The Telephone Conference Bridge is a switching device capable of interconnecting as many as 4 telephone systems in such a manner that any party on any system can be connected to any party on any other system. The circuit may be extended to encompass as many systems as required or simplified to handle as few as two.

The Conference Bridge provides a number of switching features. For controlling each line, there are lamps and an indicator lamp because the circuit repeats 4 times; it is necessary to have one of these to give an understanding of its operation. The switches which control line 1 circuitry are S1, S5, DMP1, and RST.

S1 is essentially an on/off switch for line number 1. In the off position, it disconnects all equipment from the line. When on, it allows the line to be automatically connected to conferences or interoffice. The position of S5 determines whether or not a line will answer into conference or hold. If a party is in conference, they will be connected with parties on the other lines. If they wish to be disconnected from the conference but not from the line, S5 should be placed in the hold position. Returning this switch to the conference position will place the party back into conference.

If you wish to cut off the party on line 1, then press the DMP (Dip) button. This will put them on hold. The position of S5 determines whether or not a line will answer into conference or hold. If a party is in conference, they will be connected with parties on the other lines. If they wish to be disconnected from the conference but not from the line, S5 should be placed in the hold position. Returning this switch to the conference position will place the party back into conference.

The RST (reset) button does just the opposite. When on, it connects all equipment from the line. When off, it allows the line to be automatically connected to conferences or interoffice.

Figure 1 is a partial schematic diagram of the Telephone Conference Bridge. Line 1 will be used as an example to explain the operation of the circuit. When a ring-in occurs, a ringing current is generated through R1 and operated R1. The full-wave rectification serves to make the circuit more sensitive. R1 thus operates, placing its coil resistance across the line by shorting C1 through its contacts. This stops the ringing and answers the line as a lifting of the telephone handset. In addition, the operation of R1 connects the line to points 1A and 1B. This is used to link the conference network. When the party hangs up, a moment of zero voltage occurs on the line. However, in many systems it is necessary to press the DMP button to ensure the line can pass through the necessary.