

A photograph of an astronaut in a white space suit floating in space. The astronaut's helmet is prominent in the lower-left foreground. In the background, the curved horizon of the Earth is visible, glowing with a soft light. A thin crescent moon is positioned above the Earth's horizon. The title 'Celestial Bodies' is overlaid in a large, yellow, serif font across the top of the image.

Celestial Bodies

Endorsement by astronaut and cosmonaut alike has given a few lucky watch brands the chance to bathe in the reflected glamour and excitement of space travel. What does it take to be moonworthy? What is the appeal of the space watch? And what does Snoopy have to do with it all? QP boldly goes in search of answers...

Josh Sims



The Fortis Cosmonaut Chronograph has been counted among the official equipment of Rosaviakosmos cosmonauts since the beginning of the European-Russian space mission, EUROMIR 94 (Cosmonaut model pictured, £1,030).

Fortis' new Cosmograph, launched last November, is the first automatic chrono with an integrated mechanical alarm – handy, considering that an astronaut sees 16 sunsets and sunrises every 24 hours on board the International Space Station. But why do astronauts wear watches when an on-board chronometer accurately synchronized with Mission Control does the job perfectly well? Surprisingly to some, measuring time using a chronograph function has proved itself useful beyond all doubt, and even life-saving in some near-disastrous cases.

The reason astronauts wear watches is not really about timekeeping at all. Astronauts may not need to know what 'o'clock' it is, but a watch helps them do their job in many other unexpected ways. "Being able to see what the local time is back on Earth grounds you psychologically," says Eugene Cernan, Apollo 17 commander and last man to walk on the moon. "It always made me feel connected to be able to look at my watch and know that, for instance, my daughter is getting up, or she's off to school now..."

Of course, this is something equally achievable by the other kind of space watch, the 'space art' watch – technically basic watches whose elaborate pictorial dials commemorate important space missions. Funnily enough, it was because Fortis had created a series of watches with planets painted on them for the first art-painted spacecraft in 1992, that the generals of Rosaviakosmos, the Russian space agency, asked the company to develop a self-winding watch for their boys in white to wear. It was delivered two years later.

High standards

But in reality, space watches are as tough as old space boots. Built to extreme technical specifications in order to function in extreme conditions, they typically comprise design details such as 24-hour dials and, like aviation watches, outsize buttons (for ease of use when wearing outsize gloves). Seals are made of special rubber that, like the glass, can withstand temperature extremes (from -18°C to +93°C) and cope with magnetic fields, and reinforced parts are used to withstand incredible vibrations and G-forces. NASA tested

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chronographs from ten anonymously purchased brands in 1962, and, having eliminated four, requested two models from each of the remaining six. One of the reasons Omega won the NASA account with its famed Speedmaster Professional in 1965 (actually a version of a watch launched in 1957) was because, unlike their competitors of the time, they were able to develop an acrylic glass that would not only give maximum visibility in direct, unfiltered sunlight, but would not shatter into tiny pieces if broken.

Perhaps this is why only a few companies have ventured into this field, and few seem keen to break into it. Each company has battled to supply one or other space agency with their model, reassuringly through meeting rigorous demands and not through sponsorship deals. Breitling's 1962 Navitimer Cosmonaute (currently retailing between £2,645 and £3,190) was worn on an early NASA orbital flight. Then the US agency adopted the Speedmaster – still the only watch to have gone to the moon (hence its Moon Watch nickname) and currently the official Space Shuttle crew watch (£1,000 upwards). Fortis' Cosmonaut and Spacematic series have been popular with the Russians (who also wore Speedmaster Professional X-33s – the so-called Mars Watch – on MIR from 1998 until its decommissioning in 2001); in fact, the Cosmonaut is the official watch of the International Space Station.

Bell & Ross entered the market in 1992 with their Space 2 – a re-edition of the first automatic chronograph worn in space (in 1983 by the German astronaut, Reinhart Furrer on SpaceLab). BASELWORLD 2003 saw the launch of the Space 3,

complete with rubber pushers and a crown that integrates fully into the case so as to not catch on the spacesuit (£1,420–£2,150).

If it ain't broke...

It seems that a lot of effort goes into the design and manufacture, just to make an astronaut feel better about being literally out of this world. Yet many astronauts – who seem particularly attached to the watch they have worn in orbit, never dreaming of replacing it, no matter how battered – have added that a mechanical watch has particular appeal because, surrounded by electronic equipment inherently susceptible to failure, their

The 'Mars Watch': Russia's space station MIR was used as an orbiting test lab in 1998 for Omega's Speedmaster X-33 chronograph. It is now flight-qualified by both NASA and the Russian Space Agency (£1,450).





(Left) The Breitling Navitimer Cosmonaute with steel bracelet (£3,190). An earlier edition was worn by Astronaut Scott Carpenter during the NASA orbital flight aboard the Aurora 7 space capsule, 1962. (Centre) Not all 'space' watches are fit for the great beyond, as demonstrated by Fortis' Spacematic SL ladies' line (£2,825). (Right) The Fortis B-42 Flieger Chronograph Alarm – a recent addition to Fortis' rapidly expanding line of space watches (£1,115).

watch is the one thing they can rely on. Chip-free cogs and springs have an old-fashioned security to them.

Perhaps ironically, Tim Ward, Omega's brand director, suggests that the fact that the Speedmaster has not changed – it still has no date function, its Plexiglass scratches, and its movement is relatively old-fashioned – is part of its appeal. "And it's this simplicity that means that however advanced space travel gets, these explorers will always want to wear a watch," he says.

Certainly there have still been times when even these old-timers have saved lives in space. In 1970, for instance, the Speedmaster helped the crew of the crippled Apollo 13 mission to return safely to Earth. The watch was used to time a critical 14-second firing of the engine in order to correctly angle the craft for re-entry; the computer normally used for this had failed. This feat won Omega the prestigious Silver Snoopy Award – NASA's recognition of outstanding performance – and gave rise to a limited edition Moon Watch featuring a design of the eponymous cartoon dog.

Such yarns have certainly allowed space watch manufacturers to win kudos for making fantastic watches – hardy, beefy, manly, straightforward and often unchanged for decades. Fortis, for instance, have won Rosaviakosmos' Star of the Blue Planet award for their development of mechanical chronographs. For the man not on the moon, but on the street, it all adds up to an often irresistible 'Buzz Lightyear' glamour that makes wearing a space watch an exciting proposition. However, in an era when space exploration has been overtaken by commercial interests, this aura has admittedly been dampened.

"Under-25s haven't grown up with the moon landings; just MIR and the tail end of the Space Shuttle programme, which seem less exciting," suggests Ward. "That will have a knock-on effect in terms of the popularity of space watches – at least until the next manned space exploration programme gets going. At the moment it's all about sending Tonka toys to Mars. And they don't wear watches." President Bush's recent announcement that future manned missions to both Mars and the Moon are in the pipeline may well turn this apathy around...

Universe appeal

"But the fact that these watches have been developed for very uncomfortable situations and have passed very specific tests in order to be worn in space gives them an enduring appeal to people who are *not* in those situations and *don't* have those needs," believes Liese-Lotte Peter, director of Fortis, whose involvement in space activities is such that next October they will be part of the the first public-private partnership in space, creating a low-orbit satellite capable of sending a local time signal to electronic devices on Earth (from cars to heating systems to, yes, watches). "Space can be symbolic in many ways: of a positive kind of globalisation, for instance, and of what really is man's last great adventure. This carries through to the watches. Besides, interest in space tends to create a real if small community that people want to feel a part of."

These are the people who may have little use for the functionality of the watches, but love them anyway. Tim Ward recounts the story of one watch retailer who declined to stock Omega divers' watches. "We won't sell them: we're a long way from the sea here," he said. "You're also a quarter of a million miles from the moon, but you sell a lot of Speedmasters don't you?" was the rep's sharp reply.

Manual or auto?

These are also the kind of people who will answer that other oft-posed conundrum of space watches: doesn't weightlessness, or the moon's minimal gravity (one third of the Earth's) negatively affect the way an automatic mechanical watch works (preventing it from self-winding, for instance)?

This was the reason behind early spaceflight's adoption of manually wound watches such as Breitling's Cosmonaute; even the Speedmaster was unavailable as an automatic until 1973 (after eight years of NASA service). Manual-wind watches are still popular with astronauts, but, Houston, we do not have a problem: "Before they were actually tested in space, an argument raged for about 25 years as to whether gravity would affect the mechanics in a watch. Plenty of people said they wouldn't work," says Peter. "But it turned out to be a question of simple physics: of course, the astronaut has to move to start the automatic movement, but in weightless conditions something given kinetic energy is given momentum just as on Earth. So it works just fine." That, surely, is one giant leap for watchkind. ◉

This limited edition 'Moon Watch' commemorates Omega's receipt of the coveted Silver Snoopy award, in recognition of the Speedmaster's instrumental part in the Apollo 13 rescue mission (£1,600).



Further information

Bell & Ross: Tomillo Ltd., 3000 Cathedral Hill, Guildford, Surrey GU2 7YB. Tel: 01483 243 588, E-mail: info@tomillo.co.uk, www.bellross.com

Fortis: Grenchen Time Ltd., The Old School House, Coppice Row, Theydon Bois, Essex CM16 7DN. Tel. 01992 814 814, Fax 01992 814 710, E-mail: sales@michelherbelin.co.uk, www.fortis-watch.com

Omega: UK stockist information, Tel. 023 80646 915, www.omega.ch