

Dynalab NX Test Systems

Dynalab Wire Harness Tester
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Rev. 1.5



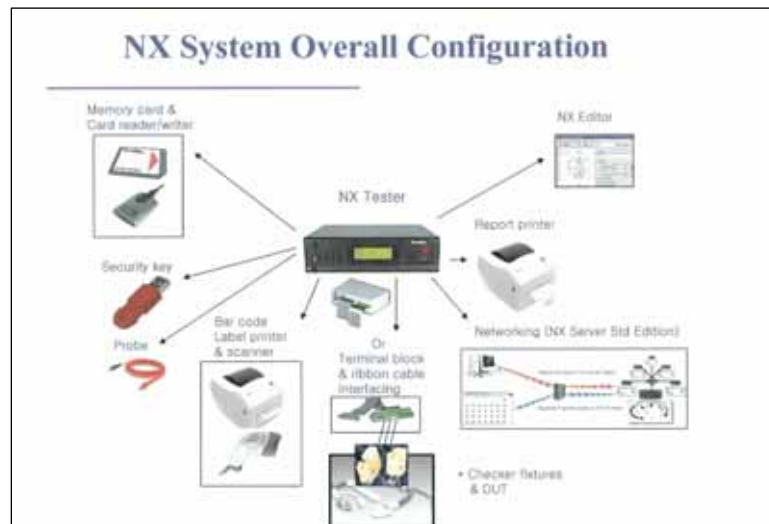
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For Wire Harness Testing

Main characteristics of Dynalab's NX System

- NX System Configuration



- Characteristics

- Advanced and modern industrial design : NX Solo, NX Pro and NX Pro+
- Flexible selection of tester points for customer requirement :
 - NX Solo : 64 – 256 Test points
 - NX Pro : 128 – 512 Test points
 - NX Pro+ : 128 – 32,768 Test points
- Various Test Item : Continuity, Shorts, Components (Diode, Resistor, Capacitor and active relay)
- Several sound tones : Selectable by user (GD, NG or for other purposes)
- Flexible and optional accessories by customer needs or conditions :
 - Security key - Probe - Memory card & Card reader/writer
 - Barcode scanner - Barcode label printer - Report printer
 - Control port - Multi-port unit - Extended display
 - Networking
- The best test process development by customer :
 - Test process development like Flow Chart methodology using NX Editor's WorkFlow function (for test display, report print-out or test counter)
- Available are sets of user's manual and useful application note documents
- Importing the spreadsheet data of multiple part numbers and options
- Others

- Application Notes

- Alarm Mode
[NX Tester program for alarm/warning mode, when operator remove the wire harness from checker fixture before completion of test]
- Card Reader Application Note (=Using the Memory Card Reader/Writer)
[The explanation of copy and move of test program into/from movable disk of USB]
- Extended Display
[ED has the size of 34.5cm(W)x8.9cm(H)x 4.3cm(T) and is capable of displaying the testing status with 2 lines & 20 characters in a distance, in real time. Its explanation.]
- Fixture Clamp Activation
[For mass production, most automotive wire harness mfgs are utilizing air slide typed checker fixtures for high quality. Only after test passed, the control of fixture clamp activation by elect-sol required. This A/N explains how to apply.]
- Interfacing to External Devices
[It explains how to interface with external devices using control port module]
- Label Printing
[It explains how to printer the barcode label]
- NXI File Specification
[It explains how to import and recognize the data and file with NXI extension]
- Testing a Switch in a Wire Harness
[It explains how to do testing for switch component in a wire harness]
- Testing an Optical Switch
[It explains how to do testing for optical switch component]
- Testing combinations of Components in a Wire Harness
[It explains how to do testing for combination of components in a wire harness]
- Testing Electrical parts that mate with a Harness Connector
[It explains how to do testing for electrical parts (fuse, lamp or relay coil) that mate with a harness connector]

NX Tester's major differences

No	Item	NX Tester	High-end	Low-end
1	Size (for Installation)	Small and proper	Relatively big	Small and proper
2	Capacity of test points	Flexible selection from 128 to 32,768 TP	Flexible	Lack of flexibility
3	Test items	Continuity, Shorts and components (Diode, Resistor, Capacitor and Relay)	Continuity, Shorts and limited components	Continuity and Shorts
4	Various and optional Accessories	Standardized Security key, Probe, Memory card R/W, Barcode scanner/printer, Report printer, Control port, Extended display and Networking	Limited option or custom order of development	Limited option
5	Interfacing with external devices	Capable of interfacing with external devices for input and output using control port	Custom order of development	Limited
6	Test speed	Relatively suitable speed by the emphasis on Short testing. In case of 1024 TP, Continuity : Within 1 sec. Continuity + short : 3 sec.	Relatively fast	Relatively slow
7	Developing test process	Independent development of test process like Flow chart using NX Editor	Custom order of development	Limited
8	Manual and Application	Documented and provided with customer	Provided	Limited
9	Certified	CE certified	Some are certified	Not sure
10	Price	Economical and relatively low thanks to flexible selection based on customer needs	Relatively high	Relatively low

Introduction of NX System of Dynalab (USA) for wire harness tester

Dynalab is proud to offer the NX System. The NX System builds upon Dynalab's proven reputation for reliable cost-effective products to offer a higher level of performance and value. As good as Dynalab products have been in the past, the NX System is better in every way. With over 17 years of industry-leading experience and with more than 18,000 testers sold, Dynalab is uniquely qualified to offer this next step in wire harness testing.

NX Testers

Dynalab NX Testers offer state of the art continuity testing. NX Testers are fast, accurate and easy to use. Dynalab has designed NX Testers to take advantage of the latest available technologies to provide a highly flexible and adaptable product line that meets the changing needs of wire harness manufacturers. For testing applications that span the range from simple to complex, Dynalab's NX Testers represent the best choice for today and tomorrow.

All NX Testers are part of a series - they are programmed using the same NX Editor software and they support the same accessories. Dynalab's NX Testers are offered in 3 configurations, depending upon your testing needs:

NX Solo Tester

The Dynalab NX Solo Tester is a low-cost, feature-packed, stand-alone continuity tester designed to accept up to two Test Point Boards giving it a maximum capability of 256 test points. The flexibility of the NX System allows each program to perform multiple tests, display custom messages or sounds, and analyze the results of a test or an input to "decide" which operation to perform next. The NX Solo Tester has 1.3Mb memory capacity for program storage and is compatible with Printers, Scanners, and all other Dynalab NX System accessories.



NX Pro Tester

The Dynalab NX Pro Tester is a low-cost, feature-packed, stand-alone continuity tester designed to accept up to four Test Point Boards giving it a maximum capability of 512 test points. The flexibility of the NX System allows each program to perform multiple tests, display custom messages or sounds, and analyze the results of a test or an input to "decide" which operation to perform next. The NX Pro Tester has 1.3Mb memory capacity for program storage and is compatible with Printers, Scanners, and all other Dynalab NX System accessories.



NX Pro+ Tester

The Dynalab NX Pro+ Tester is modular and is designed for applications requiring up to 32,768 test points. It has the same "front end" as the NX Pro Tester, but employs a series of Expansion Units to accommodate the test point cards. Each expansion unit is supplied with a 2' and a 6' ribbon cable to connect to the NX Pro Tester - either cable can be used depending on your set up needs; and 1 NX Terminator. Each Expansion Unit can contain up to 8 test point cards for 1024 test points. A maximum of 32 Expansion Units may be connected for 32,768 test points.

The flexibility of the NX System allows each program to perform multiple tests, display custom messages or sounds, and analyze the results of a test or an input to "decide" which operation to perform next. The NX Pro+ Tester has 1.3Mb memory capacity for program storage and is compatible with Printers, Scanners, and all other Dynalab NX System accessories.



NX Editor

The NX Editor is used to develop test programs for all NX Testers. The NX Editor uses no command language, but instead employs a powerful and easy to use flow charting tool for test program development. Describing the wire harness connections is done with simple entries in a connections table.

Test programs are transferred to the NX Tester using the NX Memory Card or by downloading via a serial port connection from the PC. Once the program is transferred to the NX Tester, it runs stand-alone with no need to maintain a PC connection.

The NX Editor uses the actual attributes of the harness components (connector names, wire names, wire colors). This enables the NX Tester to display meaningful information when an error is encountered, allowing the operator to quickly and easily locate the problem.

The NX Editor is only compatible with Windows 2000 and Windows XP operating systems.

The screenshot shows the NX Editor interface. On the left is a workflow diagram with steps: Start, Test Display, and Remove. On the right is a 'Connections' table with columns for Point, Point, Name, and Color.

Point	Point	Name	Color
A-2	C-2	W2	BLU
A-2	C-3	W3	BLU
A-3	S1	W4	RED
S1	C-4	W5	RED
S1	D-1	W6	RED
B-2	D-2	W7	GRN
B-3	S2	W9	ORG
B-4	S2	W10	ORG
S2	D-3	W11	ORG
A-1	C-1	W1	BLK

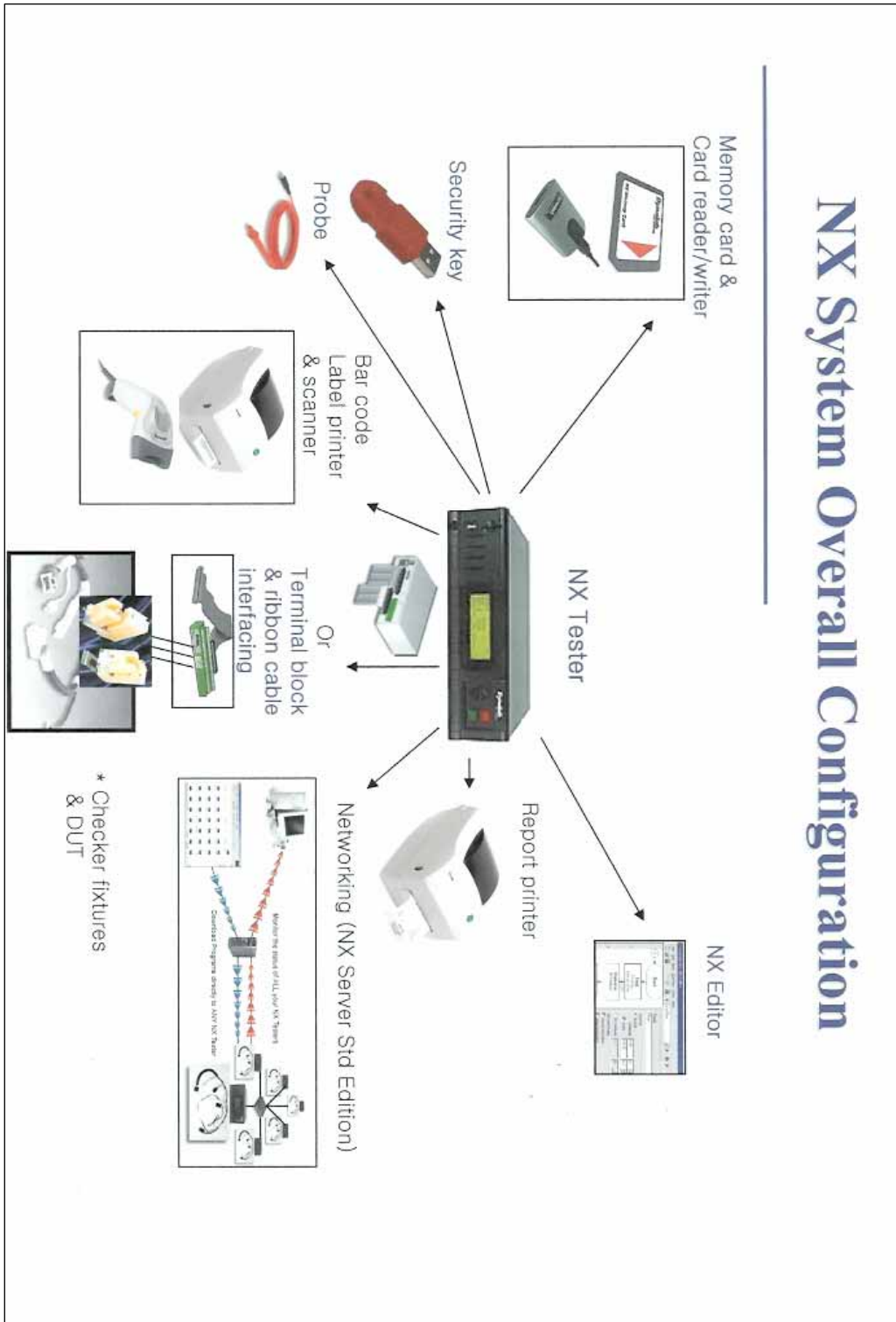
NX Testers Feature Summary and Specifications

Connections	Continuity: 1-100 ohms (± 1 ohm), 100 ohms – 2Mohms ($\pm 1\%$) * Shorts: 1Kohm - 2Mohms ($\pm 20\%$)
Components	Diodes: Checks for proper orientation Resistors: 1-100 ohms (± 1 ohm), 100 ohms – 2 Meg ohms ($\pm 1\%$) * Capacitors: 100pF to 500uF ($\pm 5\%$ to 20% based on capacitor type, ± 10 pF) Contact Dynalab for exact specification per capacitor type
4-Wire (Kevin)	0.005 ohm to 2.5 Mohms (+/- 0.005 ohm, +/- 1%) *
Relay Testing	Capable of active relay testing
Test Voltage	Test voltage is automatically selected by the NX Tester. The maximum voltage is 14VDC
Test Current	Test current is automatically selected by the NX Tester. The maximum current is 5mA DC
Test Speed	1 seconds per 1024 test points (continuity only) 3 seconds per 1024 test points (continuity and shorts)
Display	Errors are displayed using connector names, wire names, and wire color on a 4-line x 20 character display.
Audible Tones	Provides a variety of user programmable tones for error notification and special events.
Program Storage	Provides 1.3Mb to store up to 170 test programs
Control Port	One control port accommodates the optional Control Port Module to control a single device. Optional Multiport Unit is available to allow control for up to 24 devices through a serial port.
Serial Ports	Two RS-232 ports are standard, and two additional RS-232 ports are optionally available to connect to printer, bar code scanner, extended display, or multiport unit.
Test Point Interface	64 pin card edge connector
Input Power	Uses external power supply rated for 100 – 240VAC, 50-60Hz, 30W max. Power supply provides 15VDC to the NX Tester.
Test Point Capacity	NX Solo: 128 - 256 test points NX Pro: 128 - 512 test points NX Pro+: 128 - 32768 test points
Size (W x D x H)	NX Solo 10.7" x 7.5" x 3" (27.2c m x 19.0 cm x 7.1 cm) NX Pro: 10.7" x 7.5" x 4" (27.2 cm x 19.0 cm x 9.7 cm)

	NX Expansion Unit: 9.5" x 6.4" x 6.3" (24.2 cm x 16.3cm x 16.0 cm)
Weight	NX Solo: 5.1 lbs (2.3 Kg) NX Pro: 6.6 lbs (3 Kg) NX Expansion Unit:8.0 lbs (3.6 Kg)
Operating Temperature	40 – 100 degrees F (4 – 38 degrees Celsius)
Warranty	One year parts and labor
Certifications	CE Certified

** Note: The accuracies listed above apply to 60Hz power environments. In a 50Hz environment, induced 50Hz hum may degrade the resistance test accuracies above 700K ohms to +/-3%.*

NX System Configuration



NX Solo Tester



NX Pro Tester



NX Pro+ Tester

