Foreword by Mr. Rupert Neve

There has been a growing realisation that in spite of the many advantages of digital sound processing, as yet only the highest quality analogue is entirely satisfying to the professional sound engineer.

The fine subtleties of circuit design relating to sonic performance are gradually becoming more clearly understood. For example, research has shown conclusively that frequencies above 20kHz affect the way in which humans perceive sound quality. But, long before such scientific evidence emerged a substantial body of musicians and engineers knew that equipment with apparently the same technical specification nevertheless sounded different.

Obviously, there must have been parameters that were not being measured - or were considered to be unimportant. For example, a figure of 0.1% harmonic distortion was thought to imply excellence or at least "as good as you can get" but without qualifying the harmonic order of distortion such a figure cannot identify the sonic quality. Very small amounts of high order distortion producing musically dissonant odd harmonics, have a disastrous effect on the sound quality whereas if the 0.1% is all composed of second harmonic, it will be totally inaudible.

Odd order harmonics above the 3rd, i.e. 5th, 7th... etc. must be reduced by more than fifty times below the old "0.1%" standard.

A modern console requires a multiplicity of circuits to drive busses, auxiliaries and to provide for numerous alternate signal paths. Integrated circuits make use of "push-pull" output configurations. As their name implies, within the I.C. two output devices work as a complementary pair, one device handling the positive half of the signal and the other device handling the negative half. In an ideal situation both devices would work simultaneously each device handling the entire signal all the time. This is known as class A operation. Unfortunately, the current required for this mode of operation has to be high enough to cater for totally linear operation of the devices at the continuously maximum signal level. The small size of the integrated circuit makes it impossible to dissipate the resultant heat that would be generated.

To keep dissipation within limits each device must be biased to handle half the signal and draw only enough current to feed the load. The point at which one device hands over to the other, known as the crossover point, needs very careful attention from the designer. Very small discontinuities or imperfections in the crossover result in disastrous high order harmonics.

The 9098i design displaces the crossover from the zero region and linearises the transfer characteristic resulting in a quasi-single sided amplifier having the pure sound of class A.

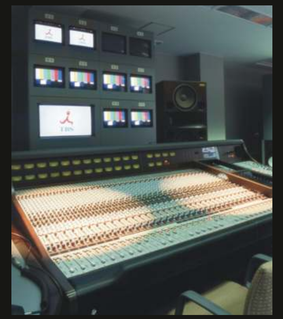
The performance figures are a dramatic advance on anything previously achieved but that is only part of the story. The only way to be convinced is to listen - not just to already recorded music with all its limitations, but to live performances and experience the power of the equalisation for which my vintage consoles are famous. I think you'll enjoy opening up a new perspective on this familiar setting.

The Electrical Interface

The benefits of high quality signal processing within the console can only be realised if inter-connections with the studio are of an equally high order. I.C. amplifiers can give very good measurements on the design bench but they do not provide adequate rejection of the stray fields, which are found in every working environment. Input and output circuits must be freed from ground dependence so that only the "wanted" signal enters the processing path. Transformers are the ideal solution,



Mr. Rupert Neve



9098i in Drama Production

providing total galvanic isolation but if they are to handle a wide dynamic range they are necessarily bulky and expensive. Instead of input transformers I use my "TLA" - Transformer-Like Amplifier - which achieves a similar result with only a small increase in cost.

Output circuits need similar independence from ground-induced and environmental interference. Outputs also have to drive a wide variety of loads ranging from the traditional 600 ohms to long lines. In addition, cable itself further loads the outputs. Twin screened or quad pairs are used to interconnect equipment, patchfields etc., within the control room and between the studio and control room. Similar cables are used over much greater distances in location work. A modern high performance twin-screened cable has natural impedance of between 50 and 150 ohms, mainly due to capacitance. Even short runs of such cable simply cannot be driven adequately by common Integrated Circuits. The principal signal outputs of the 9098i use high definition transformers whose design is integrated with powerful discrete driver transistors capable of driving any load situation. Auxiliary outputs are driven by self-balancing hybrid amplifiers designed to work with all control room situations.

Summary

There is no such thing as a perfect amplifier. Every design represents an optimisation of criteria determined by the designer, so it follows that every design reflects the aims, opinions, experience and even the personality of the designer. I have designed the 9098i to substantially exceed known requirements according to our present knowledge but, most important of all, the sonic quality of the 9098i is satisfying and gives pleasure to the ear.



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9098i

Multi-format Production Console



The Pinnacle of Excellence

The 9098i Super Analogue Console

In the modern audio industry the AMEK 9098i multi-format production console has no equal in terms of audio quality, features and automation.

Critically acclaimed by many of the worlds leading producers/engineers as the greatest sounding console of all time, the 9098i's advantage stems from its unique ability to combine the much loved sonic qualities of vintage desks with an unparalleled feature set and extended functionality of the worlds most powerful console automation system, ***Supertrue V4™.***

9098i epitomises Super Analogue console technology at its most refined and advanced state. As well as being the only modern day console with the right to genuinely bare the words "Designed by Mr. Rupert Neve". The 9098i has a pedigree of design that no other manufacturer can match.

However at AMEK we wouldn't want you to just take our word for it. Why not audition the 9098i yourself and experience the difference with your own ears?

- Genuine Mr. Rupert Neve design
- Unrivalled sonic quality
- AMEK generic Supertrue *V4™* automation
- User-defined intuitive ergonomic layout
- Multi-channel mixing/monitoring as standard
- Quite simply the ultimate operational experience



Always in session

Sonic Perfection...Just Listen



Glenwood Place Studios, Burbank, CA

9098i

Just Some Reasons Why





"My choice of the AMEK 9098i was inspired by opportunity and the desire to run ahead of the pack. I was absolutely stunned by the sound of the desk. The power and fullness reminded me of the older Rupert Neve-designed modules that I've collected over the years. I was receiving calls to book the console before it was even installed.

The automation package is as engineer-friendly as it is comprehensive, plus I've got dynamic options on every fader - in one afternoon, I was able to mix like I was used to mixing on it, and more! Finally a console with the sonics akin to my old Neve modules, combined with the automation power of an SSL - audio nirvana is here!"

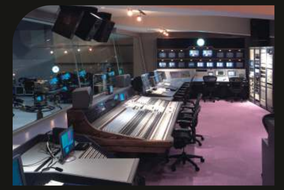
Jim Zumpano, Owner/Producer, Stonehenge Recording, Atlanta

"All the engineers who come here agree with us that the sound is unsurpassable. The mic amps are the nearest you can get to a vintage Neve. The layout of the desk is great; 16 auxes make it so much more flexible. And the automation is very simple to use and very accurate. It takes a similar approach to the ProTools system, which means that a lot of people find it familiar and user-friendly.

A year ago, there was a lot of pressure on us to put in an SSL console. At the time, we were using a lot of the 9098 EQ channels in our outboard set-up; we'd grown very used to them and our ideal solution was to have a whole desk that sounded like that. We thought it would be the best console we'd ever heard - we were right, and everyone who comes here agrees!"

Paul Wilson, 'Producer Absolute', Olympic Studios, London





Digital Open Studio, Nihon Kogakuin,Tokyo, Japan



"The power is undeniably there. The combination of Neve's legendary circuit design and the flexibility of the features and automation make this a spectacularly uncompromising desk."

Bulent Aris, Producer, Booya Music Production, Hamburg



"It's very rewarding to be confronted by possibilities, not limitations, when recording and mixing a record. This is truly what mixing on a 9098i is all about.

Imagine an EQ that can swing effortlessly from subtle to brutal with outrageous amounts of boost and cut muscle and less phase coherency penalty attached to those choices than you ever imagined possible. An EQ so clean, you can chain 6 of them in a row on something and still have fidelity on the other end.

A stable, flexible and powerful automation system that lets you work the way you want, not the way someone whose never mixed a record in his life wants.

Imagine a sound that is clearer, wider and more musical than anything on the planet. No, try harder... it's better than that!"

Tim Giles, Owner/Producer, Big Blue Meenie, New Jersey

"I've always been a fan of British consoles and Mr. Rupert Neve, but I have also wished someone would couple that classic sound with the best in console automation. After sitting behind the AMEK 9098i for a short time I am convinced that AMEK & Mr. Rupert Neve have achieved this magic combination.

I now have that classic sound coupled with an automation system that is not only powerful, but so easy to use. Put simply, Glenwood Place is my vision for success and I know I can achieve it, because Rupert and AMEK have designed the ultimate analog board, the console of our dreams."

Phil Bonanno, Vice President, Glenwood Place Studios, Burbank





The possibilities enjoyed on a 9098i are further enhanced through the power of ***Supertrue V4™***, the latest development of AMEK's highly successful and well established automation package.

Fast, intuitive and easy to learn Supertrue encompasses the largest installed user base of any console operating system of it's type in the world. Supertrue V4 truly thinks like you mix having also been designed in consultation with some of the world's top producers and engineers.

V4's comprehensive feature set incorporates, Moving Fader (on Monitor & Channel paths) and Switch automation, Virtual Dynamics®, Recall and comprehensive oft and on-line editing as standard, ensuring there is no compromise on functionality.



In Review

"The system is stuffed with clever options and sheer versatility. There is at least two or three different ways of doing almost everything, which means that you can use it as suits you best, screen based or dedicated button based or somewhere in between, the choice is individual. All the standard automation capabilities are there, but some features are unique. It's also worth mentioning the amount of effort that is still being applied to developing Supertrue. Mature but evolving, that's Supertrue."

Keith Spencer-Allen Audio Media

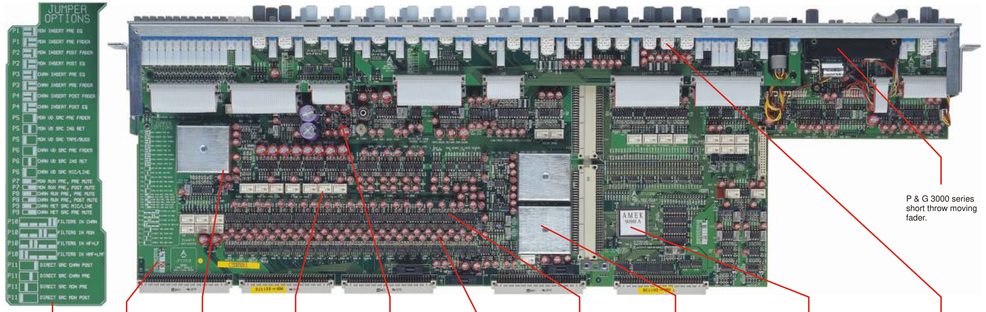
Supertrue V4

The Automated Advantage



9098i-A Mono Input Module

The 9098i-A mono input module has, like the rest of the 9098i console, been designed to provide exceptional audio performance over an extended frequency response of -3dB @200KHz. Couple this with the Virtual Class 'A' circuit designs of Mr. Rupert Neve, Linear phase response and the highly skilled engineering knowledge required to realise such specifications on a final production console results in probably the finest large format audio console ever made.





9098i-L Stereo Input Module

9098i

Artistry in Analogue™

Pure Quality, Pure Performance

The unrivalled sonic and technical performance of the 9098i can only be achieved with meticulous attention to the finer and subjective details of audio circuit design.These are the hallmark's of Mr. Rupert Neve's most splendid creation to date and for this reason alone no expense has been spared in the design of the 9098i's signal path.

AMEK's manufacturing process is second to none. A well established quality procedure, including extensive testing at all stages of manufacture, means every one of our products is first class.

Rugged motherboard construction and the highest grade of components, coupled with skilled craftsmanship throughout, means the 9098i delivers superb stability and reliability, affording you peace of mind for years to come.



Extensive test and line up procedures.
(Note: Ribbon extenders used for test purposes only)



Reliable MPS-15 Linear Power Supplies - Designed to provide stable and very clean power to the 9098i.



Sturdy Welded Steel Chassis Sections.