

# THE NEVE 66 SERIES

## John Andrews MIBS describes Neve's development of a digitally controlled analogue console.

The story of the development of the Neve 66 console begins in December 1982, with Robbie Weston and his Silk Sound studio in London. He approached the Windsor-based mixer manufacturer Alice (Stancoil Ltd) to request a new design of multitrack console incorporating electronic reset switching facilities. The company's financial situation in that year of depression dictated that any order was acceptable, especially from an existing customer (Silk already had three Alice mixers) offering money up front. With a confidence born of a combination of ignorance and desperation, design work on the innovative new concept began in January 1983, and the console was installed five months later.

In 1984 an article about Silk in *Studio Sound* magazine resulted in two similar multitrack mixers being ordered by Swiss studio owners, Glenn Miller of Greenwood Studios, Nunningen and Helmie Edinger of Blackwood Studios, Basle. These consoles were delivered in 1985 and the following year Glenn and Helmie considered further orders. However, the financial situation at

Alice was becoming increasingly precarious, so the two studio owners collaborated with Alice designer Mike Law to form a separate company (Acrone Limited, later Alice Digital) in order to safeguard their investments in the Silk technology. With this new source of finance, Mike Law continued his planned development of the digital control systems to incorporate a recall facility for the rotary controls, using a 4-character alphanumeric display in each channel combined with an indicator light alongside each control. It was during this period that Neve, which had been bought by Siemens Austria in December 1985, appeared on the scene.

### Neve's Proposals

In 1986 the Austrian state broadcaster ORF issued a requirement for 16 audio consoles for its regional radio centres in Linz, Salzburg, Innsbruck and Dornbirn. ORF asked for a range of consoles constructed from common modules, and capable of fulfilling all of their operational requirements, from simple newsreading functions to multitrack music recording and remixing, and jingle productions.

Siemens, historically a major supplier to ORF, naturally expected the newly acquired Neve to be able to secure the contract. Unfortunately, though, the ORF specification was for digitally controlled analogue consoles, which Neve had never

manufactured and could not supply. Nevertheless, Siemens insisted that Neve should propose a solution, even if it meant designing a new type of console, and three separate proposals were created: standard Neve consoles, suitably modified consoles, or a brand new design.

In March 1987, the Neve team was shown copies of a console proposal which would apparently meet the ORF specification, and were told to offer something similar. Several years later it became clear that what had been shown were drawings for a proposed new Studer console, the 990 Series.

The requirement was for digitally controlled switching and routing, and also for digital control of input amplifier gain, all with recall/reset facilities. The author of this article was, at the time, serving as Neve's Sales and Marketing Director and had previously been Joint Managing Director of Alice (Stancoil Ltd) when that company designed the Silk multitrack console. I suggested that the requirement could be met by combining the Silk technology with Neve's 51 Series broadcast mixer and the remotely controlled mic amplifier of the Neve DSP-1 digital console.

### Silk Mk2

Meanwhile, the development of what was intended to be a Silk Mk2 console was proceeding at Acrone's premises in Windsor, just around the corner from where Alice (Stancoil Ltd) was in terminal decline. Glenn and Helmie each wanted one of the new mixers, and believing that the design was in advance of anything else on the market at the time, they thought further consoles could be sold to other studios. With this in mind a small demonstration unit was produced for the 1987 APRS exhibition in London.

The timing proved to be fortuitous as Siemens was interested in pursuing the technology purchase route to meet ORF's requirements. It was arranged for Siemens technical representatives to visit the exhibition and examine the product, and subsequently Siemens approved the idea. Negotiations between Neve and Alice Digital resulted in Neve acquiring the rights to use the Silk digital switching technology for an undisclosed cash sum plus the provision of two 48-channel Neve V series

consoles (to be installed at Glenn's and Helmie's Studios instead of the Silk Mk2 consoles originally sought).

The implementation of the technology transfer involved Mike Law effectively designing what became the Neve 66 Series, as most of Neve's own designers were heavily involved in other projects, including the development of the Capricorn digital mixer.

### New Designs

The original intention was to combine the Neve 51 Series console with the DSP-1's remotely-controlled microphone amplifier, as the basis for the 66 Series. However, the Neve 51 was expensive to manufacture and had unbalanced buses. Determined to accept no compromises in quality, Mike Law took the opportunity to introduce balanced buses in the mixing and output stages, and also replaced Neve's ageing -15V CMOS control system with his own 5V CMOS system, well proven in several previous Alice designs.

## “With a confidence born of ignorance and desperation”

A problem was also identified with the DSP-1 mic amp when a prototype was sent to Vienna for testing, as severe clicks were heard during gain changes. This mic amplifier was not designed with real time operational gain changes in mind, and Neve's designers struggled with little success to solve the problem. So Mike Law was asked to collaborate with the Neve designers (who had initially rejected his offers of assistance with some disdain; the 'Not Invented Here' syndrome!) to produce a new design.

In addition to the switch reset function inherited from the Silk design and the reset facility built into the input gain control, all the standard (analogue) rotary controls were also designed to have a recall capability which would be enabled in later versions of software, using the 4-character alpha-numeric displays near the faders coupled with LED indicators alongside each rotary control to show which ones to adjust.

### Delivering Consoles

The 16 consoles for ORF's Westrekke studios were tested successfully against the demanding IRT specification, and delivered during 1989. The standard 66 Series had been launched in the previous year and orders were soon received from BBC Radio (a total of six consoles for Broadcasting House) and from a number of television studios, the largest console being a 44 channel multitrack version for the BBC SYMPHER Suite in Television Centre.

The BBC Radio desks, delivered and installed during 1991, were inevitably non-standard and the software modifications required by the additional hardware meant that each console had to be tested by Acrone before delivery. Some correspondence from the period indicates that all did not go smoothly! In June 1991 Mike Law wrote to Neve asking for an order for two days of additional consultancy to compensate for delays due to non-completion of the custom hardware. “Unfortunately we had to spend the majority of the time available to us getting the hardware ready for checking, rather than completing what we intended to do,” he explained.

During 1990 discussions began with Siemens about possible upgrades to the console's specification, prompted by ORF's desire to implement the rotary control recall system. At the same time Siemens was negotiating to acquire Burnley-based AMS Industries. A deal was concluded in September 1990 for a reported £8.9m, and in October 1992 it was announced that the newly-built Neve factory in Cambridgeshire, opened with great publicity only five months earlier by HRH Prince Edward, would close at the end of the year.

In November 1992 Siemens placed an order with BCD Audio (the new trading name for Acrone) for the new software and additional hardware to implement the extended recall system for the 66 series console, including PCMCIA 'credit card memory modules.' The following year Mike Law and engineer Chris Finney enjoyed a working tour of ORF's Westrekke studios to install and commission the upgrades, and it was hoped that a successful trip would lead to upgrade orders from other Neve 66 owners.

After the formation of AMS-Neve, BCD offered the BBC an enhancement package for the 66 Series console in its Training Suite at Broadcasting House, as the ideal place to demonstrate the advantages of the

upgrade. However, the BBC wanted the offer to come from the manufacturer, and so in September AMS-Neve booked BCD for two days of support work at the BBC, and asked BCD “to consider helping us to support the BBC from a service point of view long-term.” Mike Law was therefore stunned to receive a second letter the following month informing him that “the decision has been taken not to ask you to be the first contact for first-line (sic) support, or to make recommendations to the BBC regarding the installation of your software.”

A direct approach to AMS-Neve's managing director Mark Crabtree was ignored, and BCD then became aware that it had been reported within the BBC as being 'not interested' in assisting with the front-line maintenance of the 66 series consoles – an assertion which was completely unfounded and about as far from the truth as possible. It had become clear during 1993 that the BBC's 66 Series consoles would benefit greatly from the installation of the upgrade software, which contained a significant number of bug fixes as well as the operational enhancements, so BCD wrote again to the BBC offering assistance. The offer was declined, and in early 1994 it became obvious that AMS-Neve was determined to phase out BCD's involvement in the support and enhancement of the 66 Series. Production of the 66 Series, which had been set up at Neve's Kelso factory in the Scottish Borders and continued there during the merger, ended shortly thereafter. Several of the BBC's 66 Series desks in Broadcasting House continued in service until the demolition of BH Extension for the West One project in 2006.

The very last 66 Series to be completed (a 16-channel frame with 12 input modules) was installed in a van in 1990 as a touring demonstration unit, but a couple of years later the desk was loaned to BCD at Windsor to provide a software development test bed. In 1994 AMS-Neve gave BCD permission to dispose of the console, which was then refurbished, fitted with custom metering, and sold to Greenwood Studios in Switzerland where it was used for many more years as a mastering console.

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