

# TELECONFERENCING SYSTEM

## ■ PRINCE PHILLIPS

Here is a low-cost teleconferencing system that lets you talk to two persons at a time in any part of the world over two telephone lines. The circuit makes use of a coupling transformer and some passive components.

The circuit is connected between the two telephone lines. It works like this: When 'X' calls 'A' on the first telephone line, 'A' puts this call on hold, dials 'Y' on the other telephone line (which is free) and keeps this call too on hold, and slides switches S1 and S2 to 'on' position. Now 'X,' 'A' and 'Y' can talk to one another simultaneously over the two telephone lines.

Both the primary and secondary coils of the coupling

transformer consist of 500 turns of 40SWG insulated copper wire. At the secondary side, a small circuit is used for DC holding. This circuit is built around transistor T1 (BC547), resistors R2 and R3 (15 kilo-ohms and 100 ohms, respectively), condenser C3 (22 $\mu$ F, 63V) and two LEDs as indicators for both the primary and secondary sides. It provides proper DC characteristic to hold second telephone line in operation even though

no telephone on that line is present.

Here, transistor T1 acts like a resistor to DC and as high impedance for audio signals. The high impedance of the circuit is provided by condenser C3, which prevents any audio signal from appearing at the base of T1. Thus any audio voltage appearing across telephone line No. 2 will not cause a corresponding current in the transistor. ●

