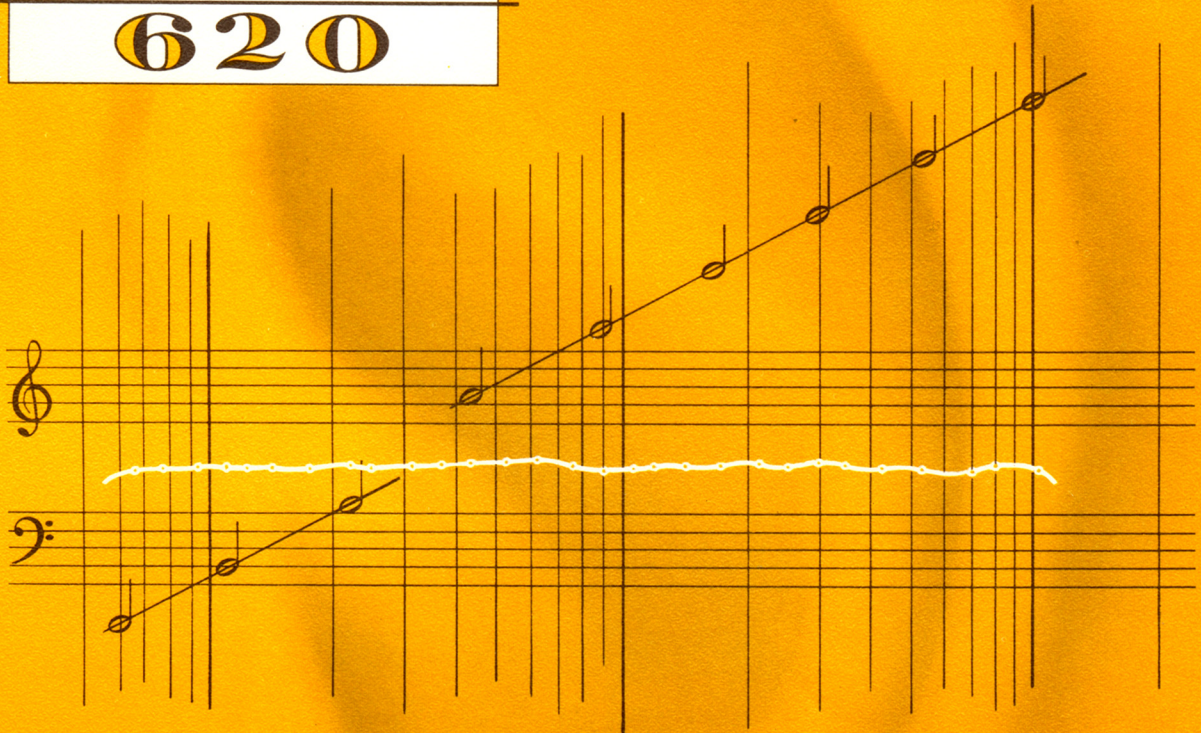


AMPEX

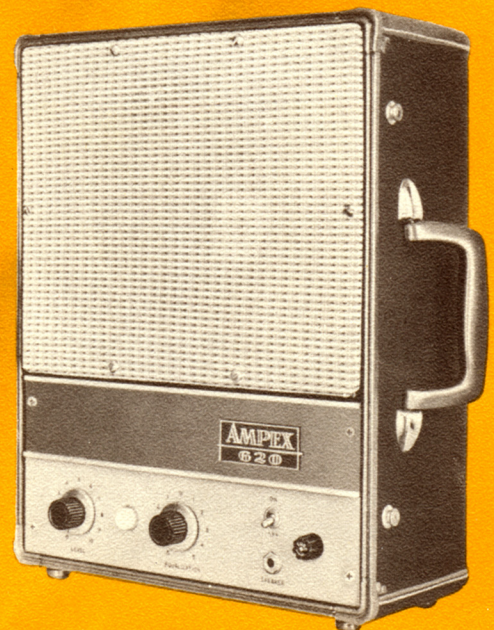
620



SOUND FOR THE GOLDEN EAR
from a speaker the size of an overnight case

AMPEX 620 AMPLIFIER-SPEAKER

IT HAS FLAT ACOUSTIC RESPONSE! . . . thus one of the ultimate ideals in sound reproduction has become a reality. By standard measuring techniques in air the Ampex 620 gives response that is free from irregularities over the entire 65 to 10,000 cycle range, with substantial response present above and below. To achieve this at all would be engineering triumph enough. But that this is accomplished in a portable unit of this size is something that must be heard to be believed.



AMPEX

620

for the **GOLDEN EAR**

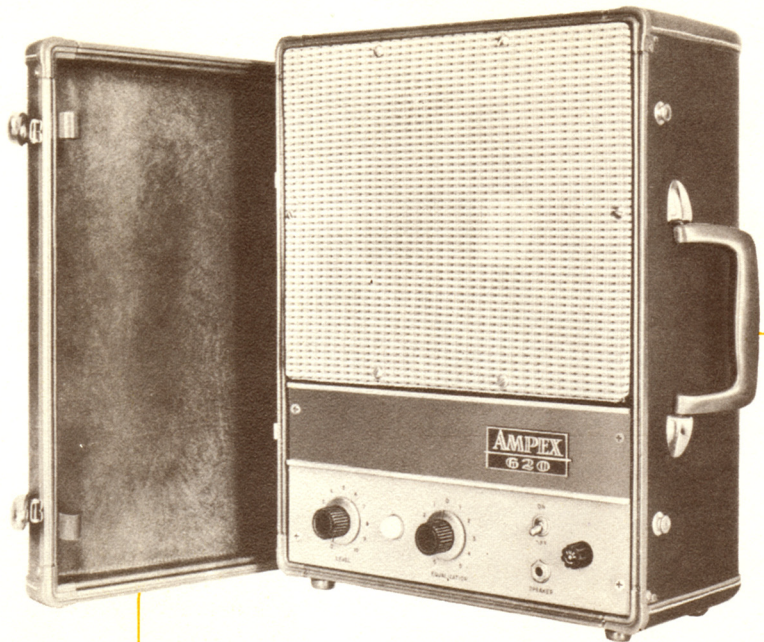
In a private demonstration an Ampex 620 was heard by one of the country's best known symphony conductors. A tape recording was played. It began with a brief spoken description of the 620. Then there was a short orchestral selection. The distinguished musician's face lighted up with spontaneous enthusiasm. The complimentary things he later said were hardly necessary. The things his face had said were testimonial enough.

NEW STRENGTH IN THE WEAKEST LINK

In the chain of sound reproduction equipment, the Ampex 620 provides strength where strength has been needed. Speakers have always been the weak link. They have been plagued by "peaks and valleys" tending to overemphasize some frequencies and lose others. The fact that the Ampex 620 puts out actual sound that is uniform from 65 to 10,000 cycles is revolutionary. Bass is full but not boomy. Highs are brilliant and undistorted. Even when using its full 10 watts, the 620's output is remarkably free of harmonic and intermodulation distortion. To the listener the effect is startling realism.

A SIZE THAT'S A GREAT SURPRISE

Imagine taking your high fidelity reproducing system over to a friend's home for the evening or across the country as luggage. This is the new mobility that the Ampex 620 gives to high fidelity sound reproduction. The Ampex 620 disproves the theory that a speaker must necessarily be large to have power, clarity and extended frequency range. Performance of the Ampex 620 is the result of a completely integrated design. The loudspeaker unit, enclosure, amplifier and reciprocal network were each designed with great care to operate with each of the other components. Together they achieve a near perfect mutual compensation. (A more detailed technical explanation is given on the back page.)



THE AMPEX 620 AMPLIFIER-SPEAKER

FIDELITY

Speaker output is uniform from 65 to 10,000 cycles and has useful range above and below these frequencies. Harmonic and intermodulation distortion are very low.

POWER

Amplifier output is 10 watts with less than 1% harmonic distortion. Volume is more than ample for homes and completely adequate for conference halls, classrooms, small auditoriums.

PORTABILITY

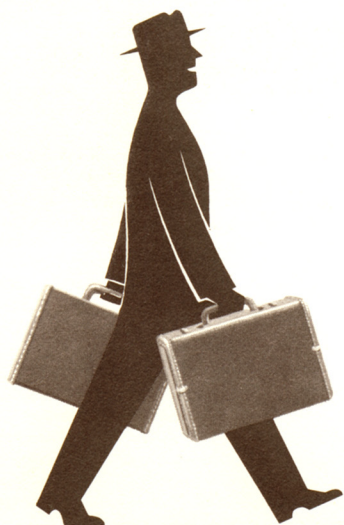
Total weight is only 25 pounds. Dimensions are 13 x 16 x 8 inches. Case is sturdy Samsonite and the entire unit is of shockproof design to withstand normal travel handling.

VERSATILITY

The Ampex 620 can amplify from tape recorder, turntable, record changer, AM-FM tuner or pre-amplified microphone. It is equally desirable as a semi-fixed home installation or as a portable. Its handsome Arizona brown case looks good in any surroundings.

ADAPTABILITY

An external speaker jack is provided. When in use, it bypasses the internal speaker and its reciprocal network, letting the Ampex 620 be used as an all-purpose 10 watt amplifier. Amplifier frequency response is 20 to 20,000 cycles $\pm 1/2$ db.



AMPEX 600 - 620 ultra-fidelity combination

The perfect sound source for the Ampex 620 Amplifier-Speaker is its matching companion piece, the Ampex 600 Tape Recorder. Likewise a separate speaker unit like the 620 is the only kind that can do justice to the 600's performance. The two were designed for each other. Both are portable. Both are remarkably versatile. And both have fidelity that surpasses any comparable unit.

The Ampex 600 can put onto tape almost any conceivable combination of music, speech or sounds. Whether taken from live sources, recordings or broadcasts, these sounds will lose no perceptible quality in being taped. The Ampex 600 and 620 together can go anywhere. And together they can reproduce any program of music and speech with startling fidelity.



APPLICATIONS UNLIMITED

For the home the Ampex 620 provides a higher quality of reproduction than has ever before been available at moderate cost. Your radio tuner, phonograph, TV or tape recorder will all sound better through the 620. It makes minimum space demands and can be moved from room to room as desired.

For the audiophile the Ampex 620 is the backbone of a "walking Hi-Fi system." It provides greater fidelity than most speaker consoles of far greater size — particularly if used with its companion piece the Ampex 600 Tape Recorder. The 620's 10 watt amplifier can serve any purpose.

For lectures and sales shows, the Ampex 620 is a sound system that can travel. It assures the highest possible quality of sound and provides complete independence from locally available (and usually inadequate) facilities.

For the sound engineer the Ampex 620 is an ideal means for checking room acoustics and sound equipment performance. Quality of the 620 is more than ample to reveal the character of other portions of the sound system.

For the custom music shop the Ampex 620 is a ready means to demonstrate high fidelity music reproduction from discs or tape in the home or premises of prospective customers.

For musicians and ensemble groups the Ampex 620 and its companion, the Ampex 600 Tape Recorder, are invaluable aids to practice, rehearsal and teaching. They let performers hear themselves exactly as the audience hears them.

For schools the Ampex 620 makes it feasible to use high quality professional tape recorders such as the Ampex 600. They can serve for band, orchestra and gleeclub rehearsal, giving quality of music reproduction that no small recorder has ever before provided.

For music appreciation classes the Ampex 620 has power and fidelity that let every member of the class hear music at its best. The 620 is rugged and easily moved from room to room.

For broadcasters and recording studios the Ampex 620 is an efficient monitoring system either inside or out, and is a perfect means for demonstrating program material to prospective advertisers at their own locations.

For stereophonic sound the Ampex 620 makes mobile use and demonstration feasible. Since two, three or more amplifier-speaker units are a basic requirement, the compactness of multiple 620's results in a great saving in weight and bulk.

MODEL 620

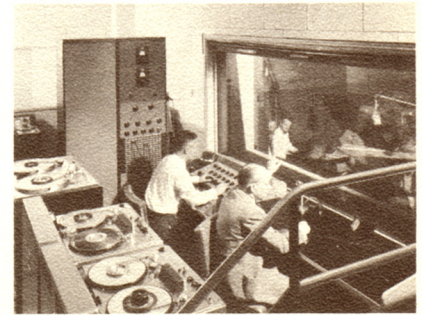
AMPLIFIER-SPEAKER

WHY A GREAT SPEAKER SHOULD COME FROM AMPEX

"Necessity is the mother of invention" and nowhere else has the need been greater. Ampex builds the finest recording machines in use today. They make master tapes for today's fine Lp records. They record the big radio shows. They are used by every major broadcast network. And they can record sound as true to life as the human ear can perceive. But no loud-speaker in existence can reproduce this sound with equal perfection. The recent Ampex 600 Tape Recorder demands still more. It performs like the big studio Ampexes, but it weighs only 28 pounds. An

ideal speaker would have to match the Ampex 600 in portability as well as fidelity. No existing one has come close. Those with quality were big. Bigness was assumed to be essential. Ampex challenged the assumption.

The Ampex 620 Amplifier-Speaker was the result. It achieves a uniformity of response that is an ultimate aim of even the largest speakers. Ampex engineers met the challenge. They made a speaker as small as their Model 600 tape recorder. And it approached its fidelity as well.



Ampex Recorders making master tapes at Capitol Records, Inc.

HOW FIDELITY AND PORTABILITY WERE COMBINED

Performance of the Ampex 620 is achieved by a carefully integrated design of all components. Each was specially built for the 620.

Heart of the Ampex 620 is an 8-inch speaker of special design. It was developed by Ampex engineers to utilize a high degree of bass and treble boost without undue harmonic or intermodulation distortion. Notable features are longer voice coil travel, large

magnet size and flexible diaphragm mounting. All are unusual for any speaker, and particularly for one of this size.

The 10-watt power amplifier is of push-pull design. It is a conventional high fidelity type but is unusual for its fast transient overload recovery. In conjunction with the amplifier is a "reciprocal network." It forms an accurate upside down version of the speaker and

enclosure characteristics. Since the speaker is designed to utilize the boost from this network, the result is a uniform response curve that is virtually perfect. **(The network is bypassed when the amplifier is used for an external speaker.)**

Two-thirds of the portable case forms the speaker enclosure. Portability dictated these dimensions as a beginning point of the Ampex 620 design. Speaker and reciprocal network were designed to be acoustically correct with this enclosure only.

MODEL 620

GENERAL PERFORMANCE CHARACTERISTICS AND SPECIFICATIONS

OVERALL FREQUENCY RESPONSE (in air)

65 to 10,000 cycles/sec. essentially flat. The 620 also has substantial response beyond these limits.

**Response curve established by a test microphone in free field on axis with unit radiating into semi-infinite space of 2π steradians solid angle. Actual use will approximate this condition when the 620 is placed in a good acoustical environment. Tests were made with 7 component multitone of quarter octave overall width.*

AMPLIFIER FREQUENCY RESPONSE

20 to 20,000 cycles/sec. $\pm 1/2$ db.

POWER OUTPUT

10 watts amplifier power with less than 1% harmonic distortion. Speaker can use full power.

SIGNAL-TO-NOISE RATIO

Amplifier noise (including hum) is 70 db below rated output.

CONTROLS AND CONNECTIONS

Level control, equalization control, power switch and on-off indicator light are provided. Cable for A.C. power is furnished and also an A.C. convenience outlet is built in. Audio input connector is of the concentric pin type. External speaker connection is a headphone type jack.

EQUALIZATION

Single control on front panel gives a level tilt to speaker output, boosting the bass and attenuating the treble or vice versa. Maximum bass boost is 6 db relative to treble. Maximum treble boost is 6 db relative to bass.

EXTERNAL SPEAKER FEED

Use of the external speaker jack automatically cuts out the 620's speaker and reciprocal network. Hence, flat amplifier output is fed to the external speaker.

INPUT IMPEDANCE

20,000 ohms.

OUTPUT IMPEDANCE

12 ohms to external speaker.

POWER REQUIREMENT

117 volts, 50 or 60 cycles, 0.5 amps, 55 watts.

WEIGHT

25 pounds.

DIMENSIONS

13 x 16 x 8 inches.

AMPEX

CORPORATION

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REDWOOD CITY, CALIFORNIA

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