Roland®

STUDIO MONITOR

Owner's Manual

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (Owner's Manual p. 2, p. 3). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's Manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

Features

The Roland Studio Monitor RSM-90 speaker system was designed, developed, and manufactured in the United States. The high-quality sound these studio monitors deliver make them perfect for mixing duties in digital recording studios.

2-Way Speakers with Superior Sound Quality

To achieve such high-quality sound, the low-frequency driver uses a 160-mm polypropylene foam cone, and the high-frequency driver features a dome tweeter with a high-precision face plate.

3/4" MDF Cabinets with 1" MDF Baffles

Cabinet construction prevents excess vibration, which greatly improves sound quality.

* MDF = Middle Density Fiberboard

Bi-Wiring Connections

Bi-wiring reduces problems (intermodulation distortion) caused by the effect the high-frequency and low-frequency drivers have on each other.

Gold-Plated Post Connectors

Gold plating provides long-lasting protection for the connectors, preventing degradation of sound quality over time. Additionally, the binding post connectors are compatible with heavy-gauge speaker cables.

Magnetically Shielded Low- and High-Frequency Drivers

This allows you to use the speakers next to CRT displays.

Front-Facing Bass Reflex Ports

These ports ensure consistent low-end sound regardless of placement.

Copyright © 2000 ROLAND CORPORATION All rights reserved. No part of this publication may be reproduced in any form without the written permission of ROLAND CORPORATION.

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About \land WARNING and \land CAUTION Notices

Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly.
* Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

be mu wit	e \bigotimes symbol alerts the user to items that must never carried out (are forbidden). The specific thing that ist not be done is indicated by the design contained thin the circle. In the case of the symbol at left, it
	ans that the unit must never be disassembled.
car ind the	e \bullet symbol alerts the user to things that must be rried out. The specific thing that must be done is licated by the design contained within the circle. In a case of the symbol at left, it means that the power- rd plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

WARNING

• Before using this unit, make sure to read the instructions below, and the Owner's Manual.



• Do not open or perform any internal modifications on the unit.

.....

• Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

.....

- Never use or store the unit in places that are:
 - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are



- Humid; or are
- Exposed to rain; or are
- Dusty; or are
- Subject to high levels of vibration.
- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.

.....

- This unit combinated with an amplifier may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.
 - Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.



- Immediately turn off the power of the device connected to this unit, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
 - Objects have fallen into, or liquid has been spilled onto the unit; or
 - The unit has been exposed to rain (or otherwise has become wet); or
 - The unit does not appear to operate normally or exhibits a marked change in performance.

.....

• In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

.....

• Protect the unit from strong impact. (Do not drop it!)

.....





- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.
- \triangle
- Never climb on top of, nor place heavy objects on the unit.



- Disconnect all cords coming from external devices before moving the unit.
- Should you remove screws of input jacks and the short bar, make sure to put them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.

.....

.....

Important Notes

In addition to the items listed under "USING THE UNIT SAFELY" on page 2,3 please read and observe the following:

Placement

- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Also, do not allow lighting devices that normally are used while their light source is very close to the unit (such as a piano light), or powerful spotlights to shine upon the same area of the unit for extended periods of time. Excessive heat can deform or discolor the unit.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.
- Do not allow rubber, vinyl, or similar materials to remain on the unit for long periods of time. Such objects can discolor or otherwise harmfully affect the finish.
- Do not put anything that contains water (e.g., flower vases) on the unit. Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the unit. Swiftly wipe away any liquid that spills on the unit using a dry, soft cloth.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Additional Precautions

- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

Making the Connections

Connect the output connectors of your power amp to the RSM-90 input connectors with speaker cable.



Before connecting the speakers, confirm that the power is off on all connected devices. Also check to make sure that the power amp and mixer volume levels are turned down completely.

Cautions

- Make sure to match the polarity (+, -) of the connectors.
- Avoid causing shorts when connecting the speaker cables. Also take care not to connect the cables incorrectly. Failure to follow these precautions may result in damage to your equipment.
- The screws and short bar on the input connectors are made to be removable. When you do remove these, be sure to store them in a secure place out of the reach of small children. Consult a physician or get other appropriate medical help immediately if any of these pieces is swallowed accidentally.
- With high-output power amps (100 W or above), touching the amp's input connectors may cause electric shock. Take care not to come into contact with the input connectors.
- These speakers have a rated impedance of 4 ohms. Confirm that the recommended load impedance of the power amp you are using is compatible.
- Do not connect any power amp with output higher than the maximum allowable input for these speakers. Failure to follow this precaution may result in damage to the equipment.
- Don't touch the diaphragm of the HF driver or the cone of the LF driver.

Connections on the Speakers

Use the short bar on each speaker to bridge the speaker's high- and low-frequency "+" connectors (or "-" connectors), then connect the speakers to the power amp with speaker cable.



Bi-Wiring Connections

Remove the short bar horizontally, then connect the power amp to each speaker using two sets of cables.



Bi-wiring is a method of connecting the power amp to the speakers using separate sets of speaker cables for the low- and high-frequency portions. Using separate cables for the low- and high-frequencies reduces intermodulation distortion, thus improving the high-end sonic quality.



Tips for High Quality Playback

- Think carefully beforehand to determine the optimum location for the speakers. To fully realize the speakers' excellent low-end reproduction capabilities, place the speakers on stands that will provide firm, stable support.

- Use bi-wiring connections to bring out the speakers' superior high-end response.
- To help ensure great sound, use high-quality, heavy-gauge speaker cables.

Appendices

Specification

System

2 Way Monitor Speaker

Enclosure

Bass-reflex type

Cabinet

3/4"MDF, Baffle:1"MDF

LF Driver

160 mm(6-1/2") Foamed polypropylene cone type, magnetically shielded

HF Driver

25 mm(1") Soft dome type, magnetically shielded

Power Handling

rated: 90 W *1 max: 270 W *1 EIA RS426A

Frequency Response

62 Hz to 20 kHz (+/-3dB)

Nominal Impedance 4 ohms Sensitivity(1W/1m) 88 dB **Crossover Frequency** 2.6 kHz **Crossover Network** Advanced second order filter Connectors Binding posts x 4 (LF input, HF input) **Dimensions** 228.6(W) x 322.3(D) x 371.5(H) mm 9(W) x 12-11/16(D) x 14-5/8(H) inches Weight 11 kg/24 lbs. 5 oz. Accessory **Owner's Manual**

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

Dimensions



Frequency Response



Impedance



Polar Response (Horizontal)



Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.



EGYPT Al Fanny Trading Office P.O. Box 2904 El Horrieh Heliopolos, Cairo, EGYPT

TEL: (02) 4185531

REUNION Maison FO - YAM Marcel 25 Rue Jules Merman, ZL Chaudron - BP79 97491 Ste Clotilde REUNION TEL: 28 29 16

SOUTH AFRICA That Other Music Shop (PTY) Ltd. 11 Melle Street (Cnr Melle and Juta Street) Braamfontein, 2001 Republic of SOUTH AFRICA TEL: (011) 403 4105

Paul Bothner (PTY) Ltd. 17 Werdmuller Centre Claremont 7700 Republic of SOUTH AFRICA

P.O. Box 23032 Claremont, Cape Town SOUTH AFRICA, 7735 TEL: (021) 64 4030



CHINA

Beijing Xinghai Musical Instruments Co., Ltd. 6 Huangmuchang Chao Yang District, Beijing, CHINA TEL: (010) 6774 7491

HONG KONG Tom Lee Music Co., Ltd. Service Division 22-32 Pun Shan Street, Tsuen Wan, New Territories, HONG KONG TEL: 2415 0911

INDIA

Rivera Digitec (India) Pvt. Ltd. 409, Nirman Kendra Mahalaxmi Flats Compound Off. Dr. Edwin Moses Road, Mumbai-400011, INDIA TEL: (022) 498 3079

INDONESIA PT Citra IntiRama J1. Cideng Timur No. 15J-150 Jakarta Pusat INDONESIA TEL: (021) 6324170

KOREA **Cosmos Corporation** 1461-9, Seocho-Dong, Seocho Ku, Seoul, KOREA TEL: (02) 3486-8855

MALAYSIA Bentley Music SDN BHD 140 & 142. Jalan Bukit Bintar 55100 Kuala Lumpur, MALAYSIA TEL: (03) 2443333

PHILIPPINES G.A. Yupangco & Co. Inc. 339 Gil J. Puyat Avenue Makati, Metro Manila 1200, PHILIPPINES TEL: (02) 899 9801

SINGAPORE Swee Lee Company 150 Sims Drive SINGAPORE 387381 TEL: 748-1669

CRISTOFORI MUSIC PTE LTD Blk 3014, Bedok Industrial Park E, #02-2148, SINGAPORE 489980 TEL: 243 9555

TAIWAN **ROLAND TAIWAN** ENTERPRISE CO., LTD. Room 5, 9fl. No. 112 Chung Shan N.Road Sec.2, Taipei, TAIWAN, R.O.C. TEL: (02) 2561 3339

THAILAND Theera Music Co. . Ltd. 330 Verng NakornKasem, Soi 2, Bangkok 10100, THAILAND TEL: (02) 2248821

VIETNAM Saigon Music 138 Tran Quang Khai St., District 1 Ho Chi Minh City VIETNAM TEL: (08) 844-4068

AUSTRALIA/ **NEW ZEALAND**

AUSTRALIA Roland Corporation Australia Pty., Ltd. 38 Campbell Avenue Dee Why West. NSW 2099 AUSTRALIA TEL: (02) 9982 8266

NEW ZEALAND Roland Corporation (NZ) Ltd. 97 Mt. Eden Road, Mt. Eden Auckland 3, NEW ZEALAND TEL: (09) 3098 715

CENTRAL/LATIN AMERICA

ARGENTINA Instrumentos Musicales S.A. Florida 656 2nd Floor Office Number 206A Buenos Aires ARGENTINA, CP1005 TEL: (54-11) 4- 393-6057

BRAZIL **Roland Brasil Ltda.** R. Coronel Octaviano da Silveira 203 05522-010 Sao Paulo BRAZIL TEL: (011) 3743 9377

COSTA RICA JUAN Bansbach Instrumentos Musicales Ave.1. Calle 11, Apartado 10237, San Jose, COSTA RICA TEL: (506)258-0211

CHILE Comercial Fancy S.A. Avenida Rancagua #0330 Providencia Santiago, CHILE TEL: 56-2-373-9100

EL SALVADOR OMNI MUSIC 75 Avenida Notre YY Alameda, Juan Pablo 2, No. 4010 San Salvador, EL SALVADOR TEL: (503) 262-0788

MEXICO Casa Veerkamp, s.a. de c.v. Av. Toluca No. 323, Col. Olivar de los Padres 01780 Mexico D.F. MEXICO TEL: (525) 668 04 80

La Casa Wagner de Guadalajara s.a. de c.v. Av. Corona No. 202 S.J. Guadalaiara, Jalisco Mexico C P 44100 MEXICO TEL: (3) 613 1414

PANAMA SUPRO MUNDIAL, S.A. Boulevard Andrews, Albrook, Panama City, REP. DE PANAMA TEL: (507) 315-0101

PARAGUAY Distribuidora De Instrumentos Musicales J.E. Olear y ESQ. Manduvira Edeficio, El Dorado Planta Baja Asuncion PARAGUAY TEL: 595-21-492147

PFRII VIDEO Broadcast S.A. Portinari 199 (ESQ. HALS), San Borja, Lima 41, REP. OF PERU TEL: 51-14-758226

URUGUAY Todo Musica S.A. Cuareim 1844. Montevideo URUGUAY TEL: 5982-924-2335

VENEZUELA Musicland Digital C.A. Av. Francisco de Miranda Centro Parque de Cristal, Nivel C2 Local 20 Caracas VENEZUELA TEL: (02) 285 9218

EUROPE

AUSTRIA Roland Austria GES.M.B.H. Siemensstrasse 4, P.O. Box 74, A-6063 RUM, AUSTRIA TEL: (0512) 26 44 260

BELGIUM/HOLLAND/ LUXEMBOURG

Roland Benelux N. V. Houtstraat 3, B-2260, Oevel (Westerlo) BELGIUM TEL: (014) 575811

DENMARK Roland Scandinavia A/S Nordhavnsvej 7, Postbox 880, DK-2100 Copenhagen DENMARK TEL: (039)16 6200

FRANCE **Roland France SA** 4, Rue Paul Henri SPAAK, Parc de l'Esplanade, F 77 462 St. Thibault, Lagny Cedex FRANCE TEL: 01 600 73 500

FINLAND Roland Scandinavia As. Filial Finland Lauttasaarentie 54 B Fin-00201 Helsinki, FINLAND TEL: (9) 682 4020

GERMANY **Roland Elektronische** Musikinstrumente HmbH. Oststrasse 96, 22844 Norderstedt, GERMANY TEL: (040) 52 60090

GREECE STOLLAS S.A Music Sound Light 155, New National Road 26422 Patras, GREECE TEL: 061-435400

HUNGARY Intermusica Ltd. Warehouse Area 'DEPO' Pf.83 H-2046 Torokbalint, HUNGARY TEL: (23) 511011

IRELAND **Roland Ireland** Audio House, Belmont Court, Donnybrook, Dublin 4 Republic of IRELAND TEL: (01) 2603501

ITALY Roland Italy S. p. A. Viale delle Industrie 8, 20020 Arese, Milano, ITALY TEL: (02) 937-78300

NORWAY Roland Scandinavia Avd. Kontor Norge Lilleakerveien 2 Postboks 95 Lilleaker N-0216 Oslo NORWAY TEL: 273 0074

POLAND P. P. H. Brzostowicz UL. Gibraltarska 4. PL-03664 Warszawa POLAND TEL: (022) 679 44 19

PORTUGAL Tecnologias Musica e Audio, Roland Portugal, S.A. RUA DE SANTA CARARINA 131/133. 4000-450 PORTO PORTUGAL TEL: (022) 208 4456

ROMANIA FBS LINES Plata Libertatii 1. RO-4200 Cheorgheni TEL: (066) 164-609

RUSSIA Slami Music Company Sadojava-Triumfalnaja st., 16 103006 Moscow, RUSSIA TEL: 095 209 2193

SPAIN **Roland Electronics** de España, S. A. Calle Bolivia 239, 08020 Barcelona, SPAIN TEL: (93) 308 1000

SWEDEN Roland Scandinavia A/S SWEDISH SALES OFFICE Danvik Center 28, 2 tr S-131 30 Nacka SWEDEN TEL: (08) 702 0020

SWITZERLAND Roland (Switzerland) AG Musitronic AG Gerberstrasse 5, CH-4410 Liestal, SWITZERLAND TEL: (061) 921 1615

UKRAINE TIC-TAC Mira Str. 19/108 P.O. Box 180 295400 Munkachevo, UKRAINE TEL: (03131) 414-40

UNITED KINGDOM Roland (U.K.) Ltd. Atlantic Close, Swanse Enterprise Park, SWANSEA SA7 9FJ, UNITED KINGDOM TEL: (01792) 700139

MIDDLE EAST

BAHRAIN Moon Stores Bab Al Bahrain Road, P.O. Box 20077 State of BAHRAIN TEL: 211 005

CYPRUS Radex Sound Equipment Ltd. 17 Diagorou St., P.O. Box 2046 Nicosia CYPRUS TEL: (02) 453 426

ISRAEL Halilit P. Greenspoon & Sons Ltd. 8 Retzif Fa'aliya Hashnya St. Tel-Aviv-Yaho ISRAEL TEL: (03) 6823666

JORDAN AMMAN Trading Agency Prince Mohammed St. P.O. Box 825 Amman 11118 JORDAN

TEL: (06) 4641200 KUWAIT Easa Husain Al-Yousifi

Abdullah Salem Street, Safat KUWAIT TEL: 5719499

LEBANON A. Chahine & Fils P.O. Box 16-5857 Gergi Zeidan St. Chahine Building, Achrafieh Beirut, LEBANON TEL: (01) 335799

OATAR **Badie Studio & Stores** P.O. Box 62. DOHA QATAR TEL: 423554

SAUDI ARABIA aDawliah Universal Electronics APL P.O. Box 2154 ALKHOBAR 31952. SAUDI ARABIA TEL: (03) 898 2081

SYRIA **Technical Light & Sound** Center Khaled Ibn Al Walid St. P.O. Box 13520 Damascus - SYRIA TEL: (011) 2235 384

TURKFY Barkat muzik aletleri ithalat ve ihracat Ltd Sti Siraselviler cad Gunev is hani 84-86/6, Taksim. Istanbul. TURKEY TEL: (0212) 2499324

U.A.E. Zak Electronics & Musical Instruments Co. L.L.C. Zabeel Road, Al Sherooq Bldg., No. 14, Grand Floor DUBAI U.A.E. TEL: (04) 3360715

NORTH AMERICA

CANADA Roland Canada Music Ltd.

(Head Office) 5480 Parkwood Way Richmond B. C., V6V 2M4 CANADA TEL: (0604) 270 6626

Roland Canada Music Ltd. (Toronto Office) Unit 2, 109 Woodbine Downs Blvd, Etobicoke, ON M9W 6Y1 CANADA TEL: (0416) 213 9707

U. S. A. **Roland Corporation U.S.** 5100 S. Eastern Avenue Los Angeles, CA 90040-2938, U.S.A TEL: (323) 890 3700

As of June 1, 2000 (Roland)

Roland Corporation