Addendum to PUB 42704A
December, 1976

TO: Recipients of the Bell System Interface Technical References

The attached page should be inserted in the Bell System Voice Communications Technical Reference for Protective Connecting Arrangements TSPXY/TSPZ1 Interface Specification dated March 1975, PUB 42704.

The changes and additions incorporated in this addendum advise of a conflict in method of operation if both on-premises toll diversion arrangements and protective connecting arrangements TSPXY or TSPZ1 are furnished in the same PBX system.

All text changes are noted by marginal lines.

PRELIMINARY

PROTECTIVE CONNECTING ARRANGEMENTS TSPXY AND TSPZ1

1. GENERAL

1.1 Introduction

F.C.C. tariffs and corresponding intrastate tariffs filed by the Bell System Companies provide for the electrical connection of customer-provided voice transmitting and receiving terminal equipment and communications systems to the Bell System telecommunications network by means of a protective connecting arrangement. The connecting arrangement includes circuit elements to provide network control signaling unit functions as well as certain other network protection functions and is furnished, installed, and maintained by the Telephone Company. In addition, the tariffs require compliance by the customer-provided equipment with network protection criteria specified therein.

1.2 Application

Protective Connecting Arrangements TSPXY and TSPZ1 provide means for automatically connecting customer-provided recording and/or control equipment to one-way outgoing central office trunks from Bell System PBX equipment located on the customer's premises (Fig. 1). Both of these protective connecting arrangements enable the customer-provided equipment to split the outgoing trunk in order that the station user may dial digits into customer-provided equipment before a seizure is sent to the central office. After the desired digits have been dialed, Protective Connecting Arrangement TSPZ1 can be directed to connect the PBX party to the central office after which he will obtain dial tone and dial the normal DDD number. Voltage sensing resistors are provided to allow customer-provided equipment to record the dialed number. The split condition can be re-established at any time for such purposes as call restriction if desired.

Protective Connecting Arrangement TSPXY provides the same capability as Protective Connecting Arrangement TSPZ1 (with slightly different control signals) while providing an additional feature whereby the customer-provided equipment may dial a DDD number on behalf of the station user prior to removing the split condition.

If the customer-provided equipment is disconnected, or fails in certain detectable ways, the protective connecting arrangement provides a cut-through path to permit all outgoing calls.

Dial PBX Systems frequently include on-premises toll diversion arrangements for control of outgoing local central office and DDD calls. Methods of operation for on-premises toll diversion arrangements and protective connecting arrangements TSPXY and TSPZ1 conflict. Therefore, installations of both on-premises toll diversion arrangements and protective connecting arrangements TSPXY and TSPZ1 in the same PBX system are not recommended.

1.3 Power Outage Provisions

Protective connecting arrangements TSPXY and TSPZ1 will normally be powered from the PBX power supply. If the PBX is equipped with battery reserve, the connecting arrangements will also have battery reserve. Should the power to the protective connecting arrangement fail while the PBX power continues, TSPXY and TSPZ1 will revert to a metallic cut-through condition and become transparent to outgoing calls.

Should the power fail in the customer-provided equipment while PBX power continues, the normally operated split control relay should be released by the customer-provided equipment causing the connecting arrangement to go into the metallic cut-through mode.

In either case, the customer-provided equipment should perform certain tests (described in Section 3.9) before initiating a split after power has been restored.

1.4 Ordering and Identification

The protective connecting arrangements described in this Technical Reference are identified by the Bell System as Uniform Service Order Codes (USOC) TSPXY and TSPZ1. When ordering this service, the customer should