Eumig Nautica

By Steve Warren

It was the films produced by Cousteau and Hass that inspired the diving movement of the 1950s. Throughout the sixties and seventies movie theatres and television audiences were fed an unrelenting diet of underwater documentaries, drama and science fiction

Naturally the thoughts of sportdivers turned to making their own underwater movies. Early equipment was largely homemade, although a few companies such as the Swiss firm Bolex, Germany's Bauer, the Japanese company Fujica and , perhaps surprisingly, the Soviets all produced movie camera and housing packages. But it would fall to an Austrian design team to produce the Worlds first and only underwater amateur movie camera.

Eumig cine cameras were already a firm favourite with amateur underwater movie makers. Soon after Super 8 film was launched in the mid sixties, Eumig teamed up with Rene Hugenshmidt to offer the Eumig/Hugyphot Submarine. The aluminium housing was custom built around the Vienette cameras and is one of the most recognisable movie housings to a collector. But the Nautica itself really had its genesis in 1974, when the Eumig Mini 3 Servofocus camera appeared. The Mini 3 was a budget camera aimed at the movie maker who largely wanted to shoot family events and holidays. The compact, frill free camera boasted auto exposure and had a 9-30mm f1.9 zoom lens. Eumig used a hyperfocal focusing system. Essentially the lens was fixed focus for somewhere in the middle distance and relied on depth of field to keep foreground to infinity acceptably sharp. In good light, on the widest setting focus stretched from as little as 2ft /0.5m to infinity.

Interestingly this simplified focusing system is in some ways preferable to the more modern electronic auto focus. Autofocus tends to hunt if something unexpectedly enters the frame and as the camera pans between subjects, which is distracting. Servofocus eliminated that.

The point and shoot qualities of the Mini 3 immidiately attracted the attention of housing manufacturers. With the camera set to wide angle, the only control needed was the shutter release. Until the arrival of the Mini 3 housings tended to be built sporadically. The choice of cine cameras was overwhelming. They ranged from top of the line Nikons, Elmos, Beaulieus and Canons aimed at the very serious film maker willing to invest hundreds of pounds to fixed lens models for the budget family snapper from GAF, Kodak and Halina. It made it hard to settle on a particular model that could appeal to a large part of the diving cine market and encourage divers who weren't into photography to give it a go. The Mini 3 met that need. Soon dedicated housings began to appear from brands like Birchley Products, Promoacean and Ikelite, Even Italian diving equipment specialists Technisub produced a housing as did British company Submarine Products, which was later marketed by Roy Midwinter under his Aquasnap label.

Like many modern video and digital stills cameras, Super 8 cameras were flawed in one major respect. They offered very modest wide angle capability. All the development was on increasing the telephoto end of the lens. Even the best cameras had wide angles little better than those found on a 35mm compact.

1976 saw Eumig address that issue. The Panarama Macro Aspheric (PMA) arrived on the scene with Eumigs high end 860 and 880 cameras. This simple conversion lens screwed into the existing zoom to increase the wide angle from 8mm to just 4. With it you could have sharp, focus free

images from a few centimetres away to infinity. An added bonus for filmakers working without tripods was that it made camera movements appear more fluid and less jarring, so it was easier on the eye as the camera tracked.

In 1977, the year The Deep hit the movie screen, Eumig updated the Mini 3 to include the PMA. With this simple addition, the Mini 3 became the near perfect solution for amateur underwater filming. It was a concept not lost on the Wizards of Vienna....

Lets backtrack slightly. A quarter century ago, the only underwater stills camera that merited serious respect was the Nikonos 111. It alone offered a wide choice of shutter speeds and apertures. It was non reflex. There was no built in light meter. You wound it on yourself.

It was state of the art.

Other underwater cameras were much more basic. Crude is the word I'm searching for. Cameras like the Gagy Anfibian, Nemrod Siluro and Spirotechnique Aquamatic offered little exposure control and were restricted to a standard lens with some limited close up options. The stills photographer seemingly battled against his equipment to get images. Filmakers, on the other hand, were about to be treated.

The Eumig Nautica premiered in 1979. Little larger than the Mini 3 Servofocus that begat it, it was a scene stealer at every photographic show. Peter Scoones tested it for Amateur Photographer, Mike Busutilli raved about it in Diver and Tony Sopher took it diving on the TV show Blue Peter.

Eumig beefed up the outside of the camera and added a stippled finish that imbued a military look. The grip was enlarged and had two useful features added - a swing out storage bay for the PMA and a wrist strap designed to let you accurately measure off the filming distance for shooting macro. The macro filming was a by product of the PMA adapter. To focus on the image created by the aspheric wide angle, Eumig had to provide focusing down to just a few centimetres. An external lever ensured you didn't enter the macro zone accidentally and a warning light was a bold reminder in the viewfinder that you were set for macro/PMA use. The Nautica had an excellent CDS exposure meter positioned above the lens which rarely got it wrong.

Compared to the Mini 3 minor changes were made to the control layout. Most super 8 film is designed for use with artifical light. A filter is built into the camera to correct the film for daylight shooting. Many cameras used a key or the foot of a cine light mount to switch the filter in and out. On the Nautica it's a slider inside the film chamber. Choosing betwen normal filming and single frame for animation is done by screwing a cable release into the appropriate hole in the trigger on the Mini 3. It's an external knob on the Nautica. A flourescent film counter made it easy to read off your remaining film stock. And the Nautica had a unique feature. To ensure you didn't drop below it's maximum operating depth of (allegedly) 40 metres, a simple capillary depth gauge was built into the door lock. That some Nauticas certainly found themselves working at 60 metres plus is common knowledge.

What's the Nautica like to use? It's a breeze. A low volume mask gives easy edge to edge viewing, once the eyecup is removed. The viewfinder is clear. The lights to indicate that you are set to macro and to confirm the film is running through the camera are placed outside your view of your subject. A red flag slides into the viewfinder to warn of underexposure and a black pointer lets you know you've turned on the backlight control. Deliberately

making these warnings obtrusive ensures you don't foul up your shots through exposure problems. The frame finder was something I abandoned almost immediately.

The wide angle served me well for most subjects that I wanted to film. Shooting macro was convenient and easy. The cameras is slightly negative (it's shown floating in the ads).

Eumig went out of business in the mid 1980s. Demand for cine cameras had been dropping steadily and an emerging medium - amateur video - was a threat about to be realised. Eumig had taken a knock from the canceling of the Polavision project (instant developing movie film for which Eumig provided cameras and viewers to Polaroid), and took a further knock when they tried to enter the video market and got it wrong.

At the time the Eumig Nautica was nearing the end of its life, Sony launched their first Marine Pack. Housing a shoulder mounted amateur camera and a full size home video deck, it weighed in at 45 kg. That's about the weight of 50 Nauticas.

Today video dominates underwater film making. But super 8 is enjoyinmg a resurgence amongst young trendy professionals. They use it increasingly for making pop videos to get the grainy look.

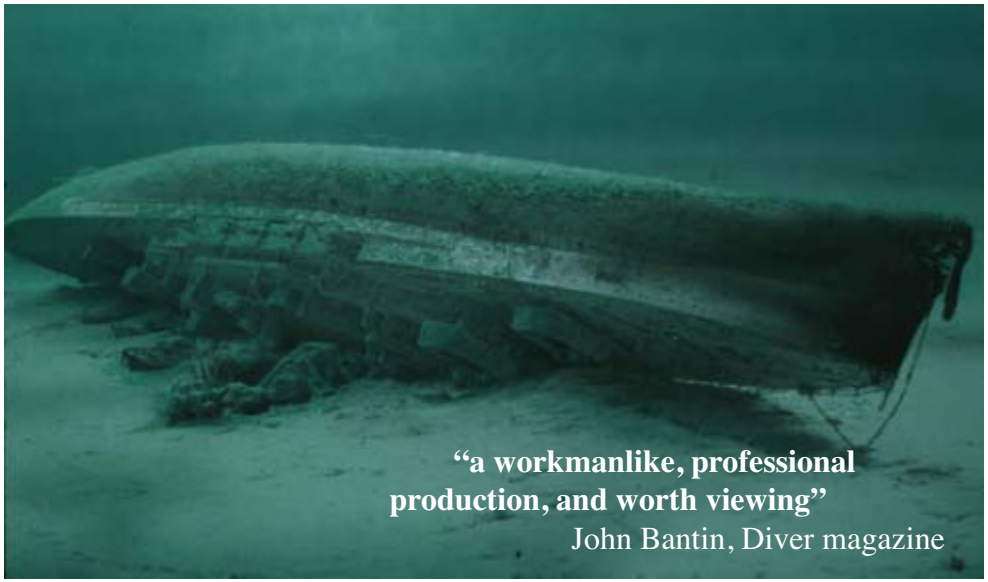
There are three models of Nauticas for the collector. Eumig supplied them originally with a framefinder of perspex with the grid etched on. Later this was changed to the open sight - possibly to reduce drag and avoid scratching. The third version is a modification carrried out for Helix of Chicago. Super 8 cameras normally ran at 18 frames per second. This is fine for visuals, but not so good for recording and playing back sound. Although the Nautica was mute - it didn't record sound - it was possible to have a sound track added to silent film later or use Agfa Moviechrome Plus film which already had a sound stripe. During post production effects, narration and music could be added. To improve sound quality, Helix had some of their Nauticas adjusted to run at 24frames per second.

Nauticas are regularly seen in secondhand camera shops and on E bay. A nice one should cost no more than a hundred pounds.

Steve Warren

optics@oceanoptics.co.uk

HMS Royal Oak video



The wreck of HMS Royal Oak in Scapa Flow is a designated war grave and all diving is prohibited but in 2000 a special permission was granted for the wreck to be filmed as a moving tribute to all those who lost their lives.

"I ordered the video and it arrived last Monday. I've only had a chance to view it today. I was so profoundly moved (and I am a hard bitten first world war historian) that I had to email you.
I was impressed with virtually all aspects. I thought the balance between interviewees, diving footage and historical context was spot on. This is something not always achieved in documentaries - I know because I used to make them. The interviews with the survivors threw the whole affair into stark relief. I cannot praise this video highly enough. And I thank you for your web site."
Warm regards, Pamela Armstrong
Running time 50 minutes. Narrated by Tom Fleming. Produced by Ocean Optics Ltd. Directed by Peter Rowlands

The video costs £16.95 (+£2.50 UK postage). Total £19.45. Please send cheques payable to PR Productions and send them to: Royal Oak Video, 13 Langley Avenue, Surbiton, Surrey KT6 6QN. Credit card tel & fax 020 8399 5709