

CIRCUIT DESCRIPTION

CD-81600-01  
ISSUE 5B  
APPENDIX 3D  
DWG ISSUE 9D  
DISTN CODE 3M99

POWER SYSTEMS  
POWER SUPPLY CIRCUIT  
AC, DC & RINGING SUPPLY  
FOR 756A BATTERYLESS PBX  
J86464L

CHANGES

D. Description of Changes

D.1 Changed the rating of the schematic drawing  
from AT&TCo Standard to Manufacture Discontinued,  
as a result of 756A PBX being rated Manufacture  
Discontinued.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 2426-COR

WE DEPT 81450-SDL-JK

CIRCUIT DESCRIPTION

CD-81600-01  
ISSUE 5B  
APPENDIX 2D  
DWG ISSUE 8D

POWER SYSTEMS  
POWER SUPPLY CIRCUIT  
AC, DC & RINGING SUPPLY  
FOR 756A BATTERYLESS PBX  
J86464L

CHANGES

D. Description of Changes

- D.1 In Fig.1, present wiring of "FC1" lead has been designated option "S" and rated MFR DISC. New wiring of "FC1" lead is designated option "R". This change is made to agree with associated drawing.
- D.2 Circuit note 104 is rated MFR DISC. as concerned wire will no longer be provided.
- D.3 Added BSP 802-618-150 to supporting information.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 8143-JRP-TRC-EAF  
DEPT 5147-RRG

Printed in U.S.A.

Page 1  
1 Page

POWER SYSTEMS  
POWER SUPPLY CIRCUIT  
AC, DC & RINGING SUPPLY  
FOR 756A BATTERYLESS PBX  
J86464L

CHANGES

A. Changed and Added Functions

A.1 An additional dc output (-96 volts) is provided for operation of the "Make Busy and Busy Display" test feature.

D. Description of Changes

D.1 An additional output (-96 volts), "T" option, is provided on the Fig. 1 supply.

D.2 Circuit note 103 is revised.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5153-SR-DET-EAF

POWER SYSTEMS  
 POWER SUPPLY CIRCUIT  
 AC, DC & RINGING SUPPLY  
 FOR 756A BATTERYLESS PBX  
 J86464L

SECTION I - GENERAL DESCRIPTION

1. PURPOSE OF CIRCUIT

1.01 To provide power supplies for the 756A Batteryless PBX system.

2. GENERAL DESCRIPTION OF OPERATION

2.01 The circuit consists of ferroresonant regulated rectifier KS-19642, load capacitor panel J86808G, AC, DC and ringing supply panel J86812B, and interconnections between these units. TOUCH-TONE dial tone is provided by the 404C tone generator which is part of J86812B.

2.02 Commercial ac power, 105 to 129 volts, is connected to the supply panel and distributed to the rest of the circuit. A line switch on this panel removes power from the entire circuit. Connections are shown for furnishing output power, ringing, tones and interruptions to the PBX circuits. The lead connecting 10V ac from terminal 6 on TS2 to terminal 8 on J1 of the J86812B unit must be disconnected for operation in the 756A PBX.

2.03 A 48,000 uf capacitor bank provides protection against power failures of less than 1/4 second duration.

3. ALARMS

3.01 Provision for fuse failure alarms are provided on -48 volts dc to the ringing circuit and 10 volts ac to the inter-rupter motor and output circuit.

SECTION II - REFERENCE DATA

1. WORKING LIMITS

1.01 AC Input:

105 to 129 volts, 60 cps.

1.02 Outputs

(a) DC Outputs

Nominal Volts	Voltage Range Volts	Load Range Amperes
-48	-45 to -52.6	0.5 to 8.0 normal 12 intermittent
+48	40 to 60	0.1

(b) AC Output

Nominal Volts	Voltage Range Volts	Load Range Amperes
±10, 60 cps	8 to 11	2.1

1.03 Output Noise and Ripple

Nominal Volts DC

-48	Noise max. 34 dbrnc Ripple max. 0.050 peak to peak at 8 amp load
+48	Ripple max. 1.0V rms

1.04 AC Outputs (Ringing and Tone Supply)

- (a) Ringing - 75 to 100 volts, 20 cps
- (b) Busy Tone - 2.0 volts. (LT1)
- (c) TOUCH-TONE Dial Tone - 1.75 volts, (TT1)

2. FUNCTIONAL DESIGNATIONS

None

3. FUNCTIONS

3.01 This circuit is designed to perform the following functions:

- (a) To provide -48 volts dc for relay and talking power.
- (b) To provide +48 volts dc and 10 volts ac for direct station selection.
- (c) To provide low tone for busy tone.
- (d) To provide TOUCH-TONE dial tone.
- (e) To provide 460 cps modulated at 40 cps superimposed on 20 cps for audible ringing, machine ringing and signaling interruptions.

4. CONNECTING CIRCUITS

4.01 This circuit connects to the 756A Batteryless PBX switching circuits.

SECTION III - REASONS FOR REISSUE

CHANGES

D. Description of Changes

D.1 In Fig. 4, the use of the load capacitor panel J86808G, L2, SD-81581-01, Fig. 9 as rated "Mfr Disc." replaced by J86808G, SD-81581-01. The new list number of the load capacitor panel and Fig. number of the circuit drawing were omitted to avoid reissuing the drawing everytime the list number and Fig. number of the load capacitor panel are changed.

D.2 Reference to note 104 from TS2, terminal 5 to J1, pin 8 erroneously read note 101.

D.3 Designations of 14 and 16 gauge to leads "E" and "F" in Fig. 4 and to leads "A", "B", "C", "D", "E" and "F" in Fig. 1 were added.

D.4 Equipment note 201 was changed to add "Leads over 20GA shall be KS-13385 stranded".

LL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5153-HMK-DET-EAA