

TIME TRAVEL

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Mr. Spock, We Need to Print a Circuit!

Star Trek is one of the most successful Sci-Fi series ever. It began with *Star Trek* (1966 to 1969), the first iconic series, followed by *Star Trek Next Generation* (1987 to 1994) and several other series and full-length movies. The special effects, especially in the first series, were somewhat naïve. Despite the premise, the futuristic look is very recognizable as being in the 1960s and 1980s. However, if you have keen eyes and are looking at Season 1, Episode 12¹ of *Star Trek: The Next Generation*, titled “Datalore,” you will find some nice eye candy for microwave engineers.

The episode aired on January 18, 1988, in the U.S.² In the context of the show, the episode takes place at a stardate, the fictional time measurement scale used by the *Star Trek* franchise, of 41242.4 on planet Omicron Theta. This is the home planet of the android, Data, the second-officer of the *USS Enterprise*. An exploration team from the *Enterprise* finds a lab that they learn is the one where Dr. Noonien Soong indeed built Data. In the panoramic view of the lab, the Quintel Q2001 mask aligner, shown in **Figure 1**, appears here, playing the role of a far-future fantastic item.

Indeed, Quintel Corporation was founded in 1978 to provide an alternate source for OEM-level product support for the Canon, Kasper and Cobilt brands of contact mask aligners. In 1986, Quintel introduced its own line of mask alignment exposure systems to serve the micro-electronic industry better, so the Quintel Q2001

shown on *Star Trek: The Next Generation* is one of the first they produced. In 2005, Quintel was then acquired by Neutronix, a company dating back to 1989, that still operates in the mask alignment segment as NxQ.

As a personal note from the authors, the RF Microwave and Electromagnetics lab at the University of Florence used an even older version of a Quintel Q2001. This piece of equipment, shown in **Figure 2**, had an electromechanical timer and a slightly different eyepiece from the one seen in the *Star Trek: The Next Generation* episode. It was purchased second-hand in 1992 and is now considered an industrial archaeology item. The photo in **Figure 2** was taken some time ago when the mask aligner was still in use. So, maybe the one in the *Star Trek: The Next Generation* series was indeed the futuristic version!



Fig. 1 The Quintel Q2001 mask aligner featured as a “futuristic device” from *Star Trek: The Next Generation*.



Fig. 2 The Quintel Q2001 mask aligner at the University of Florence.

References

1. www.imdb.com/it/title/tt0708698/?ref_=ttep_ep12
2. en.wikipedia.org/wiki/Datalore

¹Or episode 13. The first episode “Encounter at Farpoint,” was split into two parts, so “Datalore” is the 12th title but the 13th to be aired.