

•THE RADIO MONTH IN REVIEW•

The "radio news" paper for busy radio men. An illustrated digest of the important happenings of the month in every branch of the radio field.



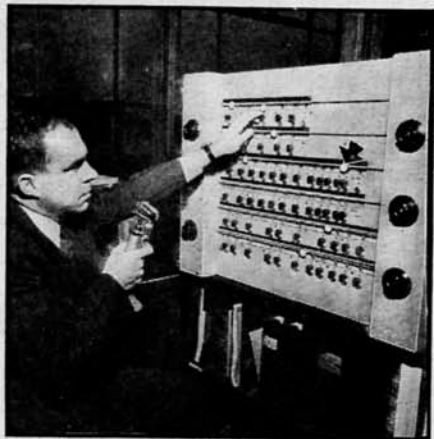
RADIO DETECTIVE!

Here's what the interior looks like of an F.C.C. "traveling radio detector" for tracking-down unlicensed radio sending stations. Hallicrafters receivers are used. This innocent-appearing car provides for recording the unlawful broadcasts, as well as determining their source by means of its direction-finding equipment.

effect in Great Britain against unlicensed radio transmitters. The war induced these governmental restrictions.

Berlin's shortwave propagandist Lord Haw-Haw, last month rebroadcast to America a recording of a portion of a transcription, broadcast a short time before over the N.B.C. net. The airing had featured Senator Nye during an N.B.C.-Chicago University Round Table Discussion program, the trade newspaper "Radio Daily" reported.

According to "PM," it was this newspaper's "rather impish" suggestion that Americans take Hitler at his word, when he recently broadcast a request that Americans send 25-word radiograms offering suggestions for improving the shortwave programs to the United States. Until the newspaper called attention to the potentialities of the offer, 10 days after it was first made only 1 radiogram for Berlin had been received, it was reported; but before the 10th day was out, 4 telephone operators had been added to RCA's staff to handle the resulting "witskrieg" (as another newspaper put it). Total number of "suggestions" was over 50,000, which cost Hitler about \$100,000, it was estimated.



AERO SIGNAL BLOCK

An "automatic block signal" system for airplanes in flight has been perfected by radio engineers of Transcontinental & Western Air, Inc. Miniature planes (arrow) proceed along a track at a rate proportionate to keep pace with a plane aloft. When the miniature plane arrives at check points the Dispatch Office radio man contacts the flight plane by radio and then "clears" it into the next block. The miniature plane rings an alarm, if it arrives at a check point before its airplane aloft.

ABROAD

ARMY officers and civilian observers recently returned from Britain report that development is progressing satisfactorily on airplane detectors which utilize photoelectric cells or "electric eyes." Designed to coordinate the aim of searchlight beams and anti-aircraft gun batteries, they represent a new hazard to night air-raiders, according to AP reports last month.

Secret agents of the Philippine constabulary and Manila police last month arrested one Japanese and held several others for questioning, in a sudden raid, for possessing an unlicensed radio transmitter and receiver.

A "target squadron" of 13 radio-controlled airplanes soon will be in use, in Honolulu, towing targets for U.S. anti-aircraft gun batteries, UP reported last month.

Radio-diathermy instruments come within the province of bans recently put into

F.M.

NOW that Frequency Modulation has received the blessings of the Federal Communications Commission, in the form of its OK to "go commercial," we look for meteoric progress in this field. Station No. 1 on the Honor Roll of commercial F.M. stations is W47NV, owned and operated by WSM of the National Life & Accident Insurance Co., Nashville, Tenn.

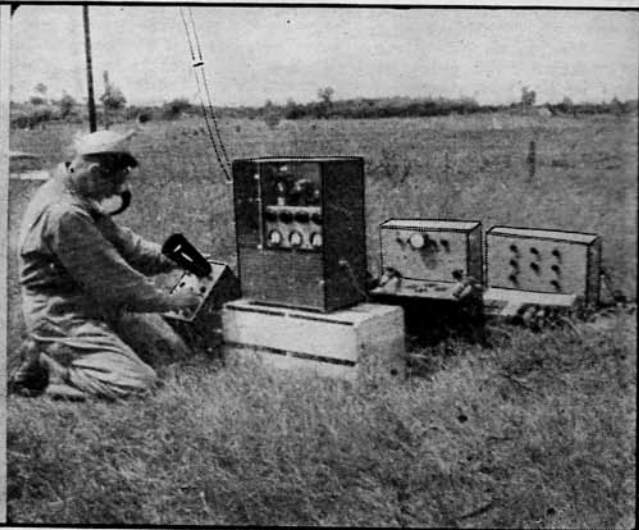
A number of commercial F.M. stations, by special permission, will continue to utilize their experimental transmitters for a time pending the arrival of higher-powered equipment that have been delayed by manufacturers' Defense orders.

Westinghouse Radio Stations, Inc., received construction permits for 4 F.M. transmitters, last month (no more than 6 are permitted under common ownership or control) . . . movie makers have moved into the F.M. field with the application by Metro-



SCOUTING BY TELEVISION!

Television made its debut as a new and powerful defense weapon last month when 15 technicians of Allen B. DuMont Laboratories, in cooperation with U. S. Army personnel, demonstrated its military uses. The photo at left shows how the portable equipment was set up to view scenes of troop movements from ambush and transmit them over an ultra-shortwave channel to receivers at



Headquarters and a dozen other points! The television camera was connected by coaxial cable to a 25 watt transmitter in an army truck. The picture at right shows the mobile 25-watt relay television transmitter out in a field, several operating directly from the television camera and flashing a signal to the main transmitter miles away. The operator is monitoring the video signals.

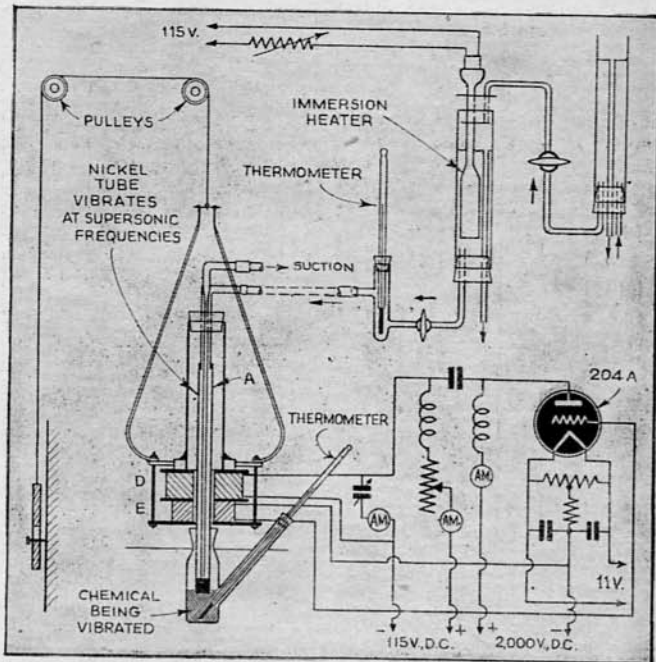


SKI BROADCAST!

▲ Ski-record breaker Torger D. Tolle is here shown in a preliminary jump prior to setting a new record last month, through a snow-storm, at Lake Placid, N. Y.—at the same time broadcasting over WGY and the N.B.C. net.

SUPERSONICS

The machine at right demonstrates chemical reactions under supersonic frequencies at up to 300,000 vibrations per second, reported "Science Observer" magazine. M.I.T.'s Dr. W. C. Schumb and E. S. Ritter use a vibrating nickel tube, A, which is actuated by driving and polarizing coils D and E, respectively.



Goldwyn-Mayer for a construction permit. . . . The cost of F.M. transmitters at present lies between approximately \$5000 and \$100,000. . . . Zenith Radio Corp. has signed a 9-year lease with Chicago's 600-ft. Field Building, which is to house this set-maker's new 50 kw. station W51C. . . . The "New York Daily News" last month entered radio via its application for a permit to construct an F.M. station. . . . estimates place the total of F.M. receivers now in use in the Metropolitan (New York) area at about 8,000.

A unique feature of F.M. is the fact that all commercial stations in a given area are required, by regulations, to provide a signal of equal strength.

Here's how the Big Cities stack up in F.M. activity, by number of construction permits requested (R) and granted (G):

City	R	G	City	R	G
Philadelphia, Pa.	6	4	Los Angeles, Cal.	5	1
Schenectady, N. Y.	2	2	New York City	18	7
Providence, R. I.	2	0	Chicago	6	5
Hartford, Conn.	2	2	Detroit	4	2
Pittsburgh, Pa.	3	2	Boston	3	1
			St. Louis	3	0

SOUND

A MICROPHONE made of frozen rubber is the subject of Patent No. 2,231,159, granted here to Erwin Gerlach of Berlin, Germany. Electrodes on either side of the thin insulating plate pick up the electrical voltages it generates, much like the soft-rubber, taut-diaphragm static-electricity microphone described in Radio-Craft, several years ago, in which a membrane of stretched rubber was shown to afford articulate speech when arranged as a microphone.

"Uncle Don" wanted a vacation, so Uncle Don obtained his respite from the usual WOR stint for children by the simple expedient of leaving a week's-work of transcribed programs to carry-on in his absence.

At Rutgers University, New Brunswick, N. J., sound recordings are made of speech, as part of the technique in a new course designed to improve students' voices for dictating, telephoning, etc. An intercommunicator between 2 rooms enables class monitoring, from loudspeakers, of study conversations between students.

WHK-WCLE's program director last month received something new in the way of a fan "letter." A fellow with an idea, thought enough of his suggestion to make a sound-on-disc recording of it, and to send

"AIRING" THE CANARY

◀ In a recent broadcast over the N.B.C. Blue network, Dr. Orestes H. Caldwell (left) utilized the special birdcage arrangement shown here to transmit the heartbeat of a canary bird. The heart pulsations of the canary were picked up through its feet, by a perch especially built by Brush Laboratories to include a Rochelle-salt crystal pickup, and broadcast world-wide over N.B.C.'s 50 kw. international shortwave station WNBI.

WIRELESS "PA"

▶ A cable-free microphone* last month made its official debut as an important adjunct to public address work, when the Federal Communications Commission granted a construction permit to Guy S. Cornish for his Station W8XW1, shown at right, on 310 megacycles. It is proving an ideal solution to the problem of announcing winners at sporting events, etc., where use of a mike with attached cable would be impossible or unsafe.

*Also see "Wireless Public Address," Radio-Craft, Jan. '40.

the disc to director R. W. Richmond. The reverse side of the disc was blank for "reply."

A KDKA shortwave broadcast to England, of a program which featured 25 British refugee children, was recorded; it was then sent to Boston, and there again broadcast to England by shortwaves.

The actual sounds of aerial blitzkrieg, recorded in England during the worst air raids last Fall, were dubbed into an American radio drama, last month, in the "Hospital on the Thames" broadcast over the WOR-Mutual net. The sounds included the chattering of machine guns in an aerial dog fight over Dover, the din of "pom poms" during anti-aircraft fire, the frightening sound of "screecher" bombs, the sound of air raid sirens, the welcome "all clear" signal.

The demands of Uncle Sam's Defense program are beginning to pinch the toes of manufacturers of sound-on-disc blanks. No material to equal aluminum as a backing has as yet been found, manufacturers say. The present recording demand for aluminum totals about 500 tons annually.

