



Avalanches—Tiger Growls Exciting Listening . . . But Tough Work for Soundmen

WBBM-Chicago Sound Crew Finds Some Shows Require A Barrel of Gadgets

*A man runs up stone steps to a house!
He is being pursued by another man!*

First man slams and locks door!

Pursuer smashes door!

Two shots fired!!!

Body falls!!!

CURTAIN

These sounds make exciting radio listening but for WBBM-Chicago technicians they are merely routine. It happens everyday! Someone is always getting killed, doors are continually being smashed in and bodies fall all around the microphones. The equipment required isn't very complicated, either; all a sound-man needs is a marble block to "run" on, a door complete with lock, a couple of strawberry boxes to crush in simulation of a smashed-down door, two pistols firing blanks (on cue) and an assistant to fall to the floor—and, of course, recording equipment.

When a sound-man's life really gets tough and he starts breaking out with a series of headaches, is when a script calls for such devices as an avalanche or the sound of a pen writing under water. Such assignments require some expert improvising and a storehouse of assorted gadgets packed high to the ceiling and including nearly everything from a razor strop to a dish of Mexican jumping beans.

But such assignments as: "Get me the sound of a man washing his car—make it a sedan" or "I gotta have the sound of a wild buffalo calling his mate" never send WBBM's Chief Technician Urban Johnson or his assistants running for cover. Nothing has stumped them yet and recently the strangest sound in all of radio: the sound of a man who had fallen in a vinegar vat being pickled to death produced editorial comment throughout radiodom.

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Urban Johnson, WBBM—Chicago's Chief Technician, (background) and assistant Edward Wojtal, shown at a busy moment during a dramatic WBBM program full of sound and fury . . . and signifying something!

Many U. S. Stations Air French Recordings; Programs Cut in Paris—Pressings Made Here

Less than a month after the liberation of France, the French Broadcasting System (Radiodiffusion Francaise) resumed its broadcasts to foreign countries, even though the war had reduced their facilities to seven per cent of pre-war standards.

The shortwave broadcasts in English to North America began in December 1944. They received immediate and most encouraging response. Hundreds of listeners, who hadn't heard the voice of Paris since 1940, wrote letters from all over the U. S. to express their good wishes and encouragement. So, during the summer of 1945, after Robert Lange, who had worked in New York on the Voice of America shortwave broadcasts to France during the war, was appointed Head of the North American Service of the French Broadcasting System, a relay service to America was inaugurated.

Many interesting programs, prepared in Paris, were relayed by U. S. stations east and west of the Mississippi.

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But Natch!

Several unofficial reports from New York claim that the quality of the transcribed Bing Crosby program showed considerable improvement during recent weeks when the show was recorded in Gotham instead of Hollywood. Larry Ruddell, ABC Recording Chief, whose net handles the program, says he is unable to account for any such improvement. "We have been experimenting with various other methods of recording, including tape and film," Mr. Ruddell said, "but so far we have not found anything that could supplant the discs"

audio record

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Amateur Reporter Records Horror of LaGuardia Crash

Man's Vivid Description of Tragedy Broadcast Same Day by WOR-New York

The first radio reporter on the scene of the tragic plane crash at LaGuardia Field a few weeks ago was an amateur. He was Marino Jeantet, 32, a sound service man of Corona, L. I. Jeantet was driving his truck along Grand Central Parkway as the giant airliner roared across the parkway and crashed a few hundred feet away. Rushing to the scene of the disaster, Jeantet not only gave first aid, but set up his semi-professional recording equipment, which he was carrying along in his trunk, and reported the tragedy for radio station WOR-New York. Working in the rain for two hours, Jeantet vividly described the wreckage and the rescue work, as well as putting on a clergyman who offered a brief prayer.



Marino Jeantet

"I couldn't devote my entire time to making the records," Jeantet said, "because I was frequently called away to help carry a charred body to the improvised morgue in the cafeteria of the Academy of Aeronautics."

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Soundmen Need Barrel of Gadgets

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A man has to have an inventive mind to work as a sound technician, and Urb Johnson is just such a man. Among his souvenirs he counts his rain-making machine as one of his most ingenious devices. At first sight it looks like a washing machine on rollers with a huge porcelain tub and three overhanging shower bath sprays along with a faucet. The merit of this contraption is that it can be wheeled all over the station and no water connection is required. After a long search, Urb finally found a silent electric motor and pump which rotates

the water through the tub and back into the pipes so that a mere half-gallon of water can produce the effect of an all-night rain storm in the tropics or the faucet can force a jet of water onto a tin can to produce the sound of a man washing a car—even a sedan! For light rain—garden party variety—water is allowed to fall gently on a piece of soft cloth placed on the bottom of the tub.

Many times Urb and his assistants, Louis Woehr and Edward Wojtal, have been called on to produce a sound without a moment's notice. Urb recalls the time a few years ago when he arrived at Great Lakes, Illinois, where Kate Smith, CBS singing star, was doing a benefit broadcast for the Navy personnel stationed there. When Urb arrived he learned at the last minute that the script required the sound of horses' hoofs—and not a nag was in sight! Quick-think-Johnson stepped to the microphone, bared his chest, cupped his hands and beat on his upper ribs in rhythmic fashion which sounded like a whole posse of western riders on the romp.

Johnson has many other tricks up his sleeve, too—more than the average magician, and his latest assignment for WBBM-CBS' "Adventurers' Club" called for the sound of a rumbling avalanche crashing down on a road. For this effect, Urb placed a ten-inch record over a 12-inch one and around the rim of the larger record he cut a ragged groove with a file. Rotated at different speeds on the turntable, this clever invention produced such a rumbling sound that a CBS page girl passing the sound department during the experiment, was sure Chicago had been hit by an earthquake and ran for cover.

Not only does a sound technician have to be an idea-man, a mechanic and an athlete (falling all over the place without getting hurt requires almost as much training as a prize-fighter) but he has to be a vocal actor as well. One of Urb's special accomplishments is the sound of a barking dog—any mood, any degree of anger which he can produce and for which there is a special pay rate.

Looking around the WBBM sound department, a visitor has no doubt that if the technicians on the staff are ever required to reproduce the sound of Jack climbing a beanstalk or an atom bomb sent to the moon they can do it! From the floor to the ceiling there are more gadgets than you'll find in the average attic or hall closet: compressed air tanks, buggy whips, clocks, pans, flower pots, gongs, coffee grinders, straw hats, dishes, toy trains, hat boxes, balls, plates of glass, bottles, roulette wheels, punching bags, rubber plungers, auto horns that date back to 1904 anything you name it!



By C. J. LeBel, Vice President
AUDIO DEVICES, Inc.

QUALITY CONTROL IN THE DISC FACTORY

It is obvious that finding the finest recording lacquer is not, in itself, the only necessary guarantee of a good disc. In the May issue we discussed the problems underlying the development of a lacquer formula. Now we shall see what precautions are necessary in its use.



C. J. LeBel

A manufacturing system without a definite organization to supervise quality maintenance is one without guidance, so we were fortunate that our 1938 contract with La Societe des Vernis Pyrolac started us

off with all the disc quality control know-how they had developed since 1929. This system has been enlarged in accordance with our own experience in the nine years since then, and as we make our own lacquer, control of product characteristics is all under one roof. Mistakes would be expensive, so a good quality control system keeps costs down at the same time that it improves quality.

Incoming Materials

General tests are applied to all incoming raw materials, as follows:

1. Solvents and diluents are checked for acid number, distillation range, non-volatile residue, specific gravity, and water content. Some manufacturers' products must be checked drum by drum; other organizations have not had a rejectable shipment in eight years, and a spot check suffices.

2. Film forming material is tested for solid content, viscosity, water content, and clarity.

3. Plasticizers are checked for specific gravity, viscosity, and color.

4. Aluminum shipments may be spot checked for flatness, surface smoothness, and surface cleanliness. This is seldom necessary as the circles have to be individually inspected as they go on the production line, anyhow.

In addition to the general tests, special procedures are applied to certain materials. These special tests are for contaminants which would not be shown up by the simple methods previously mentioned, yet which would be harmful in even small proportion. The test is repeated after purification, if the latter proves necessary. Drums of chemicals are tagged when approved.

Lacquer

The individual mix is made and filtered by the Lacquer Department, using tagged drums of chemicals. Individual mixes are used because continuous mixing (apart from the difficulty of handling so large a number of ingredients) would not permit of testing before passage of lacquer into the main system.

The filtering calls for the finest work of the chemical engineer due to the high solid content and hence the high viscosity of the lacquer. The high solid content is essential to single layer, homogeneous automatic machine application; and the high viscosity results therefrom by the inherent law of nature. Many filtering methods and media are available: single, multiple filtering; plate-and-frame filters and centrifuges; paper, cloth, and other filter media; various filter aids. It is most important that filtration be done properly, for no combination of methods is such that it can be used without extremely careful supervision, hence individual mixes are tested not only for viscosity and solid content, but also for filtration quality.

The Engineering Department then coats some test discs, and makes a recording. If this is satisfactory, a sample of the solution is retained in glass, and the mix is released to production. This mix is then blended with previous mixes in tanks and aged before use. Hence lacquer in the tanks and system at any given time is a blend of several mixes. This blend is refiltered just before passing to the coating machines.

The sample in glass is retained for several months, and is available in case of doubt as to absence of impurities, or question as to stability. It is always large enough to coat an adequate number of test discs, as well as provide material for analysis.

Disc Factory Control

The Engineering Department quality control personnel make a regular check of factory process conditions. It is interesting to note that to check functioning of automatic controls they have to read 118 thermometers. They must also check many air flow indicators, machine speeds, air filtering, and air conditioning

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More than 400 radio stations are currently cooperating in the U. S. Coast Guard's recruiting program by airing "Jive Patrol," a unique series of 15-minute transcribed programs designed to aid recruiting and to stimulate public interest generally in the humane work of the Coast Guard. Above, Bea Wain and her husband Andre Baruch (right) were among the top disc jockeys in radio who helped to promote the series. Jim Lehner (holding disc) of Newell-Emmett Company, New York, is author of the programs. Featuring the Coast Guard Academy band and its swing unit, the Coast Guard Cutters, the shows, which were offered to stations nationally as public service features, are slanted to appeal to young veterans and recent high school grads. Recorded station-break spots ranging from 10 to 60 seconds, and a 15-minute platter-chatter script series for disc jockeys have also been backing the six-month recruiting program. Newell-Emmett is now producing a 15-minute documentary disc for the Coast Guard as a tribute to the service's 157th anniversary, which will be observed on August 4th.

Extensive Use of Recordings at Stanford Univ. Explained by Head of Speech-Drama Dept.

From Mr. Hubert Heffner, Executive Head of the Department of Speech and Drama at Stanford Univ., Palo Alto, Calif., comes another account of the many uses of recording in audio-visual education today.

"In our basic courses, 'Training the Speaking Voice', and 'Public Speaking', we make voice recordings of each student in each section at the beginning of the term," explains Mr. Heffner. "This disc is then used in conferences with the student as a basis of analysis of his voice and speaking problems. And, as he develops through the term, additional recordings are made so that at the end of the semester the student has a complete record of his development attained during the course. This same method is employed in our course in 'Fundamentals of Oral Reading'.

"We also use recordings," Mr. Heffner relates, "in connection with certain of our drama courses, although these are not on a regularly scheduled basis as they are in the speech courses. These records are used only when it is desirable to assist a student with a problem of interpretation of a role. On the other hand, in connection with our debate, discussion and public speaking courses,

we use recordings extensively. Throughout the term a number of the regular classroom discussions are recorded and played back to the students for further analysis and discussion."

The California school, also, uses many discs in recording various campus radio shows. Student announcers, too, use discs regularly as a check-up on their abilities.

"In addition to the classroom use of recording," Mr. Heffner concludes, "the Speech and Drama Department also employs a larger number of records for instruction purposes. For instance, in our record library, we have discs of various types of American dialects, examples of outstanding readings of literature, records of actor interpretations of great speeches from Shakespeare, and other classic drama, and recordings of certain major debates and discussion. These records are used in our public speaking, oral interpretation and acting courses.

Disc Data

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settings. A most important test is that of lacquer thickness, done by weighing a disc before and after coating.

Discs which have passed factory inspection are sampled regularly throughout the day, and checked by engineering personnel for the following:

1. Noise
2. Thread action
3. Static
4. Groove gloss
5. Wear
6. Coating thickness
7. Perfection of filtration

On the basis of these tests production discs are released for packing and shipping. It should be pointed out that the control number on the disc is on a chronological basis. The blending mentioned above and the quantities of raw materials are so great that it has been quite impossible to change the control number every time we use another drum of any given chemical.

Production discs sampled as mentioned heretofore are retested periodically to check for:

1. Noise level increase—a groove cut today should not be noisier when played back next week, next month, or next year (if dust is excluded). A groove cut next month, or next year should be no noisier than the one cut today, in the same disc.
2. Delayed wear—A groove cut today should last for just as many playings, whether it is played right after cutting, a month, a year, or a decade later.

Discs are inspected 100 per cent by the factory staff at each of the following points in the process: aluminum circles before coating, discs leaving the coating machine, discs leaving the drying conveyor, and when completed.

Note that every disc manufactured is inspected, but not all discs manufactured need be test cut. Successive discs are chemically identical, and a test on one is a test of the next thousand. Scientific sampling procedure is the basis of good quality control in this case.

A Few Sidelights

Experience has indicated the value of a number of precautions. Perhaps our readers will find them of interest:

1. Lint-free smocks for operators
2. Periodical washing of floors and walls
3. Special ventilation systems with low air velocity
4. Extremely large filters, each now as large as and rather heavier than an automobile
5. Minimum number of personnel in certain critical areas of the plant



Pioneer

On the afternoon of Feb. 3, 1935, Martin Block, whose name is a synonym for disc-jockey, "sold" the station manager of a New York station on the idea of presenting a record program. And, without a turntable, the creator of radio's famous "Make Believe Ballroom," conducted his first half-hour disc show with a tiny portable phonograph. Next day, as a result of a telephone barrage from curious listeners, the station gave the likeable Mr. Block a solid hour to spin his records . . . and he's been spinning 'em ever since. His new program "The Martin Block Show" over the coast-to-coast Mutual network is being presented direct from a special newly constructed studio, equipped with the latest recording equipment, in his home in Encino, Calif. KFVB-Hollywood, which also carries the program, feeds the show to the Mutual web.

6. Lint-free packaging—special wrapping for all discs; lacquer impregnated spacing rings to separate masters

Nevertheless, just as good filtration will not cure a bad formulation, every step in the process is a vital link in the chain. Break one link and the chain is broken. This intricate chain that is the disc making process is maintained by our personnel. Good personnel are as important as good equipment, so we are exceedingly fortunate in that over half of our key production personnel started with us in the early days of automatic-machine disc-coating.

Horror of Plane Crash Recorded

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In his WOR broadcast, which was heard on Fred VanDeventer's 11 P. M. news broadcast on the evening of the tragedy, Jeantet said: "There is no panic here among the personnel. Nurses and doctors are going about efficiently, not saying a word in their grim duty. The police are restraining crowds as the clergy, such as the minister you heard a moment ago, comfort some of the hysterical people viewing the scene."

Working without assistance, in the driving rain, Jeantet gave a dramatic and moving account of the disaster, which, until less than 24 hours later, had the horrible distinction of being the worst air tragedy in the history of American commercial aviation.

U. S. Stations Air French Discs

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The next step in Franco-American radio relations followed naturally: a plan for interchange of radio programs between France and the United States, to bring the peoples of the two countries closer together. An American Advisory Board was set up under the chairmanship of John S. Hayes, Station Manager of WQXR—New York, to help put this plan into operation. And, on April 7, 1947, the New York office of the North American Service sent out the first discs in a series of 12 different programs, 5- and 15-minute transcriptions in English, to 165 American stations.

Offered to all U. S. stations without cost for use as sustaining features, the French programs are recorded in Paris on the Champs Elysees and airmailed to New York where the pressings are made.

Six of the principal programs offered include HELLO FROM FRANCE—a weekly chronicle of amusing and interesting happenings in France, and more especially in the French capital, and interviews with famous celebrities; RENDEZVOUS IN PARIS—a weekly tour of Paris' nightclubs and cafes, with the well-known stage and movie actor, Claude Dauphin, as Master of Ceremonies; THE FOLK MUSIC OF FRANCE—a musical journey through France. Every week the Narrator, a folk ballad hunter, brings his latest discoveries in the field of French folk music; FIVE CENTURIES OF FRENCH MUSIC—twice every month, the symphony orchestras of France present the classical and modern music of their country; UNIVERSITY SERIES—a series of sketches of student life in Paris with visits to schools, museums, libraries and historic monuments; YOUTH SHOW—how teenagers in Paris live at the present time, their family life, their schools, their amusements, their ideas.

Thus far the reaction to the series, which are not educational programs, but very informal on-the-spot reports of everyday life in France and of the customs and ways of its people, has been extremely gratifying. In less than two months of operation, the number of stations transmitting the discs has gone up from 165 to over 200 stations in 46 states of the United States, in Canada, in Alaska and in the Philippines.

As a counterpart to these shipments from France, American stations are preparing similar programs in French to be sent to France. Already NBC and the Voice of America broadcasts in French are being relayed by the French networks. Thus radio, with the aid of transcriptions, is playing a new and great part as a medium of peace and better understanding between nations.