

SANSUI QRX RECEIVERS WITH NEW QS VARIO-MATRIX

Straight Answers from Sansui about 4-Channel Stereo, QS Regular Matrix System and QS Vario-Matrix

Why 4-Channel Stereo?

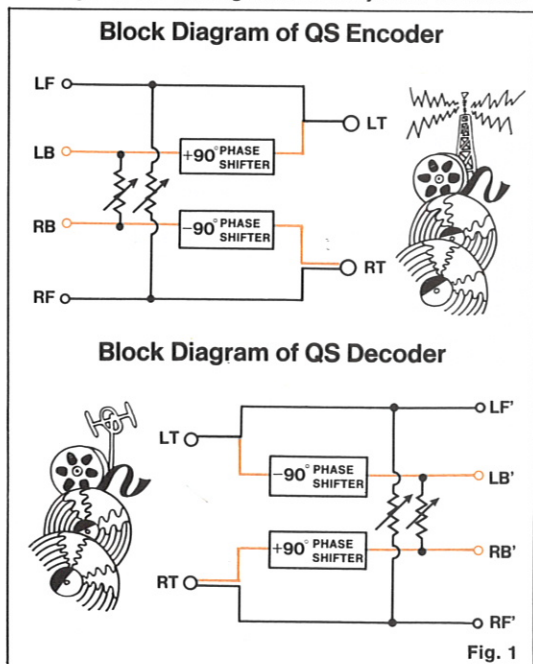
Many people would say that 4-channel stereo works so well because it has twice the number of speakers to deliver the sounds. The trouble with this logical answer is that it's only partially correct. The fact is that 4-channel sound is not just "twice as good" as conventional 2-channel stereo. It's *infinitely* better. And here's why:

Conventional 2-channel stereo works on the principle that sound coming from the left and right speakers will interact to create the effect of "presence" missing from monophonic sound reproduction. The left/right placement can also create the illusion of movement and direction in sound. The one serious drawback to this, however, is that 2-channel illusions are strictly 2-dimensional. They take place only along one flat "wall" or surface. And all of the sounds are direct, as well, with no ambience or reflected sound depth.

At a live musical concert, or in the midst of a crowd, our ears perceive a multitude of sounds from all directions at once. This is what is called a natural sound field. It has no flat walls since each listener is in the center of his own 360° circle of sound, made up of direct and ambient sounds. This natural sound field can be recreated only by a multi-channel audio system. And that's what 4-channel is and does. It's as simple as a circle of sound and just as perfect. It's a whole new approach to full realism in reproduced sound and Sansui's new QRX series of 4-channel receivers makes it work to full advantage for you. Here's how:

The Sansui 4-Channel Secret—QS Regular Matrix System

Although recently improved by the addition of the QS vario-matrix (incorporated in all QRX models) so that it is now able to reproduce 4-channel sound on a pair with discrete tape, the basic secret of Sansui's 4-channel magic is the QS regular matrix system. This revo-



lutionary innovation has been widely acclaimed since it was first introduced at the Consumer Electronics Show in New York in 1970.

If you were to look inside the QS regular matrix system module in a QRX receiver, you would see, of course, a complicated-looking electronic circuit. The function of this circuit is actually very simple, however. It consists of a Square Matrix and a pair of Plus/Minus 90° Phase Shifters. These elements make it possible to decode the two 'encoded' total signals recovered from your QS 4-channel record, tape or FM broadcast. These two total signals, you see, were actually picked up from any number of microphones placed around a concert hall or recording studio, and then encoded or reorganized into two signals by means of a QS encoder, so that they can be put into the record groove, recorded on tape, or transmitted via FM multiplex. The illustration (Fig. 1) shows how this is done.

In Fig. 1, L=left, R=right, F=front, B=back, T=combined total signal and the prime mark(') stands for reproduced sound.

As you see, in the encoding stage (which is done in the recording studio), one of the 90° phase shifters is used to shift the phase of the LB signal by *plus* 90 degrees. The other shifts the phase of the RB signal by *minus* 90 degrees. Thus, the LT (or RT) signal is a combination of the LF and LB (or RF and RB) signals, which can be transmitted or cut into a record groove as a single signal. The decoding process, which is carried out by your QRX receiver, also employs plus/minus 90° phase shifters but this time, shifts the phase of the LB signal by *minus* 90 degrees and that of the RB signal by *plus* 90 degrees, to retrieve the four separate signals from the two combinations.

This electronic logic network is rotationally symmetrical and circumferentially uniform, resulting in a number of very important technical advantages:

1. It does not lose or mislocate any part of the original sound field information;
2. It provides for excellent inter-channel separation;
3. It gives an outstanding "surround" 4-channel effect since it treats equally all signals originating anywhere within the original 360° sound circle, and,
4. It doesn't reduce current high fidelity standards at all.
5. It makes it possible to play any QS matrix-encoded recording on conventional stereo (2-channel) equipment since all the information for the left (or right) channel (i.e. LF and LB or RF and RB) is contained in the left (or right) side of the record groove.

How QS Regular Matrix Works as Synthesizer

Inherent in the Sansui QS regular matrix system is its ability to act as a 4-channel synthesizer which lets you enjoy your present collection of conventional 2-channel stereo records and tapes, as well as FM multiplex stereo broadcasts in the immensely richer and more satisfying 4-channel format.

The original stereo perspectives of such 2-channel sources is enhanced by the new "2-4 Synthesizer Encoder" in the QRX receiver series. It "pre-processes" all 2-channel signals from regular stereo sources, reorganizing them electronically, and prepares them for optimum conversion into 4-channel by the QS regular matrix system decoder.

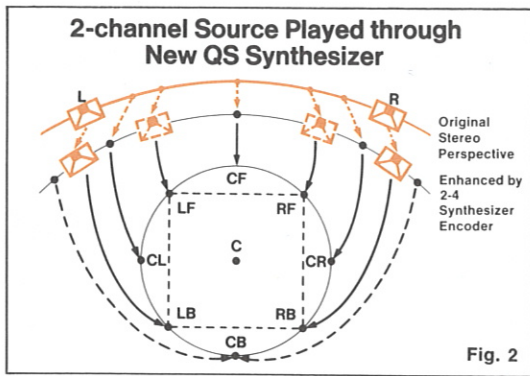


Fig. 2

QS Vario-Matrix Eliminates Crosstalk

Without QS vario-matrix, the original QS regular matrix system was able to reproduce a 360° sound field far superior to conventional 2-channel stereo. But it unfortunately allowed a crosstalk or leakage of sound from one channel into its neighboring channels of up to 0.7. Naturally, this made it difficult to locate sounds exactly and precisely within the 360° listening area.

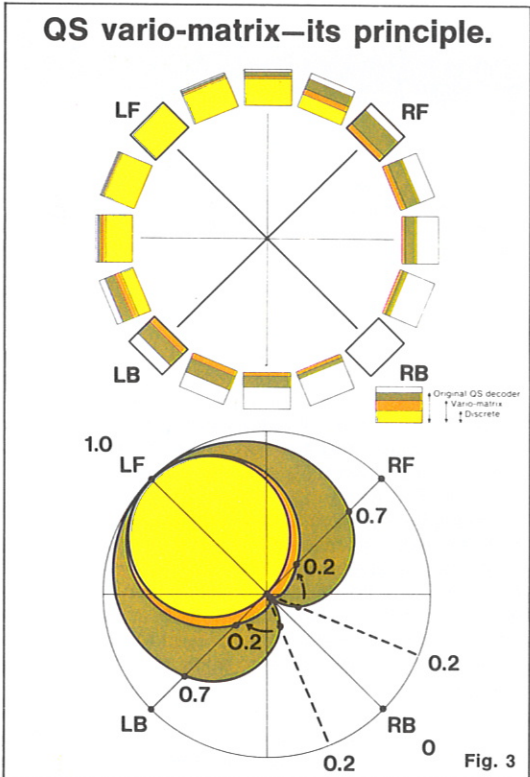


Fig. 3

To eliminate crosstalk, the new QS vario-matrix technique controls the operating parameter of the QS regular matrix according to the input signals it receives. It is therefore possible to preset the sound pressure response curve (see illustration) for a certain signal, say the LF (left front) signal, anywhere one chooses since, in a matrix 4-channel system, it is possible to obtain an output signal from any given point on the response curve itself.

To reduce the 0.7 crosstalk and preset it to, say, 0.2, the QS vario-matrix changes the parameter of the regular matrix instantaneously. In this way, the reproduced RF (right front) and LB (left back) signals are derived from two points close to the RB (right back) position where there is no leakage of sound whatsoever from the LF (left front) signal.

What would happen if multiple input signals entered the matrix simultaneously? Actually, the QS vario-matrix would continue to operate in much the same manner. But if these multiple input signals were of different levels and directionalities, the directionalities

of the weaker signals would be somewhat obscured, at least in terms of physical measurement. However, and this is important, the human ear does not sense the obscuring of the directionalities of the weaker signals. This is because, when a number of sounds arrive at our ears simultaneously from different directions, our sense of hearing is momentarily attracted by the loudest of those sounds. And it is insensitive to the directions from which the weaker sounds come. In the terminology of psycho-acoustics, this phenomenon is called "directional masking." Thus to our ears, the 4-channel sound field reproduced by the QS vario-matrix circuits sounds almost identical to the original, live, multi-dimensional sound field. Equally important is another fact: The QS vario-matrix strictly preserves the total sound volume in the original sound field. And this is unlike some other matrix systems which control the amplifier gain in the neighboring channels to hide crosstalk. With the QS vario-matrix, the content or expression of your music does not change.

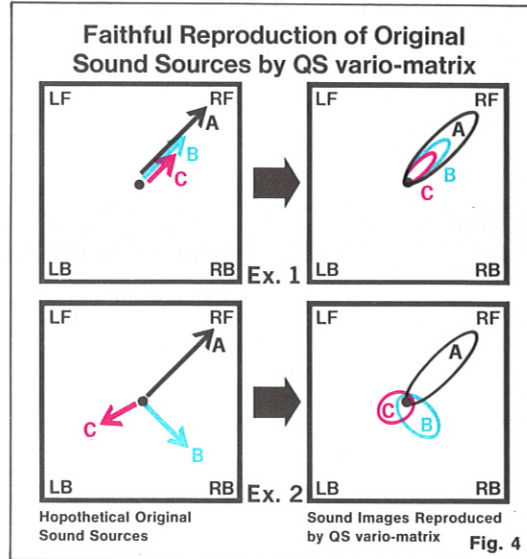


Fig. 4

QS Vario-Matrix Circuit

In terms of electronics, the QS vario-matrix consists primarily of a phase discriminator, a pair of matrix parameter controllers, and two special-purpose processors. These components work together in a unique way. As an example, let's look at the front channel signals. The front sub signal—part of the total sound derived from a QS-encoded 4-channel record—is controlled in level through a variable gain amplifier in the matrix parameter controller, according to a control signal. This controlled sub signal then joins the main signal in the processor to separate the reproduced LF and RF signals. It is the phase discriminator that produces the control signal from an inter-relationship of the input signals.

Other 4-Channel Functions of the QS Vario-Matrix

The QS regular matrix system 4-channel decoder—unlike any other matrix decoder—also provides a synthesizing function—the ability to convert conventional 2-channel stereo signals to 4-channel sound. We call this a QS Synthesizer and its operation has been further improved by the addition of the QS vario-matrix circuit. In all QRX receivers, a 90° phase shifter and a pair of special phase shifters are added to the QS vario-matrix circuit to perform the same decoding matrix function as that of an SQ matrix decoder. This means that all QRX receivers are able to reproduce the CBS SQ* program sources with impressive front-back separation.

Importantly, too, they are all provided with AUX terminals for connecting a CD-4** demodulator.

*SQ is a trademark of Columbia Broadcasting System, Inc.

**CD-4 is a trademark of Victor Company of Japan, Ltd.



QRX6500

280-WATT 4-CHANNEL STEREO RECEIVER

The QRX-6500 is an impressive instrument, specifically designed for those who demand no-nonsense professional quality in a home 4-channel stereo receiver. Its broad range of unique features, unlimited power, flexibility and superb tonal quality make it the finest 4-channel receiver Sansui makes today. Here's why:

First of all, the QRX-6500 is a complete 4-channel stereo control center. Its functions can be divided into three major areas: 1) the Sansui QS 4-channel Synthesizer and Decoder, 2) the 4-channel, 280-watt integrated amplifier section, and, 3) the super-sensitive stereo FM/AM tuner.

At the heart of the 4-channel QS Synthesizer and Decoder section is the team of circuits which together make up the new Sansui QS Regular Matrix decoder with QS vario-matrix. This, with the built-in discrete 4-channel auxiliary inputs and control capabilities, adds up to total 4-channel stereo versatility. The standard Sansui 4-channel Synthesizer/Decoder Control, a five-position rotary control located on the front panel, enables the selection of two different QS Synthesizer modes (Surround and Hall), two QS regular matrix modes (Surround and Hall) as well as the additional Phase Matrix mode for decoding SQ* records.

The QRX-6500 owes its wide dynamic range and excellent tonal quality to its exceptionally stable integrated amplifier, one which drives even the most power-hungry 4-channel speaker systems with ease. The power amplifier stage is of the semi-complementary SEPP-OTL design, delivering music power of 280-watts (into 4 ohms) and continuous power of 33 watts per channel (into 8 ohms in 4-channel usage). Sansui

has selected expensive silicon transistors and advanced circuit design to keep total harmonic and intermodulation distortion below 0.5% and to achieve a power bandwidth of from 20Hz to 30,000Hz.

Thoughtful planning and design of preamplifier functions and front-panel displays make the QRX-6500 a complete but easy-to-use home control center. For instance, the bass and treble responses of each of the four channels can be adjusted by individual controls on the front panel. In addition there are individual front/rear high and low filters and loudness controls, individual speaker selection controls for front and rear (up to three pairs of front speaker systems, two rear), separate left/right balance controls for the front as well as the rear speaker systems and a main front/rear balance control.

There is also a convenient 7-position Mode switch to keep the front sound up front and a 7-position Selector control (PHONO 1, PHONO 2, FM AUTO, FM MONO, AM, AUX-2-CH and DISCRETE 4-CH). Push-button tape monitor switches handle up to three tape decks (one 4-Ch and two 2-Ch). Also on the front panel are two sets of two stereo headphone jack inputs, one set for front or rear channels, and inputs for tape recording and for playback.

Easy, exact tuning, advanced circuitry and an impressive list of such extras as two tuning meters, extra-large tuning flywheel, automatic FM mono/stereo switching, and more, distinguish the FM/AM stereo tuner section of the QRX-6500. Its precision-built FM IF amplifier combines three bi-resonator ceramic filters and an IC 3-stage limiter to pull in even the weakest of FM signals with a sensitivity of 1.8 μ V (IHF) and selectivity of better than 70dB. AM sensitivity and signal selectivity is also greatly improved. Both an IF and RF amplifier with AGC (Auto Gain Control) are employed for clear AM reception free of whistles, whines and booms.



QRX5500

220-WATT 4-CHANNEL STEREO RECEIVER

Uncompromising quality is the key factor in the design concept of the QRX-5500. It's a full-fledged 4-channel stereo home control center with all the advantages of the very latest electronic technology in the form of its all-stage direct-coupled OCL pure complementary power amplifier. What's more, it offers excellent performance—high fidelity performance of the highest standards—and Sansui reliability.

Sansui's revolutionary 4-channel audio developments—as exemplified by the QS regular matrix system with QS vario-matrix and the famed QS Synthesizer—is combined in this powerful 220-watt 4-channel amplifier and sensitive FM/AM stereo tuner to enable you to enjoy any and all stereo and 4-channel program sources in realistic 4-channel reproduction. Here's a close look at the more outstanding features of the QRX-5500:

As in all models of the new Sansui QRX series, the basic secret of the QRX-5500 is its QS 4-channel Synthesizer and Decoder section—a team of circuits which together make up the new Sansui QS regular matrix decoder with QS vario-matrix. The Synthesizer/Decoder Control on the right-hand side of the front panel enables you to select any one of five different 4-channel reproduction modes, including Phase Matrix for decoding SQ*-encoded records. There's also the extra excitement of hearing your favorite 2-channel music sources transformed into authentic 4-channel sound by the Sansui QS Synthesizer, now greatly enhanced thanks to the QS vario-matrix technique. This, with the built-in discrete 4-channel tape and auxiliary input circuits, adds up to full versatility in all 4-channel formats.

Four large, professional type VU meters are displayed on the front panel. Next to them is a Level Set Control which allows you to pre-set the input levels of any incoming 1-, 2- or 4-channel source to prevent an excessive signal from entering the decoder amplifier. Naturally there are separate and individual bass and treble tone controls for each of the four channels, front/rear high and low filters, loudness control and much more. The balance controls are especially elaborate, and handy: three separate controls are provided, the first one for balancing the front left/right channels, another for the rear left/right channels and a third giving you fast and easy balancing between the total front and total rear sound. There's a separate microphone mixing input circuit with a front panel jack and its own, separate Mic Mixing Level Control. There is also a 4-channel Direction Control with four individual click-stop positions. Turning this control causes all four channels to shift position 90° at a time; in this way the front two channels can be moved from speaker pair to speaker pair so that you always face them in proper left/right/front/rear relation no matter where you sit in your listening room. The QRX-5500 also has versatile tape circuits for a stereo and TWO 4-channel tape decks, TWO circuits for 4-channel AUX inputs, TWO phono equalizers. Special tape monitor switches allow you to make 2- or 4-channel tape-to-tape reprints without changing input/output connections to your tape decks. The advanced FM/AM tuner section features MOS FET and IC circuitry, two tune meters and superb FM multiplex stereo separation and much more. And to round out the truly advanced performance of the QRX-5500, it features an all-stage direct-coupled OCL pure complementary power amplifier, elaborate plus/minus dual power supply and complete power and speaker protection circuits. Unparalleled tonal quality and exceptionally low-distortion performance are yours with the fully 4-channel QRX-5500.

There is a connection jack for an optional remote 4-channel balance/volume controller, QBL-100.



QRX3500

180-WATT 4-CHANNEL STEREO RECEIVER

The QRX-3500 has been conceived and crafted to lead the new generation of quality Sansui 4-channel stereo receivers. Its distinctive styling and high performance specifications have already earned it critical acclaim from professionals and the public alike. Here are some of the reasons:

The overall design of the QRX-3500 is based around the new Sansui QS regular matrix system with QS vario-matrix 4-channel decoder circuitry and the QS 4-channel Synthesizer. This electronic ensemble works in concert with the 180-watt 4-channel stereo integrated amplifier and high-resolution FM/AM 4-channel stereo tuner sections for total 4-channel versatility in a medium-priced instrument.

A newly-designed Function control lets you select any one of five 4-channel modes (QS SYNTHESIZER, QS REGULAR MATRIX-SURROUND, QS REGULAR MATRIX-HALL, and PHASE MATRIX) plus a conventional 2-channel position. The QS Synthesizer creates an authentic 4-channel sound field from any 2-channel stereo source, while the positions for QS regular matrix system with new QS vario-matrix circuit for decoding all QS and compatible matrix-encoded 4-channel program sources. Records encoded with the SQ* matrix system are heard in full 4-channel sound with the function control in the Phase Matrix position. In addition, there are two sets of discrete 4-channel inputs, adding up to total 4-channel capabilities in one complete unit.

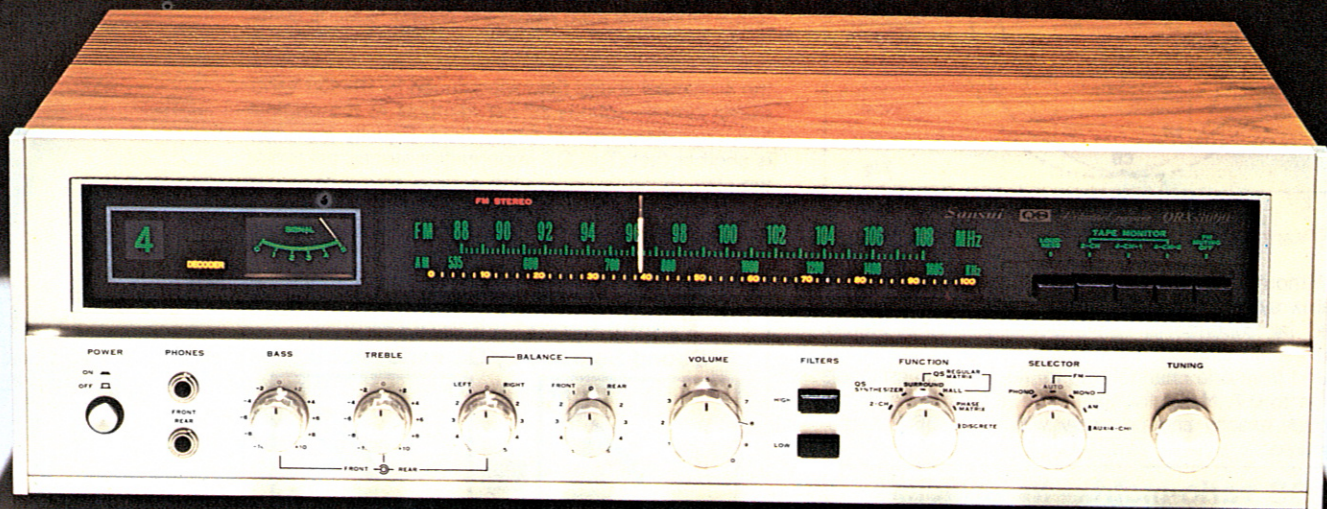
In the power category the QRX-3500 is a remarkable performer. The integrated amplifier section is of the OCL pure complementary type, featuring an all-stage direct coupling, in combination with a dual power sup-

ply, pure complementary circuit system using a differential amplifier as its first stage. The sum effect of this all-new design is a very wide power bandwidth of from 10Hz to 33,000Hz, with total harmonic distortion of 0.5%. Overall power is rated at 180 watts of music power (into 4 ohms) or 22 watts per channel (RMS power into 8 ohms, each channel driven).

The preamplifier and front panel control design, too, is remarkable. All output functions of the preamplifier are handled from an easy-to-use, clearly marked display panel which features completely individual bass and treble controls for each separate speaker system, convenient rotary left/right balance controls for front and for rear speaker systems *plus* a main front/rear balance control. In addition, there are low and high filters for the front and rear speaker systems, a loudness switch, a 6-position Selector control (PHONO, FM AUTO, FM MONO, AM, and two 4-channel AUX positions). Tape monitor facilities are controlled by pushbuttons for one 2-channel and two 4-channel tape recorders. There are also two stereo headphone jack inputs, one for the front channels, one for rear.

Featured in the FM/AM 4-channel stereo tuner section of the QRX-3500 is a highly sensitive MOS FET-equipped FM frontend known for its low noise characteristics. The frequency-linear super-precision 4-gang variable capacitor and other advanced components combine to achieve an impressive FM sensitivity of 2.2 μ V with a selectivity of better than 50dB. A newly developed wide-band coil and a bi-resonator ceramic filter in the AM section of the tuner delivers noise-free signals to a Jaumann type filter in the AM IF amplifier stage for double assurance of clean and listenable AM reproduction. The multi-function tuning meter for both FM and AM sections, together with an extra-wide, black-out dial, flywheel tuning mechanism and other features of the QRX-3500 tuner make listening to AM, FM stereo and FM 4-channel stereo broadcasts an exciting experience.

There is a connection jack for an optional remote 4-channel balance/volume controller QBL-100.



QRX3000

100-WATT 4-CHANNEL STEREO RECEIVER

From the standpoint of 4-channel versatility and performance, the QRX-3000 is clearly a best buy in a quality 4-channel stereo receiver. The ingenious Sansui QS regular matrix system with new QS vario-matrix and QS 4-channel Synthesizer combination is employed, as in the more expensive QRX models, to give it full 4-channel capabilities, while its simplified design and modest cost earn it the attention of economy-minded audio enthusiasts everywhere.

As a 4-channel stereo control center for the home the QRX-3000 is complete. The QS Synthesizer/Decoder section, powerful 100-watt integrated 4-channel stereo amplifier and FM/AM 4-channel stereo tuner sections are integral parts of its functional and attractive design. Here is a closer look at each of these multi-purpose components:

As in the slightly more powerful QRX-3500, this model also features a newly-designed Function control which lets you select any one of five 4-channel modes (QS SYNTHESIZER, QS REGULAR MATRIX-SURROUND, QS REGULAR MATRIX-HALL, and PHASE MATRIX) plus a conventional 2-channel position. The QS Synthesizer creates an authentic 4-channel sound field from any 2-channel stereo source, while the positions for QS regular matrix (Surround or Hall) bring into use the QS regular matrix system with QS vario-matrix circuit for decoding all QS and compatible matrix-encoded 4-channel program sources. Records encoded with the SQ* matrix system are heard in fine 4-channel sound with the Function control in the Phase Matrix position. In addition, there are two sets of discrete 4-channel inputs, adding up to total 4-channel

capabilities in one complete unit.

The semi-complementary ITL/OTL power amplifier in the QRX-3000 drives your speakers with exceptional stability because of the constant-voltage design in its power supply circuit. The total music power output is a full 100 watts (into 4 ohms), and total harmonic distortion is less than 0.5%, impressive figures for a receiver in its price range.

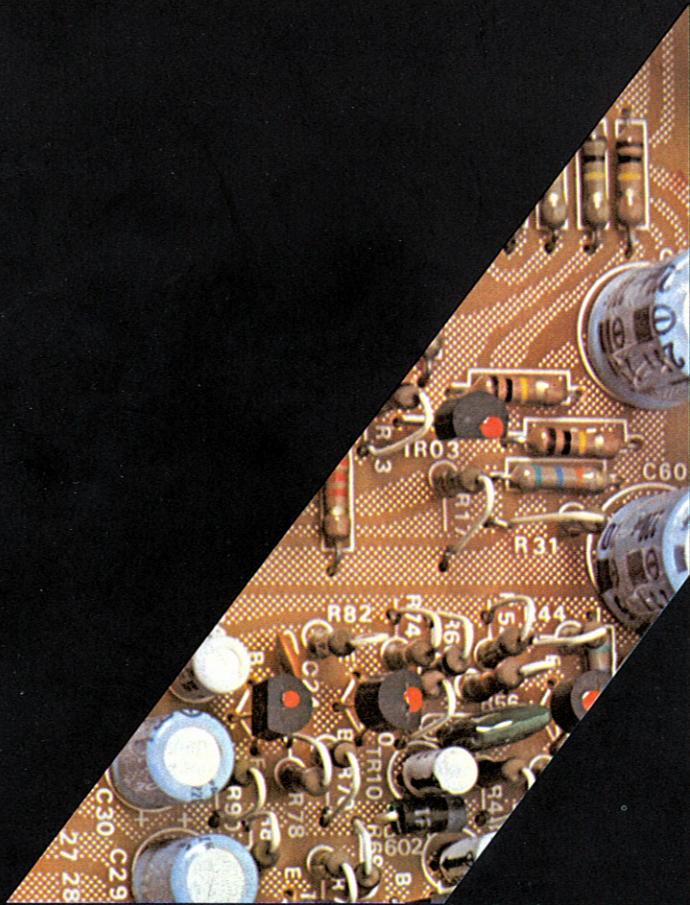
Preamplifier performance is equally impressive, and just as versatile as many more powerful and expensive 4-channel receivers. The QRX-3000 uses a two-stage direct coupled negative feedback design in its noiseless equalizer amplifier. Only the best quality, low-noise silicon transistors are employed to assure a wide dynamic range, high signal to noise ratio and high linearity to keep deviations from the RIAA curve to a minimum. All output controls are centered in easy-to-use groupings on the front panel and include separate bass and treble controls for front and rear speaker systems, left/right balance controls for front and rear systems, a main front/rear balance control, high and low filters, versatile tape record/playback circuits, headphone jack inputs for front and rear channels, and 5-position Selector control which determines which mono, 2-channel or 4-channel stereo program source is fed to the four speakers.

In the tuner section, the FM frontend of the QRX-3000 4-channel receiver combines an expensive dual-gated MOS FET, known for very low noise characteristics, with a frequency-linear super precision 3-gang variable capacity in its FM amplifier stage. Two bi-resonator ceramic filters and an IC used with a discriminator transformer of high linearity give outstanding IF characteristics, a sensitivity of 2.5 μ V (IHF) and selectivity of better than 50dB. And finally, the AM section features a wide selectivity and excellent tonal quality thanks to the use of a Jaumann type filter in the AM IF amplifier stage with a newly-developed wide-band coil and a bi-resonator ceramic filter. Whether tuned to an AM, FM stereo or FM 4-channel stereo broadcast, the QRX-3000 always delivers enjoyable listening.

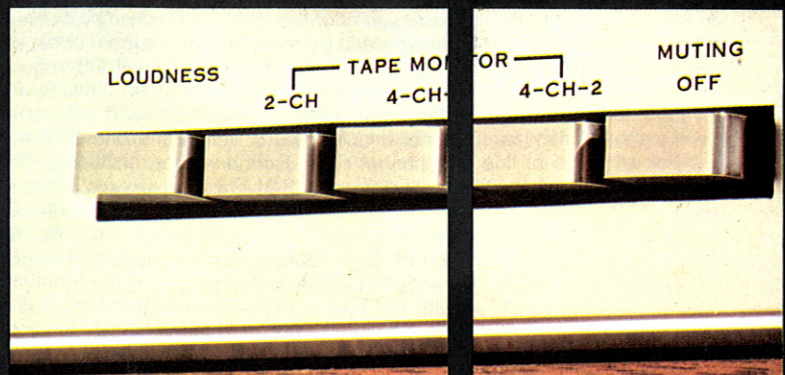
QRX



SANSUI 4-CHANNEL RECEIVERS FEATURING NEW QS VARIO-MATRIX



QS REGULAR MATRIX
4-CHANNEL STEREO



SPECIFICATIONS

	QRX-6500	QRX-5500	QRX-3500	QRX-3000
AMPLIFIER SECTION				
Music Power (IHF) 4Ω	280W	220W	180W	100W
Continuous Power 8Ω (Each channel driven)	37W x 4	30W x 4	22W x 4	15W x 4
Total Harmonic Distortion	0.5%	0.3%	0.5%	0.5%
Power Bandwidth (IHF)	20 - 30,000Hz	10 - 30,000Hz	10 - 33,000Hz	20 - 30,000Hz
Hum & Noise (IHF)	70dB	80dB	75dB	75dB
Damping Factor	30	40	30	30
PREAMPLIFIER SECTION				
Frequency Response	30 - 30,000Hz	30 - 30,000Hz	30 - 30,000Hz	30 - 30,000Hz
Channel Separation	45dB	50dB	45dB	45dB
Hum & Noise (IHF)	60dB	70dB	70dB	70dB
Controls				
Bass (50Hz)	±15dB★	±12dB★	±12dB★	±12dB●
Treble (20,000Hz)	±15dB★	±12dB (at 15,000Hz)★	±12dB (at 15,000Hz)★	±12dB (at 15,000Hz)●
Loudness	+8dB (at 50Hz)●			
(Volume control at -30dB)	+3dB (at 10,000Hz)●	+8dB (at 50Hz), +3dB (at 10,000Hz)○		
Low Filter (50Hz)	-10dB●	-10dB●	-10dB○	-10dB○
High Filter (10,000Hz)	-10dB●	-10dB●	-10dB○	-10dB○
SYNTHESIZER DECODER SECTION QS regular matrix system with QS vario-matrix circuit				
FM TUNER SECTION				
Sensitivity (IHF)	1.8μV	1.9μV	2.2μV	2.5μV
Harmonic Distortion (stereo)	0.8%	0.5%	0.6%	0.8%
Signal to Noise Ratio	65dB	65dB	65dB	60dB
Selectivity	70dB	60dB	50dB	50dB
Capture Ratio (IHF)	1.5dB	2.0dB	2dB	2.5dB
Image Frequency Rejection	100dB	75dB	75dB	45dB
IF Rejection	100dB	90dB	90dB	60dB
Stereo Separation	35dB	37dB	35dB	35dB
AM TUNER SECTION				
Sensitivity (Bar Antenna)	50dB/m	50dB/m	50dB/m	25dB/m
SWITCHES				
Synthesizer/Decoder	QS SYNTHESIZER-SURROUND & HALL, QS REGULAR MATRIX-SURROUND & HALL, PHASE MATRIX	QS SYNTHESIZER-SURROUND & HALL, QS REGULAR MATRIX-SURROUND & HALL, PHASE MATRIX, DISCRETE	QS SYNTHESIZER QS REGULAR MATRIX-SURROUND & HALL, PHASE MATRIX, DISCRETE	
Speaker Selector (Front)	A, B, C, A+B, A+C	A, B, A+B	A	A
(Rear)	A, B, A+B	A, B, A+B	A	A
GENERAL				
Power Requirements				
Power Voltage	100, 110, 117, 127, 220, 230, 240, 250V 50/60Hz		100, 117, 220, 240V 50/60Hz	
Power Consumption	150W, 470VA	140W, 400VA	110W, 300VA	80W, 110VA
Dimensions (H x W x D)	181 x 536 x 362(mm) 7 ³ / ₁₆ " x 21 ¹ / ₁₆ " x 14 ¹ / ₄ "	203 x 594 x 370(mm) 8" x 23 ³ / ₁₆ " x 14 ¹ / ₁₆ "	181 x 526 x 350(mm) 7 ¹ / ₁₆ " x 20 ³ / ₄ " x 13 ¹³ / ₁₆ "	140 x 505 x 330(mm) 5 ⁹ / ₁₆ " x 19 ¹⁵ / ₁₆ " x 13"
Weight (Net.)	22 kg (48.5 lbs.)	21.6kg (47.5 lbs.)	18.5 kg (40.8 lbs.)	11.5 kg (25.4 lbs.)
(Packed)	25.9 kg (57 lbs.)	24.8kg (54.6 lbs.)	22.0 kg (48.5 lbs.)	14.0 kg (30.9 lbs.)

★ Front Left & Right, Rear Left & Right ☆ Front Left & Right ● Front & Rear ○ All Channels △ Front Only
The design and specifications of all Sansui products in this catalogue are subject to change without notice for the purpose of improvements.