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**KINTEK SCORES
WITH MONO ENHANCEMENT**

BY

JOHN F. ALLEN

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There can be more to a state of the art theatre sound system than stereo. Kintek's mono enhancement system produces five channel sound from Academy mono films.

Every year more and more films are released in stereo. But, while there should be no argument that stereo greatly improves the film going experience, the majority of films are still being released in monophonic sound. Some theatre owners have delayed installing stereo equipment due to a lack of stereo films. Owners of some "X" rated houses rarely run films recorded in stereo but would still like to upgrade their systems.

Kintek's cinema processor offers perhaps the best answer to both situations. In theatres equipped for stereo, it is the final link. In theatres playing only monophonic films, it is the only link.

Even though the Kintek system fully utilizes the left, center, right and surround speakers, in the true sense it is not stereo. Stereo requires at least two discrete sound channels. These are generally called left and right. A third center channel can be derived by simply summing the left and right together. What stereo adds is an auditory perspective, in effect a recreation not only of the original sound but also the location of each event or instrument as it would appear to a listener, were he or she actually there.

The heart of the Kintek system is their KT-21 "Stereophonizer", a stereo synthesizer. Its job is to simulate a three channel stereo effect from a monophonic source, without harming dialog. Listening to the result, one hears the sense of width and depth stereo provides without the directional cues required to determine locations. In this case the center channel is used to play the original mono signal without processing thus providing normal dialog.

In my opinion, stereo synthesizers have generally been failures. It has usually been easier on the ears to listen to the original single channel sound than to their pseudo stereo. It seems that no matter what the scheme employed, they have eventually exhibited some sort

of out of phase or out of balance characteristics in the sound. The Kintek unit is the only synthesizer I've yet heard that is free of these effects. The result is a presentation subjectively more pleasant to listen to than the monophonic original. Quite an achievement considering that one now has the option of hearing virtually every film ever made with a new sense of fullness.

As welcome as this improvement might be, Kintek, a subsidiary of DBX, didn't stop there and later developed the KT-24 surround and bass enhancement processor, the first of its kind. Most Academy mono films lack deep bass. Typically they exhibit little or nothing below 50 Hertz (cycles per second). Audible sound and some stereo films go considerably lower. To solve this problem, Kintek incorporated DBX's sub-harmonic synthesizer and a specially made KT-90 subwoofer. The sub-harmonic synthesizer takes the portion of the sound between 50 and 100 Hertz and plays it one octave lower. In other words, a 60 Hertz signal will also be heard with a 30 Hertz signal extending the lower portion of the bass band with dramatic results.

The other half of the KT-24 is the "surround decoder". This circuit constantly monitors the soundtrack and determines whether or not it contains dialog. When dialog is present, the surround speakers are turned off. But when the sound becomes music and/or effects, the surrounds come on to provide a remarkably realistic surround effect. To fully appreciate this device one should watch scenes with helicopters or space ships as the KT-24 will track these through the theatre in a manner closely resembling a full four channel stereo soundtrack. Situations occasionally can occur when a syllable or two will be played through the surrounds. But with the surround level and delay set properly, this effect is not offensive, considering the benefits this surround processor provides.

Also included in Kintek's system is the KT-21 dynamic range expander/noise reduction unit. Expanders make quiet sound (including noise) quieter and loud sound louder. The KT-21 uses a DBX designed three-band expander which works separately with the bass, mid and treble bands. when used at the 1.1 or 10% expansion ratio it does an effective of reducing unwanted background noise without noticeable modulation or "breathing" effects.

One unexpected feature is the lack of fiddling required to use the Kintek system with different films. In seven months of use at a local theatre, only the level of the subwoofer had to be lowered for one film. This done with a front panel control. The surround level, also a front panel control, has never required adjustment.

Quite frankly, before I ever heard this system I viewed it as a bit of a monster, tamed only

by constant readjustment from film to film - or even scene to scene. After all, how could anyone design such a “gimmick” and have it work properly with different soundtracks all made without playback processing in mind? As with all cinema processors however, the initial setup is critically important. Once properly set, Kintek’s system can just about be left alone.

The only slightly negative comment I have about this system is not the system at all but the advertising agencies’ insistence in calling it “stereo” or even “stereo redefined”. These descriptions can only tend to mislead and confuse people who might wish to benefit from the fine MONO enhancement system it (more accurately) is.

I personally have been both surprised and impressed with Kintek’s performance and feel I should recommend its use to anyone as part of an overall sound system which includes a real processor for Dolby stereo and first rate loudspeakers. Such a system would be truly state of the art as well as a real crowd pleaser.

Recently Kintek has developed two modifications announced here for the first time. A “de-esser” circuit has been added to combat sibilant or “essey” dialog which affects many monophonic films. Another helpful change is the further use of the dialog detection circuit in the surround processor to increase the level of the center channel a bit during dialog. This provides a “harder” center image for better intelligibility as well as the widest possible stereo effect during music and effects.

If only we could get theatre owners as interested in better sound as manufacturers like this are becoming, we might well find that audiences CAN tell the difference after all.

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