

CIRCUIT DESCRIPTION

CD-65754-01
ISSUE 3D
APPENDIX 2D
DWG ISSUE 7D

PBX SYSTEMS
NO. 756A
BUSY TONE TRUNK CIRCUIT

CHANGES

D. Description of Changes

D.1 The rating of this circuit is changed from AT&TCo
Standard to Mfr Disc.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 3224-WVS-RVL

PBX SYSTEMS
NO. 756A
BUSY TONE TRUNK CIRCUITCHANGESD. Description of Changes

D.1 On sheet 2, the connections for the make busy and busy display circuit are shown in the line, link, and marker circuit.

F. Changes in CD Sections

F.1 Under TABLE OF CONTENTS, SECTION II - DETAILED DESCRIPTION, add:

3. FUNCTION OF BUSY TONE TRUNK WITH MAKE BUSY AND BUSY DISPLAY CIRCUIT

- 3.1 Busy Tone Trunk Key Normal
3.2 Busy Tone Trunk Made Busy

F.2 In SECTION II - DETAILED DESCRIPTION, add:

3. FUNCTION OF BUSY TONE TRUNK WITH MAKE BUSY AND BUSY DISPLAY CIRCUIT

3.1 Busy Tone Trunk Key Normal

With the busy tone trunk key (BT key) normal in the make busy and busy display circuit, the busy tone trunk lamp (BT lamp) will light when the marker, in placing a busy test on the busy tone trunk, applies a resistance ground to lead HM in the line, link, and marker circuit. The lighting of lamp BT indicates that the busy tone trunk has been called on by the marker under normal operations.

3.2 Busy Tone Trunk Made Busy

If it is desired to place the busy tone trunk in a busy condition, key BT in the make busy and busy display circuit is operated. Key BT operated, grounds lead HM in the line, link, and marker circuit. Grounding lead HM in the marker circuit:

(a) Operates the trunk hold magnet THM in the marker circuit.

(b) Makes the busy tone trunk busy to the marker.

(c) Lights lamp BT in the make busy and busy display circuit. The lighting of lamp BT indicates that the busy tone trunk has been made busy.

Under this condition, the marker directs the register to furnish the busy tone to the calling station on subsequent busy connections.

F.3 In SECTION III - REFERENCE DATA, 3. CONNECTING CIRCUITS, add:

3.3 Make Busy and Busy Display Circuit - SD-5E029-01.

BELL TELEPHONE LABORATORIES, INCORPORATED

(WECO 2120HW-JJM-WHK)
DEPT 5337-WHK

PEX SYSTEMS
NO. 756A
BUSY TONE TRUNK CIRCUIT

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SECTION I - GENERAL DESCRIPTION

1. GENERAL METHOD OF OPERATION

1.1 When a PEX line or trunk originates a call to another PEX line or trunk, and the called line or trunk is found busy, the marker will then route the call to this Busy Tone Trunk Circuit. Routing the call to the Busy Tone Trunk permits release of the Register to handle subsequent calls instead of being held to return tone to the calling line.

2. GENERAL FUNCTIONS

2.1 When the Busy Tone Trunk is seized, it provides a ground to hold the cross-points under control of the calling station loop.

SECTION II - DETAILED DESCRIPTION

1. SEIZURE OF BUSY TONE TRUNK

1.1 Operation of A Relay and Holding Cross-points

When a PEX line or trunk other than a 2 WAY CO. Trunk originates a call to another PEX line or trunk which is found busy by the Marker, the Marker will function to establish a connection between the calling line or trunk and the Busy Tone Trunk. The A relay operates from the calling line loop via the link crosspoints. Without "W" option relay A operated, closes ground from 100 ohm resistor A over the link sleeve to hold the originating line hold magnet, and provides direct ground to the Busy Tone Trunk hold magnet HM in the Line Link & Marker Circuit. With "W" option relay A operated operates relay RA which connects ground from resistor A (100 ohms) over the link sleeve to hold the originating line hold magnet and provides direct ground to the Busy Tone Trunk hold magnet HM in the line link and marker circuit.

Relay RA is slow release to prevent releasing of the connection should the calling line continue to dial.

1.2 Returning Tone to Calling Line

The tone Generator in the Power Supply Circuit supplies Busy Tone over lead BT to condenser A of this trunk. Busy Tone is extended through condenser A to the Ring Conductor of the trunk.

2. RELEASE OF BUSY TONE TRUNK

2.1 Release of Relay A and Restore to Normal

When the calling line goes "on-hook" in response to the busy tone signal, the originating station loop is opened and relay A releases. Without "W" option, relay A released removes the 100 ohm locking ground from the link sleeve to release the Line Hold Magnet of the calling line in the Line Link and Marker Circuit, and removes direct ground from the Busy Tone Trunk hold magnet in the Line Link and Marker Circuit.

With "W" option relay A released causes relay RA to release which removes the 100 ohm locking ground from the link sleeve to release the Line Hold Magnet of the calling line and removes direct ground from the Busy Tone Trunk hold magnet.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

- 1.1 Maximum external circuit loop is 2370 ohms.
- 1.2 Voltage Limits are 45 to 52 Volts.

2. FUNCTIONS

- 2.1 To respond to a seizure and provide a holding ground for the calling station Line Hold Magnet and the Busy Tone Trunk Hold Magnet.
- 2.2 To extend busy tone to the calling line.
- 2.3 To cause release of calling line hold magnet and Busy Tone Trunk Hold Magnet when calling line goes "On Hook", and to return to normal.

3. CONNECTING CIRCUITS

When this circuit is listed on a key-sheet, the following connecting information is to be followed.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2242 -WVS-RDW-AP

3.1 Line Link and Marker Circuit - SD-65741-01.

3.2 Power Supply Circuit - SD-81296-01 or SD-81297-01.

4. MANUFACTURING TEST INFORMATION

4.1 The Busy Tone Trunk shall be capable of performing all the service functions specified in this circuit description, and meeting all the requirements of the Circuit Requirement tables.

5. TAKING EQUIPMENT OUT OF SERVICE

5.1 In order to take a Busy Tone Trunk out of service it is necessary to ground the HM lead toward the marker circuit. The following procedure shall be followed. As certain that no select magnet is operated then block A relay operated.

6. ALARM INFORMATION

6.1 Fuse Alarm

An operated fuse supplying the Busy Tone Trunk is indicated by a major alarm at the Plant Service Center if alarm transmitting features are provided and in any case a visual signal at the attendant equipment and in the Alarm Transfer & Test Circuit. Replace the operated fuse to restore the circuit, put out the alarm lamp, and silence the alarm at the Plant Service Center.

SECTION IV - REASONS FOR REISSUE

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Option "W" is added to prevent the disconnection of the trunk should the calling line continue to dial.