

SHEET INDEX

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CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
A	2	-24V SIG	FIG.1 OR 4 AND ASSOC FIG.3
B	2	-24V SIG	ALL FIGS. 2 ASSOC WITH SAME STATION

BATTERY SYMBOL	VOLTAGE RANGE
-24	20-26V

102.

FEATURE OR OPTION	PROVIDE		
	APP FIG.	APP OR WIR	QUANTITY
FOUR-WIRE LINE CKT USED WITH TOUCH-TONE CALLING SETS	1	V	1 PER 4-WIRE LINE
FOUR-WIRE PICKUP RELAY CKT	2		1 PER 4-WIRE LINE PER STATION
FOUR-WIRE EXCLUSION CONTROL CKT	3		1 PER 4-WIRE LINE
FOUR-WIRE LINE CKT USED WITH ROTARY DIAL SETS	4		1 PER 4-WIRE LINE
LAMP FUSE UNIT	5		AS REQD
FOUR-WIRE LINE CKT USED WITH AUX SERVICE TRFR		S	
	WITHOUT AUX SERVICE TRFR	T	
	WITH MULTI-SIG CONT CKT FOR RINGERS	J	
NONEXCLUDED STATIONS		H	

103.

NETWORK VALUES			
NO.	NETWORK CODE	RESISTANCE IN OHMS	CAPACITANCE IN UF

104.

RECORD OF 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	HD	

105.

TO PROVIDE TRANSMITTING LOSS OF	PROVIDE OPTION
0 DB	Z
2 DB	Y
4 DB	X
6 DB	W

CIRCUIT NOTES: (CONTINUED)

106.

TO PROVIDE RECEIVING LOSS OF	PROVIDE OPTION
0 DB	K
4 DB	R
6 DB	Q
8 DB	N
10 DB	M

INFORMATION NOTES:

301. UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS.
302. ALL TERMINALS ON FS1, FS2, FS4, FS5 AND FS6 APPEAR ON 242A AND 243A KEY TELEPHONE UNITS UNLESS OTHERWISE INDICATED.

SUPPORTING INFORMATION

CATEGORY	NO.

OPTION INDEX

APP OR WRG	LOCATION
3	2A5, 2B7, 2D5, 2D7, 2F5, 2F7, 2G5, 2G7, 3B2, 3B3, 3H2, 3H3, 4A1, 4A2, 4C1, 4C2
4	2B2, 2D3, 2D4, 3B1
Z	2A1, 2A2, 2D2, 2E1
Y	2A2, 2C2, 2D2,
X	2A1, 2C1, 2C2, 2E1
W	2C1, 2C2
V	2B1, 2E4, 3B1
T	3D6, 3D7, 3F6
S	3D4, 3D6, 3D7, 3D8, 3F6, 5G6, 4A2, 4D2
R	2E1, 2E2, 2G1, 2H1, 2H2
Q	2E1, 2E2, 2F1, 2G1, 2H2
N	2E1, 2E2, 2F1, 2G1, 2H1, 2H2
M	2E1, 2E2, 2F1, 2G1, 2H1, 2H2
K	2E1, 2E2, 2H1, 2H2
J	3F7, 3G6
H	2B7, 2D7, 2E7, 2G7, 3B3, 3H3

DWG ISSUE	EE OR CH ISSUE	DATE ISSUED	DRG	APP
1	1	1-18-61	DNC	PBP
2A	2A	6-30-61	DIA	PBP

SD-69414-01

STATION SYSTEMS  
4-WIRE SUBSCRIBER LINE CIRCUITS  
ARRANGED FOR COMMON  
BATTERY OPERATION

AT&TCO  
STANDARD

SD-69414-01-1  
6 SHEETS

BELL TELEPHONE LABORATORIES  
INCORPORATED

6S

PRINTED IN U.S.A.



**FS2**  
DIAL OFF-NORMAL CONTROL  
OR SPECIAL GRADE ENABLING  
SEE NOTES 301 AND 302

**FS5**  
AUXILIARY HOLD  
SEE NOTES 301 AND 302

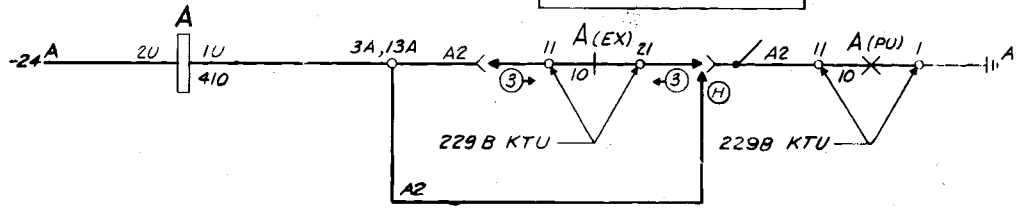
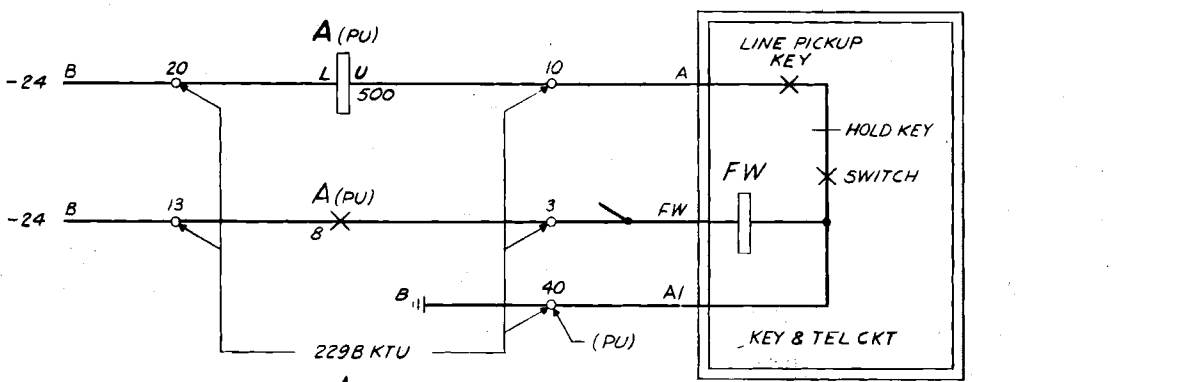
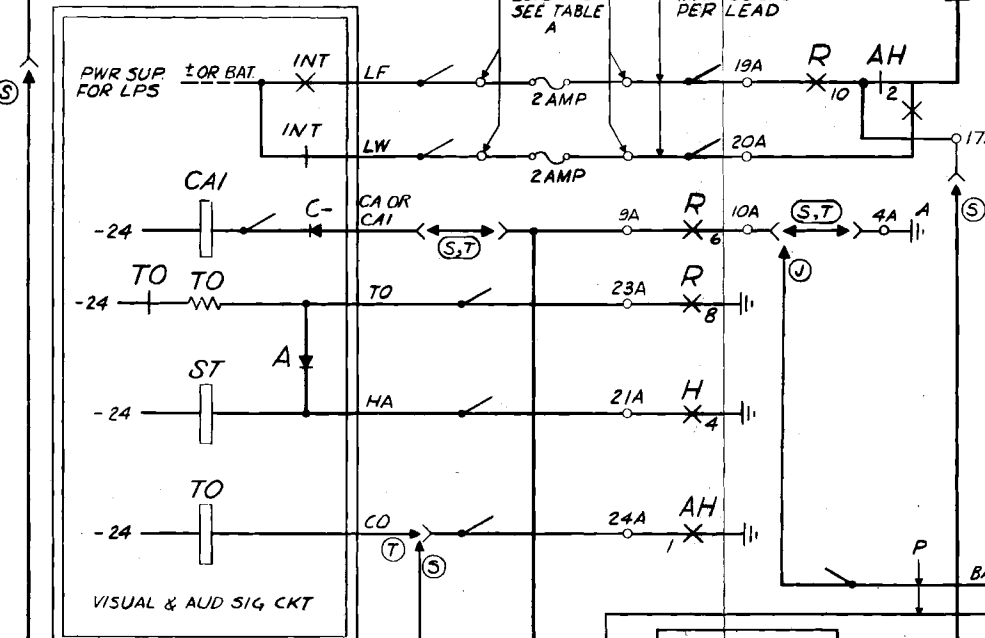
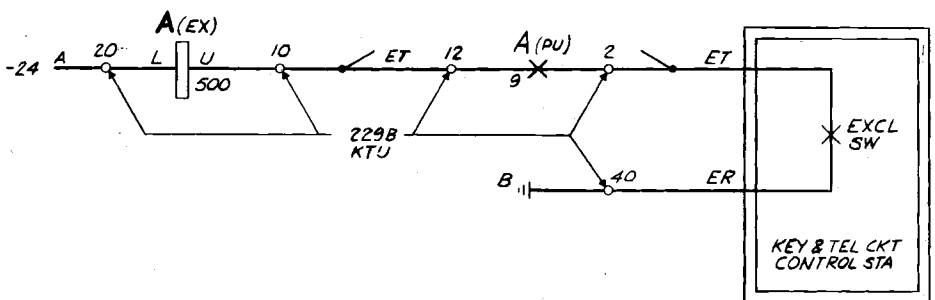
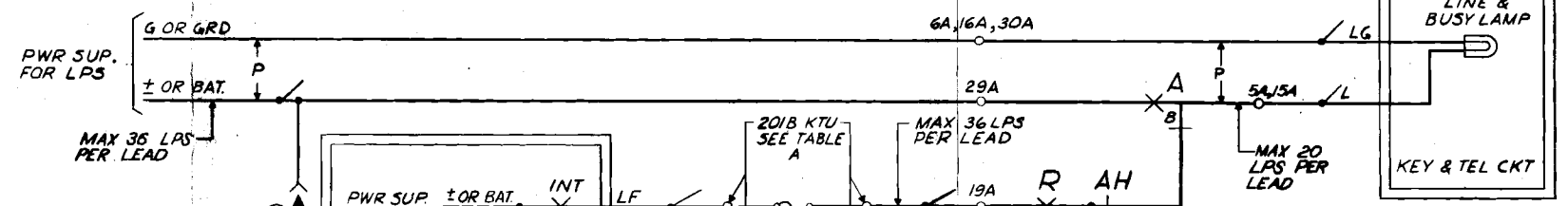
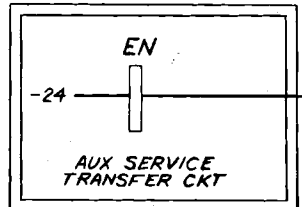
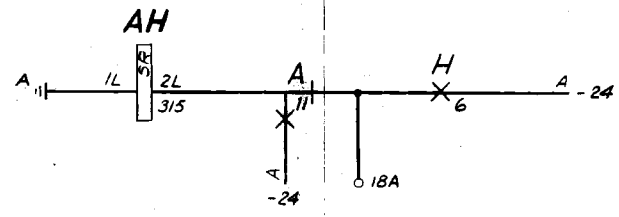
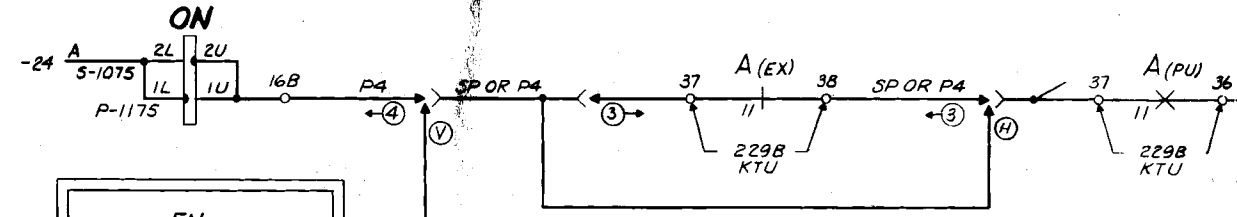
**FS6**  
VISUAL AND AUDIBLE SIGNAL CONTROL  
SEE NOTES 301 AND 302

**FS3**  
EXCLUSION CONTROL  
SEE NOTE 301

**FS4**  
LINE PICKUP  
SEE NOTES 301 AND 302

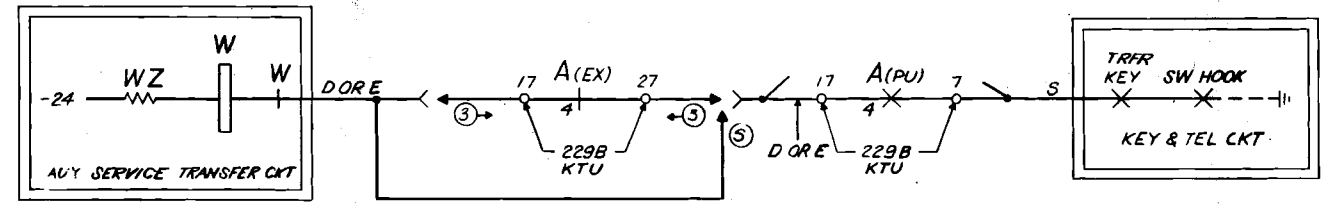
TABLE A

FUSE DESIG	PCHGS ON 2018 KTU
A	1 11
B	2 12
C	3 13
D	4 14
E	5 15
F	6 16
G	7 17

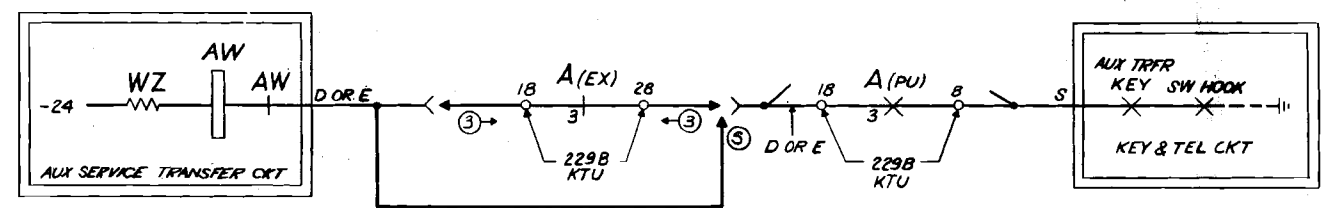


DRAWING  
ISSUE  
1  
2A  
DIR  
DOC  
ME

### FS7 TRANSFER CONTROL



### FS8 AUXILIARY TRANSFER CONTROL



A  
B  
C  
D  
E  
F  
G  
H

A  
B  
C  
D  
E  
F  
G  
H



CIRCUIT REQUIREMENTS

4-WIRE SUBSCRIBER LINE CIRCUITS

APPARATUS				MECH REQ			CIRCUIT PREPARATION			TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQ					REMARKS
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT PRESS	ARM. TRVL	BLOCK OR INSULATE	TEST CLIP DATA				TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	
								CONN BAT.	CONN GRD								
RELAYS																	
229B KTU																	
A(EX)	AJ43		3						U(A)	GRD			0	24.5	23.0		
A(PU)	AJ43		2						U(A)	GRD			0	24.5	23.0		
242A OR																	
243A KTU																	
A	1/2AK1		1,4						IU(A)	GRD	T	0	26.0	24.5	MTD WITH (AH) RELAY		
AH	1/2AK1		1,4						2L(AH)	BAT.	1	B	0	46	38.5	36.5	MTD WITH (A) RELAY
												H	46	5.2	4.9		
H	AJ100		1,4				(AH)0, 12B(A)	L(H)	U(H)	B/G	2		0	10.5	10.0		
													NO	5.0	5.3		
UN	AF123	4	4						IU(UN)	GRD		P/S	0	19.0	18.0	243A KTU ONLY	
R	AJ48		1,4						1L(R)	BAT.	3	P	G	8.8	8.0		
													NO	6.1	6.5		
											4	S	0	AC	AC		

TEST NOTES:

1. MINIMUM RELEASE TIME 60 M/S.
2. CONTACT MAKE 5, NO MAKE 8.5, READJUST: MAKE 3.5, NO MAKE 10. TEST. ARMATURE BACK TENSION MINIMUM 20 GRAMS READJUST, 15 GRAMS TEST.
3. ARMATURE BACK TENSION MINIMUM 20 GRAMS READJUST, 15 GRAMS TEST.
4. TEST BY APPLYING MIN 95V (1100-1200 RPM) RING IN SERIES WITH A 13B RES LAMP OR EQUIVALENT AND A 7000 OHM RESISTOR TO TERM. NO. 18B WITH GROUND ON TERM. NO. 17B.

STATION SYSTEMS 4-WIRE SUBSCRIBER LINE CIRCUITS	SD-69414-01-6  PRINTED IN U. S. A.
BELL TELEPHONE LABORATORIES INCORPORATED	