
- Pharmaceutical manufactures to avoid dispensing incorrect materials
- Chemical Manufactures to avoid fines and legal action
- Automotive suppliers to ensure labels meet industry specifications
- Automated warehouses to avoid bottlenecks

#### Why on-line Verification?

- Real-time
- Hands-free
- Unattended
- Traceable record
- Checks every barcode

The Toshiba TEC solution...

- **SX Printers**
- **RJS SV Series Verifier**

Using the SX Printers and the BCI TEC have interfaced an on-line verifier directly to the printer. Once installed the verifier works automatically without the need to be connected to a computer. Using the Printers LCD Display you can enter Expand mode which allows you to change various settings on the Verifier.

When you enter Expand Mode the display will show:  
Note: Version relates to the firmware in the Verifier



**VERIFIER SETTING**  
**Version: X327**

Using the Printers LCD Display you can change:-

- The passing ANSI Grade
- Minimum Scans per code
- Passing percentage of decodes per barcode
- Whether you wish to check the Quiet zone
- If an invalid barcode is found whether you wish to back feed the label and cross out or print an error label

### ANSI Grade

Using the FEED and RESTART keys ANSI grades of 01 to 40 can be selected



- ANSI A = 35 to 40
- ANSI B = 25 to 35
- ANSI C = 15 to 25
- ANSI D = 05 to 15
- ANSI F = less than 05

If the barcode doesn't meet the ANSI grade specified an invalid barcode will be flagged

### Minimum Scans per code

- Using the FEED and RESTART keys minimum scans per code can be selected from 02 to 99  
*Sets the minimum number of times a full decode must be achieved in order to be a valid read.*
- The default is set to 10

### Passing Percentage decode

- Using the FEED and RESTART keys minimum passing percentage decode can be selected from 01% to 99%  
*If a passing percent decode of 75 is set then if 74% or less of scans on the code were not decoded then the barcode will fail.*
- The default is set to 75%

### Quiet Zone Check

- Using the FEED and RESTART keys Yes or NO can be selected  
*In some cases the Quiet Zone may not need to be checked. In this case if Quiet Zone Check is set to No the barcode will Pass even if the Quiet Zone Fails*
- The default is set to YES

### Error Label or Backfeed on an invalid

- Using the FEED and RESTART keys Error Label or Backfeed can be selected
- **Error Label** - An error label will be issued following the label which has the failing barcode. (The Error label shows the ANSI Grade, Overall Pass or Fail, Percentage Decode and Quiet Zone Pass or Fail)
- **Backfeed** - the label with the failing barcode will be backfed and an X (cross) drawn on the label. The default is set to Backfeed

**Which option is chosen, the failed label will always be reprinted....**

### How it works?

Label information is sent to the printer in the normal way

The BCI program determines:-

- The number of barcodes
- The type of barcodes
- Prints the label
- For each label printed checks user defined parameters and number of barcodes/types of barcodes
- If the barcode doesn't match defined criteria then errors the last label printed and re-prints

### About RJS

In 1975 RJS developed the first bar code verifier. Since that time we have continued to be the forerunner in the bar code quality assurance arena. Other industry firsts include our 1977 analytical bar code verification system for assuring the quality of film masters; introduction and patent of our Auto-Optic scan head for ANSI verification standards in 1994, and a wide range of patented and proprietary technologies in subsequent years. Among these are patents relating to on-line verification and hand held laser verifiers.

In 1999 we introduced our second generation SV Series on-line scanner/verifiers incorporating an RJS designed and manufactured rotating polygon, precision Analog laser scanner. This SV Series is a unique and economical high speed scanning system capable of calculating practically all industry-recognised verification methods including ANSI/ISO. The SV Series can now meet applications that were previously not attainable including high-density symbols and codes printed directly on corrugated material. Patents are in the application stage.



### RJS SV100 SCANNER/VERIFIER

- Kits available for most popular thermal transfer/direct thermal printer models
- Traditional Analysis
- ANSI Method Verification
- Data match compatibility
- Increment/Decrement capability
- Programmable outputs and serial port for system operation
- Download language
- Picket Fence Codes



### SV100 Physical Size:

- Package: 4.4" (112 mm) x 2.4" (61 mm) x 5.2" (132 mm)
- Indications: Five (5) LED's – Power/Sync, Calibration, Read, two (2) programmable LED's
- Comm Port: DB-9 male, RS 232C, programmable baud rate up to 115200 baud
- I/O-Power: DB-15 male, five (5) programmable outputs, two (2) sync inputs +5VDC @ 1 amp required
- Mounting: Two (2) sets of mounting holes on two (2) different surfaces or a clamp for tightening to a 3/8" (9.5 mm) rod.

### SV100 Technical:

- Scan rate: 100 analyses / sec
- Beam width: 6" / 152mm
- Focus distance: 8" / 203mm
- X dimension min: 0.0067" / 0.17mm
- Symbologies: USS Code 39, USS Code 128, USS Code 93, USS Codabar, USS Interleaved 2 of 5, UPC / EAN including 2 and 5 digit supplemental codes
- (Contact Toshiba TEC for special symbology applications.)

## What's Bar Code Verification?

Bar code verification ensures maximum reliability in the interface between bar code printing and scanning technologies:

- Scanning
- Verification
- Printing

Bar code symbology and print quality specifications are the bridge between scanning and printing. The existence of published specifications for symbologies reflects a quality assurance step required.

## SV Series

The SV Series of scanner/verifiers by RJS provides both fixed position scanning and high-speed on-line ANSI method verification of linear bar codes. This unique instrument can be used for many types of bar code scanning and/or verifying applications.

The SV Series assures that bar code print quality is at an acceptable level. It checks to make sure the print mechanism has not failed or gone out of adjustment during operation. It even makes sure that the correct data is encoded and that the encoded data is in the proper format.

### **The SV SERIES of SCANNER/VERIFIERS are ON-LINE VERIFIERS**

The SV Series analyzes and reports virtually every verification parameter known. ANSI and Traditional print quality parameters are transmitted along with decoded data. The reported symbol quality parameters ensure the print method or complete bar code process is optimized. This is important for ISO corrective action procedures, label manufacturing and printing, tracking systems, ink jet applications and more.

### **The SV SERIES of SCANNER/VERIFIERS are FIXED POSITION SCANNERS**

The SV Series can operate as a fixed position scanner. But, since it also provides diagnostic bar code quality information, it can reduce system downtime and save material costs. It does this by isolating the source of the problem. Once the source of the problem is found, it can be corrected before non-readable bar codes are printed and material is wasted.

The diagnostic capability is also useful when installing the scanner or after a conveyor or printer maintenance cycle. The available print quality information gives an indication of first time read rates, optimal scanner alignment, optimal conveyor speed and optimal printer settings and adjustments. In short, everything that is needed to ensure proper set-up of a system.

### **EASY SETUP / FLEXIBLE INTERFACE**

The SV Series uses a serial port to interface with RJS ScanVision, a PC based software package used for set-up and monitoring. Use ScanVision for SV setup while the scanner/verifier is off line and/or use it for real-time bar code quality analysis while the scanner/verifier is operating. The unit also incorporates Model SV download language for setup without RJS ScanVision.

Five hardware outputs are available via an I/O-Power port for logic operation such as No Read, Poor Quality, Good Quality or Good Read status. Two synchronization inputs are also available for robust No Read evaluations. Two LED's are available for status indications.

The serial port can also be used without ScanVision to provide decoded data and/or bar code analysis information to a host system.

## **SV100 Statement of Compliance**

The RJS Series of Scanner/Verifiers gathers data per the ANSI/ISO method of verification to perform practically all the industry standard bar code quality parameter calculations. These include all ANSI/ISO method parameters, PCS, ratio, X dimension calculation, modulo check digit calculations, average bar deviation, etc.

### **Reflectance Compliance – 660 nm wavelength (red) light**

The reflectance values embedded in the calibration symbol supplied with each SV unit are traceable to Applied Image Primary Verification Calibrated Standard per ANSI X3.182 Step Reflectance Chart (see note 2.)

Applied Image certified Calibration Standards are manufactured to Applied Image, Inc. and Uniform Code Council, Inc. specifications, using ANSI X3.182-1990 methodology, and are calibrated using standards traceable to the National Institute of Standards and Technology (N.I.S.T.)

### **ANSI/ISO Method Compliance**

The RJS SV Series gathers data and performs all ANSI/ISO method parameter calculations per the ISO/IEC 15416 and ANSI X3.182-1990 methodologies with a few exceptions. The exceptions are related to the instrument's design and mission. The design incorporates a proprietary analog laser scanner that can be assembled with various focus lengths to produce different beam sizes.

The mission is to not only analyze bar code quality, but also to detect any printer failures, process failures or media problems. For maximum performance, a fixed mounting distance and angle are required. A beam spot size able to detect errors of the particular print method is highly recommended.

This beam spot size may or may not correspond to the recommendations in various specifications that it be related to the X dimension of a particular symbol, but instead correspond to the printer's resolution or some other parameter(s) critical in the application.

A major philosophy of an on-line verification system is; if the printer and/or process is operating correctly and the media has proper reflectance properties, the best print quality for that particular print method and material is achieved by definition.

### **Notes**

1. The SV Series can be calibrated to practically any reflectance standard. Internal high and low calibration reflectance normalization settings are user programmable via commands.
2. Final system tests are performed at the proper focus distance and at an angle of 22 degrees. Units with common focus distances are checked to yield analysis results within +/- 4 % of all target values.
3. SV models with an 8 inch focus distance have a spot size that gathers light very similar to a 6 mil round aperture. For these models, final test includes analyzing UPC symbols on the Calibrated Conformance Standard Test Card for EAN/UPC Symbol Verifiers. Results are checked to be within +/- 4% of the marked values on the test card. SV100 and SV200-1 are examples of models with a focus distance of 8 inches.

### **Exceptions to the ANSI/ISO method**

1. The Defects calculation does not include the quiet zone area. A separate quiet zone check is implemented to easier isolate print problems vs. setup problems in an on-line environment.
2. A laser spot is used instead of a round aperture. The spot size is dependent on the focus distance of the unit's optical system.

## Manufacturer and Distributor Status:

- UK: Manufacturer of Newbury Data Serial Impact Printers
- UK: Manufacturer of Newbury Data Thermal Ticket & Encode Printers
- Europe's No:1 Distributor of Citizen Thermal Printers
- UK: Leading Distributor of CPG (Compuprint / Genicom) Printers
- UK: Leading VAR for HHP Data Capture Terminals and Scanner
- UK: Accredited Reseller for Datalogic Scanners
- UK: Leading Solutions Partner for Kyocera Mita Laser & Multi Function Printers
- UK's No: 1 Distributor of Printronix Industrial Printing Solutions
- UK's No: 1 Distributor RJS Scanners/Verifiers
- UK's: Leading Toshiba TEC Verification Partner
- UK: Leading Distributor of Televideo Thin Client Terminals
- UK: Gold Business Partner for Zebra Thermal Printers
- UK's 1st: System Integrator of "Genesis" Network Software for Zebra Printers

Newbury Data Recording Ltd  
Premier Park  
Road One  
Winsford  
Cheshire  
CW7 3PT

Tel: +44 (0) 1606 593424  
Fax: +44 (0) 1606 558383  
Email: [ndsales@newburydata.co.uk](mailto:ndsales@newburydata.co.uk)  
Web: <http://www.newburydata.co.uk>