

Title (en)  
Inkjet pen alignment mechanism and method

Title (de)  
Verfahren zum Ausrichten von Schreibstiften und Gerät mit einem Mehrstift-Tintenstrahldruckkopf

Title (fr)  
Imprimante à jet d'encre avec système d'alignement et méthode

Publication  
**EP 0890442 A1 19990113 (EN)**

Application  
**EP 98304776 A 19980617**

Priority  
US 87848997 A 19970618

Abstract (en)  
Disclosed is a printer having a set of permanent or semi-permanent inkjet printhead units or pens (28, 30, 32, 34) and a remote ink supply (20, 22, 24, 26) connected to the pens (28, 30, 32, 34) by means of trailing tubes. A precision latching mechanism (112,114,116) is provided to precisely position the pens (28, 30, 32, 34) in their respective stalls. The fluid interconnect device for the pens (28, 30, 32, 34) is designed so that it does not counteract the precision alignment provided by the pen and carriage datums (84,86,90). The carriage (16) has a valve member (132) with a septum (148), and the valve (132) is connected to the carriage (16) in such a way that it can roll and otherwise move a preselected limited amount with respect to the carriage (16). The pens (28, 30, 32, 34) each have a needle (54) designed to pierce the septum. The needle (54) is located inside a shroud (56) connected to the pen by a neck member (58). As the pen is inserted into the carriage (16), the neck member (58) fits within a notch (100) in the carriage (16). The engagement of the neck member (58) in the notch (100) positions the shroud (56) over the valve (132). As the pen is further inserted into the carriage (16), the shroud (56) contacts the valve (132) to thereby position the septum below the needle (54). As the pen is further inserted, the needle (54) pierces the septum to fluidically connect the pen (28) to the ink supply in the printer. A latching mechanism (112,114,116) firmly locks the pens (28, 30, 32, 34) into the carriage (16) so that the pen datums (60,62,64,66,68,70) are positioned against the carriage datums (84,86,90) to precisely locate the pens (28, 30, 32, 34) in their stalls. <IMAGE>

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