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OPERATION SANDSTONE

NUCLEAR EXPLOSIONS 1948 No. 16

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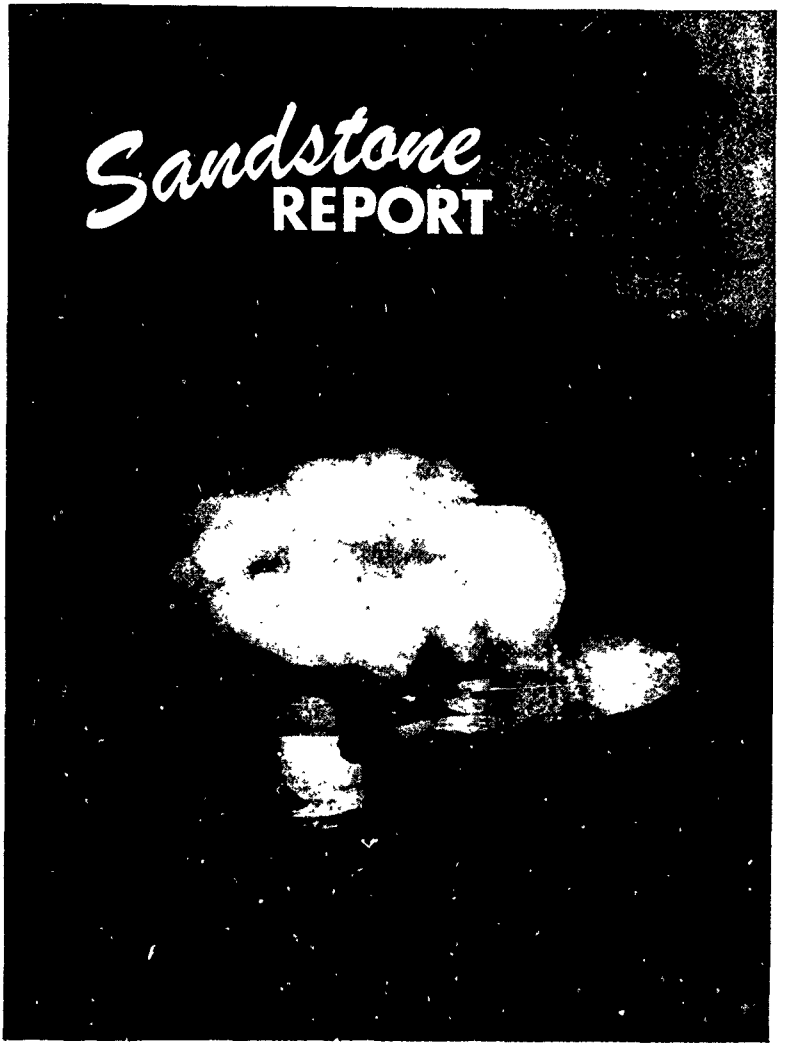

[redacted]

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OPERATION SANDSTONE

Report by
Groups LAJ-4B, LAJ-12A

VOLUME II

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SECTION 5
ADDENDA

September 30, 1948

Edgerton, Germeshausen & Grier, Inc.
155 Massachusetts Avenue
Cambridge 39, Massachusetts

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CONTENTS
SECTION 5

[redacted]

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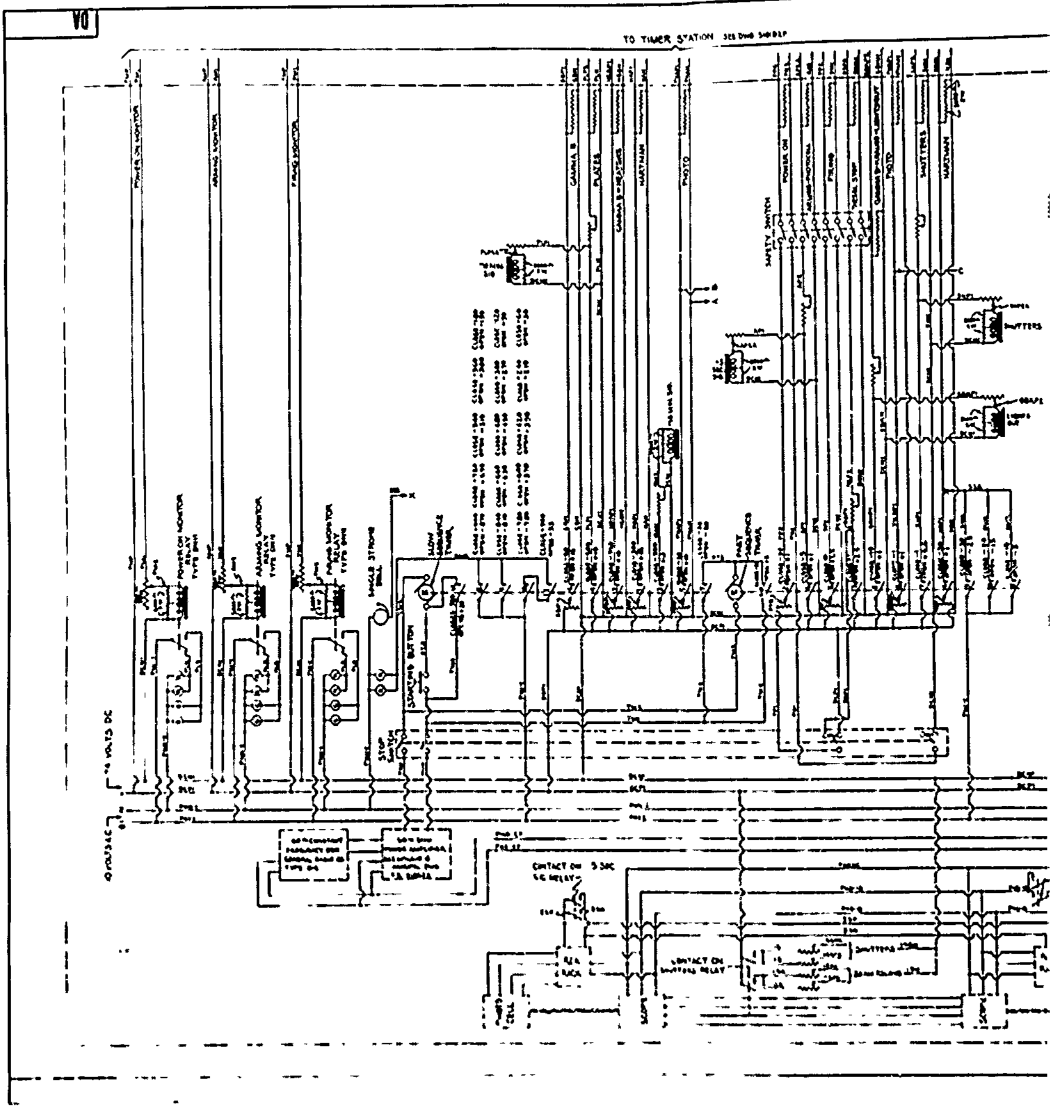
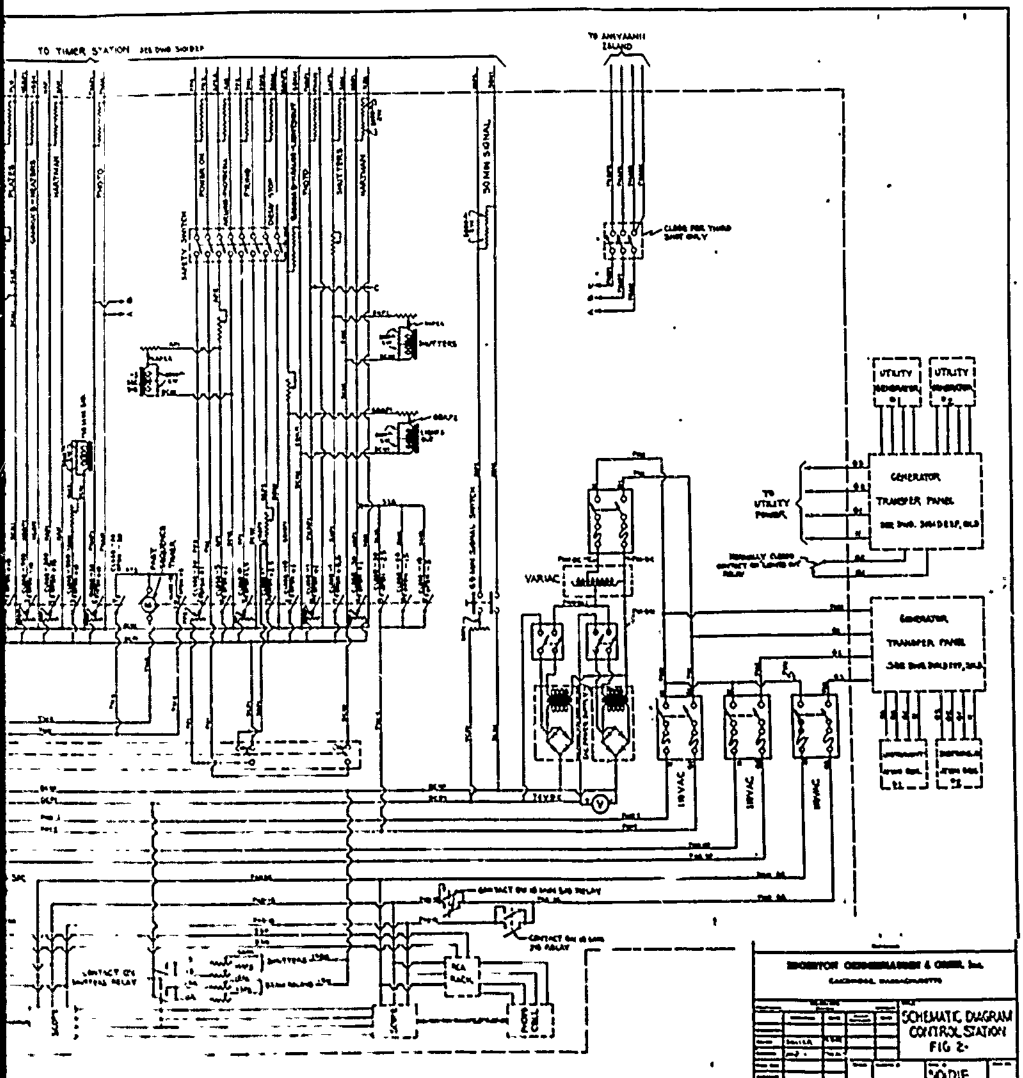
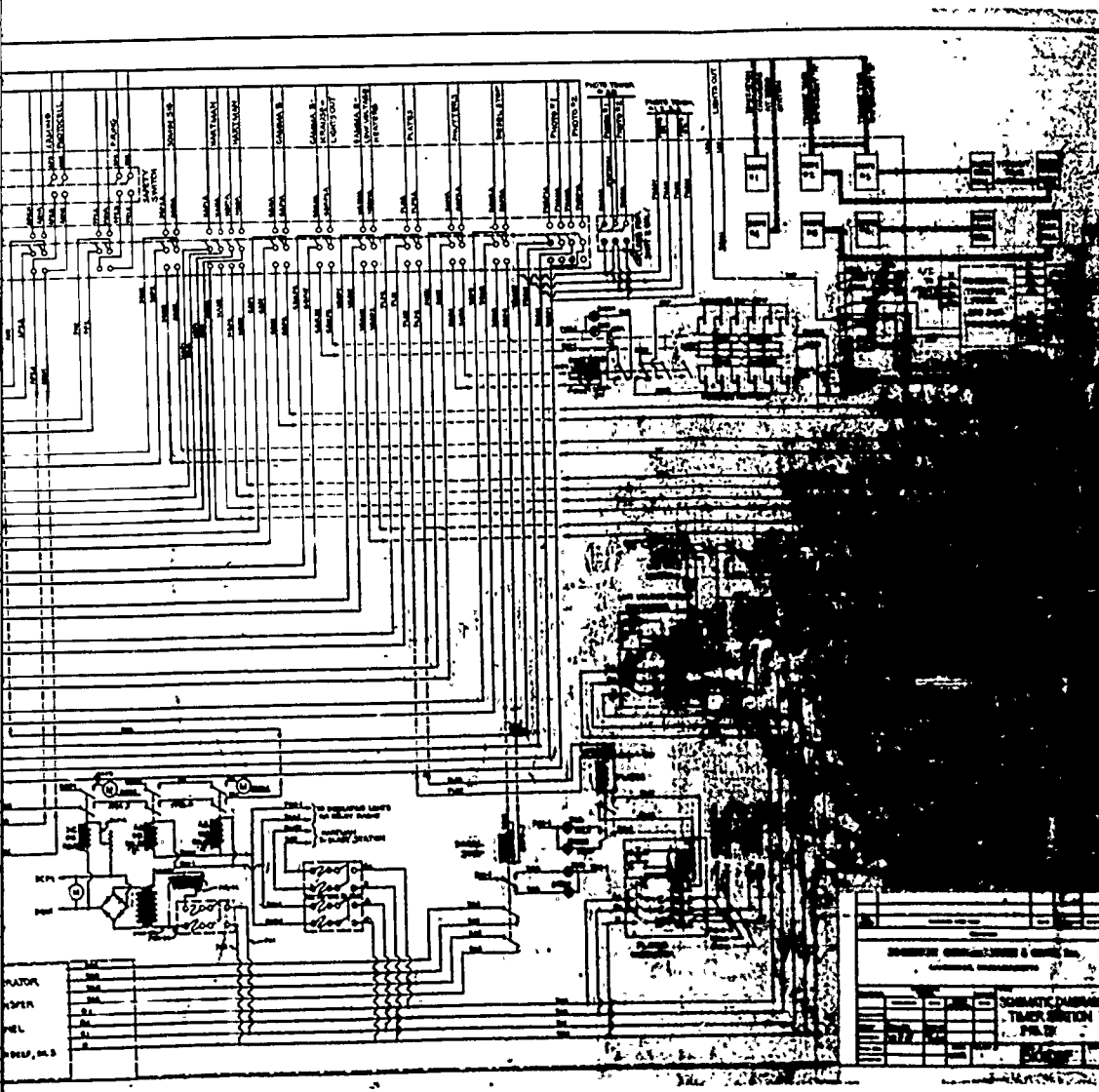
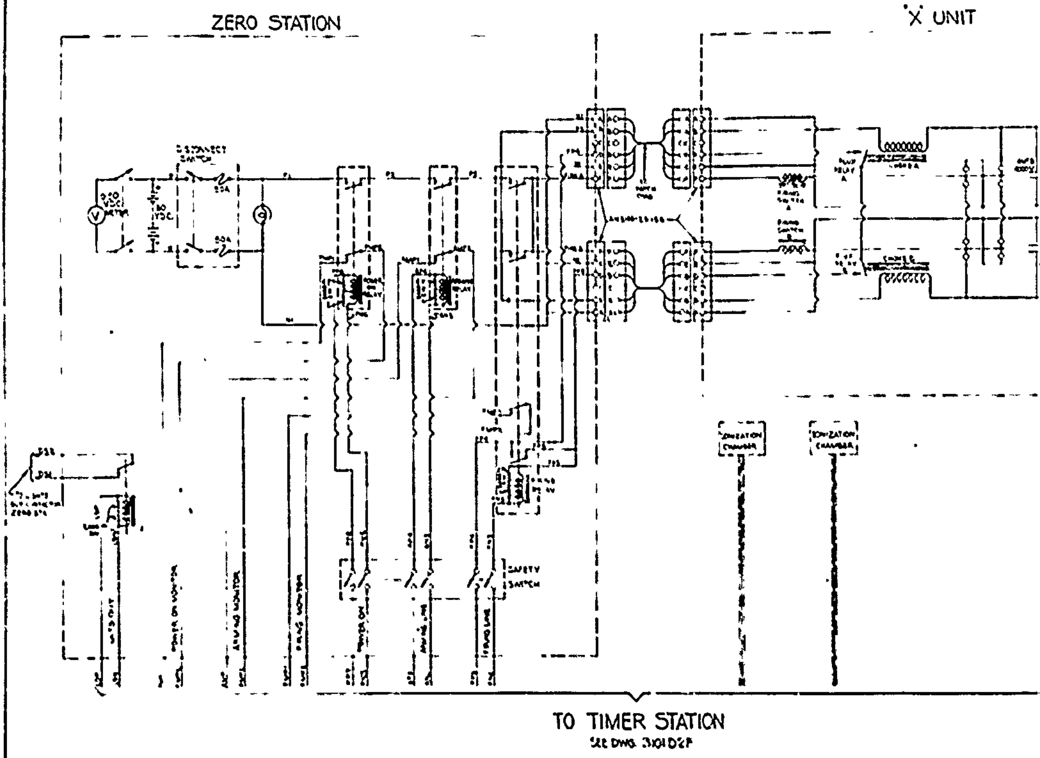
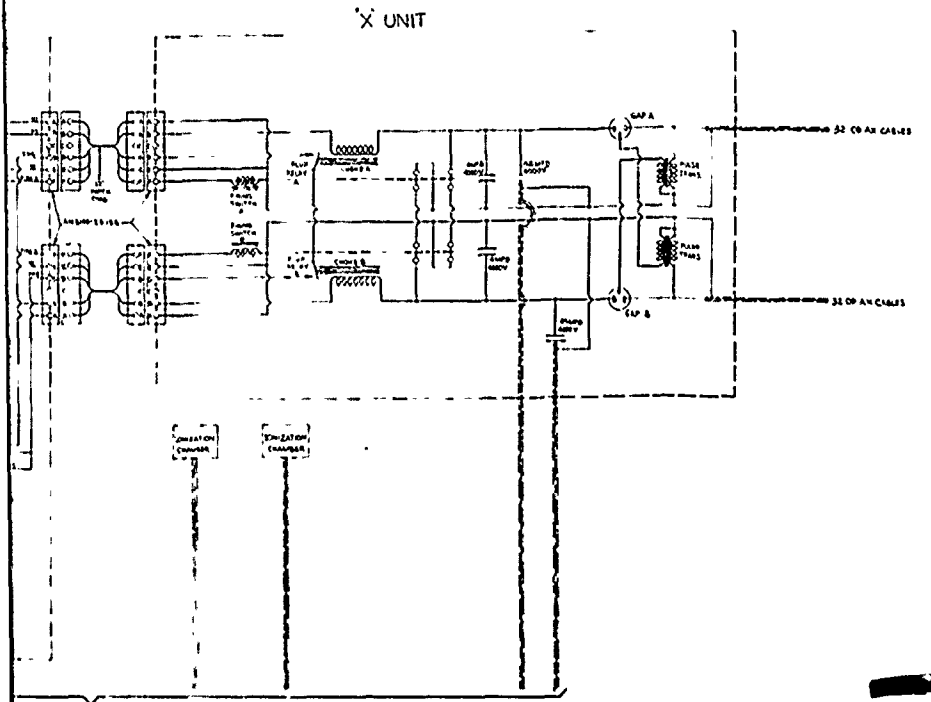

VO
TO TIMER STATION
POWER ON MONITOR
ARMING MONITOR
FIRING MONITOR
GAMMA B
PLATES
HARTMAN
PHOTO
SAFETY SWITCH
POWER ON
SHUTTERS
SINGLE STROKE BELL
START BUTTON
STOP SWITCH


TO TIMER STATION
PLATES
CATHODE HEATERS
HARTMAN
PHOTO
POWER ON
SAFETY SWITCH
DELAY STOP
SHUTTERS
50 MIN SIGNAL
LIGHTS
VARIAC
UTILITY
GENERATOR
TRANSFER PANEL
TO UTILITY POWER
110VAC
RCA RACK
PHOTO CELL
SCHEMATIC DIAGRAM
CONTROL STATION
FIG 2
501DIF

TO ZERO STATION #3
TO TIMER STATION #2
TO CONTROL STATION
GENERATOR
TRANSFER
PANEL




ZERO STATION
'X' UNIT
DISCONNECT SWITCH
SAFETY SWITCH
IONIZATION CHAMBER
IONIZATION CHAMBER
TO TIMER STATION
SEE DWG. 3101D2P



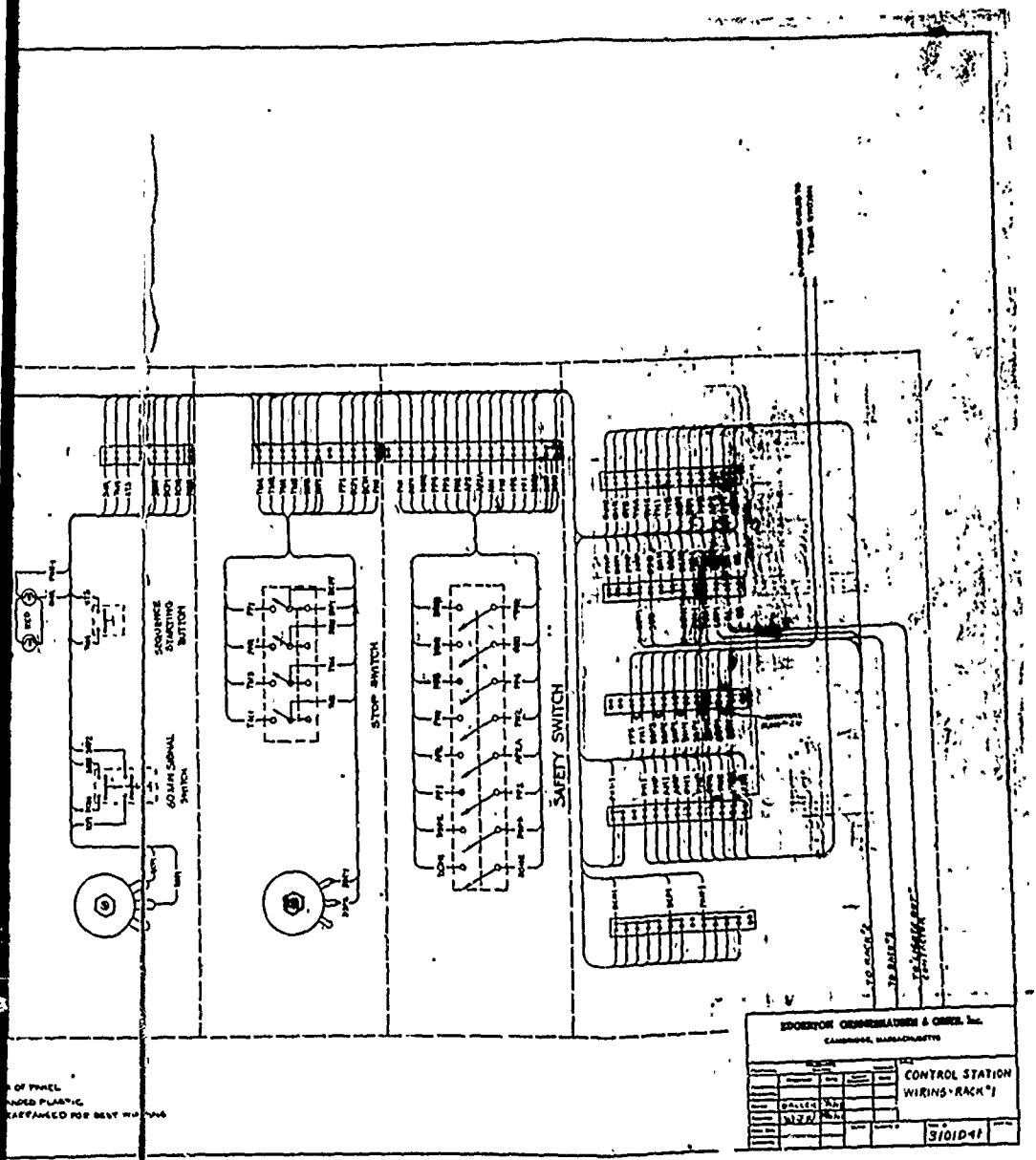
'0 TIMER STATION
SEE DWG. 31018-29

EDGERTON GERMESHAUSEN & GRIER, Inc.
CAMBRIDGE, MASSACHUSETTS

SCHEMATIC DIAGRAM
ZERO STATION
FIG. 2-

31018-3

NOTE:
WIRING VIEWED FROM REAR OF PANEL
ALL WIRE TO BE NOT STRANDED PLASTIC
TERMINAL STRIPS MAY BE REARRANGED FOR BEST WIRING


SQUIRREL STARTING BUTTON
60 MIN SIGNAL SWITCH
STOP SWITCH
SAFETY SWITCH
EDGERTON GERMESHAUSEN & GRIER, Inc.
CONTROL STATION WIRING-RACK "J"
3101D41

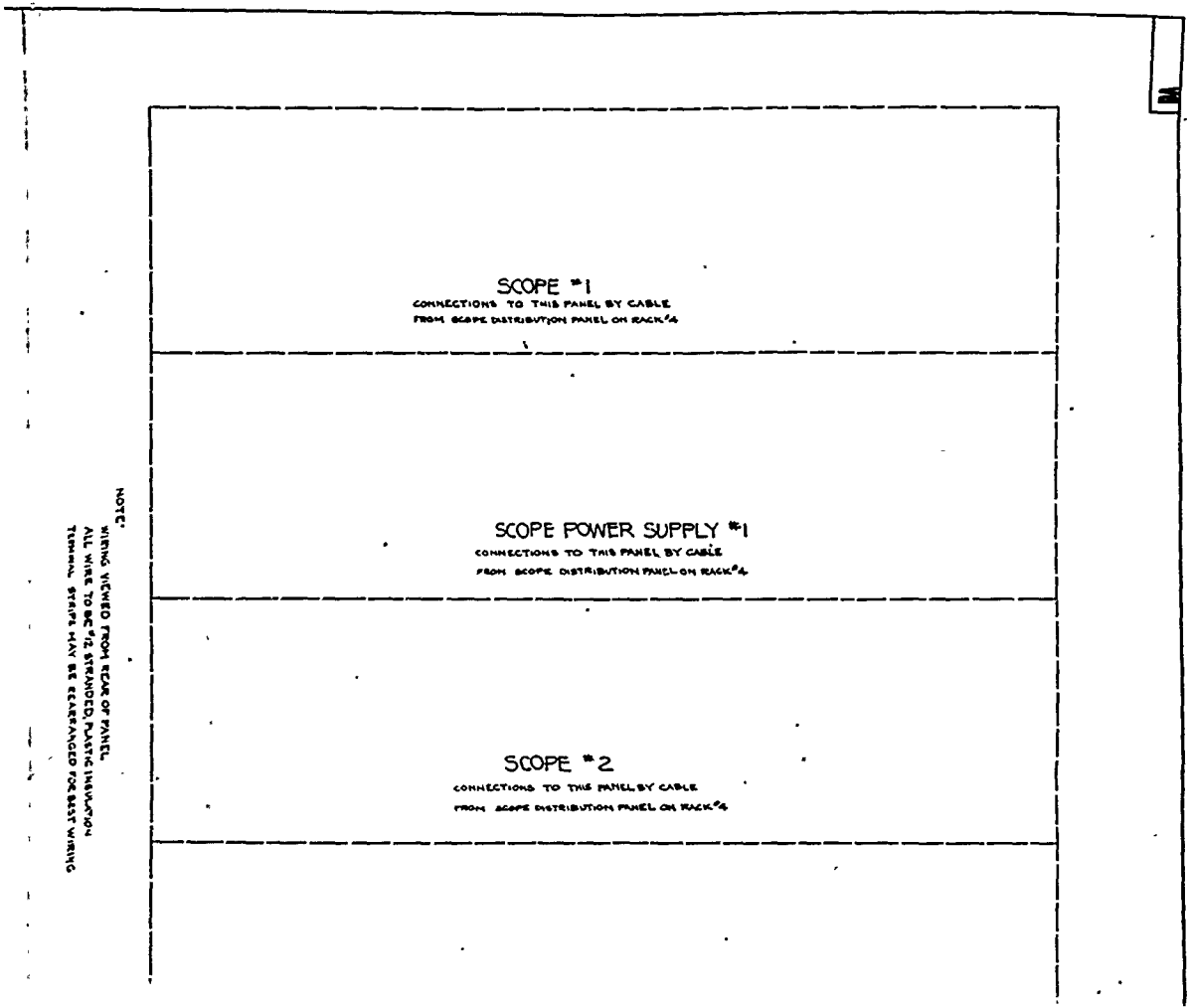
CONSTANT FREQUENCY GENERATOR
CONSTANT FREQUENCY AMPLIFIER
SLAW SERVICE TAILER
OUTLET PLUGS
NOTE:
WIRING VIEWED FROM REAR OF PANEL
ALL WIRE TO BE NO 18 STRANDED, PLASTIC
TERMINAL STRIPS MAY BE REARRANGED FOR BEST WIR

WIRING VIEWED FROM REAR OF PANEL
ALL WIRE TO BE NO 16 STRANDED, PLASTIC
TERMINAL STRIPS MAY BE REARRANGED FOR BEST WIRING

HOUSTON INSTRUMENT & CHART, Inc.
CAMBRIDGE, MASSACHUSETTS

CONTROL STATION
WIRING - RACK #2

3101DSF


SCOPE #1
CONNECTIONS TO THIS PANEL BY CABLE
FROM SCOPE DISTRIBUTION PANEL ON RACK #4
SCOPE POWER SUPPLY #1
CONNECTIONS TO THIS PANEL BY CABLE
FROM SCOPE DISTRIBUTION PANEL ON RACK #4
SCOPE #2
CONNECTIONS TO THIS PANEL BY CABLE
FROM SCOPE DISTRIBUTION PANEL ON RACK #4
NOTE:
WIRING VIEWED FROM REAR OF PANEL
ALL WIRE TO BE #12, STRANDED, PLASTIC INSULATION
TERMINAL STRIPS MAY BE REARRANGED FOR BEST WIRING

SCOPE #2

CONNECTIONS TO THIS PANEL BY CABLE FROM SCOPE DISTRIBUTION PANEL ON RACK #4

SCOPE POWER SUPPLY #2

CONNECTIONS TO THIS PANEL BY CABLE FROM SCOPE DISTRIBUTION PANEL ON RACK #4

VM

VARIAC

F PANEL
D, PLASTIC INSULAT ON
RRANGED FOR BEST WIRING

EDGERTON GERMESHAUSEN & GRIER, Inc.
CAMBRIDGE, MASSACHUSETTS

CONTROL STATION WIRING RACK #3

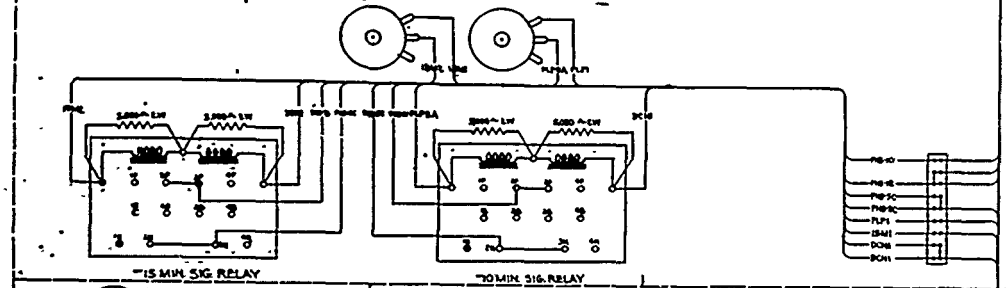
3010C-P

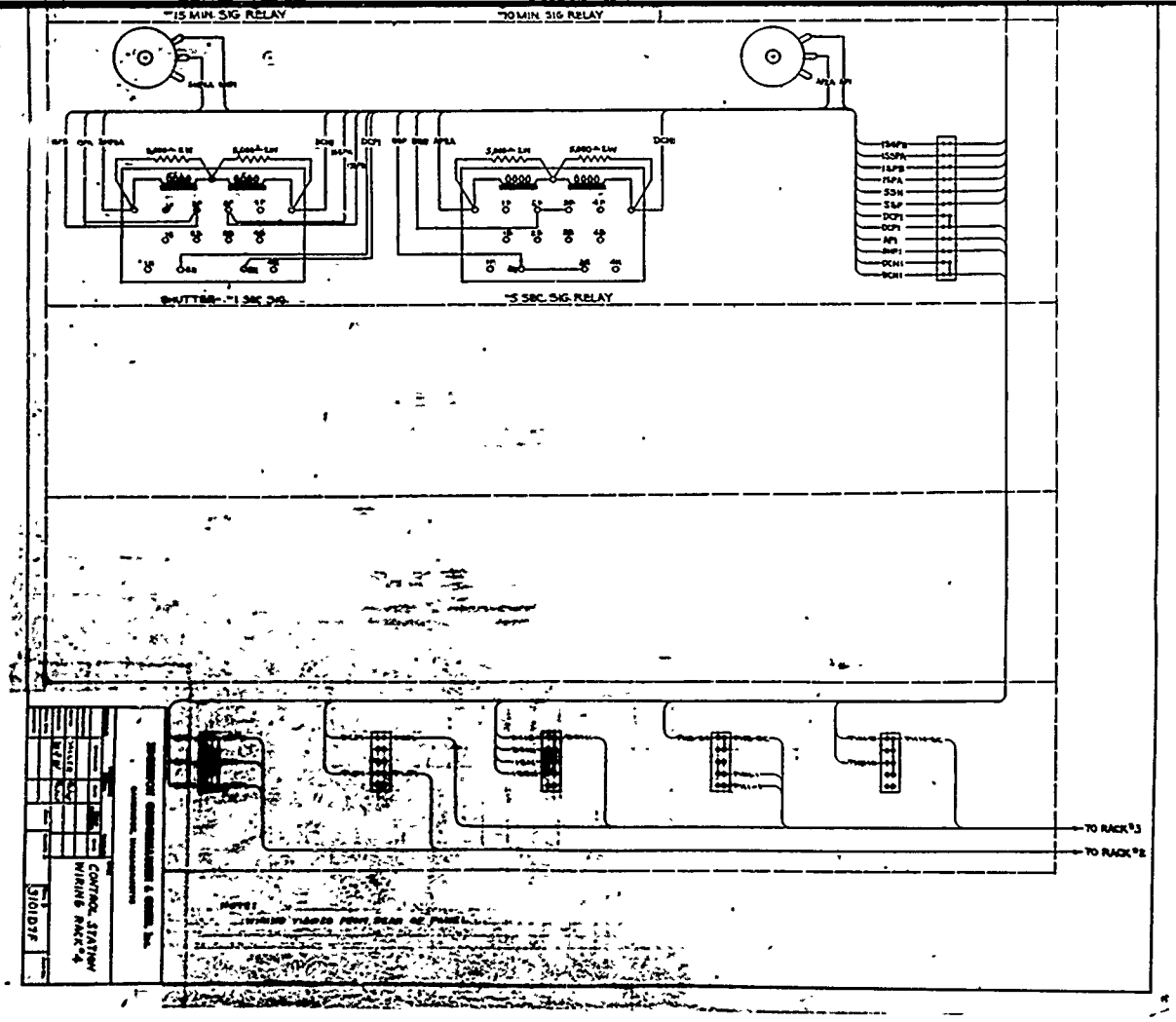
FOR WIRING SEE DWG 3101D8F

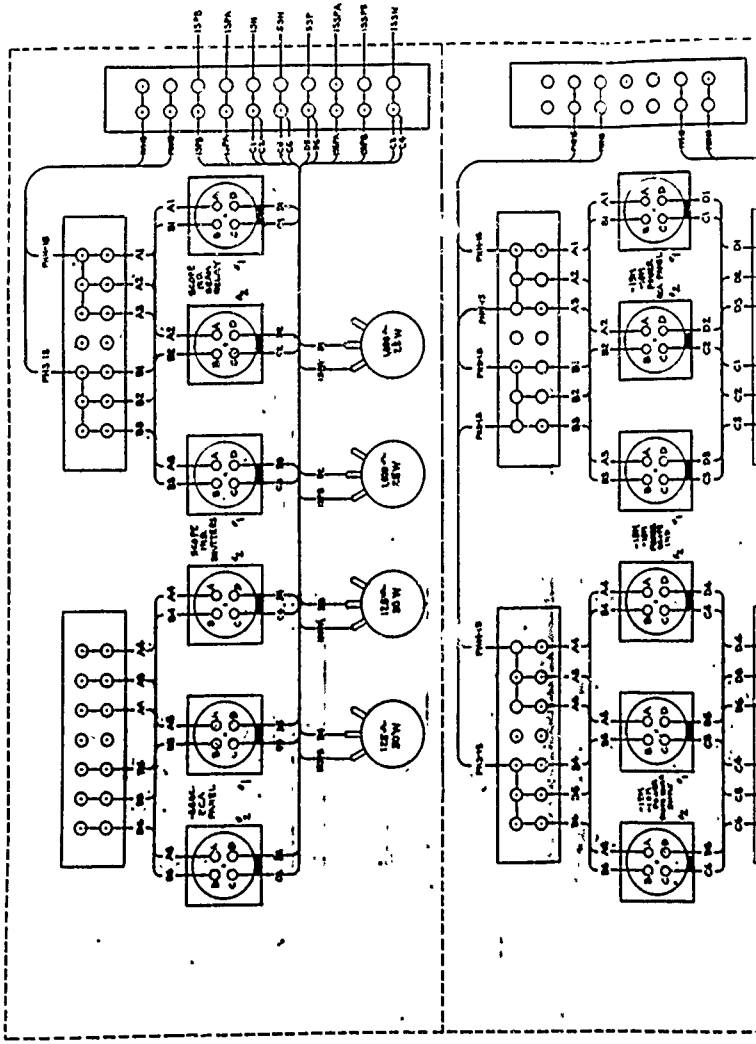
(-95EC RCA PANELS SCOPE IND SHUTTERS, SCOPE IND BEAM RELAY DIST PANEL)

FOR WIRING SEE DWG 3101D8F

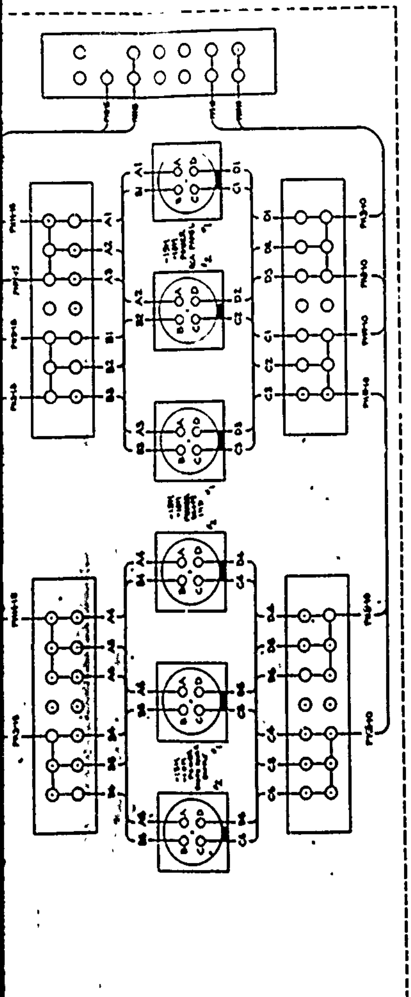
(-19 IND & 15 MIN POWER, RCA PANELS, SCOPE IND, SCOPE POWER SUPPLY)




#15 MIN. SIG RELAY
#10 MIN. SIG RELAY
SHUTTER #1 SEC SIG.
#5 SEC. SIG. RELAY
TO RACK #3
TO RACK #2
CONTROL STATION WIRING RACK #4



NOTE:
WIRING VIEWED FROM REAR OF PANEL
ALL WIRE TO BE #12 STRANDED, PLASTIC INSULATION
CONNECTORS TO BE AMPHENOL AN-3108-20-4S

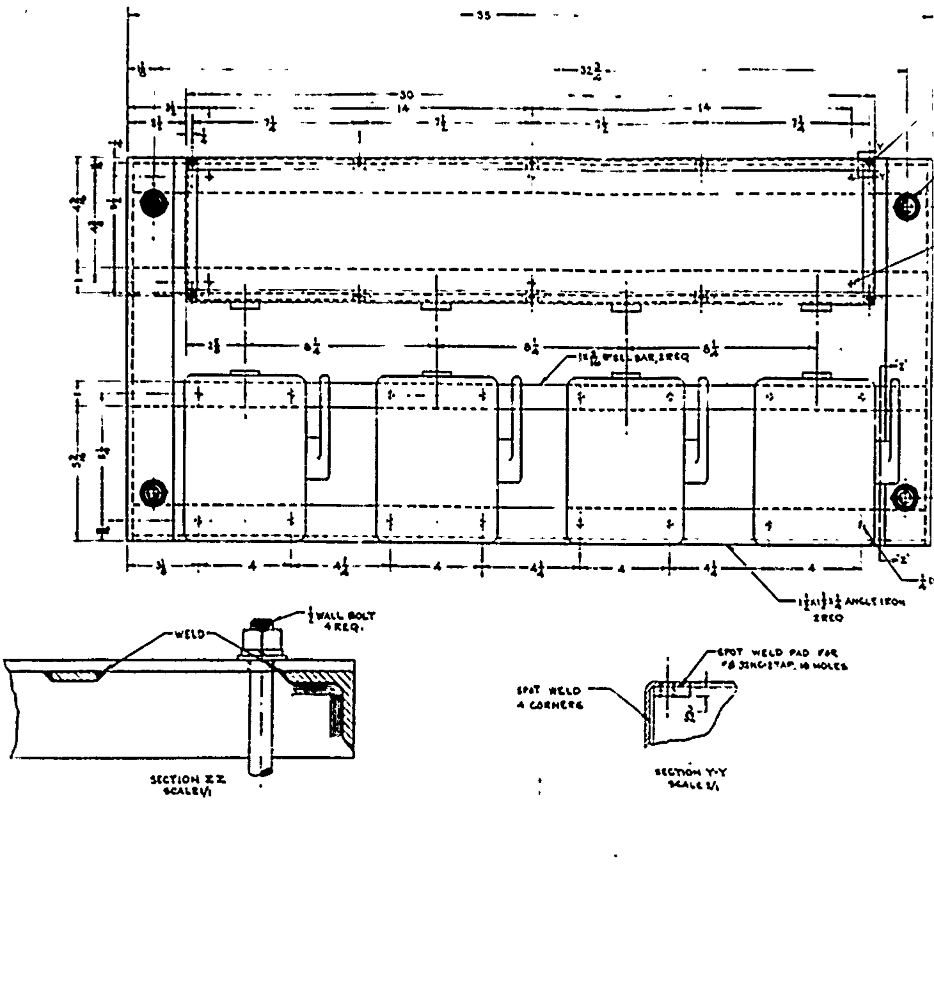


WED FROM REAR OF PANEL
TO BE #12 STRANDED, PLASTIC INSULATION
RS TO BE AMPHENOL AN-3102-28-4S

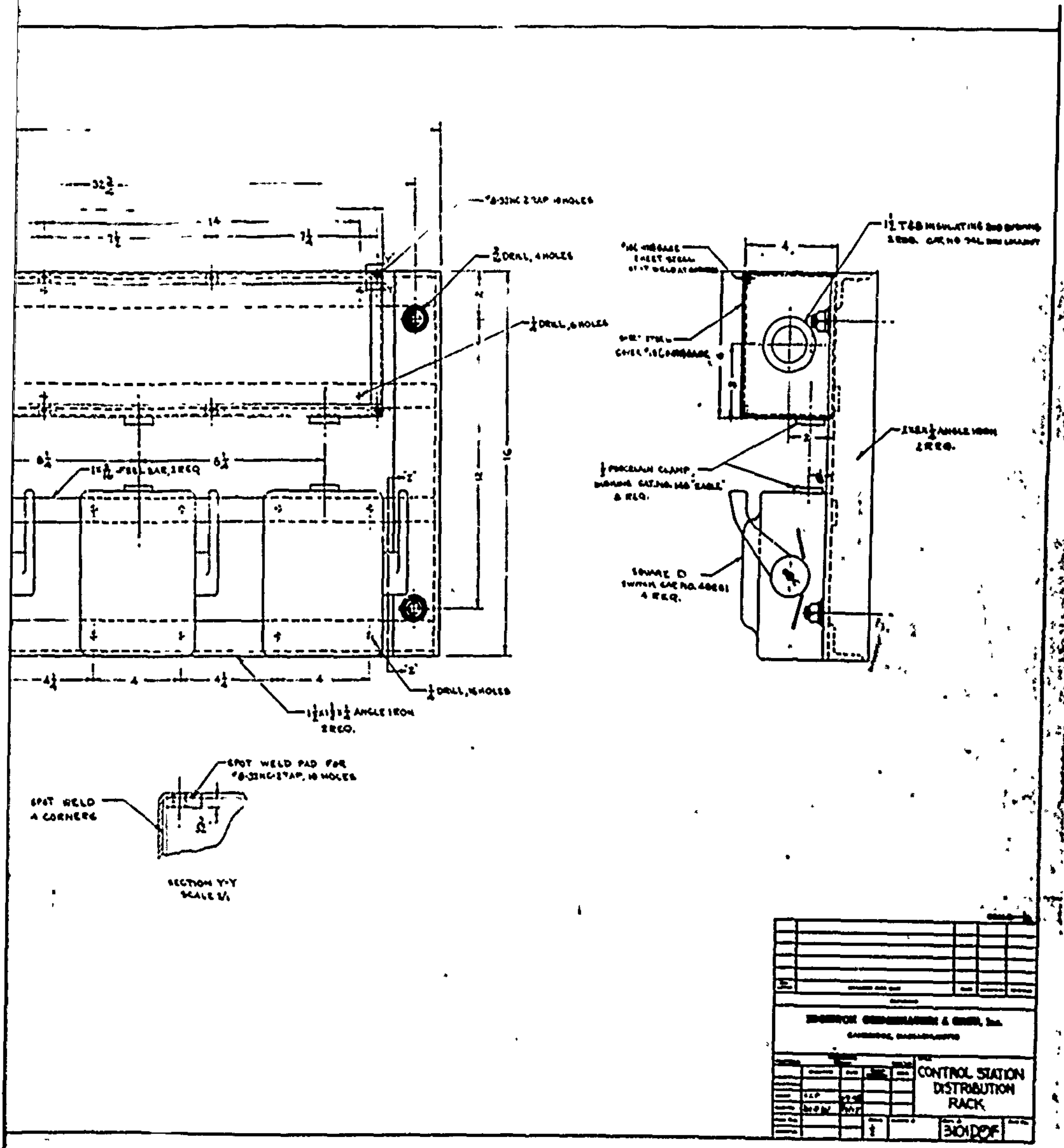
WIRING DIAGRAM, SCOPE
DISTRIBUTION PANELS
CONTROL STATION

A.A.P.
M.M.

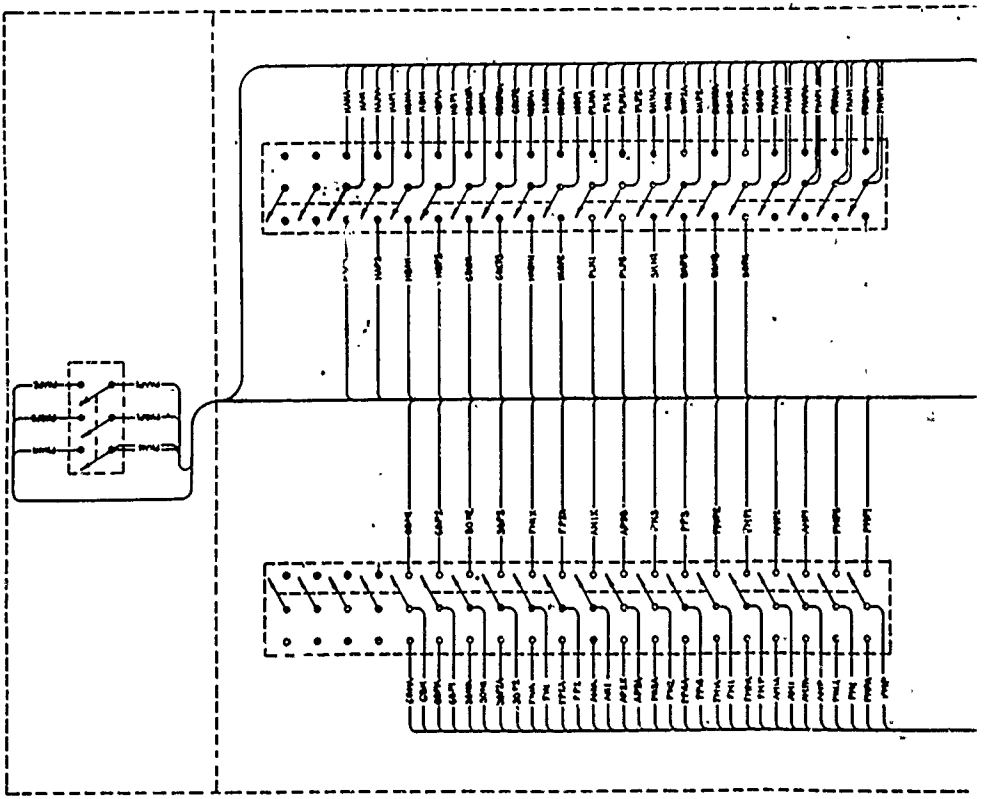
3101D8F



WELD
$\frac{1}{2}$ WALL BOLT 4 REQ.
SECTION Z-Z SCALE 1/1
SPOT WELD 4 CORNERS
SPOT WELD PAD FOR #8 32NC-2 TAP, 16 HOLES
SECTION Y-Y SCALE 2/1
$1\frac{1}{2}$ x $\frac{1}{8}$ x $1\frac{1}{2}$ ANGLE IRON 2 REQ



SPOT WELD
4 CORNERS
SECTION Y-Y
SCALE 1/1
SQUARE D
CONTROL STATION
DISTRIBUTION
RACK

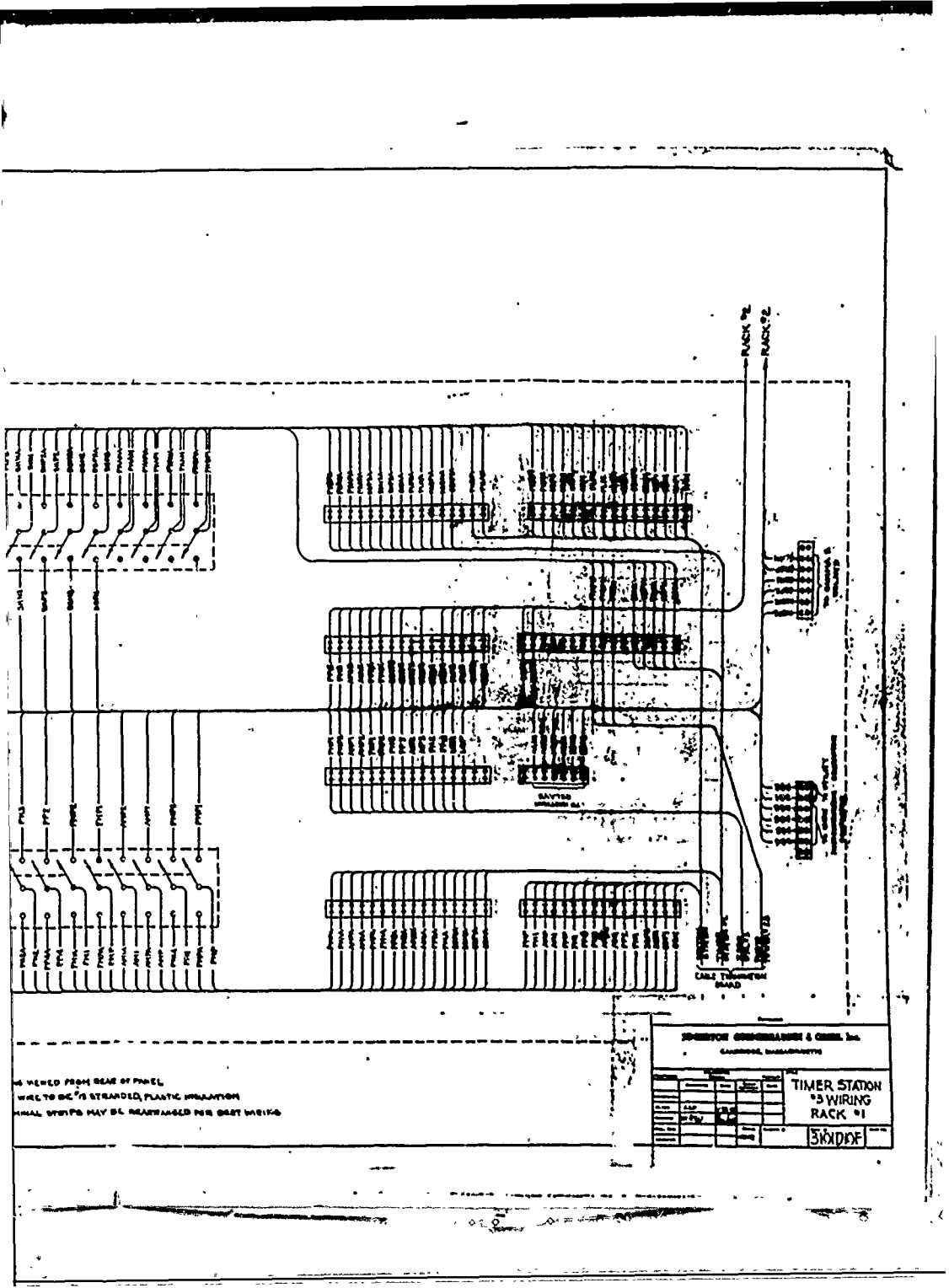


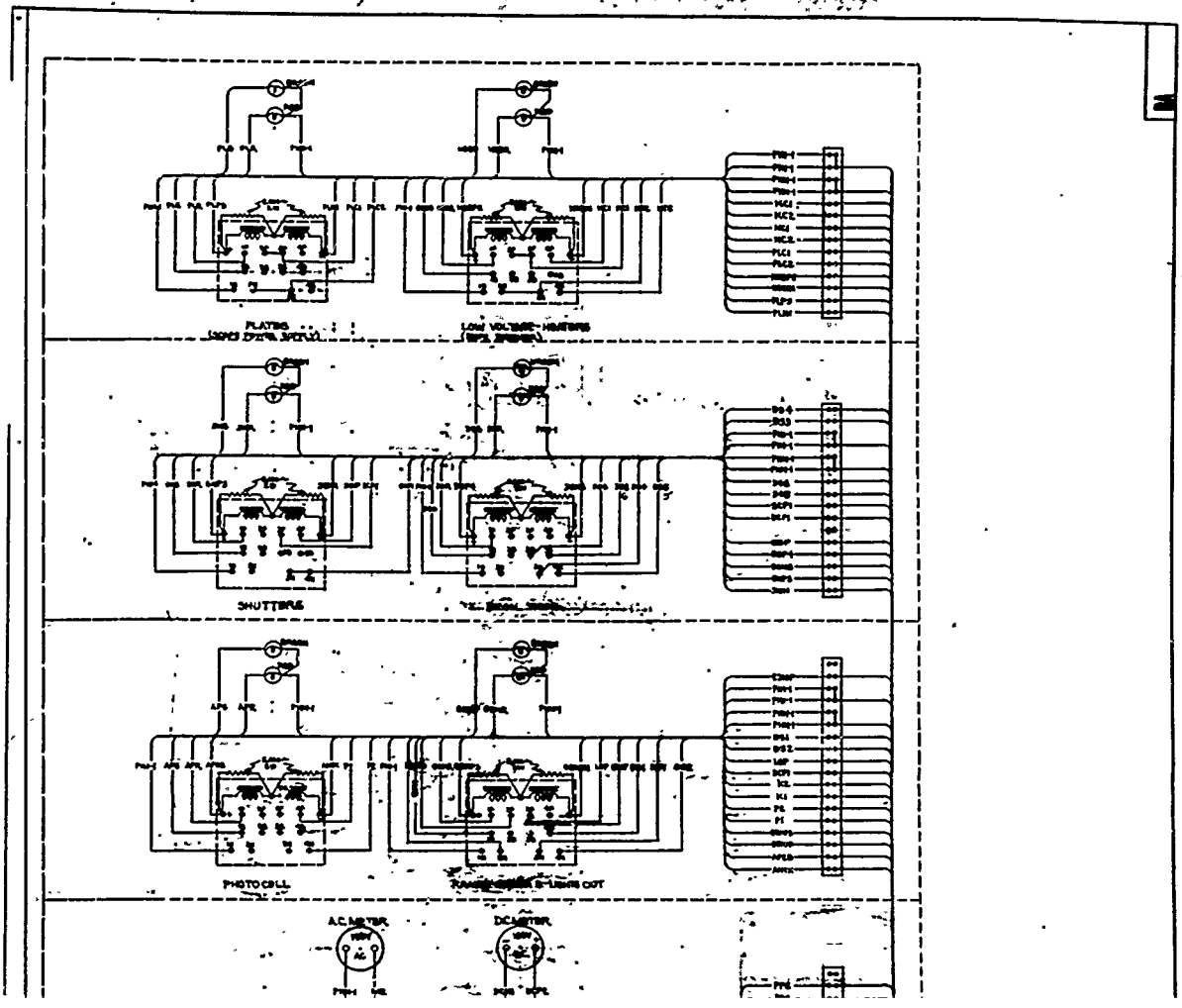
NOTE:

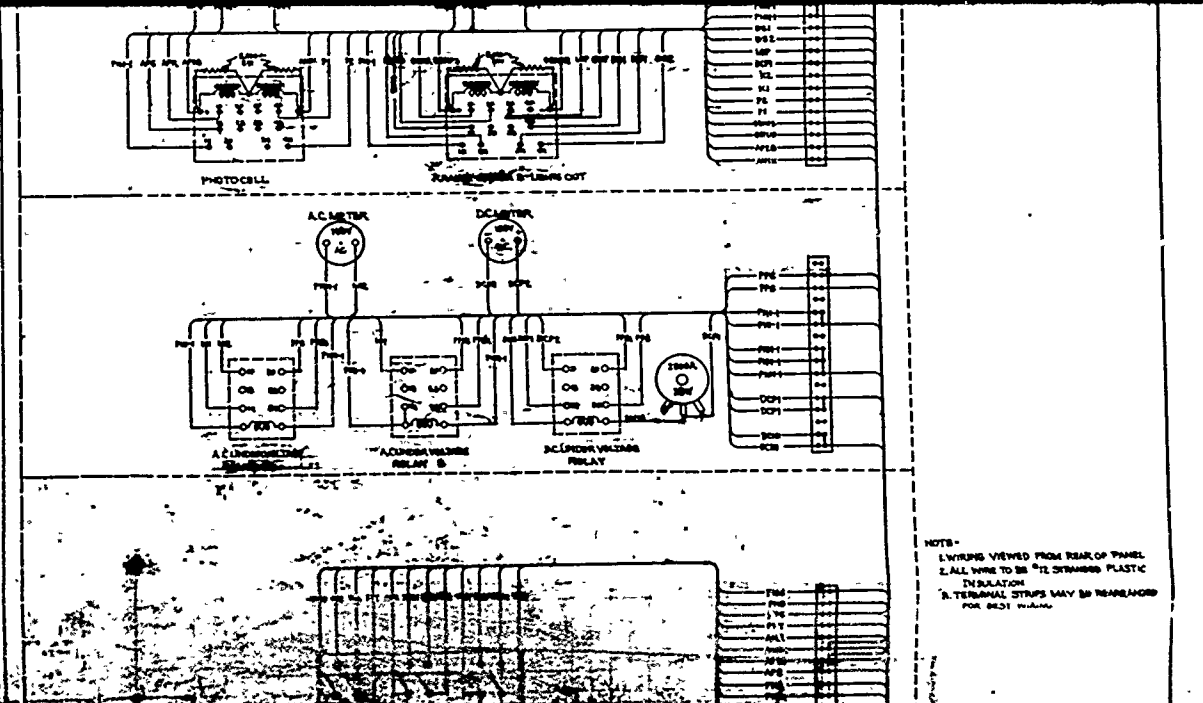
WIRING VIEWED FROM REAR OF PANEL.

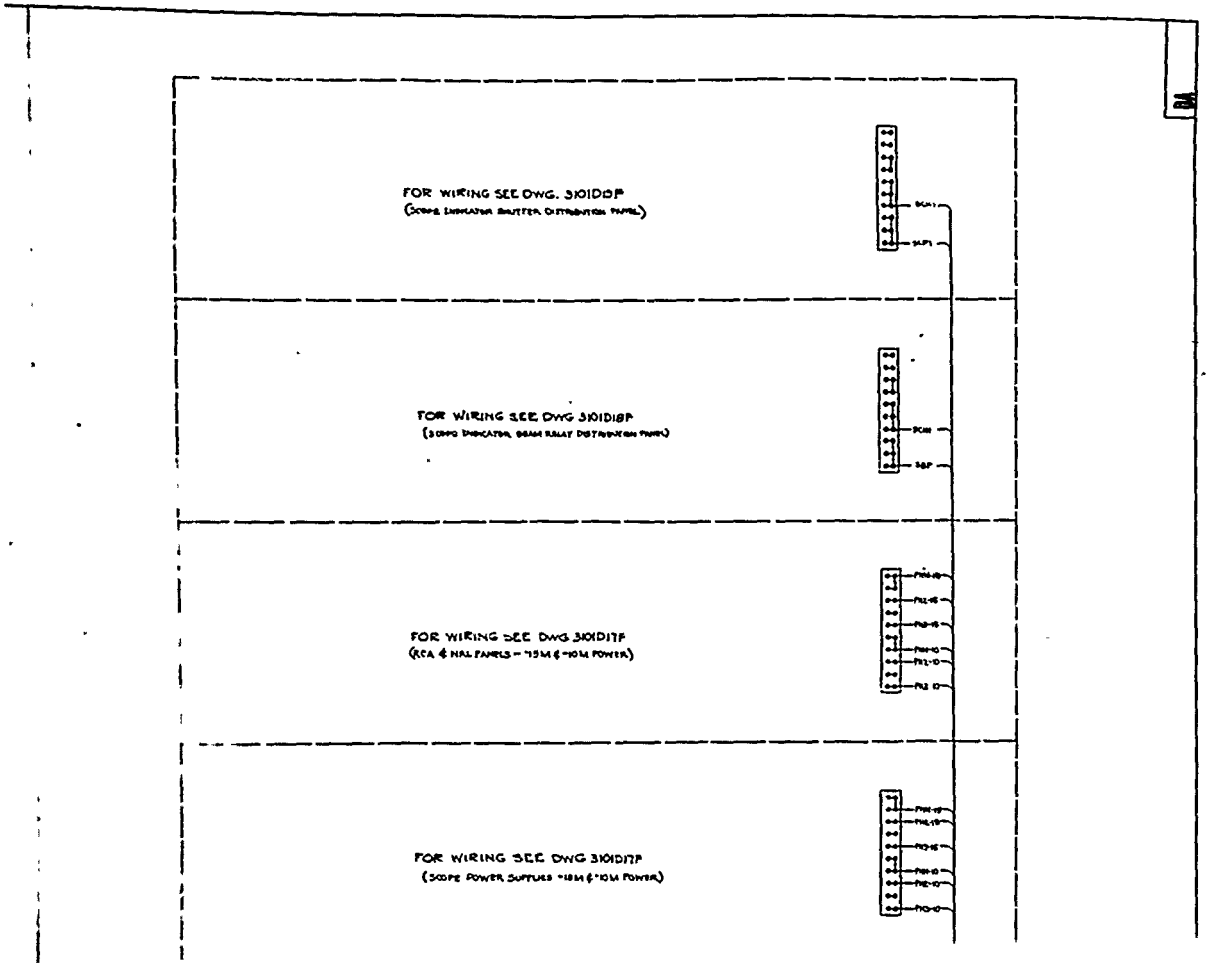
ALL WIRE TO BE 7/28 STRANDED, PLASTIC INSULATION

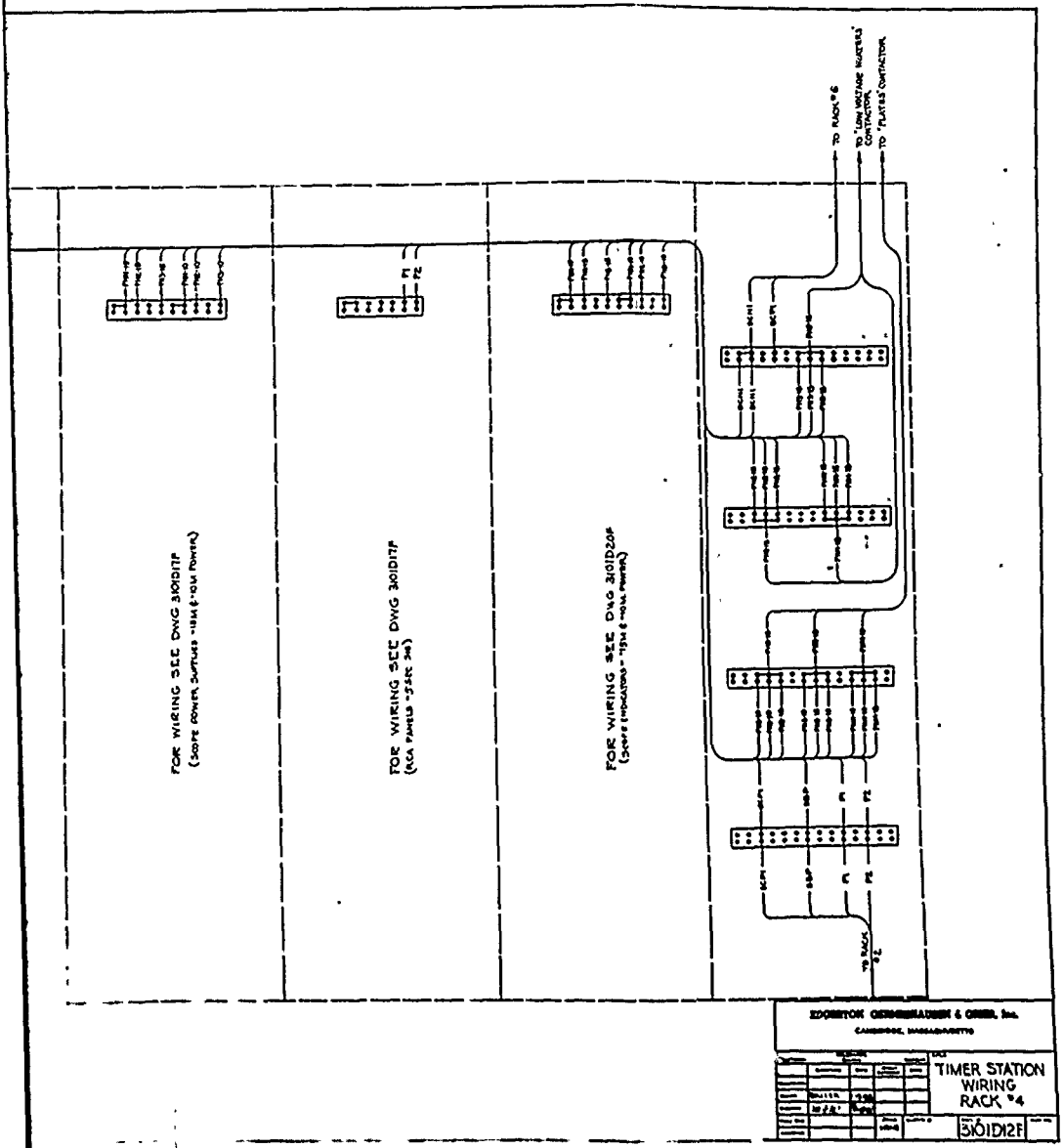
TERMINAL STRIPS MAY BE REARRANGED FOR BEST WIRING


RACK #1
RACK #2
CABLE TERMINATION BOARD
TIMER STATION #3 WIRING RACK #1
3KXIDDF


PLATING
LOW VOLTAGE HEATERS
SHUTTERS
PHOTO CELL
A.C. METER
D.C. METER


PHOTOCELL
A.C. METER
D.C. METER
NOTES -
1. WIRING VIEWED FROM REAR OF PANEL
2. ALL WIRE TO BE #12 STRANDED PLASTIC INSULATION
3. TERMINAL STRIPS MAY BE REARRANGED FOR BEST WIRING
TIMER STATION WIRING RACK #12
500IIF

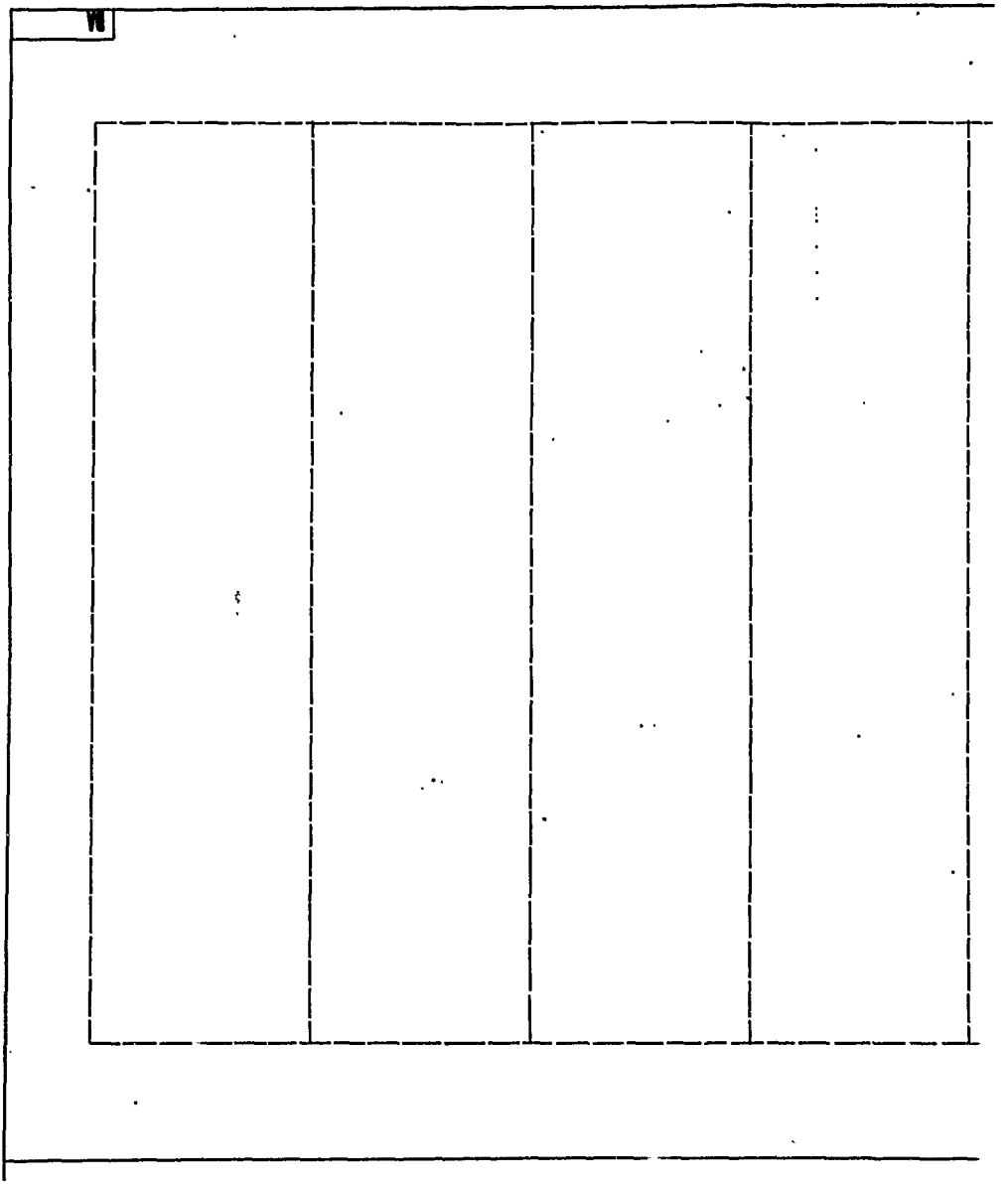

FOR WIRING SEE DWG. 3101D0P
(SCOPE SIMULATOR BREITER DISTRIBUTION PANEL)
FOR WIRING SEE DWG 3101D18P
(SCOPE INDICATOR, BEAM RELAY DISTRIBUTION PANEL)
FOR WIRING SEE DWG 3101D17F
(RCA & NAL PANELS - 115M & -10M POWER)
FOR WIRING SEE DWG 3101D17F
(SCOPE POWER SUPPLIES +18M & +10M POWER)

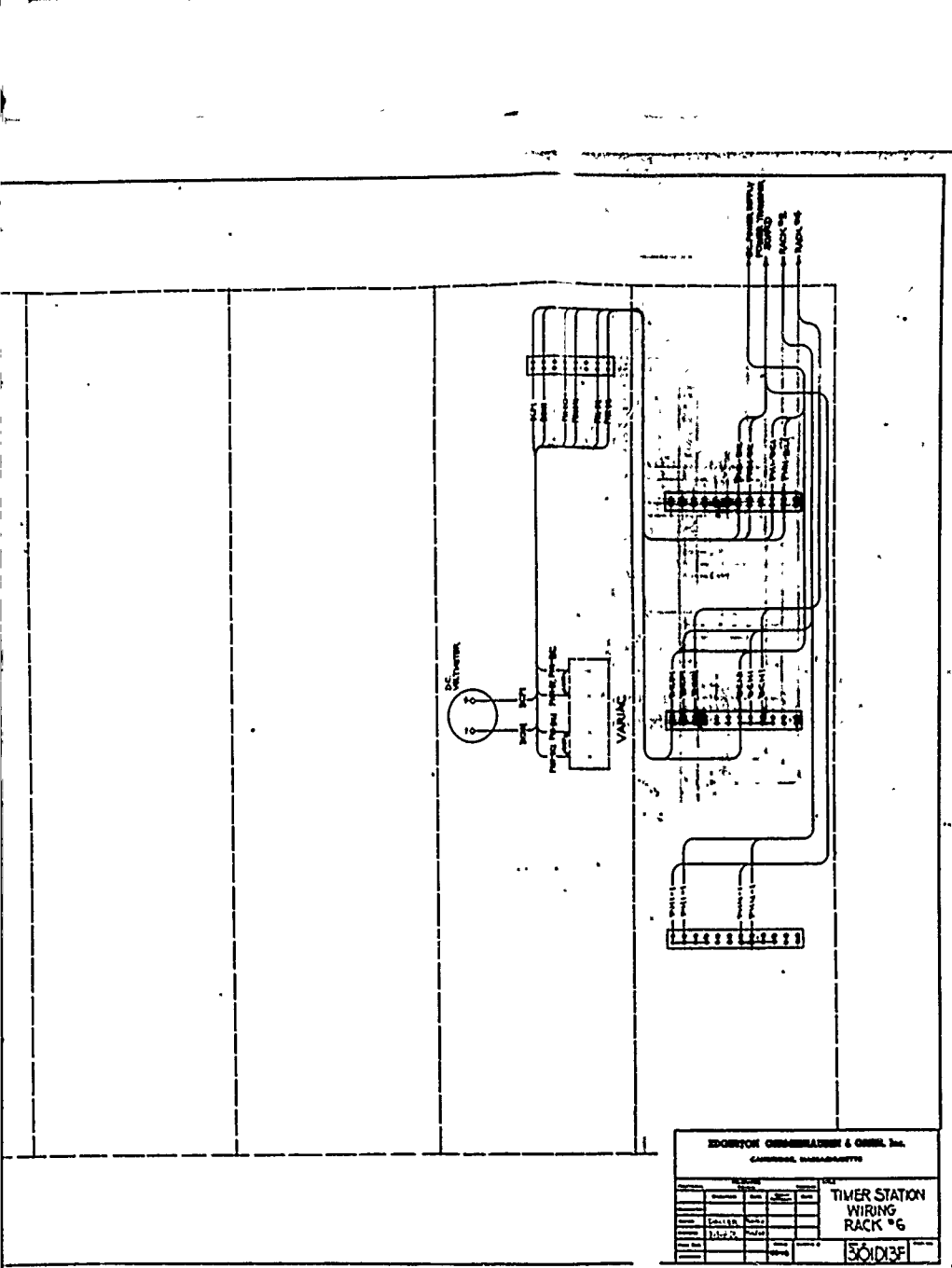


EDGERTON, GERMESHAUSEN & GRIER, Inc.
CAMBRIDGE, MASSACHUSETTS

TIMER STATION WIRING RACK #4

310D121F

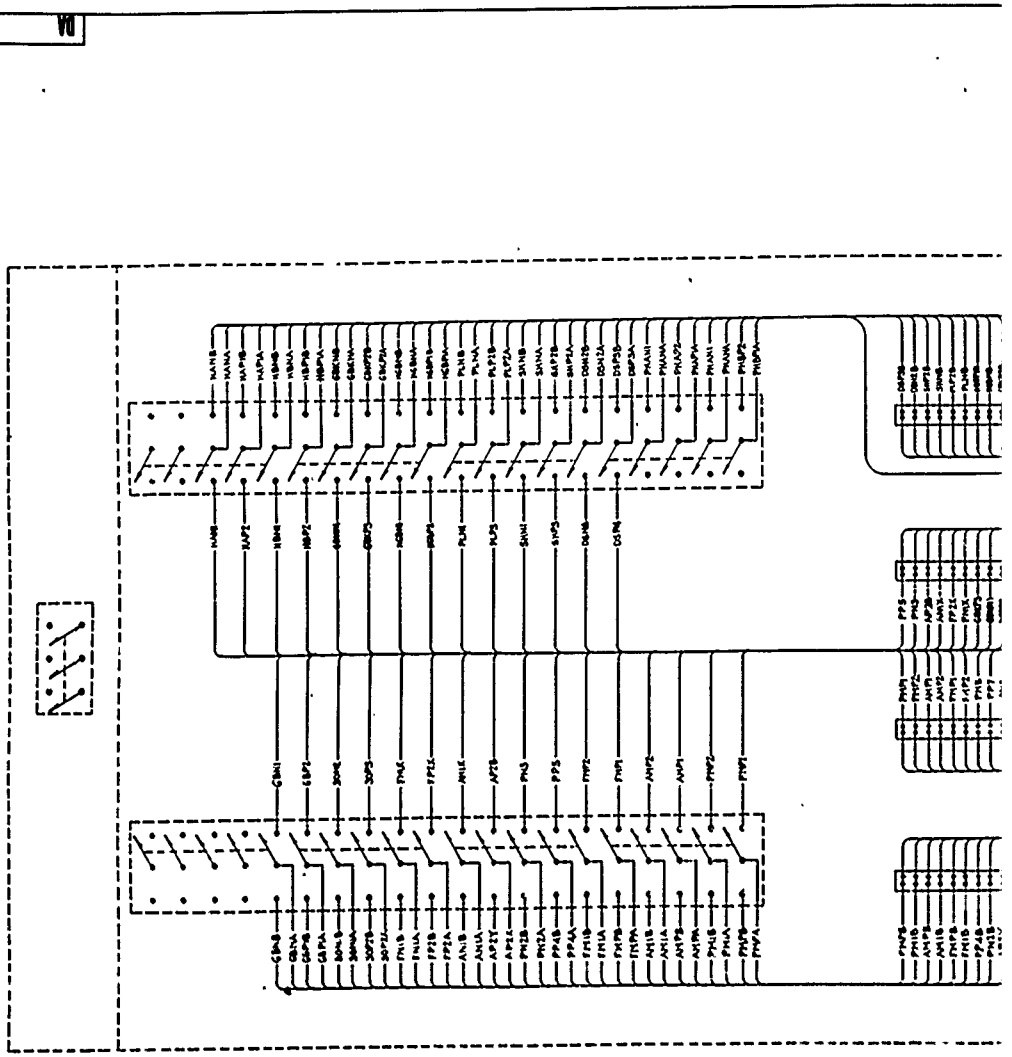




EDGERTON GERMESHAUSEN & GRIER, Inc.
CAMBRIDGE, MASSACHUSETTS

TIMER STATION
WIRING
RACK "G"

SOI D13F

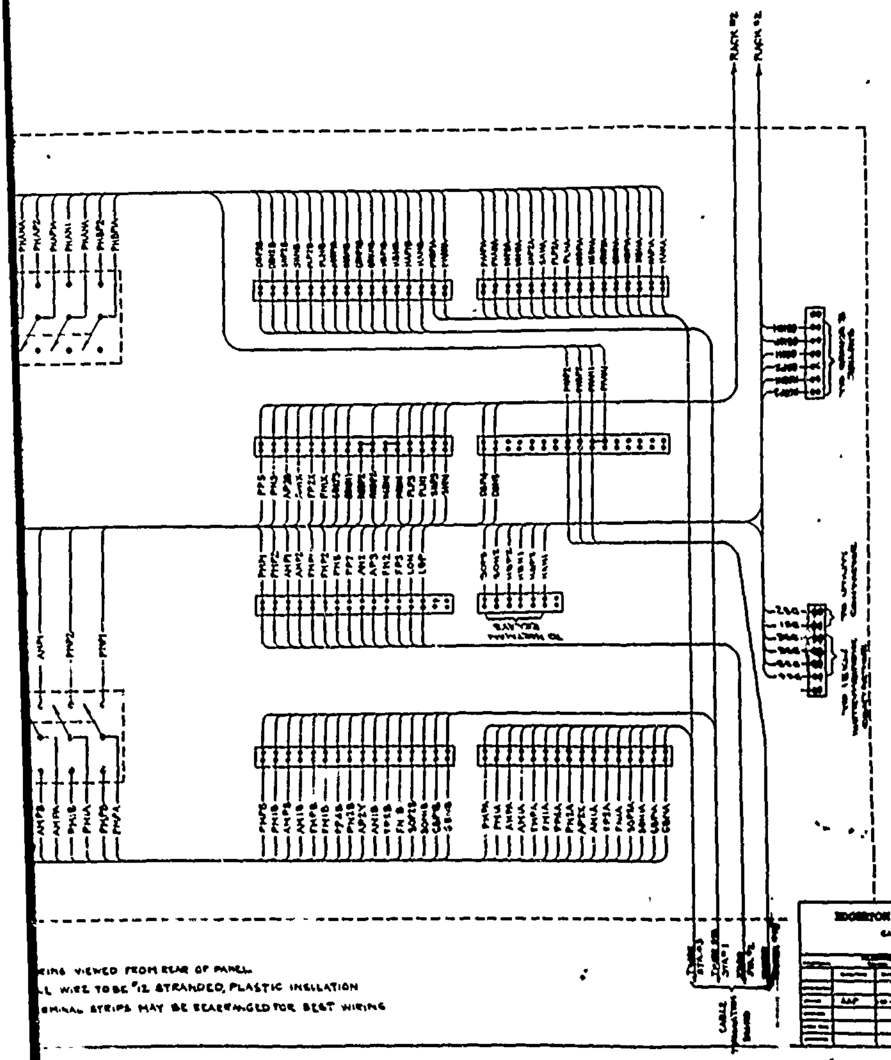


NOTE

WIRING VIEWED FROM REAR OF PANEL.

ALL WIRE TO BE #12 STRANDED, PLASTIC INSULATION

TERMINAL STRIPS MAY BE REARRANGED FOR BEST WIR

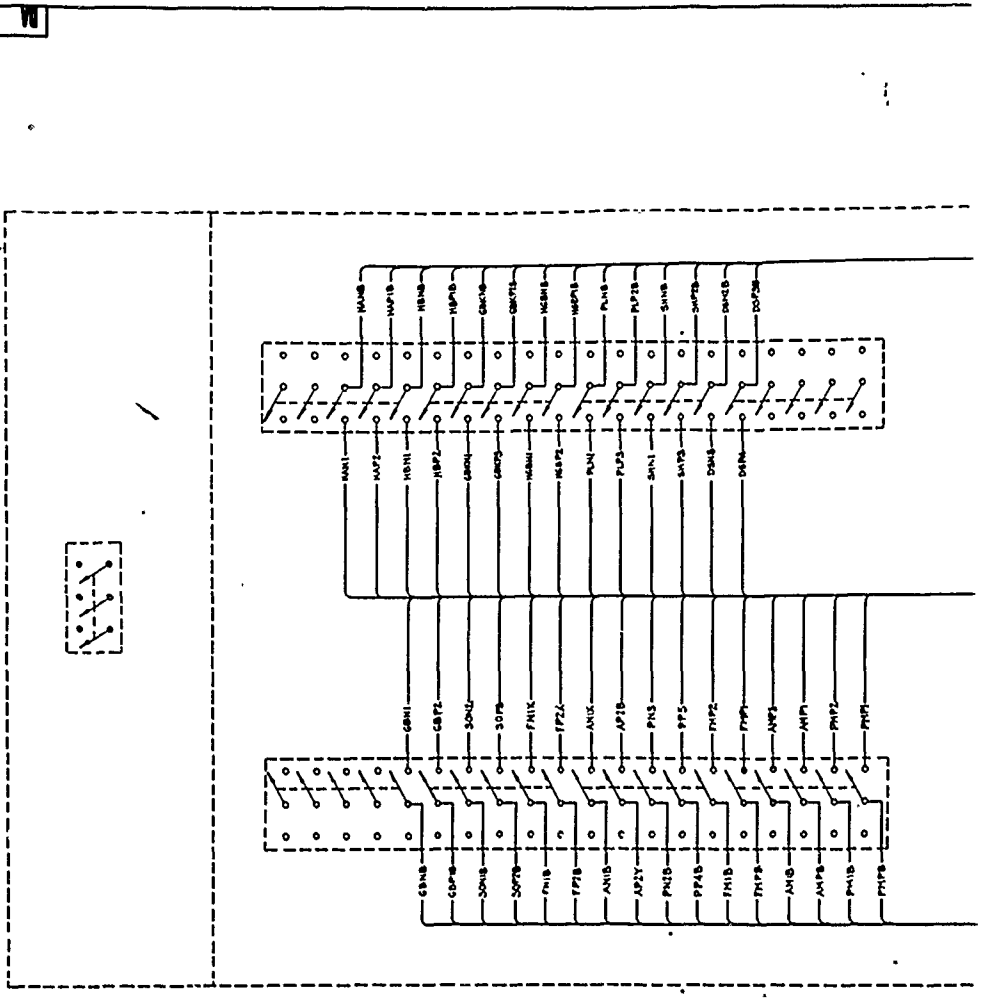


...RING VIEWED FROM REAR OF PANEL.
...LL WIRE TO BE #12 STRANDED, PLASTIC INSULATION
...ERMINAL STRIPS MAY BE REARRANGED FOR BEST WIRING

EDGERTON, GERMESHAUSEN & GRIER, INC.
CAMBRIDGE, MASSACHUSETTS

TIMER STATION #2 WIRING RACK #1

310IDI4F

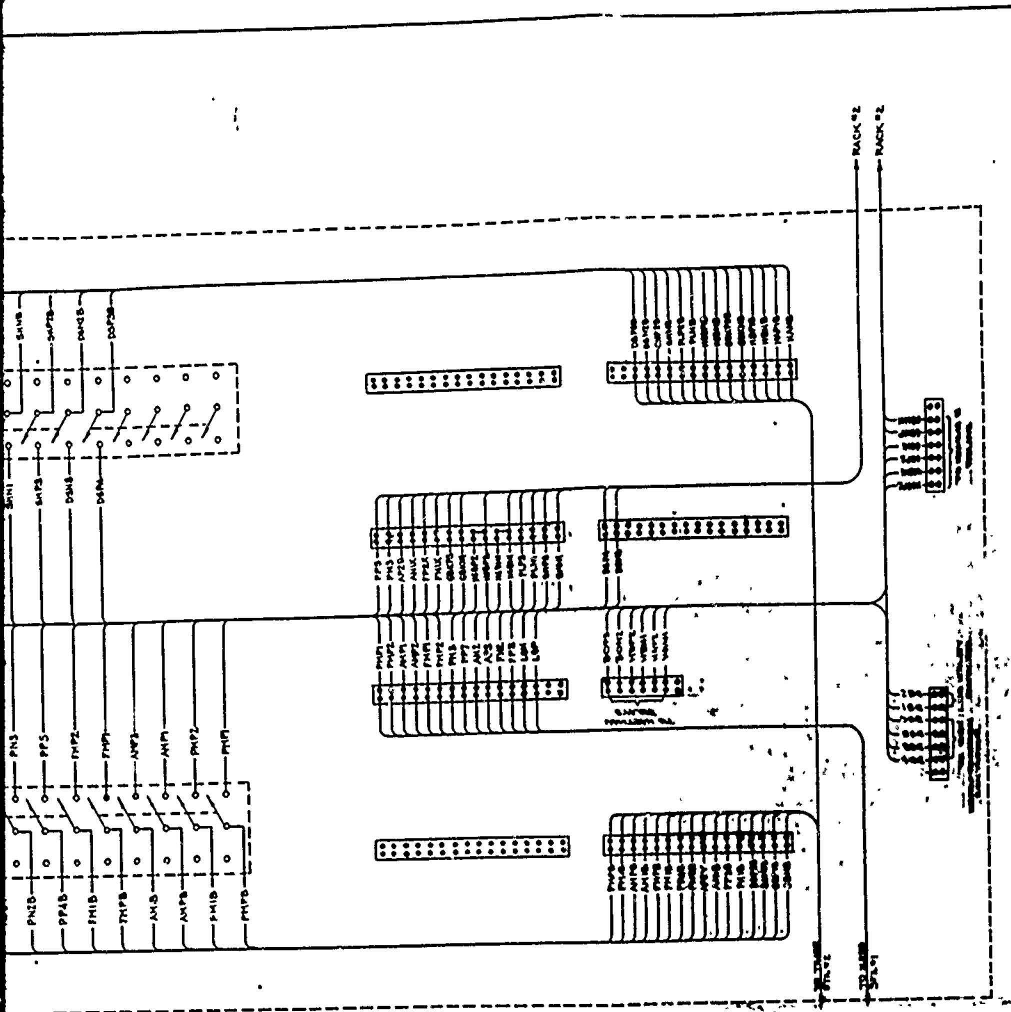


NOTE:

WIRING VIEWED FROM REAR OF PANEL

ALL WIRE TO BE #18 STRANDED PLASTIC INSULATION

TERMINAL STRIPS MAY BE REARRANGED FOR BEST WIRING

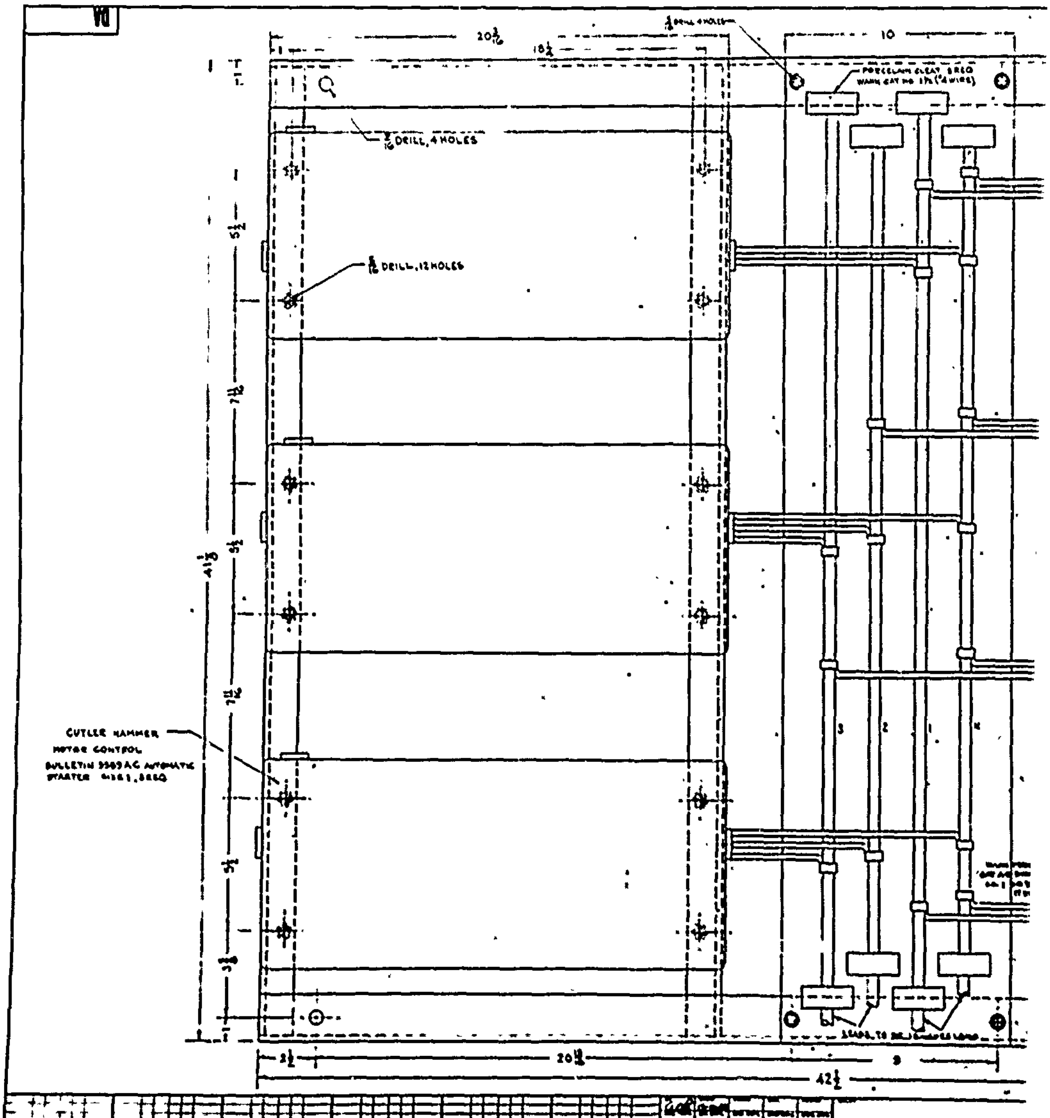


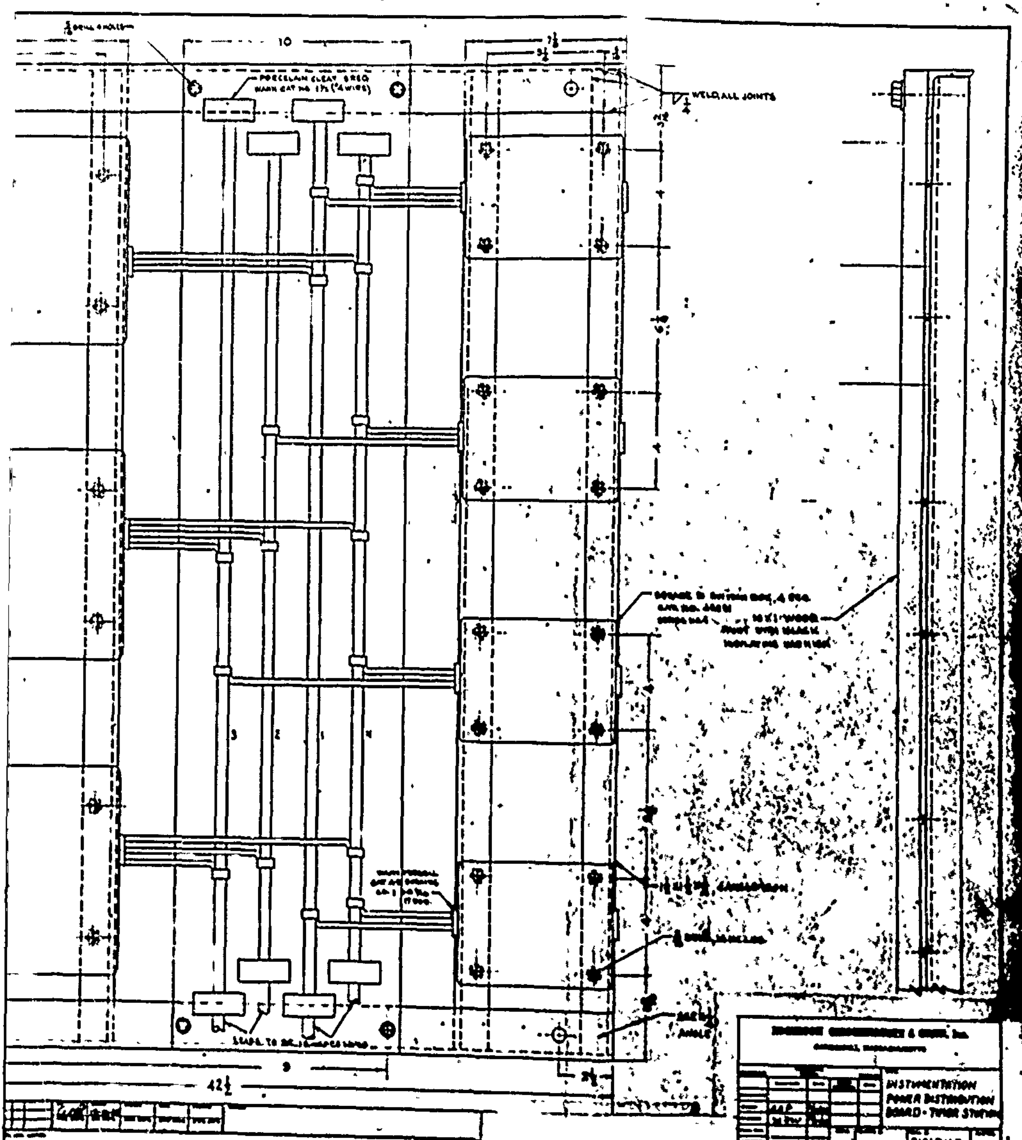
...S VIEWED FROM REAR OF PANEL
...WIRE TO BE #12 STRANDED PLASTIC INSULATION
...INAL STRIPS MAY BE REARRANGED FOR BEST WIRING

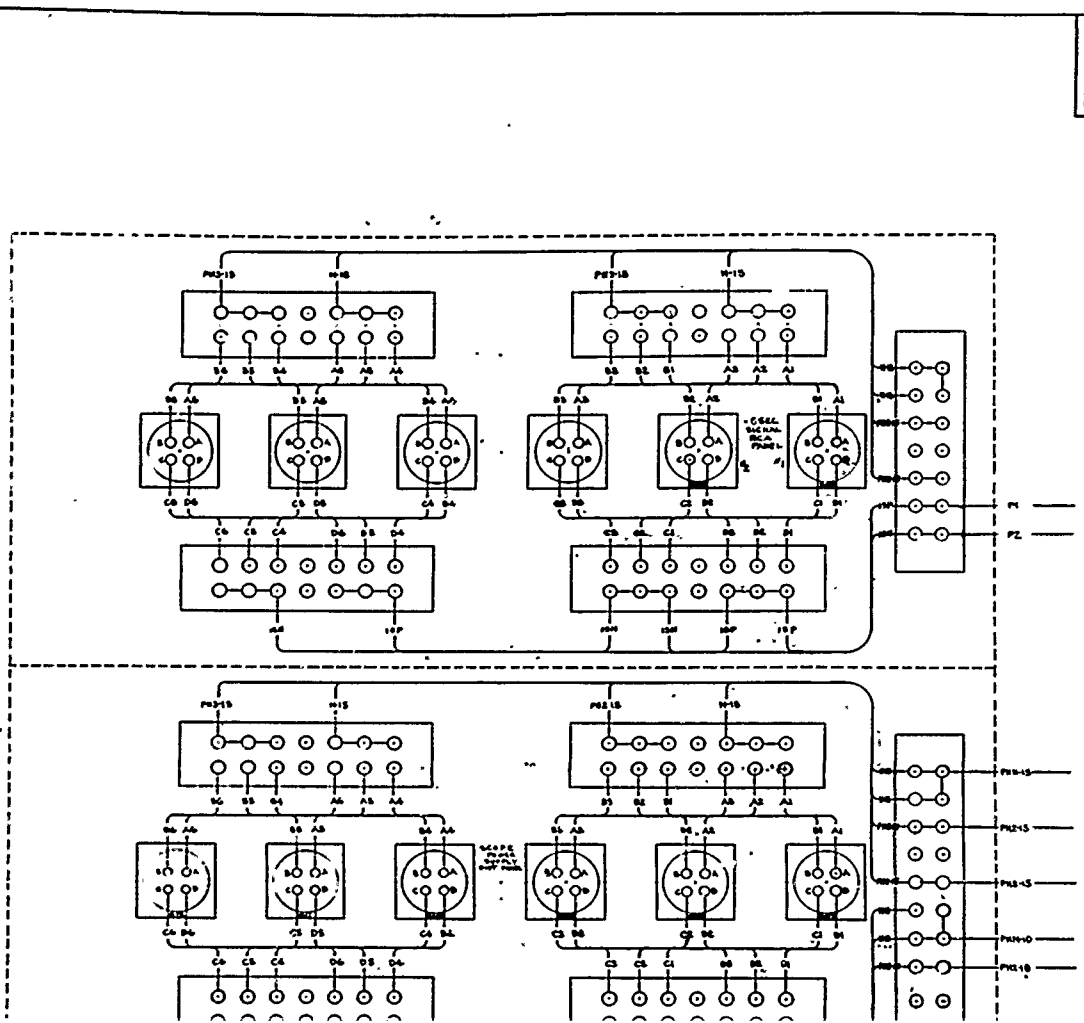
CAMBRIDGE, MASSACHUSETTS

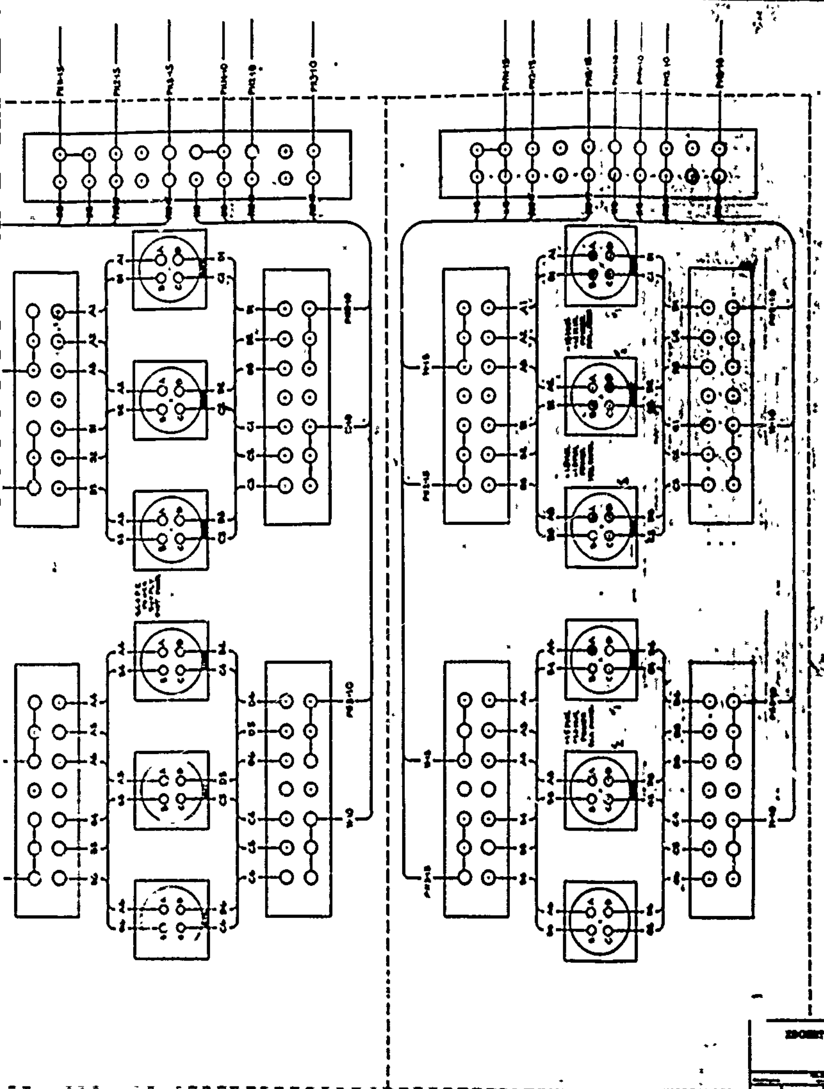
TIMER STATION NO.1 WIRING - RACK #1

5101D15F


DRILL, 4 HOLES
DRILL, 12 HOLES
CUTLER HAMMER
MOTOR CONTROL
10
42½


10
PORCELAIN CLEAT
WELD ALL JOINTS
9
42½
INSTRUMENTATION
POWER DISTRIBUTION
BOARD - TIMER STATION
3401 D46F



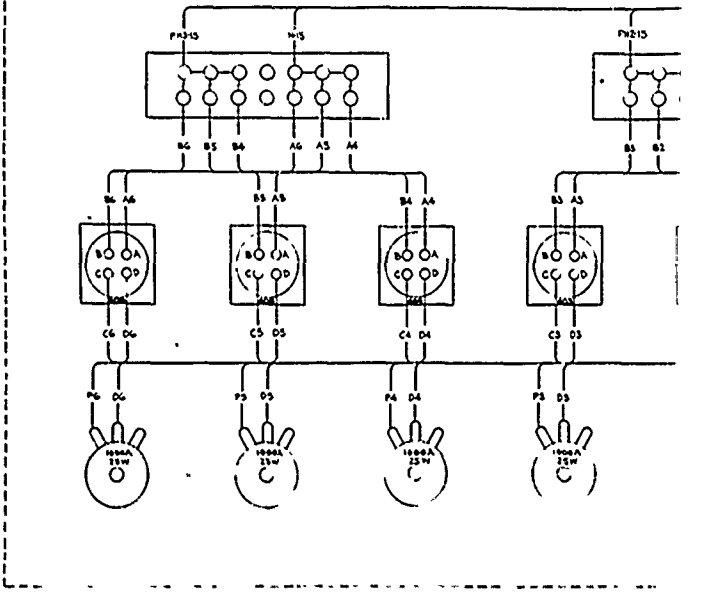


NOTE:
WIRING VIEWED FROM REAR OF PANEL
ALL WIRE TO BE #22 ... STRANDED, PLASTIC INSULATION
CONNECTORS TO BE AMPHENOL AN-3108-20-...

EDGERTON, GERMESHAUSEN & GRIER, Inc.
CAMBRIDGE, MASSACHUSETTS

WIRING DIAGRAM, SCOPE DISTRIBUTION PANELS TIMER STATION

3101017F



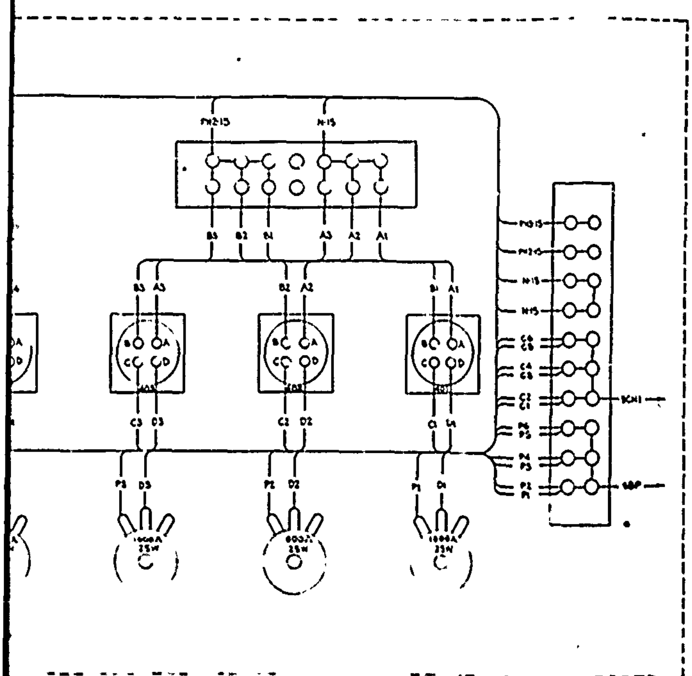
NOTE

WIRING VIEWED FROM REAR OF PANEL.

ALL WIRE TO BE #12 STRANDED PLAST C INSULATION

CONNECTIONS TO BE AMPHENOL AN 3102-20-4S

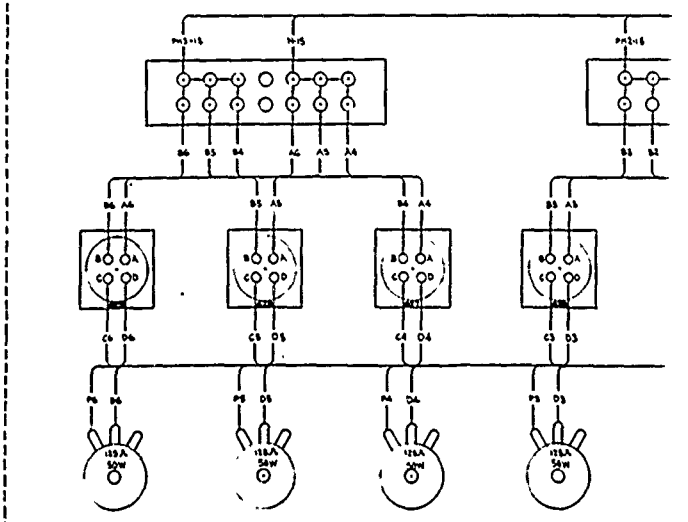
TERMINAL STRIPS MAY BE REARRANGED FOR BEST WIRING



FROM REAR OF PANEL.
STRANDED PLASTIC INSULATION
TO BE AMPHENOL AN 3102-20-4S
PS MAY BE REARRANGED FOR BEST WIRING

EDGERTON, GERMESHAUSEN & GRIER, Inc.
CAMBRIDGE, MASSACHUSETTS

...BEAM RELAY
...STRIBUTION PANEL
TIMER STATION



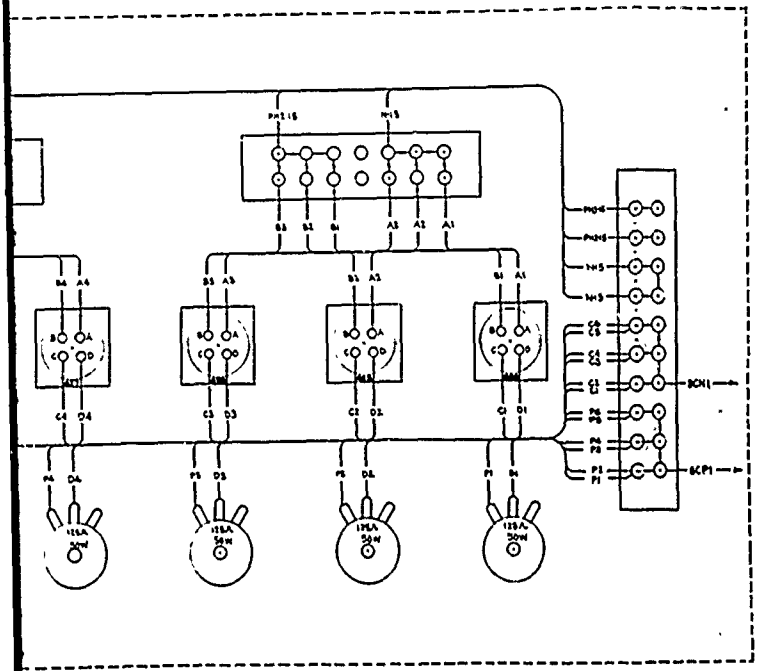
NOTE:

WIRING VIEWED FROM REAR OF PANEL

ALL WIRE TO BE #12 STRANDED, PLASTIC INSULATION

CONNECTORS TO BE AMPHENOL AN-5102-20-4S

TERMINAL STRIPS MAY BE REARRANGED PER BEST WIRI

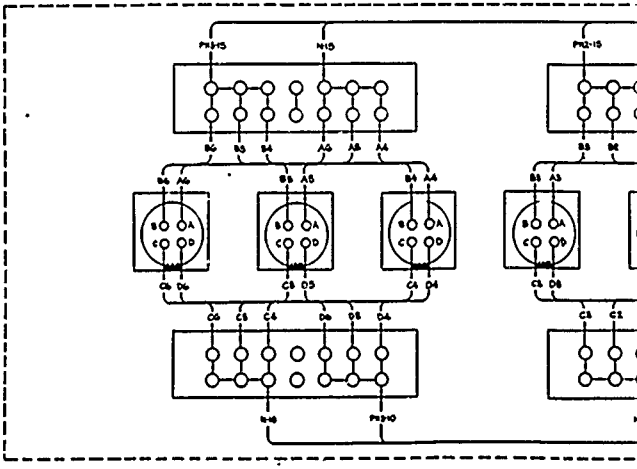


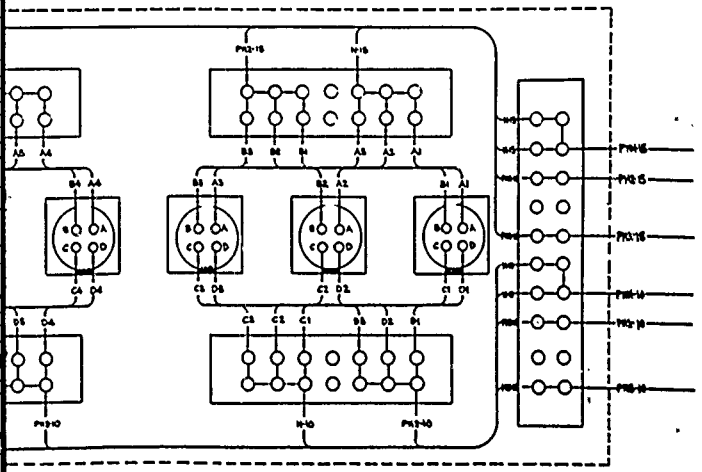
...ing viewed from rear of panel.
... wire to be #16 stranded, plastic insulation
...nectors to be Amphenol AN-3102-20-4S
...minal strips may be rearranged for best wiring

HOUGHTON CHEMICAL & OIL, Inc.
CAMBRIDGE, MASSACHUSETTS

SCOPE SHUTTER DISTRIBUTION PANEL TIMER STATION

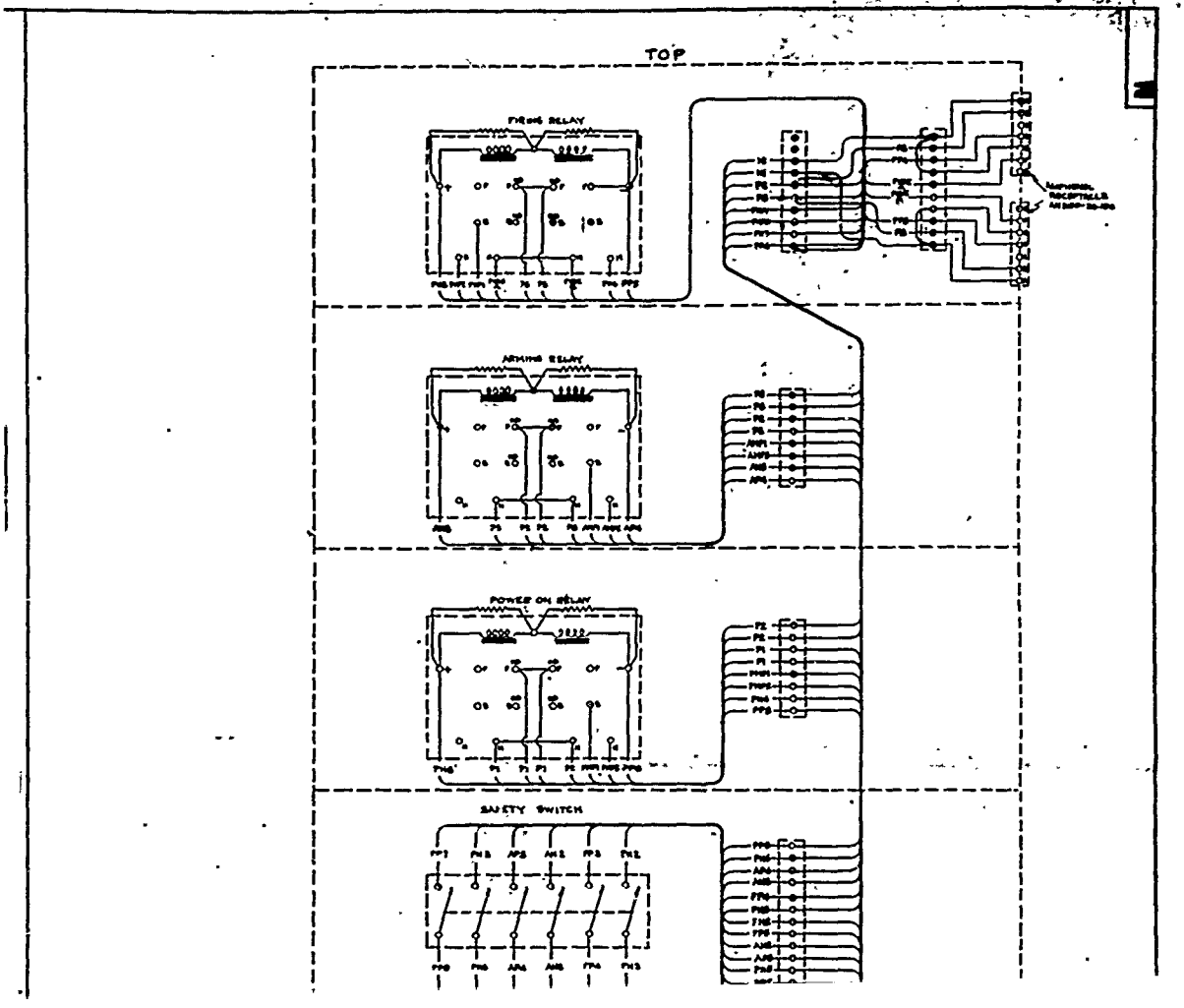
3101D19F

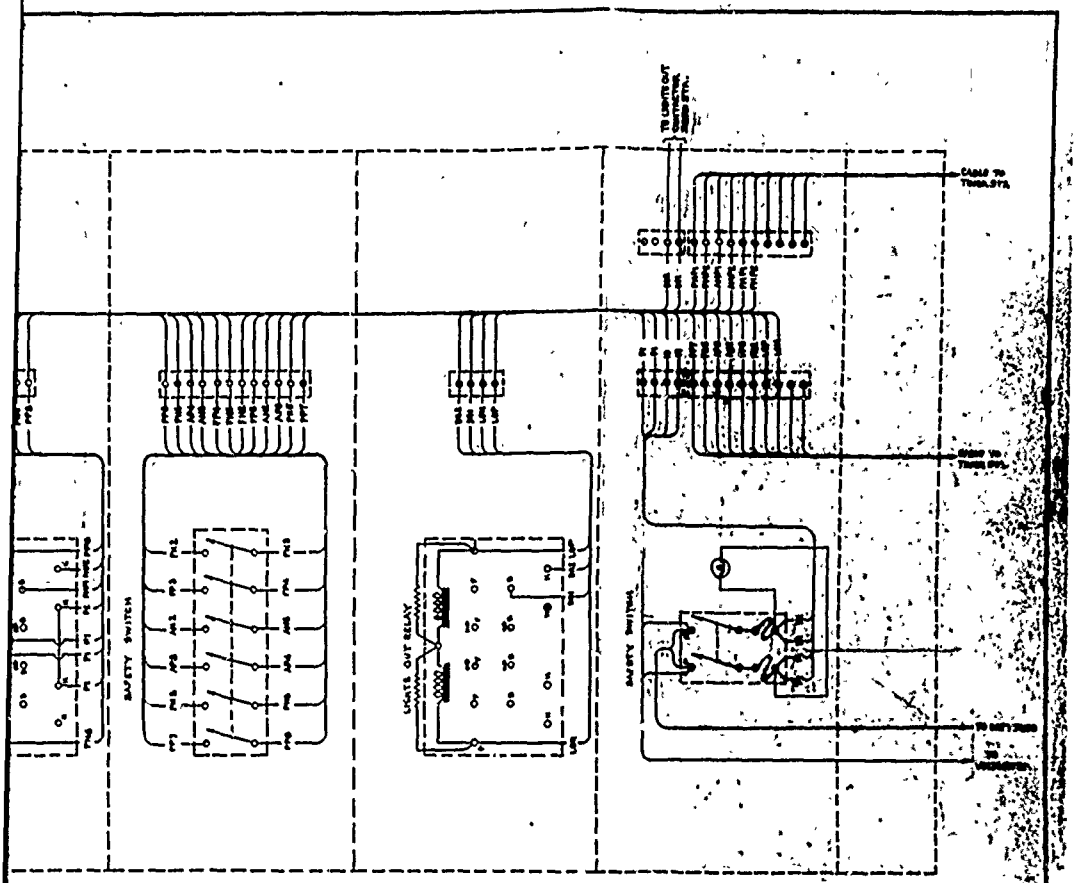

P13-15
N-15
P12-15
B6 B5 B4 A6 A5 A4
B6 A6
B5 A5
B4 A4
B3 A3
B
A
C
D
C6 D6
C5 D5
C4 D4
C3 D3
C6 C5 C4 D6 D5 D4
C3 C2
N-16
P13-16



SCOPE INDICATOR:
POWER DISTRIBUTION
PANEL: TIMER, STATION

SHEET 2 OF


TOP
FIRING RELAY
ARMING RELAY
POWER ON RELAY
SAFETY SWITCH

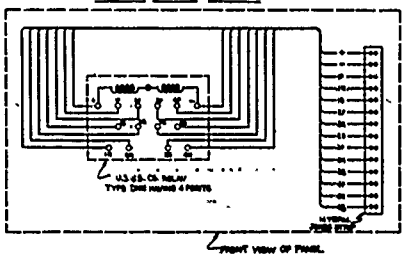


NOTE: WIRING VIEWED FROM FRONT OF PANEL

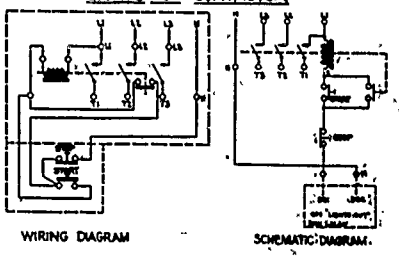
WIRING DIAGRAM
ZERO STATION
RACK

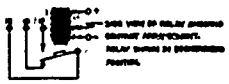
SW-D21F

SINGLE RELAY PANEL



'LIGHTS OUT' CONTACTOR

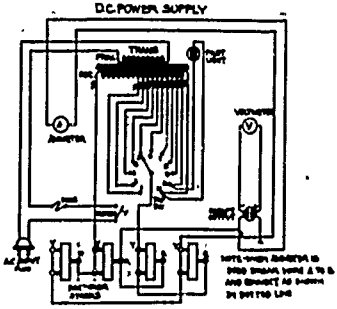




SKETCH "2

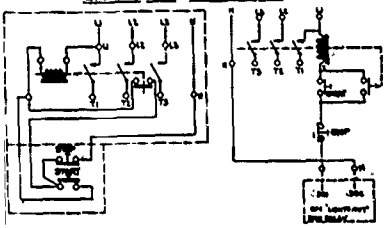
SKETCH "1

D.C. POWER SUPPLY



SKETCH "4

'LIGHTS OUT' CONTACTOR

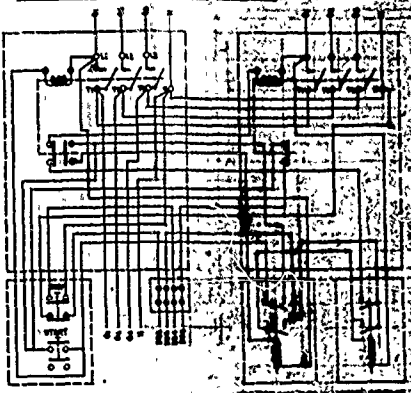


WIRING DIAGRAM

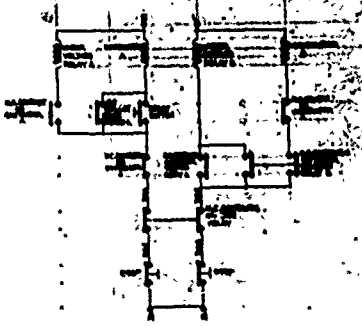
SCHEMATIC DIAGRAM

SKETCH #2

GENERATOR TRANSFER PANEL

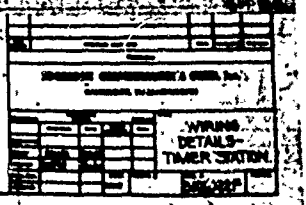


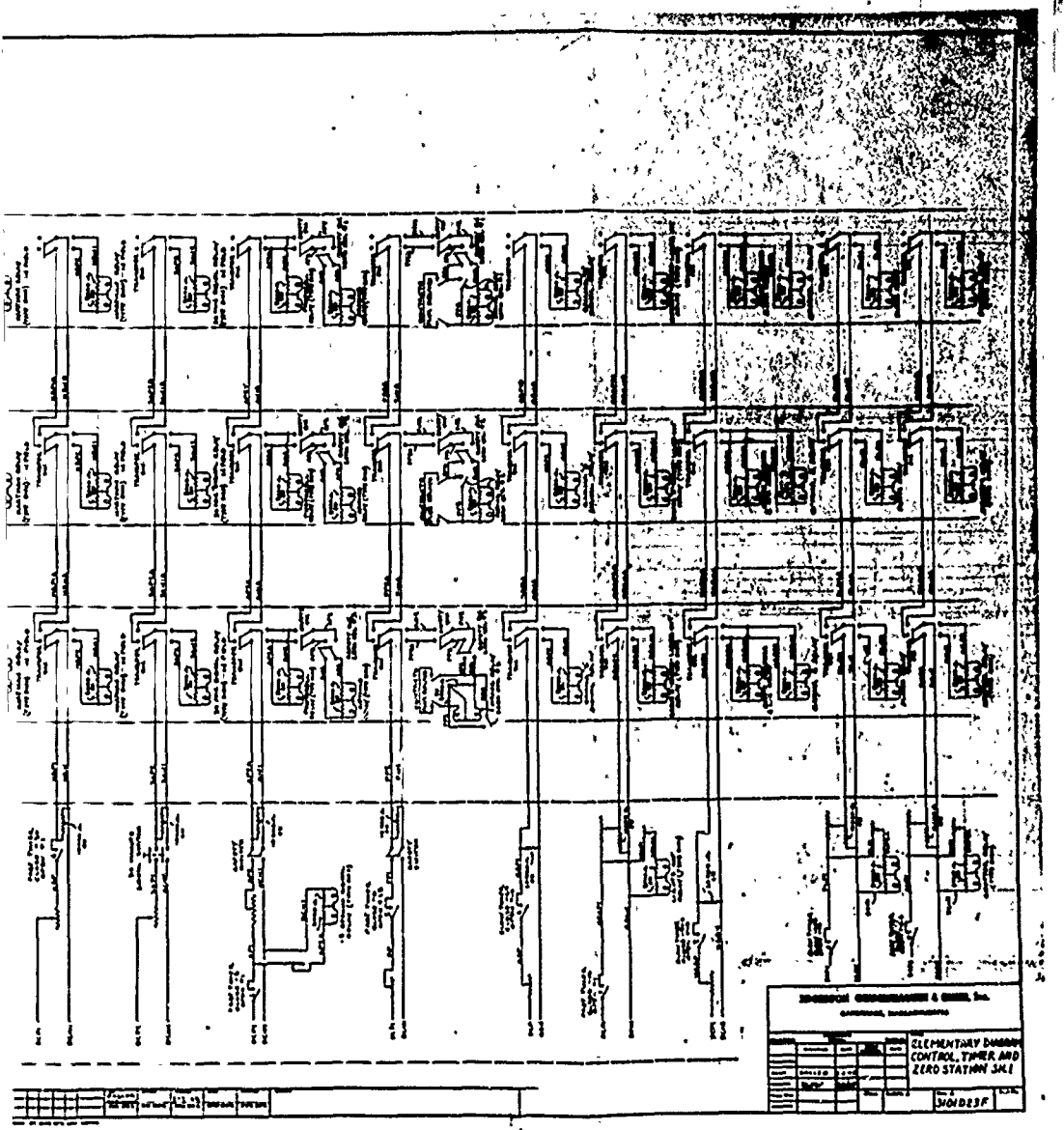
WIRING DIAGRAM



SCHEMATIC DIAGRAM

SKETCH #3




ELEMENTARY DIAGRAM
CONTROL, TIMER AND
ZERO STATION SHT

ELEMENTARY DIAGRAM
CONTROL, TIMER AND
FEED STATIONS SHT 2

3101D24H

CABLE NO	IDENTIFICATION	CABLE & TYPE	FROM	CONNECTOR	ADAPTER	FITTING	TO
300	CONTINUATION [illegible]	10-#12 STRANDED	[illegible] IN TIMER STA.				TRANSFER SW.
301	[illegible]	DO	DO				DO
302	[illegible]	DO	DO				DO
303	CONTINUATION OF [illegible]	DO	DO				DO
304	[illegible] CABLE	DO	DO				DO
305	[illegible]	DO	DO				DO
306	[illegible]	2-#12 STRANDED	DO				DO
307	[illegible]	DO	DO				DO
308	[illegible]	DO	DO				DO
309	CABLE [illegible]	DO	DO				DO
310	[illegible]	DO	DO				DO
311	[illegible]	DO	DO				DO
312	[illegible]	10-#12 STRANDED	DO				DO
313	[illegible]	DO	DO				DO
314	[illegible]	3-#12 STRANDED	DO				DO
315	GAMMA [illegible]	2-#4 STRANDED	RELAY RACK				GAMMA STAT[illegible]
316	" " [illegible]	DO	DO				DO
317	" " [illegible]	DO	DO				DO
318	HARTMAN [illegible]	2-#4 STRANDED	DO				HARTMAN BLAS[illegible]
319	" [illegible]	DO	DO				"
320	" [illegible]	DO					"
321							
322							
323	[illegible]	2-#[illegible] STRANDED	RELAY RACK				UTILITY GEN. [illegible]
324	UTILITY POWER [illegible]	4-#4 STRANDED	UTILITY [illegible]				TIMER STATION
325	[illegible]	2-#4 STRANDED	RELAY RACK				INST. POWER DI[illegible]
326	INSTRUMENTATION POWER	4-#4 STRANDED	INSTRUMENTATION [illegible]				DO
327	-15 MIL. POWER	4-#12 STRANDED	INST. POWER DIST. BOARD				SCOPE DIST. [illegible]
328	-15 MIL. POWER CONTROL	2-#12 STRANDED	RELAY RACK				INST. POWER DI[illegible]
329	-10 MIL. POWER	4-#12 STRANDED	INST. POWER DIST. BOARD				SCOPE DIST.
330	-10 MIL. POWER CONTROL	2-#12 STRANDED	RELAY RACK				INST. POWER DI[illegible]
331	[illegible]	2-#12 STRANDED	INST. POWER DIST. BOARD				D.C. SUPPLY [illegible]
332	[illegible] TO RELAY RACK	2-#[illegible] STRANDED	DO				RELAY RAC[illegible]
333	[illegible]	2-#[illegible] STRANDED	RELAY RACK				INST. POWER DIS[illegible]
334	[illegible]	RG 58/U	PHOTO CELL 1	PL-259	UG 176/U		SCOPE #3 [illegible]
335	[illegible]	RG 58/U	" " 2	PL-259	UG 176/U		SCOPE #4
336	[illegible]	[illegible]	[illegible] IN TIMER STA.				ZERO STA[illegible]
337	[illegible]	[illegible]	[illegible] IN TIMER STA.				ZERO STA[illegible]
338	[illegible]	2-#[illegible] STRANDED	ZERO STATION				ZERO STA. [illegible]
339	[illegible] SIGNAL	1-[illegible]	[illegible] IN TIMER STA.				PHOTO TO[illegible]
340	[illegible]	4-#4 STRANDED	[illegible]				INST. POWER DIS[illegible]
341							
342							
343							
344							
345							
346							
347	[illegible] TO RCA PS	4 WIRE #[illegible]	SCOPE INST.	[illegible]-20-4P			RCA PS
348	[illegible] TO RCA PS	4 WIRE #[illegible]	PANEL	[illegible]-20-4P			RCA PS
349	-[illegible] TO RCA	2 WIRE #[illegible]	PANEL	[illegible]-20-4P			RCA PS
350	-[illegible] TO RCA	2 WIRE #[illegible]	PANEL	[illegible]-20-4P			RCA PS
351	RCA HV #1	[illegible]	RCA [illegible]	UG [illegible]		MX [illegible]	PHOTOCELL #[illegible]
352	RCA HV #2	[illegible]	RCA [illegible]	UG [illegible]		MX [illegible]	PHOTOCELL #[illegible]
353	RCA HV #1	[illegible]	RCA [illegible]	[illegible]	CONDUIT		RCA AMP #1 [illegible]
354	RCA HV #2	[illegible]	RCA [illegible]	[illegible]	DO		RCA AMP #2 [illegible]
355	RCA HV #1	[illegible]	RCA [illegible]	[illegible]	DO		RCA AMP #1 [illegible]
356	RCA HV #2	[illegible]	RCA [illegible]	[illegible]	DO		RCA AMP #2 [illegible]
357	RCA HV #1	[illegible]	RCA [illegible]	[illegible]	DO		RCA AMP #1 [illegible]
358	RCA HV #2	[illegible]	RCA [illegible]	[illegible]	DO		RCA AMP #2 [illegible]
359	ZERO STA.	7-#[illegible]	ZERO STA.	[illegible]	[illegible]		
360	ZERO STA.	7-#[illegible]	ZERO STA.	[illegible]	[illegible]		
361	ZERO STA.	7-#[illegible]	ZERO STA.	[illegible]	[illegible]		
362	ZERO STA.	7-#[illegible]	ZERO STA.	[illegible]	[illegible]		
363	ZERO STA.	[illegible]	ZERO STA.	UG [illegible]			
364	ZERO STA.	[illegible]	ZERO STA.	UG [illegible]			

NOTES-
1. THE CABLE NUMBERS ON THIS SCHEDULE APPLY TO CABLES AT EACH TIMER STA. EXCEPT AS NOTED. BETWEEN ISLAND PREFIX O.
2. CABLES ON [illegible] HAVE PREFIX 1, ON [illegible] PREFIX 2, ON [illegible] PREFIX 3, ON [illegible] PREFIX 4, ON [illegible] PREFIX 5, [illegible]
3. 300 SERIES FOR CABLE LAYOUT IN TIMER STA.
4. 300 SERIES FOR CABLE LAYOUT OUTSIDE OF TIMER STA.

ADAPTER	FITTING	TO	CONNECTOR	ADAPTER	FITTING	FUNCTION	SUPPLIER	REMARKS
		TRANSFER SW. RACK					M.I.T.	
		DO					DO	
		DO					DO	
		DO					DO	[illegible]
		DO					DO	DO
		DO					DO	DO
		DO					DO	
		DO					DO	
		DO					DO	[illegible]
		DO					DO	DO
		DO					DO	[illegible]
		DO					DO	OR TIMER STA.S.
		DO					DO	
		DO					DO	
		DO					DO	[illegible]
		GAMMA STATION B					ARMY	
		DO					DO	
		DO					DO	
		HARTMAN BLAST STA.					DO	
							DO	
							DO	
		UTILITY GEN. CONNECTOR					ARMY	
		TIMER STATION OUTLET					DO	
		INST. POWER DIST. BOARD					DO	
		DO					DO	
		SCOPE DIST. RACK					M.I.T.	
		INST. POWER DIST. BOARD					DO	
		SCOPE DIST. RACK					DO	
		INST. POWER DIST. BOARD					DO	
		D.C. SUPPLY RACK					DO	
		RELAY RACK					DO	
		INST. POWER DIST. BOARD					DO	
UG 176/U		SCOPE #3 IN [illegible]	PL 259				DO	
UG 176/U		SCOPE #4	PL 259				DO	
		ZERO STATION					NAVY	
		ZERO STATION					DO	
		ZERO STA. [illegible]					ARMY	
		PHOTO TOWER					NAVY	[illegible]
		INST. POWER DIST. BOARD					ARMY	
		RCA P5	3106-20-4S				NAVY	
		RCA P5	3106-20-4S				DO	
		RCA P5	[illegible]				DO	[illegible]
		RCA P5	3106-20-4S				DO	
	MX 304/U	PHOTOCELL #1	UG 89A/U		[illegible]	[illegible]	DO	
	MX 304/U	PHOTOCELL #2	UG 89A/U		[illegible]		DO	
CONDUIT		RCA AMP. #1 IN [illegible]	3106-18-11S	CONDUIT			DO	
DO		RCA AMP. #2 IN [illegible]	3106-18-11S	DO			DO	
DO		RCA AMP. #1 IN [illegible]	3106-18-10S	DO			DO	
DO		RCA AMP. #2 IN [illegible]	3106-18-10S	DO			DO	
DO		RCA AMP. #1 IN [illegible]	3106-20-8S	DO			DO	
DO		RCA AMP. #2 IN [illegible]	3106-20-8S	DO			DO	
3057-12			3106-20-18P [illegible]	3057-12				
3057-12			3106-20-18P [illegible]	3057-12				
3057-12			3106-20-18P	3057-12				
3057-12			[illegible]	3057-12				
			UG 88A/U					
			UG 88A/U					

[illegible] STA.
[illegible] OF TIMER STA.

[illegible] CAMBRIDGE, MASSACHUSETTS

CABLE SCHEDULE

3161025F

NO.	INDENTIFICATION	CABLE TYPE	FROM	CONNECTOR	ADAPTER	FITTING	TO	CONNECTOR	AD
401	ALPHA #1 HD ABSCD PWR	4 WIRE #12 46'-0"	HD [illegible] BACK #3 PWR DIST PANEL	AN-3108-20-4P		AN-3057-12	COFFIN ALPHA #1 HD.	AN 3108-20-4S	
401A	DO #3 DO DO	DO DO	H.V. [illegible] BACK #1 PWR DIST. PANEL	DO		DO	DO DO #3 DO	DO	
402	DO #2 DO DO	DO DO	[illegible] BACK #3 PWR DIST PANEL	DO		DO	DO DO #2 DO	DO	
405	TRANSIT TIME #1 ABSCD PWR	DO DO	DO DO HD PS	DO		DO	DO TRANSIT TIME #1 DO	DO	
406	DO DO #2 DO	DO DO	DO	DO		DO	DO DO DO #2 DO	DO	
407	[illegible] ABSCD PWR [illegible]	DO 9'-0"	HD DIST RACK #4	DO		DO	[illegible]	DO	
413	ALPHA #1 HD. 25 KV	RG 8/U 46'-0"	[illegible]	HOD UG 22B/U			COFFIN ALPHA #1 HD.	HOD. UG 22B/U	
413A	DO #3 DO DO	DO DO	[illegible]	DO			DO DO #3 DO	DO	
414	DO #2 DO DO	DO DO	[illegible]	DO			DO DO #2 DO	DO	
417	TRANSIT TIME #1 HD. 25 KV	DO DO	DO	DO			DO TRANSIT TIME #1 DO	DO	
418	TRANSIT TIME #2 HD. 25 KV	DO DO	DO	DO			DO DO DO #2 DO	DO	
419	[illegible]	4 WIRE #12 30'-0"	HD DIST RACK #4	AN 3108-20-4P		AN-3057-12	[illegible] PWR DIST PANEL	AN-3108-20-4S	
420	[illegible]	DO DO	DO	DO		DO	DO #2 DO DO	DO	
421	[illegible]	DO DO	DO	DO		DO	DO #3 DO DO	DO	
422	STA E CD PWR	2 WIRE	STA J WALL CONT C"	TERMINAL BOARD			STA. E [illegible] IN BOX		
423	DO	DO	DO	DO			DO		
424	[illegible]	4 WIRE #12 46'-0"	HD DIST RACK #4	AN-3108-20-4P			COFFIN ALPHA #1 HD.	AN 3108-20-4S	
424A	ALPHA #3 DO-DO	DO DO	DO	DO			DO DO #3 DO	DO	
425	ALPHA #2 DO DO	DO DO	DO	DO			DO DO #2 DO	DO	
428	[illegible]	DO DO	DO	DO			DO TRANSIT TIME #1 HD.	DO	
429	TRANSIT TIME #2 DO-DO	DO DO	DO	DO			DO DO DO #2 DO	DO	
430	[illegible]	DO 30'-0"	DO	DO			[illegible] RECORDER	AN-3108-18-[illegible]	
431	TRANSIT TIME #2 HD.	RG 10/U [illegible]	[illegible] DET	UG 218/U	UG 27A/U	MX-564/U	COFFIN [illegible]	UG 218/U	U[illegible]
432	DO DO " [illegible]	RG 18/U	STA. A - [illegible] UNIT	UG 154/U	UG 217/U	[illegible] WITH CONNECTOR	[illegible] TRANSIT TIME [illegible]	UG 154/U	UG
432A	TEST INITIATING DO	DO	DO "B" PULSE UNIT	DO	UG 259/U	DO	STA "A" - CABLE 432	DO	UG
433	TRANSIT TIME #2 [illegible]	DO	DO A - E UNIT	DO	UG 217/U	DO	[illegible]	DO	UG
433A	TEST INITIATING DO	DO	DO "B" - PULSE UNIT	DO	UG 259/U	DO	STA "A" CABLE 430	DO	UG
434	ALPHA #1 TEST DO	DO	DO "E" - CABLE BOX	DO		DO	DO "A" CABLE 501	DO	
435	ALPHA #1 [illegible]	4 WIRE #12 46'-0"	HD. DIST RACK #4	AN-3108-20-4P		AN-3057-12	COFFIN ALPHA #1 HD.	AN 3108-20-4P	
435A	DO #3 DO DO	DO DO	DO	DO		DO	DO DO #3 DO	DO	
436	DO #2 DO DO	DO DO	DO	DO		DO	DO DO #2 DO	DO	
437	TRANSIT TIME #1 HD. DO	DO DO	DO	DO		DO	DO TRANSIT TIME #1 DO	DO	
440	[illegible] DO #2 DO DO	DO DO	DO	DO		DO	DO DO DO #2 DO	DO	
441	[illegible]	TELEX [illegible]	STA J ALPHA #3 HD.				STA "E" PORTABLE PULSE UNIT		
NOTE	[illegible]								

Fig. 16-19 Cable Chart, 400 Series, X-Ray Site

...TOR	ADAPTER	FITTING	TO	CONNECTOR	ADAPTER	FITTING	FUNCTION	SUPPLIER	FROM CHASSIS CONNECTOR	TO CHASSIS CONNECTOR
...20-4P		AN-3057-12	COFFIN ALPHA #1 ING.	AN 3108-20-4S		AN-3057-12	E	U.E.L.	[illegible]	[illegible]
		DO	DO DO #3 DO	DO		DO	E	DO	DO	DO
		DO	DO DO #2 DO	DO		DO	E	DO	DO	DO
		DO	DO TRANSIT TIME #1 DO	DO		DO	E	DO	DO	DO
		DO	DO DO DO #2 DO	DO		DO	E	DO	DO	DO
		DO	[illegible]	DO		DO	E	DO	DO	DO
...28/U			COFFIN ALPHA #1 ING.	[illegible] UG 88/U			E	DO	NONE	NONE
			DO DO #3 DO	DO			E	DO	DO	DO
			DO DO #2 DO	DO			E	DO	DO	DO
			DO TRANSIT TIME #1 DO	DO			E	DO	DO	DO
			DO DO DO #2 DO	DO			E	DO	DO	
...0-4P		AN-3057-12	REL SWEEP PWR. DIST. PANEL	AN-3108-20-4S		AN-3057-12	E	DO	[illegible]	[illegible]
		DO	DO #2 DO DO	DO		DO	E	DO	DO	DO
		DO	DO #3 DO DO	DO		DO	E	DO	DO	DO
...OARD			STA E [illegible]				E	DO	NONE	NONE
			DO				E	DO	DO	DO
...0-4P			COFFIN ALPHA #1 ING.	AN-3108-20-4S		AN-3057-12	E	DO	[illegible]	[illegible]
			DO DO #3 DO	DO		DO	E	DO	DO	DO
			DO DO #2 DO	DO		DO	E	DO	DO	DO
			DO TRANSIT TIME #1 ING.	DO		DO	E	DO	DO	DO
			DO DO DO #2 DO	DO		DO	E	DO	DO	DO
			REL SWEEP [illegible] RECORDER	AN-3108-18-[illegible]		AN-3057-10	E	DO	DO	[illegible]
	UG 27A/U	MX-564/U	COFFIN [illegible]	UG 21B/U	UG 27B/U	MX-564/U	E	MIT		UG 88/U
	UG 217/U	[illegible] WITH CONNECTOR	[illegible] TRANSIT TIME [illegible]	UG 154/U	UG 259/U	[illegible]	E	DO		
	UG 259/U	DO	STA "A" CABLE 432	DO	UG 218/U	DO	T	DO	UG 259/U	
	UG 217/U	DO	[illegible] TRANSIT TIME #2 [illegible]	DO	UG 259/U	DO	E	DO		
	UG 259/U	DO	STA "A" CABLE 433	DO	UG 218/U	DO	T	DO	UG 259/U	
		DO	DO "A" CABLE 501	DO		DO	T	DO		
...20-4P		AN-3057-12	COFFIN ALPHA #1 ING.	AN 3108-20-4P		AN-3057-12	E	DO	[illegible]	[illegible]
		DO	DO DO #3 DO	DO		DO	E	DO	DO	DO
		DO	DO DO #2 DO	DO		DO	E	DO	DO	DO
		DO	DO TRANSIT TIME #1 DO	DO		DO	E	DO	DO	DO
		DO	DO DO DO #2 DO	DO		DO	E	DO	DO	DO
			STA "E" PORTABLE PULSE UNIT				T	DO		

Fig. 16-19 Cable Chart, 400 Serics, X-Ray Site

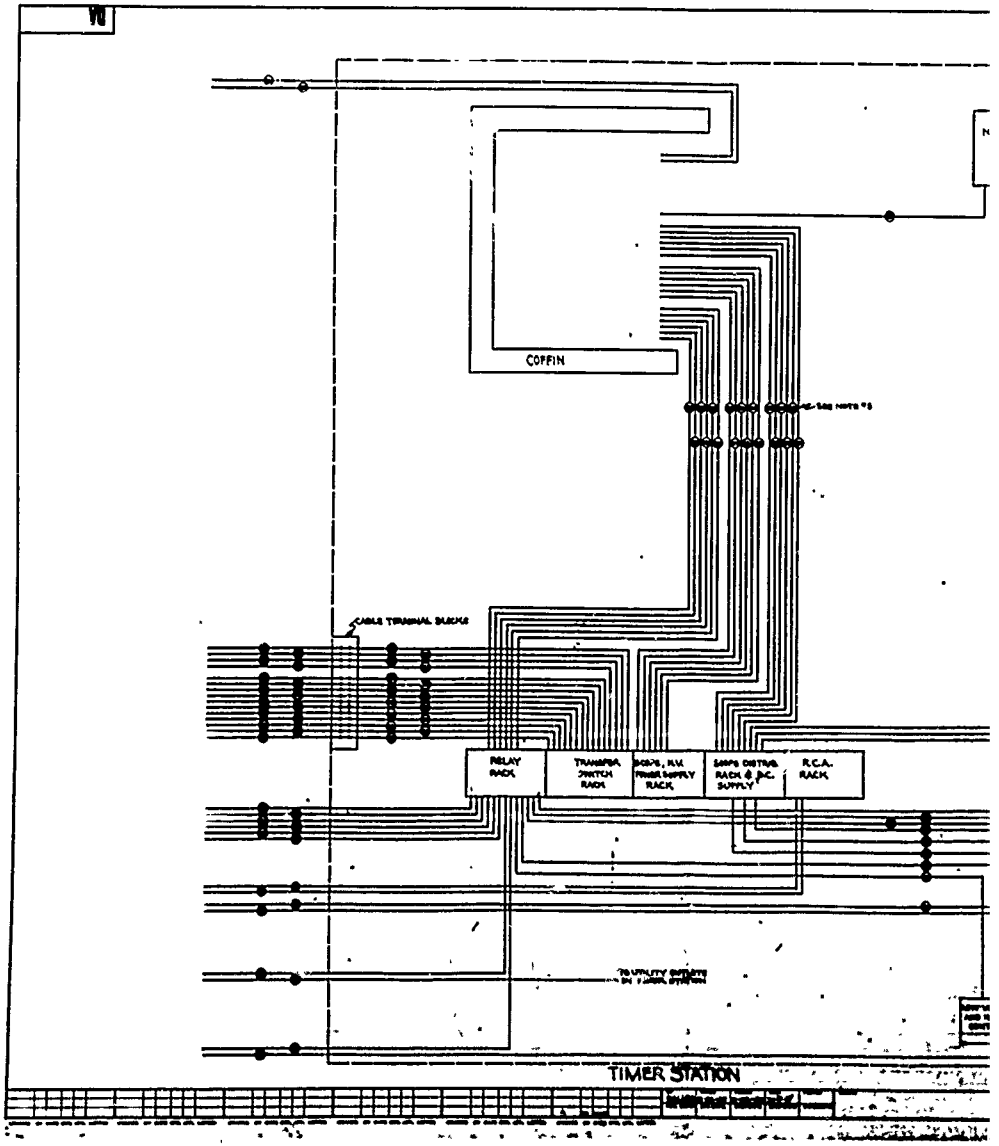
NO.	IDENTIFICATION	CABLE	TYPE	FROM	CONNECTOR	ADAPTER	FITTING	TO	CONNECTOR	ADAPT.
401		4 WIRE #18	46'-0"		AN-3108-20-4P		AN 3057-1E		AN-3108-20-4S	
401A		DO	DO		DO		DO		DO	
401B		DO	DO		DO		DO		DO	
402		DO	DO		DO		DO		DO	
403		DO	DO		DO		DO		DO	
406		DO	DO		DO		DO		DO	
407		DO	9'-0"		DO		DO		DO	
413		22 B/U	46'-0"		MOD UG 22 B/U				MOD UG 22B/U	
413A		DO	DO		DO				DO	
413B		DO	DO		DO				DO	
416		DO	DO		DO				DO	
417		DO	DO		DO				DO	
418		DO	DO		DO				DO	
419		4 WIRE #18	30'-0"		AN-3108-20-4P		AN-3057-1E		AN-3108-20-4S	
420		DO	DO		DO		DO		DO	
421		DO	DO		DO		DO		DO	
422		#22 WIRE			TERMINAL BOARD					
423		DO			DO				DO	
424		4 WIRE #18	46'-0"		AN-3108-20-4P				AN-3108-20-4S	
424A		DO	DO		DO				DO	
424B		DO	DO		DO				DO	
425		DO	DO		DO				DO	
426		DO	DO		DO				DO	
429		DO	DO		DO				DO	
430		DO	30'-0"		DO				DO	
431		86 (0/U	36'-0"		UG 21B/U	UG 27A/U			UG 21B/U	UG 27A/U
432		DO	DO		UG 156/U	UG 217/U			UG 156/U	UG 249/U
432A		DO			DO	UG 229/U			DO	UG 21B/U
433		DO			DO	UG 217/U			DO	UG 249/U
433A		DO			DO	UG 229/U			DO	UG 21B/U
434		DO			DO				DO	
435		4 WIRE #22	46'-0"		AN-3108-20-4P		AN-3057-1E		AN-3108-20-4P	
435A		DO	DO		DO		DO		DO	
435B		DO	DO		DO		DO		DO	
436		DO	DO		DO		DO		DO	
439		DO	DO		DO		DO		DO	
440		DO	DO		DO		DO		DO	
441		TELEPHONE WIRE								

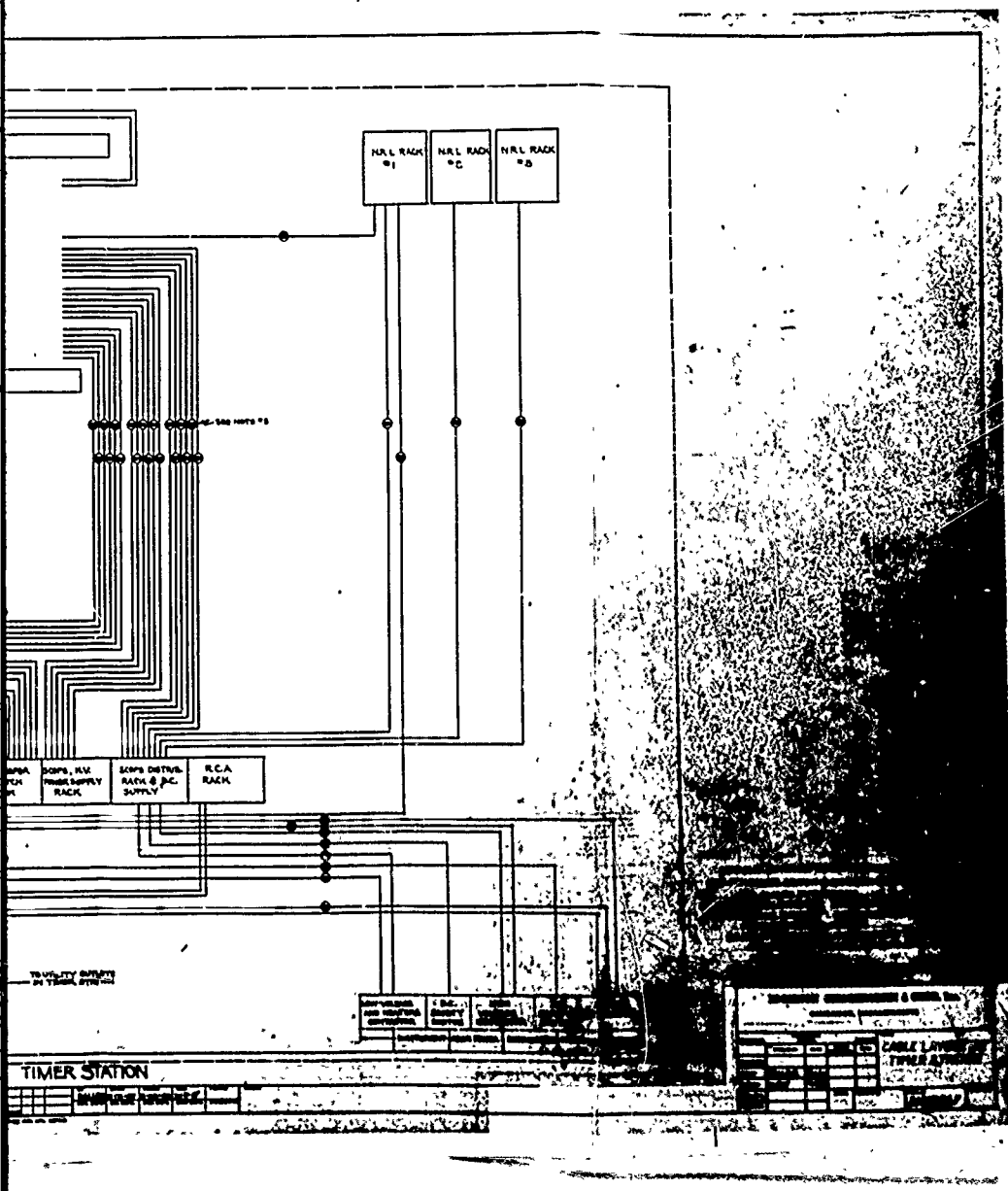
NOTE

Fig. 16-36 Cable Chart, 400 Series, Yoke Site

NECTOR	ADAPTER	FITTING	TO	CONNECTOR	ADAPTER	FITTING	FUNCTION	SUPPLIER	FROM CHASSIS CONNECTOR	TO CHASSIS CONNECTOR
3108-20-4P		AN 3057-12	COFFIN ALPHA #1 MO	AN-3108-20-4S		AN-3057-12	E	N.R.L	AN-3102-20-4S	AN-3102-20-4P
DO		DO	DO DO #3 DO	DO		DO	E	DO	DO	DO
DO		DO	- - DO #4 DO	DO		DO	E	DO	DO	DO
DO		DO	COFFIN-DO #2 DO	DO		DO	E	DO	DO	DO
DO		DO	DO TRANSIT TIME #1 DO	DO		DO	E	DO	DO	DO
DO		DO	DO DO #2 DO	DO			E	DO	DO	DO
DO		DO	[illegible] PWR. DIST. PANEL	DO			E	DO	DO	DO
UG 22 B/U			COFFIN ALPHA #1 MO	MOD UG 22B/U			E	DO		
DO			DO DO #3 DO	DO			E	DO		
DO			- - DO #4 DO	DO			E	DO		
DO			COFFIN- DO #2 DO	DO			E	DO		
DO			DO TRANSIT TIME #1 DO	DO			E	DO		
DO			DO DO #2 DO	DO			E	DO		
3108-20-4P		AN-3057-12	N.R.L. RACK #1 PWR. DIST. PANEL	AN-3108-20-4S		AN-3057-12	E	DO	AN-3102-20-4S	AN-3102-20-4P
DO		DO	N.R.L. RACK #2 DO [illegible]	DO		DO	E	DO	DO	DO
DO		DO	DO DO #3 DO [illegible]	DO		DO	E	DO	DO	DO
[illegible]NAL BOARD			STA."E" JUNCTION BOX				E	DO		
DO			DO	AN-3108-20-4S		AN-3057-12	E	DO	AN-3102-20-4S	AN-3102-20-4P
3108-20-4P			COFFIN-ALPHA #1 MO.	DO		DO	E	DO	DO	DO
DO			DO DO #3 DO	DO		DO	E	DO	DO	DO
DO			- - DO #4 DO	DO		DO	E	DO	DO	DO
DO			COFFIN-DO #2 DO	DO		DO	E	DO	DO	DO
DO			DO TRANSIT TIME #1 DO	DO		DO	E	DO	DO	DO
DO			DO DO DO #2 DO	DO		DO	E	DO	DO	DO
DO			N.R.L. RACK [illegible] AMP. & RECORDER	AN-3108-18-4S		AN-3057-10	E	DO	DO	AN-3102-18-4P
UG 21B/U	UG 27A/U	MX-864/U	COFFIN CASE [illegible]	UG 21B/U	UG 27A/U	MX 864/U	E	M.I.T.		UG 58/U
UG 154/U	UG 217/U	[illegible] WITH CONNECTOR	[illegible] TIME [illegible]	UG 154/U	UG 259/U	[illegible] WITH CONNECTOR	E	N.R.L.		
DO	UG 259/U	DO	STA."A" CABLE 438	DO	UG 215/U	DO	T	DO	UG 259/U	
DO	UG 217/U	DO	[illegible] TRANSIT TIME #2 [illegible]	DO	UG 259/U	DO	E	DO		
DO	UG 259/U	DO	STA. "A" CABLE 439	DO	UG 215/U	DO	T	DO	UG 259/U	
DO		DO	DO "A" DO 341	DO		DO	T	DO		
AN-3108 20-4P		AN-3057-12	COFFIN-ALPHA #1 MO.	AN-3108-20-4S		AN-3057-12	E	DO	AN-3102-20-4S	AN-3102-20-4S
DO		DO	DO - DO #3 DO	DO		DO	E	DO	DO	DO
DO		DO	- - DO #4 DO	DO		DO	E	DO	DO	DO
DO		DO	COFFIN DO #2 DO	DO		DO	E	DO	DO	DO
DO		DO	DO TRANSIT TIME #1 DO	DO		DO	E	DO	DO	DO
DO		DO	DO DO #2 DO	DO		DO	E	DO	DO	DO
			STA "B" [illegible] CHASE UNIT				T	DO		

Fig. 16-36 Cable Chart, 400 Series, Yoke Site


COFFIN
CABLE TERMINAL BLOCKS
RELAY RACK
TRANSFER SWITCH RACK
RACK
RACK
RACK & P.C. SUPPLY
R.C.A. RACK
TIMER STATION


N.R.L. RACK #1
N.R.L. RACK #C
N.R.L. RACK #B
R.C.A. RACK
TIMER STATION

NO	INDENTIFICATION	CABLE TYPE	FROM	CONNECTOR	ADAPTER	FITTING	TO	CONNECTOR	ADAPT[illegible]
401	ALPHA #1 HD. RECEIVER [illegible]	4 WIRE #12 46'-0"	[illegible] DIST. PANEL	AN 3108-20-4P		AN 3057-12	COFFIN ALPHA #1 HD.	AN-3108-20-4S	
401-A	DO #3 DO DO	DO 5'-0"	[illegible]	DO		DO	[illegible]	DO	
401-B	DO #4 DO DO	DO DO	DO	DO		DO	DO #4 DO #4 DO	DO	
401-C	DO #5 DO DO	DO DO	[illegible]	DO		DO	DO #5 DO #5 DO	DO	
401-D	DO #6 DO DO	DO 46'-0"	[illegible]	DO		DO	COFFIN ALPHA #6 DO	DO	
401-E	DO #7 DO DO	DO 5'-0"	[illegible]	DO		DO	[illegible] DO #7 DO	DO	
402	DO #2 DO DO	DO 46'-0"	[illegible]	DO		DO	COFFIN ALPHA #2 DO	DO	
405	TRANSIT TIME #1 HD. [illegible]	DO DO	DO	DO		DO	DO TRANSIT TIME #1 DO	DO	
406	DO #2 DO DO	DO DO	DO	DO		DO	DO DO DO #2 DO	DO	
407	ALPHA HD. [illegible] PWR.	DO 5'-0"	[illegible]	DO		DO	[illegible]	DO	
408	TRANSIT TIME DO DO	DO DO	DO	DO		DO	DO	DO	
413	ALPHA #1 HD. 2 KV	RG 8/U 46'-0"	[illegible]	MOD UG 22B/U			COFFIN ALPHA #1 HD.	MOD. UG 22B/U	
413-A	DO #3 DO DO	DO DO	[illegible]	DO			[illegible] DO #3 DO	DO	
413-B	DO #4 DO DO	DO DO	[illegible] #1 DO	DO			DO DO #4 DO #4 DO	DO	
413-C	DO #5 DO DO	DO DO	DO DO #3 DO	DO			DO DO #5 DO #5 DO	DO	
413-D	DO #6 DO DO	DO DO	[illegible] DO	DO			COFFIN ALPHA #6 DO	DO	
413-E	DO #7 DO DO	DO DO	[illegible] #1 DO	DO			[illegible] DO #7 DO	DO	
414	DO #2 DO DO	DO DO	[illegible] DO #3 DO	DO			COFFIN ALPHA #2 DO	DO	
417	TRANSIT TIME #1 HD. DO	DO DO	DO	DO			DO TRANSIT TIME #1 DO	DO	
418	DO DO #2 DO DO	DO DO	DO	DO			DO DO #2 DO	DO	
419	[illegible] RECEIVER PWR	4 WIRE #12 30'-0"	HD. DIST RACK #4	AN 3108-20-4P		AN-3057-12	[illegible]	AN-3108-20-4S	
419-A	DO #1 DO	DO DO	DO	DO		DO	DO #1 DO	DO	
420	DO #2 DO	DO DO	DO	DO		DO	DO #2 DO	DO	
421	DO #3 DO	DO DO	DO	DO		DO	DO #3 DO	DO	
422	STA "E" C-D PWR	2 WIRE	STA "J" [illegible]	TERM BOARD			STATION "E" JUNCTION [illegible]		
423	DO DO	DO	DO	DO			DO		
424	[illegible]	4 WIRE #12 46'-0"	HD DIST RACK #4	AN-3108-20-4P		AN-3057-12	COFFIN ALPHA #1 HD.	AN-3108-20-4S	
424-A	[illegible] DO DO	DO DO	DO	DO		DO	[illegible] DO #3 DO	DO	
424-B	DO #4 DO DO	DO DO	DO	DO		DO	DO DO #4 DO #4 DO	DO	
424-C	DO #5 DO DO	DO DO	DO	DO		DO	DO DO #5 DO #5 DO	DO	
424-D	DO #6 DO DO	DO DO	DO	DO		DO	COFFIN DO #6 DO	DO	
424-E	DO #7 DO DO	DO DO	DO	DO		DO	[illegible] DO #7 DO	DO	
425	DO #2 DO DO	DO DO	DO	DO		DO	COFFIN DO #2 DO	DO	
428	TRANSIT TIME #1 DO	DO DO	DO	DO		DO	DO TRANSIT TIME #1 DO	DO	
429	DO #2 DO	DO DO	DO	DO		DO	DO DO #2 DO	DO	
430	[illegible]	DO 30'-0"	DO	DO		DO	[illegible]	AN-3108-18-4S	
431	TRANSIT TIME #2 [illegible]	RG 10/U 36'-0"	[illegible] DETECTOR	UG 218/U	UG 274/U	MI 369/U	COFFIN [illegible]	UG 218/U	UG 274/U
432	DO [illegible]	RG 18/U	STA "A" - 2 UNIT	UG 154/U			[illegible]	UG 154/U	UG 259/U
432-A	TEST UNIT SIG.	DO	STA "B" PULSE UNIT	DO	UG 259/U		STA "A" - CABLE 432	DO	UG 215/U
433	TRANSIT TIME [illegible]	DO	STA "A" 2 UNIT	DO			[illegible]	DO	UG 259/U
433-A	TEST UNIT SIG.	DO	STA "B" - PULSE UNIT	DO	UG 259/U		STA "A" - CABLE 433	DO	UG 215/U
434	ALPHA #1 TEST SIG.	DO	STA "E" PULSE MOD.	DO			[illegible]	DO	
435	DO #1 HD INTENSIFIER	4 WIRE #12 46'-0"	HD. DIST RACK #4	AN-3108-20-4P		AN 3057-12	COFFIN ALPHA #1 HD.	AN-3108-20-4S	
435-A	DO #3 DO DO DO	DO DO	DO	DO		DO	[illegible] DO #3 DO	DO	
435-B	DO #4 DO DO DO	DO DO	DO	DO		DO	DO #4 DO #4 DO	DO	
435-C	DO #5 DO DO DO	DO DO	DO	DO		DO	DO #5 DO #5 DO	DO	
435-D	DO #6 DO DO DO	DO DO	DO	DO		DO	COFFIN DO #6 DO	DO	
435-E	DO #7 DO DO DO	DO DO	DO	DO		DO	[illegible] DO #7 DO	DO	
436	DO #2 DO DO DO	DO DO	DO	DO		DO	COFFIN DO #2 DO	DO	
439	TRANSIT TIME #1 HD. DO DO	DO DO	DO	DO		DO	DO TRANSIT TIME #1 HD.	DO	
440	DO #2 DO DO DO	DO DO	DO			DO	DO DO #2 DO	DO	
441	[illegible]	TELEPHONE [illegible]	STA "J" ALPHA #1 HD.				[illegible]		

Fig. 16-54 Cable Chart, 400 Series, Zebra Site

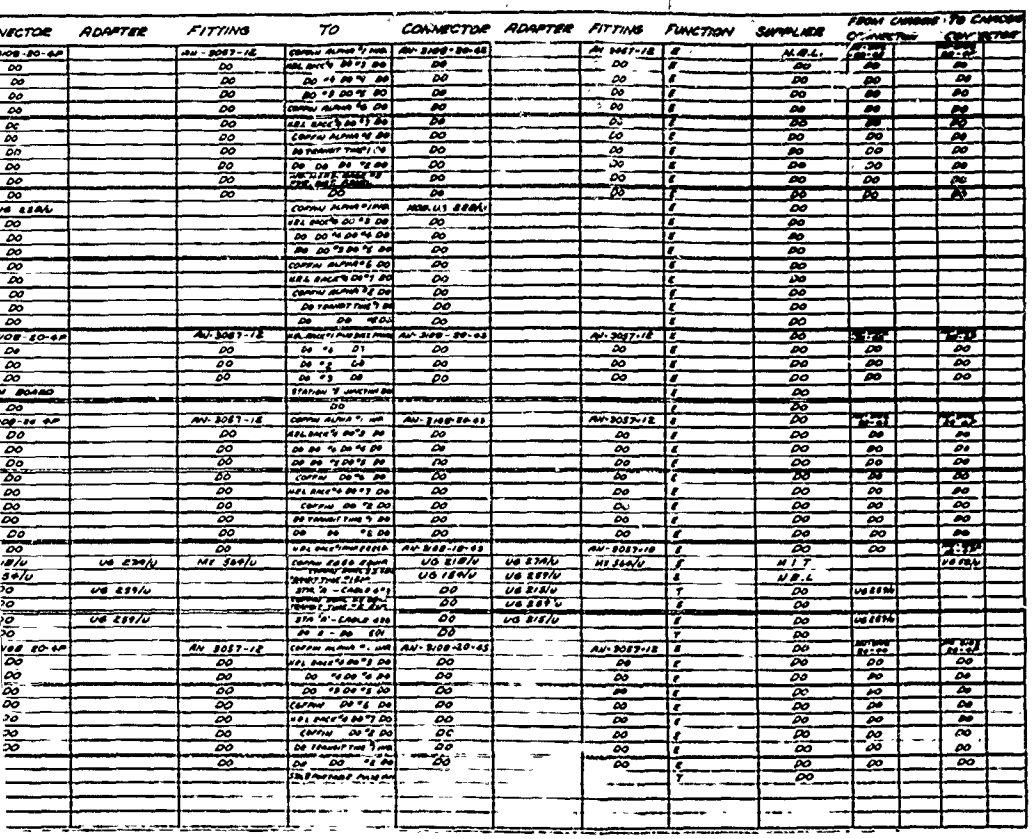
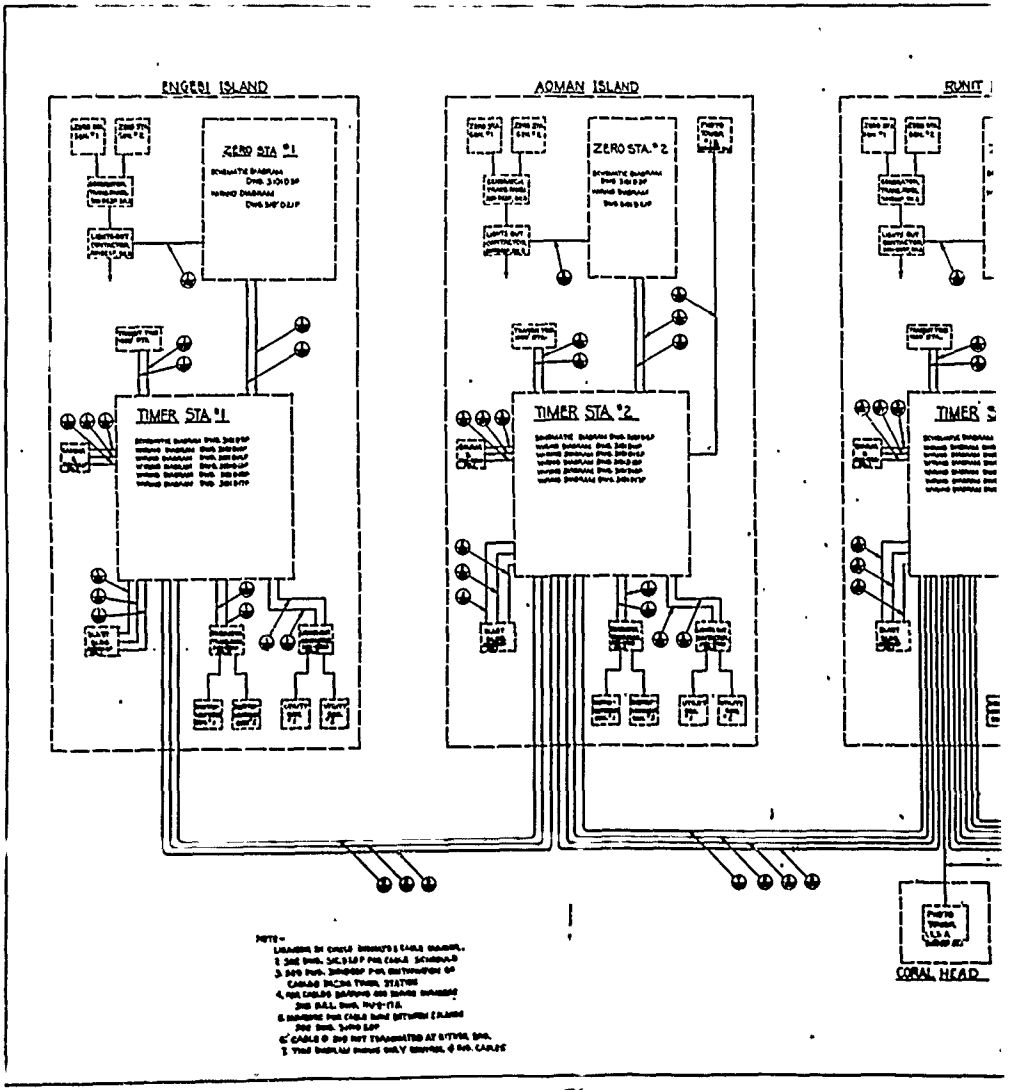
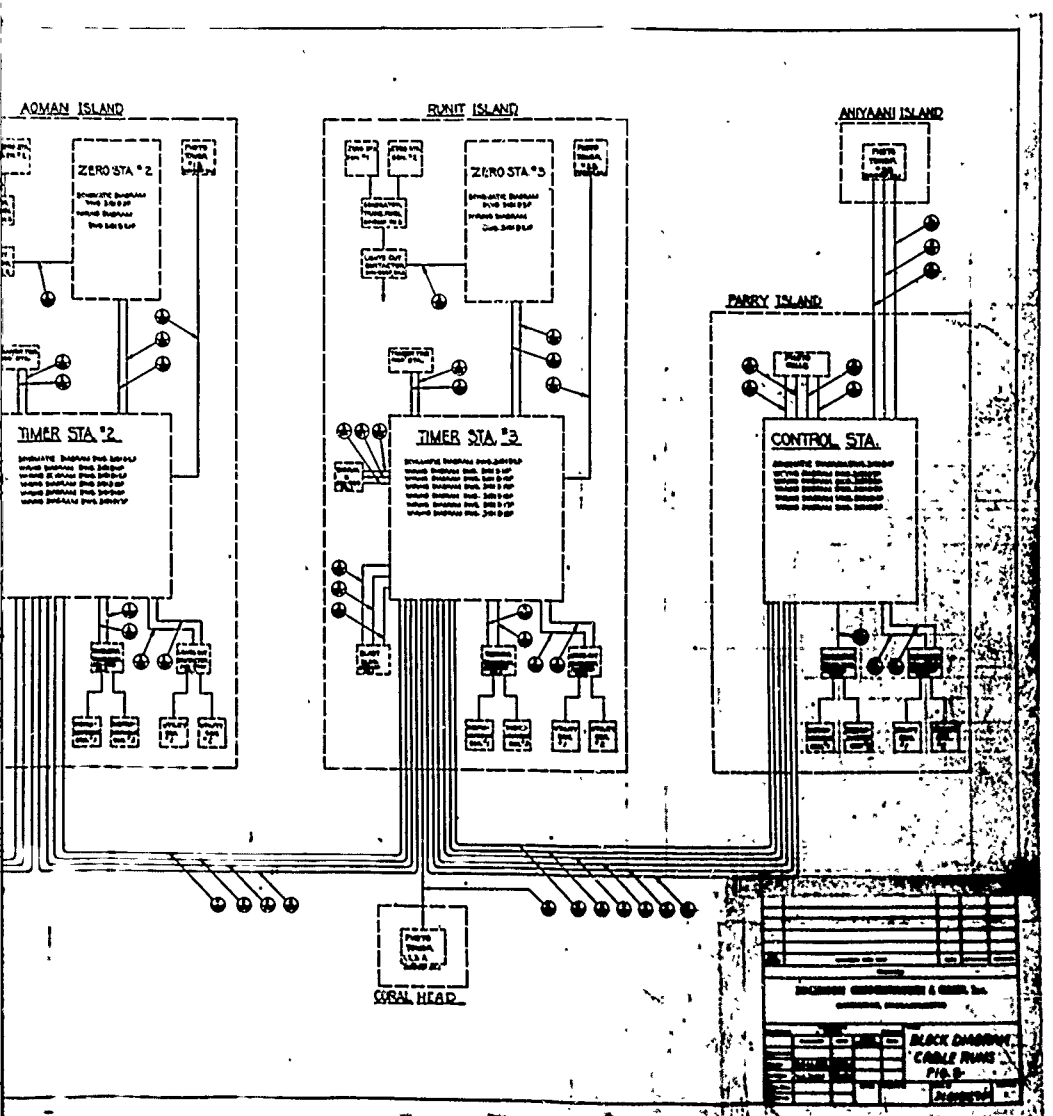


Fig. 16-54 Cable Chart, 400 Series, Zebra Site


ENGEBI ISLAND
ZERO STA. #1
TIMER STA. #1
AOMAN ISLAND
ZERO STA. #2
TIMER STA. #2
RUNIT
TIMER
CORAL HEAD


AOMAN ISLAND
ZERO STA "2
TIMER STA "2
RUNIT ISLAND
ZERO STA "3
TIMER STA "3
ANIYAANI ISLAND
PARRY ISLAND
CONTROL STA.
CORAL HEAD
BLOCK DIAGRAM
CABLE RUNS
FIG. 2

W

CABLE NO	IDENTIFICATION	CABLE & TYPE	FROM	CONNECTOR	ADAPTER	FITTING	TO
370	CONTROL STATION	4W-#12 STRANDED-7FT	SCOPE DIST PANEL	3108-20-4P	—	3057-12	SCOPE #1 POWER SUPPLY
371	DO	4W-#12 STRANDED-5FT	DO	3108-20-4P	—	3057-12	SCOPE #2 POWER SUPPLY
372	DO	4W-#12 STRANDED-7FT	DO	3108-20-4P	—	3057-12	SCOPE INDICATOR #1
373	DO	4W-#12 STRANDED-5FT	DO	3108-20-4P	—	3057-12	SCOPE INDICATOR #2
374	DO	4W-#12 STRANDED-7FT	DO	3108-20-4P	—	3057-12	SCOPE #1 SHUTTER
375	DO	4W-#12 STRANDED 5FT	DO	3108-20-4P	—	3057-12	SCOPE #2 SHUTTER
376	DO	RG10/U -7FT	SCOPE P.S. #1	UG22B/U	—	MX564/U	SCOPE IND. #1
377	DO	RG10/U -5FT	SCOPE P.S. #2	UG22B/U	—	MX564/U	SCOPE IND #2
378	DO	RG62/U -50FT	SCOPE IND #1	PL-259	UG176/U	—	PHOTO CELL #1
379	DO	RG62/U -50FT	SCOPE IND #2	PL-259	UG176/U	—	PHOTO CELL #2
380	DO	4W-#12 STRANDED-10FT	SCOPE DIST. PANEL	3108-20-4P	—	3057-12	RCA POWER SUPPLY #1
381	DO	4W-#12 STRANDED-7FT	DO	3108-20-4P	—	3057-12	RCA POWER SUPPLY #2
382	DO	4W-#12 STRANDED-10FT	DO	3108-20-4P	—	3057-12	-SEC. TO RCA
383	DO	4W-#12 STRANDED-7FT	DO	3108-20-4P	—	3057-12	-SEC. TO RCA
384	DO	RG10/U -30FT	RCA PS #1	UG53A/U	—	MX564/U	PHOTO CELL #1
385	DO	RG10/U -50FT	RCA P.S. #2	UG53A/U	—	MX564/U	PHOTO CELL #2
386	DO	6W-#16 STRANDED-	RCA AMP #1	3108-18-12P	—	3057-10	RCA POWER SUPPLY #1
387	DO	6W-#16 STRANDED	RCA AMP #2	3108-18-12P	—	3057-10	RCA POWER SUPPLY #2
388	DO	1W-#12 STRANDED	RCA #1	3108-18-16P	—	3057-10	RCA POWER SUPPLY
389	DO	1W-#12 STRANDED	RCA #2	3108-18-16P	—	3057-10	RCA POWER SUPPLY
390	DO	2W-#16 STRANDED	RCA #1	3108-20-5P	—	3057-12	RCA POWER SUPPLY
391	DO	2W-#16 STRANDED	RCA #2	3108-20-5P	—	3057-12	RCA POWER SUPPLY
392	DO	4W-#12 STRANDED-7FT	SCOPE DIST PANEL	3108-20-4P	—	3057-12	SCOPE INDICATOR #1
393	DO	4W-#12 STRANDED 5FT	SCOPE DIST PANEL	3108-20-4P	—	3057-12	SCOPE INDICATOR #2
O-201	SUBMARINE CABLE	19 COND #14 STRANDED	TIMER STA #1				TIMER STA #2
O-202	DO	TYPE 19-T-19	DO				DO
O-203	DO	ARMORED CABLE	DO				DO
O-204	DO	DO	TIMER STA #2				TIMER STA #3
O-205	DO	DO	DO				DO
O-206	DO	DO	DO				DO
O-207	DO	DO	DO				DO
O-208	DO	DO	DO				DO
O-209	DO	3 COND ARMORED TYPE 113	DO				PHOTO TOWER CORAL HEAD
O-210	DO	DO	DO				CONTROL STATION
O-211	DO	19 COND #14 STRANDED	DO				DO
O-212	DO	TYPE 19-T-19	DO				DO
O-213	DO	ARMORED CABLE	DO				DO
O-214	DO	DO	DO				DO
O-216	DO	3 COND ARMORED TYPE 113	CONTROL STA				PHOTO TOWER ANIYAANI
O-217	DO	3 COND ARMORED TYPE 114	DO				DO
O-218	DO	DO	DO				DO

NOTES-

1 THE CABLE NUMBERS ON THIS SCHEDULE APPLY TO CABLES AT EACH TIMER STATION, EXCEPT AS NOTED

2. CABLES ON ENGEBI HAVE PREFIX 1, ON BIJIRI PREFIX 2, ON RUNIT PREFIX 3, ON ANIYAANI PREFIX 4, [illegible] PREFIX 5 [illegible] HEAD PREFIX 6, BETWEEN ISLANDS PREFIX O

3 SEE DWG 3101D26F FOR CABLE LAYOUT IN TIMER STATION

4 SEE DWG 3101D27F FOR CABLE LAYOUT OUTSIDE OF TIMER STATION

5 SEE DWG 3101D25F FOR CABLE SCHEDULE (SHEET 1)

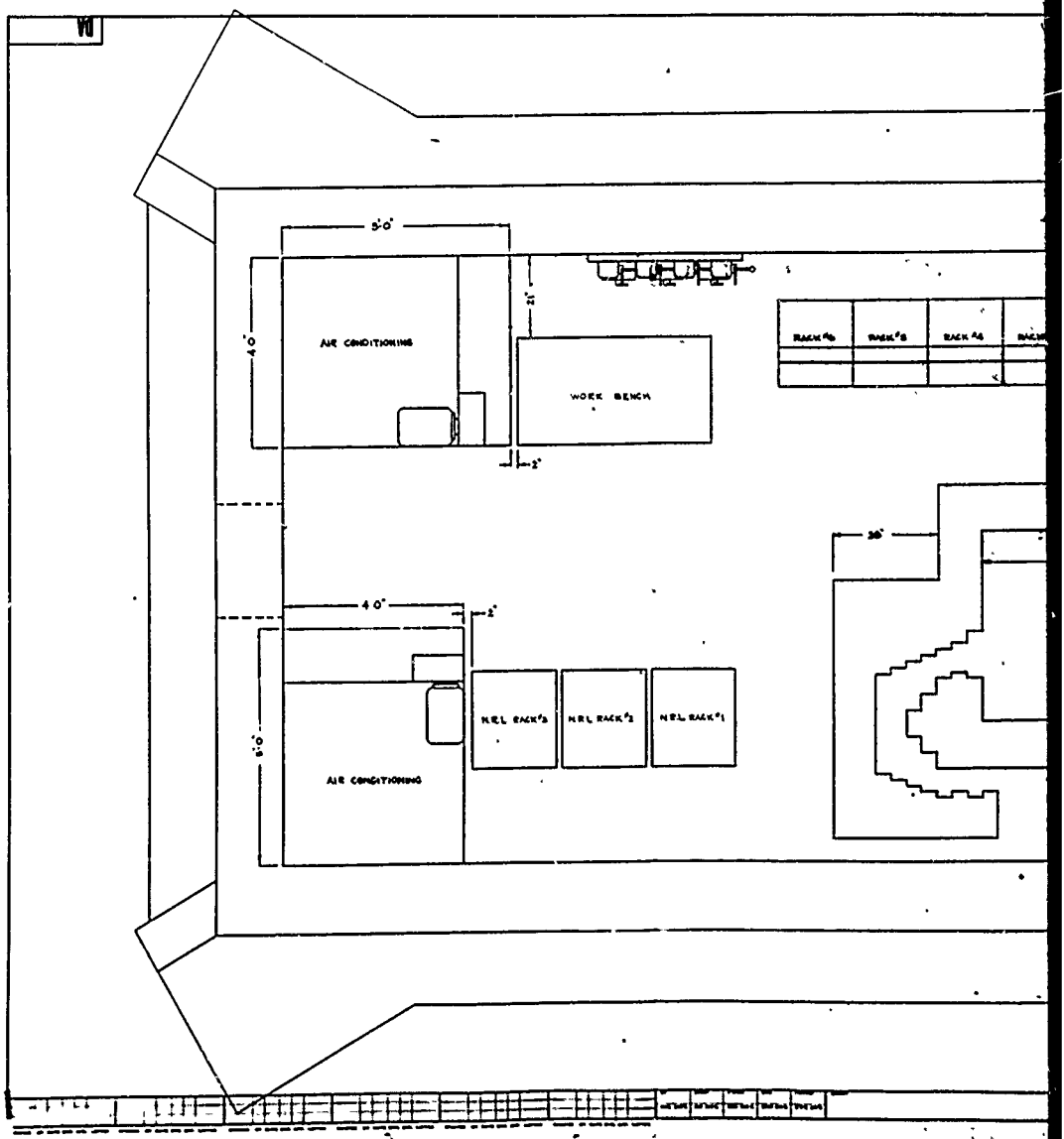
ADAPTER	FITTING	TO	CONNECTOR	ADAPTER	FITTING	FUNCTION	SUPPLIER	REMARKS
—	3057-12	SCOPE #1 POWER SUPPLY	3106-20-4S	—	3057-12			
—	3057-12	SCOPE #2 POWER SUPPLY	3106-20-4S	—	3057-12			
—	3057-12	SCOPE INDICATOR #1	3106-20-4S	—	3057-12			
—	3057-12	SCOPE INDICATOR #2	3106-20-4S	—	3057-12			
—	3057-12	SCOPE #1 SHUTTER	3106-20-4S	—	3057-12			
—	3057-12	SCOPE #2 SHUTTER	3106-20-4S	—	3057-12			
—	MX564/U	SCOPE IND. #1	UG22B/U	—	MX564/U			
—	MX564/U	SCOPE IND. #2	UG22B/U	—	MX564/U			
UG176/U	—	PHOTO CELL #1	PL-259	UG176/U	—			
UG176/U	—	PHOTO CELL #2	PL-259	UG176/U	—			
—	3057-12	RCA POWER SUPPLY #1	3106-20-4S	—	3057-12			
—	3057-12	RCA POWER SUPPLY #2	3106-20-4S	—	3057-12			
—	3057-12	-S[illegible] TO RCA	3106-20-4S	—	3057-12			
—	3057-12	-S[illegible] TO RCA	3106-20-4S	—	3057-12			
—	MX564/U	PHOTO CELL #1	UG53A/U	—	MX564/U			
—	MX564/U	PHOTO CELL #2	UG53A/U	—	MX564/U			
—	3057-10	RCA POWER SUPPLY #1	3106-18-12S	—	3057-10			
—	3057-10	RCA POWER SUPPLY #2	3106-18-12S	—	3057-10			
—	3057-10	RCA POWER SUPPLY #1	3106-18-16S	—	3057-10			
—	3057-10	RCA POWER SUPPLY #2	3106-18-16S	—	3057-10			
—	3057-12	RCA POWER SUPPLY #1	3106-20-5S	—	3057-12			
—	3057-12	RCA POWER SUPPLY #2	3106-20-5S	—	3057-12			
—	3057-12	SCOPE INDICATOR #1	3106-20-4P	—	3057-12			
—	3057-12	SCOPE INDICATOR #2	3106-20-4P	—	3057-12			
		TIMER STA. #1						
		D[illegible]						
		D[illegible]						
		TIMER STA. #2						
		D[illegible]						
		D[illegible]						
		D[illegible]						
		PHOTO TOWER CORAL HEAD						
		CENTRAL STATION						
		D[illegible]						
		D[illegible]						
		D[illegible]						
		D[illegible]						
		D[illegible]						
		PHOTO TOWER [illegible]						
		D[illegible]						
		D[illegible]						

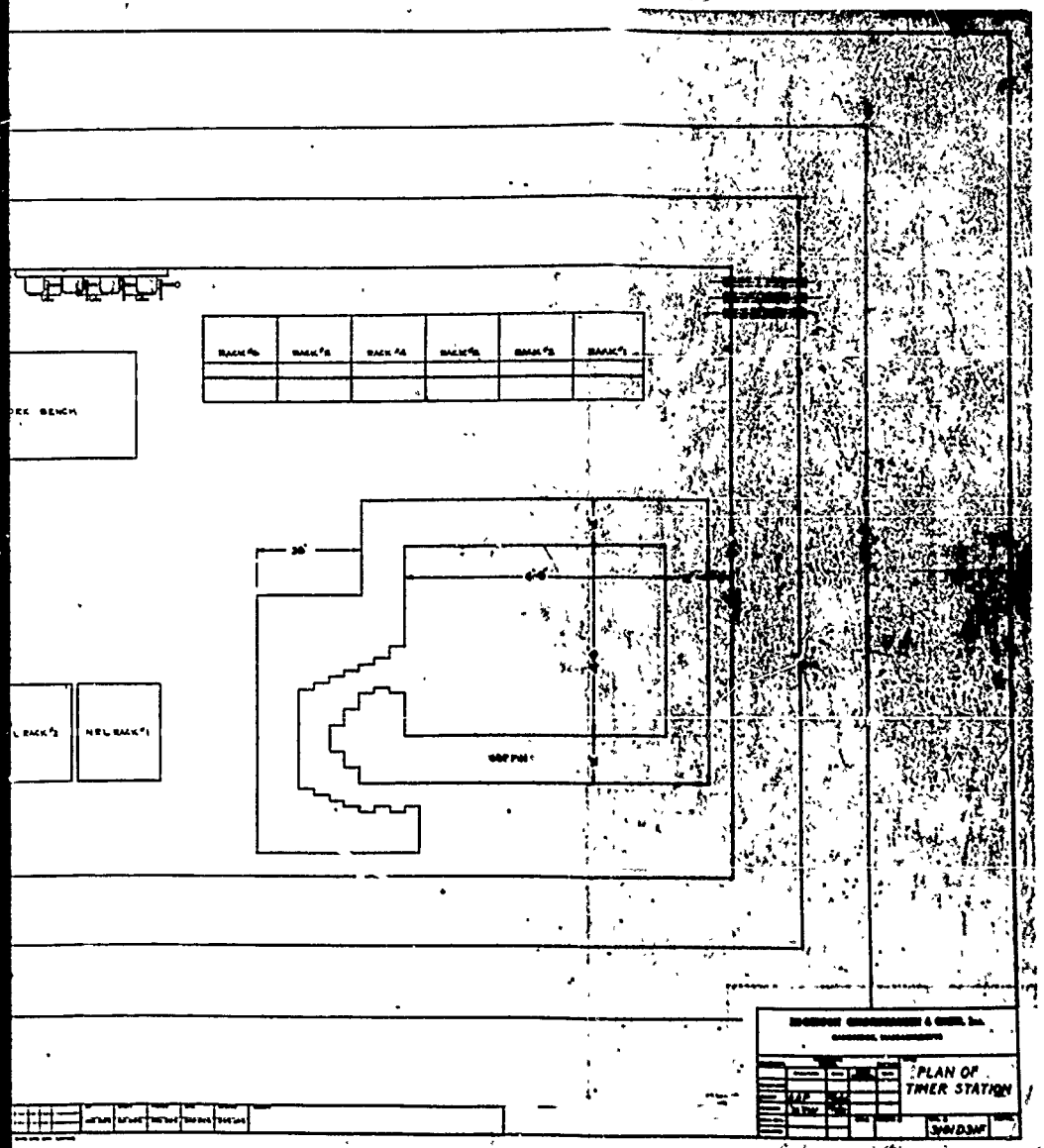
FOR CABLE LAYOUT IN TIMER STATION
FOR CABLE LAYOUT OUTSIDE OF TIMER STATION
FOR CABLE SCHEDULE (SHEET 1)
[illegible] ISLANDS [illegible]

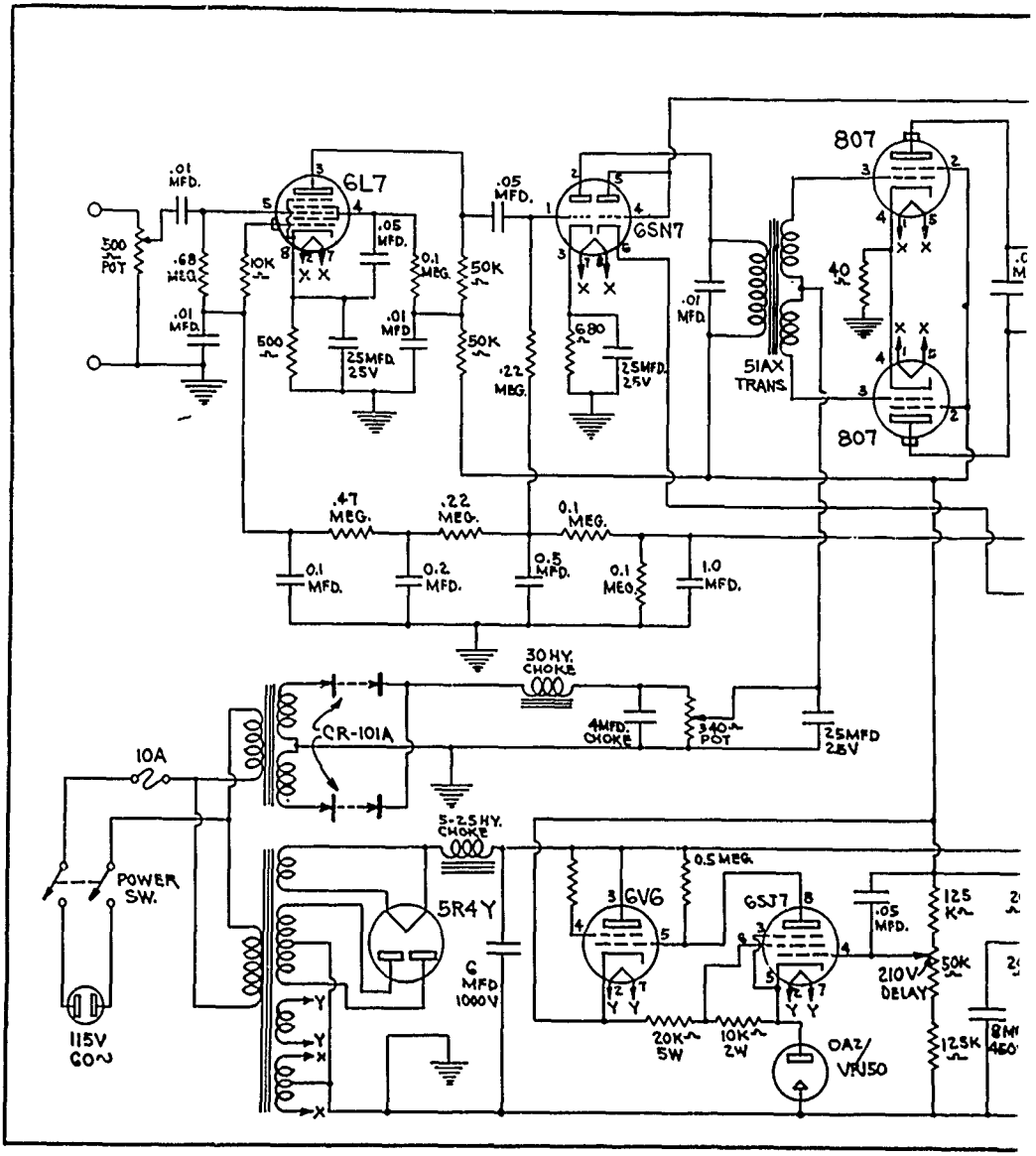
EDGERTON, GERMESHAUSEN & GRIER, Inc.
CAMBRIDGE, MASSACHUSETTS

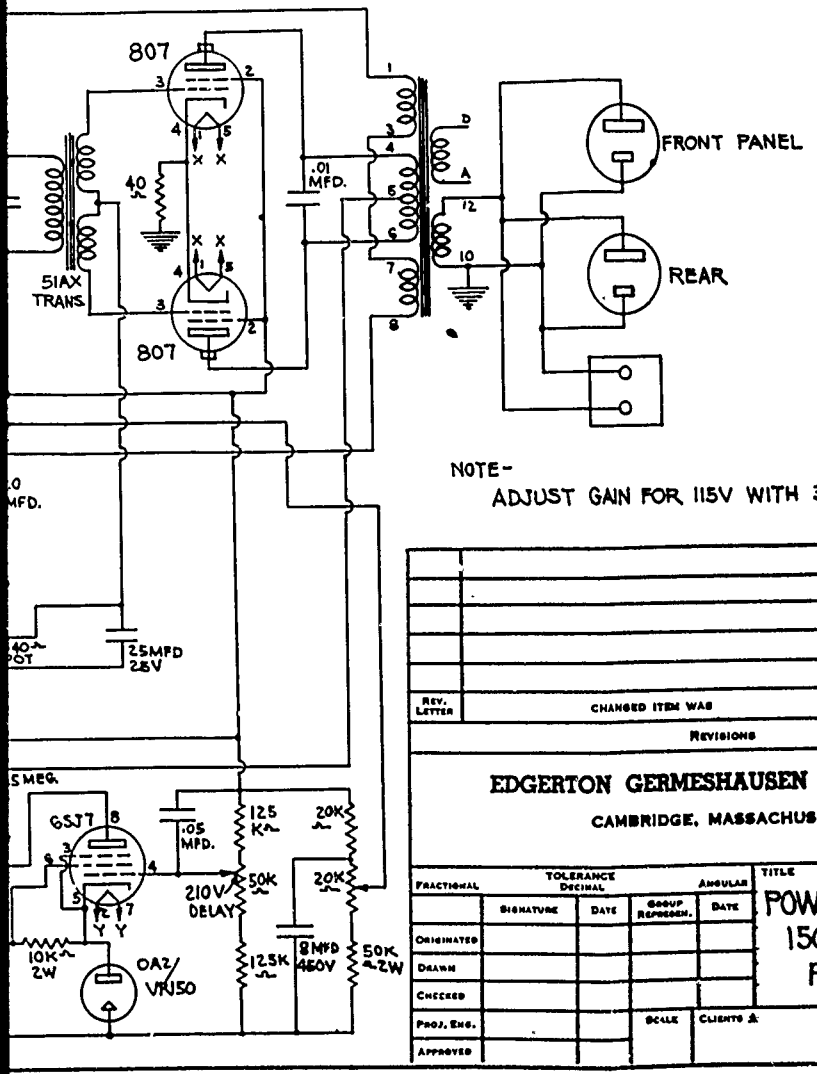
CABLE SCHEDULE

3101D28F


5'-0"
4'-0"
AIR CONDITIONING
2'
WORK BENCH
RACK #6
RACK #5
RACK #4
4'-0"
2"
5'-0"
AIR CONDITIONING
N.R.L. RACK #3
N.R.L. RACK #2
N.R.L. RACK #1
36"


PLAN OF
TIMER STATION


.01 MFD.
6L7
500 POT
.68 MEG.
.01 MFD.
10K
.05 MFD.
0.1 MEG.
500
25MFD. 25V
.01 MFD
50K
50K
.22 MEG.
.05 MFD.
6SN7
6.8Ω
25MFD. 25V
.01 MFD.
51AX TRANS.
807
40Ω
807
.47 MEG.
.22 MEG.
0.1 MEG.
0.1 MFD.
0.2 MFD.
0.5 MFD.
0.1 MEG.
1.0 MFD.
30 HY. CHOKE
CR-101A
4MFD. CHOKE
340Ω POT
25MFD 25V
10A
5-2.5 HY. CHOKE
POWER SW.
5R4Y
6 MFD 1000V
6V6
6SJ7
0.5 MEG.
.05 MFD.
125K
50K
210V DELAY
125K
20K 5W
10K 2W
0A2/ VR150
115V 60~



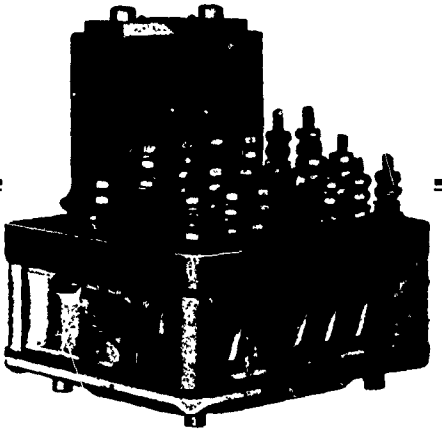
REV. LETTER	CHANGED ITEM WAS	DATE	CH'K'D BY	CH'K'D BY

REVISIONS

EDGERTON GERMESHAUSEN & GRIER, Inc.

CAMBRIDGE, MASSACHUSETTS

TOLERANCE					TITLE
FRACTIONAL / DECIMAL / ANGULAR	SIGNATURE	DATE	GROUP REPRODUCTION	DATE	POWER AMPLIFIER 150V, 50W, 60~ FIG. 2-
ORIGINATED					
DRAWN					
CHECKED					
PROJ. ENG.			SCALE	CLIENT'S #	DWG. # / PART NO.
APPROVED					



Style "DN-11" D.C. Relays

S.I.S.
No.134.

Union Switch & Signal Co.
Swissvale, Pa.

Union Switch & Signal Co.

SWISSVALE, PA.

Subject: Style "DN-11" Relays

See also Bulletin #129 and Catalog Plates E-4900 to 4903.

Sales Information Sheet

Number 134

Date Sept. 23, 1930

5 Sheets

The style DN-11 relay follows closely the lines of our DN-10 relay covered by Sales Information Sheet 124. The contact system of these two relays is approximately the same excepting that the mounting means for the contact fingers has been somewhat simplified.

The same V type graphite and flat spring finger is common to both relays. The design of the DN-11 relay however, offers more completely a universal line of relays as this model is arranged in four, six, eight and ten contact finger types. All models are arranged with front and back contacts for each finger, the same contact parts being used for 4, 6, 8 and 10 contact relays.

The top plates of all the sizes are of moulded bakelite instead of porcelain as in the DN-10 relay.

All models may be equipped with shock absorbing springs when either shelf or wall mounted.

In the Style DN-11 relay an improved terminal post arrangement has been made so that the circuits through the relay are more easily traced. These terminal posts are arranged in three rows parallel to the front of the relay, the first row representing the heel connection of the spring, the second row the back contacts,

and the third row next to the coils, the front contacts. The left hand set of these terminals represents the three connections to the left hand spring and counting from the left to right they follow the spring arrangement of the relay. The terminals to the coils of the relay are easily identified because the leads from the coils connect to them.

The magnetic structure of all DN-11 relays is of non-ageing iron, so that the effects of residual magnetism do not increase with time, and decrease the release of the relay.

With the improved magnetic structure of the four ohm four point DN-11 relay, characteristics as shown in Table I are obtained. The characteristics of this relay, as will be noted, are well within the A.R.A. requirements.

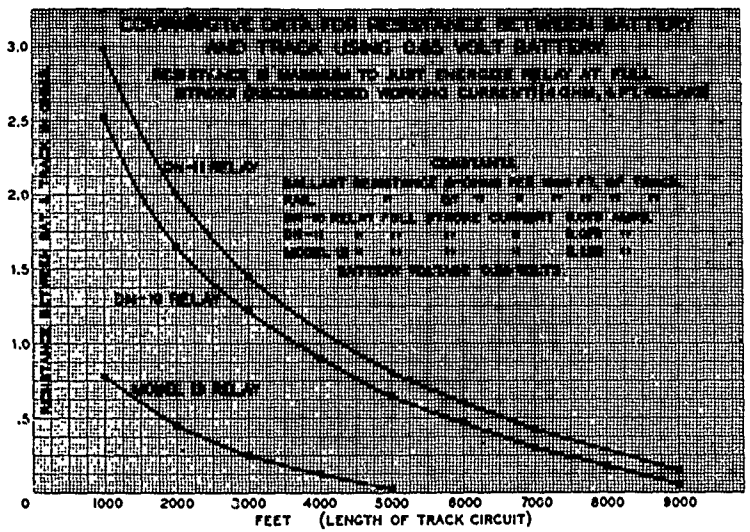
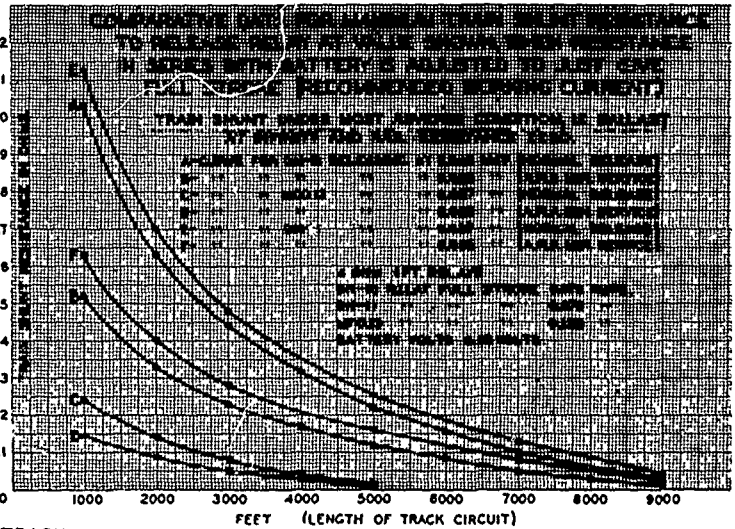


TABLE I

Minimum Drop-away without contact pressure	0.015 amp.
Minimum Drop-away with contact pressure	0.037 "
Maximum Direct Pick-up	0.065 "
Maximum working current (armature to stop pin)	0.070 "
Front contact opening	0.050 in.
Back contact opening when front contact just makes	0.050 in.

The characteristics of the DN-11 relay are such that when a DN-11 relay is to be substituted for a DN-10 type the same resistance relay should be used.

When the DN-11, four point relay is to be used in place of a Model 13 four point relay, and when voltage is the only consideration, a relay resistance about twice that of the Model 13 relay may be used. A comparison is shown in Table II. Otherwise the selection of the proper relay will depend upon the circuit conditions, bearing in mind that the current requirement of the DN-11



TRACK CIRCUIT CHARACTERISTICS FOR DN-10, DN-11 & MOD. 13 RELAYS.

relay is considerably less than that of the Model 13 relay. It should be noted that where a series line relay is used for approach lighting, the substitution of a DN-11 relay must either be accomplished by using higher resistance for both it and the series relay, or the DN-11 relay should have the same resistance as the relay replaced, to provide proper current for the series relay.

When replacing a Model 13 or DN-10 slow release relay with a slow release DN-11, approximately the same resistance should be used.

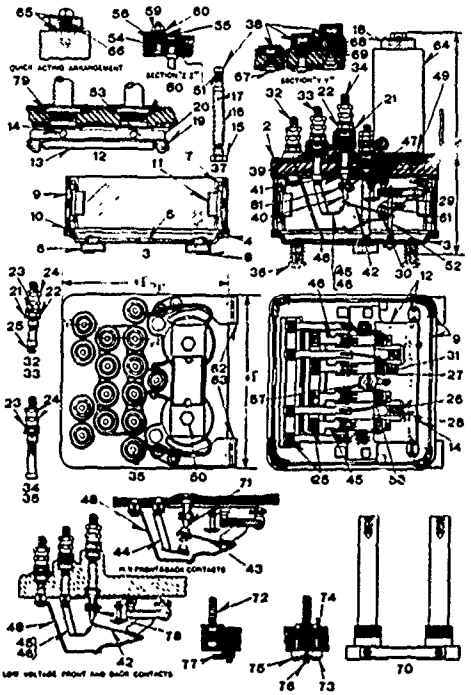
While there is a similar advantage in the use of DN-11, 6, 8 and 10 point relays over corresponding Model 13 relays, the relation of resistances, noted above, does not hold true.

Table II gives the current as well as the voltage characteristics of the ordinary acting DN-11, 4 contact relay, compared with the four contact Model 13 relay.

TABLE II

4 POINT DN-11 RELAYS							MODEL 13 RELAYS	
Res. per pair of coils	Working		Max. D.P.U.		Min. Release		Res. per pair of coils	Working
	Amps.	Volts	Amps.	Volts	Amps.	Volts		Amps.
2	.105	.21	.094	.188	.053	.106	2	0.173
4	.070	.28	.065	.260	.037	.148	4	.120
9	.050	.45	.047	.423	.026	.234	9	.090
16	.034	.54	.032	.512	.018	.288	16	.067
100	.016	1.59	.0148	1.48	.0084	.84		Volts
250	.0102	2.56	.0094	2.35	.0054	1.34	100	2.77
500	.0070	3.50	.0065	3.25	.0037	1.95		
670	.0064	4.26	.0059	3.96	.0033	2.25	250	4.33
1000	.0053	5.27	.0049	4.90	.0028	2.78	500	6.50
1500	.0041	6.21	.0038	5.76	.0022	3.28	670	7.24
2000	.0037	7.40	.0034	6.88	.0019	3.92	1000	8.71

The above list includes the relay resistances which we have adopted as standard for DN-11 relays. They include the more common relay resistances, also the resistances which will best replace the Model 13 relays in service.



Details of Style DN-11 four point Relay

H. N. Edwards
10/1/26

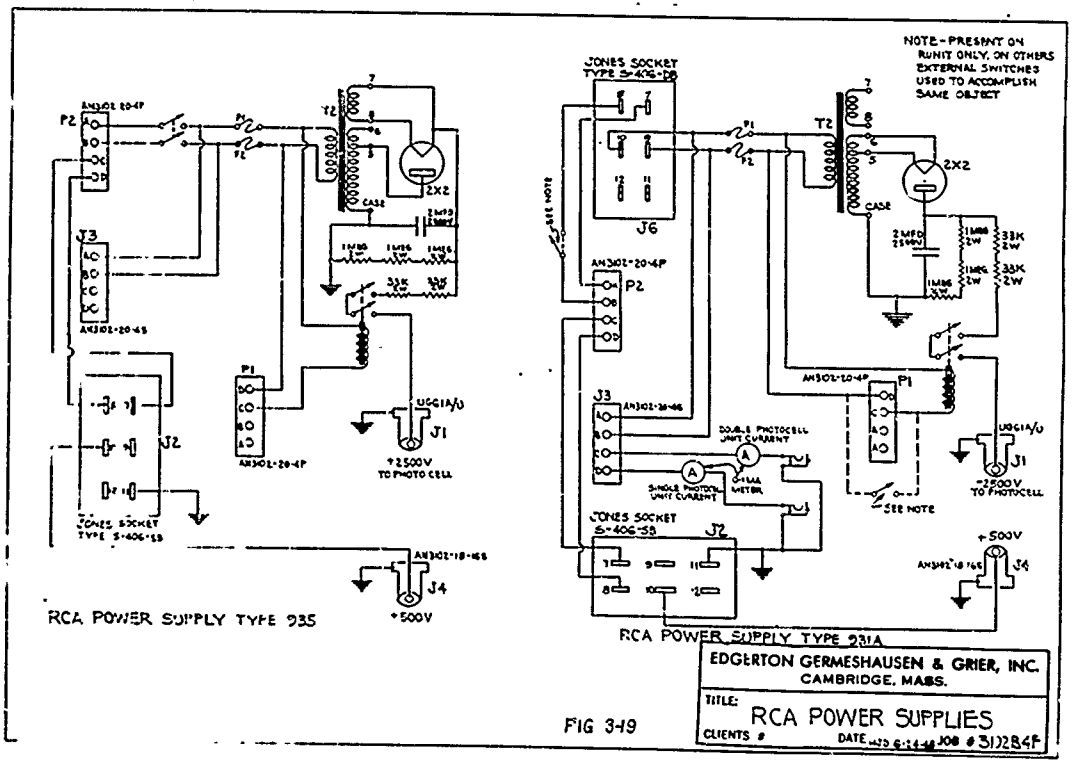
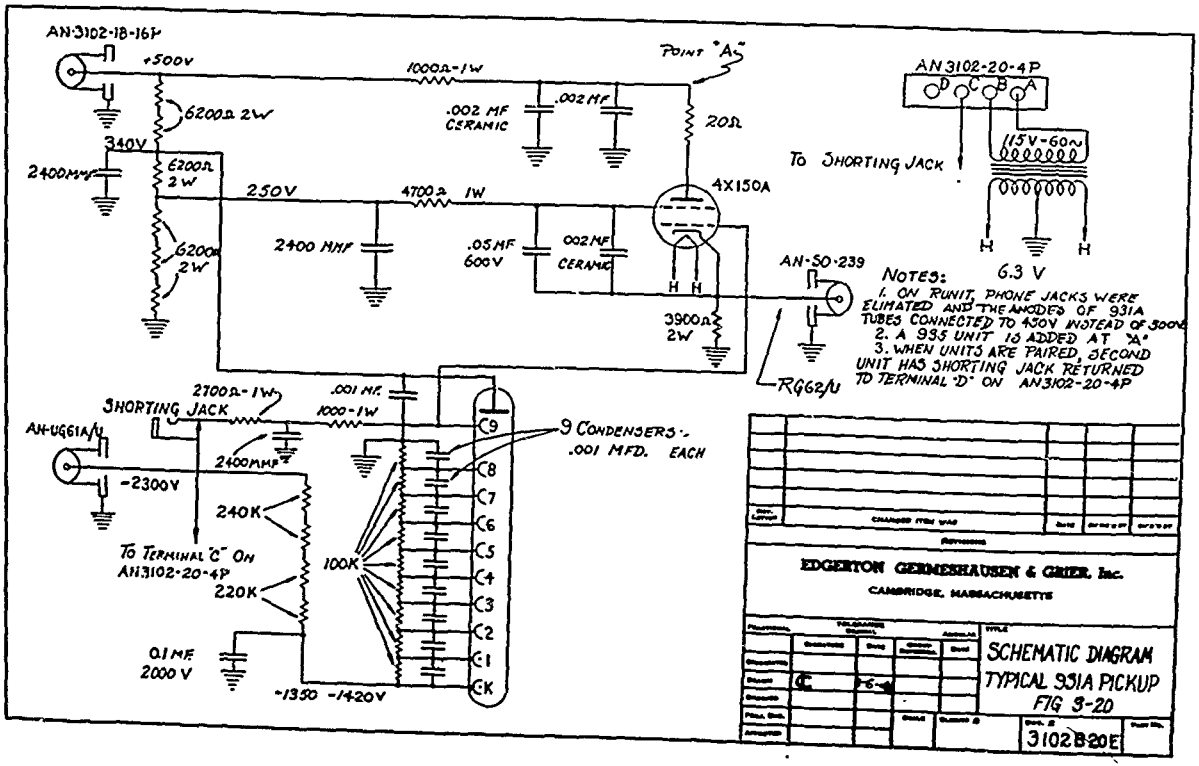


FIG 349

EDGERTON GERMESHAUSEN & GRIER, INC.
CAMBRIDGE, MASS.

TITLE: RCA POWER SUPPLIES

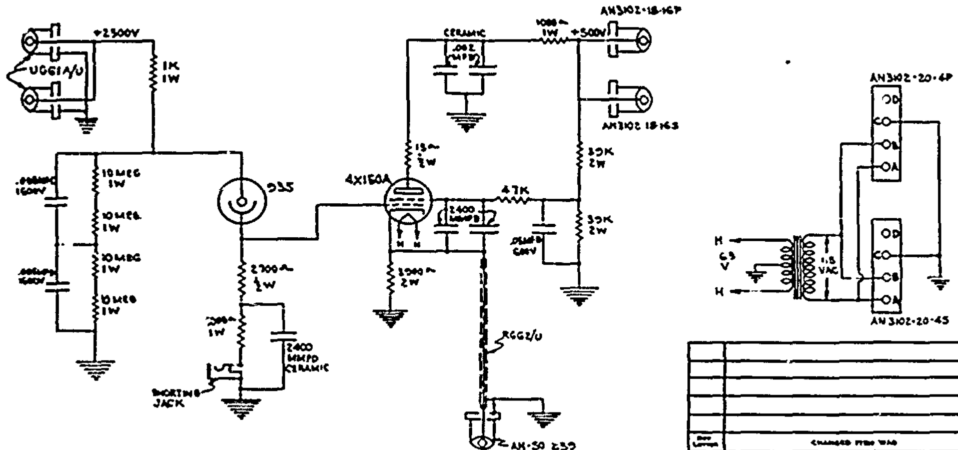
CLIENTS # DATE 1-19-6-14-48 JOB # 3122B4F



EDGERTON GERMESHAUSEN & GRIER, Inc.
CAMBRIDGE, MASSACHUSETTS

SCHEMATIC DIAGRAM
TYPICAL 931A PICKUP
FIG 3-20

3102B20E



NOTE-
DIAGRAM ABOVE SHOWS DUAL UNIT. SINGLE UNIT IS BUILT WITHOUT THE AN3102-18-16S AND AN3102-20-4S AMPHENOLS, AND WITH ONLY ONE UG61A/U JACK. ONE SET COMPRISES ONE SINGLE AND ONE DUAL UNIT.

FIG 3-21

EDGERTON GERMESHAUSEN & GRIER Inc.
CAMBRIDGE, MASSACHUSETTS

Drawn	DALLER 6-28-…
Checked	COLSON 6-29-…
Scale	NONE

ALPHA TELLER INSTRUMENTATION 935 PHOTO PICKUP UNIT-AOMAN-RUNIT

3102B3F

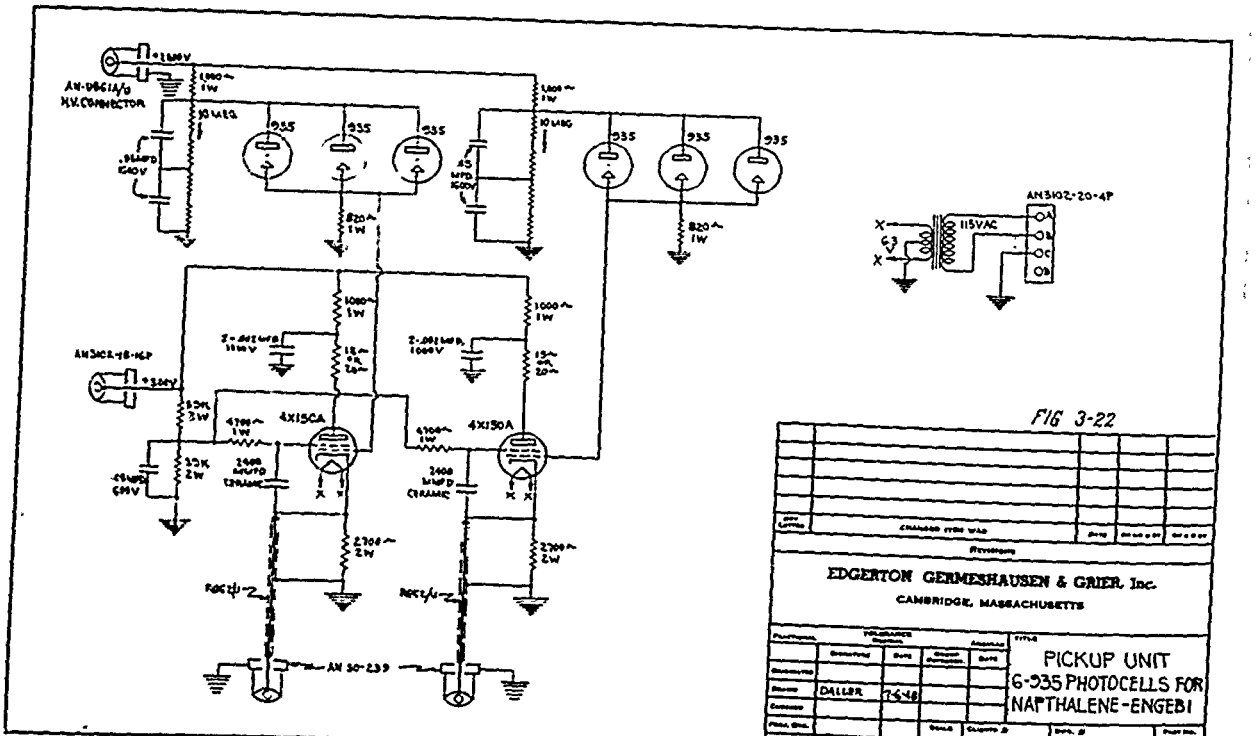


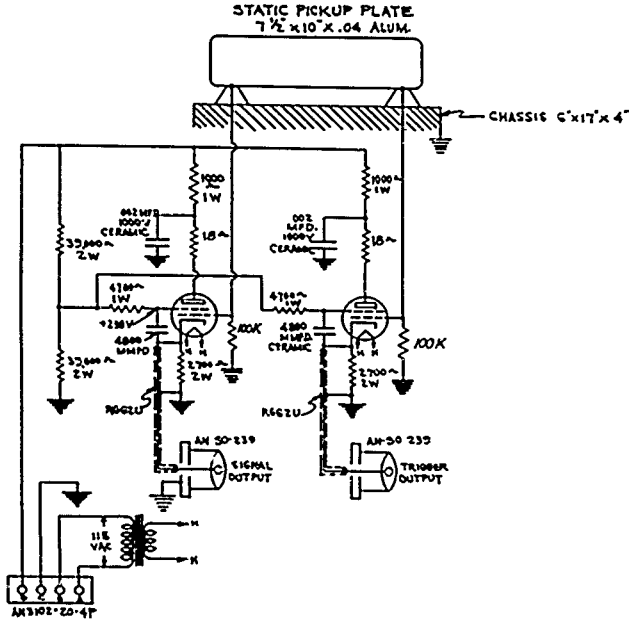
FIG 3-22

EDGERTON GERMESHAUSEN & GRIER, Inc.
CAMBRIDGE, MASSACHUSETTS

DRAWN DALLER 7-6-48

PICKUP UNIT
6-935 PHOTOCELLS FOR
NAPTHALENE-ENGEBI

DWG. NO. 3102B9F



DWG LETTER	CHANGED ITEM WAS	DATE	CHKD BY	CHKD BY

REVISIONS

EDGERTON GERMESHAUSEN & GRIER, Inc.

CAMBRIDGE, MASSACHUSETTS

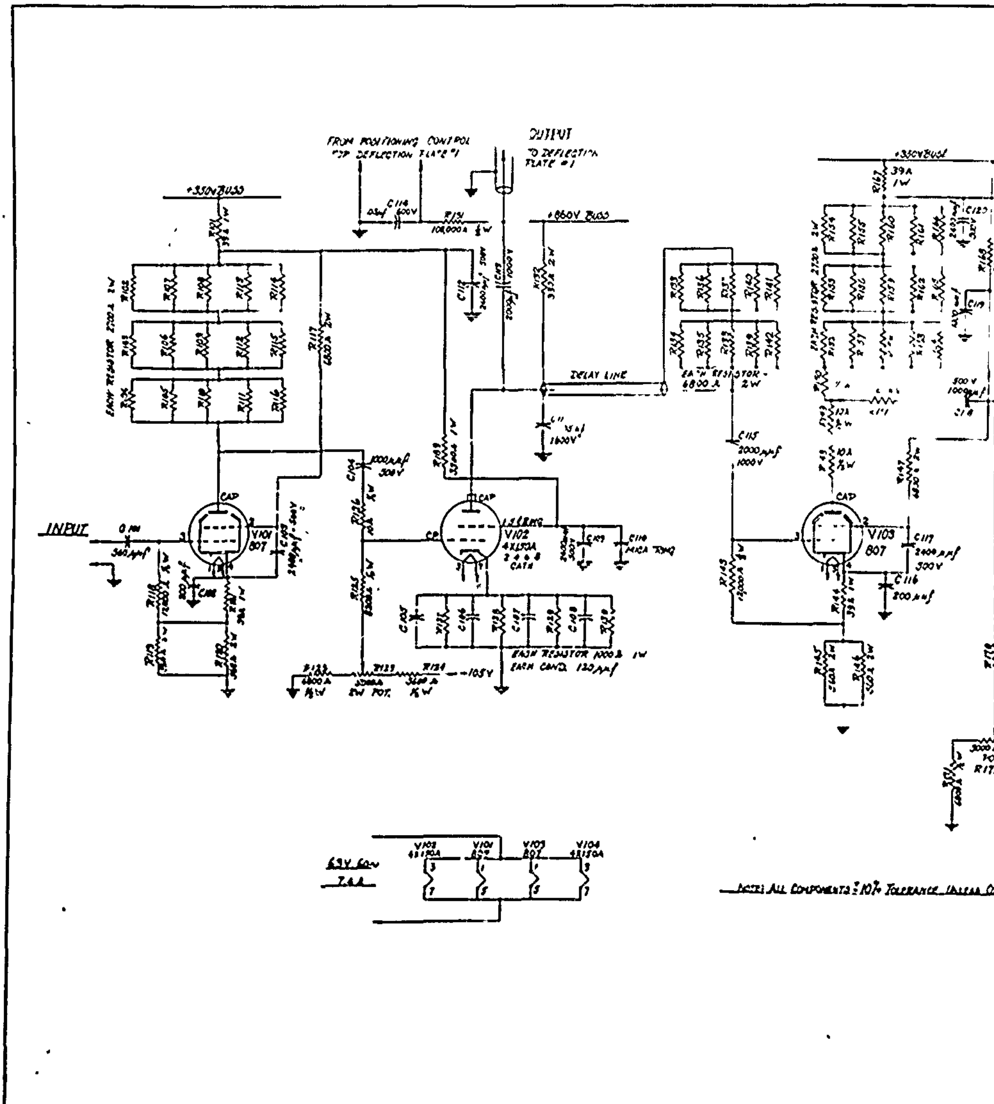
	SIGNATURE	DATE	GROUP SUPERVISOR	DATE
ORIGINATED				
DRAWN	DALLER	7-2-48		
CHECKED				
PROJ. ENG.				
APPROVED				

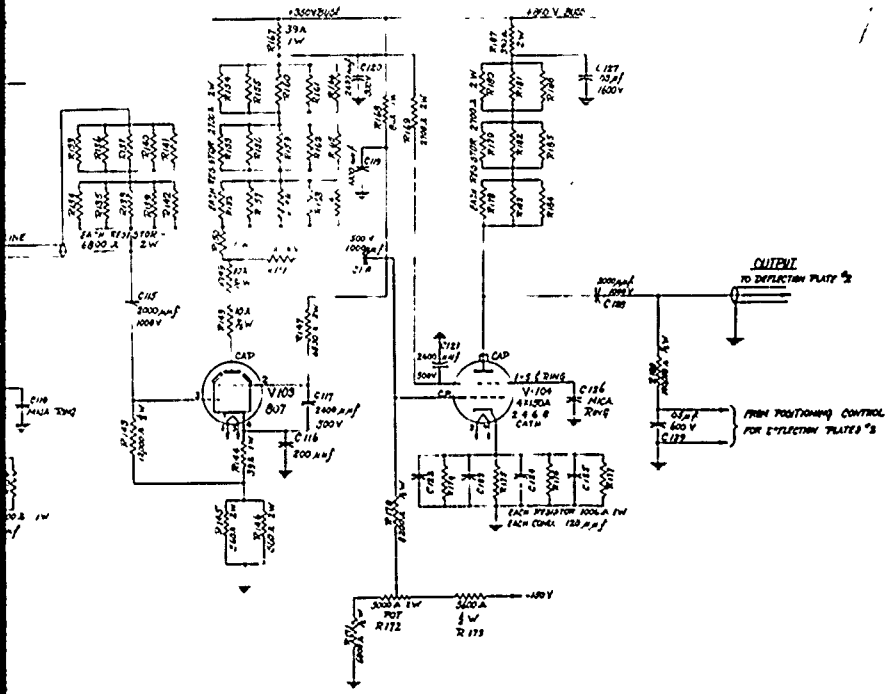
TOLERANCE UNLESS OTHERWISE SPECIFIED: FRACTIONAL, DECIMAL, ANGULAR

SCALE | CLIENT'S #

TITLE: STATIC PICKUP CIRCUIT-AOMAN FIG-3-23

DWG # 3102B8F | PART NO.


FROM POSITIONING CONTROL
OUTPUT
TO DEFLECTION PLATE #1
+350V BUSS
+850V BUSS
DELAY LINE
INPUT
EACH RESISTOR 1000Ω 1W
EACH CAND. 120 μμf
-105V
NOTE: ALL COMPONENTS ± 10% TOLERANCE UNLESS OTH



NOTE: ALL COMPONENTS ±10% TOLERANCE UNLESS OTHERWISE NOTED.

SCHEMATIC DIAGRAM
RCA AMPLIFIER