Title (en)

Multiple ink jet print cartridge alignment method.

Title (de)

Abgleichverfahren für Mehrfach-Tintenstrahldruckpatronen.

Title (fr)

Procédé pour alignement de cartouches d'impression par jet d'encre multiples.

Publication

EP 0622236 A3 19950830 (EN)

Application

EP 94106209 A 19940421

Priority

US 5562193 A 19930430

Abstract (en)

[origin: EP0622236A2] An improved media axis image registration system for a multi-color inkjet printer/plotter (10). The inventive system comprises a carriage assembly (100) for retaining multiple inkjet cartridges (102, 104, 106, 108) or pens. Each cartridge (102, 104, 106, 108) has a plurality of nozzles (502, 504, 506, 508) adapted to eject ink in response to the application of an electrical signal thereto. A first mechanism (112) is provided for moving the carriage assembly (100) in a first (scan) axis. A second mechanism (152) is provided for moving print media (30) in a second (media) axis transverse to the first axis. A position encoder (152) senses the position of the carriage assembly in the media axis. A control circuit (300) provides electrical signals which cause the nozzles (502, 504, 506, 508) in the inkjet cartridges (102, 104, 106, 108) to eject ink onto the media (30) and create an image thereon in the form of a test pattern (40) in response to timing signals. The inventive system includes a sensor module (200) which optically senses the image and provides a set of sensed signals in response thereto. The sensed signals are sampled in accordance with position encoder signals to provide corrected timing signals. In a particular embodiment, the test pattern (140) is illuminated by a light source (232) in the sensor module (200). The light source (230) has spectral energy in the color bands of interest. The test pattern (40) includes a plurality of vertically spaced bars which, when scanned by the sensor module (200), allow the module (200) to generate an output signal of a given frequency. The output signal is sampled and processed to provide the corrected timing signals for activation of the nozzles. By detecting the position of the pattern (40), the misalignment of a particular pen may be corrected. <IMAGE>

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Citation (search report)

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