

# Film-Tech

The information contained in this Adobe Acrobat pdf file is provided at your own risk and good judgment.

These manuals are designed to facilitate the exchange of information related to cinema projection and film handling, with no warranties nor obligations from the authors, for qualified field service engineers.

If you are not a qualified technician, please make no adjustments to anything you may read about in these Adobe manual downloads

[www.film-tech.com](http://www.film-tech.com)

DIRECTOR 1  
PAC 1 AUTOMATION SYSTEM

This technical manual and associated prints provide installation and operating instructions for DIRECTOR 1 and PAC 1 Automation Systems.

General Description

This system is a single projector automation system which provides the following functions:

- . STARTS Projector Drive Motor
- . Controls Lamphouse
- . Picture Douser and Sound Control
- . Non/Sync Control
- . Fail Safe ( Projector Shutdown )
- . Split Show ( Internal Intermission )
- . One House Function ( Lights OR Curtain )
- . Complete Manual Override Control
- . Full "Operating Status" Remote Interface
- . All relays and circuit boards are plug in
- . Regulated 24 Volt Power Supply

INSTALLATION

Remove all packing material, and carefully inspect for possible shipping damage. It is very important that the bill of materials on the packing list be checked to insure that no shortages exist.

Mechanical Installation

- A) Cabinet will fold apart, providing access to mounting holes and terminal strips.
- B) Two terminal strips are provided on the automation panel for connecting the system. ( See Print D1005 ).

C) Make connections to TE2 ( Bottom of Panel as follows: )

1  
-- NON/SYNC ( Switch Closure )

2

3

-- EXCITER ( Switch Closure )

4

5-- OP

6-- G Douser ( 117V AC )

7-- CL

8

-- LAMP ( Switch Closure )

9

10

-- MOTOR ( Switch Closure )

11

12-13

-- 117V AC

13-14

14--COLD WATER GROUND

D) IS 1 on left side of panel provides logic for Auditorium and remote functions.

E) Mount Sen/Safe between lower take up assembly and bottom of sound head. Plug Sen/Safe into FI ( S 306 ) receptacle on automation panel.

### OPERATION BOOTH FUNCTIONS

- 1) Turn system on and thread film through projector and past Sen/Safe paddle. Observe that the ready light will come on. ( Safety defeat switch should be down, this is only thrown to up position if it is desired to operate projector without film, or in case of take-up trouble.)
- 2) Change-over function can be checked by throwing PIX switch to up position. As switch is thrown up, change-over should open. The reverse should occur when switch is thrown to down position.
- 3) Toggle switches marked Emergency, Exciter, Lamp, and Motor are for manual operation only.
- 4) The final test should be to check the system with film which has had the cue foil applied.
- 5) Pressing start button will start projector motor, and strike lamp, and turn off non-sync, at + 7 seconds douser will open, and exciter lamp will come on.
- 6) To program split show, turn intermission switch ON (up). When outboard foil passes through Sen/Safe, projector and lamp will shut down, douser will close, exciter will go off, and non-sync will come on.
- 7) To bypass split show cue, place Split Show/Spare Cue switch to Center Off position.
- 8) Outboard Cue may be programmed as Spare Cue when split show is not used. The switch marked Split Show/Spare Cue must be in Spare Cue position.
- 9) Inboard Cue is used for end of show intermission.

### OPERATION HOUSE FUNCTIONS

- 1) The system provides single house function, either Timed or Hold. Additional house functions can be added as required.
- 2) TEL provides all logic for any timed sequence required.

3) The system is factory set as follows:

- a) Pressing the Start switch will activate Lights Down or Curtain Open relay. If timed board is used relay will remain closed for 10 seconds and will open. This time may be increased or decreased by adjusting potentiometer on the House PC board. If hold board is used relay will close and remain closed.
- b) Lights UP or Curtain Close relay is controlled by the inboard or outboard cue. Inboard cue will activate Lights Up relay with douser close, exciter off and non/sync on relays. Outboard cue may be used to activate Lights up relay only. (Intermission control switch must be in spare cue position). This will allow for Lights up prior to inboard cue closing off light and sound.
- c) If sequence other than described above is necessary, refer to Print D1005 or consult the factory.
- d) All connections to house boards are made on 3 pin terminal strips on House Control Panel.

#### SYNC OPERATION

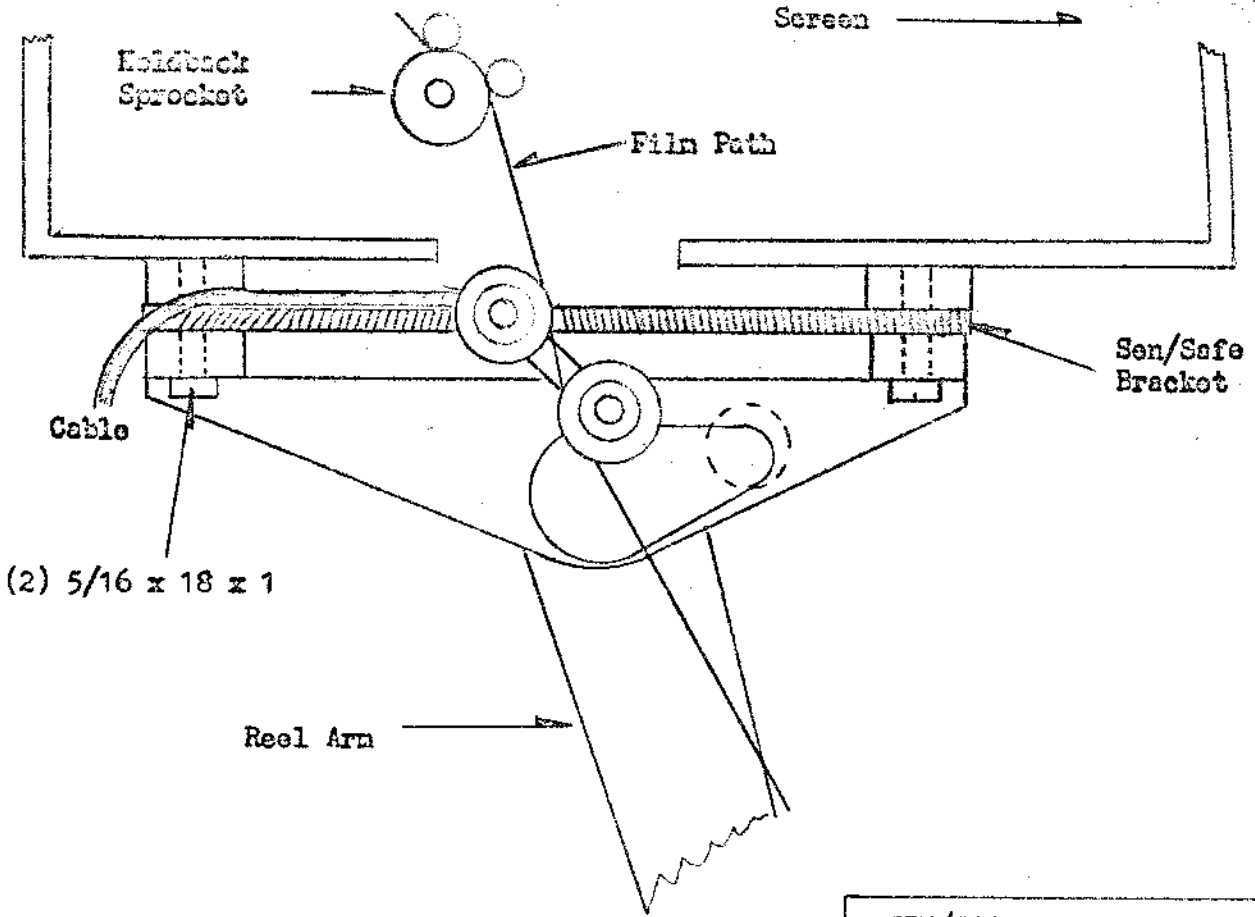
If sync is supplied with the system, connect the cable between booths and plug into receptacle F3.

#### OPERATION

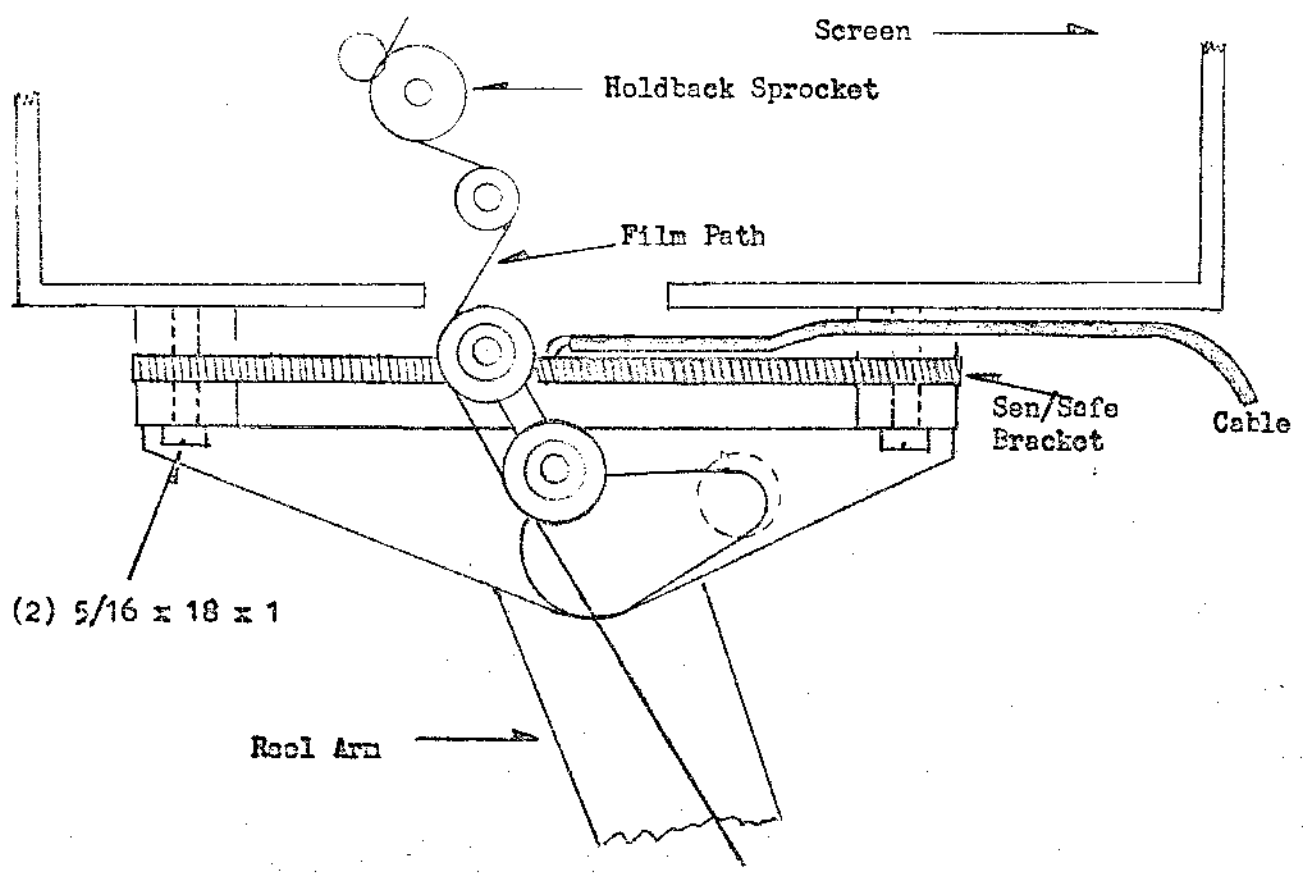
- 1) Switch marked <sup>DEFEAT</sup> FAIL SAFE must be in <sup>FAIL</sup> SAFE position in both booths.
- 2) Switch marked Split Show/Spare Cue must be in the Spare Cue position.
- 3) Pressing Start switch will start Projector and Lamp in both booths, house functions will occur only in the booth where Start switch was pressed.
- 4) Cue foil on the outboard edge of leader will activate house functions in second booth.
- 5) In the event of a film break both projectors will shut down and both house functions will be activated.

#### NOTE:

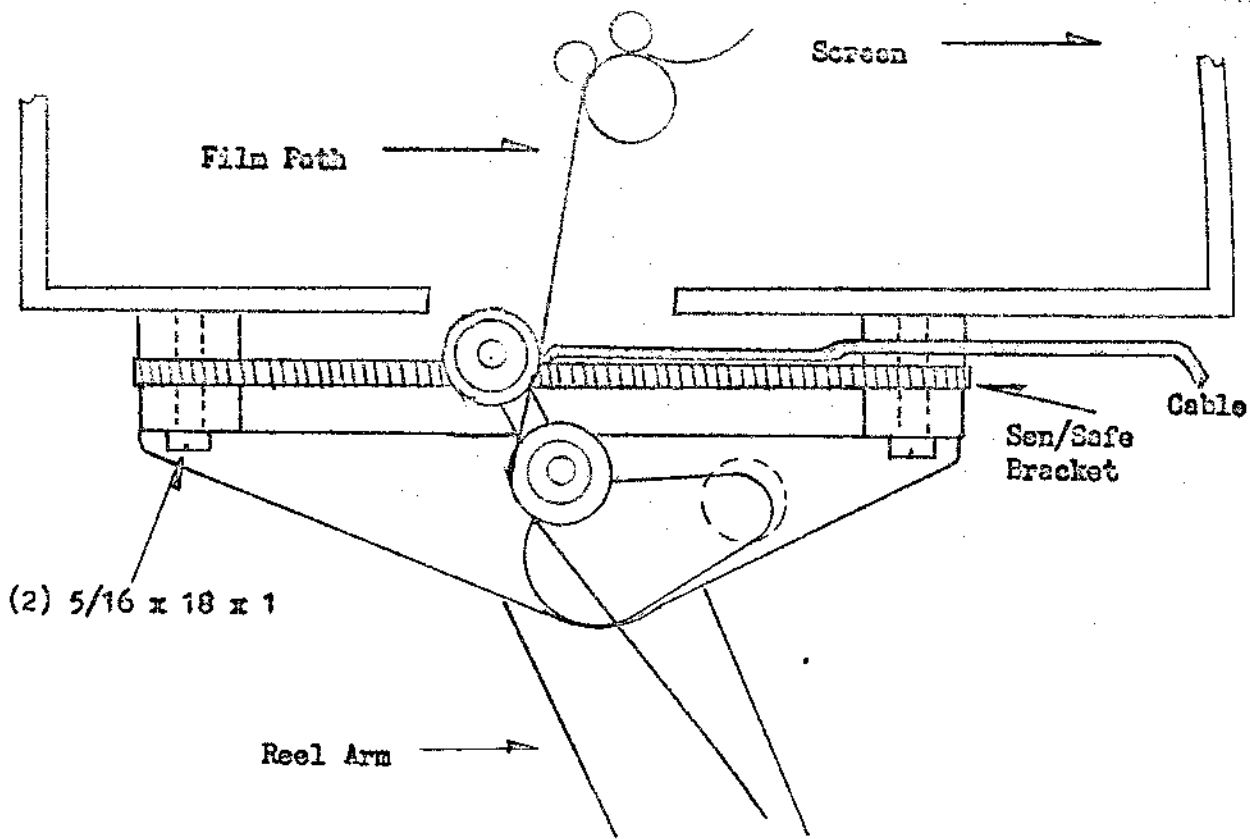
A 30 foot cable is supplied with sync system. If length is not sufficient, DO NOT UNSOLDER PLUG, Cut cable in center and splice color to color. (Plug wiring is not the same on each plug.)



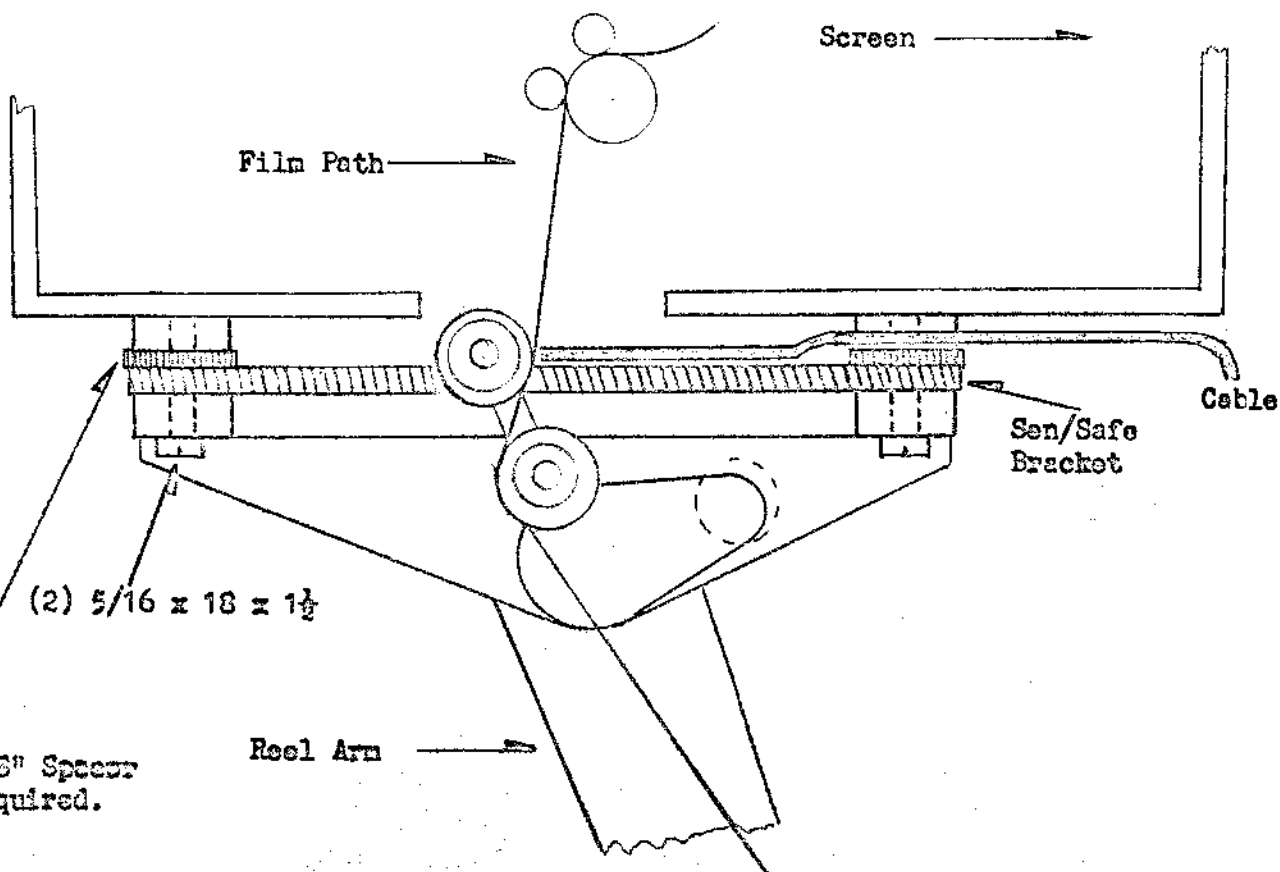
SEN/SAFE INSTALLATION 201-3A  
SIMPLEX-7200, 7310, XL



SEN/SAFE INSTALLATION 201-3B  
Century



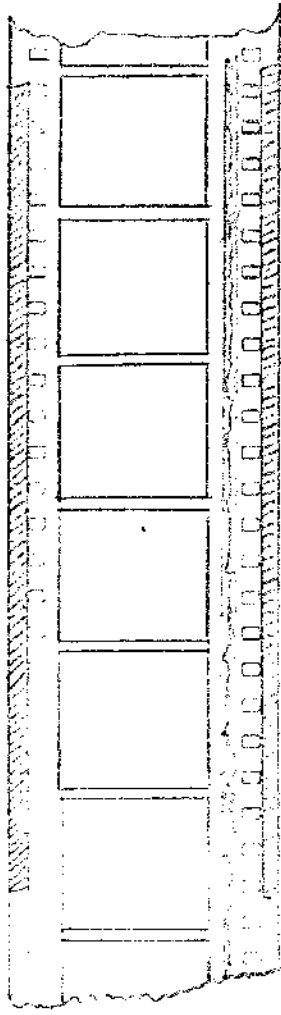
SEN/SAFE INSTALLATION 201-3C  
 RCA - 1040, 1050, 9030, 9050



SEN/SAFE INSTALLATION 201-3D  
 SIMPLEX - 1000, 4 STAR

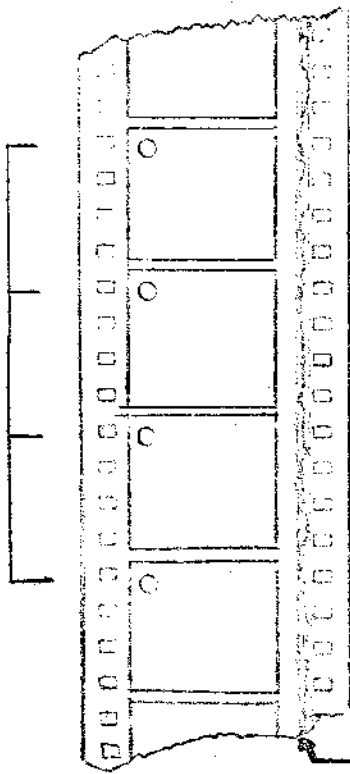
TAKEUP  
REEL

END OF SHOW,



SPLIT SHOW (LGTS UP)  
\*

LENGTH OF CUE FOIL SHOULD  
BE APPROXIMATELY 3 to 4 in.



DISTANCE FROM NORMAL MOTOR START  
CUE TO END OF CUE FOIL STRIP  
SHOULD BE APPROXIMATELY 33 in.  
( 44 frames )

WRAP CUE FOIL AROUND EDGE OF FILM  
SPROCKET HOLE TO SPROCKET HOLE

FEED  
REEL

1B.

O.B.

Sound Track

RAVEN LABS, Inc.

CUE FOIL PLACEMENT

DRAWN BY

W.J.

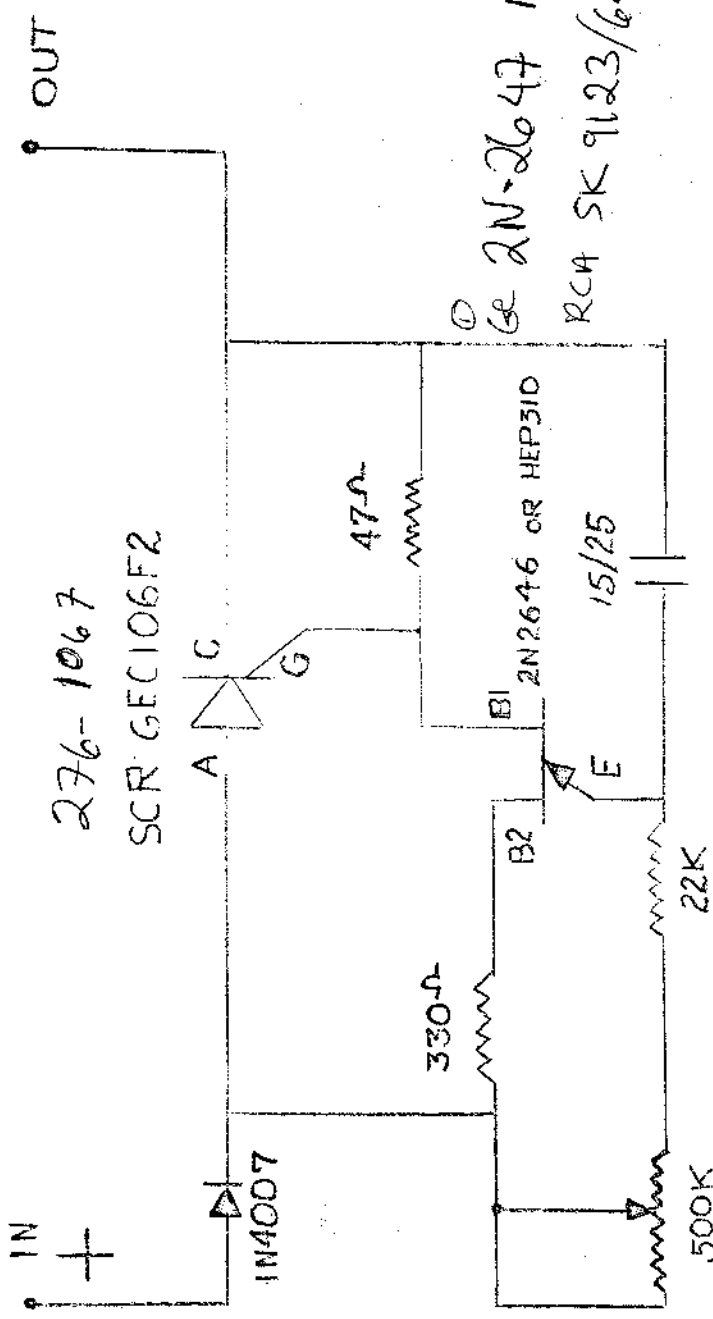
DATE

3/24/77

DWG. NO.

DIA. 2



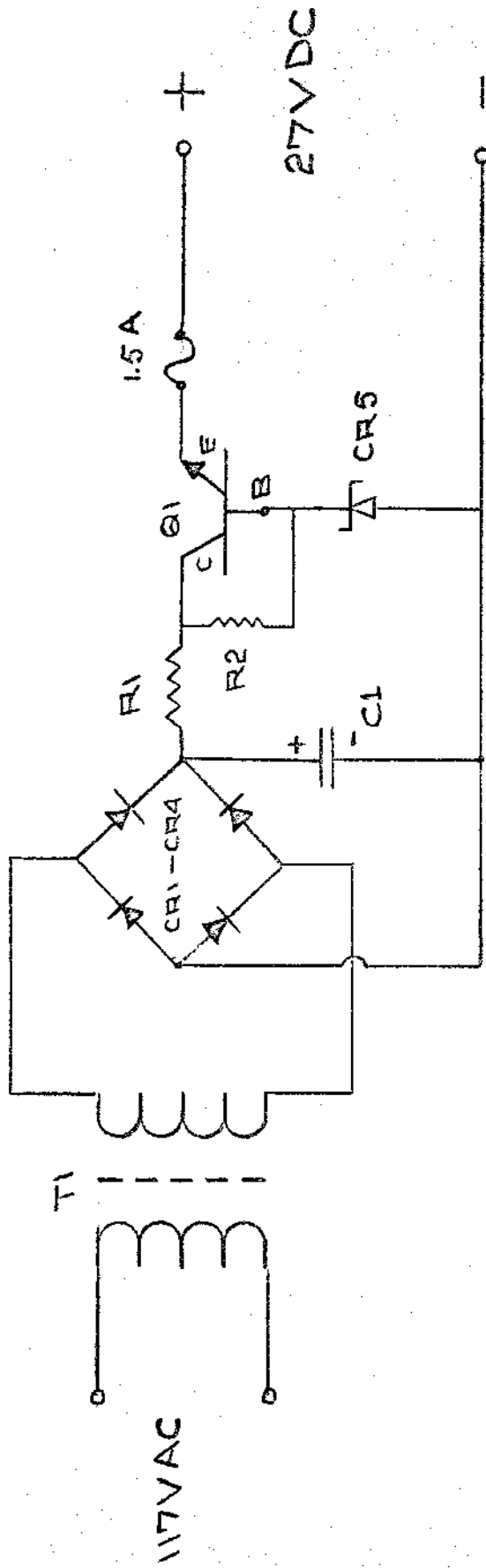


276-1067  
SCR GEC106F2

GE 2N-2647 RS 276-2029  
RCA SK 9123/6401

OVER BT UJS  
UP TO IS THEN DOWN SCR

RAVEN LABS, Inc.	
FEC TIME DELAY	
DATE	DRAWN BY
3/22/76	ED
DWG. NO. P206	



- R1 - 3Ω-10W
- R2 - 1KΩ 1/2W
- Q1 - 2N3055
- CR1-CR4 - 1N4007
- CR5 - 1N4750
- T1 - F40X
- C1 - 500/50

RAVEN LABS

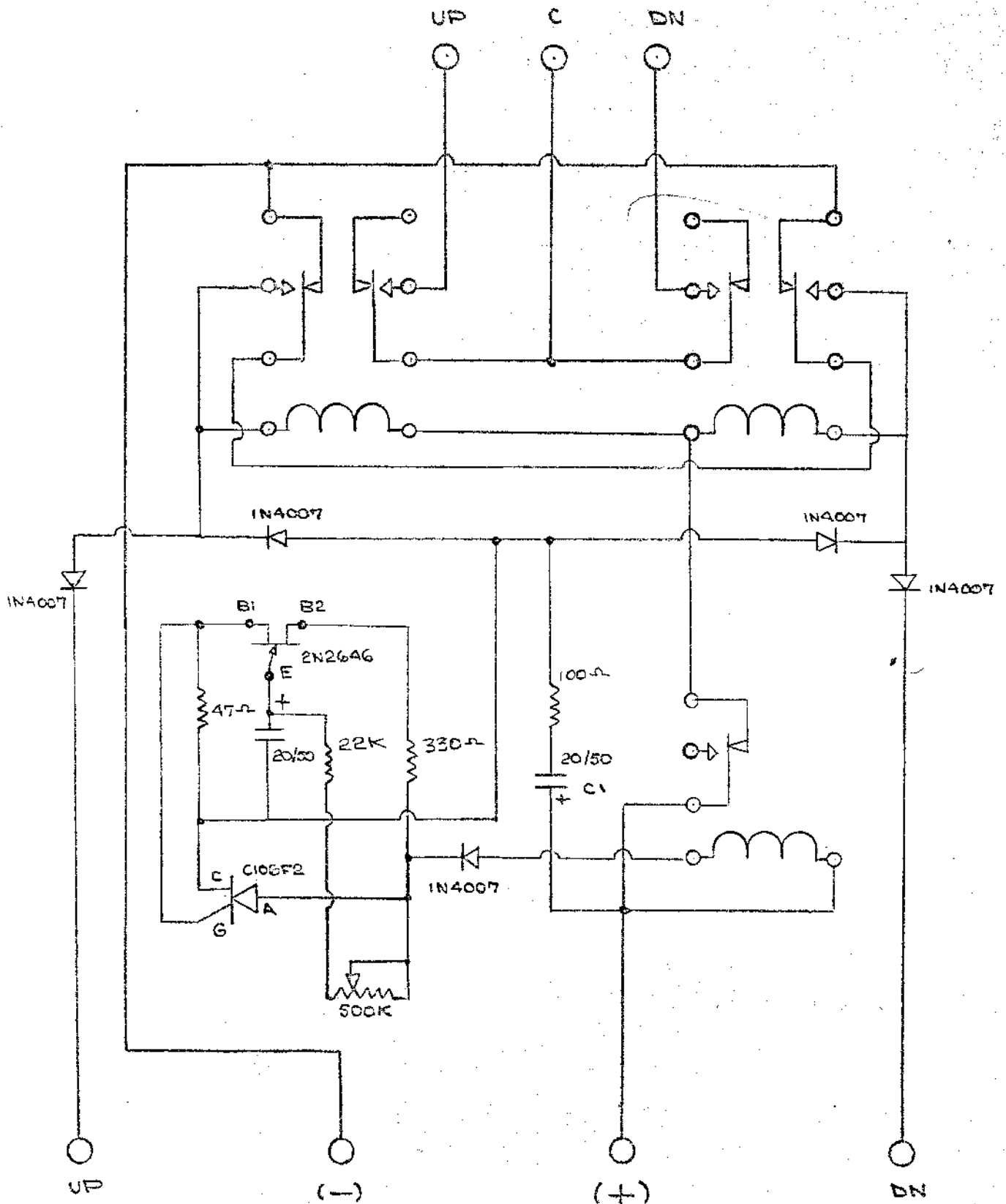
PS 50 P5

4/28/77

EP

P208

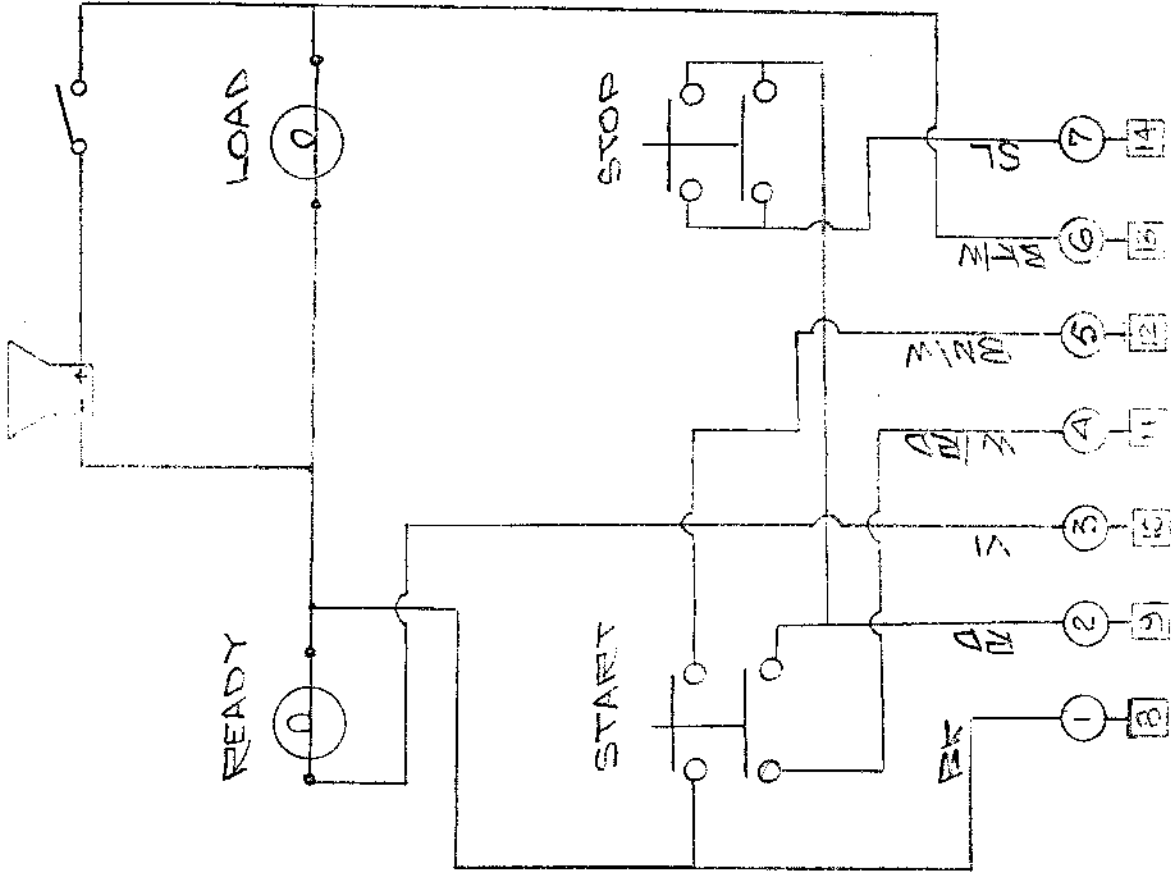




NOTE:  
 ON (+) SYSTEMS REVERSE  
 ALL POLARITYS ON DIODES,  
 C1, INPUTS ++ -

FLAVEN LABS		
HSC PC BOARD (-)		
3-30-78	ED	F226

SONALERT (A)



(A) OPTIONAL

RAVEN LABS, Inc.

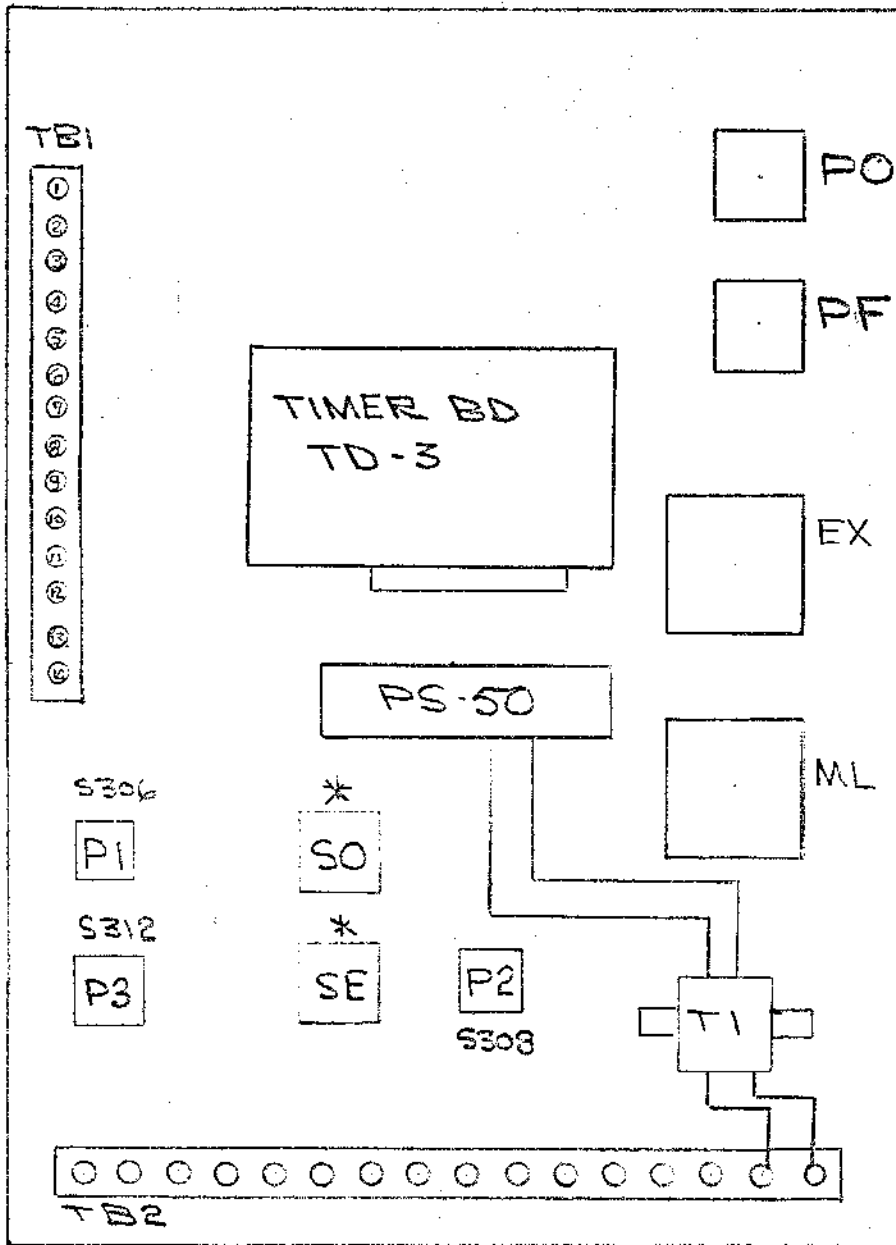
RC-2 (+ SYSTEM)

DATE 10-29-79 DRAWN BY E.S. P.2AA

S306 - SEN/SAFE

S308 - HSC HOUSE BOARDS

S312 - INTERCONNECT CABLE (DIR II)



P1 - P306  
P2 - P308  
P3 - P312 DIR II

RELAY

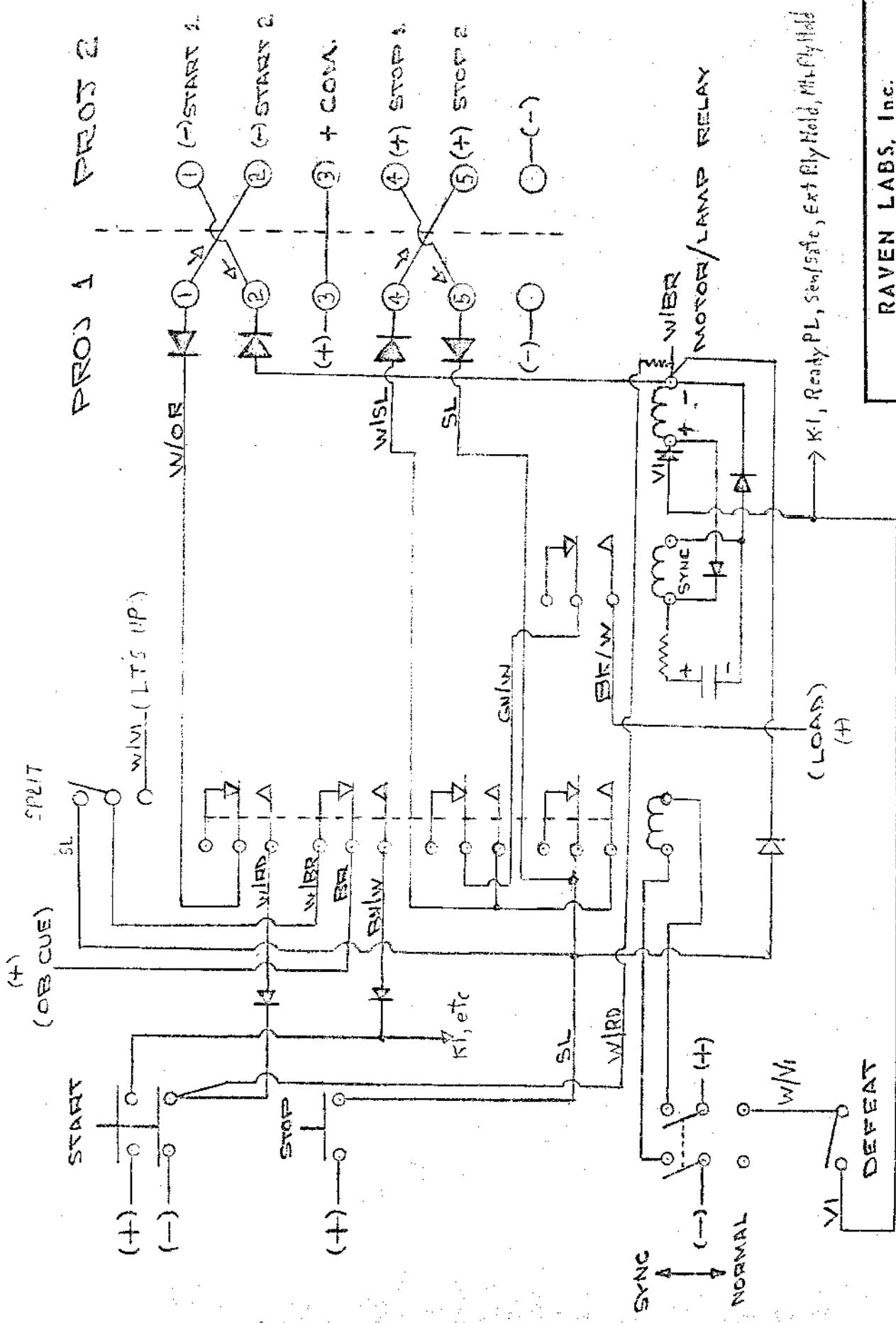
- PF - DOUSER CLOSE ————— HC2 - 24V
- PO - DOUSER OPEN ————— HC2 - 24V
- EX - EXCITER/ NON SYNC ————— HP33 - 24V
- ML - MOTOR/ LAMP ————— HP33 - 24V
- \* INT - INTERMISSION (DIR II ONLY) - KHP - 24V
- \* SO - SYNC ON (DIR I ONLY) KHP - 24V
- \* SE - SYNC ENABLE (DIR I ONLY)

RAVEN LABS, Inc.

PAC 1 / DIR A PANEL

DATE 11-1-79 DRAWN BY E.S.

DESIGN NO. P-245



RAVEN LABS, Inc.	
PAC-5 SYNC CIRCUIT	
DATE	DRAWN BY
11/27/79	ES
DWG. NO.	
P240	

K1, Ready PL, Sem/50c, Ext Fly Hold, MFLy Hold

(LOAD) (+)

DEFEAT

SYNC

NORMAL

W1/W1

MOTOR/LAMP RELAY

W1BR

W1OR

W1SL

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR

W1OR

W1SL

W1BR