THE BELLFAST SYSTEM

This system, developed by the Long Lines Western Area, provides a compact semi-automatic tape relay system.

The Bellfast system uses a pushbutton selecting arrangement using 60 and 400 millisecond pulses as selecting signals. An ERX selector is the selective device. Start codes do not appear on copy.

Line operation in the Bellfast system is either Half or Full Duplex and speeds of 60 or 75 words per minute are available. Traffic is relayed between a maximum of 6 lines (Basic Package) by manual handling of tape at the relay center. Priority arrangements are that a key at the outlying point permits manual starting out of sequence. There is a maximum of 10 stations per line. A lamp operated answer back signal of traffic or no-traffic condidions is used to denote station selection response.

Alternate transmitters are provided for each line at the relay center to speed tape handling and pushbuttons select the line to which a specific typing reperforator is assigned; thereby increasing flexibility in the use of relay center equipment. No special message format is required by the customer and message pickup is automatic from the outlying point thereby reducing customer attention.

This system differs from the other systems since it is primarily a manual tape relay system, with station selection and automatic transmitter start as essential auxiliary features.

The Sequentially Coded Automatic Transmitter Start System (SCATS)

This system, developed by the Long Lines - Eastern Area, provides the more important features of the 83B1 system. A 14 type transmitter - distributor and a 15M perforator is used in conjunction with a 28 receiving only teletypewriter and its associated selective calling features.

SCATS selective device is in the stuntbox of the 28 typing unit. The station selecting arrangement uses coded perforated tape only. The selecting signals used in SCATS are teletype characters. Start codes do not appear on copy.

Line circuit operation in SCATS is Half Duplex Only and Speeds of 60 and 75 words per minute are available. Traffic is relayed between lines manually, or automatically with reperforator transmitters. Priority arrangements are that a key at an outlying point permits manual starting out of sequence. There is a maximum of 21 stations per line. No distinctive response signals are used to denote station selection response.

Several lines equipped with SCATS may be employed as a manual tape relay system. At the relay center each line is equipped with a typing reperforator and a transmitter - distributor.

Teletypewriter Automatic Dispatch System (TADS)

This system, developed by The Pacific Telephone and Telegraph Company, is a relatively inexpensive automatic selective calling system with basic features similar to the 83B1 system.

TADS uses a relay equipped controller and selector contacts on 15 teletypewriters as a selecting device and coded perforated tape or pushbuttons as a station selecting arrangement. The selecting signals used are teletypewriter characters. Start codes are recorded on all machines until one or more stations are selected. Transmitters which have been loaded are automatically started to eliminate contention for the circuit.

Line circuit operation in this system is Half Duplex Only and speeds of 60 and 75 words per minute are available. Traffic is relayed between lines manually, or automatically with reperforator-transmitters. Priority arrangements are that operation of a key at an outlying point results in first or second pickup thereafter. There is a maximum of 36 (Tape) or 20 (Pushbutton) stations per line.

TADS is built in various distributing house shops and is covered by Practice issued by The Pacific Company.

THE 81D1 TELETYPEWRITER SWITCHING SYSTEM

This system, developed by Long Lines - Eastern Area, provides rapid handling of messages between stations of a private line teletypewriter network. It operates automatically except for the perforation of tape at the sending station and the removal of the typed message at the receiving machine. Machines are selected by directing characters punched at the beginning of the tape and terminated with end-of-message characters to disconnect the circuit.

Outlying stations consist of receive-only teletypewriters, typing reperforators, and 19 type teletypewriter sets. On multistation lines additional station control equipment is necessary. This control equipment is capable of controlling two receiving machines and two transmitter - distributors.

A priority feature is available in this system that permits a station to send urgent or priority messages ahead of non-priority messages. An assurance feature provides an alarm at the switching office to indicate trouble in a line. Speeds of 60 and 75 words per minute are available but all cross-office transmission is at 75 words per minute.

The 81D1 system has a capacity for 400 station codes per switching system, duplex lines and trunks, 10 stations per multistation duplex line, and 16 codes total per multistation line.

THE 82B1 TELETYPEWRITER SWITCHING SYSTEM

This system was developed by the Bell Telephone Laboratories. It uses 28 Automatic Sending equipment and 14, 15, or 28 type receiving equipment.

The multi-station unit consists of a director, a relay circuit in conjunction with the director, a sending device and a receiving device.

Selective-calling features for the 82B1 system are provided through an electronic director with a maximum of five (5) stations per line. Line circuit operation is Full Duplex.

Speeds of 200 words per minute are sent in cross-office transmission. Line speeds may be either 60, 75, or 100 words per minute. A pattern in conjunction with a letter is used for both transmitter start and call directing codes. Copy is free of codes.

Circuit assurance is provided through the receipt of the letter "H' if there is no message. Traffic is relayed between lines automatically. Stations are automatically polled first on a priority basis. If the stations are polled and there are no messages, the master station will go into a quiet condition and will stay that way for thirty(30) minutes. If an outlying station has a message before the thirty minutes are up, it will send a continuous "H" signal. This will start the switching center polling before the 30 minutes are up.

Connection between equipment units are by plug-in connectors for ease of installation and maintenance.

THE 83B1 TELETYPEWRITER SELECTIVE CALLING SYSTEM

This system was developed by the Bell Telephone Laboratories. It uses 28 Automatic Sending and Receiving equipment, with the selective-calling features provided through the 28 stuntbox; either in a 28A sequence selector or a 28H typing unit. Manual sending stations, using a 28 KSR teletypewriter, is also provided. There may be a maximum of forty (40) stations per line.

Line circuit operation in this system is Half Duplex Only and speeds of 60, 75 and 100 words per minute are available. Two-letter codes are used for both transmitter start and call-directing codes. Copy is free of transmitter start and all control codes, or may print all calling codes if so desired.

Circuit assurance is provided not only by a no-traffic response from the transmitter, but by an answer back from called-in receiving stations. Traffic is relayed between lines manually or automatically with Reperforator-transmitters.

Stations are automatically polled first on a priority basis. There is Key Operation at the outlying point with Emergency Start as a standard feature.

Connections between equipment units are by plug-in connectors for ease of installation and maintenance.

THE 64C SELECTIVE CALLING SYSTEM

This system, using a calling and receiving arrangement at each station, operates without the use of a central office master station.

The calling arrangement at a station sends dialed selective calling impulses to a receiving station that closes up to four sets of contacts. The closing of these contacts actuate applique circuits which put the receiving unit into operation and perform other desired tasks.

Using the normally used two-function five (5) digit code, the maximum number of individual stations that can be called using this system is twenty-four (24). A maximum of fifty-eight (58) individual stations may be called using a two-function six (6) digit code.

THE 64C PUSHBUTTON CALLING CIRCUIT

This system, developed by the Long Lines Western Area, selects stations by a single pushbutton operation instead of the five operations required with a dial.

A single circuit pushbutton system has a capacity of 20 individual codes, a master connect and a master disconnect. The pushbutton system designed for multi-circuit use on a manual tape relay system has a capacity of any combination of lines and stations not exceeding a total of thirty.