SD-82258-01-AI

SHEET INDEX

CONTENTS	SHEET NO.	ISSUE NO.																																																		SHEET NO.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
SHEET INDEX SUPPORTING INFORMATION	A1	1	2																																															A1
FS1 INVERTER CIRCUIT	B1	1	2																																															B1
APP FIG. 1	C1	1	1																																															C1
NOTES CIRCUIT EQUIPMENT INFORMATION	D1	1	1																																															D1
CAD1	G1	1	1																																															G1

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT DRAWINGS	(J87415A) (J87415B)
EQUIP. DESIGN REQ'T.	J87415
MAINTENANCE SPEC.	161-201-301
MANUFACTURING TESTING REQ'T.	X78880

DWG ISSUE	CD ISSUE	DATE ISSUED	DRAWN	APPD
1	1	9-18-75	CS CS	BB JJJ FS
2AR	1 APP. IAR	4-27-76	LGS —	BEM WEJ FWS

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.

MACHINE PREPARED

2AR

SD-82258-01 IM99

POWER SYSTEMS

INVERTER CIRCUIT
20HZ DC TO AC INVERTER
86V, 0.5 AMPERE
J87415

AT&T
STANDARD

SD-82258-01-AI
5 SHEETS

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SD-82258-01-AI

PRINTED IN U.S.A.
E-7000 (5-63)

FS1
INVERTER CIRCUIT

CPI

20 HERTZ PULSE GENERATOR

TO C.O. BATTERY

-48V GRD

TM

R10 1.96K

C2

R5 4.7K

Y1

IC1 IC2 IC3 IC4 IC5 IC6

R11 2.8K

R12 2.8K

E3 E4 E2

R3 619

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10

RV1 RV2 RV3 RV4

R1 1.96K R2 1.96K R3 6.65K R4 6.65K R5 1.18K R6 1K R7 150 R8 150

C1 4.7 C3 4.7

CR1 CR2 CR3 CR4 CR5 CR6 CR7

E1 E2 E3 E4 E5 E6 E7

L1 0.6

T1

C1 1000

C2 24000

C3 30

105V(A) 97V(A) 86V(A) 0(A) 105V(B) 97V(B) 86V(B) 0(B) 105V(C) 86V (C) 0(C)

TO RINGING DISTRIBUTION CIRCUITS

ISSUE 2AR

INVERTER CIRCUIT

SD-82258-01-BI

BELL TELEPHONE LABORATORIES INCORPORATED

6S

APP FIG. I

CAPACITOR

DESIG	LOC	CODE
C1	1E7	KS-19846,L6,1500
C2	1E6	KS-20133,L56,25000
C3	1F8	KS-16840,L16,30

DIODE

DESIG	LOC	CODE
CR1	1B6	426A
CR2	1F6	485AB
CR3	1C6	485AB
CR4	1E6	426A
CR5	1D6	426A
CR6	1G6	487C
CR7	1B6	426A

INDUCTOR

DESIG	LOC	CODE
L1	1B7	1086A

RESISTOR

DESIG	LOC	CODE
R1	1F5	KS-8512,L6C,178
R2	1F5	KS-8512,L3C,619
R3	1C5	KS-8512,L3C,619

TRANSFORMER

DESIG	LOC	CODE
T1	1B7	3015A

TRANSISTORS

DESIG	LOC	CODE
Q1	1D6	KS-21445,L2
Q2	1E5	KS-21445,L2

CIRCUIT PACK

DESIG	LOC	CODE
*CP1	1A2	J87415B

E/W

CAPACITOR

DESIG	LOC	CODE
C1	1E1	601J,4.7
C2	1A4	542F,2
C3	1F3	601J,4.7

* "CP1" CIRCUIT PACK PLUGS INTO A 905A CONNECTOR

CIRCUIT PACK (CONT)

CRYSTAL

DESIG	LOC	CODE
Y1	1B0	49DW,655.360KHZ,WECO

DIODE

DESIG	LOC	CODE
CR1	1D1	426T
CR2	1F4	446A
CR3	1G3	446AN

INTEGRATED CIRCUIT

DESIG	LOC	CODE
IC1	1B1	502AT,WECO
IC2	1B2	41CJ,WECO
IC3	1B2	41CJ,WECO
IC4	1B3	41AB,WECO
IC5	1B3	41CJ,WECO
IC6	1B4	41AB,WECO

RESISTOR

DESIG	LOC	CODE
R1	1E0	KS-20810,L18,1.96K
R2	1D1	KS-20810,L18,1.96K
R3	1E2	KS-20810,L18,6.65K
R4	1D2	KS-20810,L18,6.65K
R5	1B1	KS-20810,L18,4.7K
R6	1F3	KS-14603,L10,1K
R7	1D3	KS-20810,L18,150
R8	1E3	KS-20810,L18,150
R9	1E1	KS-14603,L10,1.18K
R10	1A4	KS-20810,L18,196K
R11	1C2	KS-20810,L18,2.8K
R12	1C2	KS-20810,L18,2.8K

TRANSISTOR

DESIG	LOC	CODE
Q1	1D1	66J,WECO
Q2	1E1	66J,WECO
Q3	1D2	66J,WECO
Q4	1E2	66J,WECO
Q5	1D3	KS-20838,L3
Q6	1E3	KS-20838,L3
Q7	1F3	KS-20835,L3
Q8	1G3	KS-20838,L3
Q9	1D3	66J,WECO
Q10	1E3	66J,WECO

VARISTOR

DESIG	LOC	CODE
RV1	1E3	100A
RV2	1D3	100A
RV3	1F3	100E
RV4	1F3	100E

ISSUE /

INVERTER CIRCUIT

SD-82258-01-CI

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

CIRCUIT NOTES

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
	5	-48	CKT (SEE NOTE 104)
		GRD	CKT

BATTERY SYMBOL	VOLTAGE RANGE
-48V	-42.75 TO -53.5

102.

FEATURE OR OPTION	PROVIDE		
	APP FIG.	APP OR WRG	QUANTITY
20 HERTZ INVERTER CIRCUIT	1		1 PER CKT

103. RECORD OF APP. FIGURES, WIRING AND APPARATUS CHANGES

CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT		
				STD	A&M	MD

CIRCUIT NOTES: (CONT)

104. THE 5 AMP FUSE SHALL BE FURNISHED WITH THE -48V INPUT LEAD.

EQUIPMENT NOTES:

201. ALL LEADS SHALL BE KS-19195,L1 SOLID OR STRANDED,24GA UNLESS OTHERWISE SPECIFIED.

202. ALL LEADS DESIGNATED BY A HEAVY LINE SHALL BE 16 GAUGE, KS-19195,L1 SOLID OR STRANDED

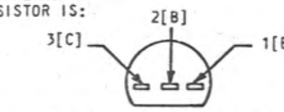
203. TAPS ON TRANSFORMER (T1) ARE FOR FACTORY ADJUSTMENT ONLY AND ARE NOT TO BE CHANGED IN THE ELD.

INFORMATION NOTES:

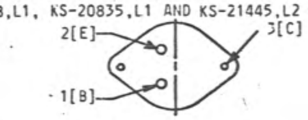
301. UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS.
CAPACITANCE VALUES ARE IN MICROFARADS.
VALUES PRECEEDED BY THE SYMBOL +(PLUS) OR - (MINUS) ARE IN VOLTS.

302. INFORMATION SHOWN IN [] IS FOR REFERENCE ONLY.

303. THE TERMINAL NUMBER ASSIGNMENT OF THE 66J TRANSISTOR IS:



304. THE TERMINAL NUMBER ASSIGNMENT OF THE KS-20838,L1, KS-20835,L1 AND KS-21445,L2 TRANSISTOR IS:



305. CONNECTOR ON FRAME IS 905A.

ISSUE 1

INVERTER CIRCUIT

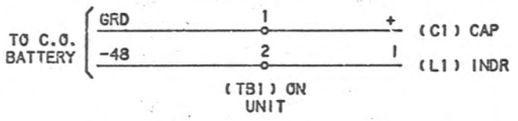
SD-82258-01-D1

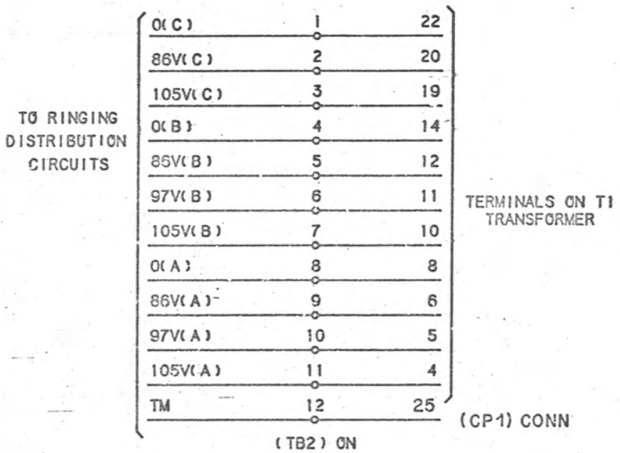
BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

PRINTED IN U. S. A.

CAD 1
(FOR APP. FIG. 1)





ISSUE	1
INVERTER CIRCUIT	SD-82258-01-G1
BELL TELEPHONE LABORATORIES INCORPORATED	SIZE 6S

PRINTED IN U. S. A.