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February 9, 1952

SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



Tagged Plant Food

See Page 87

A SCIENCE SERVICE PUBLICATION

\$5.50 A YEAR

VOL. 61 NO. 6 PAGES 81-96

What's inside a *Radio-Relay* station?

Because microwaves travel in straight lines and the earth is round, there are 123 stations on the transcontinental television route between Boston and Los Angeles. This view of a typical unattended station shows the arrangement of the apparatus which amplifies the signal and sends it on.

ON THE ROOF are the lens antennas, each with its horn tapering into a waveguide which leads down to equipment

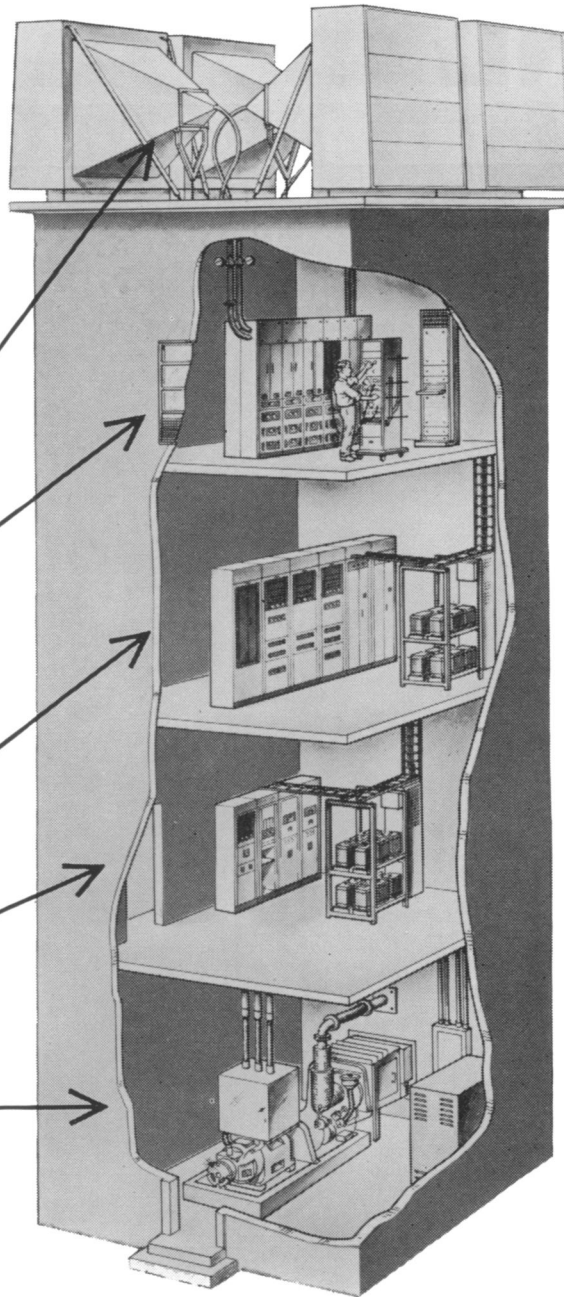
ON THE TOP FLOOR, where the signal is amplified, changed to a different carrier-channel and sent back to another antenna on the roof. Here are testing and switching facilities. Normally unattended, the station is visited periodically for maintenance.

ON THE THIRD FLOOR are the plate voltage power supplies for several score electron tubes.

ON THE SECOND FLOOR are filament power supplies. Storage batteries on both floors will operate the station in an emergency for several hours, but

ON THE GROUND FLOOR is an engine-driven generator which starts on anything more than a brief power failure.

Anything that happens—even an opened door—is reported to the nearest attended station instantly.



Coast-to-coast *Radio-Relay* shows again how scientists at Bell Telephone Laboratories help your telephone service to grow steadily in value to you and to the nation.



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