

NEOTEKSERIES I

Introduction

NEOTEK Series I consoles have been universally acclaimed as today's finest sounding recording consoles. They are now available with an expanded compliment of options and input configurations to suit sound reinforcement, broadcast, and theater installations as well as recording studios. In each application their functional design and sonic excellence are unsurpassed. Like every NEOTEK console for the last eight years, the Series I is completely transformerless and employs the most innovative circuit design in professional audio.

The four or eight-bus Series I is available with input modules having a four-knob equalizer with parametric midrange which has been engineered for optimum musicality, or with a four-band multi-mode parametric EQ of unparalleled flexibility. A recording module is optional, and a Theater Effects System version of the Series I offers an output pot matrix, multiple presets, quad panners, and other specialized features. A stage monitor version is available, with Series I of the input channels, Series IE equalization on each of ten output masters and numerous other features specifically directed toward high end sound reinforcement. The Broadcast Production version of the Series I similarly offers the sonic advantages of NEOTEK with the specialized functions which efficient production studios demand.

Series I consoles are used around the world in grueling sound reinforcement applications; they hold up, and their functional design suits a wide spectrum of operator requirements and skills. They are used indoors and outdoors, in fixed as well as portable systems, for house and stage monitors.

With the recording module, NEOTEK Series I consoles are chosen for the most critical applications, where price can never compromise sonic quality. TELARC Records, Trax Productions, Varese-Sarabande, and other users of the Soundstream Digital Recording System own NEOTEK Series I's in preference of all other consoles. The recent Grammy-winning TELARC releases are acclaimed as the finest discs ever produced.

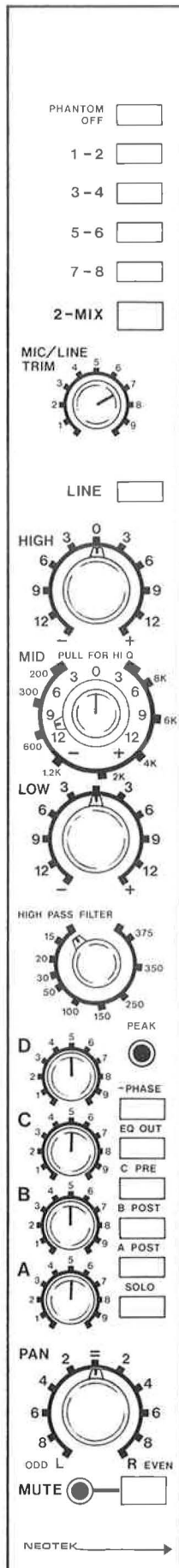
Rolly Brook of Bolt, Beranek and Newman, who specify NEOTEK Theater Systems consoles, reported in a paper before the Audio Engineering Society that of all theater consoles, NEOTEK was the quietest and conformed most closely to the ideal functional form. Acoustical consultants specify NEOTEK for these reasons and because we work cooperatively with consultants, contractors, and the end users.

Broadcasters such as WFMT/Chicago and WNET/New York as well as production companies such as Dick and Burt and John Doremus Associates find that the clarity from their NEOTEK consoles is clearly superior, even over the air. In addition to production/syndication work, NEOTEKs are used in regular remote broadcasts, such as the Chicago Lyric Opera, and specials, like the 1980 Chicago Jazz Festival broadcast over their satellite system by National Public Radio.

The New York Metropolitan Opera, The Chicago Symphony Orchestra, The Lincoln Center for the Performing Arts, the Berkeley Repertory Theater, Indiana Repertory Theater and the St. Louis Symphony are just a few of the more prestigious NEOTEK Series I clients, but the spectrum is broad and the list is long.

All of these users and applications are but a part of the unequalled reputation for quality and value which come standard on every console bearing the name NEOTEK. If you are involved in broadcast, recording, theater, sound reinforcement, or film sound, NEOTEK is a name you will hear more often. Our dealers or the factory will be pleased to provide additional information or references upon request; perhaps there is a NEOTEK in your future.

SERIES I INPUT



TRACK ASSIGNMENT is from the pan pot to the submasters or to the main stereo mix (2-mix) or both. No level is lost by multiple assignments and no pops occur when assignments are changed.

The **MIC/LINE GAIN** control changes the mic input gain and the line input attenuation simultaneously. The design is such that these functions never conflict. No pad is required on the mic input since there is no transformer to overload and the input will tolerate +12dBv or over 3 volts peak. A high capacity 48V phantom power supply is standard. Gains are quietly and continuously variable.

The **LINE** switch selects the line level input instead of the microphone.

The **SERIES I** equalization section has three continuously variable controls. The **HIGH** section is a smooth and gradual shelf which reaches its maximum effect at about 18kHz and has a natural, progressive action. The **MID** section is a true state-variable parametric equalizer with a peak/dip response and bandwidth slightly over one octave; in this mode it has a very musical effect. When the boost/cut control is pulled upward the bandwidth (only) changes silently to just over one-third octave, for more specialized control. The center of the band may be smoothly varied from 200Hz to 8kHz; the frequency, bandwidth, and amplitude controls do not interact and phase shift is minimal. The **LOW** band is a broad peak/dip band centered about 120Hz, resembling the proximity effect of cardioid microphones. Like the other bands, its effect is precisely symmetrical on boost or cut and its center position is truly flat. No NEOTEK equalizer produces out-of-band anomalies, interactions, or phase shift.

The **HIGH PASS FILTER** is in the input chain before the EQ and patch point. It is a 2-pole (12dB/octave) Butterworth filter; when set to its lowest frequency, it is less than 1/2dB down at 20Hz.

The **SERIES IE EQUALIZER** is identical to that of the Series II and III. It provides four bands of symmetrical peak/dip control whose frequency centers are widely tuneable and overlapping. Because of the highly developed NEOTEK state-variable design there is no interaction between frequency and amplitude within or among the bands. The filters are slightly wider than an octave and sound extremely musical. The low band precedes the others and the insertion point as well, which means that low-frequency filtering may be applied to signals accessed at the patch point. When the boost/cut knob on the high band is pulled outward, the filter switches silently to a shelving mode without affecting the frequency or amplitude settings. Such a change is easily made without removing one's hand from the control or one's attention from the sound. Similarly, the two mid bands switch to narrow filters, just over one-third octave, for special effects. The low band switches silently to a tuneable 12dB/octave high pass filter. Each band allows an instant comparison of its alternate modes.

The **PEAK** sensing LED lights to show remaining headroom at three points in the input signal chain; at the patch point send, after the equalization section, and after the fader. Its threshold is user adjustable via a master trim on the Recording Module.

Foldback sends **A** and **B** are derived from the point in the input signal chain after the equalizer, and before the channel fader. The **A POST** and **B POST** switches move the foldback sends post-fader for use as echo or effects sends. Echo sends **C** and **D** are nominally after the channel fader. The **C PRE** switch allows that send to be used as an additional foldback send.

The **-PHASE** switch inverts the phase of the signal chain, including line inputs and patch returns. This means that phase reversals can be made at mixdown, or on line inputs such as a drum sub-mixer or a synthesizer. Unlike a mic reversing switch, this one is silent and may be operated during a live performance. In combination with the high pass filter, switching every other vocal mic out of phase will do a tremendous amount of garbage removal to impressively clean up the sound in a live mix.

The **SOLO** switch isolates that input in the headphone mix (for PA) or in the control room monitor mix on consoles with the recording module. Other mixes are unaffected. Since the solo signal is taken before the fader and is thus mono, the control room mix automatically switches to mono and the solo comes down the middle.

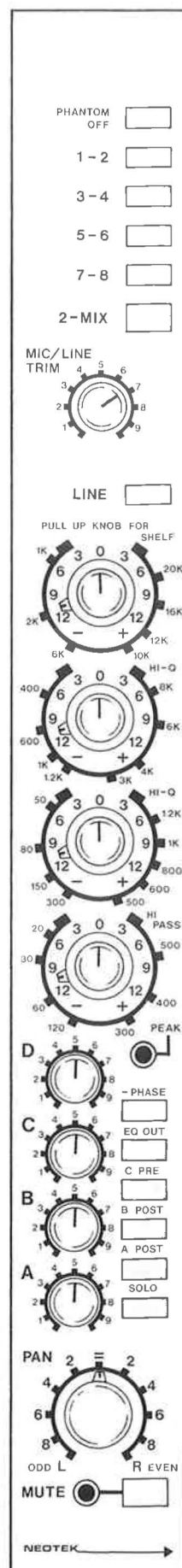
The **PAN** pot is a true sine-cosine dual control which routes the channel to the push button assigns.

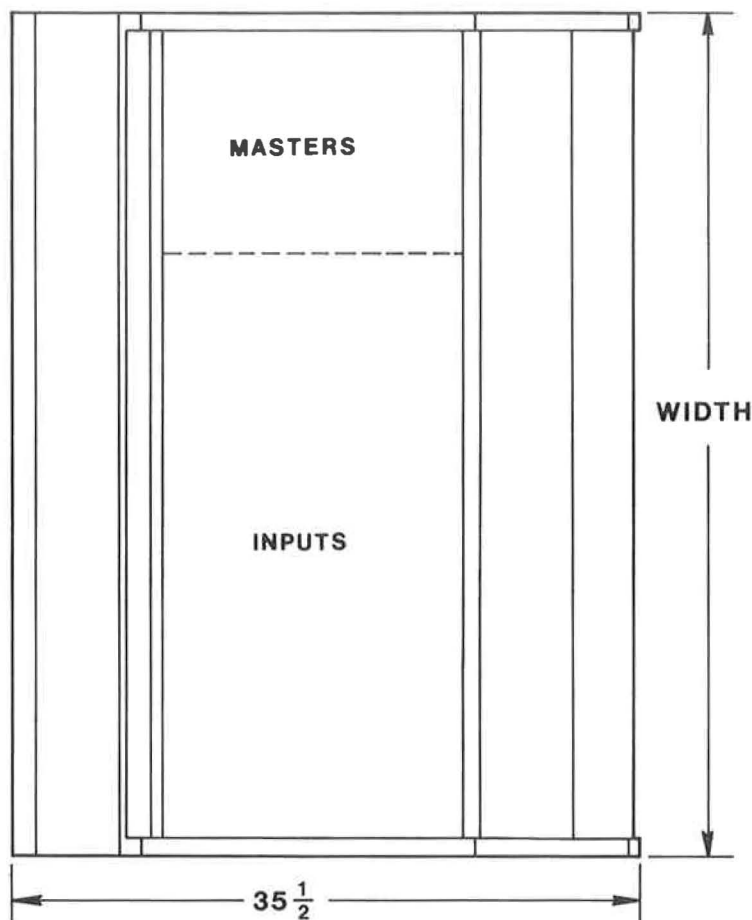
The **MUTE** switch silently mutes the track assignments from the pan pot, the echo sends, and the direct output. An LED indicates muted channels.

Below each module is a melamine laminate write-on strip for easily removed grease pencil notes or which will accept 1" leader tape for making a mini track sheet which can be wrapped around the master tape and stored.

At the front of each input group, mounted on a separate panel, is the 100mm channel fader.

SERIES IE INPUT

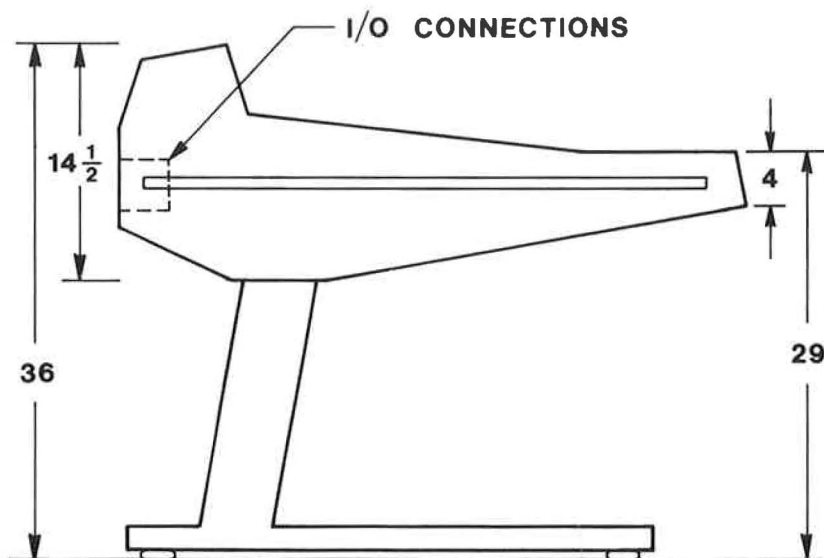


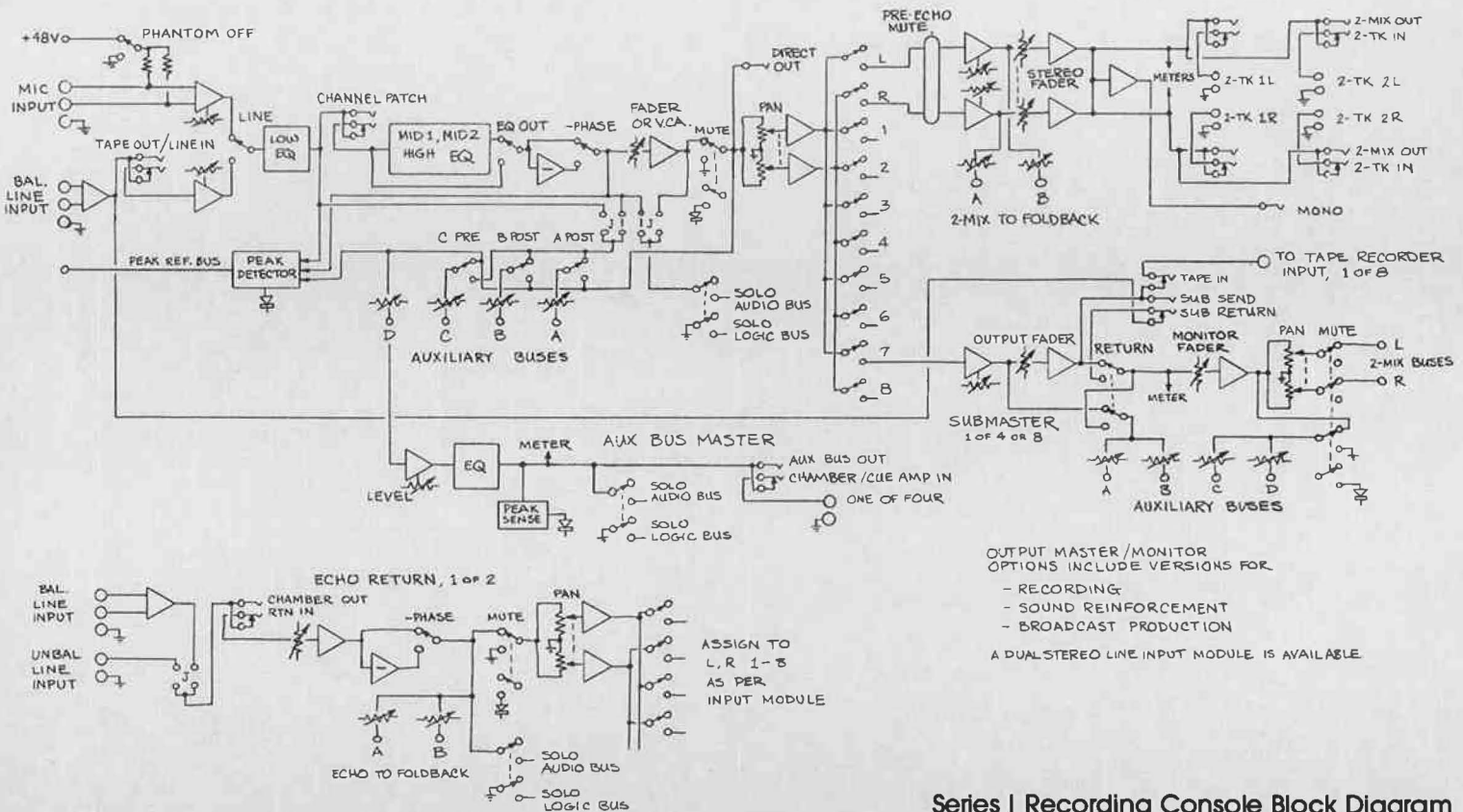


Series I Recording Console Dimensions

Format	Width
12 input, 4 output	40 $\frac{3}{8}$ "
16 input, 4 output	47 $\frac{1}{2}$ "
20 input, 4 output	54 $\frac{1}{2}$ "
24 input, 4 output	61 $\frac{1}{2}$ "
12 input, 8 output	47 $\frac{1}{2}$ "
16 input, 8 output	54 $\frac{1}{2}$ "
20 input, 8 output	61 $\frac{1}{2}$ "
24 input, 8 output	68 $\frac{3}{4}$ "

Tolerance $\pm \frac{1}{8}$ "





Series I Recording Console Block Diagram

Specifications

Manufacturers' claims and specifications are the least reliable basis on which to evaluate console performance; they are highly subject to enhancement. NEOTEK has long contended that excellent performance specifications are the consequence, not the goal, of superlative design. Our consoles have produced gold albums, Grammy-winning albums, and audiophile albums both digital and analog of the highest caliber; they are used whenever engineers demand maximum quality. It is also true, however, that when measured from input to output and compared to all other consoles, in every case NEOTEKs are demonstrably superior in terms of noise, distortion, and dynamic range. More importantly, after years of intensive listening comparisons by the most critical engineers one fact has been firmly established: when it comes to sonic quality, nothing at any price beats a NEOTEK.

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