Installation Drawings KI-1767G

Telecenter® System 21

Rauland-Borg Corporation

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Rauland-Borg Corporation
3450 West Oakton Street
Skokie, Illinois 60076-2958
(847) 679-0900
www.rauland.com

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General Information

Revision History

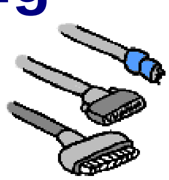
This manual revision covers changes in firmware for the Telecenter System 21. These changes affect the drawings KM1206 and KM1157.

System Assembly

The Telecenter System 21 may be shipped fully assembled or as components shelves. To insure the stability of the rack and ease in wiring, the position of the chassis shelves must be as follows:

- ✓ All audio amplifiers must be placed in the bottom of the rack. If there is more than one amplifier, the higher power unit must be placed in the bottom of the rack.
- ✓ If used, a TC2105 Station Line Card Expansion Chassis is typically placed directly below the TC2100 and the switch banks are typically placed directly above the TC2100 to minimize the length of cable to these units.
- ✓ The remaining units can be placed in any position in the rack. Fill the unused rack spaces with blank panels.

Wiring



Refer to the wire routing diagrams in this manual when wiring each unit. Be sure to route and secure all wires as shown. Specific connections between components are also shown in the main wiring diagrams KM1128, KM1129, KM1141, or KM1142.

Field wiring includes all cables which exit the Telecenter System 21 rack. Refer to field wiring diagrams included in this manual. Route and secure all wires and cables as shown in these diagrams.

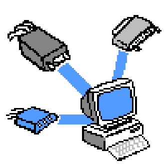
In addition to the wiring diagrams, an equipment mounting diagram (IL0474) is included in this manual, which shows the location of equipment mounted on the left and right inside walls of the rack.

U.L. Restrictions

The Telecenter System 21 must be connected to earth ground:

1. An equipment grounding conductor that is not smaller in size than the ungrounded branch circuit supply conductors should be installed as part of the circuit that supplies the system. Bare, covered, or insulated grounding conductors are acceptable. Individually covered or insulated equipment grounding conductors should have a continuous outer finish that is either green or green with one or more yellow stripes. The equipment grounding conductor should be connected to ground at the service equipment.
2. The attachment plug receptacles in the vicinity of the system should all be of a grounding type, and the equipment grounding conductors serving these receptacles should be connected to earth ground at the service equipment.

Equipment List



- ✓ TC4190 (DTMF Module)
- ✓ TC4183 (E & M Tie Line Adapter)
- ✓ TC4182 (COA2 Central Office Adapter)
- ✓ TC4181 (Line Amplifier)
- ✓ TC4180 (COA Expansion Chassis)
- ✓ TC4122 (LCD Display)
- ✓ TC4160 (Intercom Amplifier – Voice Controlled)

- ✓ TC2150 (Master Station Line Card)
- ✓ TC2120(Relay Line Card for 2nd and 3rd Channel)
- ✓ TC2114 or TC2113 (Station Line Card – four-wire or three-wire)
- ✓ TC2106 (Expander Power Supply for Extra TC2161's)
- ✓ TC2105 (Expansion Chassis for Station Line Cards)
- ✓ TC2100 (Main Chassis)
- ✓ SW25 or SWT425 (Switchbanks)
- ✓ SDA15 (Sound Disturbance Module Chassis)
- ✓ SDA1 (Sound Disturbance Module)
- ✓ RP1100, RP1101, RP1102, or RP1103 (Cabinet)
- ✓ RAC900 (AC Power Strip or equivalent)
- ✓ PSX300 (Power Supply for Director Series)
- ✓ MR200 (Media Retrieval Module Chassis)
- ✓ MR100 (Media Retrieval Module)
- ✓ MCZ300, MCB300, MCC300 (Director® Series)
- ✓ MCX300 (Radio/Cassette Player with PS12 Power Supply)
- ✓ DAX60, DAX120, FAX60, FAX120 or FAX250 (Paging Amplifiers)
- ✓ 6400 (24V DC Power Supply)
- ✓ 2524 or 2590 (Master Clock)
- ✓ Phones (UL Listed)

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List of Drawings

Drawings, Diagrams, and Other Graphics

This document includes the following drawings, diagrams, and/or supplemental graphics:

Central-System Wiring Diagrams

- ✓ TC2100 Main Wiring Diagram: 4-Conductor, Multi-Channel System (KM1128D)
- ✓ TC2100 Main Wiring Diagram: 4-Conductor, Single-Channel System (KM1129D)
- ✓ TC2100 Main Wiring Diagram: 3-Conductor, Multi-Channel System (KM1141C)
- ✓ TC2100 Main Wiring Diagram: 3-Conductor, Single-Channel System (KM1142C)
- ✓ TC2100 Main Power Supply (KM1130)
- ✓ TC2100 Option Jumper Settings (IL0442A)
- ✓ TC2106 Expander Power Supply (KM1131)
- ✓ TC2113 (SLC3) Block vs. Physical-Number Assignment Chart (KM1155A)
- ✓ TC2113 (SLC3) Cable Assignment Chart and Work Sheet (KM1108)
- ✓ TC2114 (SLC4) Block vs. Physical-Number Assignment Chart (KM1153)
- ✓ TC2114 (SLC4) Cable Assignment Chart and Work Sheet (KM1114)
- ✓ TC2195 (SAC) Cable Assignment Chart and Work Sheet (KM1109)
- ✓ TC2161 Intercom Amplifier DIP Switch and POT Settings (IL0476)
- ✓ Uniform Cabling Diagram (KM1156B)

Central-System Accessory Wiring Diagrams

- ✓ TC2100 Connected to a Modem or a Computer (KM1127C)
- ✓ TC2100 with a SecurePlex® AS System (KM1213A)
- ✓ TC2113 Terminal Layout (KM1205)
- ✓ TC2114 Terminal Layout (KM1204)
- ✓

- ✓ Code “17” Correction Wiring (KM1181)
- ✓ Code “18” Correction Wiring (KM1182)
- ✓ Code “19” Correction Wiring (KM1183)
- ✓ Code “20” Correction Wiring (KM1184)
- ✓ Connecting more than 25 Digital Clocks to TC2100 Relay Outputs (KM1152A and 24-VAC Power Supplies)
- ✓ Connecting more than 25 Digital Clocks to TC2100 Relay Outputs (KM1154A and 120-VAC Power Supplies)
- ✓ Digital Clocks to TC2100 Serial (“Dig”) Output and 24-VAC Power (KM1149A Supply)
- ✓ Digital Clocks to TC2100 Serial (“Dig”) Output and 120-VAC Power (KM1150 Supply)
- ✓ TC2100 and DSI Clock Synchronization (KM1227)
- ✓ Connecting Time-Zone Relays to External Equipment (KM1126)
- ✓ Auxiliary Intercom Wiring (KM1157B)

Wire Routing Diagrams:

- ✓ 2524 and 2490 Master Clock and MCX300 AM/FM Tuner and Cassette (IL0435 Player)
- ✓ DAX120 and DAX60 Amplifiers (IL0437A)
- ✓ FirePlex® FAX60, FAX120, and FAX250 Fire Alarm Amplifiers (IL0439)
- ✓ TC2100 and TC4180 (IL0470)
- ✓ MR200 Media Retrieval and PSX300 Director® Series DC Power Supply (IL0471)
- ✓ MCZ300 Master Control Panel, MCB300 Channel “B” Program(IL0472 Control Panel, and MCC300 Intercom Control Panel)
- ✓ Field-Wired Components (IL0473)
- ✓ Equipment Mounted on the Inside Walls of a Telecenter System 21 Rack (IL0474)
- ✓ Flat Cable Assembly (IL0475)

Room-Station Wiring Diagrams

- ✓ Administrative Telephones (KM1125)
- ✓ Staff Station with Speaker, Call Switches, and Phone (SLC4) (KM1140B)
- ✓ Staff Station with Speaker, Call Switches, and Phone (SLC3) (KM1187B)

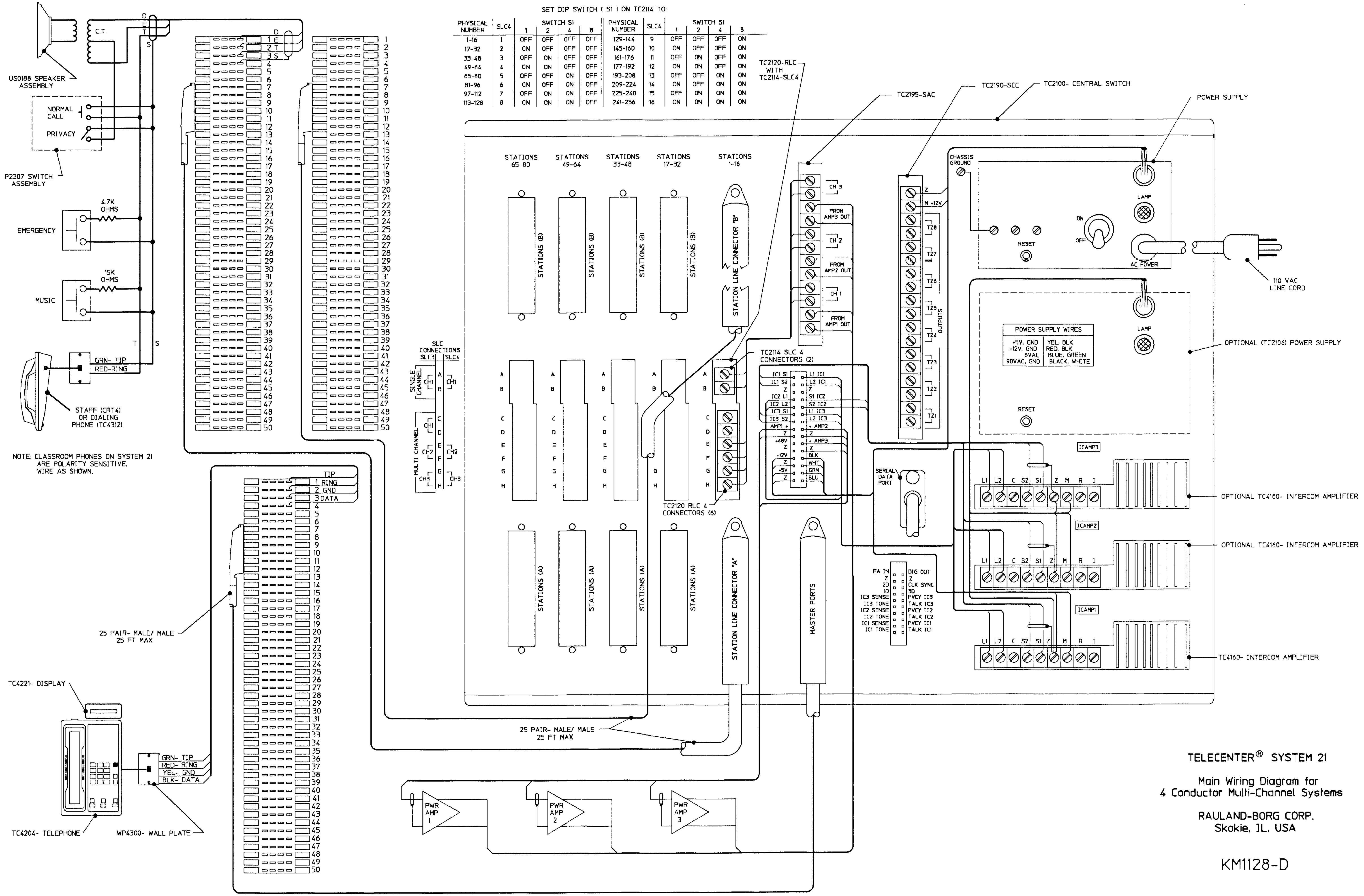
The Following Drawings:
KM1128
KM1129
KM1141
KM1142
Measure 11”x17”

If you need a printed copy, it can either be downloaded off of the Rauland-Borg Extranet, or ordered from Customer Service at (847) 697-0900 x95.

If you wish to print an 8.5”x11” copy, you may do so by choosing the “Shrink to Fit” and “Print Current Page” options in the “Print” menu

SET DIP SWITCH (S1) ON TC2114 TO:

PHYSICAL NUMBER	SLC4	SWITCH S1 1	2	4	8	PHYSICAL NUMBER	SLC4	SWITCH S1 1	2	4	8
1-16	1	OFF	OFF	OFF	OFF	129-144	9	OFF	OFF	OFF	ON
17-32	2	ON	OFF	OFF	OFF	145-160	10	ON	OFF	OFF	ON
33-48	3	OFF	ON	OFF	OFF	161-176	11	OFF	ON	OFF	ON
49-64	4	ON	ON	OFF	OFF	177-192	12	ON	ON	OFF	ON
65-80	5	OFF	OFF	ON	OFF	193-208	13	OFF	OFF	ON	ON
81-96	6	ON	OFF	ON	OFF	209-224	14	ON	OFF	ON	ON
97-112	7	OFF	ON	ON	OFF	225-240	15	OFF	ON	ON	ON
113-128	8	ON	ON	ON	OFF	241-256	16	ON	ON	ON	ON



TELECENTER® SYSTEM 21

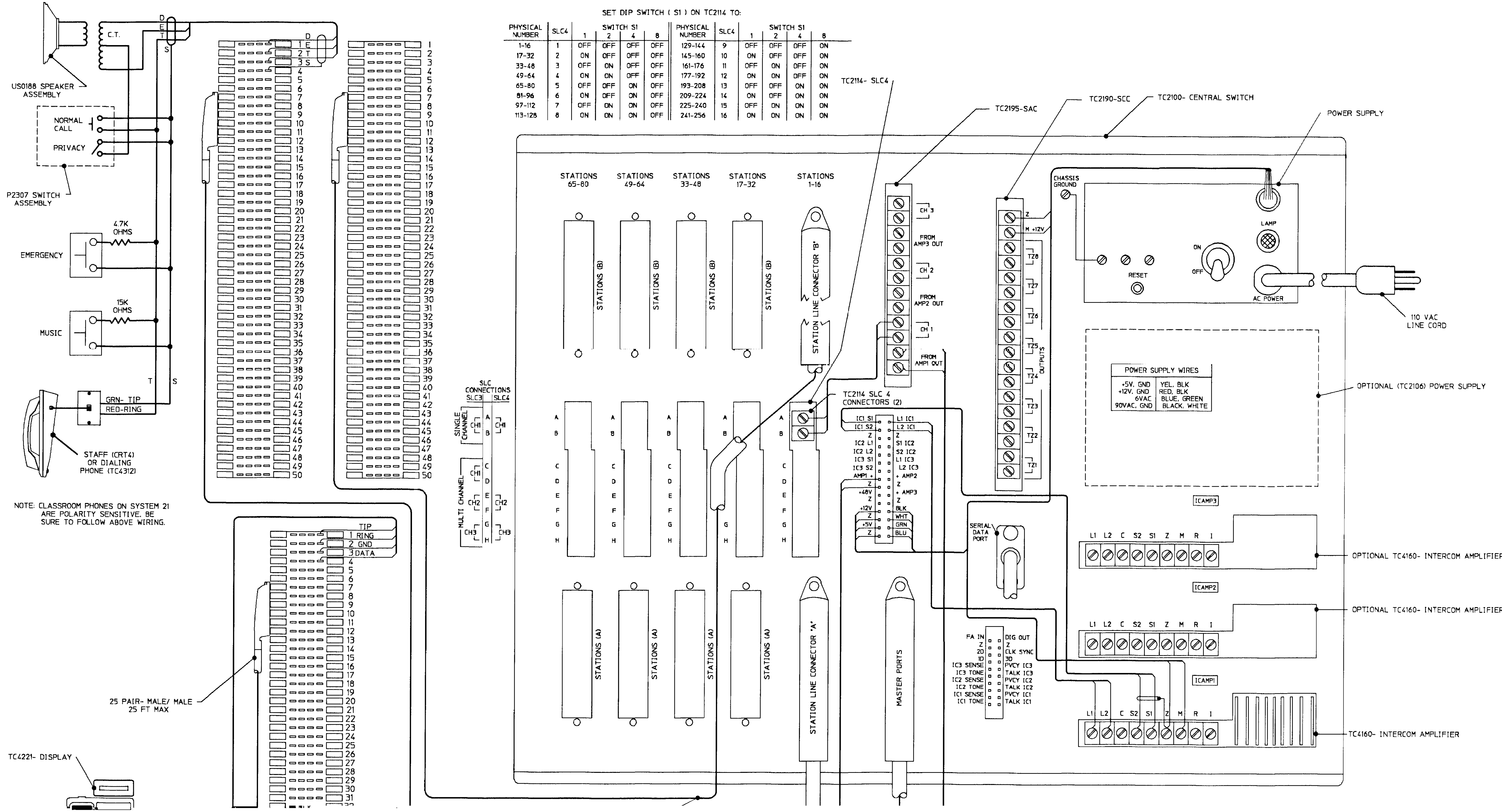
Main Wiring Diagram for 4 Conductor Multi-Channel Systems

RAULAND-BORG CORP.
Skokie, IL, USA

KM1128-D

SET DIP SWITCH (S1) ON TC2114 TO:

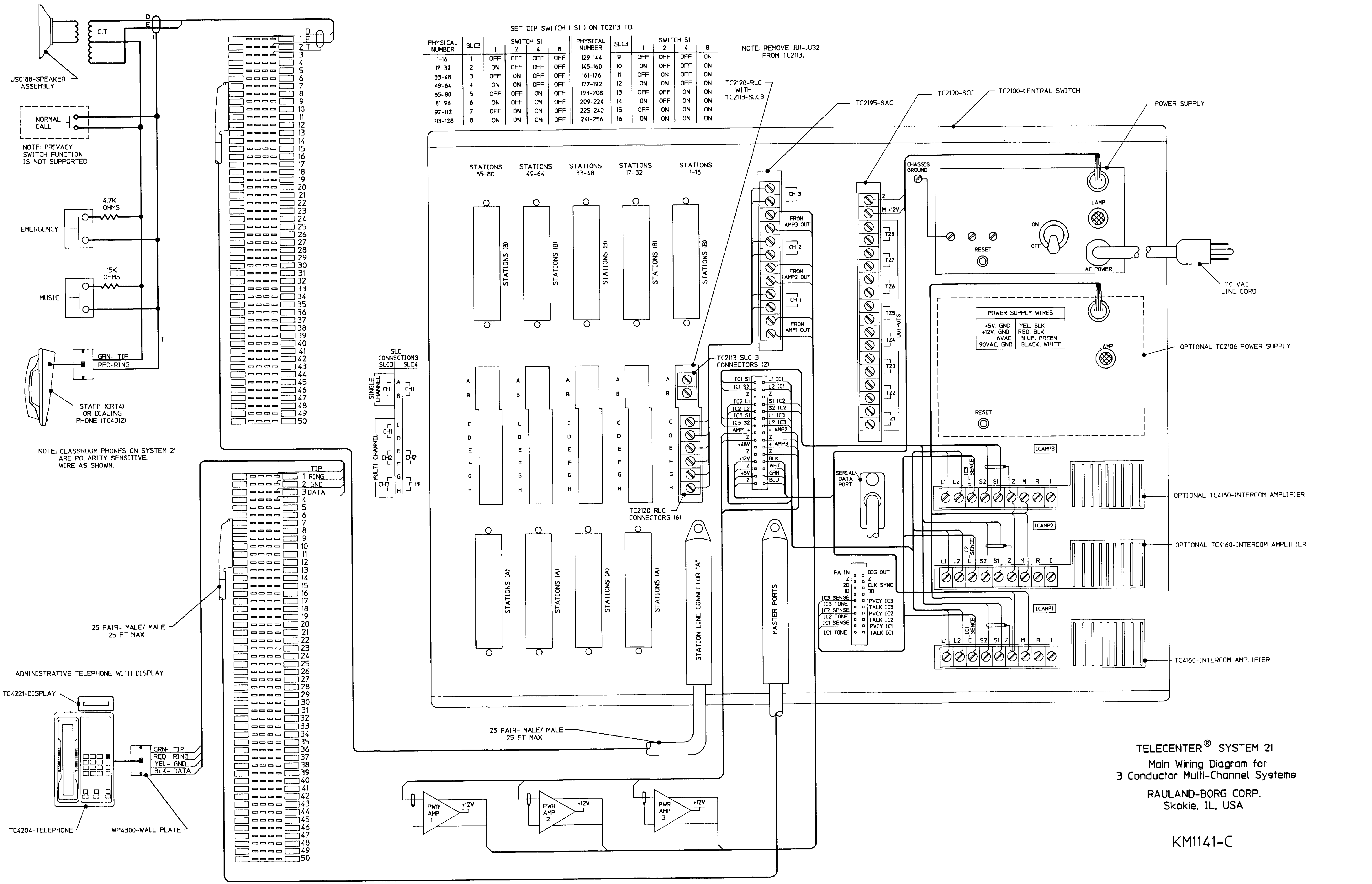
PHYSICAL NUMBER	SLC4	SWITCH S1 1	SWITCH S1 2	SWITCH S1 4	SWITCH S1 8	PHYSICAL NUMBER	SLC4	SWITCH S1 1	SWITCH S1 2	SWITCH S1 4	SWITCH S1 8
1-16	1	OFF	OFF	OFF	OFF	129-144	9	OFF	OFF	OFF	ON
17-32	2	ON	OFF	OFF	OFF	145-160	10	ON	OFF	OFF	ON
33-48	3	OFF	ON	OFF	OFF	161-176	11	OFF	ON	OFF	ON
49-64	4	ON	ON	OFF	OFF	177-192	12	ON	ON	OFF	ON
65-80	5	OFF	OFF	ON	OFF	193-208	13	OFF	OFF	ON	ON
81-96	6	ON	OFF	ON	OFF	209-224	14	ON	OFF	ON	ON
97-112	7	OFF	ON	ON	OFF	225-240	15	OFF	ON	ON	ON
113-128	8	ON	ON	ON	OFF	241-256	16	ON	ON	ON	ON



SET DIP SWITCH (S1) ON TC2113 TO:

PHYSICAL NUMBER	SLC3	SWITCH S1 1	SWITCH S1 2	SWITCH S1 4	SWITCH S1 8	PHYSICAL NUMBER	SLC3	SWITCH S1 1	SWITCH S1 2	SWITCH S1 4	SWITCH S1 8
1-16	1	OFF	OFF	OFF	OFF	129-144	9	OFF	OFF	OFF	ON
17-32	2	ON	OFF	OFF	OFF	145-160	10	ON	OFF	OFF	ON
33-48	3	OFF	ON	OFF	OFF	161-176	11	OFF	ON	OFF	ON
49-64	4	ON	ON	OFF	OFF	177-192	12	ON	ON	OFF	ON
65-80	5	OFF	OFF	ON	OFF	193-208	13	OFF	OFF	ON	ON
81-96	6	ON	OFF	ON	OFF	209-224	14	ON	OFF	ON	ON
97-112	7	OFF	ON	ON	OFF	225-240	15	OFF	ON	ON	ON
113-128	8	ON	ON	ON	OFF	241-256	16	ON	ON	ON	ON

NOTE: REMOVE JU1-JU32 FROM TC2113.



TELECENTER® SYSTEM 21

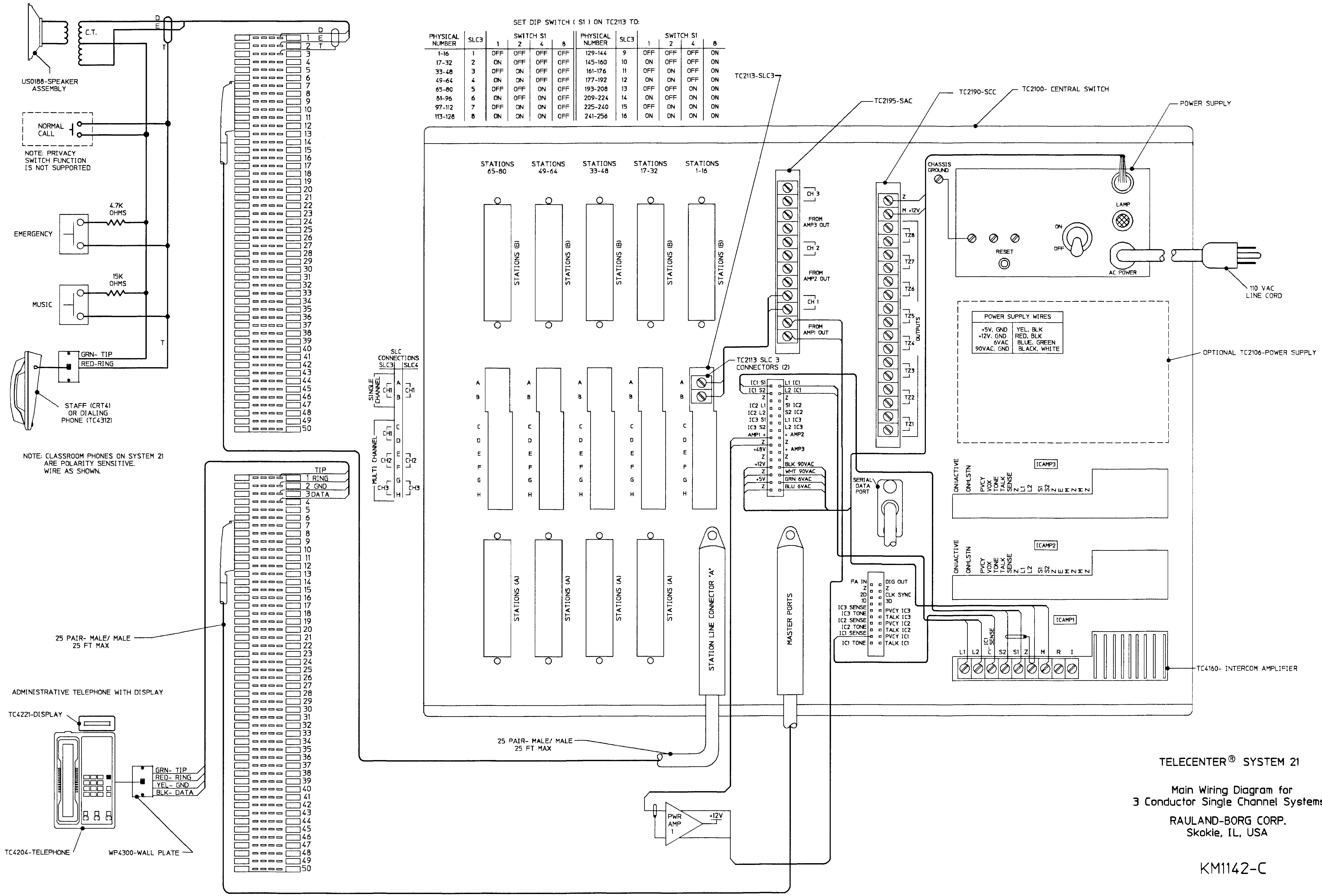
Main Wiring Diagram for
3 Conductor Multi-Channel Systems

RAULAND-BORG CORP.
Skokie, IL, USA

KM1141-C

SET DIP SWITCH (S1) ON TC2113 TO:

PHYSICAL NUMBER	SLC3	SWITCH S1 1	2	4	8	PHYSICAL NUMBER	SLC3	SWITCH S1 1	2	4	8
1-16	1	OFF	OFF	OFF	OFF	129-144	9	OFF	OFF	OFF	ON
17-32	2	ON	OFF	OFF	OFF	145-160	10	ON	OFF	OFF	ON
33-48	3	OFF	ON	OFF	OFF	161-176	11	OFF	ON	OFF	ON
49-64	4	ON	ON	OFF	OFF	177-192	12	ON	ON	OFF	ON
65-80	5	OFF	OFF	ON	OFF	193-208	13	OFF	OFF	ON	ON
81-96	6	ON	OFF	ON	OFF	209-224	14	ON	OFF	ON	ON
97-112	7	OFF	ON	ON	OFF	225-240	15	OFF	ON	ON	ON
113-128	8	ON	ON	ON	OFF	241-256	16	ON	ON	ON	ON

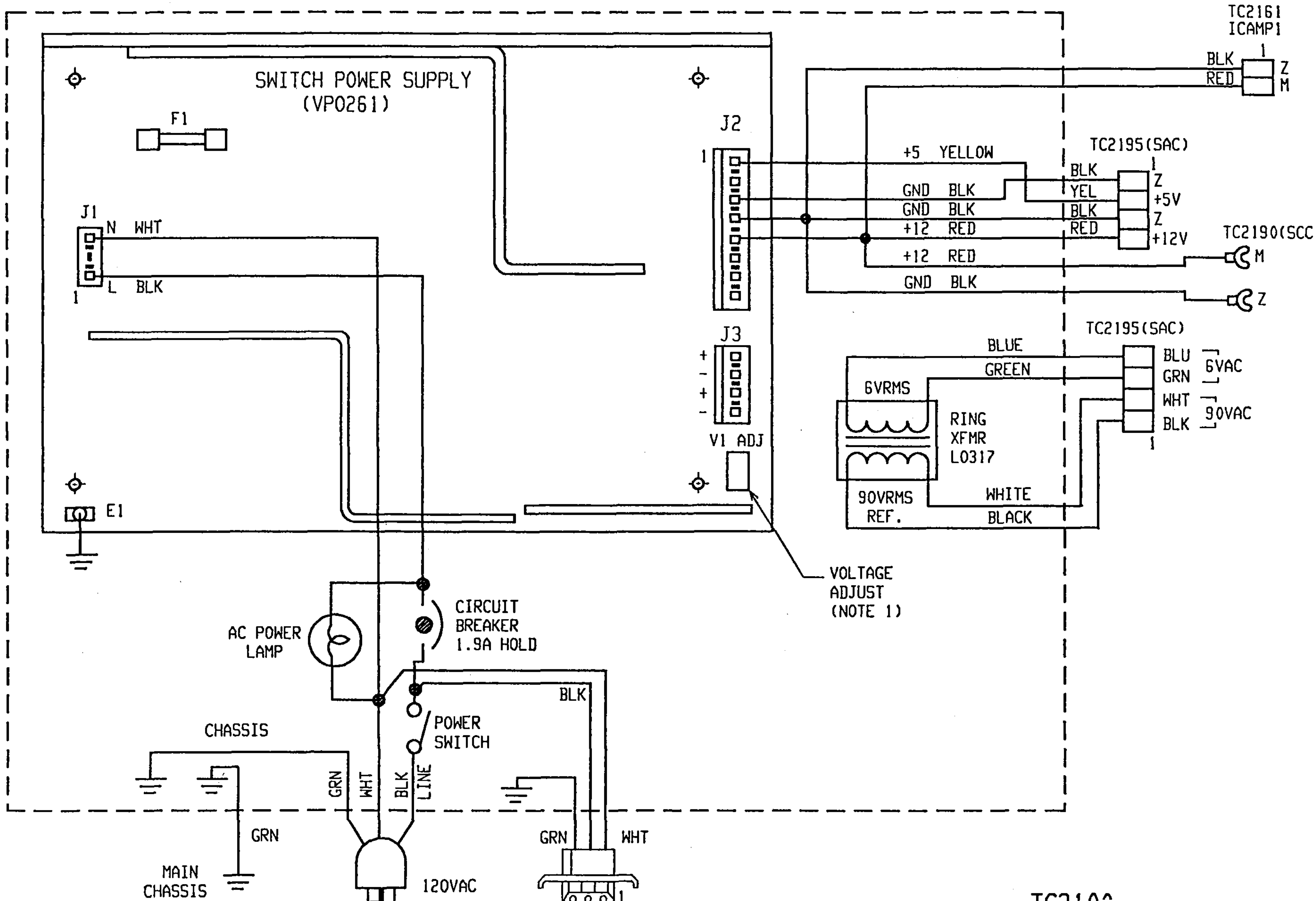


TELECENTER® SYSTEM 21

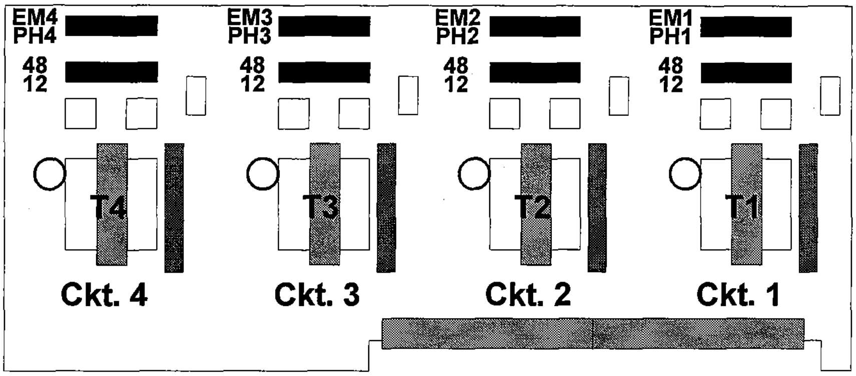
Main Wiring Diagram for
3 Conductor Single Channel Systems

RAULAND-BORG CORP.
Skokie, IL, USA

KM1142-C

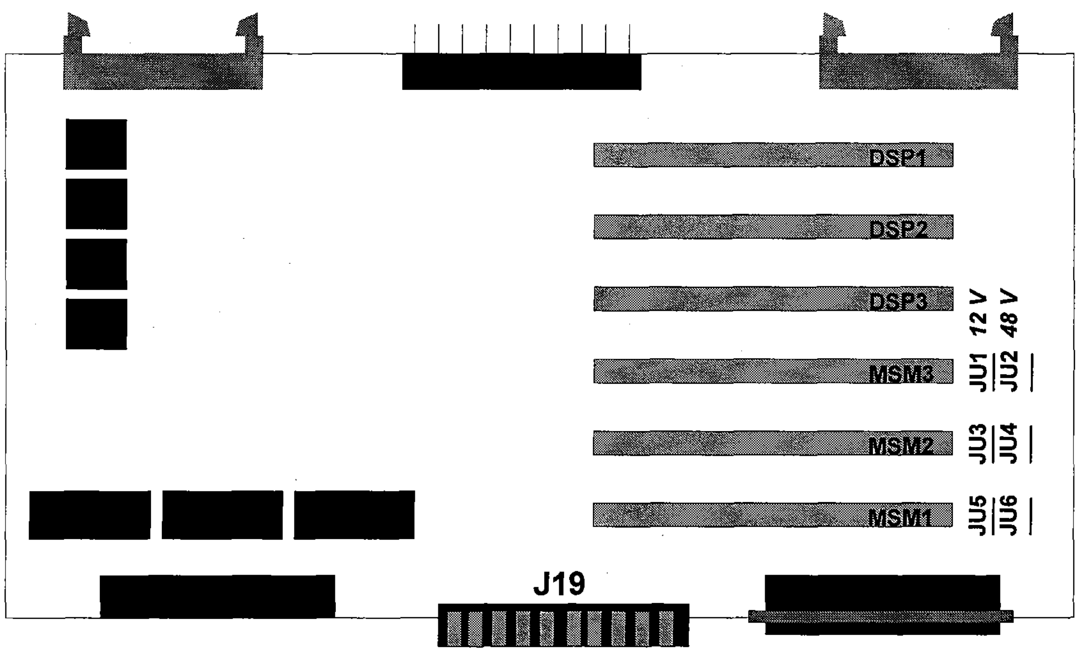

SWITCH POWER SUPPLY
(VP0261)
F1
J1
N WHT
L BLK
1
E1
J2
1
+5 YELLOW
GND BLK
GND BLK
+12 RED
+12 RED
GND BLK
J3
V1 ADJ
VOLTAGE
ADJUST
(NOTE 1)
TC2161
ICAMP1
BLK
RED
Z
M
TC2195(SAC)
BLK
YEL
BLK
RED
Z
+5V
Z
+12V
TC2190(SCC)
M
Z
TC2195(SAC)
BLUE
GREEN
BLU
GRN
WHT
BLK
6VAC
90VAC
6VRMS
RING
XFMR
L0317
90VRMS
REF.
WHITE
BLACK
AC POWER
LAMP
CIRCUIT
BREAKER
1.9A HOLD
BLK
POWER
SWITCH
CHASSIS
GRN
WHT
BLK
LINE
GRN
MAIN
CHASSIS
120VAC
GRN
WHT

TC2150 (MSM)



Notes: 1. Set each circuit (Ckt. 1 - 4) for phone operation (Ph. 1 - 4) or for interconnect (EM. 1 - 4).
2. Only 12 V operation is allowed for a MSM Module with any one of it's circuits set for E & M lines.

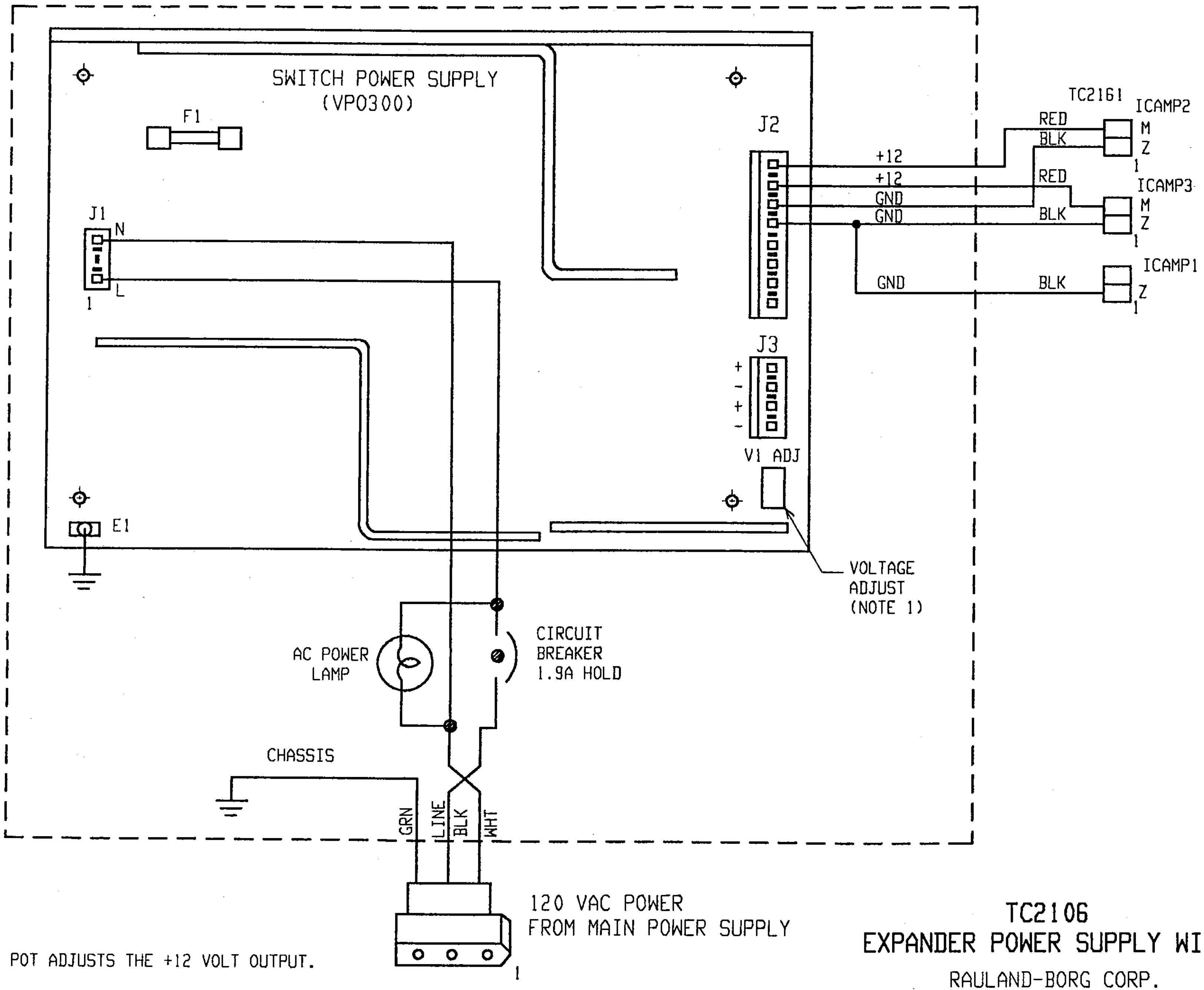
TC2195 (SAC)



Notes: 1. Factory setting is 12 V. For 48 V, cut JU1, JU3, or JU5, and install JU2, JU4, or JU6. Only one jumper (12 V or 48 V) is allowed for each MSM.
2. For 48 V operation wire an external 48 V power supply to +48 V, GND, (J19 pins 19 & 21).
3. Also set 12 V or 48 V jumpers on each MSM module for all four circuits (Ckt. 1 - 4).

Telecenter® System 21 Option Jumper Settings

IL0442A
Rauland-Borg Corp.
Skokie, IL USA
8/94



NOTES:

1. THE POT ADJUSTS THE +12 VOLT OUTPUT.
2. CHEROKEE POWER SUPPLY MUST HAVE THE FOLLOWING MINIMUM LOAD: 0.5A @ 12V.

TC2106
EXPANDER POWER SUPPLY WIRING

RAULAND-BORG CORP.
SKOKIE, IL. USA

KM1131 - 0

TELECENTER SYSTEM 21 TC2113 (SLC) BLOCK VS PHYSICAL NUMBER ASSIGNMENT CHART

KM1155-A

BLOCK	CABLE			SLC1	SLC2	SLC3	SLC4	SLC5	SLC6	SLC7	SLC8	SLC9	SLC10	SLC11	SLC12	SLC13	SLC14	SLC15	SLC16
CLIP#	PIN#	COLOR	DESIG	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#
1	26	W/BL	D																
2	1	BL/W	E	S1	S17	S33	S49	S65	S81	S97	S113	S129	S145	S161	S177	S193	S209	S225	S241
3	27	W/O	T																
4	2	O/W	D																
5	28	W/G	E	S2	S18	S34	S50	S66	S82	S98	S114	S130	S146	S162	S178	S194	S210	S226	S242
6	3	G/W	T																
7	29	W/BR	D																
8	4	BR/W	E	S3	S19	S35	S51	S67	S83	S99	S115	S131	S147	S163	S179	S195	S211	S227	S243
9	30	W/S	T																
10	5	S/W	D																
11	31	R/BL	E	S4	S20	S36	S52	S68	S84	S100	S116	S132	S148	S164	S180	S196	S212	S228	S244
12	6	BL/R	T																
13	32	R/O	D																
14	7	O/R	E	S5	S21	S37	S53	S69	S85	S101	S117	S133	S149	S165	S181	S197	S213	S229	S245
15	33	R/G	T																
16	8	G/R	D																
17	34	R/BR	E	S6	S22	S38	S54	S70	S86	S102	S118	S134	S150	S166	S182	S198	S214	S230	S246
18	9	BR/R	T																
19	35	R/S	D																
20	10	S/R	E	S7	S23	S39	S55	S71	S87	S103	S119	S135	S151	S167	S183	S199	S215	S231	S247
21	36	BK/BL	T																
22	11	BL/BK	D																
23	37	BK/O	E	S8	S24	S40	S56	S72	S88	S104	S120	S136	S152	S168	S184	S200	S216	S232	S248
24	12	O/BK	T																
25	38	BK/G	D																
26	13	G/BK	E	S9	S25	S41	S57	S73	S89	S105	S121	S137	S153	S169	S185	S201	S217	S233	S249
27	39	BK/BR	T																
28	14	BR/BK	D																
29	40	BK/S	E	S10	S26	S42	S58	S74	S90	S106	S122	S138	S154	S170	S186	S202	S218	S234	S250
30	15	S/BK	T																
31	41	Y/BL	D																
32	16	BL/Y	E	S11	S27	S43	S59	S75	S91	S107	S123	S139	S155	S171	S187	S203	S219	S235	S251
33	42	Y/O	T																
34	17	O/Y	D																
35	43	Y/G	E	S12	S28	S44	S60	S76	S92	S108	S124	S140	S156	S172	S188	S204	S220	S236	S252
36	18	G/Y	T																
37	44	Y/BR	D																
38	19	BR/Y	E	S13	S29	S45	S61	S77	S93	S109	S125	S141	S157	S173	S189	S205	S221	S237	S253
39	45	Y/S	T																
40	20	S/Y	D																
41	46	V/BL	E	S14	S30	S46	S62	S78	S94	S110	S126	S142	S158	S174	S190	S206	S222	S238	S254
42	21	BL/V	T																
43	47	V/O	D																
44	22	O/V	E	S15	S31	S47	S63	S79	S95	S111	S127	S143	S159	S175	S191	S207	S223	S239	S255
45	48	V/G	T																
46	23	G/V	D																
47	49	V/BR	E	S16	S32	S48	S64	S80	S96	S112	S128	S144	S160	S176	S192	S208	S224	S240	S256
48	24	BR/V	T																
49	50	V/S	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
50	25	S/V	GND																

Telecenter® System 21

KM1108

TC2113 Cable Assignment Chart and Work Sheet (SLC3)

Distributor: **Job Name:** **Date:** **RT 2100–**

Block	Cable						
Clip #	Conn. #	Color	Desig.	Pos. #	Phy. #	Arch. #	Notes
1	26	Wht/Blu	D	1			
2	1	Blu/Wht	E				
3	27	Wht/Org	T				
4	2	Org/Wht	D	2			
5	28	Wht/Grn	E				
6	3	Grn/Wht	T				
7	29	Wht/Brn	D	3			
8	4	Brn/Wht	E				
9	30	Wht/Slt	T				
10	5	Slt/Wht	D	4			
11	31	Red/Blu	E				
12	6	Blu/Red	T				
13	32	Red/Org	D	5			
14	7	Org/Red	E				
15	33	Red/Grn	T				
16	8	Grn/Red	D	6			
17	34	Red/Brn	E				
18	9	Brn/Red	T				
19	35	Red/Slt	D	7			
20	10	Slt/Red	E				
21	36	Blk/Blu	T				
22	11	Blu/Blk	D	8			
23	37	Blk/Org	E				
24	12	Org/Blk	T				
25	38	Blk/Grn	D	9			
26	13	Grn/Blk	E				
27	39	Blk/Brn	T				
28	14	Brn/Blk	D	10			
29	40	Blk/Slt	E				
30	15	Slt/Blk	T				
31	41	Yel/Blu	D	11			
32	16	Blu/Yel	E				
33	42	Yel/Org	T				
34	17	Org/Yel	D	12			
35	43	Yel/Grn	E				
36	18	Grn/Yel	T				
37	44	Yel/Brn	D	13			
38	19	Brn/Yel	E				
39	45	Yel/Slt	T				
40	20	Slt/Yel	D	14			
41	46	Vio/Blu	E				
42	21	Blu/Vio	T				
43	47	Vio/Org	D	15			
44	22	Org/Vio	E				
45	48	Vio/Grn	T				
46	23	Grn/Vio	D	16			
47	49	Vio/Brn	E				
48	24	Brn/Vio	T				
49	50	Vio/Slt	GND	GND			
50	25	Slt/Vio	GND				

TELECENTER SYSTEM 21 TC2114 (SLC) BLOCK VS PHYSICAL NUMBER ASSIGNMENT CHART

KM1153-0

BLOCK	CABLE			SLC1		SLC2		SLC3		SLC4		SLC5		SLC6		SLC7		SLC8		SLC9		SLC10		SLC11		SLC12		SLC13		SLC14		SLC15		SLC16	
				A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
CLIP#	PIN#	COLOR	DESIG	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#	PHY#
1	26	W/BL	D	S1	S13	S17	S29	S33	S45	S49	S61	S65	S77	S81	S93	S97	S109	S113	S125	S129	S141	S145	S157	S161	S173	S177	S189	S193	S205	S209	S221	S225	S237	S241	S253
2	1	BL/W	E																																
3	27	W/O	T																																
4	2	O/W	S																																
5	28	W/G	D	S2	S14	S18	S30	S34	S46	S50	S62	S66	S78	S82	S94	S98	S110	S114	S126	S130	S142	S146	S158	S162	S174	S178	S190	S194	S206	S210	S222	S226	S238	S242	S254
6	3	G/W	E																																
7	29	W/BR	T																																
8	4	BR/W	S																																
9	30	W/S	D	S3	S15	S19	S31	S35	S47	S51	S63	S67	S79	S83	S95	S99	S111	S115	S127	S131	S143	S147	S159	S163	S175	S179	S191	S195	S207	S211	S223	S227	S239	S243	S255
10	5	S/W	E																																
11	31	R/BL	T																																
12	6	BL/R	S																																
13	32	R/O	D	S4	S16	S20	S32	S36	S48	S52	S64	S68	S80	S84	S96	S100	S112	S116	S128	S132	S144	S148	S160	S164	S176	S180	S192	S196	S208	S212	S224	S228	S240	S244	S256
14	7	O/R	E																																
15	33	R/G	T																																
16	8	G/R	S																																
17	34	R/BR	D	S5	GND	S21	GND	S37	GND	S53	GND	S69	GND	S85	GND	S101	GND	S117	GND	S133	GND	S149	GND	S165	GND	S181	GND	S197	GND	S213	GND	S229	GND	S245	GND
18	9	BR/R	E																																
19	35	R/S	T																																
20	10	S/R	S																																
21	36	BK/BL	D	S6		S22		S38		S54		S70		S86		S102		S118		S134		S150		S166		S182		S198		S214		S230		S246	
22	11	BL/BK	E																																
23	37	BK/O	T																																
24	12	O/BK	S																																
25	38	BK/G	D	S7		S23		S39		S55		S71		S87		S103		S119		S135		S151		S167		S183		S199		S215		S231		S247	
26	13	G/BK	E																																
27	39	BK/BR	T																																
28	14	BR/BK	S																																
29	40	BK/S	D	S8		S24		S40		S56		S72		S88		S104		S120		S136		S152		S168		S184		S200		S216		S232		S248	
30	15	S/BK	E																																
31	41	Y/BL	T																																
32	16	BL/Y	S																																
33	42	Y/O	D	S9		S25		S41		S57		S73		S89		S105		S121		S137		S153		S169		S185		S201		S217		S233		S249	
34	17	O/Y	E																																
35	43	Y/G	T																																
36	18	G/Y	S																																
37	44	Y/BR	D	S10		S26		S42		S58		S74		S90		S106		S122		S138		S154		S170		S186		S202		S218		S234		S250	
38	19	BR/Y	E																																
39	45	Y/S	T																																
40	20	S/Y	S																																
41	46	V/BL	D	S11		S27		S43		S59		S75		S91		S107		S123		S139		S155		S171		S187		S203		S219		S235		S251	
42	21	BL/V	E																																
43	47	V/O	T																																
44	22	O/V	S																																
45	48	V/G	D	S12		S28		S44		S60		S76		S92		S108		S124		S140		S156		S172		S188		S204		S220		S236		S252	
46	23	G/V	E																																
47	49	V/BR	T																																
48	24	BR/V	S																																
49	50	V/S		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
50	25	S/V																																	

Telecenter® System 21
TC2114 Cable Assignment Chart and Work Sheet (SLC4)

Distributor: **Job Name:** **Date:** **RT2100-**

	Cable		Left Side of Block – Cable #1					Right Side of Block – Cable #2				
Clip#	Pin#	Color	Desig.	Pos#	Phy#	Arc#	Notes	Desig	Pos #	Phy #	Arch#	Notes
1	26	Wht/Blu	D					D				
2	1	Blu/Wht	E	1				E	13			
3	27	Wht/Org	T					T				
4	2	Org/Wht	S					S				
5	28	Wht/Grn	D					D				
6	3	Grn/Wht	E	2				E	14			
7	29	Wht/Brn	T					T				
8	4	Brn/Wht	S					S				
9	30	Wht/Slt	D					D				
10	5	Slt/Wht	E	3				E	15			
11	31	Red/Blu	T					T				
12	6	Blu/Red	S					S				
13	32	Red/Org	D					D				
14	7	Org/Red	E	4				E	16			
15	33	Reg/Grn	T					T				
16	8	Grn/Red	S					S				
17	34	Red/Brn	D					GND				
18	9	Brn/Red	E	5				GND				
19	35	Red/Slt	T					GND				
20	10	Slt/Red	S					GND				
21	36	Blk/Blu	D					GND				
22	11	Blu/Blk	E	6				GND				
23	37	Blk/Org	T					GND				
24	12	Org/Blk	S					GND				
25	38	Blk/Grn	D					GND				
26	13	Grn/Blk	E	7				GND				
27	39	Blk/Brn	T					GND				
28	14	Brn/Blk	S					GND				
29	40	Blk/Slt	D					GND				
30	15	Slt/Blk	E	8				GND				
31	41	Yel/Blu	T					GND				
32	16	Blu/Yel	S					GND				
33	42	Yel/Org	D					GND				
34	17	Org/Yel	E	9				GND				
35	43	Yel/Grn	T					GND				
36	18	Grn/Yel	S					GND				
37	44	Yel/Brn	D					GND				
38	19	Brn/Yel	E	10				GND				
39	45	Yel/Slt	T					GND				
40	20	Slt/Yel	S					GND				
41	46	Vio/Blu	D					GND				
42	21	Blu/Vio	E	11				GND				
43	47	Vio/Org	T					GND				
44	22	Org/Vio	S					GND				
45	48	Vio/Grn	D					GND				
46	23	Grn/Vio	E	12				GND				
47	49	Vio/Brn	T					GND				
48	24	Brn/Vio	S					GND				
49	50	Vio/Slt	GND	GND				GND				
50	25	Slt/Vio	GND					GND				

Telecenter® System 21

KM1109

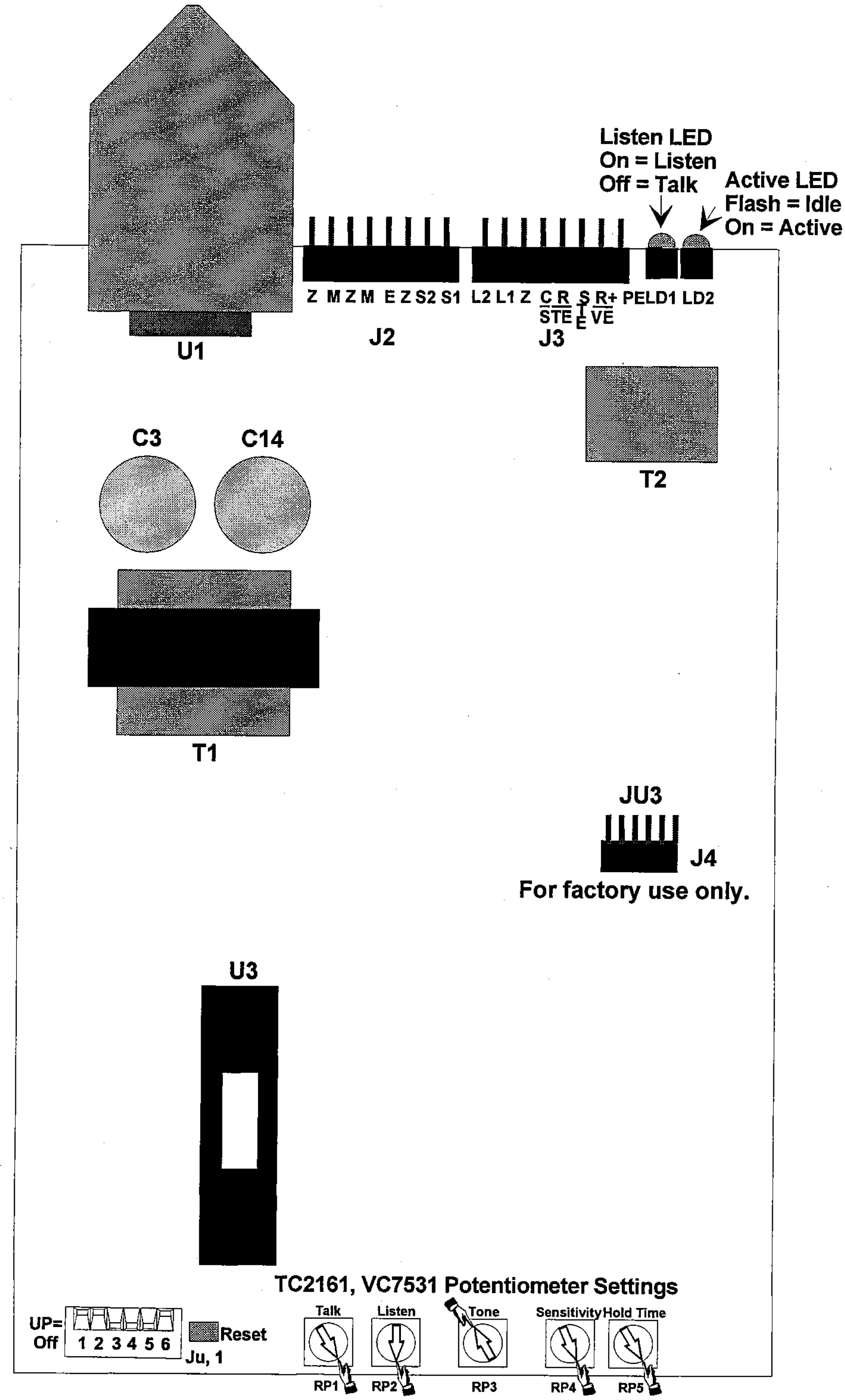
TC2195 Cable Assignment Chart and Work Sheet (SAC)

Distributor: **Job Name:** **Date:** **RT 2100–**

Block	Cable		Master Ports			
Clip #	Conn. #	Color	Desig.	Phy. #	Arch. #	Notes
1	26	Wht/Blu	T	1		
2	1	Blu/Wht	R			
3	27	Wht/Org	GND			
4	2	Org/Wht	DATA			
5	28	Wht/Grn	T	2		
6	3	Grn/Wht	R			
7	29	Wht/Brn	GND			
8	4	Brn/Wht	DATA			
9	30	Wht/Slt	T	3		
10	5	Slt/Wht	R			
11	31	Red/Blu	GND			
12	6	Blu/Red	DATA			
13	32	Red/Org	T	4		
14	7	Org/Red	R			
15	33	Red/Grn	GND			
16	8	Grn/Red	DATA			
17	34	Red/Brn	T	5		
18	9	Brn/Red	R			
19	35	Red/Slt	GND			
20	10	Slt/Red	DATA			
21	36	Blk/Blu	T	6		
22	11	Blu/Blk	R			
23	37	Blk/Org	GND			
24	12	Org/Blk	DATA			
25	38	Blk/Grn	T	7		
26	13	Grn/Blk	R			
27	39	Blk/Brn	GND			
28	14	Brn/Blk	DATA			
29	40	Blk/Slt	T	8		
30	15	Slt/Blk	R			
31	41	Yel/Blu	GND			
32	16	Blu/Yel	DATA			
33	42	Yel/Org	T	9		
34	17	Org/Yel	R			
35	43	Yel/Grn	GND			
36	18	Grn/Yel	DATA			
37	44	Yel/Brn	T	10		
38	19	Brn/Yel	R			
39	45	Yel/Slt	GND			
40	20	Slt/Yel	DATA			
41	46	Vio/Blu	T	11		
42	21	Blu/Vio	R			
43	47	Vio/Org	GND			
44	22	Org/Vio	DATA			
45	48	Vio/Grn	T	12		
46	23	Grn/Vio	R			
47	49	Vio/Brn	GND			
48	24	Brn/Vio	DATA			
49	50	Vio/Slt	GND	Display		Use these clips to connect the TC4222 (VFD Display)
50	25	Slt/Vio	DATA			

J2 and J3 Pin Functions

Z = Common
M = +12V
E = Earth Ground
S1, S2 = Speaker Pair
L1, L2 = Phone Line In
C/S = Sense
R/TE = Talk
STE = Tone
R+/VE = VOX
PE = Private



DIP Switch Settings

Switch	Function	Off (Up)	On (Down)
1	Preannounce Tone	Enabled	Disabled
2	Supervisory Tone	Enabled	Disabled
3	Not Used	-	-
4	System 21 - 4 or 3 Cond.	4 Cond.	3 Cond.
5	System 21 or TCV or TC1100	System 21	TCV or TC1100
6	Hardware Reset	Enabled	Disabled

Telecenter® System 21
TC2161 Intercom Amplifier

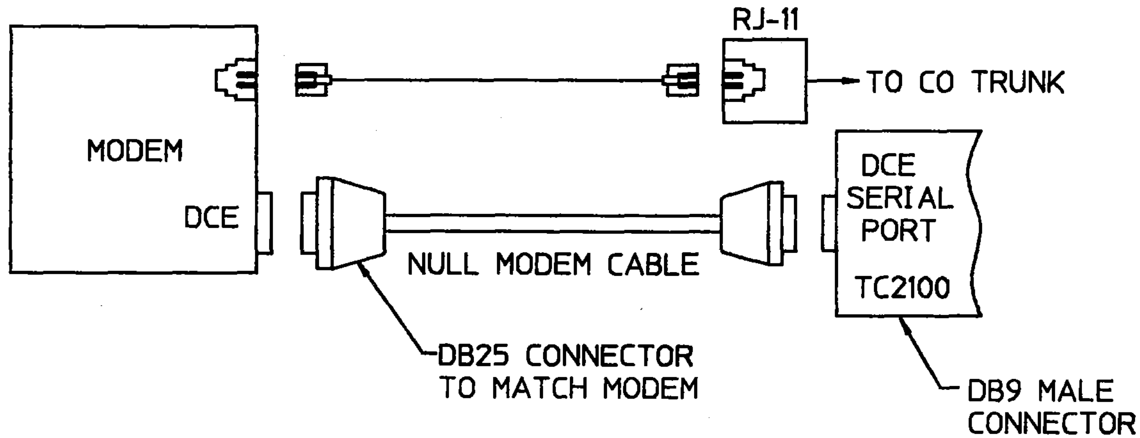
IL0476
Rauland-Borg Corp.

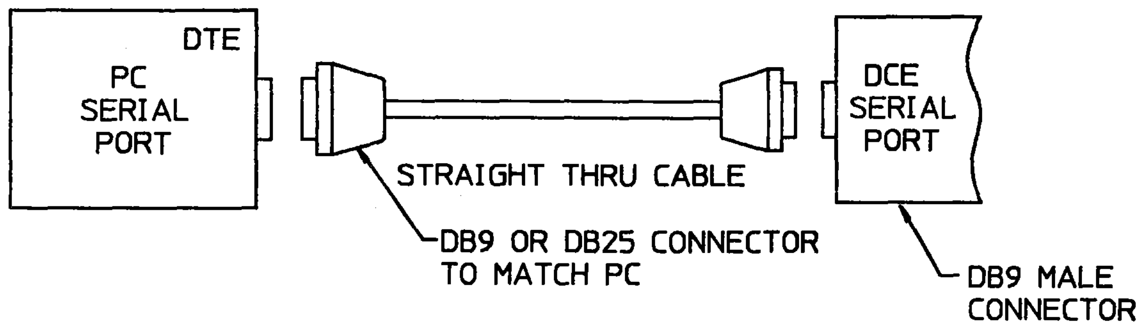
MODEM DB25	TC2100 DB9	
2	2	RD
3	3	TD
5	7	RTS
4	8	CTS
6	4	DTR
8	1	CD
20	6	DSR
7	5	GND
22	9	RI

TABLE 1

PC		TC2100 DB9	
DB25	DB9		
8	1	1	CD
3	2	2	RXD
2	3	3	TXD
20	4	4	DTR
7	5	5	GND
6	6	6	DSR
4	7	7	RTS
5	8	8	CTS
22	9	9	RI

TABLE 2





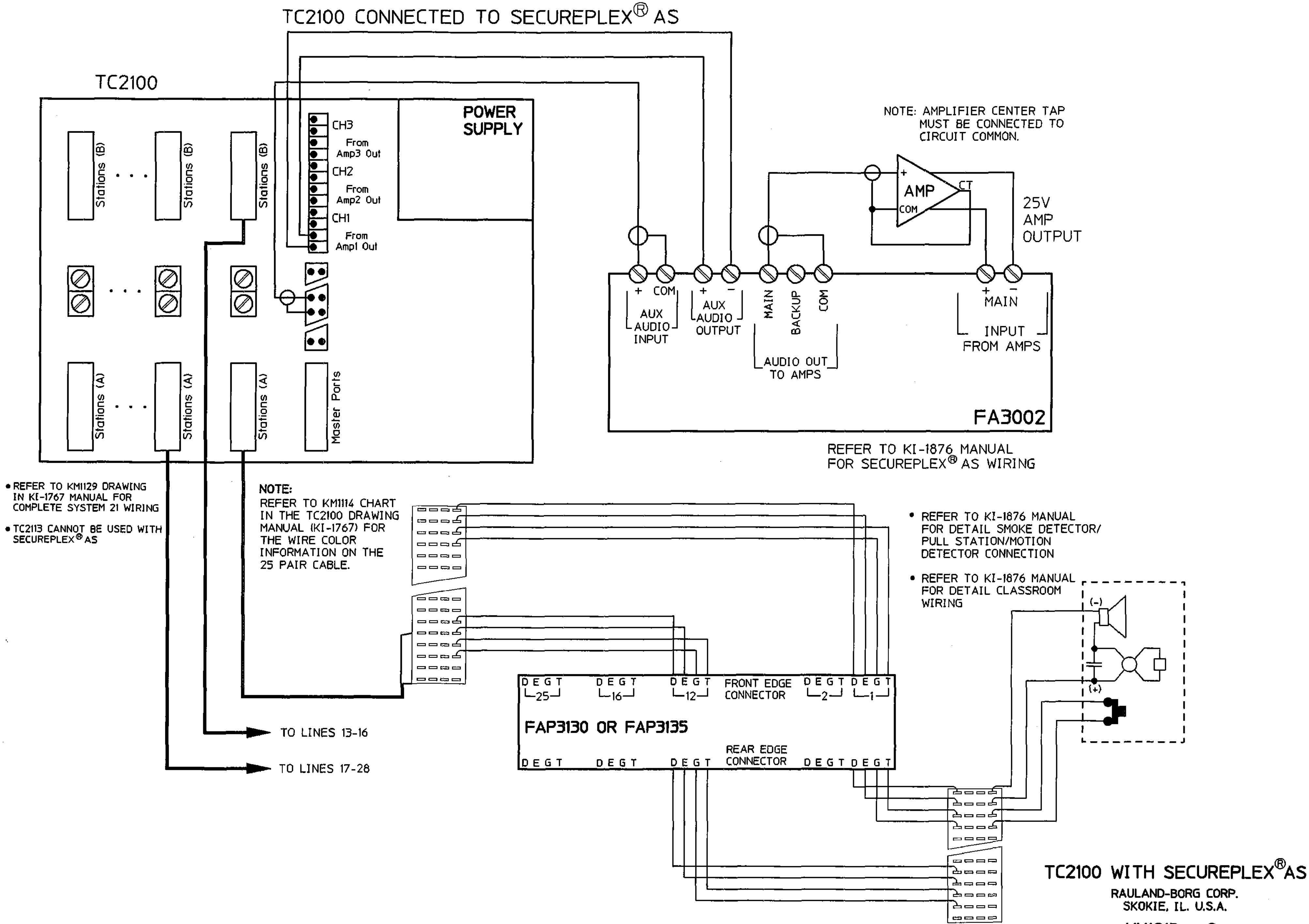
NOTES:

1. MODEM SHOULD BE SET AS FOLLOWS
   - A. AUTO ANSWER ENABLED
   - B. HARDWARE (RTS/CTS) HANDSTAKING
   - C. NO ECHO
   - D. NO RESULT CODES
   - E. DISABLE COMMAND MODE (DUMB MODE)

Telecenter System 21
To Modem or Personal Computer

Rauland-Borg Corp.
Skokie, Ill, USA

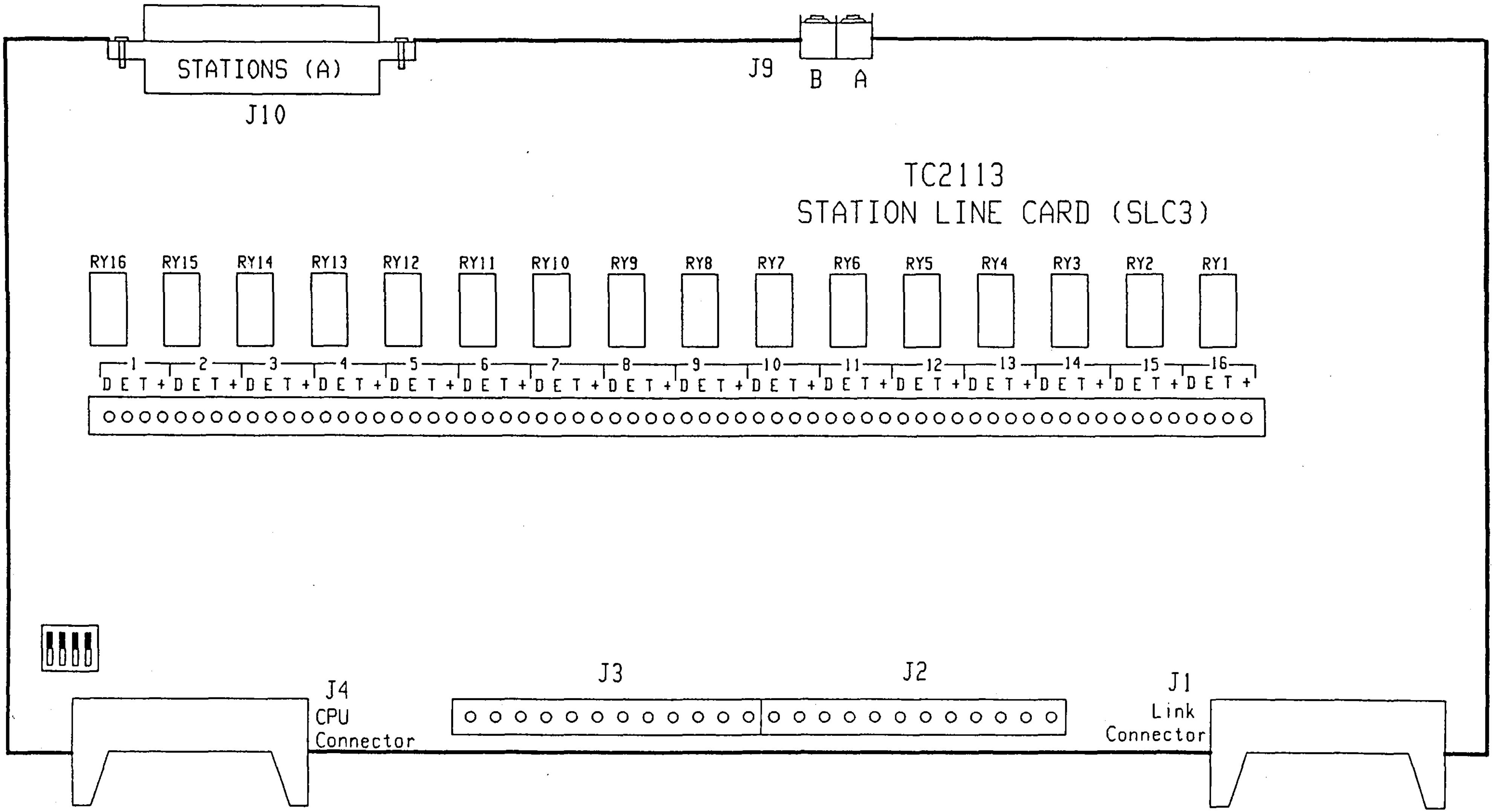
KM1127 C



TC2100 WITH SECUREPLEX® AS

RAULAND-BORG CORP.
SKOKIE, IL. U.S.A.

KM1213 - 0

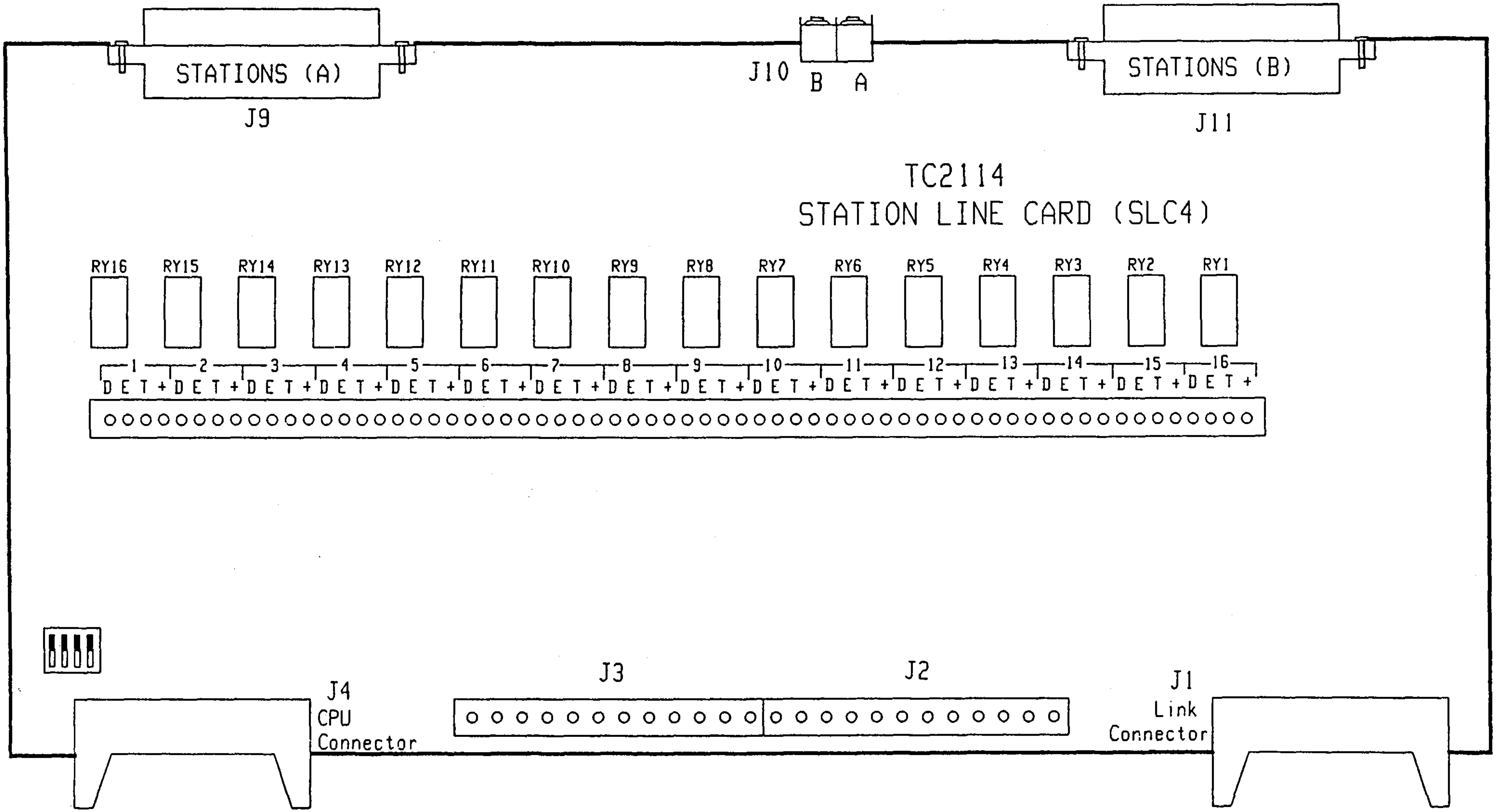


TELECENTER SYSTEM 21

TC2113 Terminal Layout

Rauland-Borg Corp.
Skokie, IL. USA

KM1205 - 0



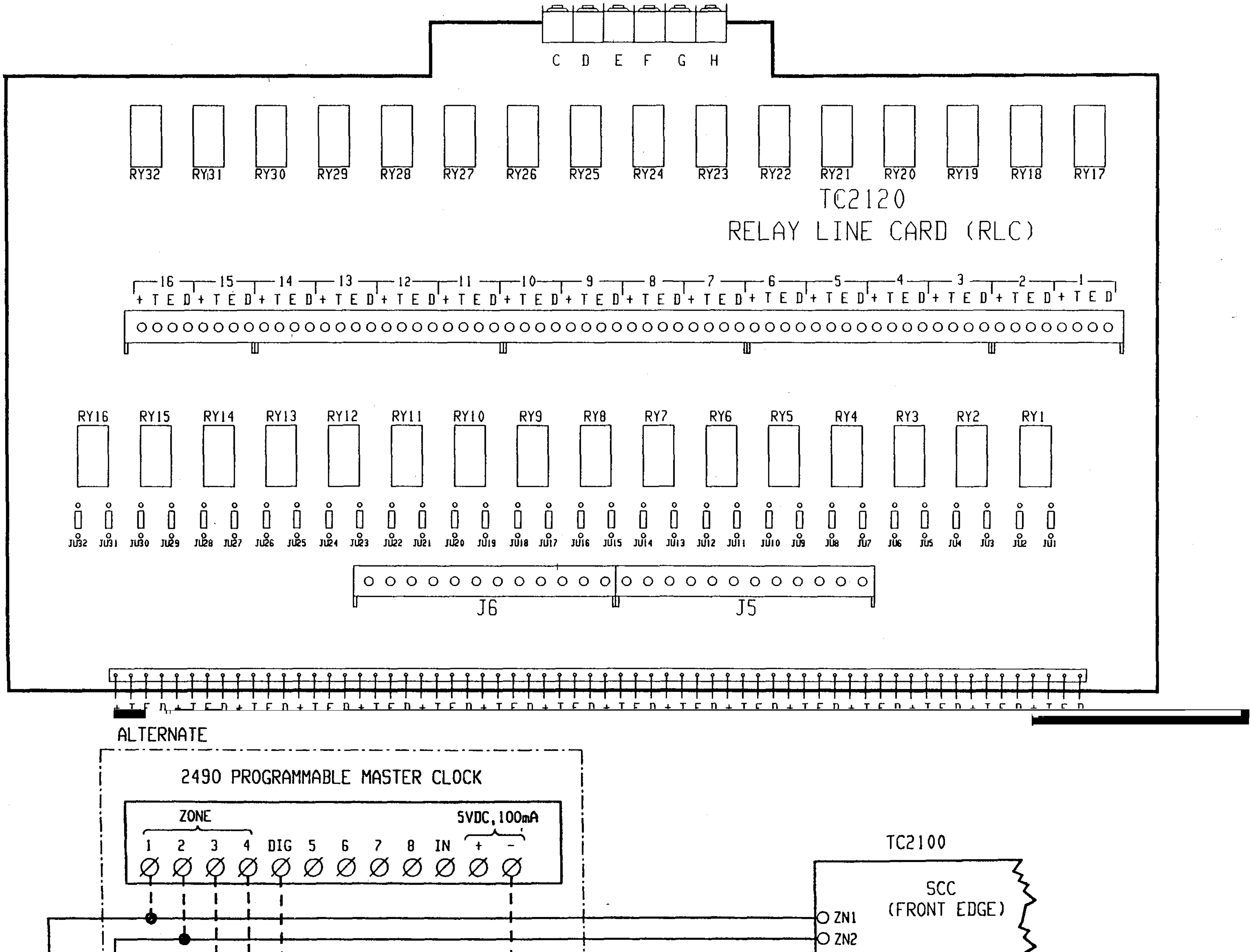
TELECENTER SYSTEM 21

TC2114 Terminal Layout

Rauland-Borg Corp.

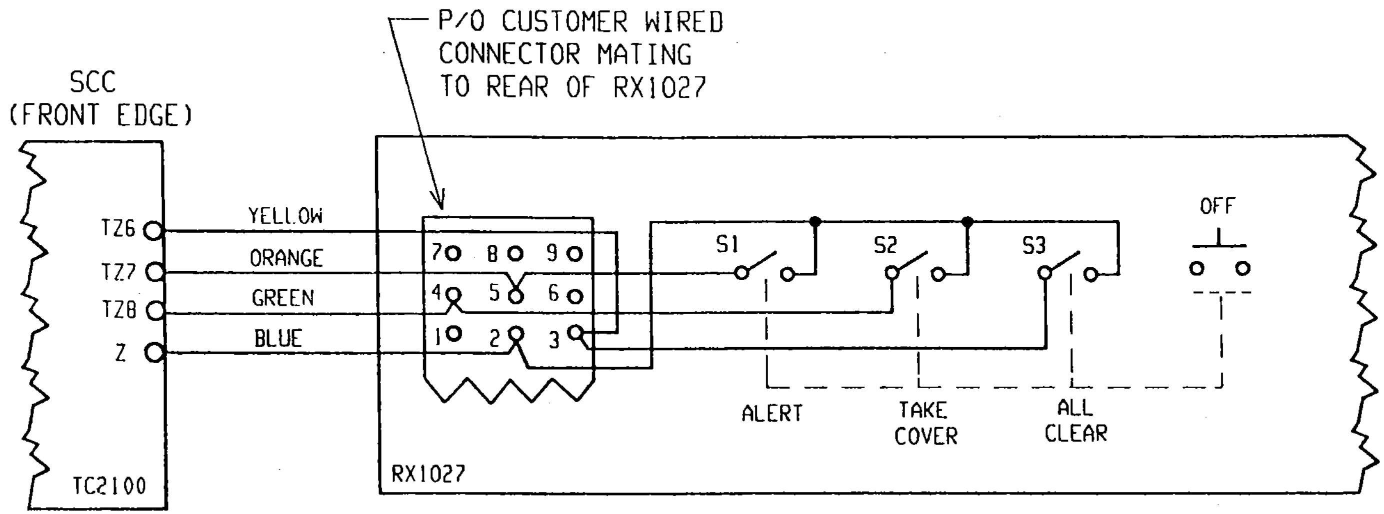
Skokie, IL. USA

KM1204 - 0



C D E F G H
RY32 RY31 RY30 RY29 RY28 RY27 RY26 RY25 RY24 RY23 RY22 RY21 RY20 RY19 RY18 RY17
TC2120
RELAY LINE CARD (RLC)
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
+ T E D
RY16 RY15 RY14 RY13 RY12 RY11 RY10 RY9 RY8 RY7 RY6 RY5 RY4 RY3 RY2 RY1
JU32 JU31 JU30 JU29 JU28 JU27 JU26 JU25 JU24 JU23 JU22 JU21 JU20 JU19 JU18 JU17 JU16 JU15 JU14 JU13 JU12 JU11 JU10 JU9 JU8 JU7 JU6 JU5 JU4 JU3 JU2 JU1
J6
J5
ALTERNATE
2490 PROGRAMMABLE MASTER CLOCK
ZONE
5VDC, 100mA
1 2 3 4 DIG 5 6 7 8 IN + −
TC2100
SCC
(FRONT EDGE)
ZN1
ZN2

EXTERNAL TONE ACTIVATION



NOTES:

1. CONNECTOR SHOWN ON RX1027 IS A 9-PIN MALE CONNECTOR.

2. TONE BUTTONS LATCH. OFF RELEASES SELECTION.

3. ASSIGNMENT OF TONE OUTPUTS FROM SYSTEM OPTIONS AS FOLLOWS:

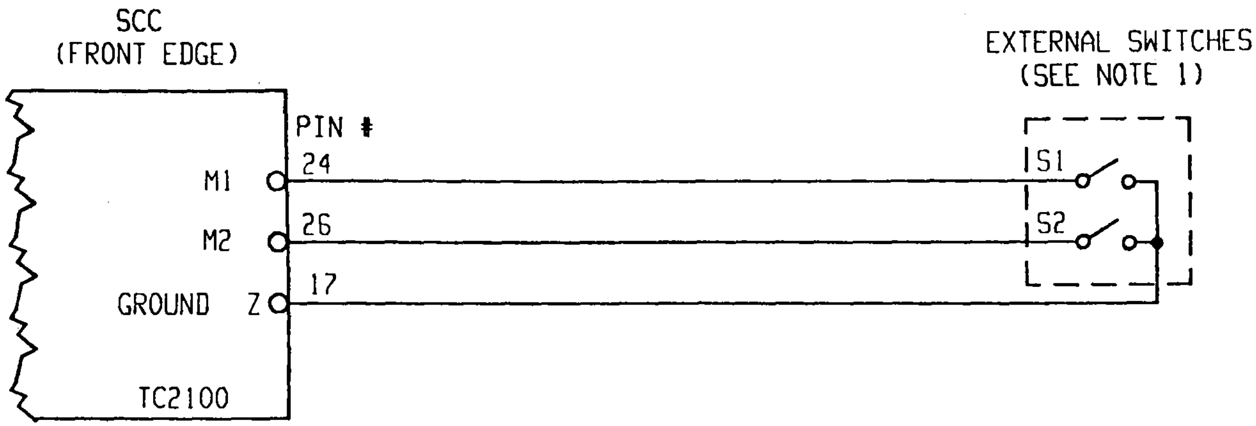
	SIGNAL	FACTORY SETTING
TZ5	PIN "TZ5" GROUNDED	NONE
TZ6	PIN "TZ6" GROUNDED	CHIME
TZ7	PIN "TZ7" GROUNDED	EURO SIREN
TZ8	PIN "TZ8" GROUNDED	MINI CHIME

4. TO USE THESE INPUTS (TZ5 - TZ8) AS TIME TONE INPUTS, PROGRAM TONES = NONE.

EXTERNAL TONE ACTIVATION
ON TELECENTER SYSTEM 21

RAULAND-BORG CORP.
SKOKIE, IL. USA

KM1123 - A



NOTES:

1. S1 AND S2 ARE EXTERNAL SWITCHES OR UNUSED ZONE RELAYS SUPPLYING DRY CONTACTS FROM A MASTER CLOCK i.e. RAULAND PART NUMBER 2524 OR 2490.

2. GROUNDING OR CLOSING SWITCHES (OV) S1 AND S2 SELECT MEMORY BLOCK 1 THROUGH 4 PER THE FOLLOWING TABLE:

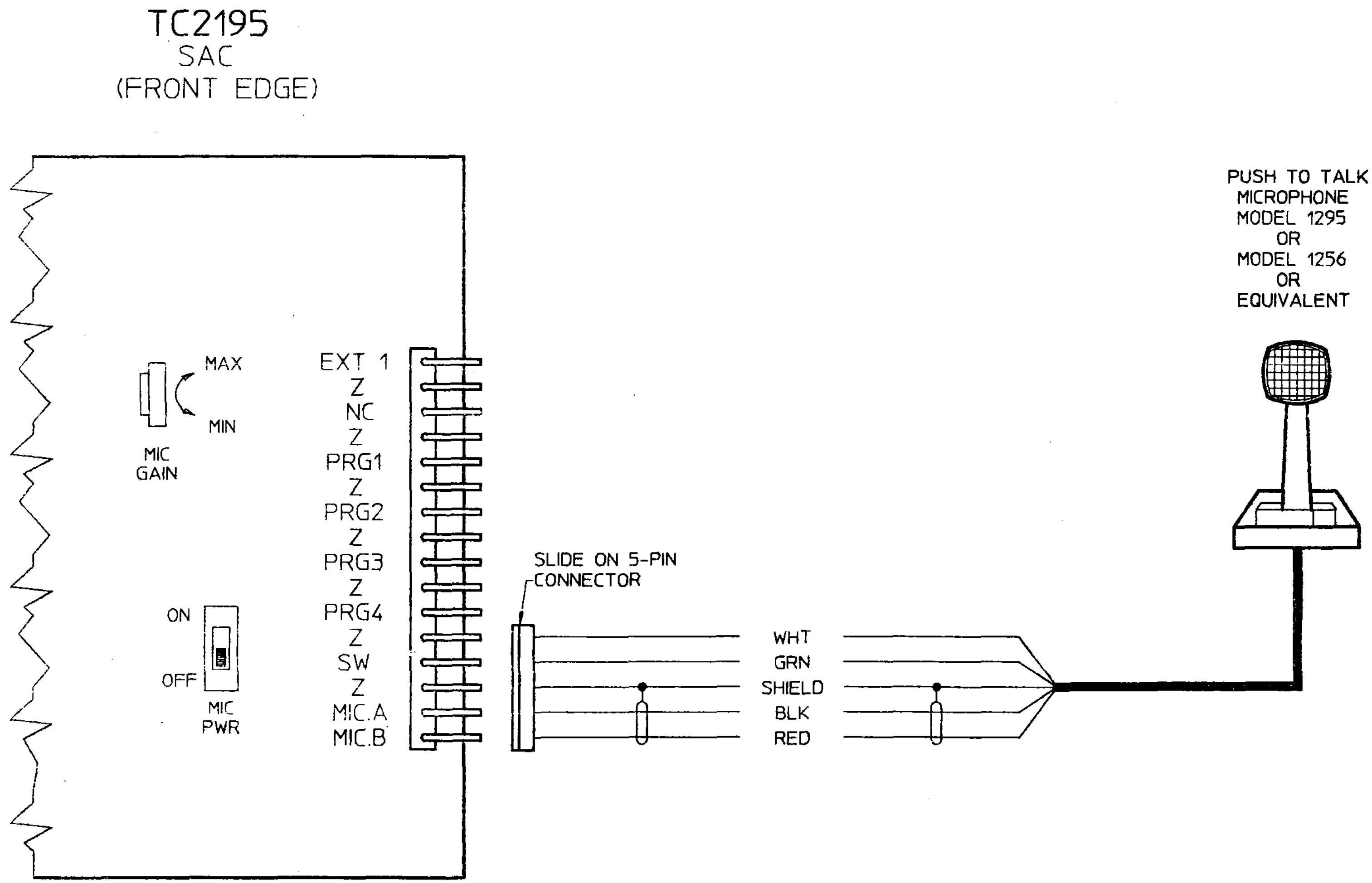
3. IF BOTH S1 AND S2 ARE OPEN, AUTOMATIC MEMORY BLOCK SWITCH WILL BE ALLOWED.

BLOCK SELECTION	S2	S1
MEMORY BLOCK 1	OPEN	OPEN
MEMORY BLOCK 2	OPEN	CLOSED
MEMORY BLOCK 3	CLOSED	OPEN
MEMORY BLOCK 4	CLOSED	CLOSED

MANUAL MEMORY BLOCK SWITCH
TELECENTER SYSTEM 21

RAULAND-BORG CORP.
SKOKIE, IL. USA

KM1122 - 0



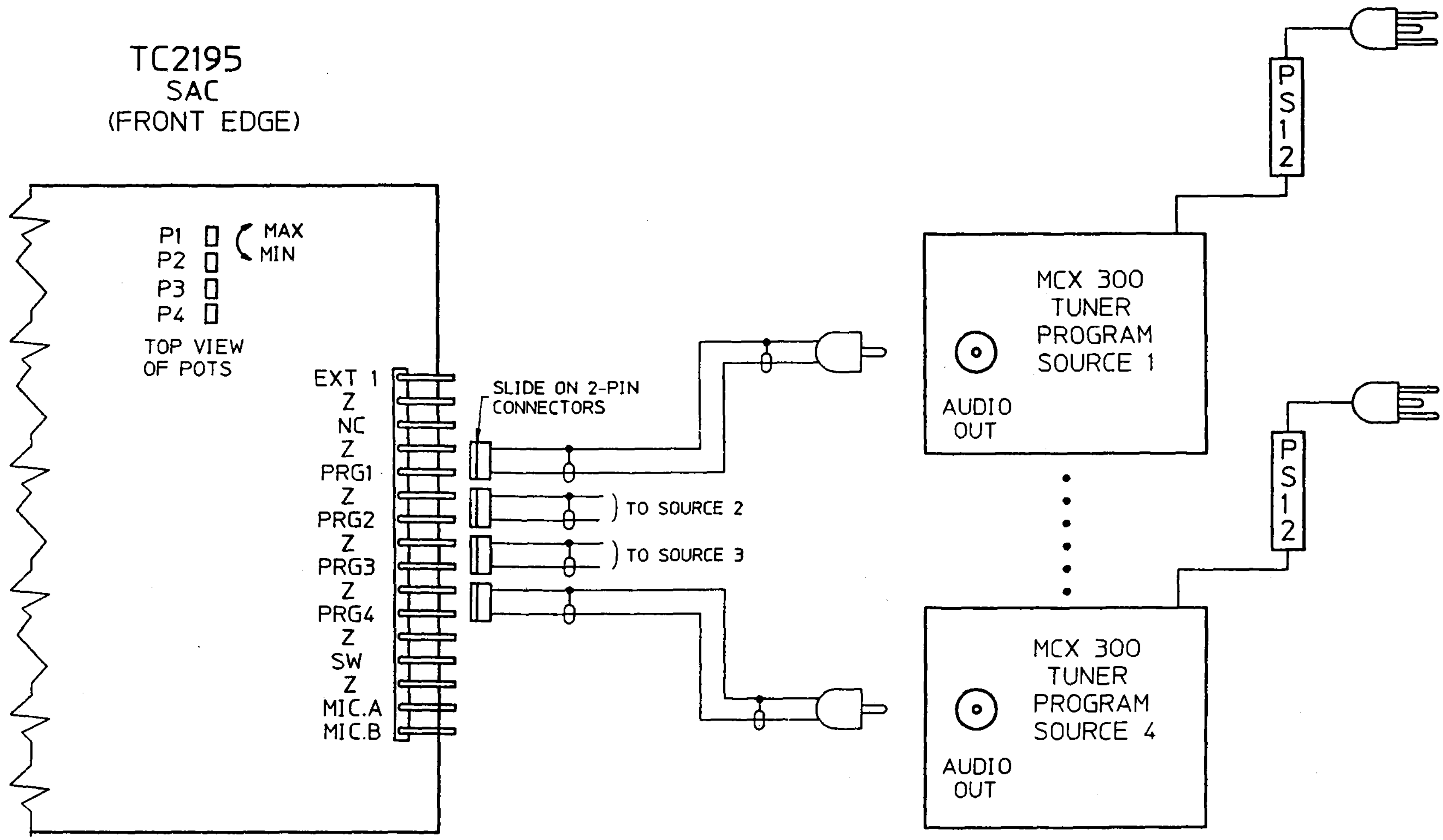
NOTES:

1. MIC GAIN ADJUSTMENT POT ON P.C. BOARD BEHIND TERMINALS.
2. SWITCH "MIC PWR" ON FOR CONDENSER MIC'S THAT REQUIRE PHANTOM POWER.

TELECENTER SYSTEM 21
PAGING MICROPHONE WIRING

RAULAND-BORG CORP.
Skokie, Il. U.S.A.

KM1136 - A



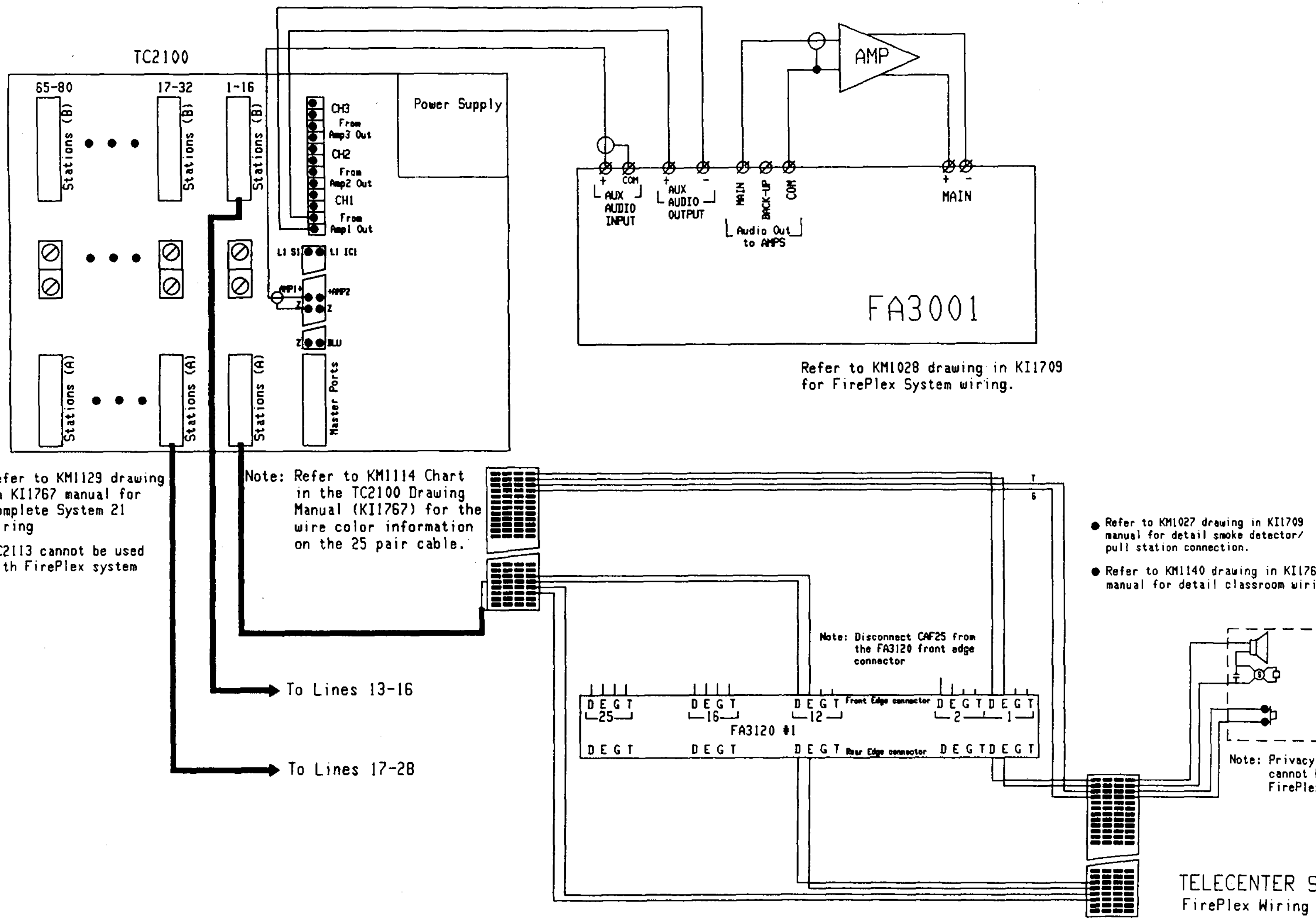
NOTES:

1. PROGRAM SOURCE GAIN ADJUSTMENT POTS P1 --- P4 ON P.C. BOARD BEHIND AND ABOVE TERMINALS.
2. SYSTEM MUST BE PROGRAMED FOR NUMBER OF PROGRAM SOURCES USING TD21 CONFIGURATION PROGRAM.

TELECENTER SYSTEM 21
PROGRAM SOURCE WIRING

RAULAND-BORG CORP.
Skokie, Il. U.S.A.

KM1137 - B



- Refer to KM1129 drawing in KI1767 manual for complete System 21 wiring
- TC2113 cannot be used with FirePlex system

Note: Refer to KM1114 Chart in the TC2100 Drawing Manual (KI1767) for the wire color information on the 25 pair cable.

Refer to KM1028 drawing in KI1709 for FirePlex System wiring.

- Refer to KM1027 drawing in KI1709 manual for detail smoke detector/ pull station connection.
- Refer to KM1140 drawing in KI1767 manual for detail classroom wiring.

Note: Disconnect CAF25 from the FA3120 front edge connector

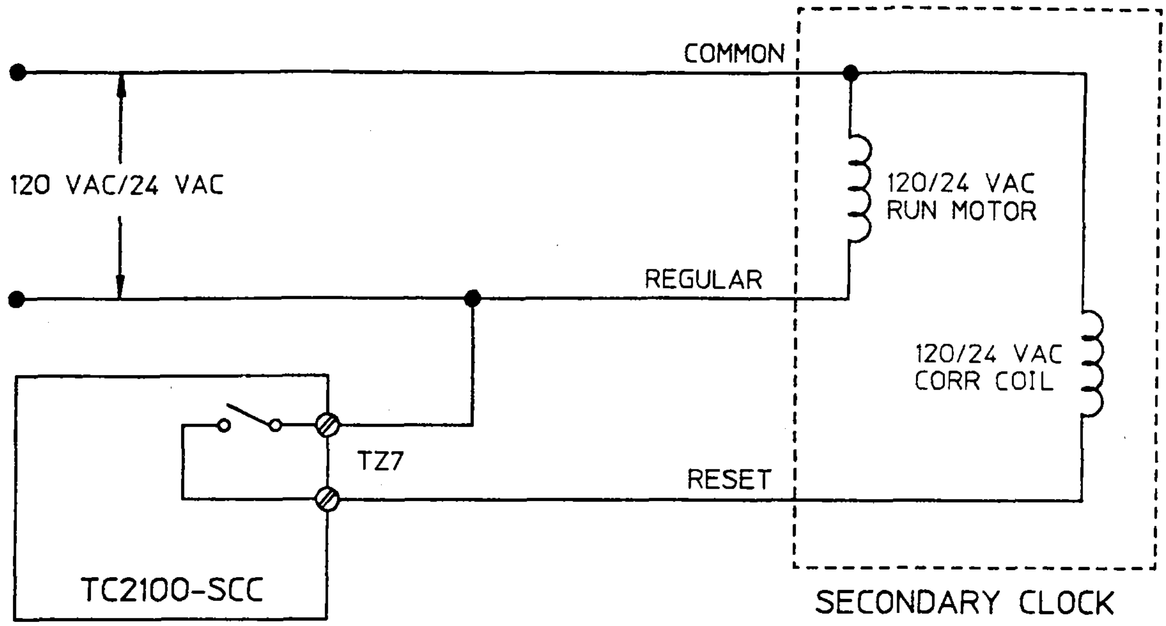
Note: Privacy switch(P2307) cannot be used with FirePlex

TELECENTER SYSTEM 21
FirePlex Wiring With TC2100
Rauland-Borg Corp.
Skokie, IL. USA
KM1197 - 0

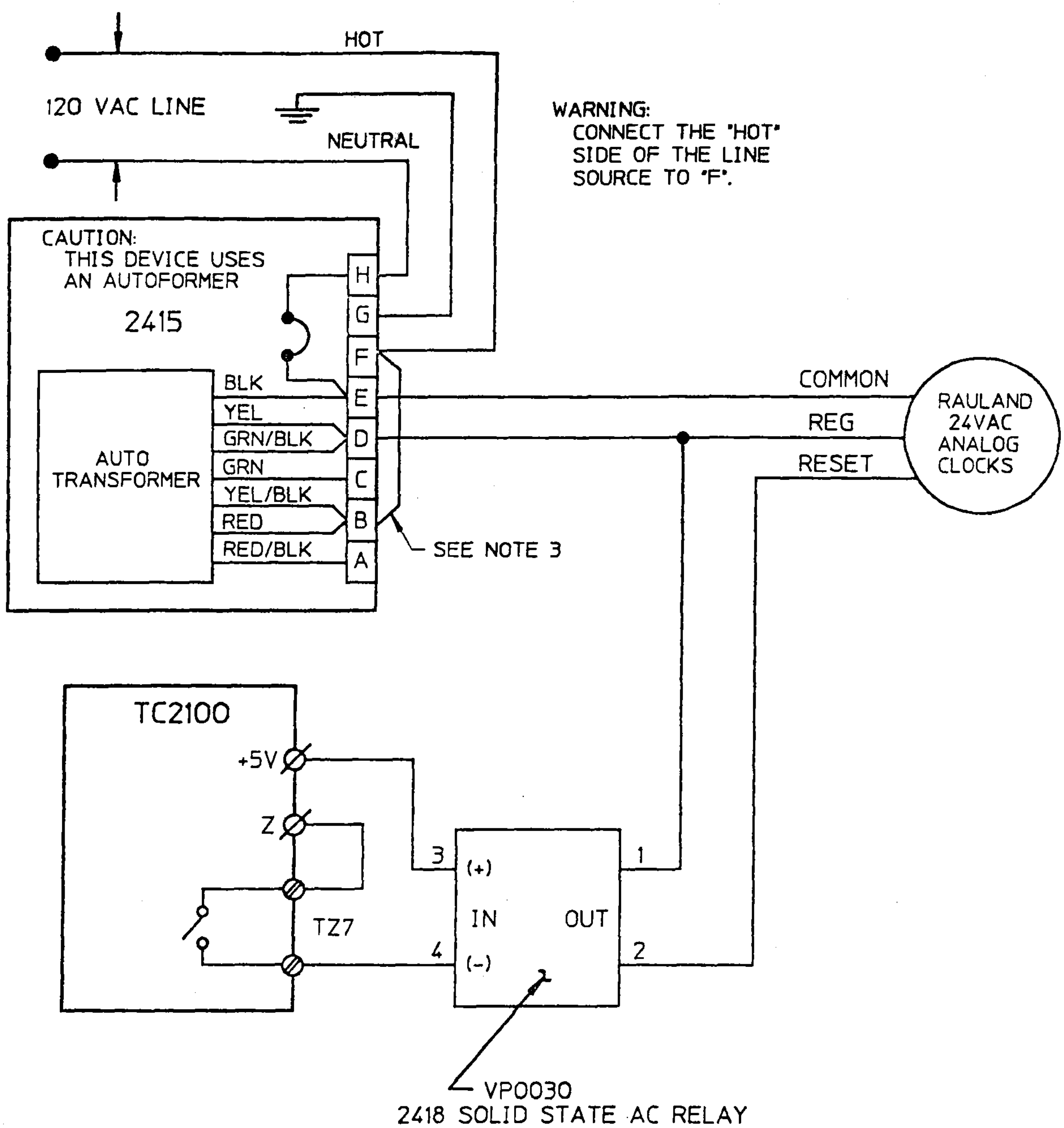
Secondary-Clock Correction Table

Manufacturer And Model	Clock Type	Correction Code	Drawing
Simplex: 2310-92XX 57 and 77 Series **IBM:** 57, 62, 67, 77, 82, and 87 Series **Cincinnati:** D10 and D12 **Lathem:** SS12 Types **Edwards:** 010 **Dukane:** 24SS Series	Synchronous Wired	12	KM1174
Standard Electric: AR2	Minute Impulse	13	KM1175
IBM: 55, 60, 65, 75, 80, and 85 Series **Simplex:** 2310-90XX 55 and 75 Series **Dukane:** 24ISC Series	Minute Impulse	14	KM1176
Cincinnati: D3 (two-wire polarized)	Minute Impulse	14	KM1177
Cincinnati: D1	Minute Impulse	15	KM1178
Stromberg: 2-wire (58th minute)	Minute Impulse	16	KM1179
Standard Electric: AR2A	Minute Impulse	17	KM1180
Standard Electric: AR3A	Minute Impulse	17	KM1181
Cincinnati: D6 (two-wire polarized) **Edwards:** 06	Minute Impulse	18	KM1182
Amano: (Made by Standard)	Minute Impulse	19	KM1183
Franklin: Mark 5M	Bi-Polar Impulse	20	KM1184

Note: *Clock correction Codes 3 through 20 require an access code to activate correction outputs. Contact Rauland Sales Staff.*



	CORRECTION TIMING



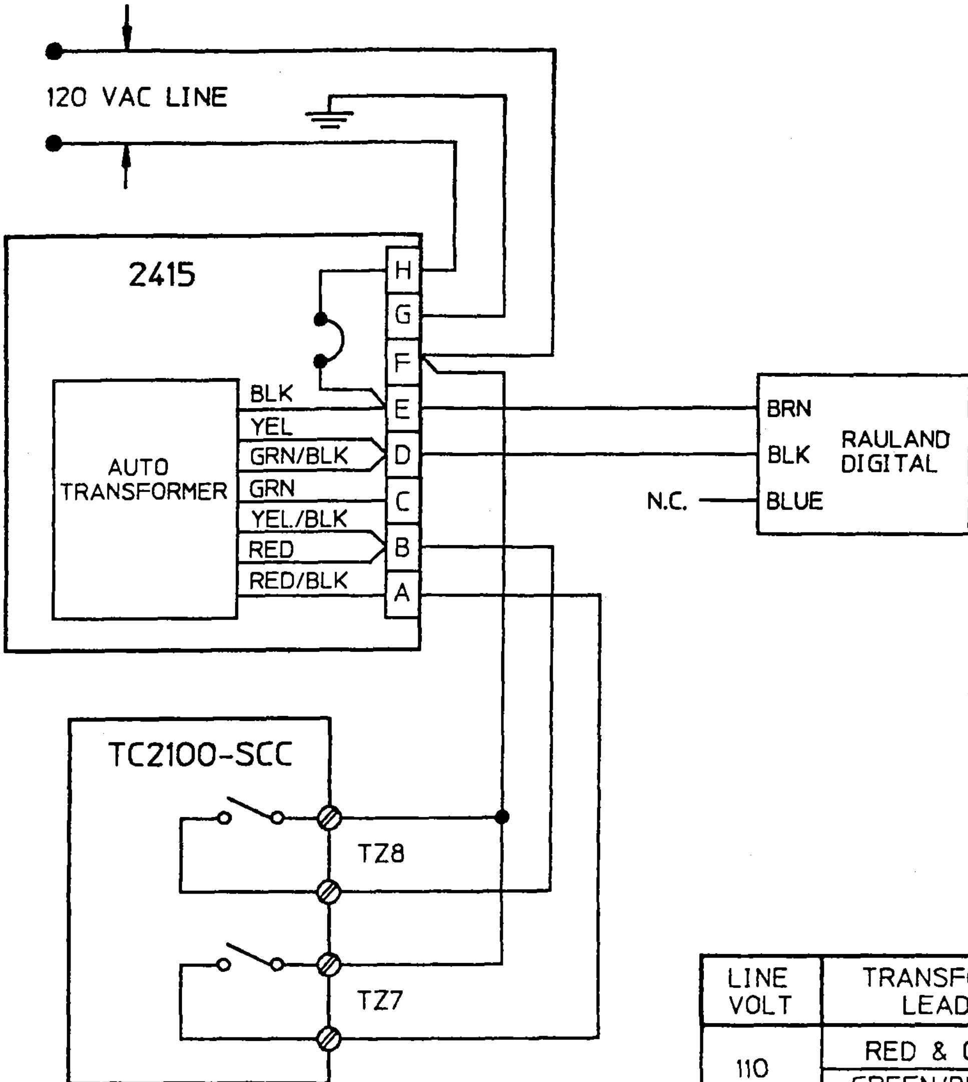
NOTES:

1. PROGRAM CORRECTION CODE FOR ANALOG CLOCK (CODE 1).
2. MAXIMUM OF 25 CLOCKS ON THE 2415 POWER SUPPLY.
3. THE JUMPER BETWEEN TERMINALS "F" & "B" IS NECESSARY TO PROVIDE 24 VAC OUTPUT.

24 VAC WIRING FOR RAULAND ANALOG SYNCHRONOUS CLOCKS

RAULAND BORG CORP.
SKOKIE, IL.
MADE IN USA

KM1151-A



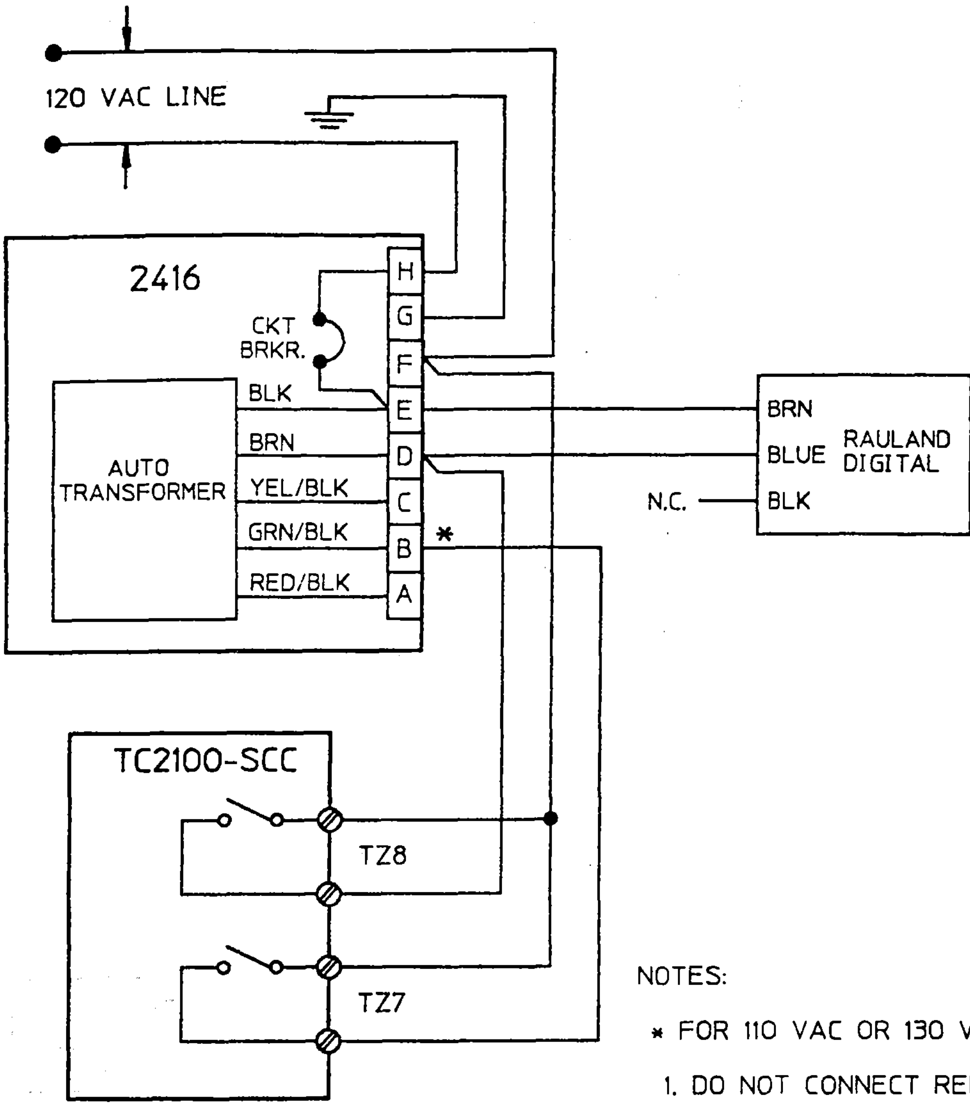
LINE VOLT	TRANSFORMER LEADS	TERMINAL
110 VAC	RED & GREEN	B
	GREEN/BLACK & YELLOW/BLACK	C
130 VAC	RED & GREEN/BLACK	B
	GREEN & YELLOW/BLACK	C

CORRECTION CODE	CORRECTION TIMING
CODE 2 (DIGITAL)	● CORRECTION EVERY 24 HOURS AT 12:01 A.M. ● CORRECTION WHEN THE TIME IS SET ● CORRECTION WHEN POWER IS RESTORED AFTER A POWER FAILURE

WIRING DIAGRAM

RAULAND BORG CORP.
SKOKIE, IL.
MADE IN USA

KM1147 - A



NOTES:

* FOR 110 VAC OR 130 VAC LINE:

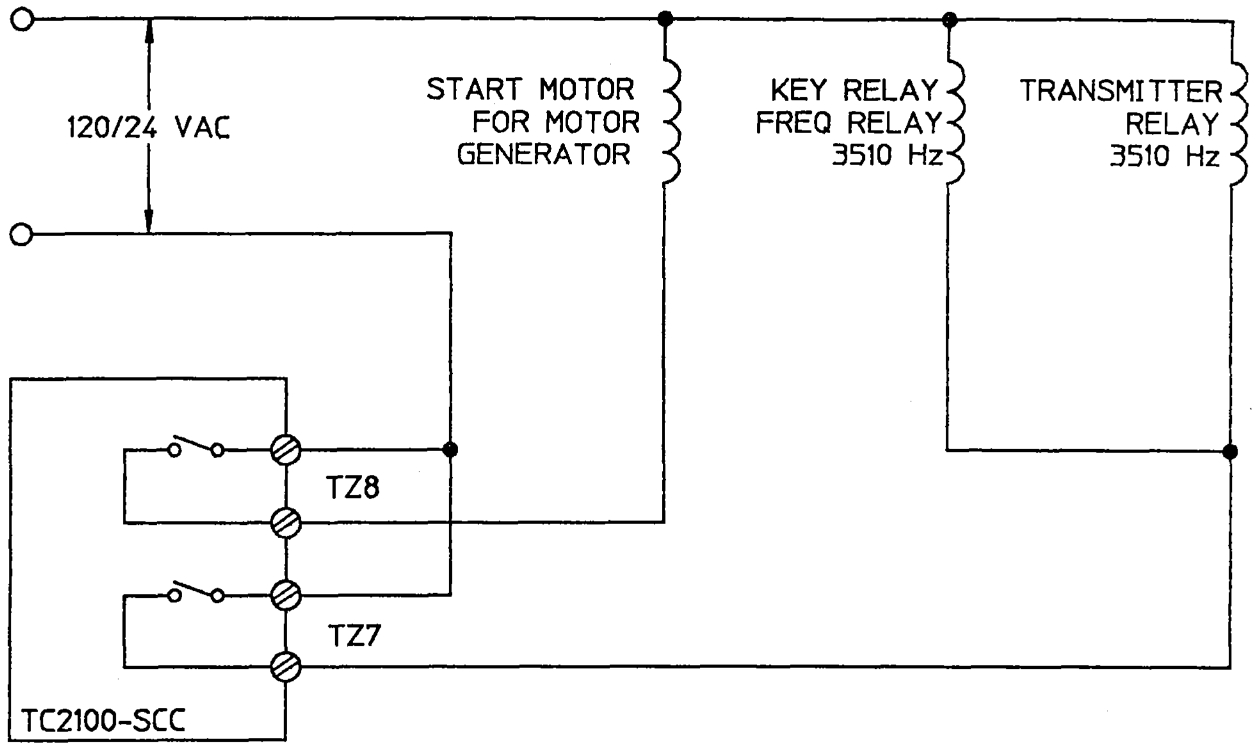
1. DO NOT CONNECT RELAY TZ7 TO 2416 TERM B.
2. IF 110 VAC LINE, CONNECT RELAY TZ7 TO 2416 TERM C.
3. IF 130 VAC LINE, CONNECT RELAY TZ7 TO 2416 TERM A.

CORRECTION CODE	CORRECTION TIMING
CODE 2 (DIGITAL)	● CORRECTION EVERY 24 HOURS AT 12:01 A.M. ● CORRECTION WHEN THE TIME IS SET ● CORRECTION WHEN POWER IS RESTORED AFTER A POWER FAILURE

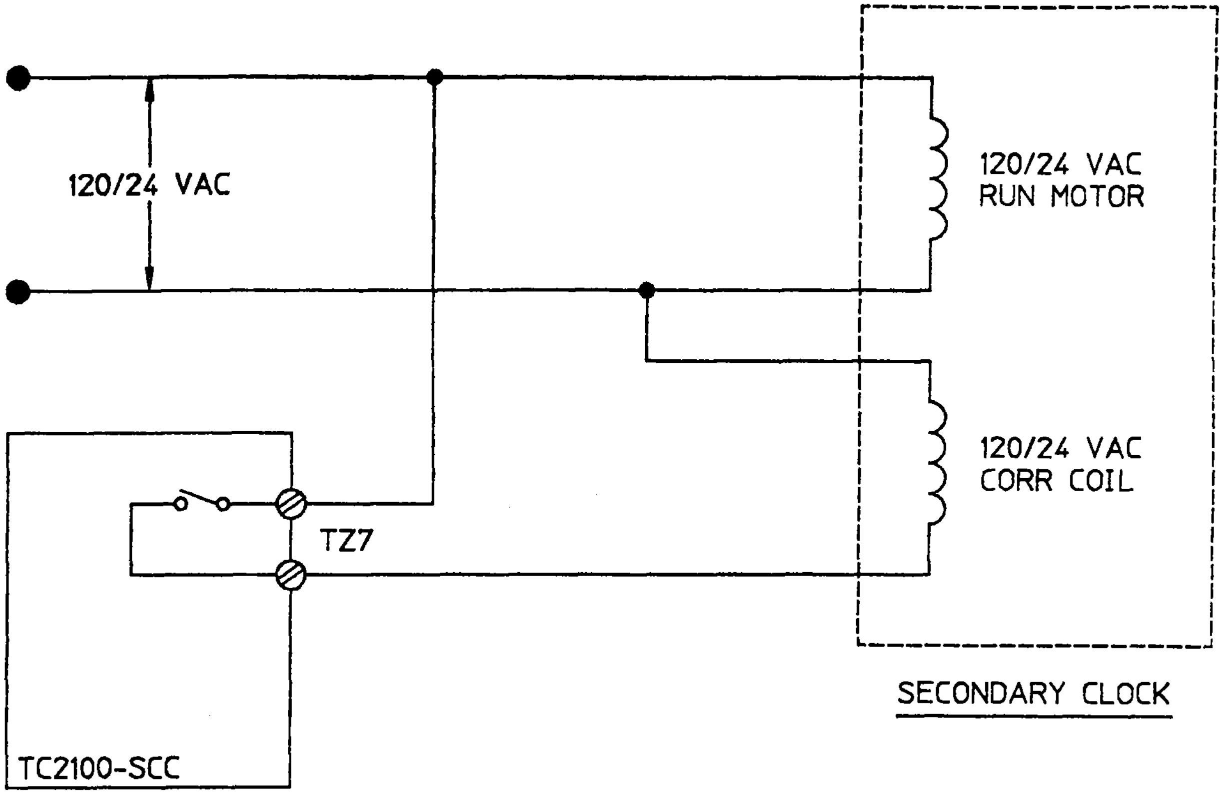
WIRING DIAGRAM

RAULAND BORG CORP.
SKOKIE, IL.
MADE IN USA

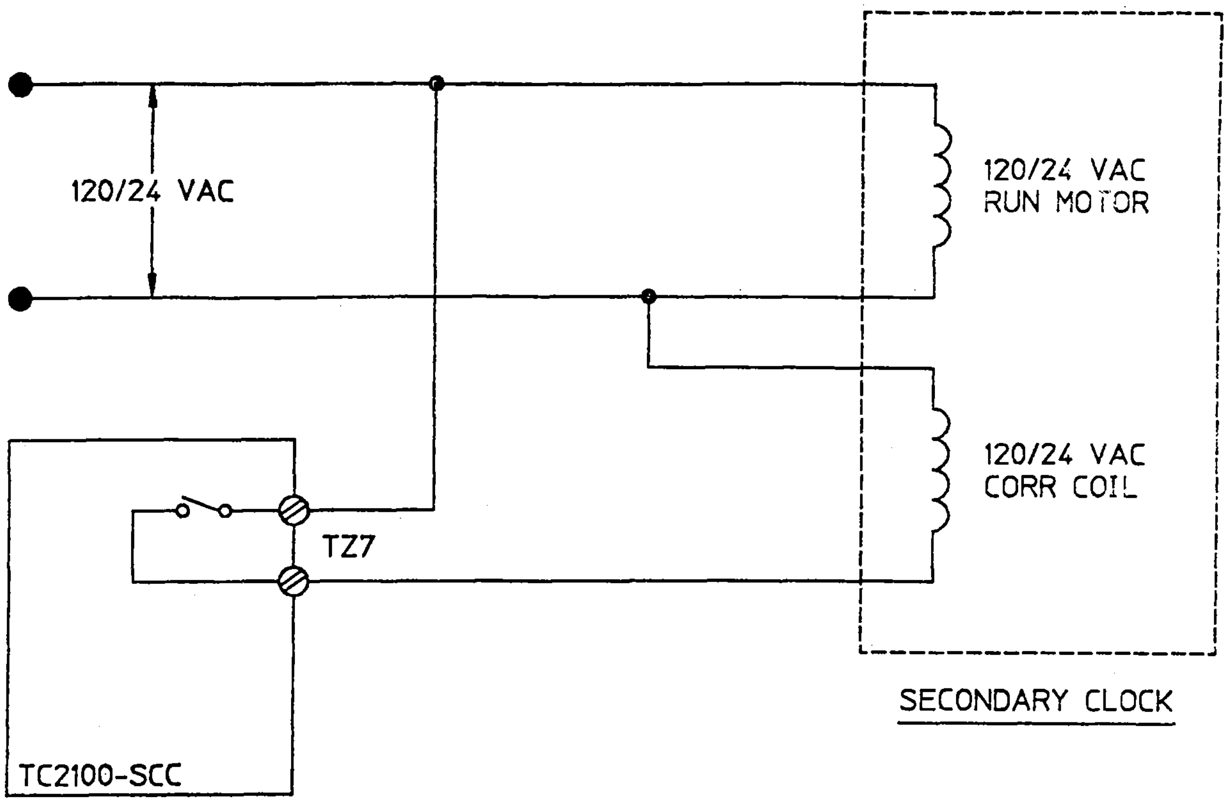
KM1148 - A



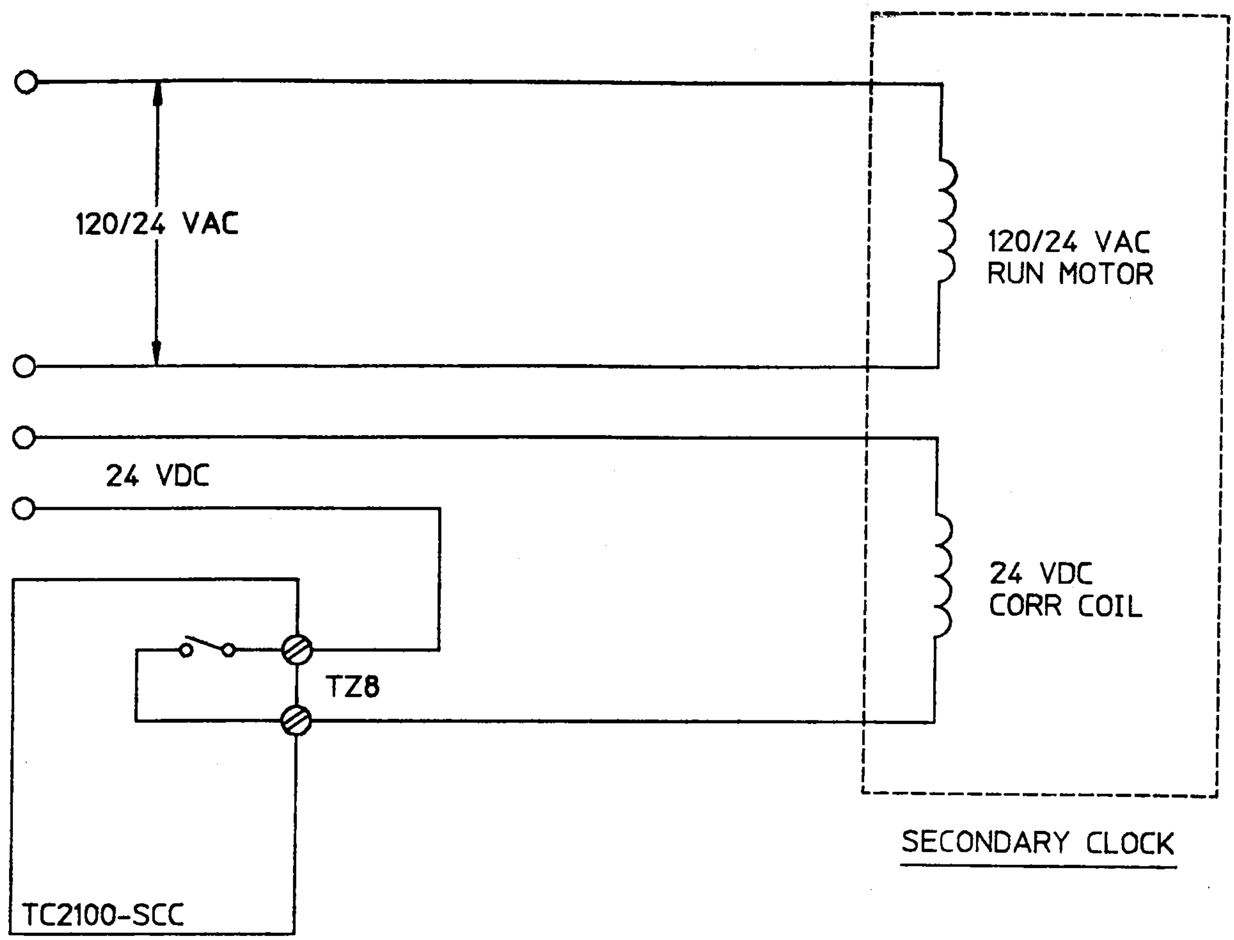
Correction Code	Correction Timing	
	Hourly	12-Hour
Code 3	"TZ8" is activated for 38 seconds every hour From X:57:39 To X:58:17 "TZ7" is activated for 8 seconds every hour From X:57:54 To X:58:02	"TZ7" is activated for 14 seconds every 12 hours From 5:57:54 To 5:58:08



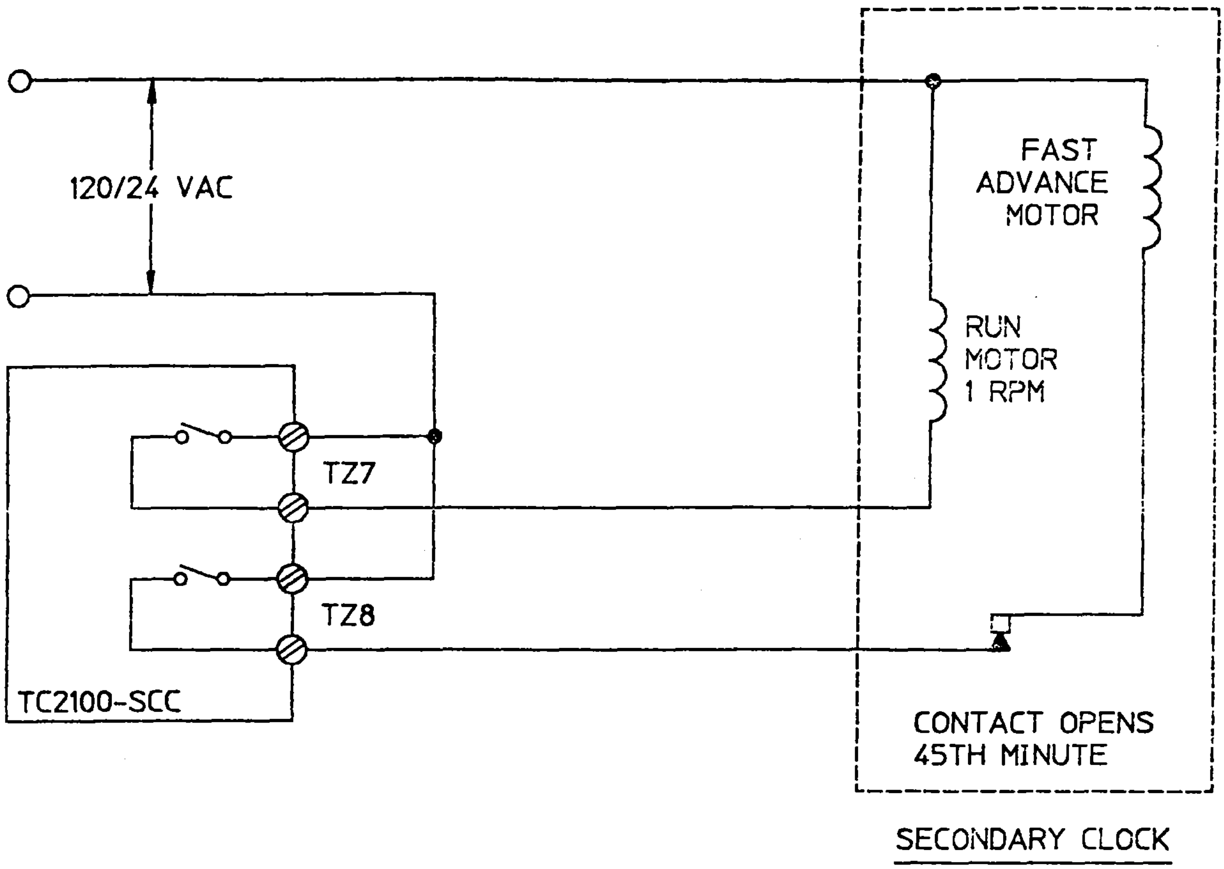
Correction Code	Correction Timing	
	Hourly	12-Hour
Code 4	"TZ7" is activated for 10 seconds every hour From X:56:05 To X:56:15	"TZ7" is activated for 45 seconds every 12 hours From 11:56:00 To 11:56:45



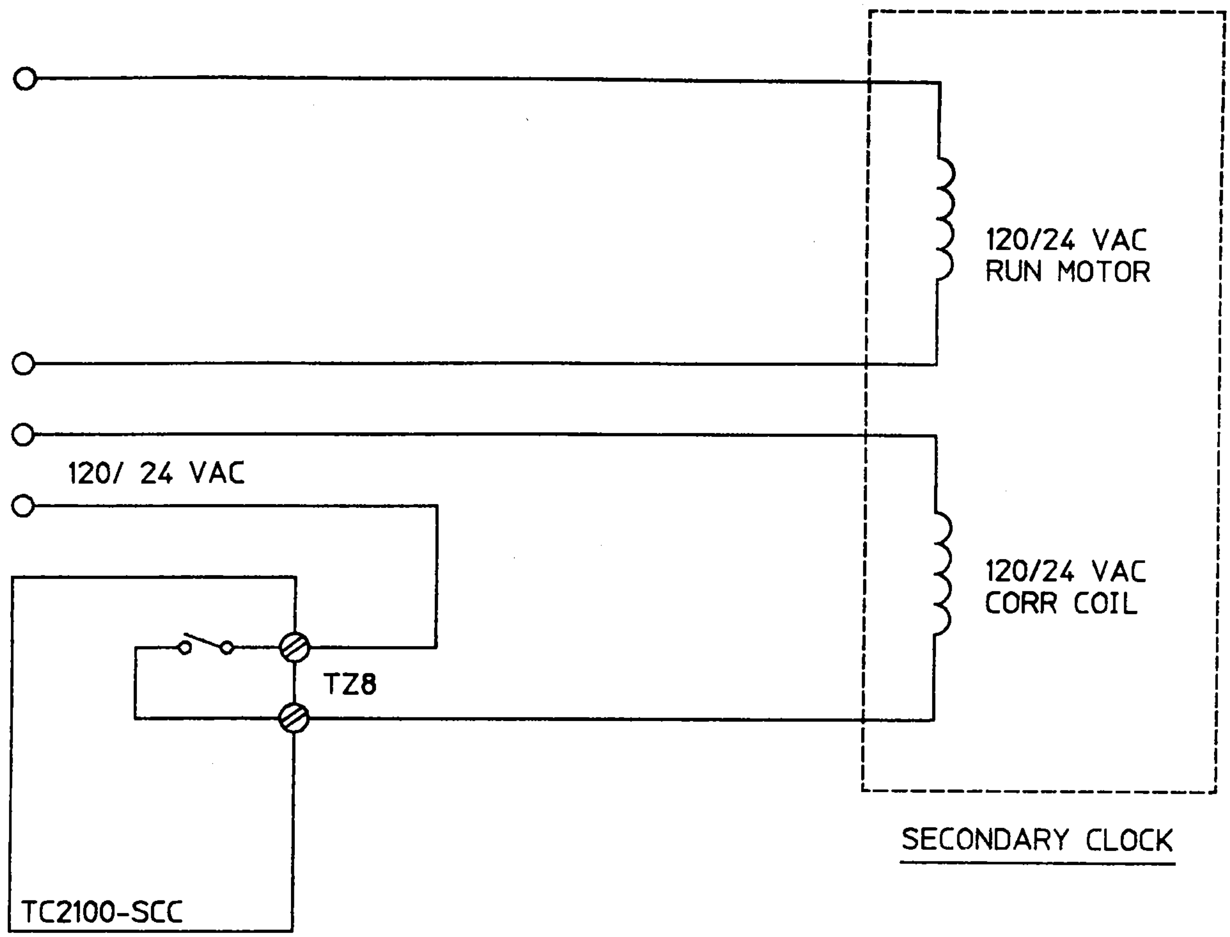
Correction Code	Correction Timing	
	Hourly	12-Hour
Code 5	"TZ7" is activated for 25 seconds every hour From X:00:00 To X:00:25	Not Applicable



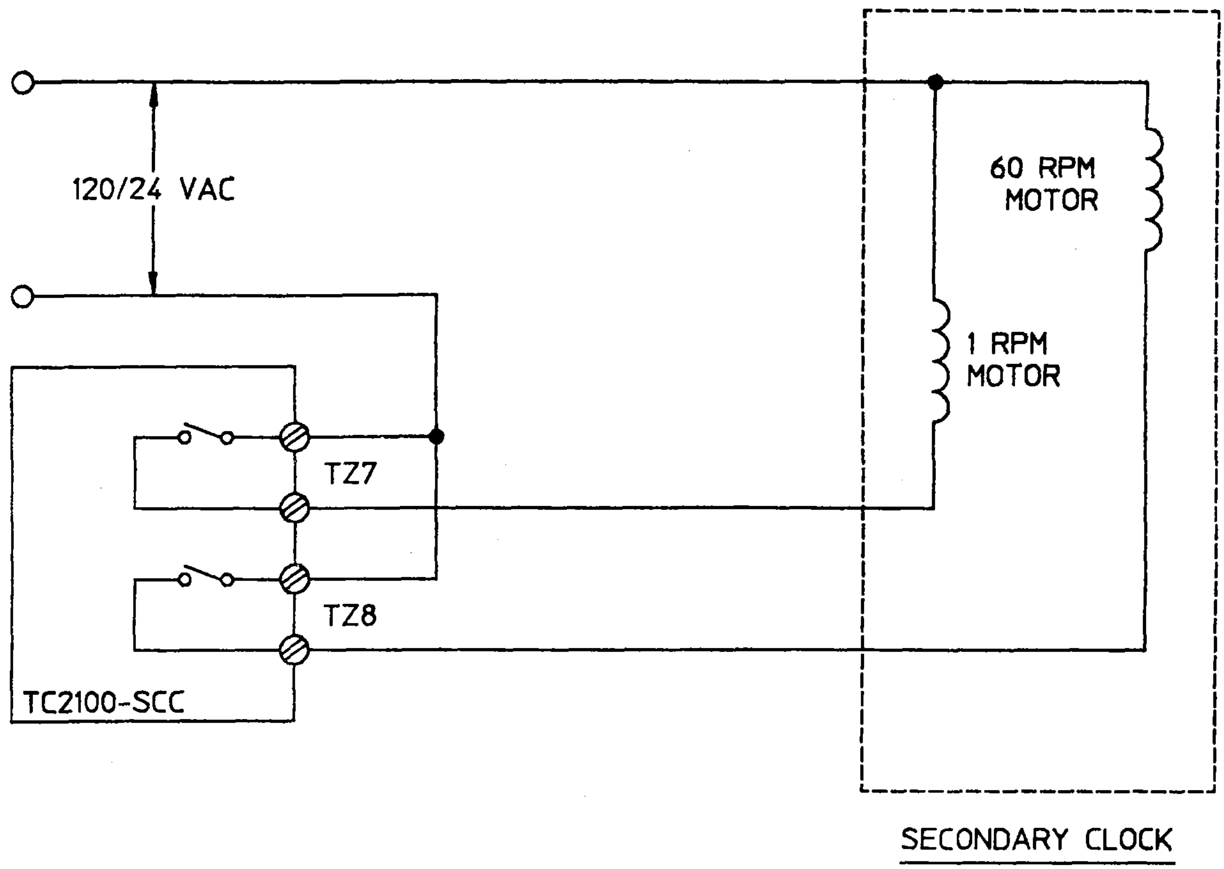
Correction Code	Correction Timing	
	Hourly	12-Hour
Code 6	"TZ8" is activated for 57 seconds every hour From X:57:03 To X:58:00	"TZ8" is activated in 11 cycles (57 seconds on, 63 seconds off) From 5:59:03 To 6:20:00



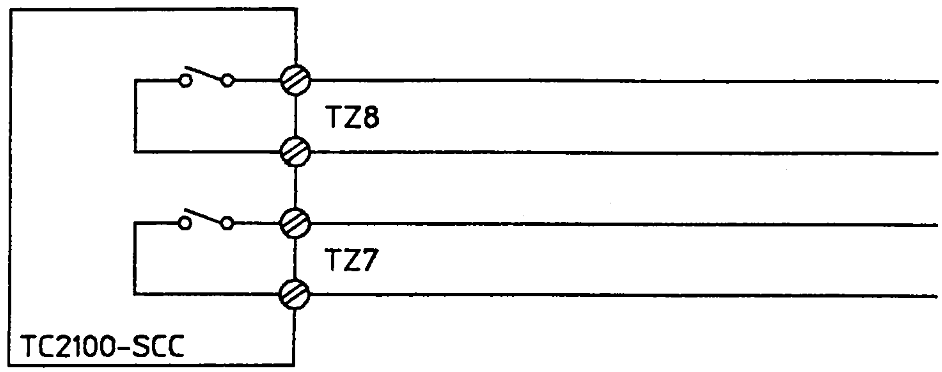
Correction Code	Correction Timing	
	Hourly	12-Hour
Code 7	"TZ7" is activated for 59 minutes, 6 seconds every hour From X:44:59 To (X+1):44:05 "TZ8" is activated for 54 seconds every hour From X:44:05 To X:44:59	Not Applicable



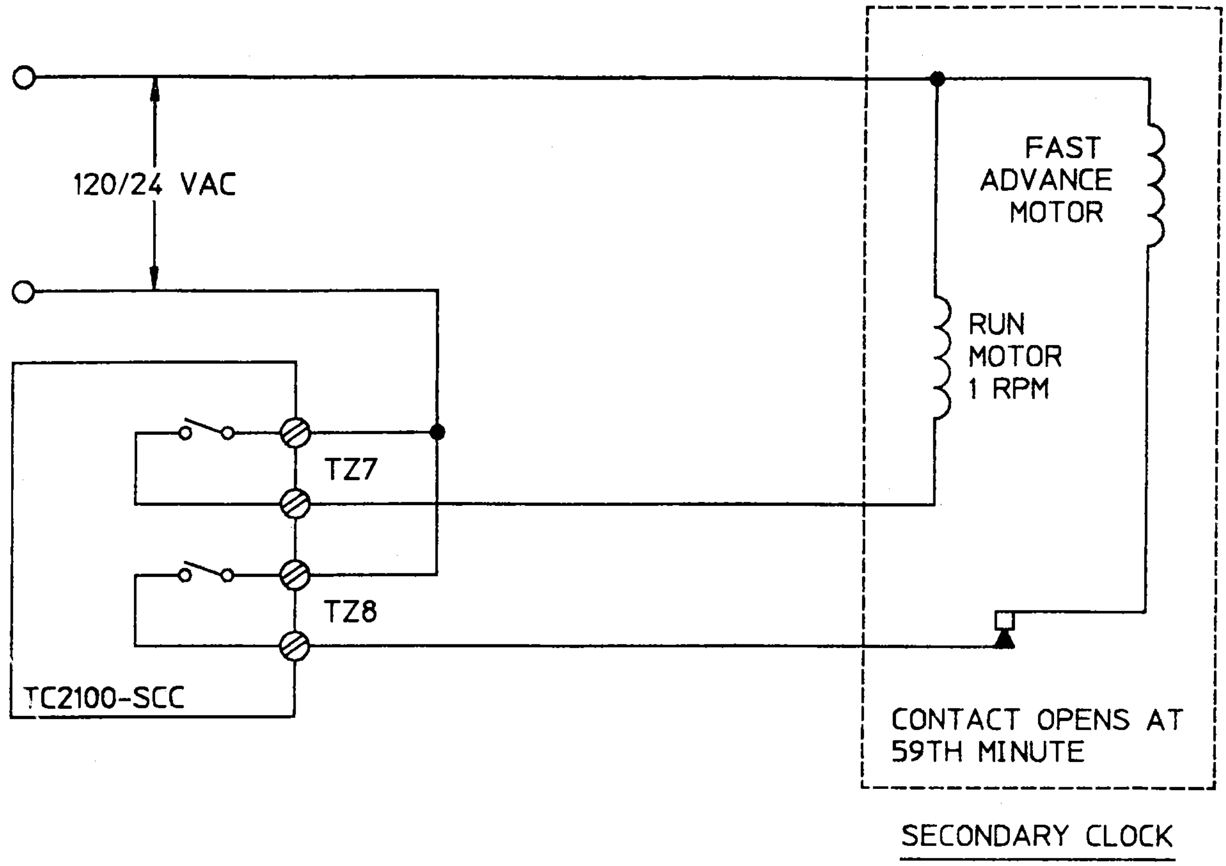
Correction Code	Correction Timing	
	Hourly	12-Hour
Code 8	"TZ8" is activated for 55 seconds every hour From X:58:05 To X:59:00	"TZ8" is activated on and off 12 times (65 seconds on and 25 seconds off) every 12 hours From 5:05:00 To 5:22:35.



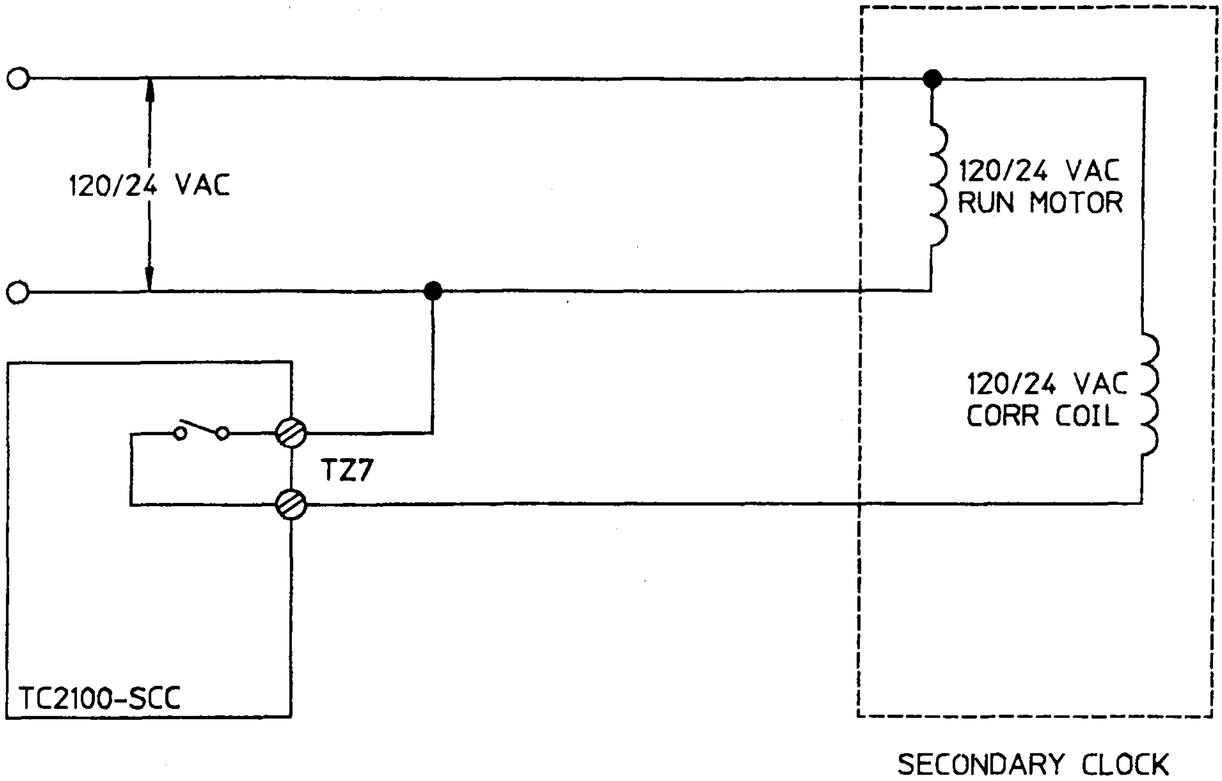
Correction Code	Correction Timing	
	Hourly	12-Hour
Code 9	"TZ7" is activated for 59 minutes, 25 seconds every hour From X:00:00 To X:59:25 "TZ8" is activated for 35 seconds every hour From X:59:25 To X:00:00	"TZ8" is activated for 16 minutes every 12 hours From 5:12:00 To 5:28:00



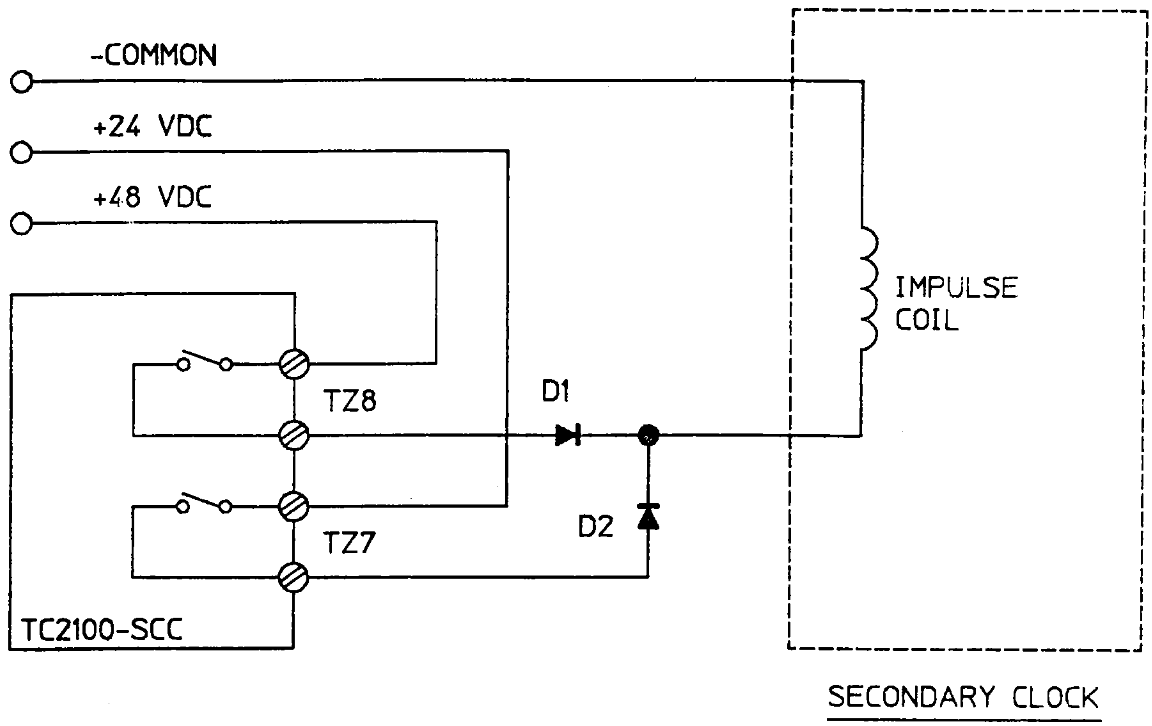
Correction Code	Correction Timing	
	Minute Impulse	Hourly and 12-Hour
Code 10	"TZ8" is activated for 2 seconds every minute From X:XX:58 To X:XX:00 "TZ7" is pulsing at the rate of 1 second on and 1 second off.	Not Applicable



Correction Code	Correction Timing	
	Hourly	12-Hour
Code 11	"TZ7" is activated for 59 minutes, 6 seconds every hour From X:58:59 To (X+1):58:05. "TZ8" is activated for 54 seconds every hour From X:58:05 To X:58:59.	Not Applicable

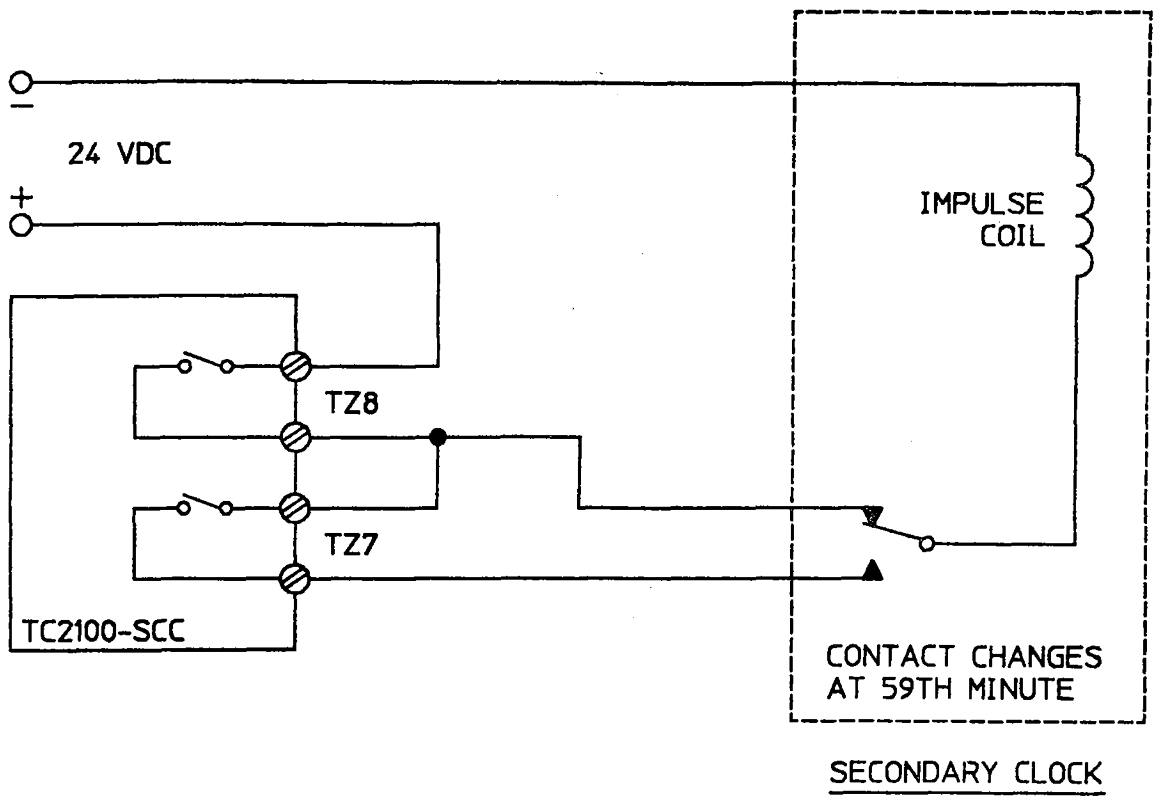


Correction Code	Correction Timing	
	Hourly	12-Hour
Code 12	"TZ7" is activated for 8 seconds every hour From X:57:54 To X:58:02.	"TZ7" is activated for 14 seconds every 12 hours From 5:57:54 To 5:58:08.

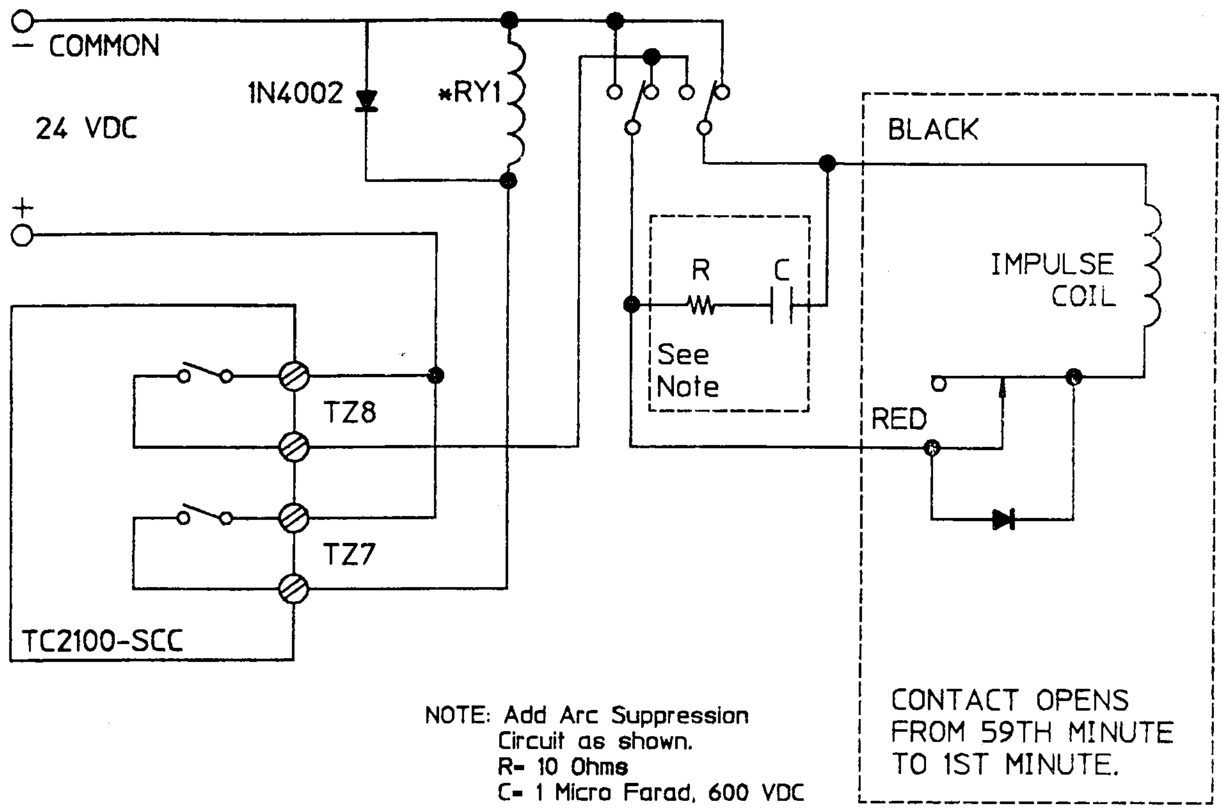


D1 AND D2 ARE 1N3210 OR EQUIVALENT.

Correction Code	Correction Timing	
	Minute Impulse	Hourly
Code 13	"TZ7" is activated for 2 seconds every minute From X:XX:58 To X:XX:00.	"TZ8" is activated for 10 seconds every hour From X:59:40 To X:59:50.



Correction Code	Correction Timing	
	Minute Impulse	Hourly
Code 14	"TZ8" is activated for 2 seconds every minute From X:XX:58 To X:XX:00.	"TZ8" is activated for 16 cycles(1 second on, 2 seconds off) From X:59:02 To X:59:48. "TZ7" is activated for 50 minutes every hour From X:59:50 To (X+1):49:50

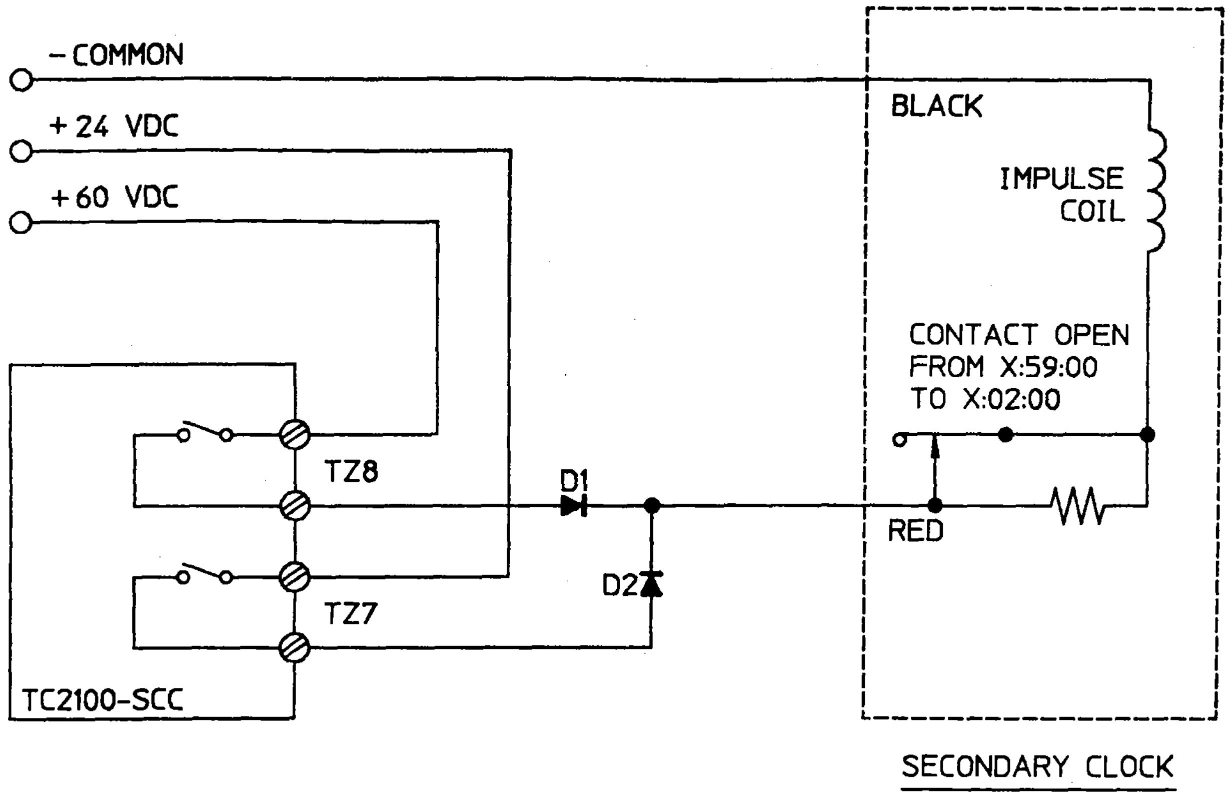


NOTE: Add Arc Suppression
Circuit as shown.
R= 10 Ohms
C= 1 Micro Farad, 600 VDC

SECONDARY CLOCK

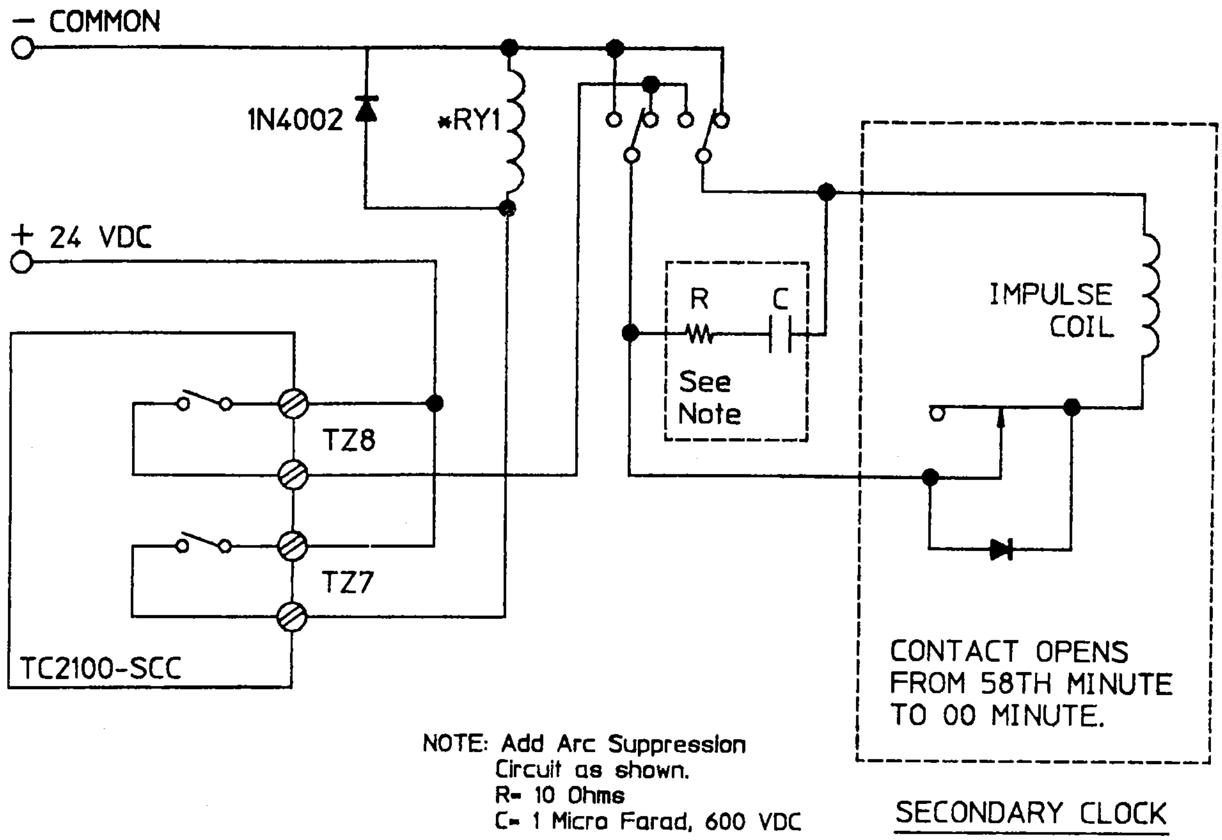
*RY1 is a customer provided 24VDC DPDT relay

Correction Code	Correction Timing	
	Minute Impulse	Hourly Correction
Code 14	'TZ8' sends a positive pulse to the impulse coil for 2 seconds every minute From X:XX:58 To X:XX:00.	'TZ8' is activated for 16 cycles (1 second on, 2 seconds off) From X:59:02 To X:59:48. 'TZ7' activates the external relay, reversing the polarity of the pulses, for 50 minutes From X:59:50 To (X+1):49:50



D1 AND D2 ARE 1N3210 OR EQUIVALENT.

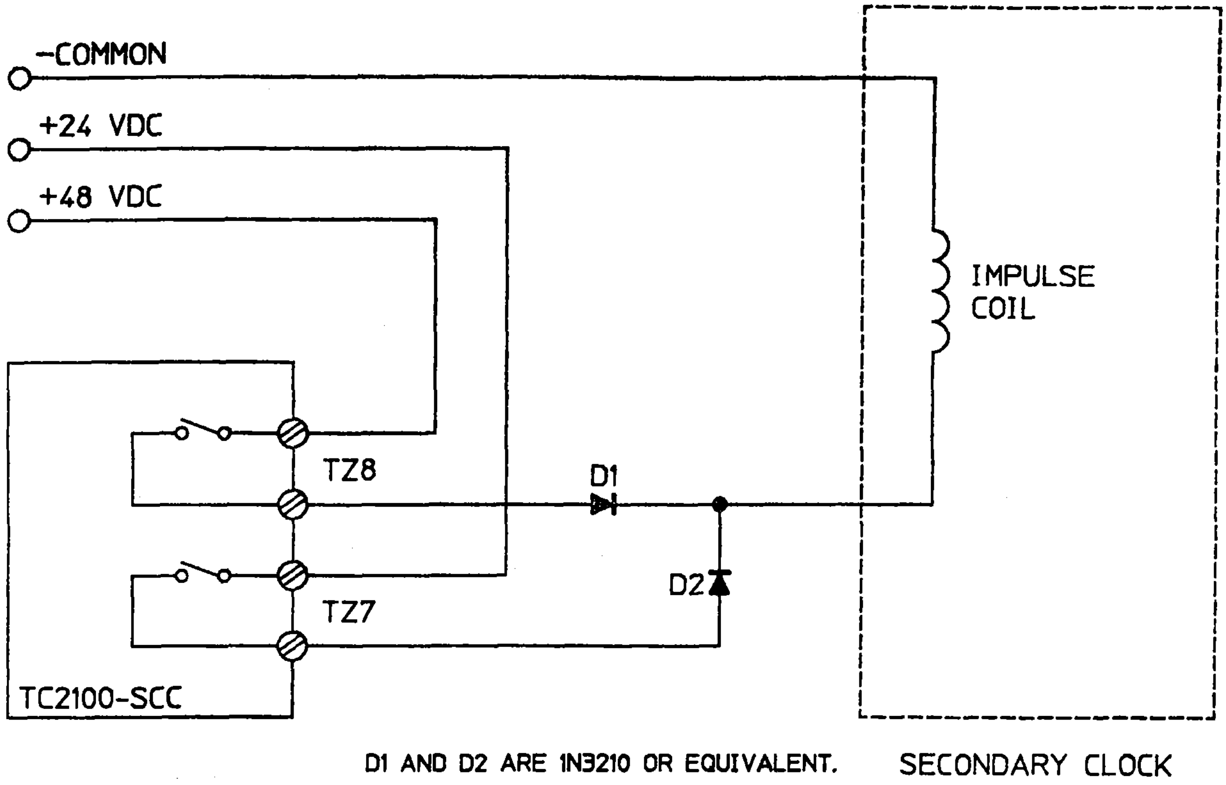
Correction Code	Correction Timing	
	Minute Impulse	Hourly
Code 15	"TZ7" is activated for 2 seconds every minute From X:XX:58 To X:XX:00. (provides 24-VDC pulses)	"TZ7" is activated 16 cycles (1 second on, 2 seconds off) From X:59:02 To X:59:48. "TZ8" is activated for 3 times each hour (2 seconds on, 58 seconds off) From X:59:58 To (X+1):00:00 X:00:58 X:01:00 X:01:58 X:02:00. (provides 60-VDC pulses)



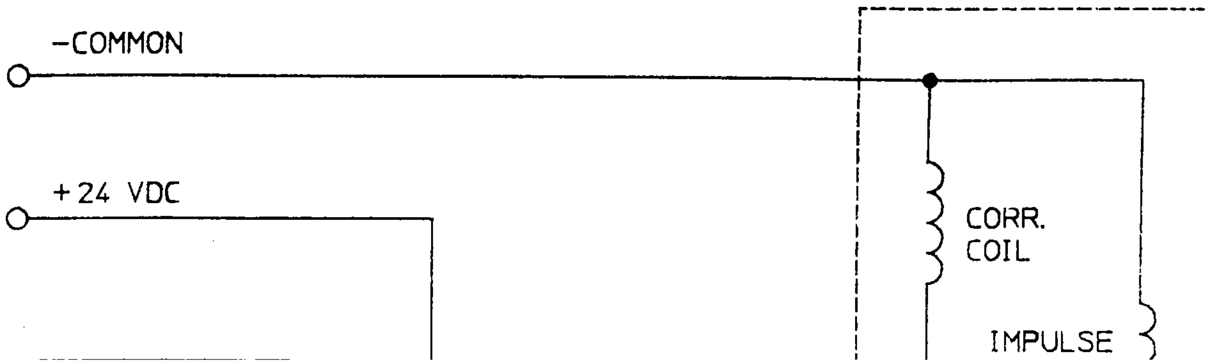
NOTE: Add Arc Suppression
Circuit as shown.
R= 10 Ohms
C= 1 Micro Farad, 600 VDC

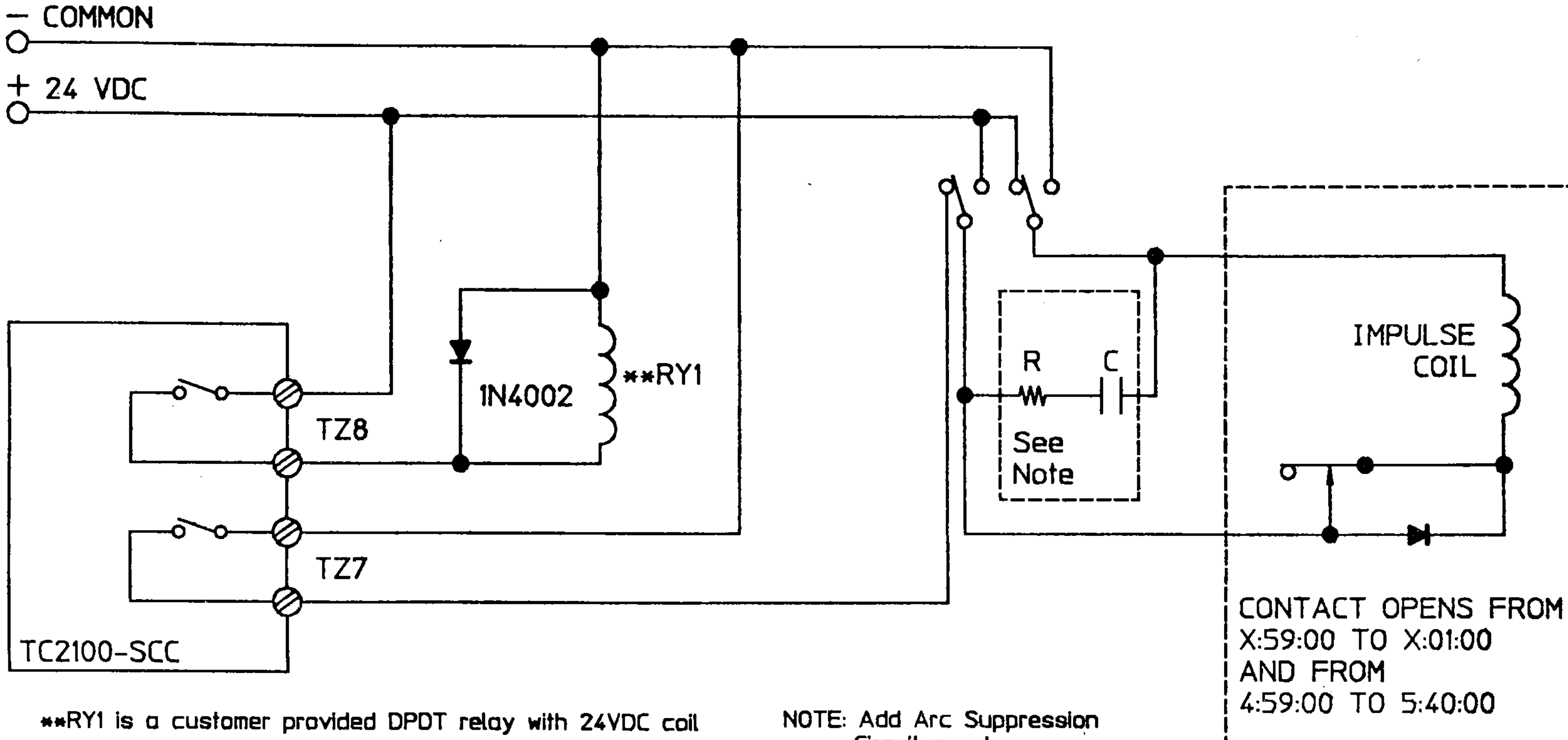
*RY1 is a customer provided 24VDC DPDT relay

Correction Code	Correction Timing	
	Hourly	12-Hour
Code 16	"TZ8" sends a positive pulse to the impulse coil for 2 seconds every minute From X:XX:58 To X:XX:00.	"TZ8" is activated for 15 cycles (1 second on, 2 seconds off) From X:58:10 To X:58:55. "TZ7" activates the external relay, reversing the polarity of the pulses for 7 minutes every hour. From X:51:50 To X:58:50.



Correction Code	Correction Timing	
	Minute Impulse	Hourly
Code 17	"TZ7" is activated for 2 seconds every minute From X:XX:58 To X:XX:00. EXCEPT for the 59TH minute	"TZ8" is activated for 10 seconds every hour From X:59:40 To X:59:50.


-COMMON
+24 VDC
CORR.
COIL
IMPULSE

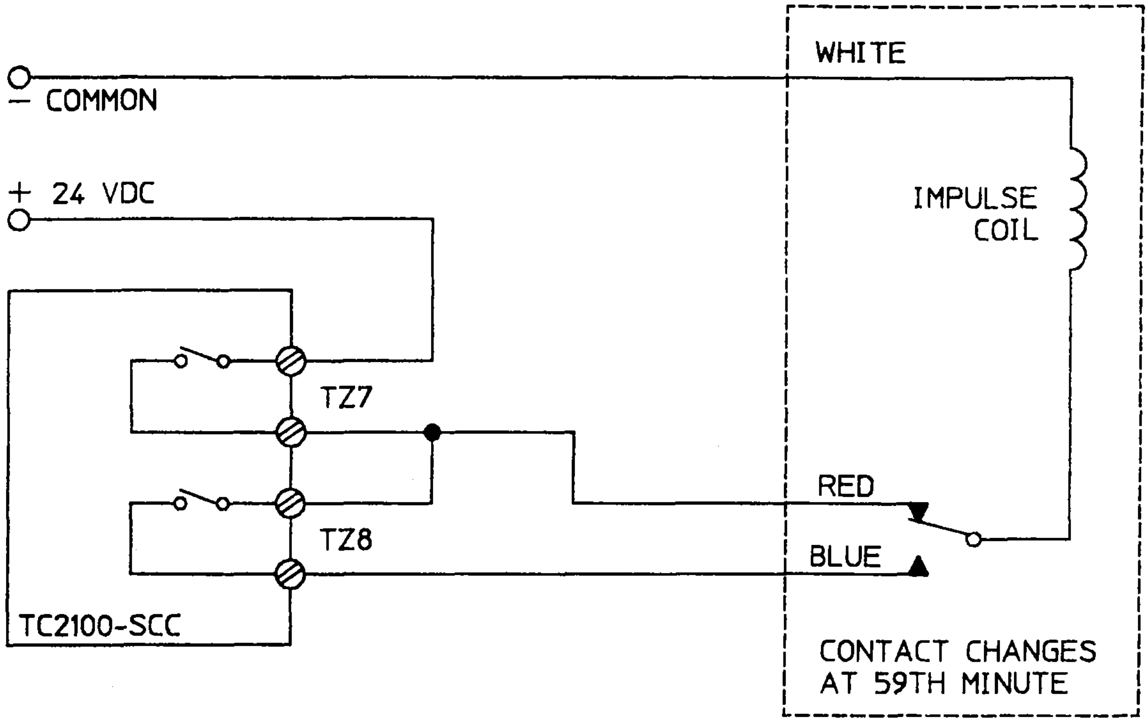


**RY1 is a customer provided DPDT relay with 24VDC coil

NOTE: Add Arc Suppression
Circuit as shown.
R- 10 Ohms
C- 1 Micro Farad, 600 VDC

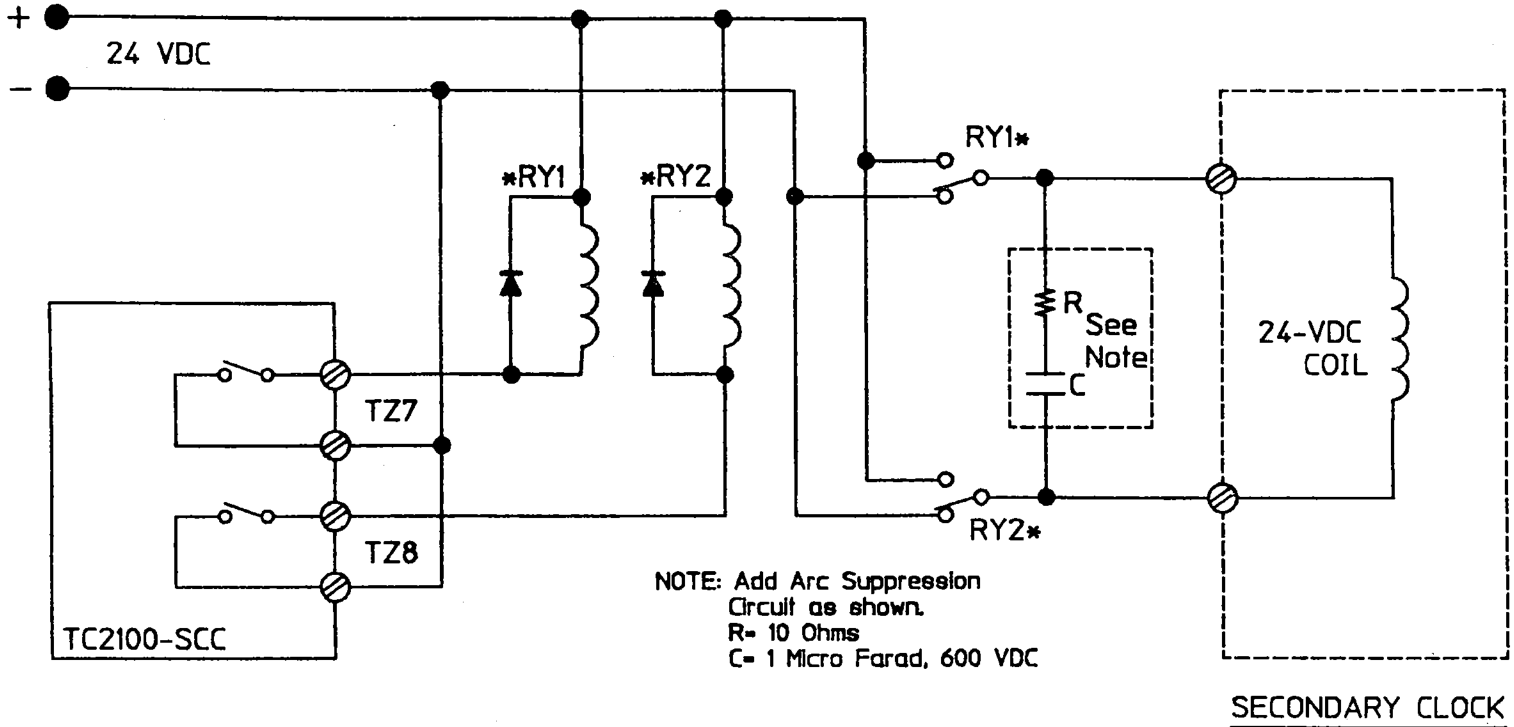
SECONDARY CLOCK

Correction Code	Impulse	Correction Timing	
	Minute	Hourly	12-Hour
Code 18	"TZ8" is activated for 2 seconds every minute for 52 minutes From X:59:58 To (X+1):51:00.	"TZ7" is activated for 2 seconds every minute for 8 minutes From X:51:58 To X:59:00. then for 19 cycles (2 seconds on, 1 second off) From X:59:01 To (X+1):00:00.	"TZ7" activates for 25 minutes (2 seconds on, 1 second off) From 5:00:00 To 5:25:00.



SECONDARY CLOCK

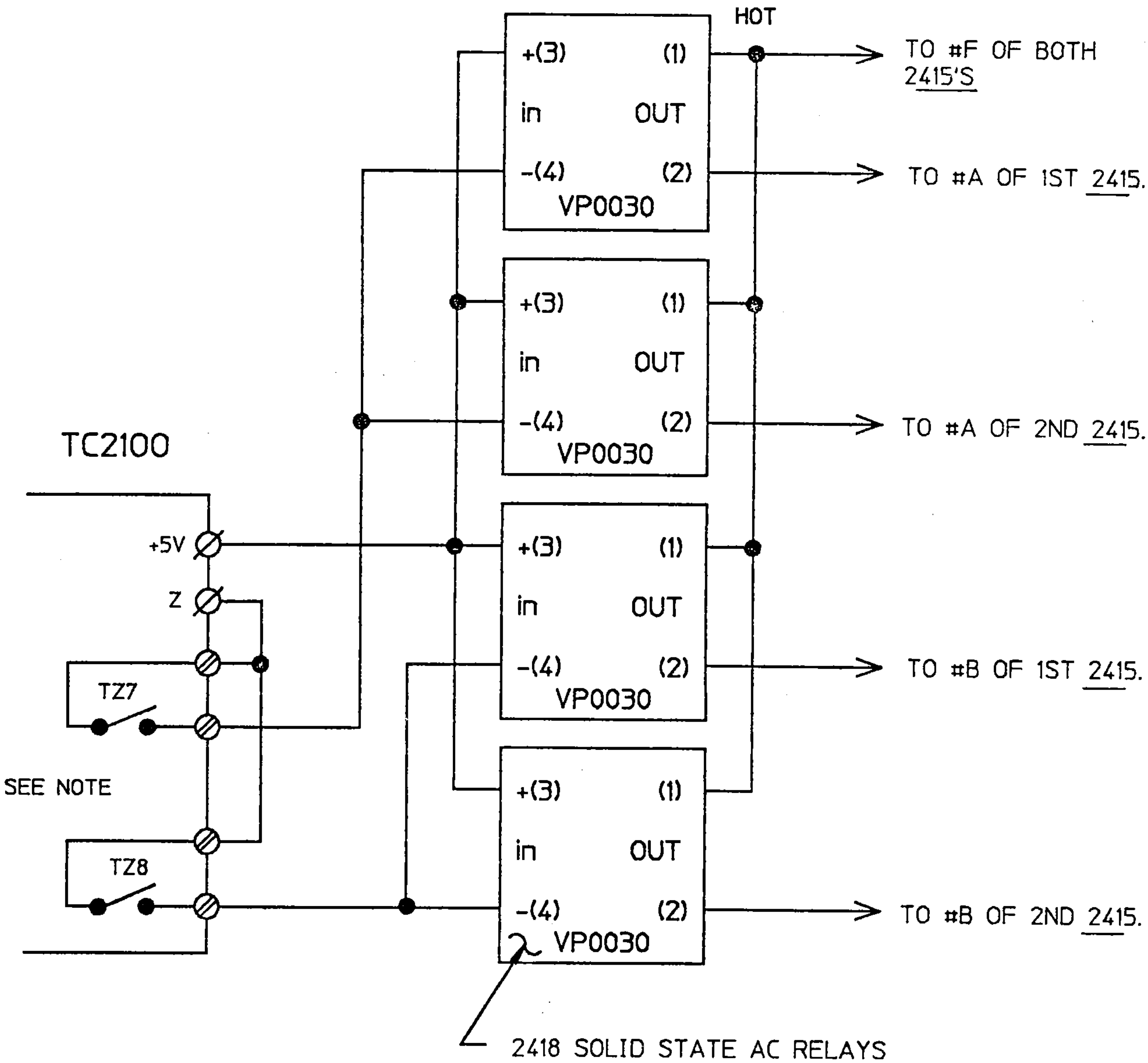
Correction Code	Correction Timing	
	Minute Impulse	Hourly
Code 19	"TZ7" is activated for 2 seconds every minute From X:XX:58 To X:XX:00.	"TZ7" is activated for 18 cycles (1 second on, 2 seconds off) From X:58:04 To X:58:56. "TZ8" is activated for 8 minutes every hour From X:59:00 To (X+1):07:00.



*RY1 and RY2 are customer provided 24-VDC SPDT relays.

Correction Code	Correction Timing	
	Minute Impulse	Hourly
Code 20	"TZ7" is activated for 2 seconds every even minute (2 seconds on, 118 seconds off, 30 cycles per hour) From X:00:58 To X:58:58. "TZ8" is activated 2 seconds every odd minute (2 seconds on, 118 seconds off, 30 cycles per hour) From X:01:58 To X:59:58.	Not Applicable

KM1184 [0]

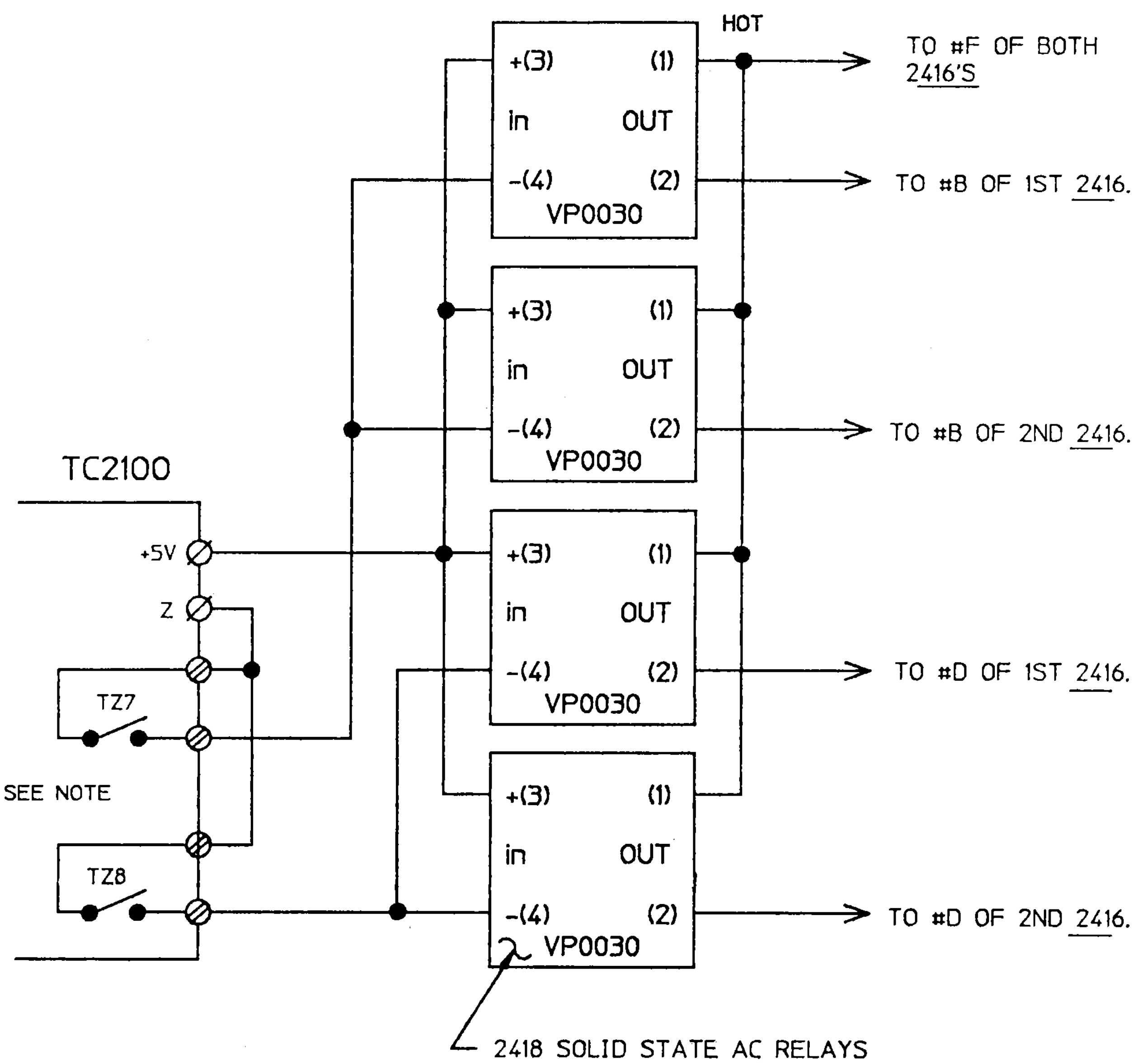


NOTE:
PROGRAM CORRECTION CODE FOR
DIGITAL CLOCK (CODE 2).

CONNECTING MORE THAN 25 DIGITAL CLOCKS
TO A TC2100 AND A 24-VAC POWER SUPPLY.

RAULAND BORG CORP.
SKOKIE, IL.
MADE IN USA

KM1152 - A

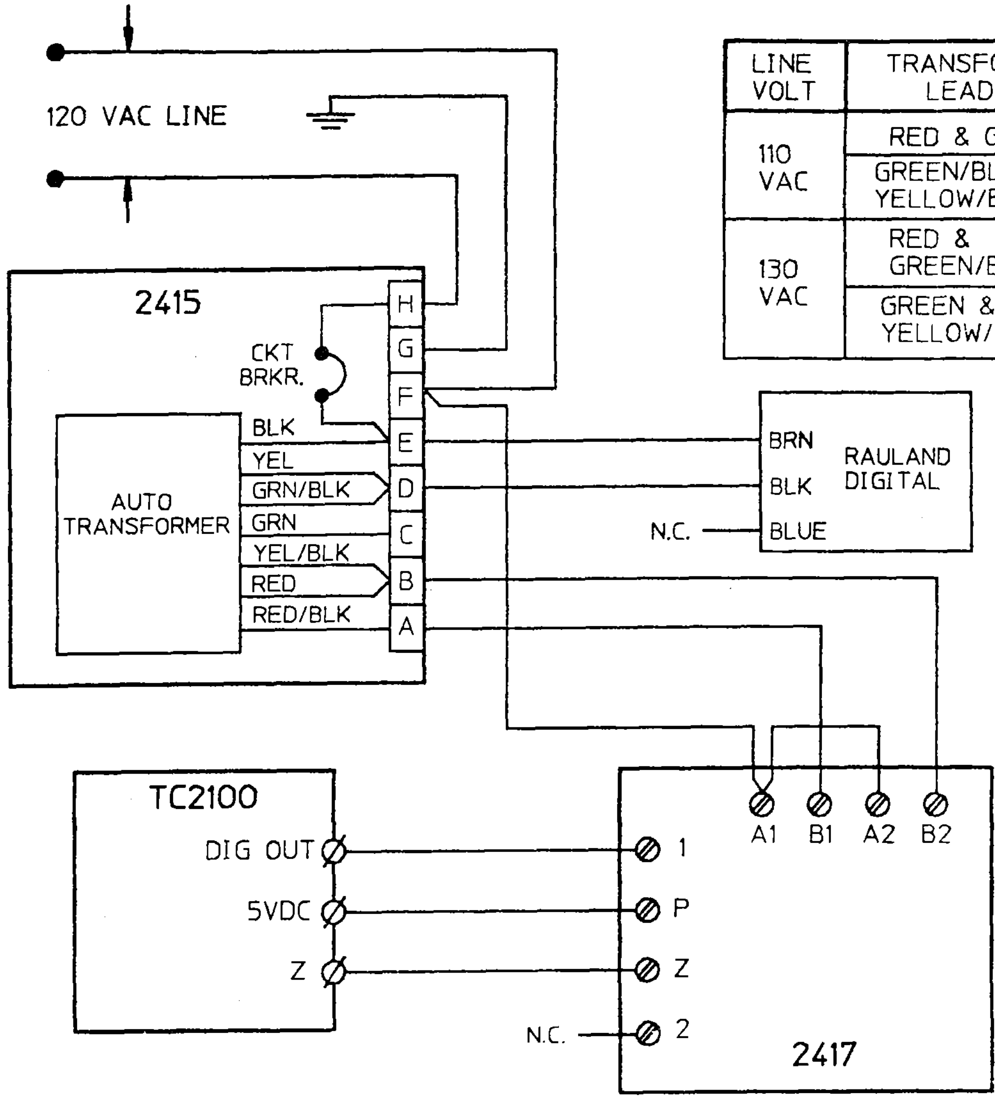


NOTE: PROGRAM CORRECTION CODE FOR DIGITAL CLOCK (CODE 2).

CONNECTING MORE THAN 25 DIGITAL CLOCKS TO A TC2100 AND A 120-VAC POWER SUPPLY.

RAULAND BORG CORP.
SKOKIE, IL
MADE IN USA

KM1154 - A



LINE VOLT	TRANSFORMER LEADS	TERMINAL
110 VAC	RED & GREEN	B
	GREEN/BLACK & YELLOW/BLACK	C
130 VAC	RED & GREEN/BLACK	B
	GREEN & YELLOW/BLACK	C

CORRECTION CODE	CORRECTION TIMING
CODE 2 (DIGITAL)	● CORRECTION EVERY 24 HOURS AT 12:01 A.M. ● CORRECTION WHEN THE TIME IS SET ● CORRECTION WHEN POWER IS RESTORED AFTER A POWER FAILURE

NOTE: THE 'DIG OUT' OUTPUT IS ALWAYS AVAILABLE REGARDLESS OF THE ZONE CONFIGURATION OR THE CORRECTION CODES USED.

WIRING DIAGRAM

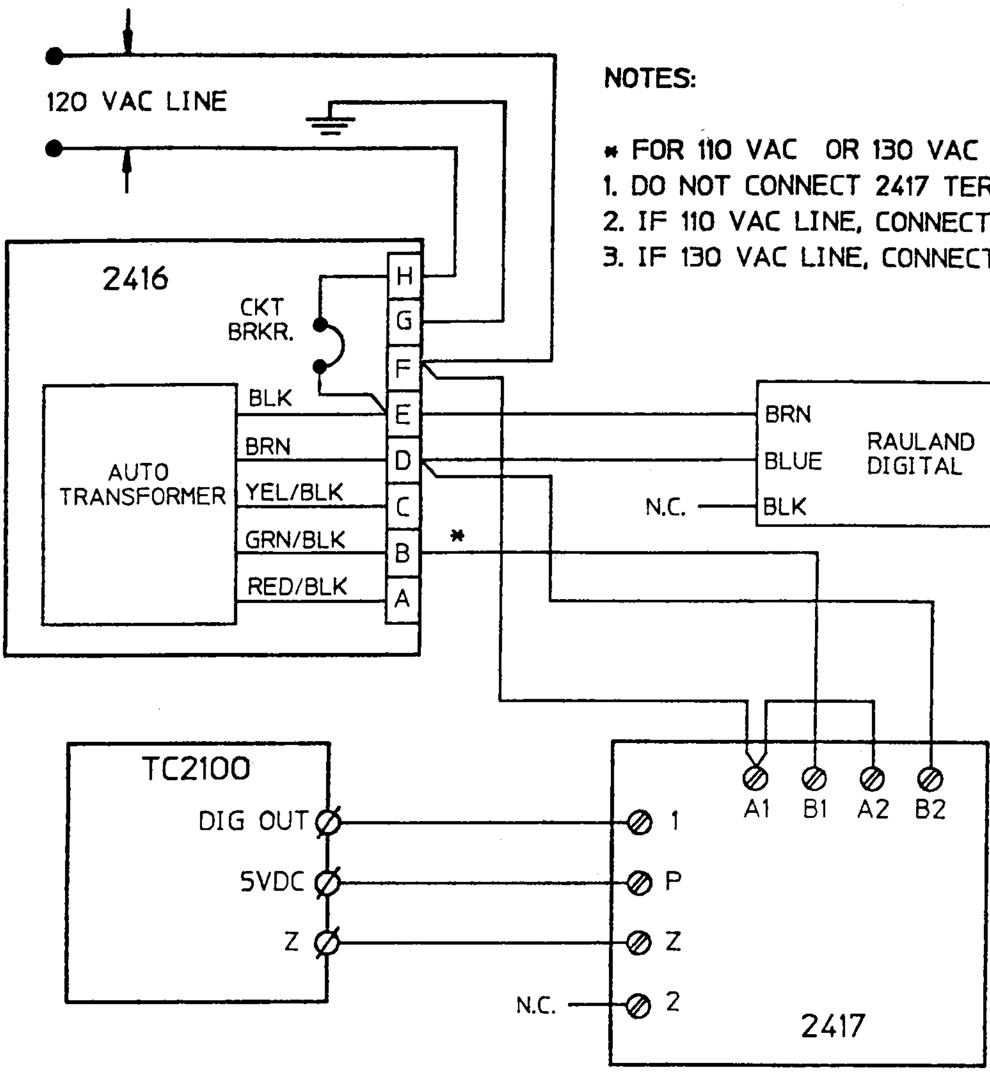
RAULAND BORG CORP.
SKOKIE, IL.
MADE IN USA

KM1149 - A

NOTES:

* FOR 110 VAC OR 130 VAC LINE.

1. DO NOT CONNECT 2417 TERM. B1 TO 2416 TERM. B.
2. IF 110 VAC LINE, CONNECT 2417 # B1 TO 2416 # C.
3. IF 130 VAC LINE, CONNECT 2417 # B1 TO 2416 # A.



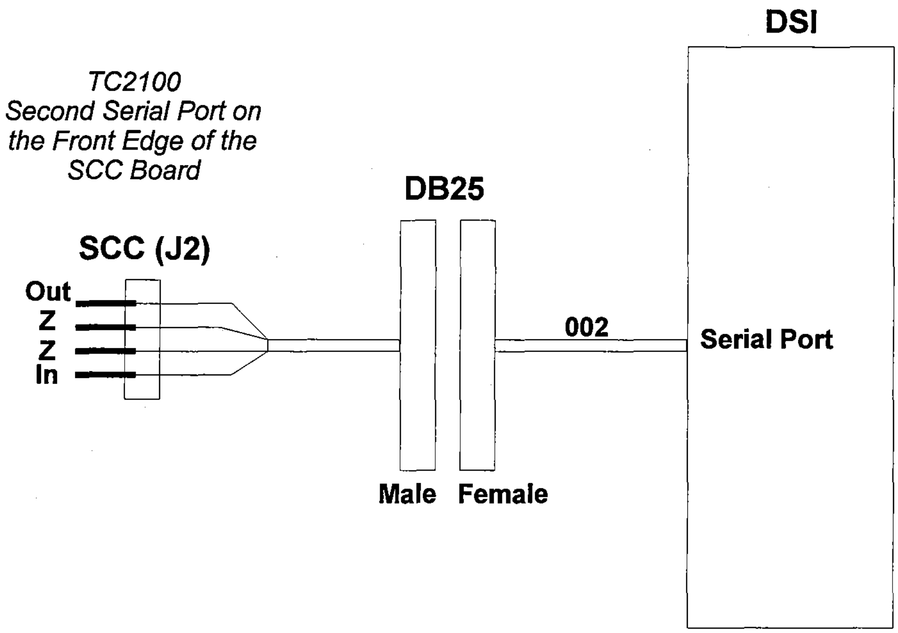
CORRECTION CODE	CORRECTION TIMING
NONE (SEE NOTE)	● CORRECTION EVERY 24 HOURS AT 12:01 A.M. ● CORRECTION WHEN THE TIME IS SET ● CORRECTION WHEN POWER IS RESTORED AFTER A POWER FAILURE

NOTE: THE 'DIG OUT' OUTPUT IS ALWAYS AVAILABLE REGARDLESS OF THE ZONE CONFIGURATION OR THE CORRECTION CODES USED.

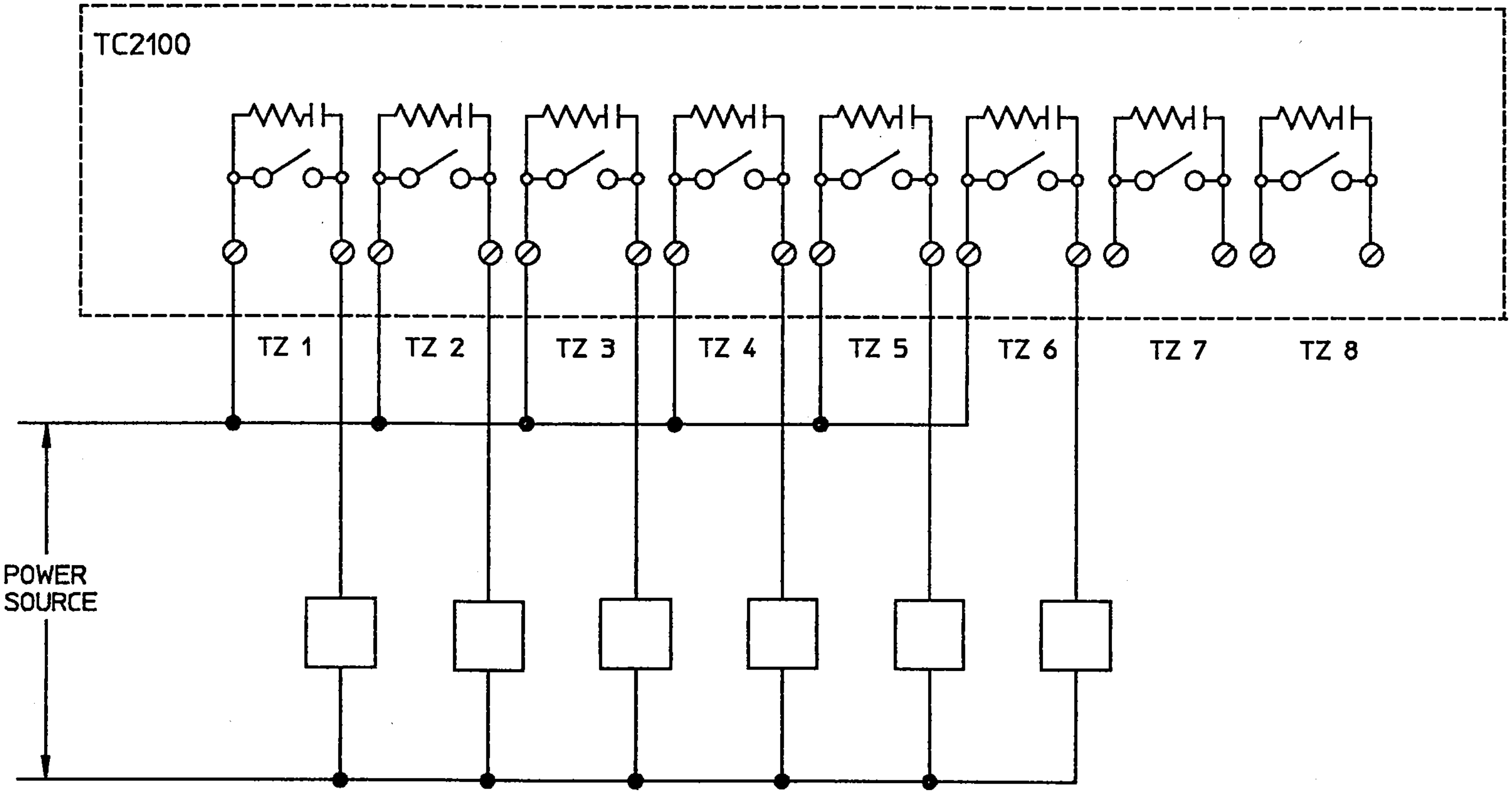
WIRING DIAGRAM

RAULAND BORG CORP.
SKOKIE, IL.
MADE IN USA

KM1150 - 0



Note: Refer to “Master Clock Options”



NOTES:

1. Each box (□) represents a load (signaling device or equipment). Each load's current should be limited to 5 amperes (resistive) at 30 VDC or 125 VAC.
2. "TZ 7" and "TZ 8" are normally used for clock correction but may be used for loads instead.

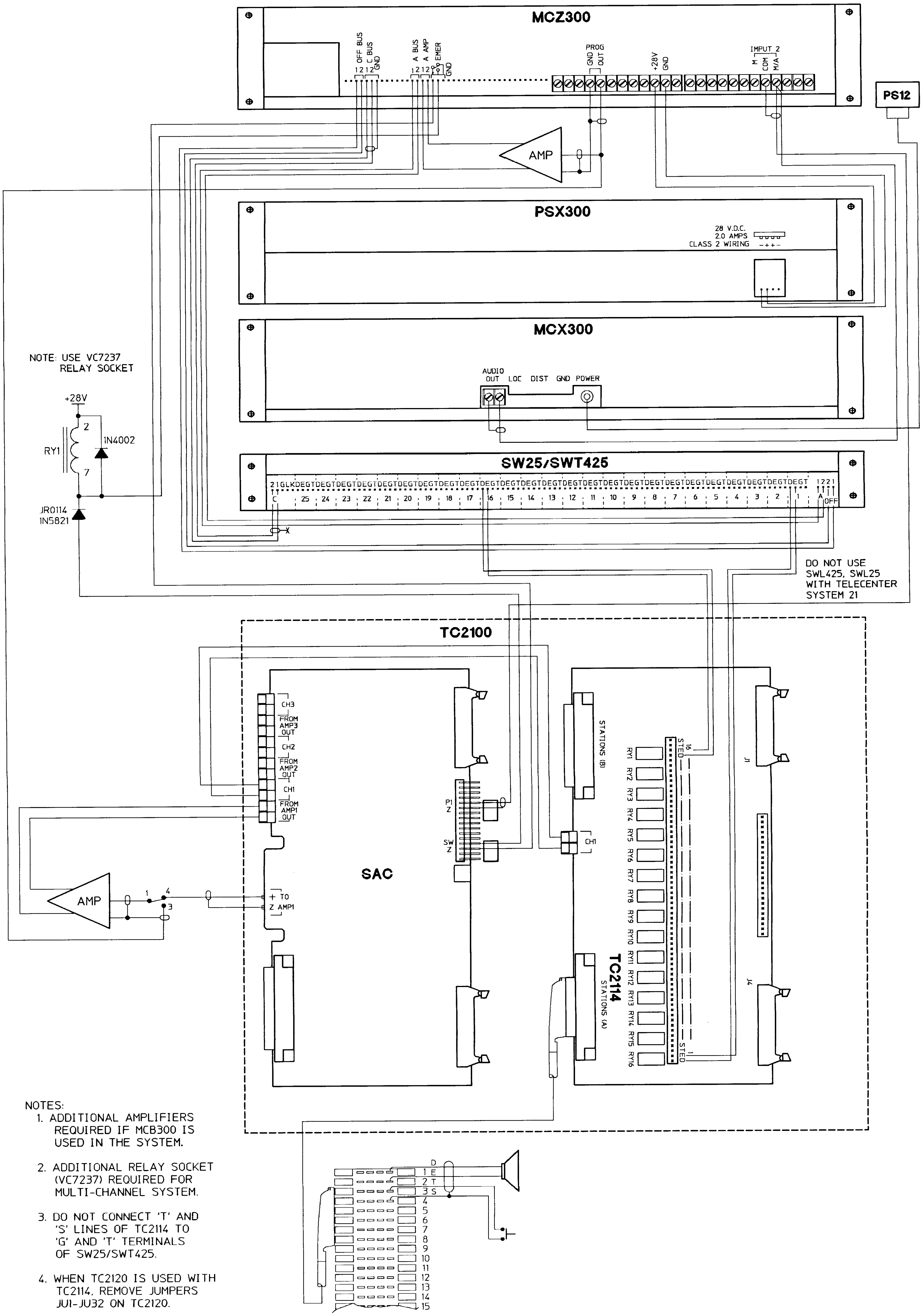
TELECENTER SYSTEM 21
Time Zone Relays Connected to
Signaling Devices and Equiptment

KM1126 $\boxed{0}$

The Following Drawing:
KM1157
Measures 11”x17”

If you need a printed copy, it can either be downloaded off of the Rauland-Borg Extranet, or ordered from Customer Service at (847) 697-0900 x95.

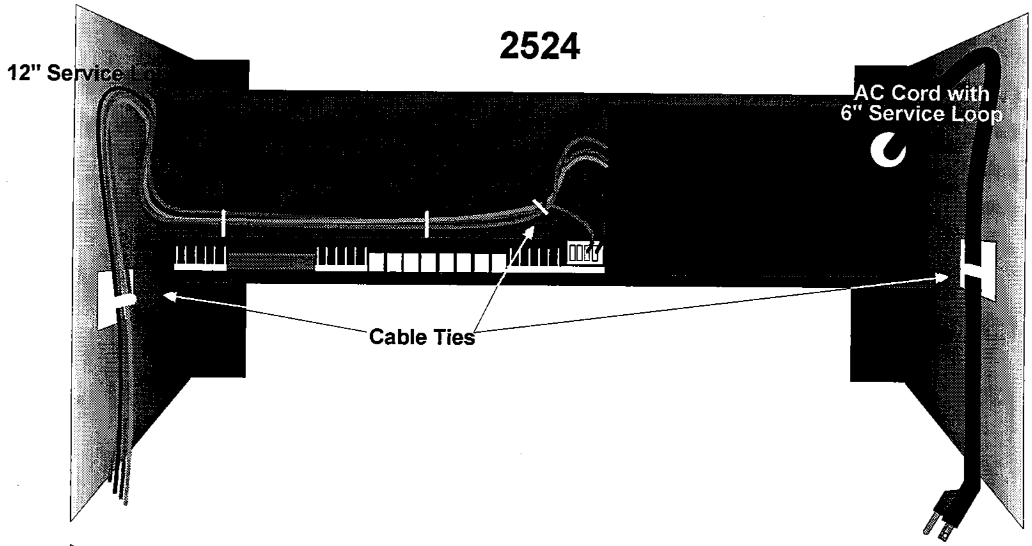
If you wish to print an 8.5”x11” copy, you may do so by choosing the “Shrink to Fit” and “Print Current Page” options in the “Print” menu

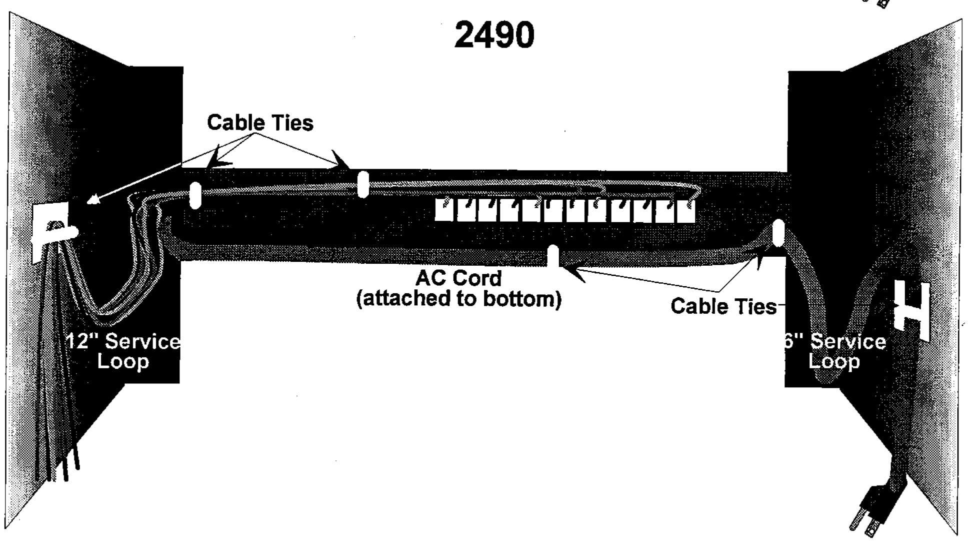


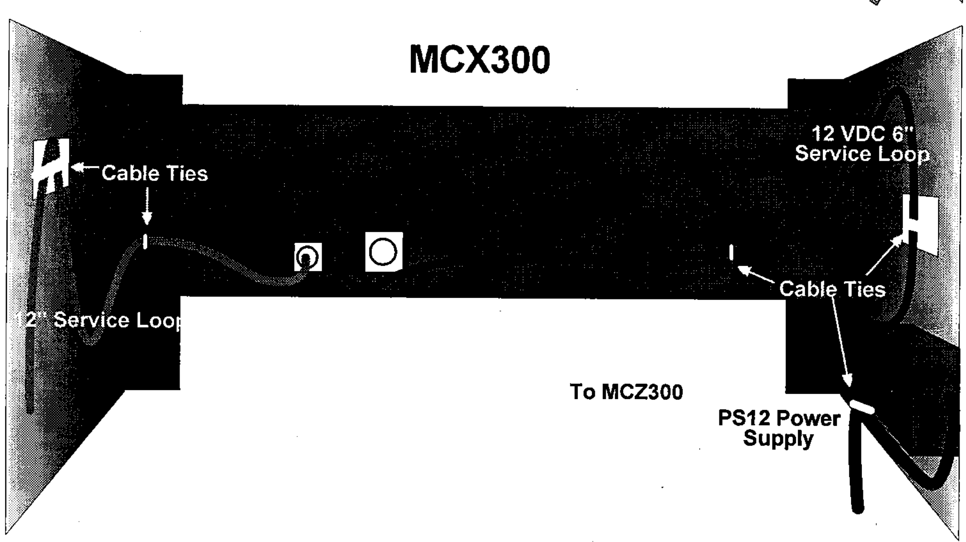
NOTES:

1. ADDITIONAL AMPLIFIERS REQUIRED IF MCB300 IS USED IN THE SYSTEM.
2. ADDITIONAL RELAY SOCKET (VC7237) REQUIRED FOR MULTI-CHANNEL SYSTEM.
3. DO NOT CONNECT 'T' AND 'S' LINES OF TC2114 TO 'G' AND 'T' TERMINALS OF SW25/SWT425.
4. WHEN TC2120 IS USED WITH TC2114, REMOVE JUMPERS JU1-JU32 ON TC2120.

KM1157 - B

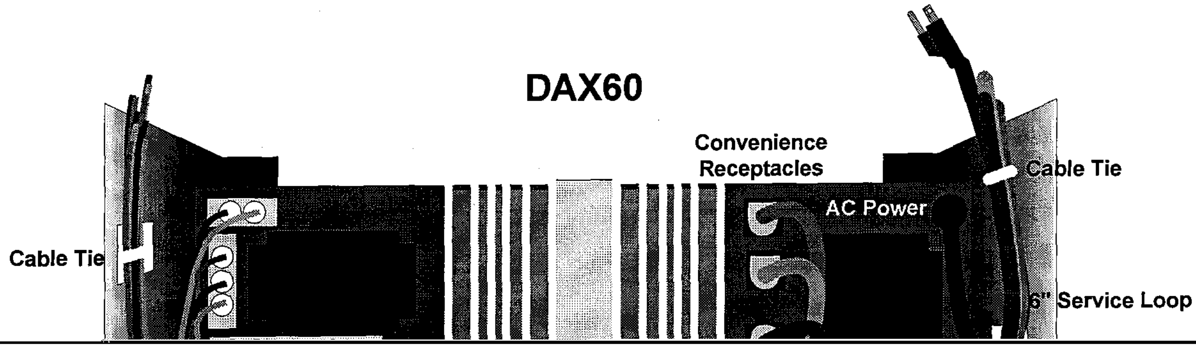




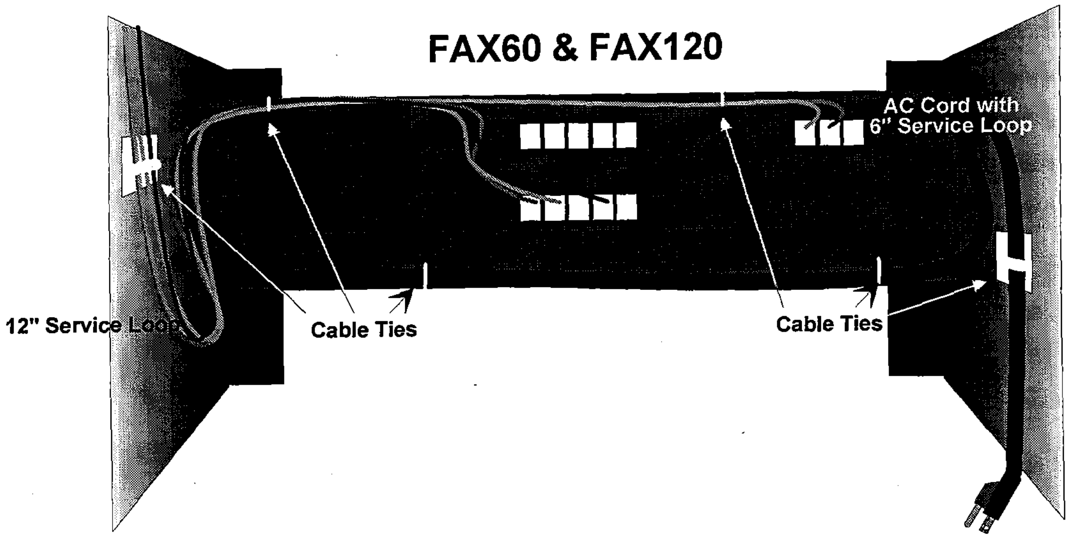


Wire Routing Diagram for the 2524 and 2490 Master Clock, and the MCX300 AM/FM Tuner and Cassette Player in a Telecenter® System (rear view)

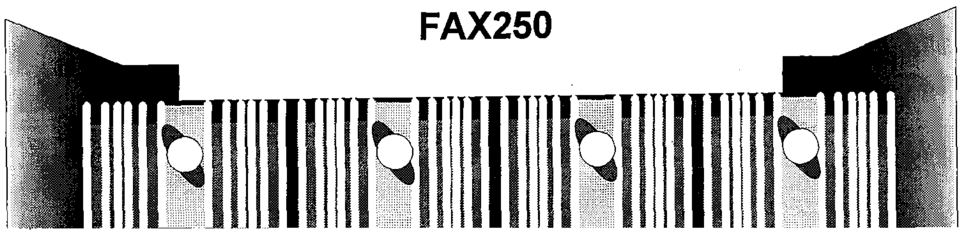
IL0435
Rauland Borg Corp.
Skokie, IL USA
8/93

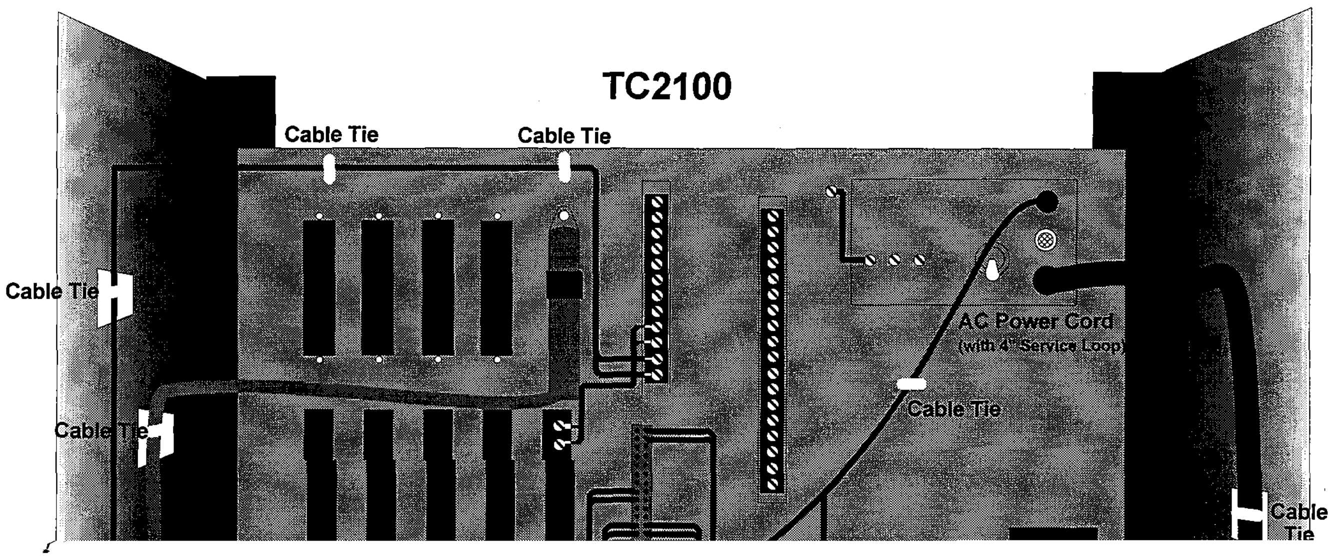

DAX60
Convenience Receptacles
Cable Tie
AC Power
Cable Tie
6" Service Loop

FAX60 & FAX120

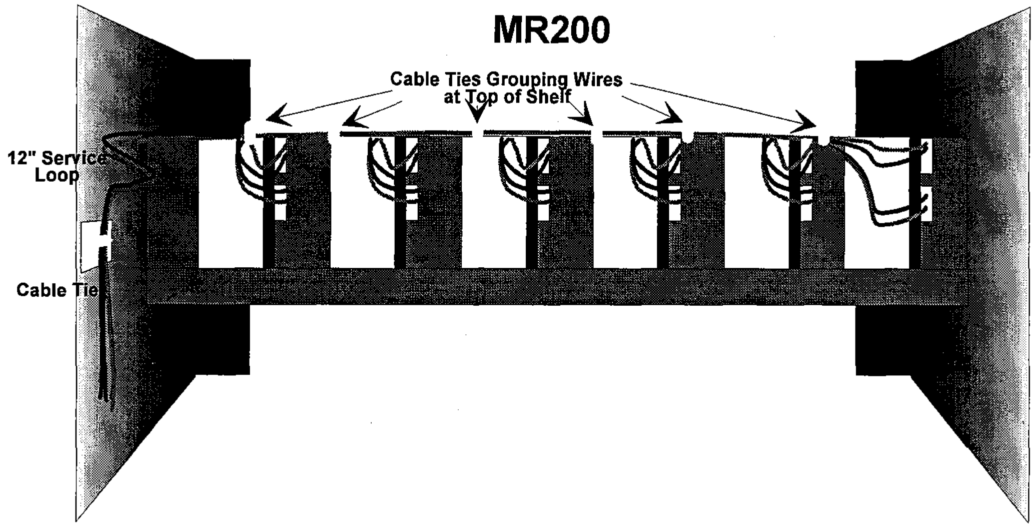


FAX250

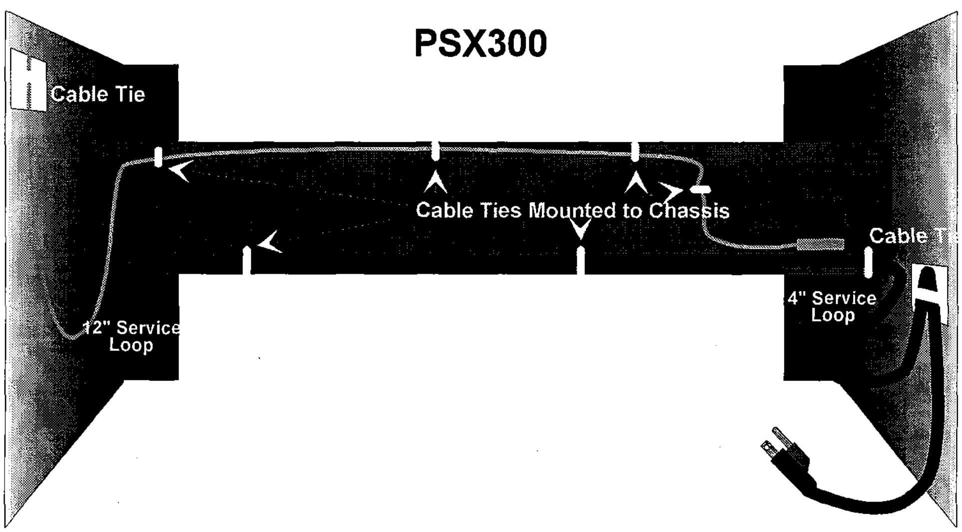



TC2100
Cable Tie
Cable Tie
Cable Tie
Cable Tie
AC Power Cord
(with 4" Service Loop)
Cable Tie
Cable Tie

MR200

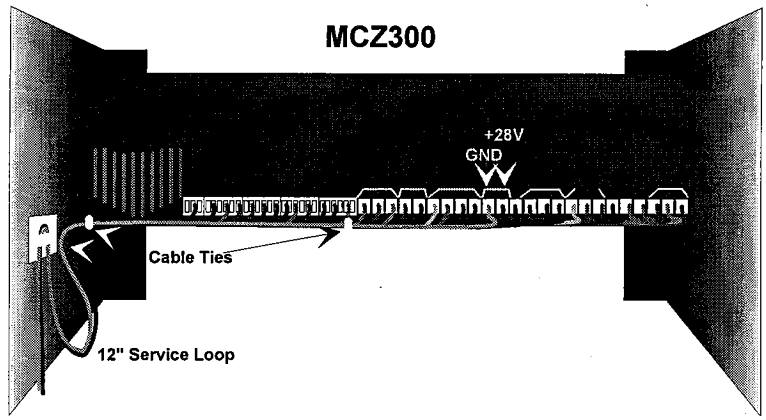


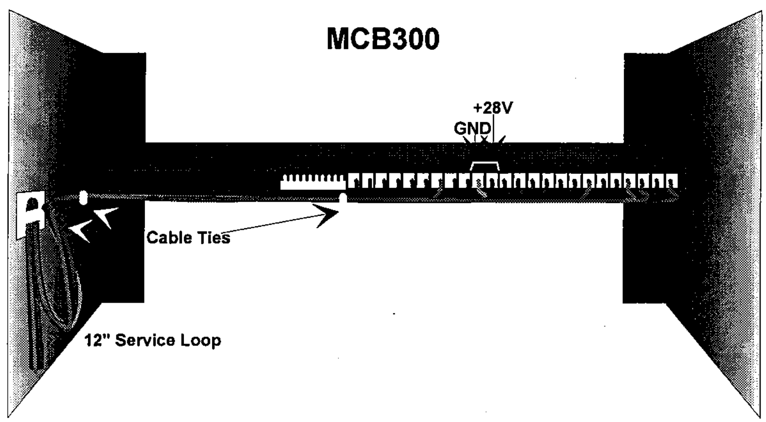
PSX300

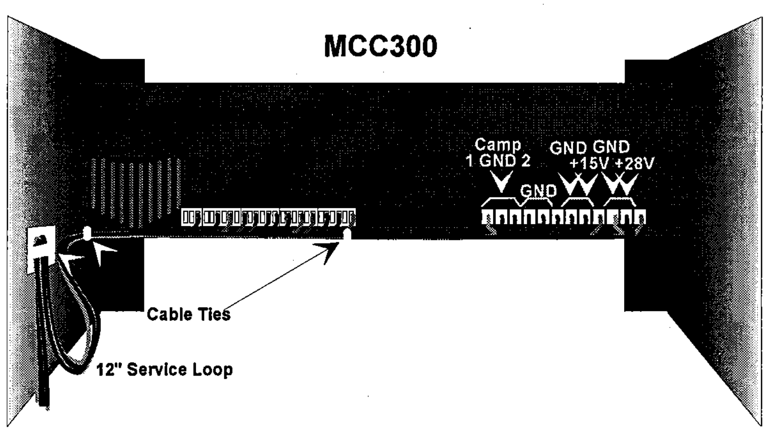


Wire Routing Diagram for the MR200 Media Retrieval and PSX300 Director® Series DC Power Supply in a Telecenter® System 21 (rear view)

IL0471
Rauland Borg Corp.
Skokie, IL USA
1/95

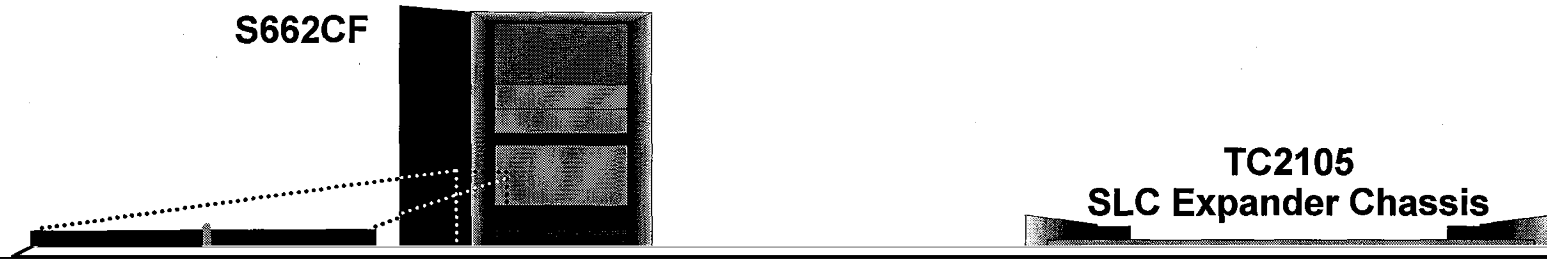


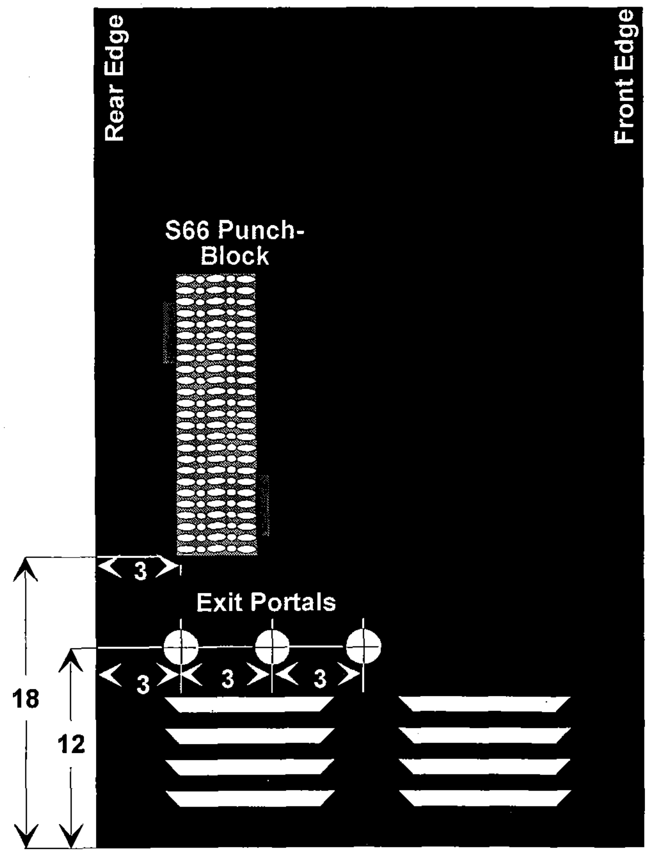


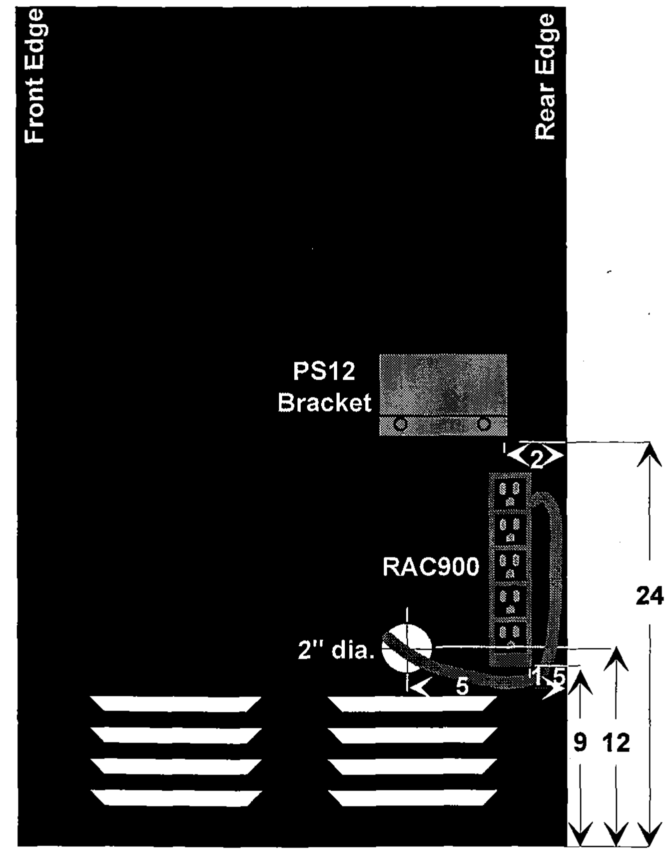


Wire Routing Diagram
MCZ300 Master Control Panel, MCB300 Channel "B" Program Control Panel, and MCC300 Intercom Control Panel in a Telecenter® System (rear view)

IL0472
Rauland-Borg Corp.
Skokie, IL USA
1/95


S662CF
TC2105
SLC Expander Chassis





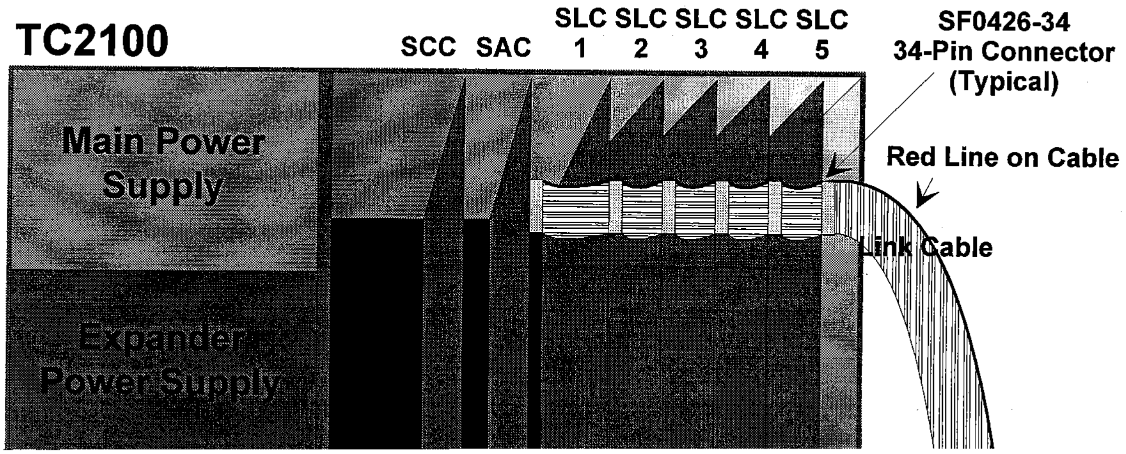
All Dimensions +/-.5"

Left Inside Wall

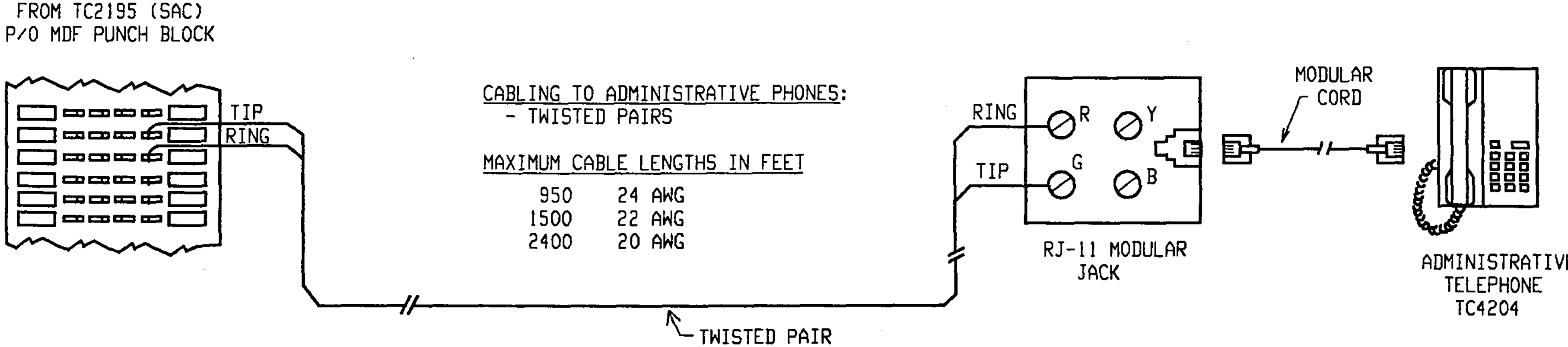
Right Inside Wall

Location of Equipment Mounted on the Inside Walls of a Telecenter® System 21 Rack

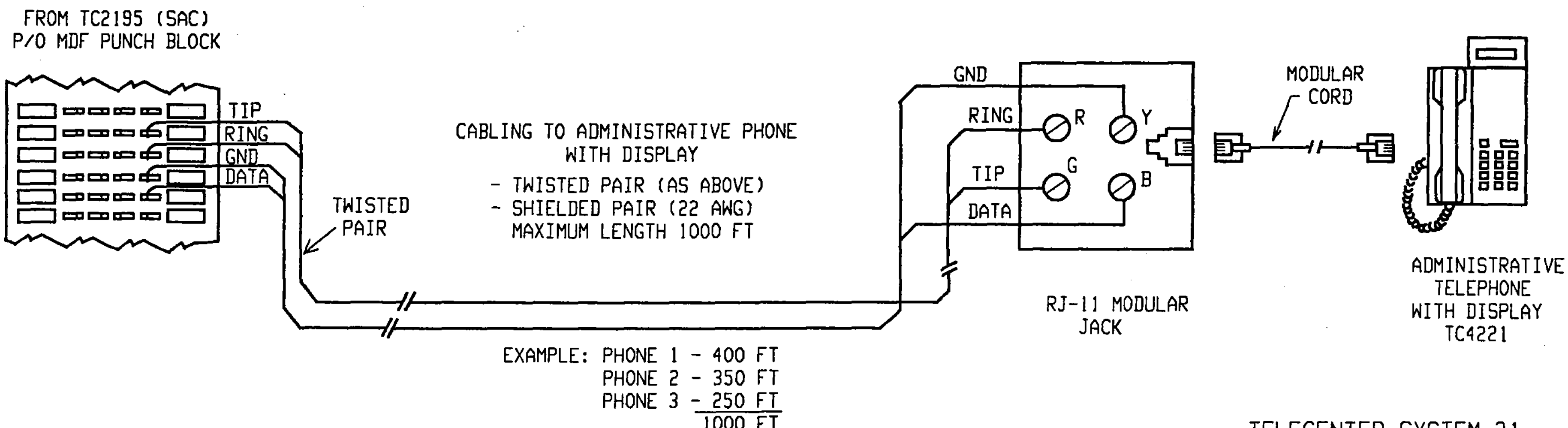
IL0474
Rauland-Borg Corp.
Skokie, IL USA
1/95


TC2100
SCC
SAC
SLC 1
SLC 2
SLC 3
SLC 4
SLC 5
SF0426-34
34-Pin Connector
(Typical)
Red Line on Cable
Link Cable
Main Power Supply
Expander Power Supply

ADMINISTRATIVE TELEPHONE



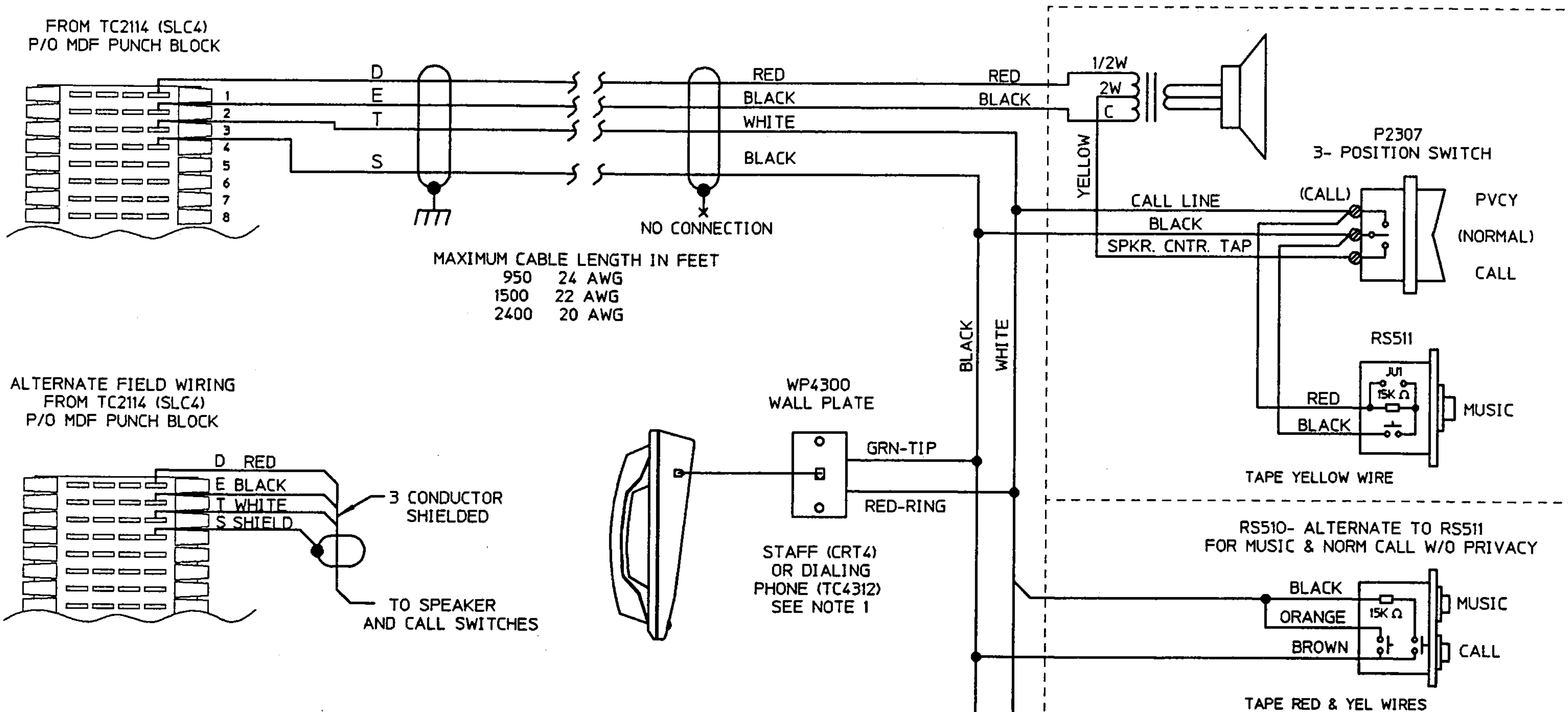
ADMINISTRATIVE TELEPHONE WITH DISPLAY

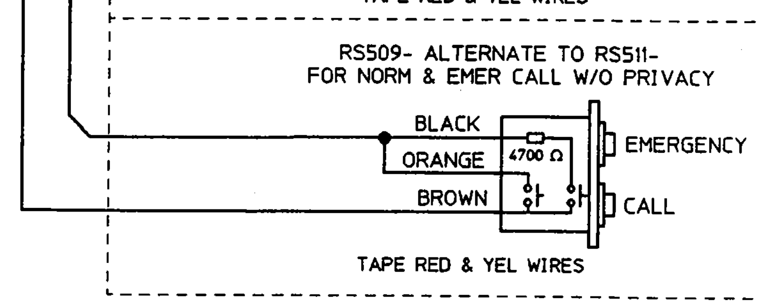


TELECENTER SYSTEM 21
ADMINISTRATIVE TELEPHONES

RAULAND-BORG CORP.
SKOKIE, ILL, USA

KM1125 - 0





NOTES:

1. CLASSROOM PHONES ON SYSTEM 21 ARE POLARITY SENSITIVE. WIRE IS SHOWN.

2. SHIELD ON ALTERNATE FIELD WIRING SHOULD BE ISOLATED FROM GROUND.

3. THIS WIRING DIAGRAM IS NOT APPLICABLE WHEN TC2113 IS USED IN THE SYSTEM.

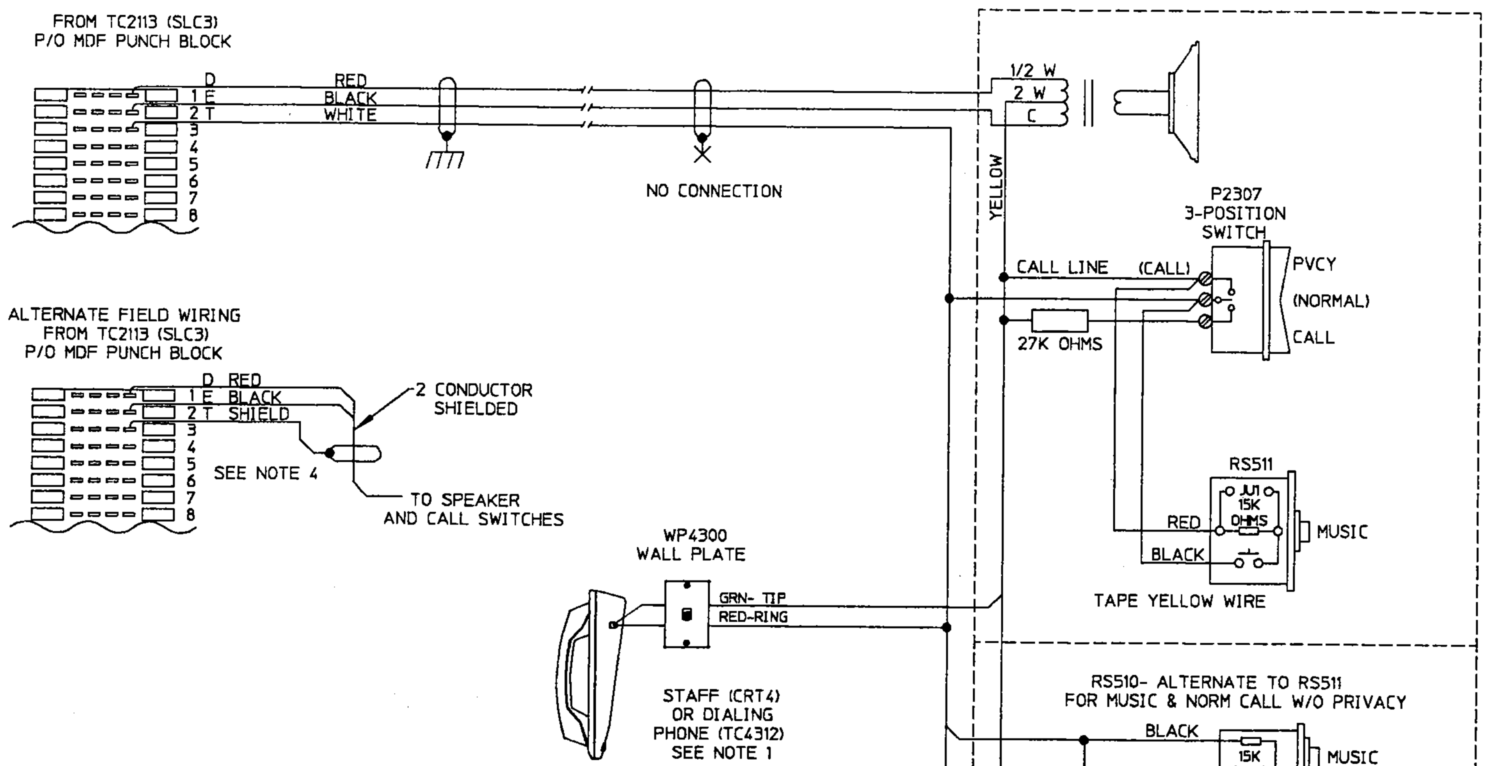
4. CABLING TO SPEAKER /SWITCH STATION-
   RECOMMENDED: 2 PAIRS SHIELDED
   ALTERNATE: 3 CONDUCTOR SHIELDED (1 TWISTED PAIR AND 1 SINGLE CONDUCTOR)

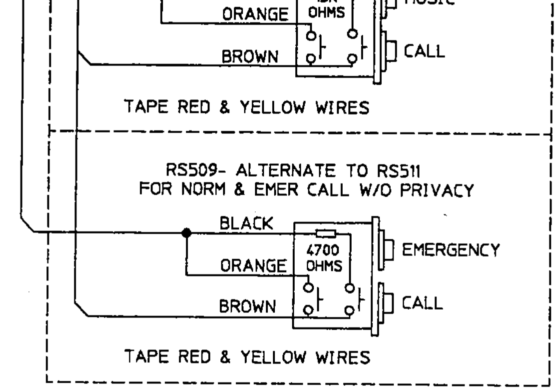
   MAXIMUM CABLE LENGTH:
   24AWG- 950 FT.
   22AWG- 1500 FT.
   20AWG- 2400 FT.

TELECENTER SYSTEM 21
STAFF STATION WITH:
SPEAKER, CALL SWITCHES
AND PHONE

Rauland-Borg Corp.
Skokie, IL. U.S.A.

KM1140 - B





NOTES:

1. CLASSROOM PHONES ON SYSTEM 21 ARE POLARITY SENSITIVE. WIRE IS SHOWN.
2. SHIELD ON ALTERNATE FIELD WIRING SHOULD BE ISOLATED FROM GROUND.
3. THIS WIRING DIAGRAM IS NOT APPLICABLE WHEN TC2114 IS USED IN THE SYSTEM.
4. CABLING TO SPEAKER/ SWITCH STATION-
   RECOMMENDED: 3 CONDUCTOR SHIELDED
   ALTERNATE: 2 CONDUCTOR SHIELDED

MAXIMUM CABLE LENGTH
IN FEET:

950	24 AWG
1500	22 AWG
2400	20 AWG

TELECENTER SYSTEM 21 STAFF STATION WITH: SPEAKER, CALL SWITCHES AND PHONE

Rauland-Borg Corp.
Skokie, Il. U.S.A.

KM1187 - B

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