



## Calrec Apollo

**Apollo is this broadcast desk manufacturer's flagship product and offers enormous power harnessed through a new controller. ZENON SCHOEPE says that there is a lot of significant stuff going on beneath the surface.**

The recent release of Artemis as the second family member in Calrec's next generation of broadcast production consoles might have deflected some of the attention from the release of its new flagship Apollo model earlier in the year were it not for the fact that Apollo is so clearly the technological statement of intent product. Calrec was first to market, by quite some time, with a large-scale FPGA product and is now talking about it more openly probably because it now has more company. It has arrived at Apollo in a manner that is extremely considerate to its existing user base and Calrec is clearly more interested in bringing them along incrementally rather than alienating them with some heartless technological jump. It's an approach that other manufacturers could learn from.

Apollo is the result of developments in the key areas of the processing, networking and the control surface at the manufacturer. The processing engine is based on the same Bluefin technology that the Alpha generation products used but in Bluefin2 guise is bigger (apparently they now use five larger FPGA chips rather than the Alpha's six) and faster. The desk has automatic hot-swap redundancy systems in DSP, control processor, router, power supplies, and connections. Another difference between the Alpha and Apollo is the I-O system. Alpha used the console backplane as part of the routing system whereas with the Apollo they are employing Hydra2 networking for all the I-O. The practical difference is significant and puts Calrec in a position where it is now effectively a supplier of standalone routing; something that remains an essential for large broadcast infrastructure planning. These 8192 x 8192 crosspoint routers that available in each desk can have access to a variety of I-O including analogue, AES, MADI, SDI, and Dolby E formats. Together they can create massive desk networks using copper or fibre connectivity and the original Hydra system can be integrated with Hydra2 via a bridge.

Not unrelated is the fact that Calrec has begun working with other companies. Control of Riedel intercoms has been implemented into the Apollo

desk surface and Hydra2 now also talks to Riedel's MediorNet networking system.

The Apollo impresses from a number of different vantage points (let's not forget that the Alpha Bluefin was no slouch) but what really stuns are the numbers: at 48kHz that's 1020 channel processing paths, 128 programme buses, 96 IFB/track outputs and 48 auxiliaries; at 96kHz it's 510 channel processing paths, 64 programme buses, 48 IFB/track outputs and 24 auxiliaries.

The high density 5.1 source world of big broadcast productions is unlikely to even begin to tickle the limits of this desk for a good many years to come even at 96kHz. With that said we could just stop the article here and reflect quietly and privately for a while on the full implications of all that power. However, as we all

know the business of useability is of primary concern in any system that interfaces with *homo sapiens*.

What we have to remember is that Bluefin was introduced originally as a massive processing upgrade to existing Alpha consoles. You could buy a new Alpha with a Bluefin or you could upgrade your existing desk. When Calrec introduced Alpha, quite a few years ago now, its customers were transitioning from analogue to digital and Calrec very cautiously introduced two-layer operation to the desk surface. By the time you'd slapped Bluefin with its tremendous channel count capacity on the back you had to have a pretty big Alpha control surface to get at all those available channels. The worksurface size became the limitation, not the back end; and this was apparent. With the Apollo control surface they've really gone for it because the operators are ready for it and their job descriptions and workloads have moved on a bit too. Apollo acknowledges this and employs technology that the company hasn't used before.

Apparently the physical size, spread and pitch of the Apollo is very similar to the Alpha but it uses OLEDs that are small and quite beautiful and some new switch and knob gear. Operation centres around the principle that if a display has a physical switch associated with it then that's what you should use, otherwise it's a touchscreen.

It is not immediately obvious when you're sitting in front of the desk, because of the varied layout and representations on the many screens, but the majority of the surface is actually built up out of small panel blocks of two pots, two switches and a small display (Calrec calls these a Control Cell). These are supplemented by small screens with two switches above and below them and small screens that are subdivided horizontally to give two distinct areas. At the top of the panel are large touchscreens. Down in the fader panel you get traditional switches and control options along with another display, some metering and a fader strip that lights in a colour that identifies the fader as mono, stereo, 5.1, group, mains, and so on.

The worksurface geography is very fader strip oriented and as such you get eight pots per fader when looked at in the vertical sense. However, that's not the only way you can run the Apollo as I am sure



you might have suspected by now.

Operationally you can regard it as working in two fundamental modes: the Alpha mode (after the Alpha console) as an assignable arrangement in which you are presented with a super fat channel of all a selected channel's processing; and then there's a Wild mode that is more strip, or analogue knob-per-function, oriented.

In Alpha mode you use Mode buttons to map controls on to the panels so you have a panel for the EQ, one for the dynamics and so on — big display depictions with hard controls below. It looks nice and clear despite the wealth of information and there's great colour co-ordination carried throughout. I think that a hardened Alpha user would be flying in seconds.

Wild Mode is a sort of 'make it up as you go along; mode in as much as you can choose what it is that you see and have access to on the fader strips while at the same time being able to effectively scroll up the fader strip on these controls. This can be applied in bays of eight or globally.

A nice touch is the inclusion of User Layout switches that can take you to your Assignable layout or your Wild layout. What I don't want to do is give the impression that the desk is fixed to work in just these two distinct modes because you can mix the two approaches. You can effectively 'crossfade' operationally between the two modes adding degrees of assignable control to a Wild layout and vice versa; it can be a hybrid. You can fix some fat channel sections on to the worksurface and surround them with Wild controls. It's the reason this is such a hard desk to talk about from an operational sense despite the fact that it's extremely easy to use. It's easy to use because of the unambiguous nature of the 'routines' used to drive the desk: the way one section of buttons controls what happens in the bay or globally; how the control cell pots and switches always relate to the parameters in the display in the same way; the importance of colour.

I really like the knobs and the way the caps change colour according to their function — EQ is aquamarine, aux is green, dynamics is pink, pan red, track send is dark blue, for example. The knob colour changes are achieved by using a multicoloured LED shining up the stem of the pot on to a translucent cap. Simple but brilliant. You can press and hold a pot to zero its value. I also like the on-screen icon depictions of the various parameters — simply stunning. Truly worth mentioning is the tonal/brightness balance of



the worksurface. Many controllers suffer from dim screen, super bright button and medium bright pot syndrome, which I believe contributes to operator fatigue. The Apollo achieves an apparently consistent degree of brightness across its many varied controller types even under unsympathetic lighting conditions. It might seem like a strange thing to say but when you sit at the desk the controls actually seem 'real' as opposed to virtual or soft. It feels like you're actually turning something up or down when you turn a pot rather than incrementing some remote parameter somewhere over there in a rack. It feels immediate and not all controllers feel this good.

Calrec has retained many of the great features of the Alpha like the routing where you can select an output and ask the desk to show you what is routed to it by flashing the channels. You can use this for checking or for adding to the routing. And they've included the Spill panel, which when selected gives you immediate hands-on four fader control of the constituent parts of a 5.1 source. This is essential for all sorts of reasons and it's still the most elegant implementation I have seen particularly when it comes to EQing or changing dynamics on the selected legs.

You'll notice a monitor display on an arm in the picture and this is used for such things as Snapshot creation and project file management. The display is treated by the system as just another control panel.

As already mentioned, things have moved on since the introduction of the Alpha worksurface as far as layers go. Apollo carries over the principle of A and B layers with the same colour-coding as Alpha — green fader screen is the A layer, yellow is the B layer — and there are global A and B selectors in every panel. However, Apollo goes deeper and gives you six A and

B layers and another six on a Bank switch. That's 12 A and Bs or a total of 24 different layers depending on how you choose to count them. Predictably, they've thought about locking faders out of layer selections and fixing or cloning faders into the same position regardless of the layer selected.

Significantly there are three AFL/PFL monitoring systems because you can split the worksurface for three operators each of which will have exclusive access to their own layers and various other functions. This is significant. You could theoretically run an Apollo from the minimum of one bay of eight faders while the maximum fader count that has crossed Calrec's mind is 320. Combine this with the operator splits, the Hydra2 distributed networking and routing and you very quickly arrive at the scenario of, say, three separate control surfaces working in different locations from the same engine. Add in the fact that dynamic automation is being looked at and you can see all sorts of new market potential for this technology.

The price is stated as being 'Alpha money' but, of course, you're getting an awful lot more of desk, processing, power and flexibility for that money.

It is a phenomenal product that succeeds on a number of different levels but ultimately it is the work surface that is the decider. It's fabulously simple yet configurable enough for an operator to make it their own. Existing Calrec drivers will adapt quickly but there is no doubt that culturally, from an operational sense, it is a different proposition to users coming from other brand products. That's always the way though.

To me, Apollo shows just how much we have all moved on in terms of expectation and acceptance in the time since the Alpha was originally launched. Apollo encapsulates our progress. It is a different world now and it needs different tools. Apollo is right on the money in my opinion and it has longevity built-in. ■

**PROS** Worksurface presentation and visual feedback; hybrid operation mode; frighteningly powerful processing and huge channel count; those knobs.

**CONS** It will be a culture shock for those approaching from a different worksurface.

#### Contact

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