



IDV-120[®] IDENT Code Reading Module
Outline Specification Document

Bronway IDV-120 IDENT Code Reader

Safeguards against Disc Contamination (mixed product)!

Collates and logs production data.



Figure 1 IDV-120 Positioned on the Bronway IHS-2002

Features:

- Reads most CD and DVD formats.
- Automatic barcode detection and set-up.
- True OCR capability for alphanumeric code recognition.
- Solid-state optics with automatic light control.
- Compact Industrial design.
- True Contamination detection.
- Fully DIGITAL image acquisition.

System Overview

The Bronway IDV-120 Code Reader has been designed to perform 100% IDENT code verification of discs in-line during the printing and packaging process. The IDV-120 reader can be fully integrated in to any machine in the Bronway range or installed as an OEM module on to most commercially available printing and packaging machines. Since most of the discs produced today are identified using barcode technology the reader is optimised for barcode verification, however, an OCR module is available to maintain compatibility with back catalogue.

Ease of operation is a key feature of the IDV-120. The system will automatically detect the symbology of the code used to identify the disc. The correct code for the current job can either be scanned from the paperwork accompanying each job using a hand-held barcode scanner, downloaded from a host computer once the works order number has been entered, read directly from a disc placed on the optical head, or entered manually using a virtual keyboard. The reader maintains production statistics for the current job that can either be archived to a floppy disk, or transferred to a server across a network through the integrated Ethernet adapter. All key system parameters, including light intensity levels, are automatically optimised during the new order process to give the best possible performance levels at run-time.

Bronway's, patented, True Contamination detection function not only ensures that all mixed product is rejected, it also positively identifies it. There are 3 outcomes to the inspection of a disc by a camera:

1. Disc positively identified as having the correct ident code
2. Disc identified as having the wrong ident code (Contamination)
3. Scan failure. The camera is unable to read the disc due to a manufacturing problem or a weakness in the scanner.



Operator, Touch-Panel Display on the IDV-120

Prior to the development of True Contamination detection, by Bronway, none of the systems deployed in the optical disc industry could reliably differentiate between true contamination and scan failures. This is because they needed some prior knowledge of the disc format and ident code symbology before attempting to read the disc. Bronway's IDV-120 system is able to positively identify a disc regardless of disc format and code symbology. This is a very important requirement that enables disc manufacturers to know when true contamination has occurred so that they can review their process and amend their security procedures.

The optical head supports and centres the disc at the start of the read cycle. It is upward facing and has an optional, patented, vacuum ring to eliminate disc vibration and tilt. The robust mechanical design and full use of solid-state components ensures reliable operation and long lifetime. The use of a digital camera ensures noise-free data transmission to achieve maximum image fidelity.



IDV-120 integrated into the Bronway IHS-2002 Handling System

The IDV-120 is based on an embedded industrial PC platform. The graphical user interface is displayed on a compact flat panel display and accessed using a touch sensitive membrane. The amount of user intervention that is required is minimised through the use of automatic parameter optimisation functions at the start of a new order, which enables the user interface to be very simple and easy to use. Production statistics can either be uploaded using the in-built Ethernet adapter or archived using the IDV-120's floppy disk drive.

A dual-headed version is now available for machines that either print or pack 2 disc titles simultaneously.

Specification

Cycle time	< 0.5 s or 120 disc per minute (Disc is required to remain static for approx 1ms)
Number of cameras	Up to 2 per system
Supported barcode formats	Code 39, Code 128, Sony Code.
Disc formats	CD, CD-ROM, DVD-5, DVD-9, DVD-10
Electrical Interface	24v Digital I/O opto-isolated.
Power Supply	110-240vAC 50-60Hz.
Environmental	0-40°C < 90% humidity.
Sensor	1k x 1k x 10bit monochrome, digital sensor
Illumination	High intensity, strobed, solid-state, white light.

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