

SHEET INDEX

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CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
1-1/3		-48 SIG	APP FIG. 1
		GRD	APP FIG. 1
BATTERY SYMBOL		VOLTAGE RANGE	
-48		45-50V	

102.

FEATURE OR OPTION		PROVIDE	
		APP FIG.	QUANTITY
CONTROL CKT		1	1 PER CKT
TIMER CKT		2	1 PER CKT
COMPATABILITY WITH RECEIVER OFF-HOOK TONE CONNECTOR CKT	NOT REQ'D	V	
	REQ'D	T	

103.

NETWORK VALUES		
NETWORK NO.	RESISTANCE IN OHMS	CAPACITANCE IN UF

104.

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
3D	Z OR Y	Z	304	Y		Z
5D	X OR W	X		W		X
8D	V OR T	V	102, 105	V, T		
9D	S OR R	S		R		S
11B	Q OR P	Q		P		Q

CIRCUIT NOTES: (CONT)

105. OPTION V SHALL BE FURNISHED WITH TIMER CIRCUIT WHEN MANUFACTURED. OPTION V SHALL BE REMOVED WHEN TIMER CIRCUIT IS CONNECTED TO RECEIVER OFF-HOOK CONNECTOR CIRCUIT - (SD-96322-01) AND ESS NO. 1 OFFICES.

EQUIPMENT NOTES:

201. THE 5A TIMER REQUIRES 2 X 23 INCHES OF MOUNTING PLATE SPACE.

INFORMATION NOTES:

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

302. THE FOLLOWING NOMINAL DC VOLTAGE READINGS TAKEN WITH RESPECT TO -48 VDC [TERM. 11 OF (TB1)] USING A VOLTMETER HAVING A RESISTANCE OF 10 MEGOHMS MINIMUM.

	NOMINAL VOLTAGE READINGS	
	DURING TIME INTERVAL	AFTER TIME INTERVAL WITH START SIGNAL STILL APPLIED
A	RISE TO +18.0	+18.0
B	0	+0.68
C	4.0	+0.8
D	5.0	0
E	+5.3	+48.0

303. ON THE 5A TIMER CHASSIS, THE PRINTED WIRING CARD ASSOCIATED WITH A1,2,3 AND B1,2,3 RELAYS IS THE UPPER CARD. THE LOWER CARD IS ASSOCIATED WITH A4,5,6, AND B4,5,6 RELAYS.

304. Z AND Y OPTIONS IN P-42E807 TIMERS MAY BE USED INTERCHANGEABLY.

305. PRIOR TO ISSUE 4D, THE 5A TIMER WAS CODED APPARATUS.

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT DRAWING	J99-28A

OPTION INDEX

APP OR WRG	LOCATION
Z	NOTE 306
Y	NOTE 306
X	APP FIG. 2
W	APP FIG. 2
V	2B3, 2E3, 2G3
T	2A3, 2B3, 2D3, 2E3, 2F3, 2G3
S	2A0, 2D0, 2F0
R	2A0, 2D0, 2F0
Q	APP FIG 2
P	APP FIG 2

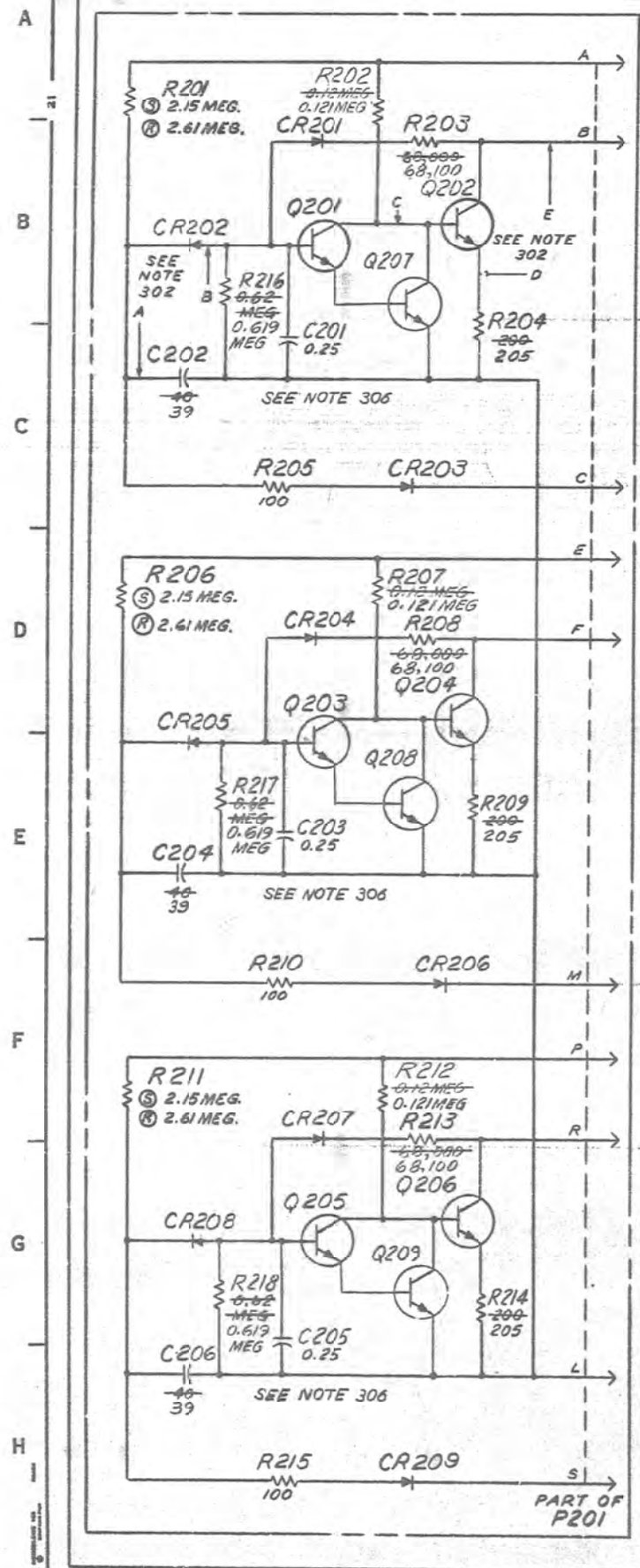
306. ON ISSUE 3D CHANGES WERE MADE ON TIMER CIRCUIT INDICATING A Z AND Y OPTION. THIS WAS A CHANGE; NOT AN OPTION. PRIOR TO ISSUE 3D (R201), (R206), AND (R211) WERE 2.61 MEG. ON ISSUE 3D (Q207), (Q208), (Q209), (R216), (R217), AND (R218) WERE ADDED. WIRING OF (Q201), (Q203), AND (Q205) WAS ALSO CHANGED.

NOTICE- NOT FOR USE OR DISCLOSURE OUTSIDE THE BELL SYSTEM EXCEPT UNDER WRITTEN AGREEMENT.

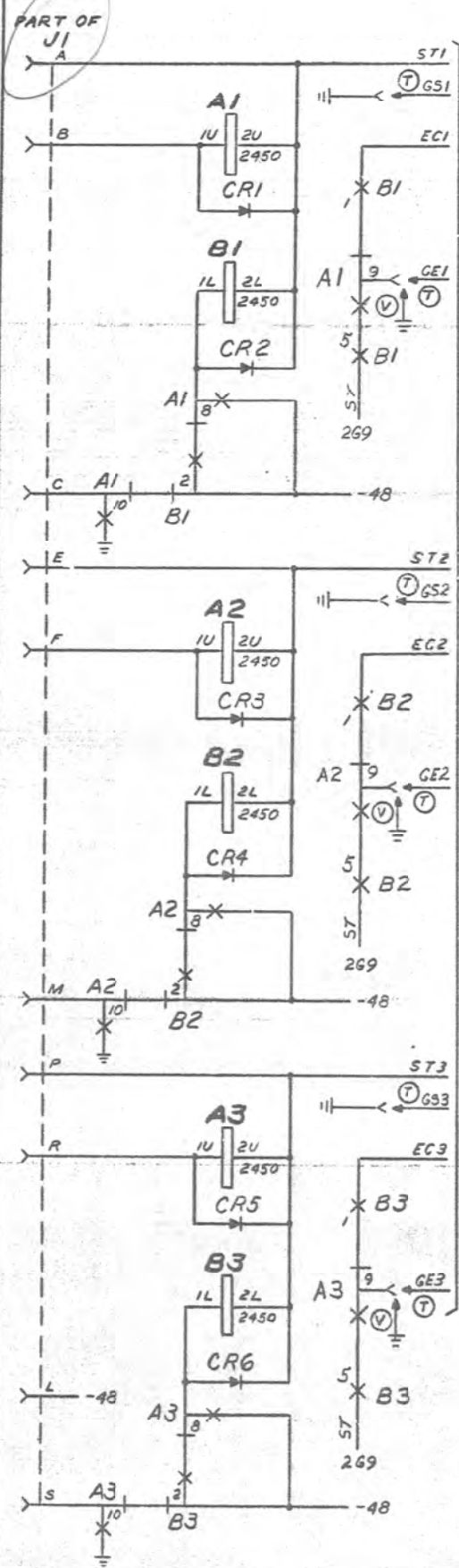
SD-99304-01	IN99	AT&T STANDARD
COMMON SYSTEMS 5A TIMER CIRCUIT		
BELL TELEPHONE LABORATORIES INCORPORATED		SD-99304-01-1 5 SHEETS

PART OF FS2 TIMER CIRCUIT

(SEE NOTES 303 & 304)

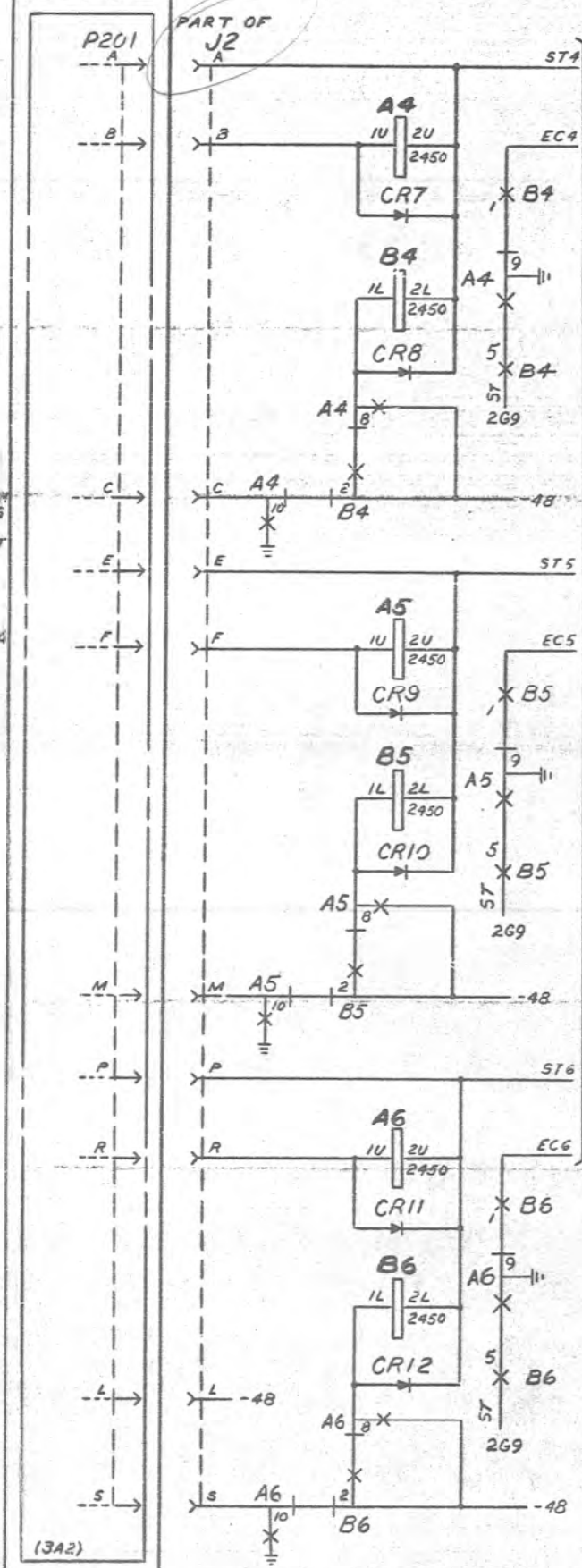


PART OF FS1 CONTROL CIRCUIT



PART OF FS2 TIMER CIRCUIT

(SEE NOTES 303 & 304)



APP FIG. 1

RELAY																	DESIGN									
DESIGN	A1		B1		A2		B2		A3		B3		A4		B4		A5		B5		A6		B6		DESIGN	
CODE	AK4				AK4				AK4				AK4				AK4				AK4				CODE	
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION	
12	M	2C3			M	2D8			M	2E3			M	2E8			M	2F8			M	2F8			12	
11	EBM	2C3			EBM	2D8			EBM	2E8			EBM	2E8			EBM	2E8			EBM	2F8			11	
10	EBM	2C2			EBM	2F2			EBM	2H2			EBM	2C5			EBM	2F5			EBM	2H5			10	
9	EMB	2B3			EMB	2E3			EMB	2G3			EMB	2B6			EMB	2D6			EMB	2G6			9	
8	EMB	2C3			EMB	2E3			EMB	2H2			EMB	2C5			EMB	2E5			EMB	2H5			8	
7																									7	
6																									6	
5			EMB	2C3			EMB	2E3			EMB	2G3			EMB	2C6			EMB	2E6			EMB	2G6		5
4			EMB	2C8			EMB	2D8			EMB	2D8			EMB	2E8			EMB	2E8			EMB	2F8		4
3			EBM	2C8			EBM	2D8			EBM	2E8			EBM	2E8			EBM	2F8			EBM	2F8		3
2			EBM	2C3			EBM	2F3			EBM	2H3			EBM	2C5			EBM	2F5			EBM	2H5		2
1			M	2B3			M	2D3			M	2G3			M	2B6			M	2D6			M	2G6		1
COIL	2A3	2B3	2D3	2E3	2F3	2G3	2A6	2B6	2D6	2E6	2F6	2G6	COIL													

CONNECTOR
KS-16345, L2

DESIG	J1	J2
CONN	SOCKET	
OPTION	NO.	LOC
	S	2H2 2H5
	R	2F2 2F5
	P	2F2 2F5
	N	
	M	2F2 2F5
	L	2H2 2H5
	K	
	J	
	H	
	F	2D2 2D5
	E	2D2 2D5
	D	
	C	2C2 2C5
	B	2B2 2B5
	A	2A2 2A5

DIODE

DESIG

LOC

CODE

DESIG	LOC	CODE
CR1	2B3	
CR2	2C3	
CR3	2D3	
CR4	2E3	
CR5	2G3	
CR6	2G3	
CR7	2B6	
CR8	2C6	
CR9	2D6	
CR10	2E6	
CR11	2G6	
CR12	2G6	

-446F
533F

APP FIG. 2

[21E0-99655-30 TIMER, (PRINTED WIRING BOARDS ASSEMBLY) (SEE NOTE 1)]

CAPACITOR

DESIG	LOC	CODE
C201	2C0	542C
C202	2C0	602E
C202	2C0	SPRAGUE 614C
C203	2E0	542C
C204	2E0	602E
C204	2E0	SPRAGUE 614C
C205	2G0	542C
C206	2H0	602E
C206	2H0	SPRAGUE 614C

CONNECTOR
KS-16345, L1

DESIG	P201
CONN	PLUG
OPTION	NO.
	S 2H2
	R 2F2
	P 2F2
	N
	M 2F2
	L 2H2
	K
	J
	H
	F 2D2
	E 2D2
	C 2C2
	B 2B2
	A 2A2

DIODE

DESIG	LOC	CODE
CR201	2B0	-446N-808AF
CR202	2B0	-446E808AD
CR203	2C1	-446F-533F
CR204	2D0	-446N-808AF
CR205	2D0	-446E808AD
CR206	2F1	-446F-533F
CR207	2F0	-446N-808AF
CR208	2G0	-446E808AD
CR209	2H1	-446F-533F

RESISTOR

DESIG	LOC	CODE
R201	2A0	145A, 2.15 MEG
R201	2A0	145A, 2.61 MEG
R202	2A1	KS-13490, L1, 0.121 MEG
R203	2B1	KS-13490, L1, 0.121 MEG
R204	2B1	KS-13490, L1, 0.121 MEG
R205	2C0	KS-13490, L1, 0.121 MEG
R206	2D0	KS-13490, L1, 0.121 MEG
R207	2D1	KS-13490, L1, 0.121 MEG
R208	2D1	KS-13490, L1, 0.121 MEG
R209	2E1	KS-13490, L1, 0.121 MEG
R210	2F0	KS-13490, L1, 0.121 MEG
R211	2F0	145A, 2.15 MEG
R211	2F0	145A, 2.61 MEG
R212	2F1	KS-13490, L1, 0.121 MEG
R213	2F1	KS-13490, L1, 0.121 MEG
R214	2G1	KS-13490, L1, 0.121 MEG
R215	2H0	KS-13490, L1, 0.121 MEG
R216	2B0	KS-13490, L1, 0.121 MEG
R217	2E0	KS-13490, L1, 0.121 MEG
R218	2G0	KS-13490, L1, 0.121 MEG

TRANSISTOR

DESIG	LOC	CODE
Q201	2B0	
Q202	2B1	
Q203	2D0	
Q204	2D1	
Q205	2G0	
Q206	2G1	
Q207	2B1	
Q208	2E1	
Q209	2G1	
Q202	2B1	
Q204	2D1	
Q206	2G1	

NOTES:

1. PRIOR TO ISSUE 4D THE ED-99655-30 TIMER WAS THE P-42E807 TIMER.

5A TIMER CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

SD-99304-01-3

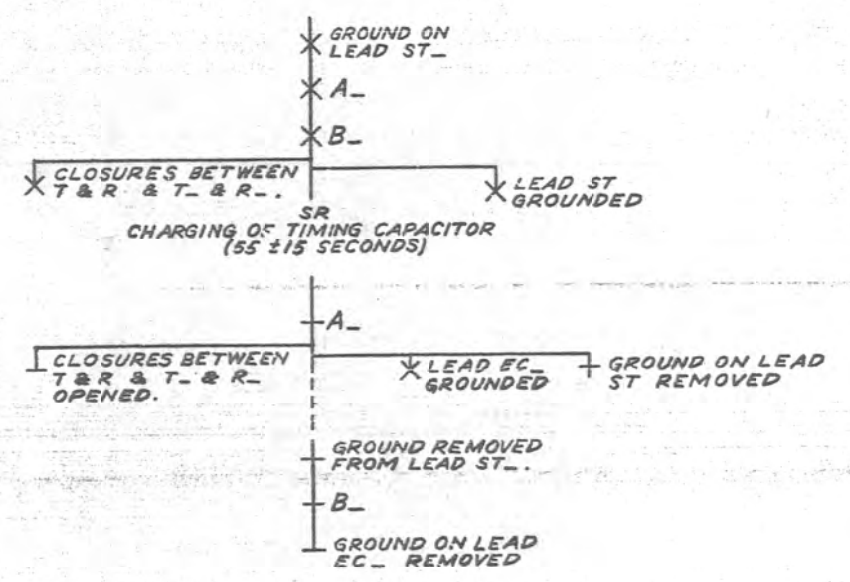
6S

ISSUE
12D

A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD AE

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SC 1



DRAWING	
ISSUE	NO.
1	1
2A	2
3D	3
7D	4
5D	5
6D	6
7D	7
8D	8

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ISSUE
12D

SD-99304-01-4

SA TIMER CIRCUIT		SD-99304-01-4
BELL TELEPHONE LABORATORIES INCORPORATED		
65		PRINTED IN U.S.A.

A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD AE

