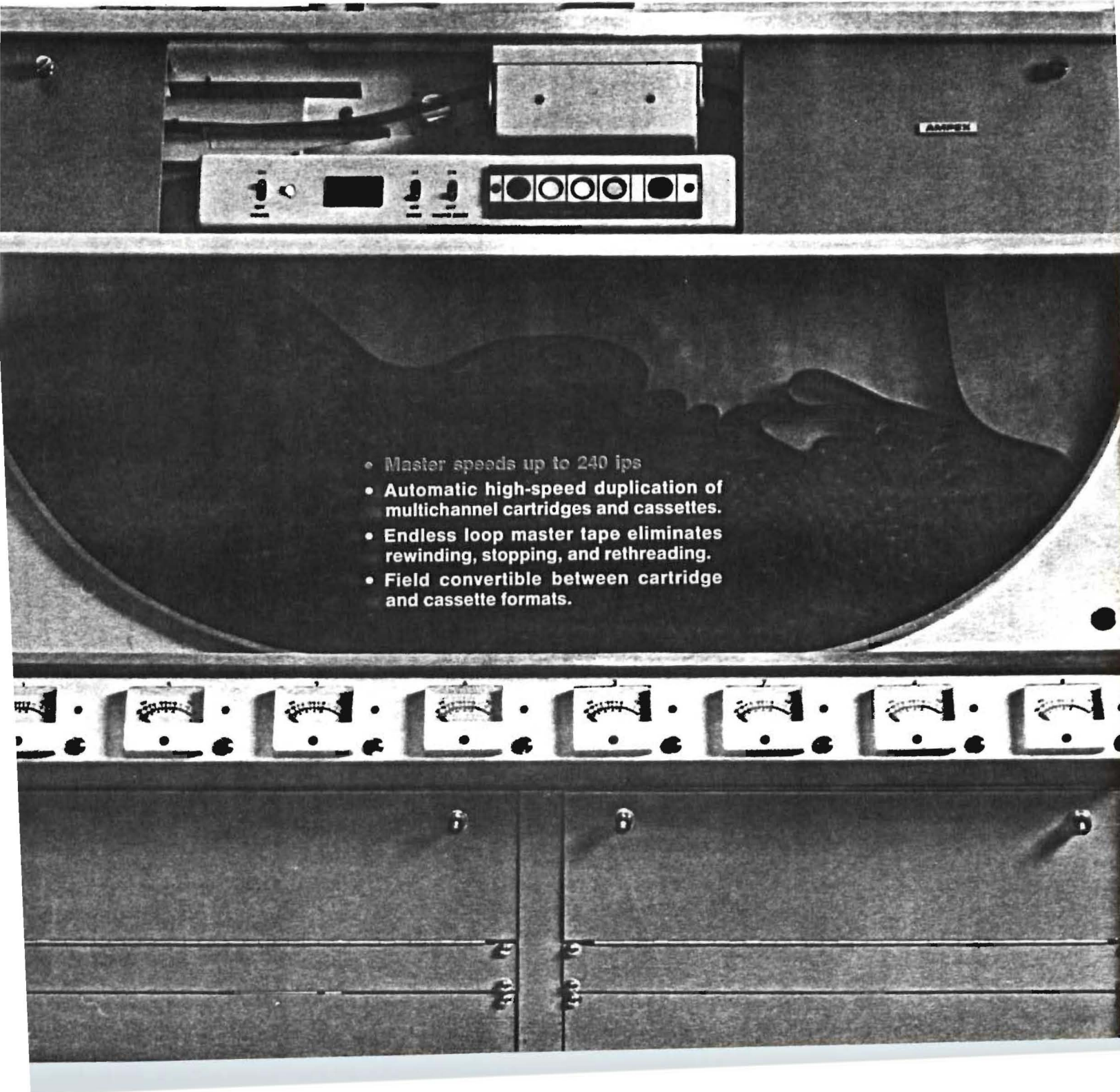
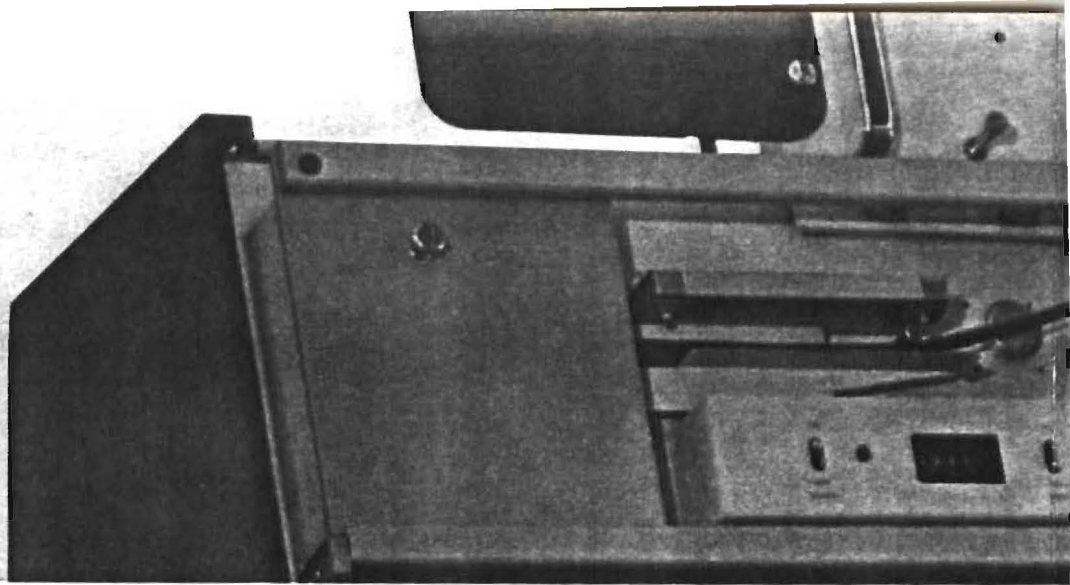


**AMPEX**

# BLM-200 Duplicator System



# BLM-200



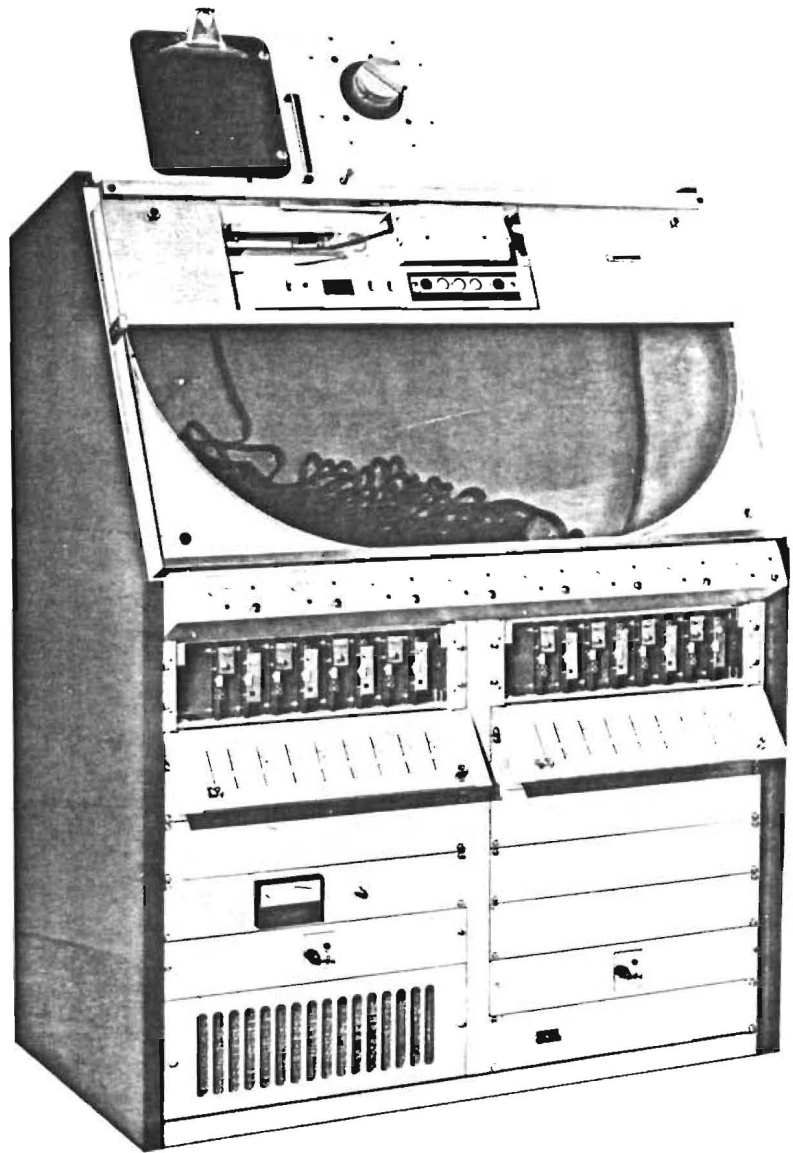
Automatic high-speed duplication of multichannel cassette and cartridge tapes is now offered by the Ampex BLM-200 Duplicator System. Rewinding, stopping, and rethreading of the tape is eliminated by use of an endless loop tape in the master transport. All solid-state electronics are used throughout. The system consists of the BLM-200 Bin Loop Master and up to 20 slave units of the 3400 series. Constructed on a flexible building block principle to provide for future expansion, the basic BLM-200 master will drive up to ten slaves and an optional configuration is offered to drive twenty slaves.

BLM Masters are available in two models, the BLM-200-8 and the BLM-200-4. The BLM-200-8 is an eight-channel version for cartridge duplication. However, the eight-channel BLM-200-8 System will also duplicate four-channel cassette tapes by simply rotating the slave tape guides and replacing the plug-in slave head assemblies. The BLM-200-4 is a four-channel version for cassette duplication. If a four-channel cassette master unit is purchased first, it can be field converted to an eight-channel cartridge version by adding a bias amplifier, a power supply, and four more channels of electronics. Conversion of the slave units is also easily done in the field because all 3400 Series slave units are already equipped with dual-width

guides and use plug-in head assemblies. Installing the eight-track head assemblies automatically programs the correct tape tension.

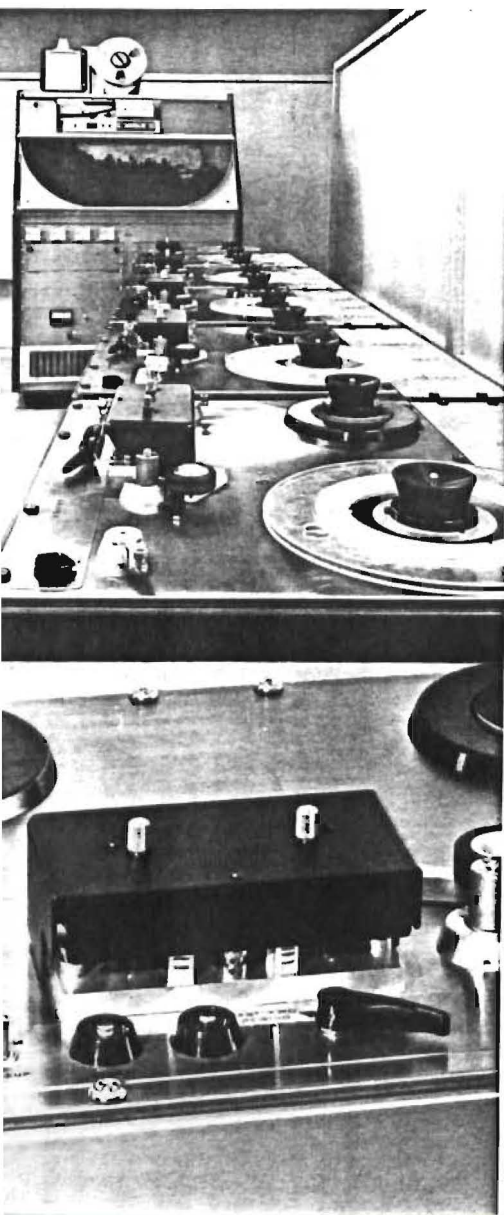
Working master tapes for both formats are recorded on one-inch wide tape with 1.5-mil polyester backing, re-

corded at 7.5 ips, NAB equalization. Recordings are made in four- to eight-track formats on eight-track recorders such as Ampex Model MM-1000-8 or Model AG-440-8. A working master tape for the eight-track duplicator system follows the same track configura-





tion as that of the eight-track cartridge format: Tracks 1 and 5, Tracks 2 and 6, etc., as stereo pairs, all in forward direction. For the 4-track duplicator system, Tracks 3 and 7 make up the stereo pair in the forward direction, and Tracks 6 and 2 in the reverse direc-



tion. (When making the master tape, recording is done on Tracks 3 and 7 in both directions.)

#### **BLM-200 MASTER REPRODUCER**

The BLM-200 Master Reproducer is a self-contained bin-loop system. It consists of a bin-loop tape transport, a reproduce head and preamplifier assembly, reproduce amplifiers, record amplifiers and a bias oscillator/amplifier. The BLM-200 drives up to ten slave assemblies at up to 32 times the speed of the original recording. Provisions in the master assembly allow increasing the number of slaves to twenty by adding bias amplifiers.

Easy loading and automatic self-cueing are advanced features of the bin-loop transport. All transport elements are mounted on a precision-milled casting frame. The transport is equipped with its own loading/unloading motor assembly to transfer tape directly from a reel to the storage bin. The tape storage bin design assures the smoothest possible tape motion.

A photocell assembly mounted in the tape path automatically counts the number of master passes and injects a 120 Hz or 320 Hz tone on the copies for cutting points.

A newly designed head produces a higher output at mid-frequencies and

greater efficiency at high frequencies. Preamplifiers are mounted on the head assembly. This unique arrangement avoids RF interference, and optimizes signal-to-noise ratio by reducing capacitive shunting of the head cables.

#### **3400 SERIES SLAVE ASSEMBLY**

The 3400 Series slave assemblies are newly adapted versions of the proven Ampex Model 3200 Slave Assemblies — the most successful and widely used units available in the tape duplicating industry. The 3400 Series slave transports feature turn-around guides with 150-mil and ¼-inch guides for ease of tape width conversion. Automatic tape tension programming is also provided to reduce the possibility of tape stretch or breakage.

Plug-in head assemblies for both 4-track cassette and 8-track cartridge systems are ferrite-core type for long life, and are equipped with their own individual bias and record level controls for each track. The controls are on top of each head assembly, insuring interchangeability without resetting controls. No wiring changes are required when changing from 4-track cassette to 8-track cartridge head assemblies.

The 3400 Series Slave head assemblies for all standard open-reel formats are also available.

# BLM-200 duplicator system specifications

## BLM-200 MASTER ASSEMBLY

**Tape Speeds:** 60/120 ips or 120/240 ips

**Master Tape Format:** 8 tracks on 1-inch-wide tape, 1.5 mil polyester

Recorded at 7.5 ips, NAB equalized

**Maximum Tape Capacity:** 1800 ft. (about 45 minutes of playing time per program track at 7.5 ips)

**Flutter & Wow:** Less than 1% peak-to-peak from 0.5 Hz to 10 kHz (unweighted)

Will not introduce more than 0.1% r.m.s. (NAB weighted) in final copy.

**Frequency Response:** Reproduce chain from a 7.5 ips NAB equalized master:  $\pm 1$  dB 500 Hz to 160 kHz at 120 ips;  $\pm 1$  dB 1 kHz to 320 kHz at 240 ips (30 Hz to 10 kHz at final copy speed)

Duplicated copies:  $\pm 2$  dB: 50 Hz to 10 kHz at 3.75 ips (8-track cartridge)

$\pm 2$  dB: 50 Hz to 8 kHz at 1.875 ips (cassette)

**Tailoring Tone:** Switchable 120 Hz or 320 Hz, actuated by photocell, applied at saturation level to input of record amplifiers

**Crosstalk Rejection:** Between the tracks or between the adjacent even or odd track pairs; greater than 50 dB from 30 Hz to 10 kHz (at final copy speed)

**System Noise:** Better than 10 dB below a blank, biased, Ampex 404 series low noise tape; 30 Hz to 5 kHz at final copy speed, Better than 6 dB up to 10 kHz.

**Total Harmonic Distortion:** System, exclusive of tape; 0.3% at Ampex operating level.

**Overload Margin:** Up to reproduce level control and record electronics: 20 dB above Ampex operating level. Reproduce electronics after the level control: 17 dB.

**Environmental Conditions:** Temperature: 60 to 105 degrees F (16 to 41 degrees C).

Relative Humidity: 50 to 90%.

**Power Requirements:** 115 volt ( $\pm 10\%$ ) ac single phase, 50 or 60 Hz; 7 amperes (BLM-200-4) and 9 amperes (BLM-200-8) at 115 volts.

**Size & Weight:** 61 inches H x 42 inches W x 27 inches D (155 cm x 107 cm x 69 cm), 500 lb. (225 kg) (approx.)

## 3400 SERIES SLAVE ASSEMBLY

**Tape Speed:** 30/60 ips or 60/120 ips

**Slave Tape Format:** 8 tracks on 250-mil-wide tape, 1.5-mil or 1-mil polyester or acetate (Ampex 681 tape or equivalent). 4 tracks on 150-mil-wide tape, 0.5-mil polyester (Ampex 9219 tape or equivalent). Other formats available.

**Maximum Reel Size:** 14 inches in diameter. A hub diameter smaller than 4.5 inches (NAB size) not recommended for 150-mil-wide tape.

**Flutter & Wow:** Less than 1% peak-to-peak from 0.5 Hz to 10 kHz (unweighted)

Will introduce less than 0.1% r.m.s. (NAB weighted) in copy.

**Power Requirements:** 115 volts ( $\pm 10\%$ ) ac single phase, 50 or 60 Hz. 2 amperes per slave assembly.

**Size & Weight:** 31 inches H x 26 inches W x 26 inches D (79 cm x 66 cm x 66 cm), 150 lb. (68 kg) (approx.) with metal cabinet.

## UNITED STATES

**CALIFORNIA**  
500 Rodier Drive  
Glendale 91201  
(213) 245-9373 TWX No. 910-497-2268

120 Independence Drive  
Mentor Park 94025  
(415) 367-3861 TWX No. 910-378-5920

**COLORADO**  
5650 E. Evans  
Denver 80222  
(303) 757-6491

**CONNECTICUT**  
380 Boston Post Road  
Orange 06477  
(203) 795-0505

**FLORIDA**  
1325 North Atlantic Avenue  
Cocoa Beach 32931  
(305) 753-1811 TWX No. 510-958-2199

**GEORGIA**  
1580 Tully Circle, N.E.  
Atlanta 30329  
(404) 633-4131 TWX No. 810-751-8586

**ILLINOIS**  
2201 Estes Avenue  
Elk Grove Village 60007  
(312) 593-6000 TWX No. 910-222-2864

**MARYLAND**  
10215 Fernwood Rd.  
Bethesda 20834  
(301) 530-8800 TWX No. 710-828-9689

**MASSACHUSETTS**  
391 Totten Pond Rd.  
Waltham 02154  
(617) 899-2040 TWX No. 710-324-6944

**MICHIGAN**  
13321 Cloverdale  
Oak Park 48237  
(313) 358-1630

**MINNESOTA**  
7710 Computer Avenue  
Minneapolis 55435  
(612) 925-1121

**MISSOURI**  
50 Crestwood Executive Center  
Suite 525  
St. Louis 63126  
(314) 842-1511

**NEW JERSEY**  
75 Commerce Way  
Hackensack 07601  
(201) 489-7400 TWX No. 710-990-5143  
(In New York, Phone 736-6116)

**NEW MEXICO**  
4100 Sara Blvd. S. E.  
Rio Rancho Estates  
Sandoval County 87124  
(505) 898-4440

**NEW YORK**  
555 Madison Avenue  
New York 10022  
(212) 758-8900 TWX No. 710-581-4121

**OHIO**  
27122 E. Oviatt Rd.  
Cleveland 44140  
(216) 871-8473

4130 Linden Avenue  
Dayton 45432  
(513) 254-6101 TWX No. 810-459-1846

**PENNSYLVANIA**  
947 Old York Road  
Abington 19001  
(215) 887-7650 TWX No. 510-665-0723

**TEXAS**  
1615 Prudential Drive  
Dallas 75235  
(214) 637-5200 TWX No. 910-861-4967

6001 GuW Freeway  
Suite C-109  
Houston 77023  
(713) WA 8-3741 TWX No. 910-861-5783

Term financing and leasing available  
on all equipment and systems.

## INTERNATIONAL

**ARGENTINA**  
ELECTRONICA AMPEX S.A.  
Carrizo 836, 9° Piso  
Castillo de Correo 5403  
Buenos Aires

**AUSTRALIA**  
AMPEX AUSTRALIA PTY. LTD.  
4 Carlotta Street  
Artarmon NSW 2064

**BELGIUM**  
AMPEX S.A.  
Rue de l'Industrie,  
B-1400 Nivelles

**BRAZIL**  
AMPEX DO BRASIL ELECTRONICA LTDA.  
Rua de Assembleia 51  
Conj. 701  
Rio de Janeiro ZC-21

**CANADA**  
AMPEX OF CANADA, LTD.  
100 Skyway Avenue  
Rexdale, Ontario

681 Lapine Avenue  
Dorval, Quebec

**COLOMBIA**  
AMPEX PAN AMERICA CO.  
Apartado Aereo 29613  
Carrera 10, No. 19-64  
Bogota, D. E.

**ENGLAND**  
AMPEX GREAT BRITAIN, LTD.  
Acre Road  
Reading, Berkshire

**FRANCE**  
AMPEX  
17 rue du Dome  
92-Boulogne

**GERMANY**  
AMPEX EUROPA GmbH  
Walter-Kolb Strasse 9-11  
6 Frankfurt/Main

AMPEX GmbH  
Postfach 288  
Herrenbergerstrasse 95  
7030 Boeblingen

**HONG KONG B.C.C.**  
AMPEX WORLD OPERATIONS, S.A.  
1801-1805 Star House  
3 Salisbury Rd.  
Kowloon

**JAPAN**  
TOSHIBA AMPEX CO., LTD.  
No. 555 Sunaba, Toriyama-cho  
Kohoku-ku, Yokohama

**AMPEX JAPAN LIMITED**  
3 Kojimachi, 3-Chome  
Chiyoda-ku  
Tokyo 102

**LEBANON**  
AMPEX S.A.  
Sahmarani Building  
Kantari Street  
Beirut

**MEXICO**  
AMPEX DE MEXICO S.A. de C.V.  
Apartado Postal No. 13-615  
Ave. Division del Norte No. 1832  
Mexico 13, D. F.

**NETHERLANDS**  
AMPEX N.V.  
Zamenhofstraat 35,  
2305 Utrecht

**SOUTH AFRICA**  
AMPEX SOUTH AFRICA (PTY.) LTD.  
601 Newkirk Building  
132 Kerk Street  
Johannesburg

**SWEDEN**  
AMPEX A.B.  
Fack E-172  
07 Sundbyberg 7

**SWITZERLAND**  
AMPEX S.A.  
P.O. Box 831  
Via Berna, 2  
6901 Lugano, Tessin

**UNITED STATES**  
AMPEX INTERNATIONAL  
OPERATIONS, INC.  
(HEADQUARTERS)  
Box 4000  
Redwood City, California 94063

AMPEX PAN AMERICAN COMPANY  
Box 4000  
Redwood City, California 94063

Contact nearest International Office  
regarding term financing and leasing.

Your investment in Ampex equipment yields maximum returns when it is operated and maintained by Ampex-trained people. Seminar and videotape training courses available worldwide. For brochure, write Ampex Technical Institute, M.S. 2-11A, 2685 Bay Road, Redwood City, Ca. 94063, U.S.A.

# AMPEX

Ampex Corporation Audio-Video Systems Division  
401 Broadway  
Redwood City, California 94063

LITHO IN U.S.A.—A463—10-70