sound BUSINESS

October 1946 ANNING-JOHNSON CO., INC.

88024 1267

BACKGROUND FOR Drama

ACOUSTONE SOUND CONDITIONING AND DECORATING BY HUBBUCH, LOUISVILLE, KY.

DOWN the booklined corridor, around the corner and through the doorway at the far end is the office of William Marshall Bullitt, head of the oldest law firm handed down from father to son in the United States.

Recently Hubbuch in Kentucky redecorated the office with red gum flexwood walls, a sound conditioned Acoustone ceiling and lighting by a hidden fluorescent system.

A long glass-topped table at the end of the room opposite the desk is convenient for conferences and for wide spreading out of papers and books. Soft leather chairs and sofa are used.

A ceiling of Acoustone, a mineral acoustical tile, reduces the mingling reverberation of voices and helps relax tense nerves. The Acoustone's irregularly fissured texture sets off the gum walls and desk.

Flush type fluorescent lights were specially planned to fit with the Acoustone ceiling so as to give clear, glare-less light in both work areas.

Advantage of the complete decorating and acoustical service is in making functional all materials that are to be used . . . Carpeting, upholstery, acoustical material and lighting *go together* because they have been planned all at one time.

The deep red and saddle beige of the leather chairs add vivid accent to the muted tones of paneling and carpet. The square shapes of the lighting troughs repeat the square acoustical tile shape.

APPROACH to the office is through a very wide corridor of books running through the whole floor. Thick carpeting absorbs the slight sounds made here. Tables line the center.

LIGHTING SET flush with the Acoustone ceiling is planned in two squares that light both working areas. Built-in cupboards behind the desk contain room's customary impedimenta.

FIT FRAME for the entrance of William Marshall Bullitt's office are the reference volumes and ancient books and pamphlets that crowd the outer office shelves.

Elements of new studio are cylindrical walls, acoustical ceiling.

WHEN FORM FOLLOWS FUNCTION

NEW STUDIO CONSTRUCTION CREATES NEAR-PERFECT BROADCAST CONDITIONS

A NEWLY developed type of studio captures the "lost notes" of broadcasting or recording and lets a performer hear himself as the audience hears him.

Until now, the function of a studio—to provide a room in which sound can be picked up and broadcast or recorded *naturally*, as one hears it—has never been fully realized. In an ordinary room, sound bounces back from room boundaries to plague the performer and gravely affect the fidelity with which the microphone broadcasts it. The earliest efforts at studio sound conditioning resulted in adequate control of reflected sound that is *too loud* or lasts *too long* by the use of sound absorbing materials.

But sound created in a room is not heard at like loudness in all parts of the room. Also, different pitches create different loudness patterns. These effects have been a constant stumbling block to fidelity.

A frequently attempted remedy was to place several microphones in the orchestra in the hope that some of them would be so located as to pick up the varying pitches and record or broadcast them at the proper relative loudness.

In ordinary broadcasting or recording, the performer was not able to hear himself as he would be heard. He had to learn "to sing in one language while his words were recorded in another."

And as a final attempt, the control room engineer partly corrected what was being incorrectly picked up by the microphone.

The new type studio eliminates all this chance and by-guess-and-by-golly correction by creating near-perfect sound at all points in the studio before it is picked up. Performer or conductor hears exactly what is picked up by microphone. Only one microphone is necessary—and it may be placed almost anywhere in the studio. And the sound itself has a brilliance and clarity that removes the intangible veil from radio or record music and causes the listener to exclaim, "It sounds like it's right here in my room!"

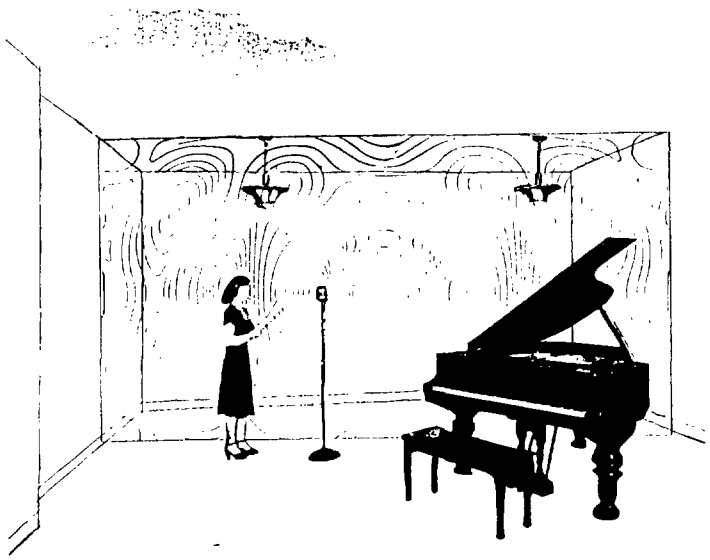
The elements that make up this studio are cylindrical construction of sound-reflecting walls and a complementary sound absorbing ceiling.

The cylindrical wall surfaces diffuse sound which strikes them, so that loudness levels throughout the room are sufficiently uniform to make one microphone adequate. By varying their diameters, the cylinders are tuned to absorb different pitches uniformly.

Walls are constructed of such materials as Weatherwood Hardboard or plywood.

An absorptive material is installed on the ceiling in an area carefully adjusted to complement the absorption of the cylindrical walls. Here, Auditone, acoustical fiber tile whose absorption curve is especially suited to this purpose, has been chosen.

The result is a truly functional studio that may be decorated by featuring the natural grain of the wood or by painting walls or ceiling with accent colors.



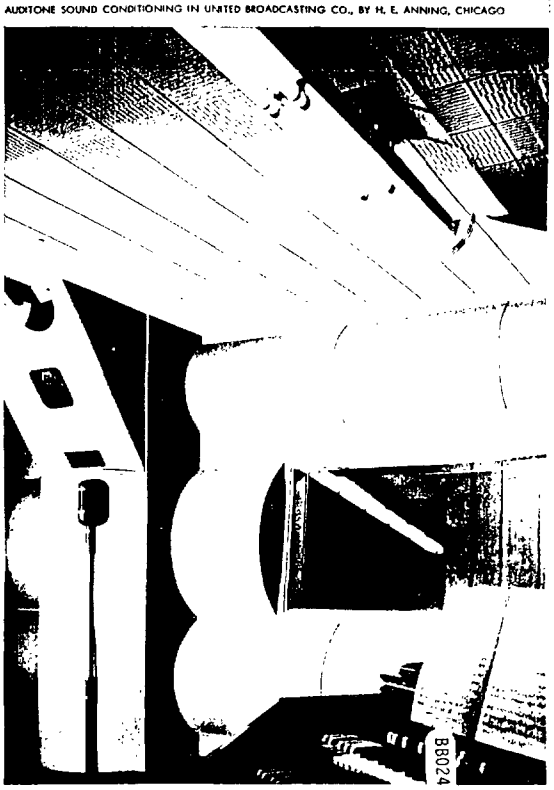
THEN. When flat wall areas reflect sound, they create a pattern of varying loudness. Diagram shows loudness pattern of one sound of single pitch in a single plane.

Only one microphone is necessary for any performance —and it can be placed almost anywhere in the studio.

AUDITONE SOUND CONDITIONING IN SCHMITT MUSIC CO. BY HAUENSTEIN & BURMEISTER, MINNEAPOLIS

NOW. The cylindrically constructed walls diffuse sound so loudness is evenly distributed. All studios with natural walls are the Paul A. Schmitt Music Co., Minneapolis.

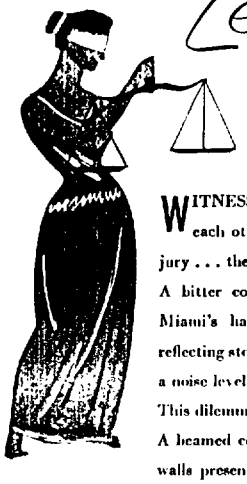
AUDITONE SOUND CONDITIONING IN UNITED BROADCASTING CO., BY H. E. ANNING, CHICAGO



In United Broadcasting Co. studio, Chicago, walls are painted in pastel shades. White Auditone on ceiling.

BB024 1270

Letting Justice Be Heard



WITNESSES spoke in tense, strained voices . . . the lawyers shouted at each other . . . the judge had trouble making himself heard by the jury . . . the spectators were confused . . .

A bitter court battle? No—simply an ordinary courtroom session in Miami's handsome Dade County Court House, where hard, sound-reflecting stone and tile surfaces bounced sound back and forth, building up a noise level of confusing intensity.

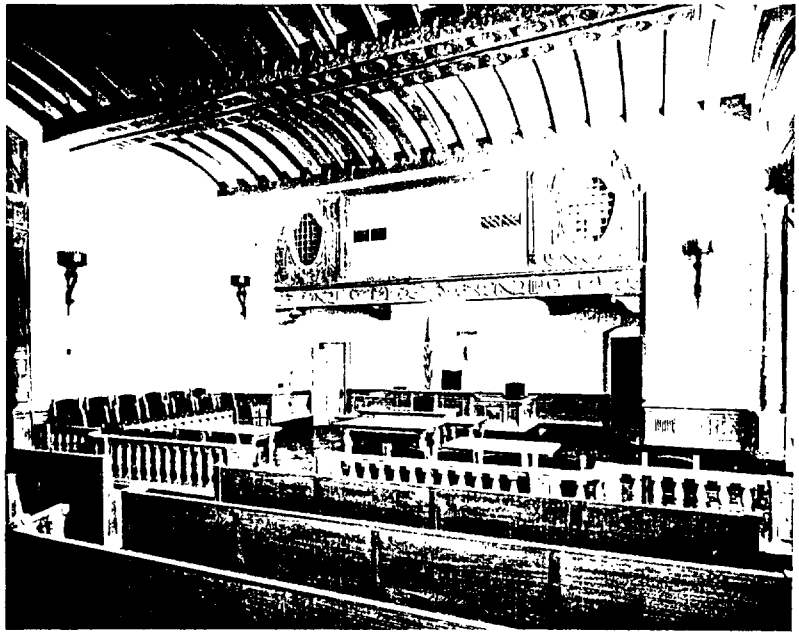
This dilemma posed both a sound conditioning and a decorating problem. A beamed ceiling prohibited ceiling acoustical treatment and the curved walls presented complications. Finally, Acoustone laid in Ashlar pattern was chosen for installation on all four walls. The curved wall was covered by carefully wetting Acoustone tile and moulding them to it. After the Acoustone had thoroughly dried while nailed to the wall, the nails and tile were removed and the tile then re-fastened into place with adhesive.

Improvement in acoustics was pronounced remarkable by the several judges who preside in the room. When speaking in normal voices they can now be heard throughout the courtroom. Witnesses are clearly understood by the jury, and lawyers can present their arguments without shouting.

Order was brought out of a chaos of sounds by the installation of Acoustone on all sidewalls.

BEFORE. The courtroom was dim, dark and noisy. Hand-rubbed wood carving was not "played up."

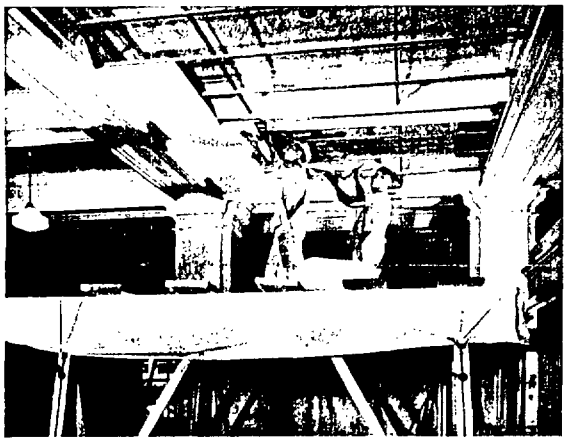
AFTER. Attractive white Acoustone sets off woodwork, eliminates glare and deep shadows.



ACOUSTONE SOUND CONDITIONING BY RAY HOF AGENCIES, MIAMI

ACOUSTONE SOUND CONDITIONING BY ELIAS MORRIS AND SONS CO., SALT LAKE CITY

FRIDAY Noise of tabulators, adding machines and comptometers brings confusion and lowered efficiency, makes most conversation difficult.



SATURDAY While employees are gone for the weekend, Acoustone is installed on a suspended ceiling and on the upper sidewalls.

MONDAY New peace and quiet. Square edged Acoustone, appearing almost jointless, has the unobtrusive simplicity of a fine plastered ceiling.

WEEKEND WONDER...

THE OFFICE of the Presiding Bishop in Salt Lake City, operating hub of the Mormon Church, was—until recently—noisy with the sound of office machines and in-and-out streams of traffic.

Marble, ceramic tile and hardwood surfaces bounced sounds back and forth, building up to a high noise level. This reduced efficiency and made conversation difficult. Then the office was sound conditioned with Acoustone.

Between the time employees left for the weekend and arrived back on Monday morning, Acoustone was installed on a suspension system that brought the ceiling down flush with the decorative beams and eliminated its "chopped-up" appearance. Returning employees were astonished by the dramatic transformation.

TO ALL THOSE who are awaiting acoustical materials—here's a program for sound conditioning that will give you a head start. (1) Have your U-S-G District Contractor make an analysis of your plant or office noise problems—with recommendations for their correction.

(2) Have him work out a long-range plan for your sound conditioning in which the critical areas will be treated soon and the others periodically, as materials become available. Here's why . . . We'd like to boast about our production record—it's the best in our history—but we still aren't able to supply the entire demand for Acoustone and Auditone.

Both are being installed in large quantities every day. And in most areas quick service can be given on *many* jobs—but not *all* jobs. Production facilities are being rapidly expanded until one of these days you'll be able to have all you want as soon as you want it. *In the meantime, early plans will mean early deliveries.*

SOUND BUSINESS BULLETIN

FROM LYLE F. YERGES, MERCHANDISE MANAGER, INDUSTRIAL SOUND CONTROL DIVISION, UNITED STATES GYPSUM CO.

88024 1272

HOW TO CHOOSE *Sound Comfort*

IN OFFICES, STORES, RESTAURANTS, THEATERS, STUDIOS, CLUBS

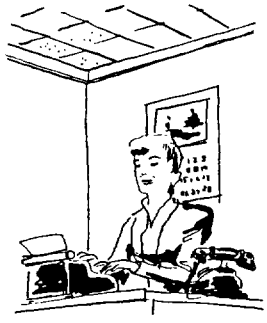
Look ahead and choose a sound-conditioning material that—installed by experts to last a lifetime without repairs—will become a permanent part of your rooms.

Choose your material from our U-S-G products that range from the business-like efficiency of Auditone, fibre acoustical tile, to the luxurious beauty of Acoustone, mineral acoustical tile.

Then follow this convenient plan for a sound program of acoustical installation . . .

1. Have a free analysis made of your noise problems, with recommendations for correction over a convenient period.

2. Plan to have the most critical noise areas treated first, with minimum inconvenience to room tenants.



3. Sound condition other areas at periodic intervals as the acoustical materials become available.

4. The acoustical installation is a permanent part of the room decoration and it may be repainted at any time.

Recent U-S-G Sound Conditioning Installations
By Anning-Johnson Co.

FEDERAL RESERVE BANK *Chicago, Ill.*
NORTHERN TRUST CO. *Chicago, Ill.*
NORTH SHORE NATL. BANK *Chicago, Ill.*
FIRST FEDERAL LOAN & SAVINGS BANK *Chicago, Ill.*
BELMONT NATIONAL BANK *Chicago, Ill.*
CONTINENTAL NATIONAL BANK & TRUST CO. *Chicago, Ill.*
CHICAGO SUN *Chicago, Ill.*
CHICAGO TIMES *Chicago, Ill.*
CHICAGO TRIBUNE *Chicago, Ill.*
UNITED BROADCASTING CO. *Chicago, Ill.*
RADIO STATION W. G. N. *Chicago, Ill.*
ZENITH RADIO CORP. *Chicago, Ill.*
MOUNT SINAI HOSPITAL *Chicago, Ill.*
PRESBYTERIAN HOSPITAL *Chicago, Ill.*
UNIVERSITY OF CHICAGO *Chicago, Ill.*
NORTHWESTERN UNIVERSITY *Evanston, Ill.*
ROSARY COLLEGE *River Forest, Ill.*
GLENBARD HIGH SCHOOL *Glen Ellyn, Ill.*
ELM PLACE SCHOOL *Highland Park, Ill.*
SUNSET RIDGE COUNTRY CLUB *Northbrook, Ill.*
ILLINOIS ATHLETIC CLUB *Chicago, Ill.*
UNION LEAGUE CLUB *Chicago, Ill.*
PUBLIC SERVICE CO. *Northbrook, Ill.*
WESTERN UNION *Chicago, Ill.*
UNITED AIR LINES *Chicago, Ill.*
T. W. A. *Chicago, Ill.*
FURNITURE MART *Chicago, Ill.*
BORG WARNER CORP. *Chicago, Ill.*
GLORE, FORGAN & CO. *Chicago, Ill.*
PEPSODENT CO. *Chicago, Ill.*
RELIANCE MFG. CO. *Chicago, Ill.*
JEWEL TEA CO. *Barrington, Ill.*
BETHLEHEM STEEL CO. *Chicago, Ill.*
CORN PRODUCTS REFINING CO. *Argo, Ill.*
A. B. DICK CO. *Chicago, Ill.*
BELL & HOWELL *Chicago, Ill.*
WESTERN ELECTRIC CO. *Chicago, Ill.*
WESTINGHOUSE ELECTRIC & MFG CO. *Chicago, Ill.*
CHASE BAG CO. *Chicago, Ill.*
SOCONY VACUUM OIL CO. *Chicago, Ill.*
HALES & HUNTER *Chicago, Ill.*
SPIEGEL'S INC. *Chicago, Ill.*

ACOUSTONE AUDITONE AND WEATHERWOOD ARE REGISTERED TRADEMARKS

ANNING-JOHNSON CO.
INCORPORATED

Engineering Consultants in Acoustics and Gypsum Roofs

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