

## GFELLER SUBSCRIBER LINE CONCENTRATOR 49-9-2

### SCHEMATICS

#### 1. GENERAL

**1.01** This is one of a group of sections, pertaining to the Gfeller line concentrator, having the base numbers A804.901 and C85.010. This section contains the schematics S10460-3, S10461-3, S10460-4 and S10461-4 submitted by the Gfeller Company and an explanation of the symbols and drawing methods used.

**1.02** The Gfeller concentrator schematics are of the detached contact type similar to those now in use in the Bell System.

**1.03** Arrowheads, bearing no designation, are used to indicate a tie-in between two points of the circuit which are separated on the same

sheet. The connection of the two points may be found by following the direction of an arrowhead, in a straight line to its associated arrowhead (Fig. 2).

**1.04** Resistor strapping drawn with an X on the strap is used to indicate strap removal when 72-volt operation is used (Fig. 2).

**1.05** Fuses are represented by an oval-shaped symbol (Fig. 2). The contacts shown above each symbol are the fuse alarm contacts. Each fuse is designated by the equipment to which it supplies power as well as by a number; this number is also associated with arrowheads at the various components of the central office unit to indicate the source of the battery supply.

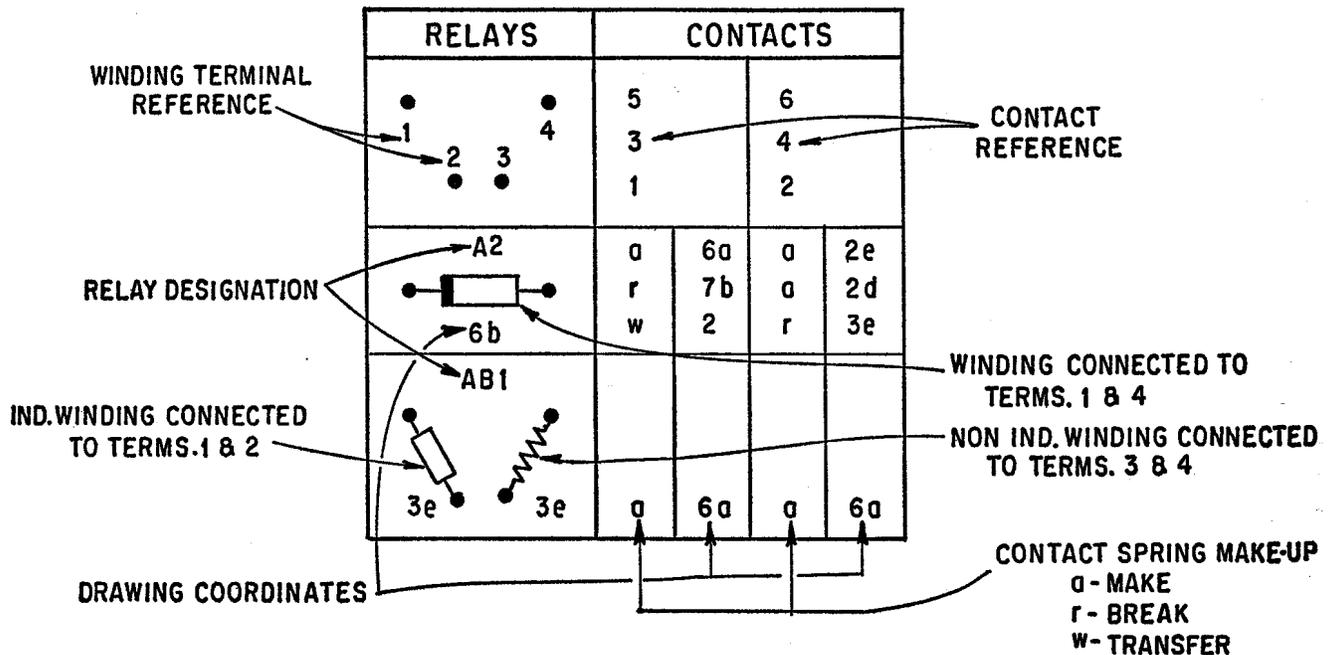


Fig. 1

1.06 The Gfeller switch vertical bars are drawn in a vertical plane and numbered 1 through 9. The horizontal bars are drawn in a horizontal plane and numbered 1 through 49. The horizontal bar designated 50 is a test bar associated only with the central office unit switch. The a, b, and c designations are the European equivalent of the Bell System T, R, and S, respectively.

1.07 The tables at the bottom of the schematics give the location of each relay winding terminal and its associated contacts by drawing coordinates. The contact spring make-up is also shown. Part of a table is shown in Fig. 1 with a labeled description.

1.08 Fig. 2 contains a list of designated symbols as used in the schematics.

**SYMBOL CHART**

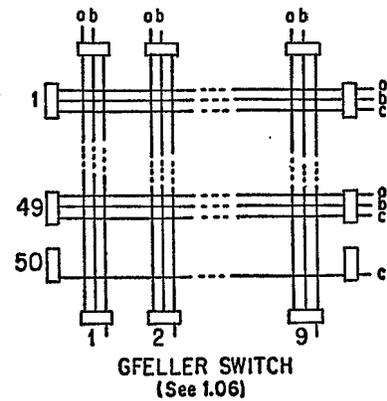
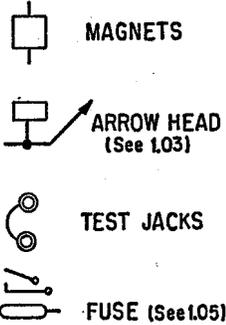
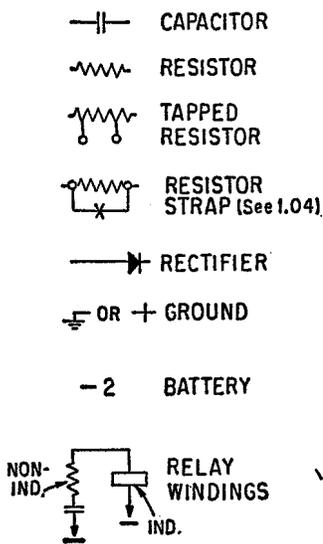
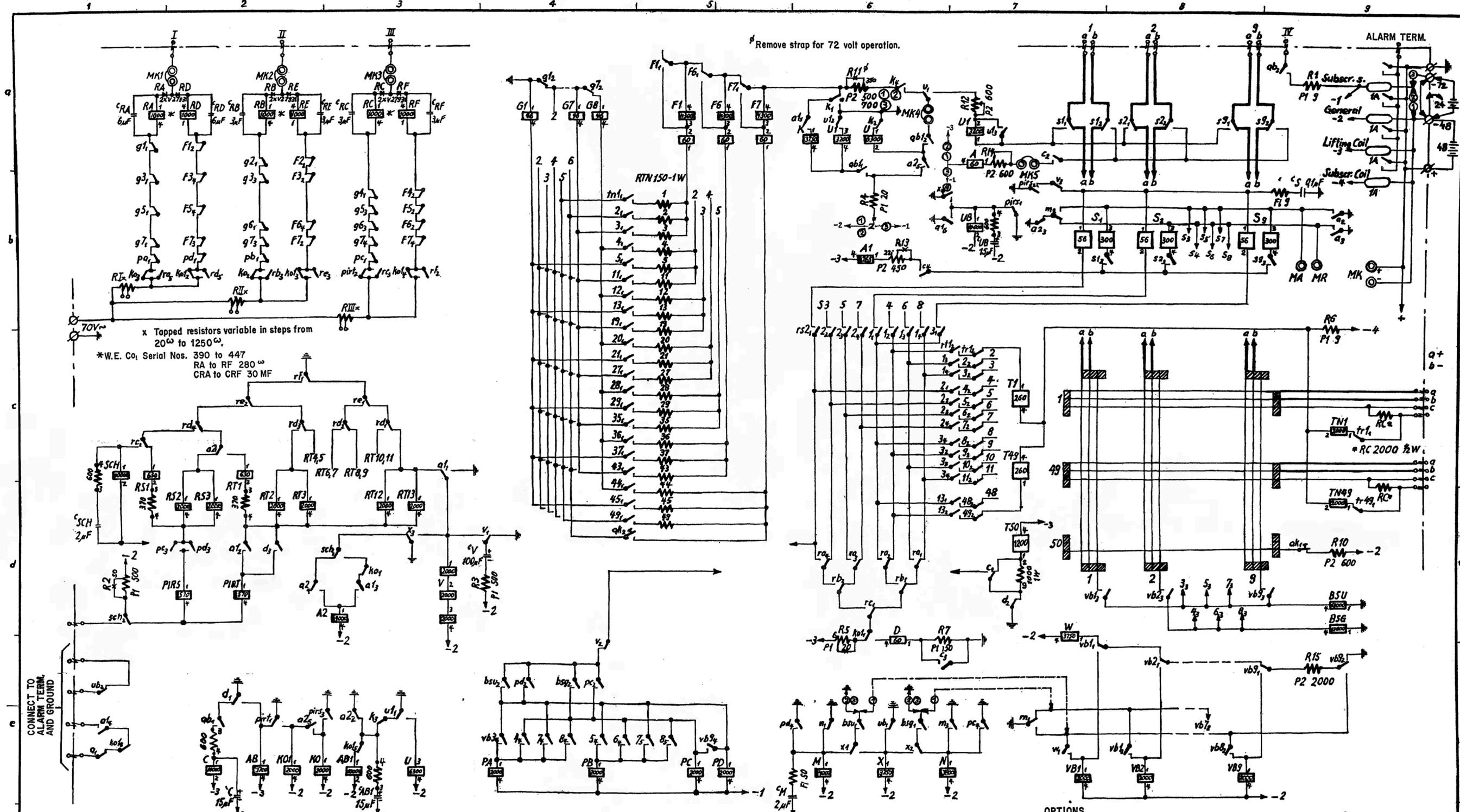


Fig. 2



x Tapped resistors variable in steps from 20Ω to 1250Ω.  
\*W.E. Co. Serial Nos. 390 to 447  
RA to RF 280Ω  
CRA to CRF 30 MF

CONNECT TO ALARM TERM. AND GROUND

OPTIONS

- ① W.E. Co. Serial Nos. 2 to 4
- ② W.E. Co. Serial Nos. 5 to 234  
Nos. 270 to 331
- ③ W.E. Co. Serial Nos. 235 to 269  
Nos. 332 to 447

Lifting Coil	Contacts	Subscr. Coil	Subscr. relays	Contacts	Disconnecting rod	Ground contacts
S1	a 7b b 7a	T1	TN1	a 4b	→ tr 1	r 7c
S2	a 8b b 8a	T49	TN49	a 4d	→ tr 49	r 7d
S9	a 9b b 9a	T50	T50	a 4d	→ tr 49	r 7d

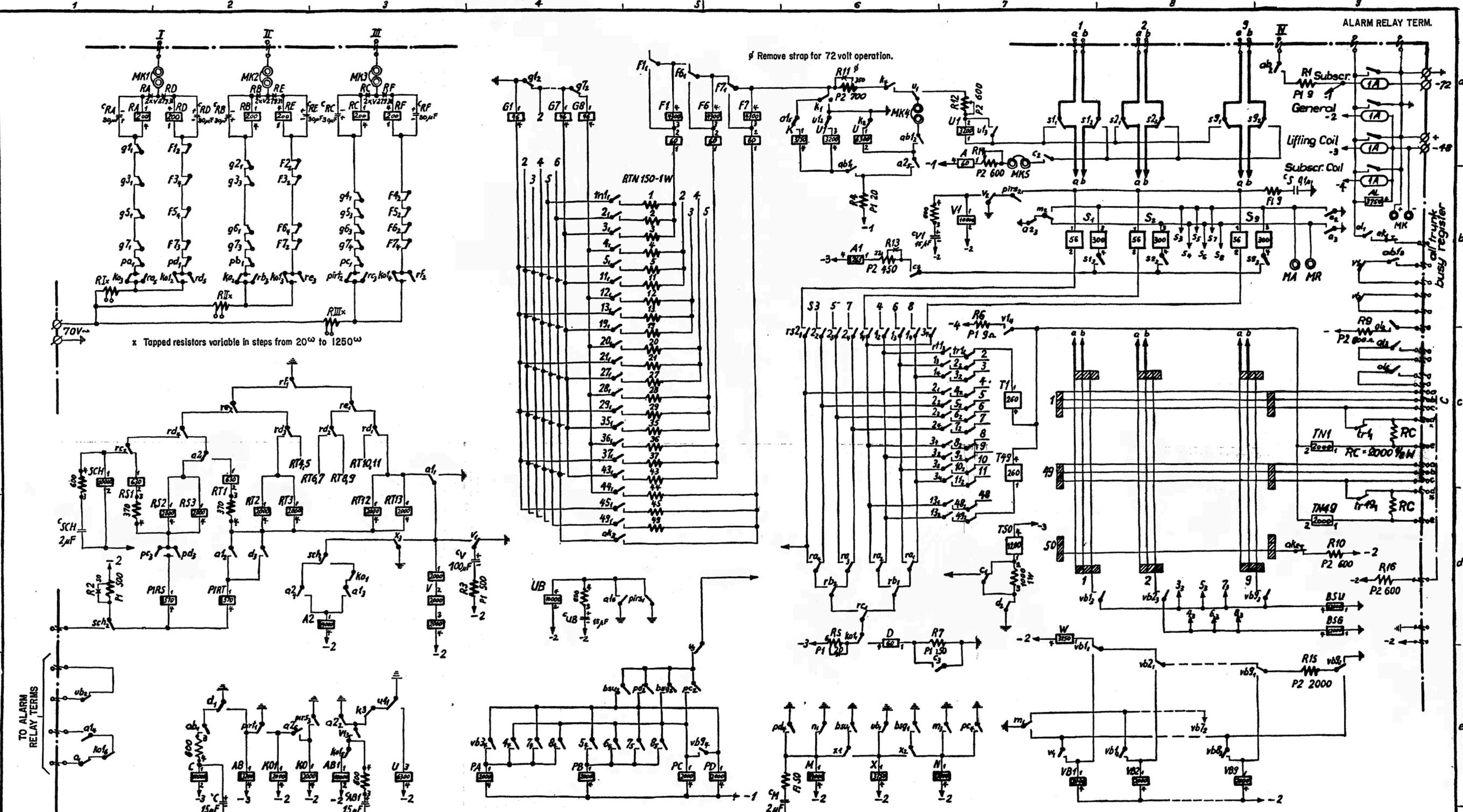
Relays	Contacts	BSU	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16	F17	F18	F19	F20	F21	F22	F23	F24	F25	F26	F27	F28	F29	F30	F31	F32	F33	F34	F35	F36	F37	F38	F39	F40	F41	F42	F43	F44	F45	F46	F47	F48	F49	F50	F51	F52	F53	F54	F55	F56	F57	F58	F59	F60	F61	F62	F63	F64	F65	F66	F67	F68	F69	F70	F71	F72	F73	F74	F75	F76	F77	F78	F79	F80	F81	F82	F83	F84	F85	F86	F87	F88	F89	F90	F91	F92	F93	F94	F95	F96	F97	F98	F99	F100																																																																																															
A	a 7a r 7e	C	a 7c r 7d	F6	a 7c r 7d	F7	a 7c r 7d	F8	a 7c r 7d	F9	a 7c r 7d	F10	a 7c r 7d	F11	a 7c r 7d	F12	a 7c r 7d	F13	a 7c r 7d	F14	a 7c r 7d	F15	a 7c r 7d	F16	a 7c r 7d	F17	a 7c r 7d	F18	a 7c r 7d	F19	a 7c r 7d	F20	a 7c r 7d	F21	a 7c r 7d	F22	a 7c r 7d	F23	a 7c r 7d	F24	a 7c r 7d	F25	a 7c r 7d	F26	a 7c r 7d	F27	a 7c r 7d	F28	a 7c r 7d	F29	a 7c r 7d	F30	a 7c r 7d	F31	a 7c r 7d	F32	a 7c r 7d	F33	a 7c r 7d	F34	a 7c r 7d	F35	a 7c r 7d	F36	a 7c r 7d	F37	a 7c r 7d	F38	a 7c r 7d	F39	a 7c r 7d	F40	a 7c r 7d	F41	a 7c r 7d	F42	a 7c r 7d	F43	a 7c r 7d	F44	a 7c r 7d	F45	a 7c r 7d	F46	a 7c r 7d	F47	a 7c r 7d	F48	a 7c r 7d	F49	a 7c r 7d	F50	a 7c r 7d	F51	a 7c r 7d	F52	a 7c r 7d	F53	a 7c r 7d	F54	a 7c r 7d	F55	a 7c r 7d	F56	a 7c r 7d	F57	a 7c r 7d	F58	a 7c r 7d	F59	a 7c r 7d	F60	a 7c r 7d	F61	a 7c r 7d	F62	a 7c r 7d	F63	a 7c r 7d	F64	a 7c r 7d	F65	a 7c r 7d	F66	a 7c r 7d	F67	a 7c r 7d	F68	a 7c r 7d	F69	a 7c r 7d	F70	a 7c r 7d	F71	a 7c r 7d	F72	a 7c r 7d	F73	a 7c r 7d	F74	a 7c r 7d	F75	a 7c r 7d	F76	a 7c r 7d	F77	a 7c r 7d	F78	a 7c r 7d	F79	a 7c r 7d	F80	a 7c r 7d	F81	a 7c r 7d	F82	a 7c r 7d	F83	a 7c r 7d	F84	a 7c r 7d	F85	a 7c r 7d	F86	a 7c r 7d	F87	a 7c r 7d	F88	a 7c r 7d	F89	a 7c r 7d	F90	a 7c r 7d	F91	a 7c r 7d	F92	a 7c r 7d	F93	a 7c r 7d	F94	a 7c r 7d	F95	a 7c r 7d	F96	a 7c r 7d	F97	a 7c r 7d	F98	a 7c r 7d	F99	a 7c r 7d	F100	a 7c r 7d

GFELLER SUBSCRIBER LINE CONCENTRATOR  
49-9-2  
CENTRAL OFFICE UNIT

W.E.Co. Serial Nos. 2 thru 447

S10460-3





Relays	Contacts	1	2	3	4	5	6	7	8	9
BSU	9d	F5	G5	M	PIRT	RS1	RT12	V1	VB7	
A	7a	F6	G6	N	RA	RS2	RT13	VB1	VB8	
A1	6a, 3d, 4d	F7	G7	PA	RB	RS3	SCH	VB2	VB9	
A2	4a, 6a, 7a, 3c, 2d	F1	G8	PB	RC	RT1	U	VB3	W	
AB	2e	F2	G2	PC	RD	RT2	UI	VB4	X	
AB1	3a, 9b, 6a, 6a	F3	G3	PD	RE	RT3	UB	VB5	Y	
BSG	3d	F4	G4	PIRS	RF	RT4-11	V	VB6	Z	

Lifting Coil	Contacts	Subscr. Coil	Subscr. relays	Disconnecting	Ground
6-3-3-3	1/2	9-3-3-3	20 other	o2	1
S1	a 8b, 7b, 8b	T1	TN1	o1	r 7c
S2	a 8b, 8b, 8b	T49	TN49	o1	r 7d
S9	a 8b, 8b, 8b	ISO		o1	r 3d

**GFELLER SUBSCRIBER LINE CONCENTRATOR**  
**49-9-2**  
**CENTRAL OFFICE UNIT**

W.E.Co. Serial Nos. 448 and over **S10460-4**

