

(channel, group and supergroup) of modulation (and demodulation) to accomplish the required translations. The types of circuits employed consist of (1) dial trunk line, (2) subscriber, (3) teletype, (4) telemetering, (5) data, (6) dispatcher's party line, (7) VHF circuits and (8) extension of existing wire line circuits.

Direct telephone distance dialing is available to all locations on the Communication System including connections to the VHF radio system for desk-to-train communication, providing communications channels between executive and division offices, stations and maintenance shops and marshalling yards of the using railroad companies.

Dispatcher call tone units are installed at each of the Lessees' division control points, permitting the Dispatchers to contact Agents in their respective divisions via the Communication System.

Master interrogator alarm/control equipment is installed in Washington, Atlanta, Chattanooga and Cincinnati. The equipment consists of a desk mounted alarm console, an alarm relay panel and tone transmitters and receivers. The operator can, by the transmission of tone signals over the microwave link, interrogate any station in the system and, by the receipt or absence of a report-back tone, determine the condition of the various station functions which are monitored by alarm circuits at each station. The operator is first made aware that a fault condition exists among a group of unattended stations by the activation of an alarm buzzer or lamp. Each station is provided with a remote responder inter-connected with up to ten station alarm circuits providing (when interrogated by the master interrogator station operator) the status of each of the monitored functions.

VHF radio base station combinations are installed at the following microwave station locations:

VHF Base Station Locations

ATLANTA-WASHINGTON LINK (21 STATIONS)

- Washington Division: Alexandria, Fairfax, Calverton, Clark Mt., Mt. Chapel, Heard Mt. and High Peak Mt.
- Danville Division: Long Mt., White Oak Mt., Reidsville, Greensboro and Lexington
- Charlotte Division: Kannapolis, Charlotte, Spartanburg, Paris Mt., Seneca, Bellton, Gainesville, Duluth and Crowders Mt.

CINCINNATI-BIRMINGHAM-ATLANTA LINK (29 STATIONS)

- Somerset Division: Cumberland Falls, Oneida Station, Pilot Mt., Kings Mt., Muddy Ford, Williamstown and Erlanger
- Knoxville Division: Citico Yard, Ooltewah, Daisy Station, Athens, Lenoir City, Rockwood and Sharp Ridge
- Birmingham Division: Bald Rock, Oak Grove and Bremen
- Birmingham Division: (AGS) Springville Station, Gadsden Hill, Mt. Brandon and Trenton Mt.
- Atlanta Division: Ooltewah, Dalton, Mt. Alto and Dallas

These provide train dispatchers complete radio coverage of their divisions. VHF control equipment consisting of two identical control consolettes are located at the offices of the Train and Chief Dispatchers in each division. Interconnection between each VHF station and the appropriate division office is provided over multiplex channels or by direct wire. The VHF stations provide dispatch service for control and supervision of railway operations such as: (1) direct radio contact from a central Hot Box Detection Center to all trains, allowing fast action to avoid costly accidents; (2) provide dispatcher access to individual VHF stations for the required type of dispatching; (3) provide "Mobile" equipment break-in access to the Dispatcher; and (4) provide both four-wire and two-wire dispatching circuits. The VHF control equipment in association with the VHF station equipment provides controls to permit