

The history of the Grass Valley Group is practically the history of our industry, from small but thrusting electronics company in 1955 to the technical giant it is today. Phil Reed paid a visit

Jolly green giant



Larry Neitling (centre front), vice-president of Grass Valley Products, and his team

FORTY YEARS AGO, a tiny company was formed near a small town nestling in the foothills of the Sierra Nevada, California. That town also gave its name to the company, Grass Valley. Today, Grass is best known for its vision mixers, routers, signal distribution and conditioning equipment and DVEs.

It all started when Dr Donald Hare sold his electronics company to Sangamo in 1955. One of the conditions of the sale was to install a research laboratory for Sangamo. After a trip to Grass Valley in 1958 Hare set up the R&D company with some of his former employees and the Grass Valley Group was formed. The first products made by GVG were actually audio amplifiers for the theatre industry. This is because the original Hare Company had built a lot of audio equipment for Cinerama (the very widescreen film system), which was then at its peak. A call to them turned up an order for nearly half a million dollars' worth of audio gear for some new cinemas.

The next few years meandered along, but a turning point was reached in 1962 when, thanks to a call to an old acquaintance, Grass Valley started selling audio equipment into the broadcast industry. This old acquaintance just happened to be Harry Jacobs, who was by then the chief engineer of ABC affiliate TV station KGO in nearby San Francisco. Jacobs showed the GV team a video distribution amplifier made by an outfit in the Midwest and said that each station used a lot of them. That was enough to convince GV who, then and there, said: "The hell with audio, we're in the TV business!"

From this momentous shift came the 700 series VDAs, with the help of more staff and some R&D. GV exhibited the product in a hotel room at NAB 64 and started selling a few units. Then came its big break. Jacobs needed some video equipment as KGO was to broadcast the National Presidential Convention from San Francisco. Its usual supplier had let KGO down, but GVG would get the order if it could supply 30 DAs and 10 processing amplifiers in a month. The trouble was, the group didn't know what a processing amplifier was! But they found out, fulfilled the order and exhibited the new products on a booth at NAB that year. The proc amp had a very special feature called the Ajax knob which, as the name suggests, was a control that could be wound in to 'clean up' a bad signal and was very popular with customers. ▽

SUPPLEMENT: GRASS VALLEY GROUP

Right: Grass Valley's 4000-3 digital production switcher, the best on the market. Below right: the 100 series switcher being tested ca. 1985



◁ 1965 was to be the first year that profits were made in the new business and by 1967 the range of processing and distribution equipment was complete. In fact there was even a sync pulse generator and keyer in the range. But it wasn't until 1968 that the products GVG is best known for were invented. The inaugural vision mixer was the 1400 series and again the first customer was KGO (this very mixer, serial number 1, is currently in the labs, being refurbished to show at NAB). From then on vision mixers became the products that most people know Grass Valley for; after the 1400 came the 1600 and the rest – as they say – is history.

Today the 4000 (the digital version of the 400) is probably still the best production switcher on the market, even though bits of it are nearly seven years old. Other milestones include E-MEM (a way of 'snap-shooting' the mixer for memorised effects, which won Grass an Emmy), Kaleidoscope and Kadenza (another Emmy), the DVE and compositing system. In 1974 another milestone was reached when GVG was merged with Tektronix. The business went from strength to strength, reaching its peak in 1989.

In the following years, many GVG staff migrated, with ex-employees starting up successful companies of their own. ImMIX, NVISION, Sierra Video Systems, Timeline Designs, Graham-Patten – to name just a few – owe their beginnings to

the vast pool of former GVG talent that still resides in the area. With the competition increasing and the market changing, it was perhaps inevitable that Grass Valley's market would gradually erode over the ensuing years. Ill-advised management and the occasional wrong strategy decision compounded the situation, but Grass Valley has pulled itself round and today is in much better shape that it has been for a long time.

Perhaps hoping physically to dispel the past few difficult years, the original site in Grass Valley has been sold and the activities of the group are now contained in a building just outside Nevada City, a few miles down the road. The current site is set in beautiful woodland and is built on top of Providence Mine (an old gold mine), the cold water from which is used in the air-conditioning chillers to save energy.

Two major personnel changes are reshaping the current Grass Valley's fortune. The first is the appointment nearly two years

ago of Larry Neitling as vice-president of Grass Valley Products. Neitling had previously been with the printed circuit board division of Tek and was tasked to re-build the group. Shortly after, Tim Thorsteinson took over as president of the Video and Networking Division (VND) of Tektronix. It's fair to say that this new team has re-vitalised the operation. "We have a large commitment from Tektronix," explains Neitling, "an example of which is the huge amount of engineering resources that we have dedicated to the regeneration of our product line. Some 15% of our revenue is being ploughed back into R&D."

Grass has always made 'customer driven products'. To quote Neitling again: "People in this industry have trusted Grass to look after their interests in terms of innovation, technology and making sure that the migration paths are there. When you buy a Grass Valley product, you expect it to be part of your infrastructure for a long time. Our research shows that some \$2 billion worth of GVG gear is in use in the market place, some of it dating back to the 1960s. We have open discussions with our customers, so we not only get to influence their decision making, but they also want to sign up for what we are going to do in the future. They will often buy technology that we are still working on in ▷

Neitling: "Broadcasters can't figure out how to make more money and frankly neither can I, but I can help them reduce their costs"





◁ the lab. They will wait for the Grass product to come out. Now that's what I call loyalty."

In the time that Neitling has been at the helm he's instigated new inventory and manufacturing procedures (there's even a brand new manufacturing facility), and after discussions with both staff and customers he has developed a new product road map with set time scales that look as if they are being achieved. "The new product lines will have a cost structure significantly below those of our competitors," Neitling claims. "Broadcasters can't figure out how to make more money and frankly neither can I, but I can help them reduce their costs. As the Internet sucks up more marketing dollars the problem is only going to get worse. Costs can be saved on two counts. First, the initial cost of the products and, second, giving the product more automation to reduce operating costs"



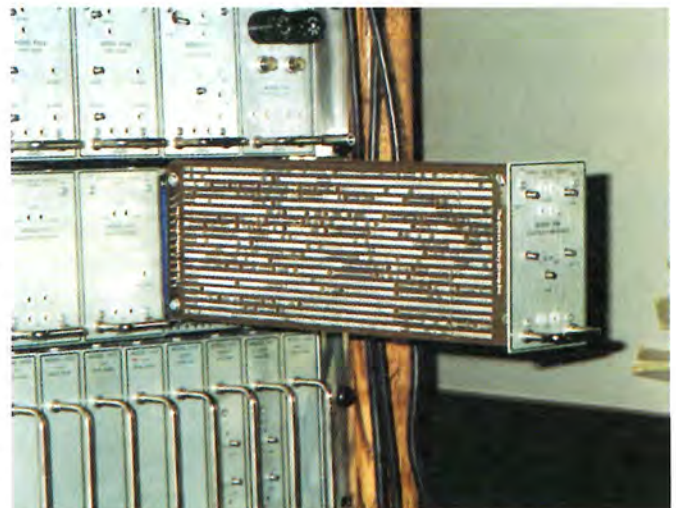
Left: Grass Valley has always made customer-driven products and Neitling confirms that 15% of revenue is being ploughed back into R&D.

Below: The inaugural vision mixer was the 1400 series, and the very first machine – serial number 1 purchased by KGO – is now back in the labs and being refurbished to put on show at NAB

The most significant launches are in the modular range, which is good news as no new modular products have been launched since the 8900 series in 1995. This NAB will change all that with two new variants on the 8900 frames, one with extra cooling and one with a network card – more of which later – and a whole new range of modules. Mark Hilton, product marketing manager for Grass Valley Modular Products, says: "We think there will be an acceleration of the transition to digital and our new products reflect this. We are focused on reducing the cost for the transition to HD. We've gone out and talked to a lot of customers and asked them what products they need, especially as they make the transition from analogue to digital. The customer requests were for multiple formats, centralised control and monitoring, and reduced costs. There is a great desire to configure and monitor modules individually and rack space is critical to a customer who is trying to squeeze in a digital system to their existing infrastructure."

Frame and fortune?

It's difficult to have one frame that will do everything without one use or another being compromised, so Grass decided to have two frames, one low-end standard definition frame and a high-end ▷



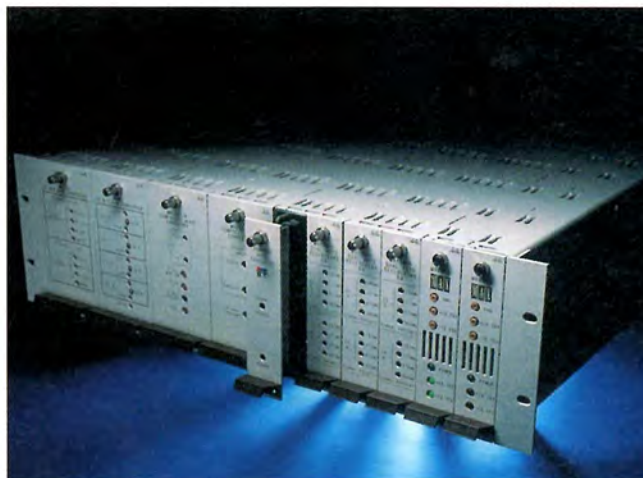
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Group therapy

NAB 99 will see the fruition of the group's labours, culminating in many new products and upgrades to existing product lines such as new software for the M-2100 master control switcher including chroma key, split audio and video transitions, and squeezeback crop to enable more space for graphics. Interestingly, the new software has been written by a GV group based in Bangalore, India, which has been operational for about five years.

"We consider these guys to be a major part of our team and treat them as such," says Bob Rhodes, engineering section manager. Other improvements include a chroma keyer and frame-stores for the HD version of the 110 mixer. The store can be accessed by Ethernet and users can load in TIFF files directly, obviating the need for an HD character generator in many cases. Both these mixers have extra interoperability with both the 7000 series routers and the Tektronix Profile recorders.

The 4000 series also gets an upgrade with the 4003 switcher featuring four channels of Krystal DVE and Profile clip recall which will be shown networked to other Profiles via Fibre Channel. The 2200i integrated version of the 32-input switcher has two channels of Krystal. As a standalone demonstration, the new four-channel Krystal will be shown with a major advance in combining technology. Rick Paulson, product marketing manager for production switchers and DVEs, says: "This new parallel type of combining scheme features channel multiplexing and pixel sorting, thus overcoming the previous restrictions of cascaded combining."



From left to right: the M-2100 SDTV/HDTV digital master control system; the HD version of the 110 series, which now sports a chroma key system; and the M 9600 HD rack-frame amplifier which, along with the 9600 series and various modules, will be launched at NAB. Grass Valley promises more HD products for the future

money to shell out for the new equipment they are expected to buy. The concept with the new equipment is that a TV station does not have to re-tool its whole system to go HD.

Since the bulk of current HD material is coming from 35mm film Grass has launched the Model 110 in an HD version. Ideal for telecine work, the 110 HD has the same control surface and software as the well proven 110. As mentioned earlier, the 110HD now sports a chroma key system, an early production version of which is currently being evaluated by Sony Pictures. It's also highly likely that the 110 HD will be capable of working to the proposed new 1080/24P system in the future. HD still not a huge market in the US with only 30 stations having an HD master control area, but 70% of that market is Grass Valley's.

So that's NAB, but what does the future hold? "We will not make a major production switcher announcement at NAB," says

Mark Narveson, product marketing manager for digital effects products. "We feel that the 4000 still has important advantages over the competition, but a major introduction will be made within the next 12 months. Detailed visits to some major customers both in the US and Europe have shown us the new demands being made on vision mixers. The need to control a lot more peripherals like CG, DVE, stills store and VTRs will minimise the movement of operators between control surfaces."

"We think it's important to let our customers know that we are working on the solutions for them," concludes Neitling. "We have had some general discussions for products to be launched after NAB and, without giving too much away, let me say that over half of my \$13.5 million engineering budget is being spent on the next-generation production switcher. This is a great company, built on great traditions and I intend to keep it that way." ■

HAPPY 40TH BIRTHDAY GRASS VALLEY



We have been using Grass Valley mixers and routers for many years. We are impressed by the professional features and reliability.

Our team appreciates the unique usability, especially when working under pressure.

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