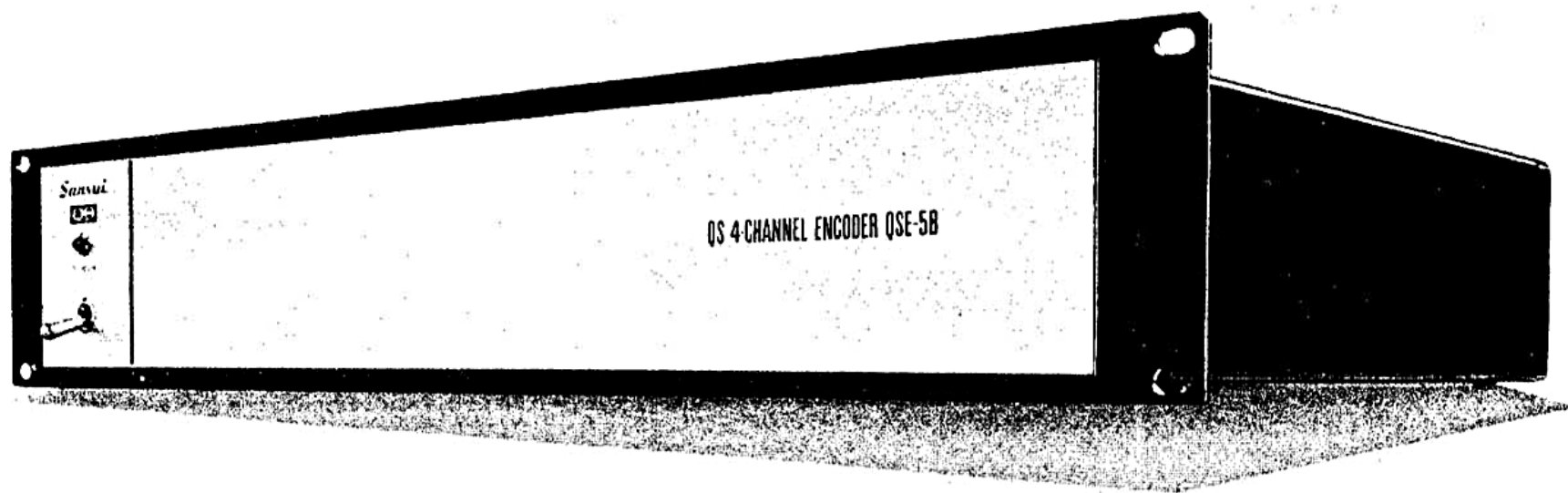


SANSUI

QSE-5B

**QS 4-CHANNEL
PROFESSIONAL
ENCODER FOR
FM BROADCASTER**



4-CHANNEL STEREO *QS is a trademark of Sansui Electric Co., Ltd.



A MILESTONE IN THE ART OF SOUND REPRODUCTION

The 4-channel system affords the world of music a number of interesting possibilities that the conventional 2-channel system cannot begin to offer.

Sansui's QS 4-channel system has been developed to fully exploit these possibilities, and its technical and artistic excellence is widely acclaimed. Since its original conception, it has undergone a significant enhancement in the form of the revolutionary QS Vario-Matrix, which enables it to provide inter-channel separation in excess of 20dB.

It has already been subjected to the severe professional scrutiny of hundreds of recording and broadcast engineers around the world, and found to pass the tests of musicality, compatibility and economy.

A multitude of major record companies in the U.S.A., Europe and Japan have released disc records and cassette tapes recorded by the QS system.

All commercial FM stations in Japan are now offering QS 4-channel programs, and so are WFMT in Chicago and other leading stations in the U.S.A.

The RIAA (Record Industry Association of America) have approved the QS encoding system as its standard.

The professional QS 4-channel Encoder introduced here fully benefit from these accomplishments and experiences. Not only are their performances certain to satisfy you, but their versatility, durability and appearances are on a par with the world's highest standards of professional hardware.

Test the instruments for yourself soon, and witness this striking breakthrough in the art of sound reproduction.

4-CANNEL ON THE AIR (A QUICK GUIDE TO QS FOR FM 4-CANNEL BROADCASTING)

WHAT CAN YOU EXPECT FROM 4-CANNEL FM?

1. Fully dimensional music broadcasting – more realistic and totally new. Especially important if you are a music-oriented station.
2. New audience – more listeners tuning in for 4-channel sounds.
3. More revenue – promotional dollars and co-op funds from 4-channel equipment manufacturers, distributors and dealers are available now! Record manufacturers and dealers are also extremely interested in getting more air time for 4-channel sounds.
4. A fresh new image for your station – "The all-quad spot on the dial"

CAN YOU BROADCAST IN 4-CANNEL TODAY?

1. Matrix encoded 4-channel materials – records, tapes made with the Sansui QS or Columbia SQ systems – can be broadcast through your regular 2-channel transmission system. Absolutely nothing else is required. Not some hazy time in the future, but NOW, today.
2. QS Encoder enables you to air:
 - *demodulated CD-4 or Quadradiscs,
 - *any other discrete 4-channel material such as Q-8 cartridges and "Surround Stereo" discrete 4-channel music tapes,
 - *4-channel "live" concerts direct from the concert halls or festival stages,
 - *decoded SQ materials, and
 - *4-channel commercials or jingles, of course.

Your audience will receive such 4-channel material as regular stereo (or mono) with rather enhances quality on his stereo equipment. There is *absolutely no loss of 4-channel information*. If a listener owns one of the matrix 4-channel decoders (and there's lots of them around), he hears them in 4-channel at home.

WAITING FOR DISCRETE?

You'll probably wait a long, long time.

Matrix decoders are already widely accepted and in the hands of millions of consumers. *You now have* a matrix 4-channel audience.

With the recent sophisticated matrix decoders such as QS vario-matrix, you are getting over 20dB separation across all four channels. With the discrete system, you will give you the same but no more.

For discrete 4-channel broadcasting, these factors must be considered:

- *SCA services must be ceased in all areas.
- *The dozen of the proposed discrete broadcast systems must be standardized to one, and that one must wait for approval from the FCC and other official bodies.
- *The FCC and others must then change their regulations accordingly.
- *Demodulators made specially for this purpose must then be mass produced and introduced to the market.
- *Consumers who presumably own matrix and CD-4 demodulators already must purchase yet this additional unit.

You have 4-channel *now* with the matrix. There's no sense waiting for discrete.

4-CHANNEL ON THE AIR (A Quick Guide to QS for FM 4-channel Broadcasting)



WHAT ABOUT 4-CHANNEL SOFTWARE?

More and more QS matrix 4-channel records and tapes are being released by some twenty major and independent labels. CD-4 or Quadradiscs by RCA and WEA group and SQ materials are also widely available. Q-8 cartridges and open reel music tapes have been on the market for quite some time with lots more to come. Complete list is available from Sansui (QS), Columbia (SQ) and JVC (CD-4).

ARE THERE MANY LISTENING?

Yes — Millions. Consumers have taken to 4-channel very rapidly. QS compatible decoders including E-V (Stereo-4) and Dyna (Quadapters) are now being used in America over 2 million listeners, and most of the newest decoders incorporate QS IC's also. These are available from:

AKAI, ADMIRAL, APF, BELL & HOWELL, BENJAMIN, CARTER-CRAFT, CLARION, CONCEPT PLUS, CONCORD, DOKORDER, DYNACO, EICO, EMERSON, E-V, FISHER, GE, GRUNDIG, HARMAN-KARDON, HEATH, HITACHI, JVC, JULIETTE, KENWOOD, KLH, LAFAYETTE, LLOYD'S, MGA, MARANZ, MASTERWORK, METRO-TEC, MIIDA, MOTOROLA, OLSON, ONKYO, PANASONIC, J.C. PENNY, PILOT, PIONEER, REALISTIC, ROBINS, ROTEL, SANSUI, SANYO, SCOTT, SHERWOOD, SONY, SOUND SYSTEMS INT'L, SUPERSCOPE, SYLVANIA, TELEDYNE PACKARD BELL, TOSHIBA, TOYO, UTAH, V-M, WOOLENSAK, ZENITH and others.

There are approximately three hundred different models of 4-channel matrix decoders for home use offered by these manufacturers.

WHERE CAN YOU GET THE QS ENCODER?

We have designed the QSE-5B professional QS encoder specially for your station to be able to produce any kind of 4-channel programs, live or recorded.

For details, please contact the below:

- Sansui Electronics Corp.
55-11 Queens Boulevard
Woodside, N.Y. 11377
Phone: (212) 779-5300
- Sansui Audio Europe S.A.
Diacem Building,
Vestingstraat 53-55,
2000 Antwerp
Belgium
Phone: 315663/4/5

THE QSE-5B ENCODER—ITS ADVANTAGES

Direct encoding from multi-track (8, 16, 32 or more) sources. And of course it handles 4-track discrete tapes.

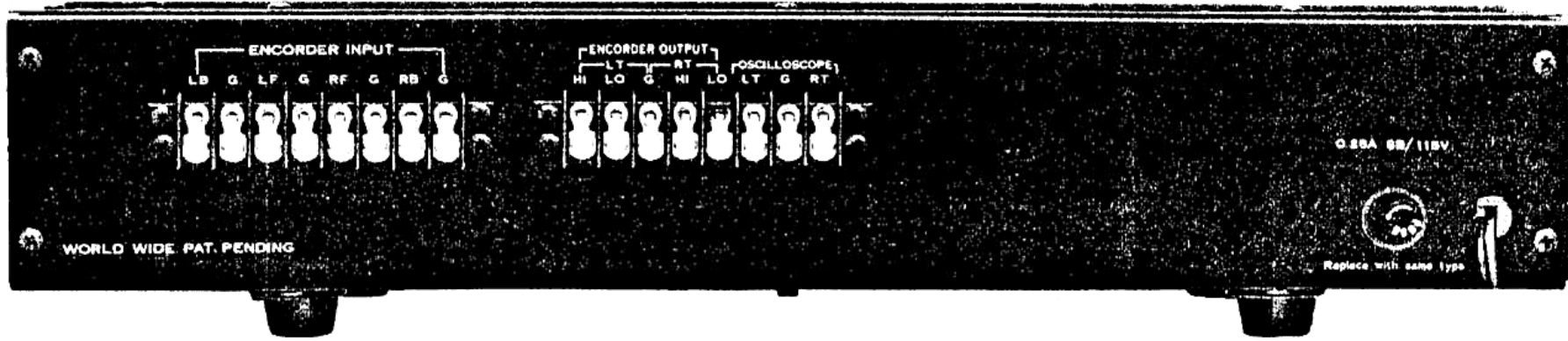
Nominal 600 ohms inputs and outputs. Input impedance is 10k ohms unbalanced and output impedance is below 600 ohms balanced.

Maximum output level of +18dBm to maintain full dynamic range. (Same is true with input level which also is +18dBm)

Linear phase relationship of "within $\pm 2^\circ$ at 1,000Hz" or "within $\pm 5^\circ$ at all frequencies" is retained.

Combining fanning strips and Jones terminals simplifies quick installation of the QSE-5B in any studio or concert hall.

Simple rack-mounting is possible.



■ Specification

Input Section	
Input Channels:	Encoder Input, 4 Channels(LF, RF, LB, RB)
Input Impedance:	10k ohms Unbalanced Type
Input Level:	+4dBm (rated), +18 +18dBm (max)
Input Connectors:	Jones Terminal & Fanning Strips
Output Section	
Output Channels:	Encoder Output, 2 Channels (LT, RT)
Output Impedance:	Below 600 ohms Balanced Type
Output Level:	+18 +18dBm (for LF, RF, LB, RB rated) +18dBm (max)
Output Connectors:	Jones Terminal & Fanning Strips HI-Positive, LO-Negative, G-Ground
Scope Section	
Output Impedance:	Below 1k ohm, Unbalanced Type
Output Level:	+2dBm (rated), +18dBm (max) (Output Load: more than 30 k ohms)
Output Connectors:	Jones Terminal & Fanning Strips LT-Left, RT-Right, G-Ground

Total Harmonic Distortion (at rated output)

Output Level (+1dBm) :	less than 0.5% (20 to 100Hz)
	less than 0.1% (100 to 20,000Hz)
Output Level (+18dBm) :	less than 1.0% (20 to 50Hz)
	less than 0.5% (50 to 20,000Hz)

Frequency Response (at rated output)

50 to 10,000Hz	±0.3dB
20 to 20,000Hz	±0.5dB

Signal to Noise Ratio (at rated output)

more than 70dB

Gain (at one channel input)

~~+18~~+18dB ±0.2dB (LF, RF, LB, RB)

Phase Relationship

	at 1,000Hz	at 20 to 20,000Hz
LF-RF	0° ±1°	0° ±3°
LF-LB	+90° ±2°	+90° ±5°
RF-RB	-90° ±2°	-90° ±5°
LB-RB	180° ±1°	180° ±3°

Power Requirements

Voltage:	115V 60Hz
Consumption:	20W rated

Dimensions

Width:	482mm (19")
Height:	88mm (3-1/2")
Depth:	323mm (12-3/4")

Weight

Net:	6.23kg
Packed:	8.6kg

Information on other technical inquiries, please contact one of the following addresses.

SANSUI ELECTRIC CO., LTD., 11-23, 6-chome, Shimorenjaku, Mitaka, Tokyo 181, Japan / Phone: 0422-46-8131 / Telex: 282-2496
 SANSUI ELECTRONICS CORPORATION, 55-11 Queens Blvd., Woodside, New York 11377, U.S.A. / Telex: NEW YORK 422633 SEC UI
 SANSUI AUDIO EUROPE S.A., Diacem Building, Vestingstraat 53-55, 2000 Antwerp, Belgium / Telex: ANTWERP 33538



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