



R I M A G E™

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Subject: Prism III Built In Diagnostics

1. General

The built-in Prism III diagnostic tests are similar but not identical to the tests built in to PrismPlus!

Prism III automatically detects AutoPrinter/StandAlone/AutoLoader modes so no manual configuration procedure is present.

The diagnostic tests are designed to be run by technical personnel familiar with their function. The printer should have a ribbon installed in it.

2. Diagnostic Tests

To enter the diagnostic mode:

1. Power Off
2. Power On while holding the Unit Attention button until it beeps--this takes about 8-seconds. Releasing the button before diagnostic mode is entered places the printer in to cleaning mode.
3. The DISC LED will be on solid while in the diagnostic test entry mode.

The tests are numbered 1-11. To select a specific press the button N times and hold it down for 2-seconds when N is the desired test. To run test 1: press and hold for 2-secnds. To run test 2: press, release, press & hold 2-seconds. If a rest is not selected the test counter returns to 0.

If the selected test terminates with an error then the FAULT LED will be on and an error code will flash on the DISC LED. Press and release the unit attention button 1-time to terminate error display and return to the test-entry mode. Power off to exit diagnostic mode.

| N | Test |
|----|--|
| 1 | Open Tray If the tray is already open then lower and raise the print-head. |
| 2 | Center Tray Moves the tray so the center of the disc is below the print-head heater line. |
| 3 | Close Tray |
| 4 | Raise Print-head |
| 5 | Lower Print-head |
| 6 | Cycle Test Cycles the tray for 370 cycles (20-minutes) or error. Option 1: Hold the button until the printer pauses after the first cycle to increase the cycle count to 4,400 (4-Hours). Option 2: Hold the button until the printer pauses after the first cycle and keep holding for 5 more seconds to increase the cycle count to 4,294,967,295. Press Unit Attention to terminate the test early. The tray must be set up so that the disc sensor is made but the clamping fingers must not be able to clamp a disc. This allows the test to detect a faulty tray flex cable. |
| 7 | Print 0-degree cross-hatch pattern in 300x300 dpi mode |
| 8 | Print thick bar pattern in 300x300 dpi mode |
| 9 | Print 45-degree cross-hatch pattern in 300x300 dpi mode |
| 10 | Sensor Test The FAULT LED is used to show state changes for the following sensors: tray out, print-head up, disc present, ribbon, code-strip, and ribbon guide roller. Since all sensors are combined in this test the FAULT LED does not show the specific state of any sensor, only that it can change state in response to changing stimulus. Press Unit Attention to terminate the test. |
| 11 | Advance the ribbon If a monochrome ribbon is installed then this test advances 2-inches of ribbon. If a CMY ribbon is installed then this test advances to the next yellow panel. |

3. Ribbon Sensor Calibration

The ribbon sensor (S2 on the 626124-401 flexible circuit board) should be calibrated for optimal performance detecting ribbon out, ribbon present, & CMY panel change. A calibration function is available in Prism firmware version 6.008 and later. The sensor was not calibrated in printers shipped with earlier versions of firmware. The sensor should be calibrated after:

1. Updating the firmware from a version earlier than 6.008
2. Replacement of the 626124-401 flexible circuit board.
3. Replacement of sensor S2.
4. Replacement of the 2002309 control board.
5. Replacement of the thermal print-head.

3.1 Ribbon Sensor Calibration Procedure

1. Make sure PrismIII firmware version 6.008 or later is loaded.
2. Make sure any associated AutoLoaders use 3.629, 7.629, or 8.629 as appropriate.
3. Remove the ribbon completely; the process does not work if the ribbon is in place.
4. Press and hold the button until the tray moves to place sensor S2 under the print-head.
5. Release-Press-Release-Press the button within 2-seconds. The calibration printer beeps once if the calibration is successful.
6. Reinstall the ribbon per the normal ribbon installation process.

3.2 Not Calibrated Indicator

Version 6.008 and later firmware blinks the power light rapidly to indicate that the calibration procedure has not yet been run. Successfully executing the calibration procedure stops this.

4. Prism Error Codes (Blink Count on Error)

| ERROR# | DESCRIPTION |
|--|---|
| 1 | Ribbon low / out (Low ribbon notification requires ribbon validation – series 5/6 control board only) |
| 2 | The printer is busy printing |
| 3 | Error lowering the print-head |
| 4 | Error raising the print-head |
| 5 | Error positioning the drawer home |
| 6 | Error positioning the drawer inward |
| 7 | Error positioning the drawer outward |
| 8 | Corrupt or invalid data in command |
| 9 | Excessive data |
| 10 | Invalid left margin |
| 11 | Missing left margin when printing without RLE compression |
| 12 | CD Detection |
| 13 | Color change error |
| 14 | User Aborted by pressing button |
| 15 | Failed Print-head Integrity Check (PIC error – series 5/6 control board only) |
| The following Error Codes are for Prism III only: | |
| 16 | Ribbon Broken, Upper ribbon idler roller does not turn when take-up roller is running |
| 17 | Ribbon Missing, No RFID tag in the antenna read field |
| 18 | Ribbon Invalid, RFID tag in the antenna field but it is invalid |
| 19 | Ribbon Over-Limit, line counter in RFID tag indicate the tag has been consumed |
| 20 | Ribbon RFID Hardware, RFID transceiver and/or antenna not working properly |