

Film-Tech

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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.

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Sterling Recreation Organization (SRO Theaters)

COMMANDER 1

INSTRUCTION MANUAL

PROJECTOR AUTOMATION UNIT

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COMMANDER 1

Technical Data

Power Requirements

- a) Commander Control Cabinet
117V 60HZ 300W
- b) House Control Cabinet
117V 60HZ 300W
- c) R-1220-1 Exciter Supply
117V 60HZ 190W
- d) Circuits as required for
Curtain motor, Masking motor,
House lights, Stage lights.
- e) Circuits as required for Xeon
or Arc rectifiers.
- f) A separate ground wire #10 BRC,
must be run from each Projector
and Terminal 3 of T.S.-3 rear
of Control Cabinet.

Internal Power Supply Voltage

24V DC Reg. at 2 AMPS

Mechanical Specifications

- a) Control Cabinet RACK MOUNT VERSION
Height 9" 7" H
Depth 15 $\frac{1}{2}$ "
Width 19 $\frac{1}{4}$ " 19" W
- b) House Control Cabinet
Height 16"
Depth 6 $\frac{1}{2}$ "
Width 12"

LAMPS ARE # 387

REQUIREMENTS

LIGHTS - The Commander 1 will operate any motorized light dimming system, regardless of whether it is a 117VAC control type, or low voltage DC. On-Off type of control can also be accommodated by the use of an auxiliary relay box (consult your N.T.S. Representative.)

CURTAINS AND MASKING - Must of course be motorized. May be either 117VAC or low voltage DC. Masking control is two position, IN or OUT (flat or wide).

PROJECTORS - Must be free running. Take-up must be smooth with no "jerk" on start. Changeovers must be even with no sticking.

GROUNDING - Both projectors and Control Cabinet must be grounded to a GOOD cold water pipe ground - NOT an AC neutral - NOT a radiator - NOT a conduit ground. At least a No. 10 wire (insulated) should be used.

The system comprises the following units:

- 1) Commander Control Cabinet containing the following plug-in modules:
 - a) PS Regulated 24 volt DC, Power Supply
 - b) SEL Program Selector
 - c) MC Sensing Control Unit

This is a wall ^{OR RACK} mounted cabinet for pre-programming the operating order of the shows.

- 2) House Control Cabinet CAB/HSC contains circuits and switches, manually operated for lights, curtains, masking, sound changeover. Located on front wall adjacent to observation port.
- 3) Two (2) sensing modules. - Contain the sensing heads which are triggered by the foil tab.
- 4) Two (2) Fail Safe modules. - Contains circuit for shutdown of projector.

INSTALLATION

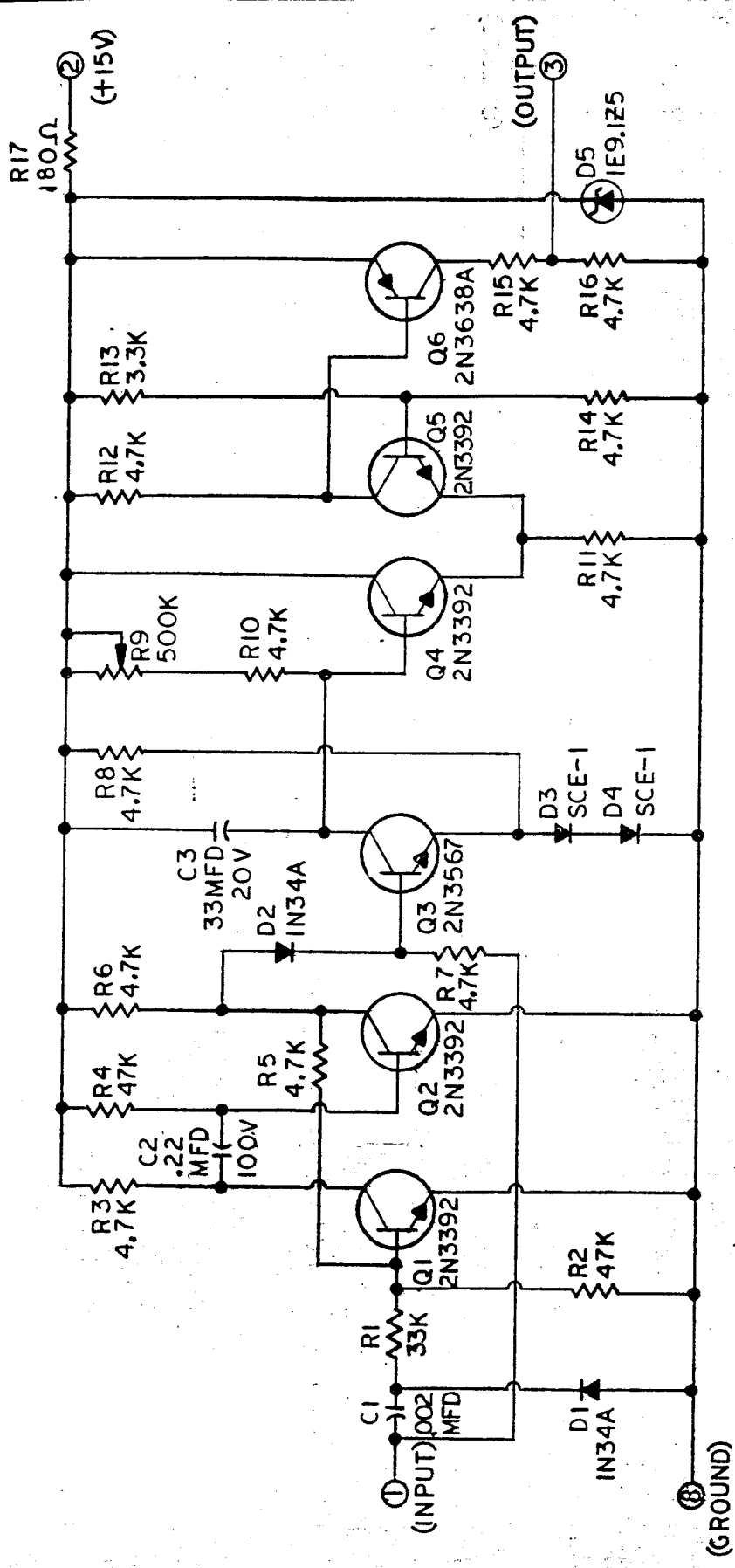
The following steps should be followed in preparing the booth for automation. The booth wiring diagram should be studied prior to commencement of any work.

- 1) Mount Control Cabinet within 25 running feet of the projectors to insure plug-in cables will be long enough. Where possible, a location should be chosen which affords a view of the operating sides of both projectors as well as the screen. If space is available on the front wall it will simplify running of the low voltage plug-in control cables. DO NOT INSTALL PLUG-IN MODULES.
- 2) Mount CAB/HSC on front wall preferably between projectors. If this is not possible, locate adjacent to other viewing port.
- 3) Mount Exciter Lamp supply as close to CAB/HSC as possible.
- 4) Install Proximity Detector on top of projector as shown on Print 2015A, and 2015B.
- 5) The Sen/Safe is mounted between the lower takeup assembly and the bottom of the sound head. Drop the lower takeup assembly down to the point where the slotted angle will slip in between the two. Align visually, then place a short length of film between the lower sound head sprocket and the take-up reel (or guide roller if a platter system is being used.) Now complete the alignment being sure that the film is in a smooth vertical plane, and remains so, as the two lower assembly/sound head screws are tightened up. Connect Sen/Safe to HSC Cabinet.
- 6) Run 12 pin connector from Control Cabinet to HSC Cabinet.
- 7) Run 3 pin shield cable from Control Cabinet to Prox.Det. and connect with Mating cable.
- 8) Connect 115V AC to 3 pin terminal strip at rear of Control Cabinet.
 1. HI
 2. LO
 3. Cold water ground
- 9) Make connections to HSC Cabinet as shown in Print P214.

OPERATION

- 1) Slide Power Supply Module into cabinet. Turn power switch on and throw select switch to "Auto" position. Auto light should light.
- 2) Throw switch marked (Safety Defeat) on HSC Cabinet to "Up" position. Ready light will come on.
- 3) Each function may be checked manually by throwing switches on HSC Cabinet as indicated.
- 4) Slide MC Module into cabinet.
- 5) MC Module is calibrated at the factory, however if it becomes necessary to re-calibrate the following procedure should be followed:
 - a) On MC Module remove pulse stretcher board from socket on Amplifier.
 - b) Turn both fine and coarse pot completely clockwise. Cue light will come on.
 - c) Turn fine pot counter-clockwise to 12 o'clock position.
 - d) Slowly turn coarse pot counter-clockwise until cue light goes out.
 - e) Turn fine pot clockwise until light comes on, and then turn fine pot counter-clockwise until light goes out.
 - f) Test sensitivity by passing cue foil in front of Sensing Head. Cueing should occur approximately 1/8 inch away from Sensing Head. If adjustment is necessary use coarse pot for adjustment only. To decrease sensitivity turn pot counter-clockwise.
- 6) Replace pulse stretcher into MC Module.
- 7) Pulse stretcher board may be checked by passing foil in front of Sensing Head. Cue light will come on and remain on for three seconds and then go out. The stretch time may be adjusted by turning pot on Stretcher Board.
- 8) Slide Select module into cabinet.
- 9) Ready light on Select module will come on. Note: If one of sequence lights are on press re-set button. This will return module to ready position.
- 10) Apply cueing tape to film across frame line to point where masking change is required. Cue foil may also be applied to reset to Ready position.
- 11) Thread film through projector past Fail Safe.

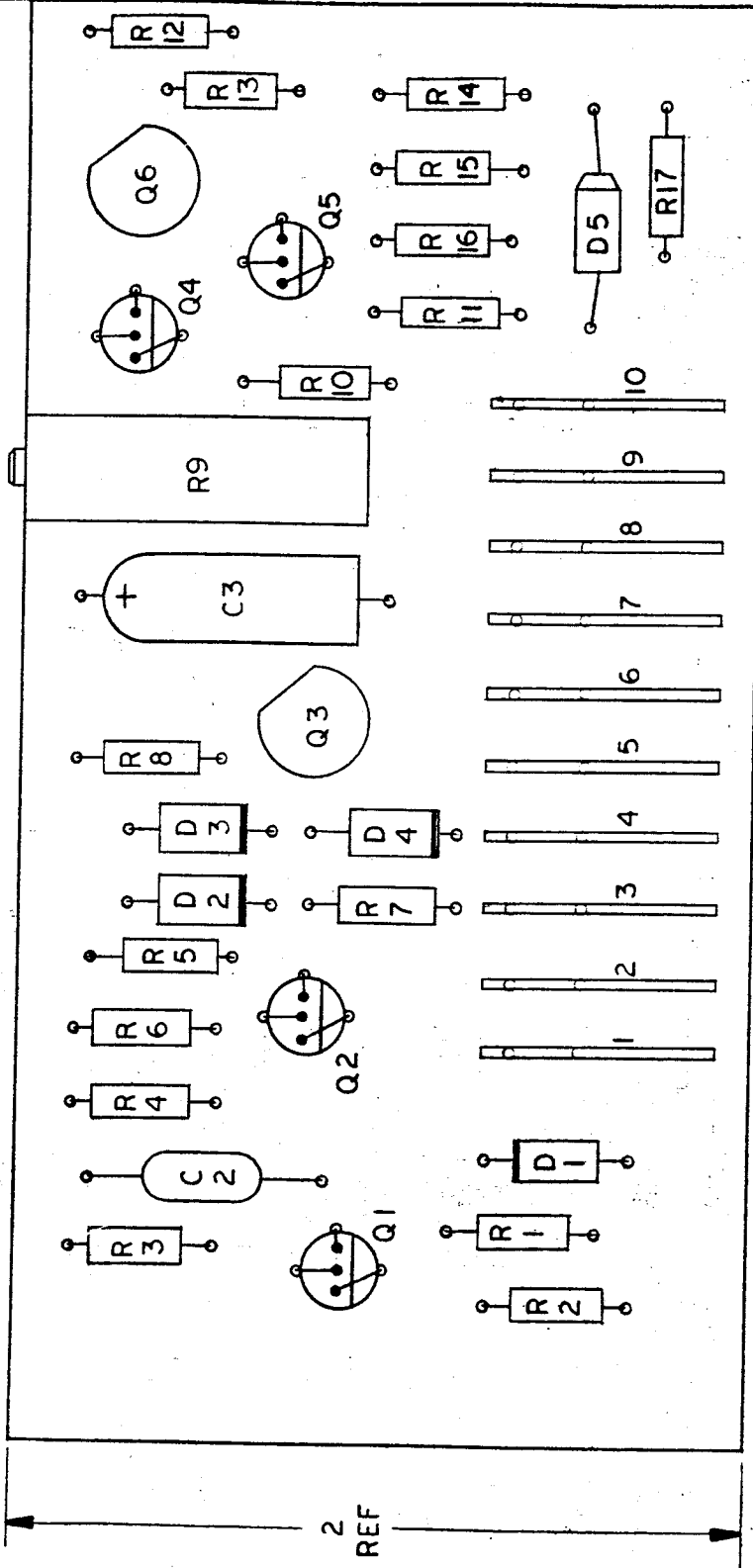
- 12) Return Safety Defeat switch to OFF position. Ready light should remain on.
- 13) Program sequence A through F for desired show. Press Start button on Select module. Hold for three seconds. Run cam assembly will be adjusted, stage lights will come down immediately, house lights will come down, and curtain will open at +7 seconds. When depress-Start button masking will also occur, and if equipped with lens turret, turret will program to corresponding masking change.
- 14) On each cue pass Select will step up to the next sequence, and whatever has been programmed will occur.
- 15) If sequence has been programmed for intermission, intermission cam assembly will be adjusted, curtain will close, and house lights will come up immediately. Stage lights will come up at +7 seconds. If sequence following intermission has been programmed for re-set, Select module will automatically re-set to Ready position.
- 16) Module may manually be re-set by pressing re-set button. Note: For automatic re-set, "AUTO" re-set switch must be in Up (ON) position.
- 17) If module is cued beyond F sequence it will automatically be re-set to Ready position.
- 18) In event of film break, system will automatically be cued into intermission.
- 19) System may also be cued into intermission by depressing STOP button.
- 20) If system has been supplied with lamp fail module, mount sensor on inboard side of lamp house. Run cable from module to HSC cabinet and connect as indicated on Print P218.
- 21) Sensitivity of lamp fail module can be controlled by Potentiometer on module.
- 22) A defeat switch marked CELL BYPASS on HSC cabinet will defeat lamp fail circuit.
- 23) A terminal strip has been supplied on the rear chassis of the main cabinet for connecting Remote Station.



RAVEN LABS, Inc.
 DELAYED BREAK MODULE
 .5 TO 10 SECONDS MODEL 76028
 DATE 4-11-72 DRAWN BY F. MORRIS DWG. NO. E17-1

DWG NO.
 676028-1

4 (REF)



COMPONENT BOARD LAYOUT

RAVEN LABS, Inc.

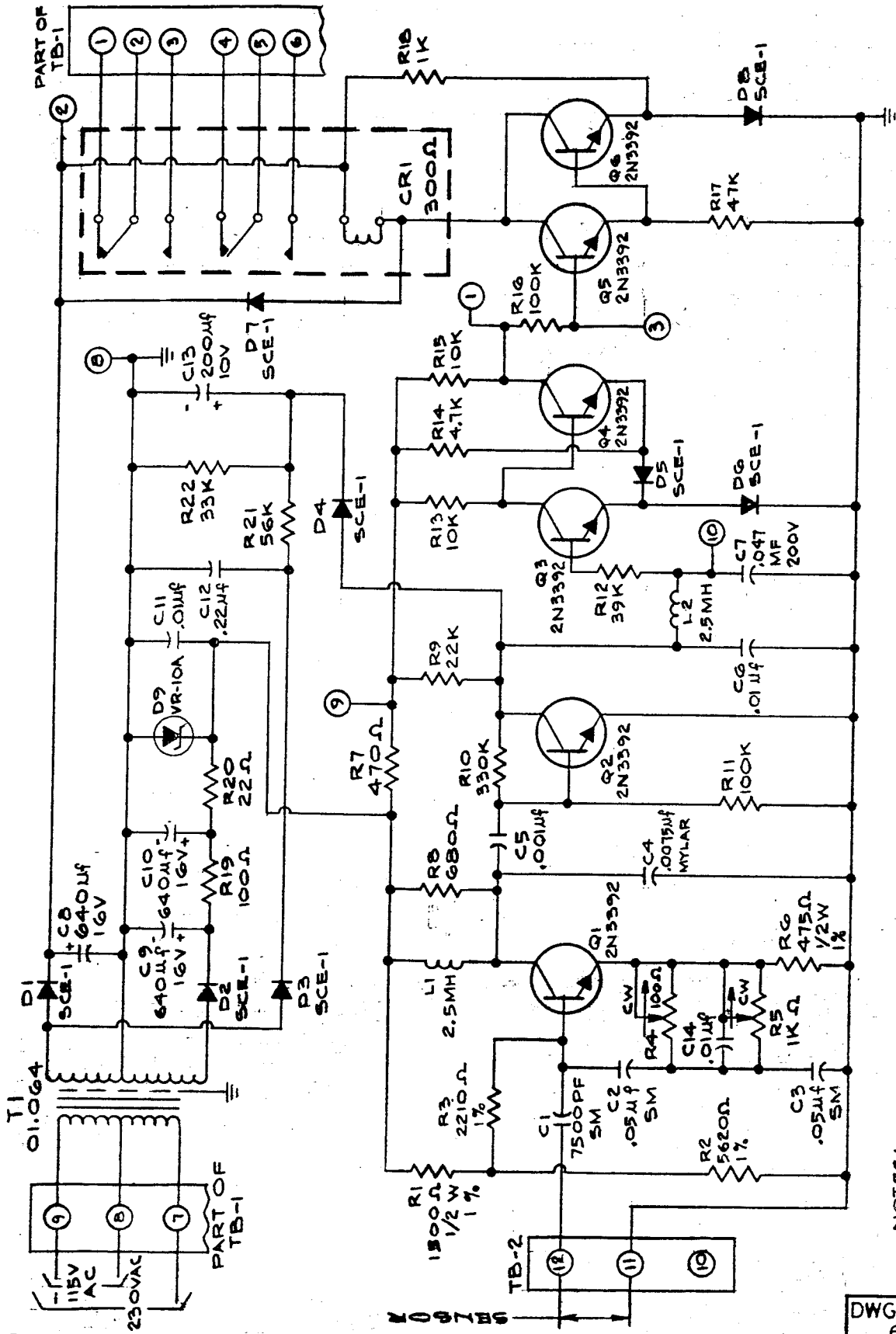
DELAYED BREAK MODULE
.5 TO 10 SECONDS MODEL 76028

DATE 4-20-72 DRAWN BY F. MORRIS DWG. NO. E16

SHEET 2 OF 2

DWG NO. 676028-1

SHT 2 OF 2



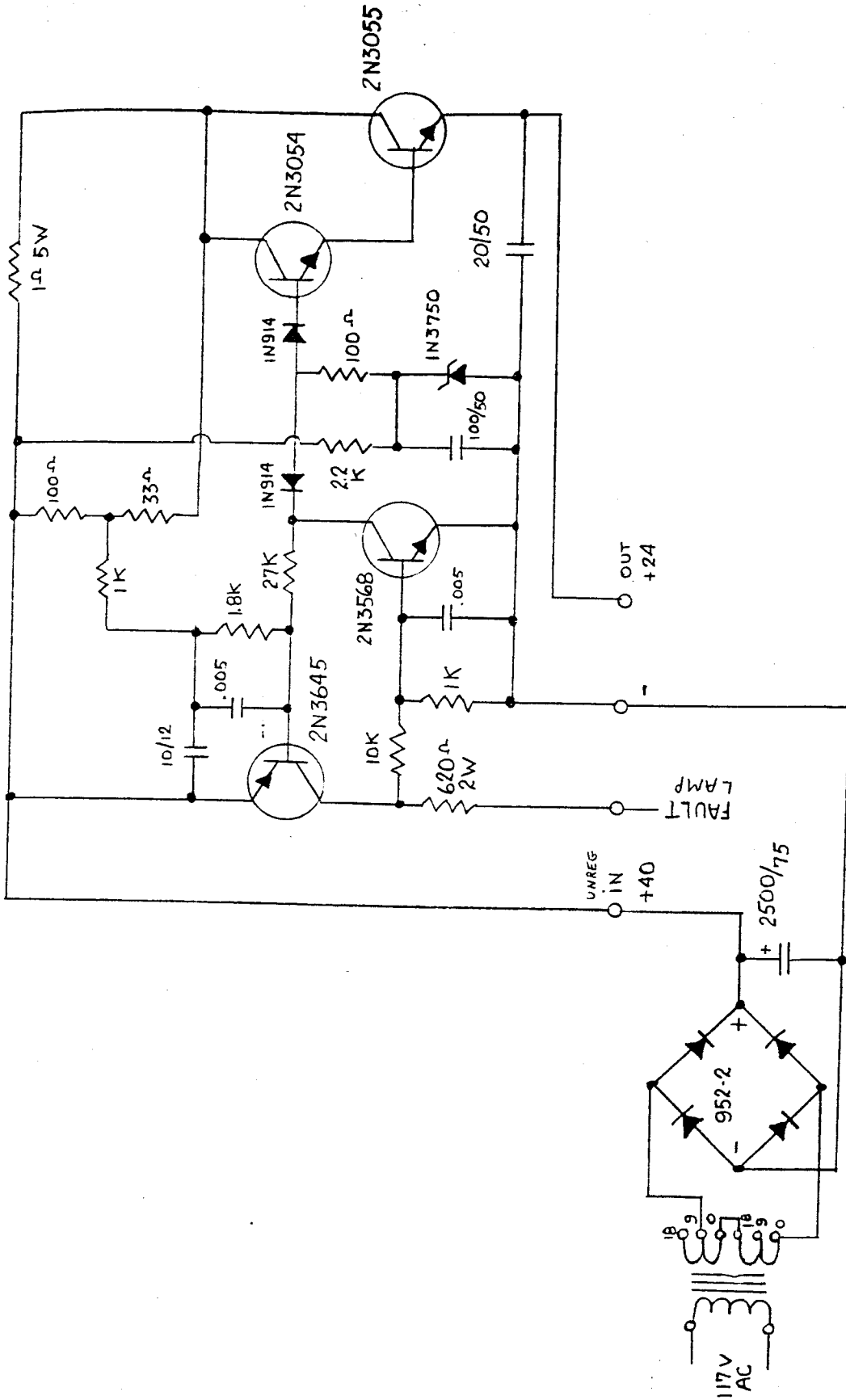
NOTES:
UNLESS OTHERWISE INDICATED;
ALL RESISTORS ARE 1/4 WATT, 10 %

DWG NO.
655121-1

SHT 1 OF 3

SHEET 1 OF 3

RAVEN LABS, Inc.	
PROX CONTROL FINAL ASSY	DWG. NO. E18-1
DATE 4-19-72	DRAWN BY F. MORRIS

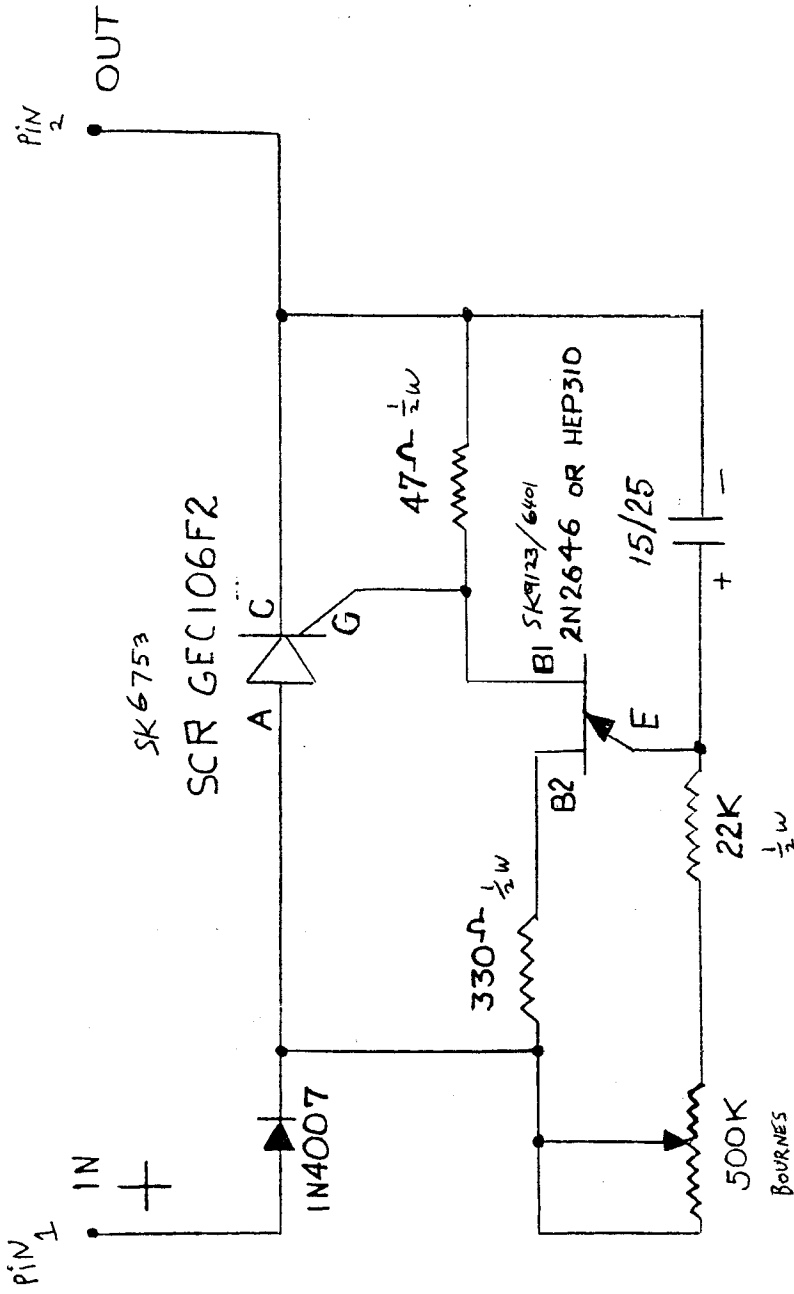


RAVEN LABS, Inc.

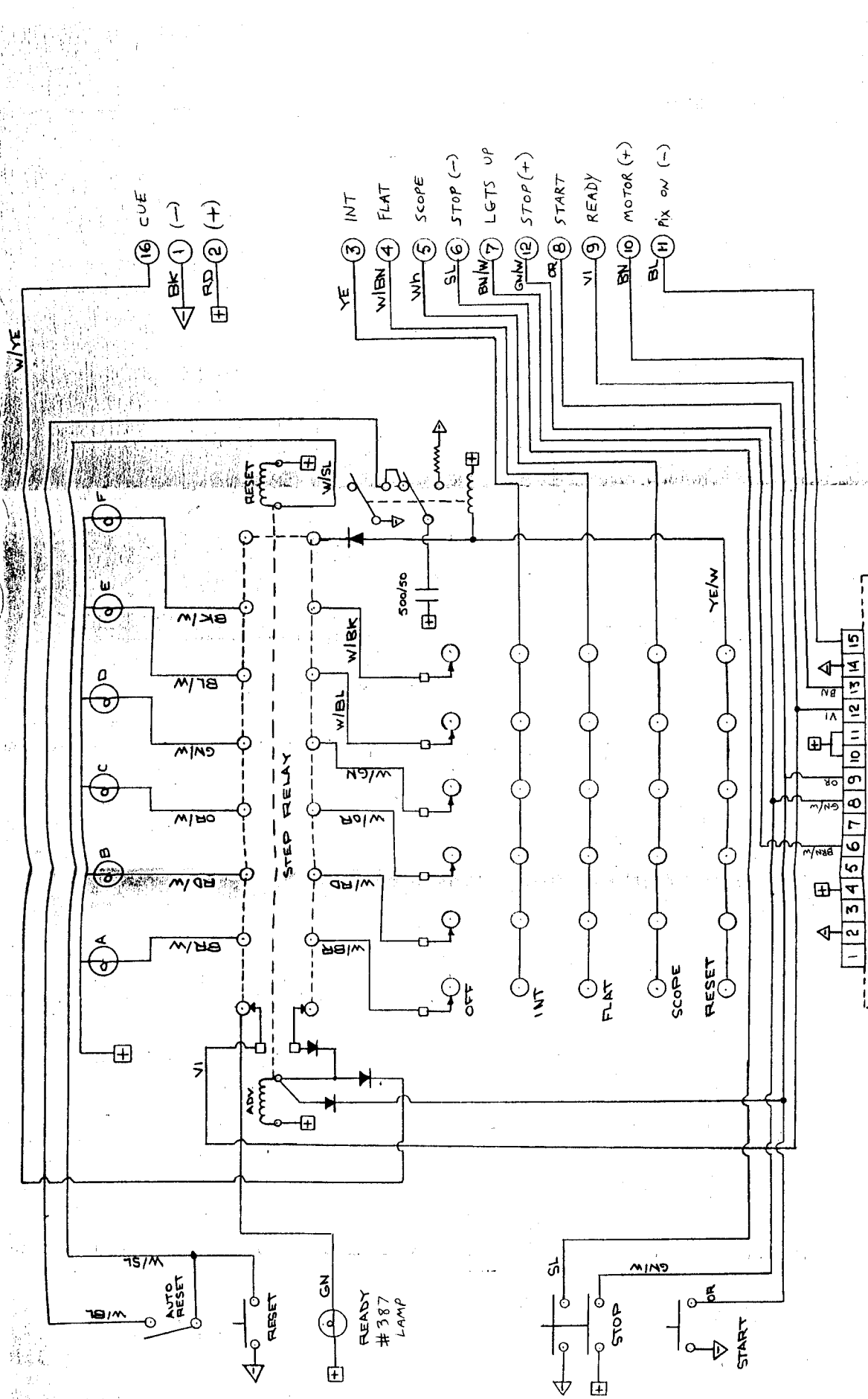
POWER SUPPLY 24V DC

DATE 3/22/74
DRAWN BY *EG*

DWG. NO. P205



RAVEN LABS, Inc.	
PEC TIME DELAY	
DATE	DRAWN BY
3/22/74	ED
DWG. NO. P206	

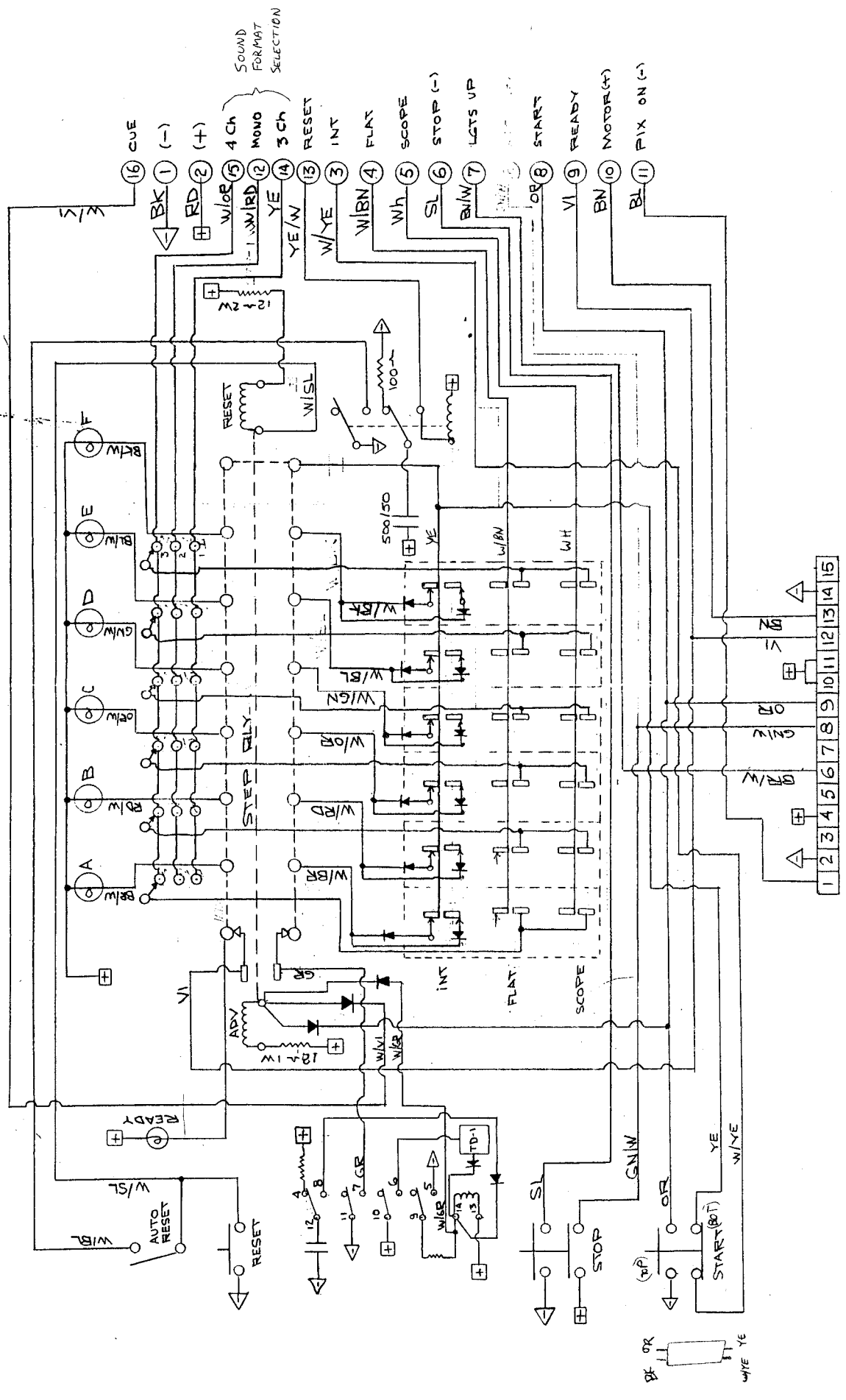


16 CUE
 BK 1 (-)
 RD 2 (+)

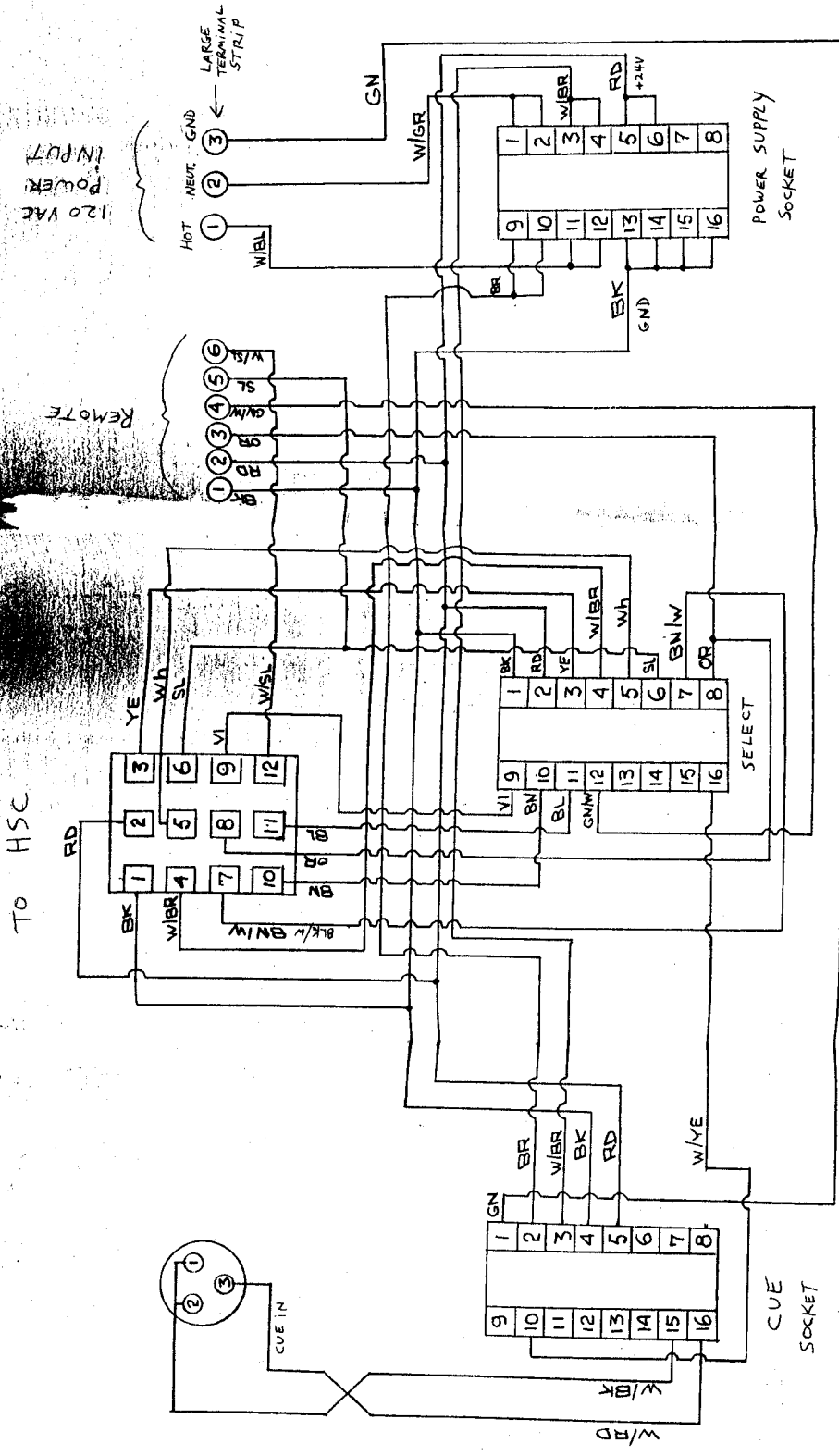
3 YE INT
 4 W/BN FLAT
 5 W/SL SCOPE
 6 SL STOP (-)
 7 BN/W LGTS UP
 8 GN/W STOP (+)
 9 OR START
 10 V/1 READY
 11 BN MOTOR (+)
 12 BL PIX ON (-)

RAVEN LABS
 COMMANDER SELECT UNIT
 9/29/77 ED P215

HSC BD
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



LOGIC BD P220



To HSC

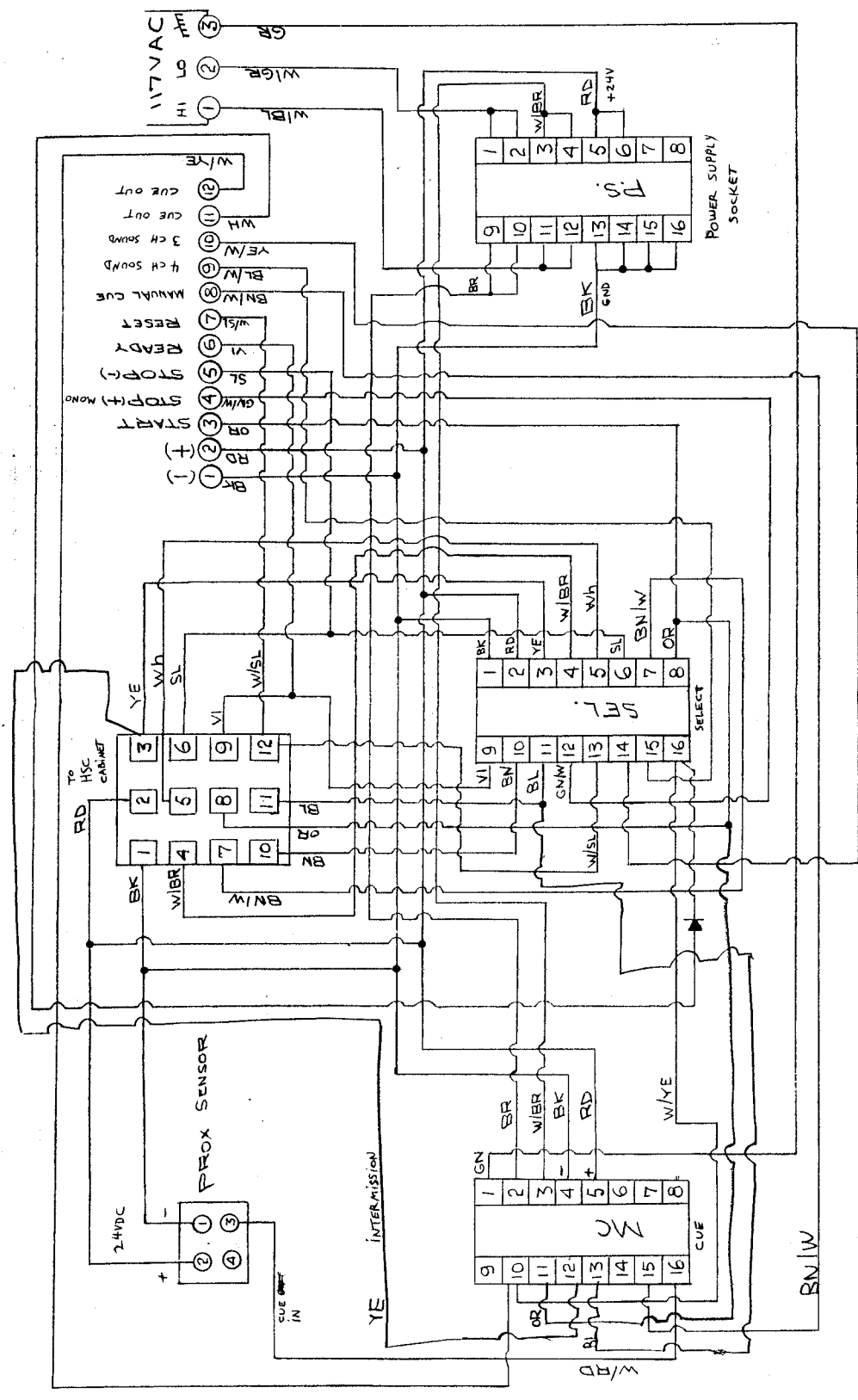
120VAC
POWER
INPUT

REMOTE



REAR OF CONTROL CHASSIS

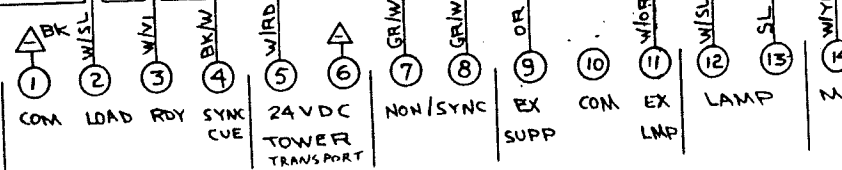
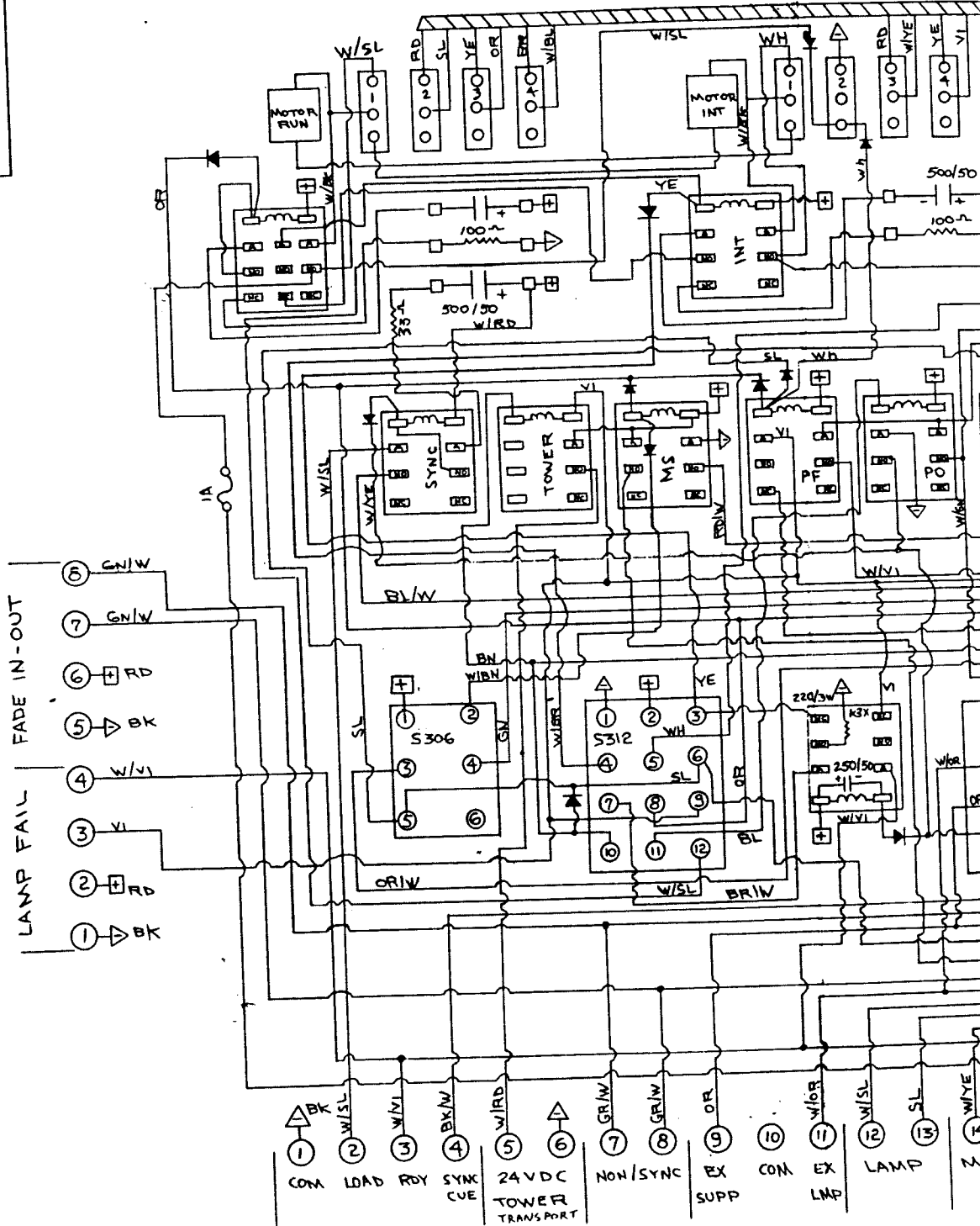
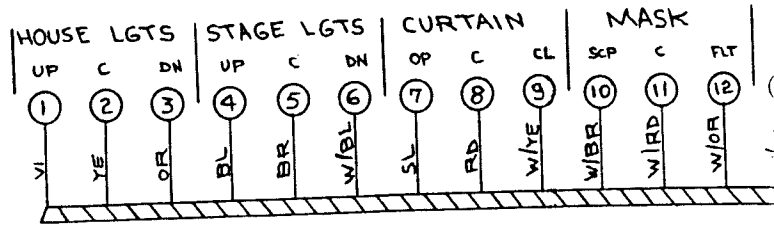
RAVEN LABS
COMMANDER REAR CHASSIS
9/29/11 ED P216

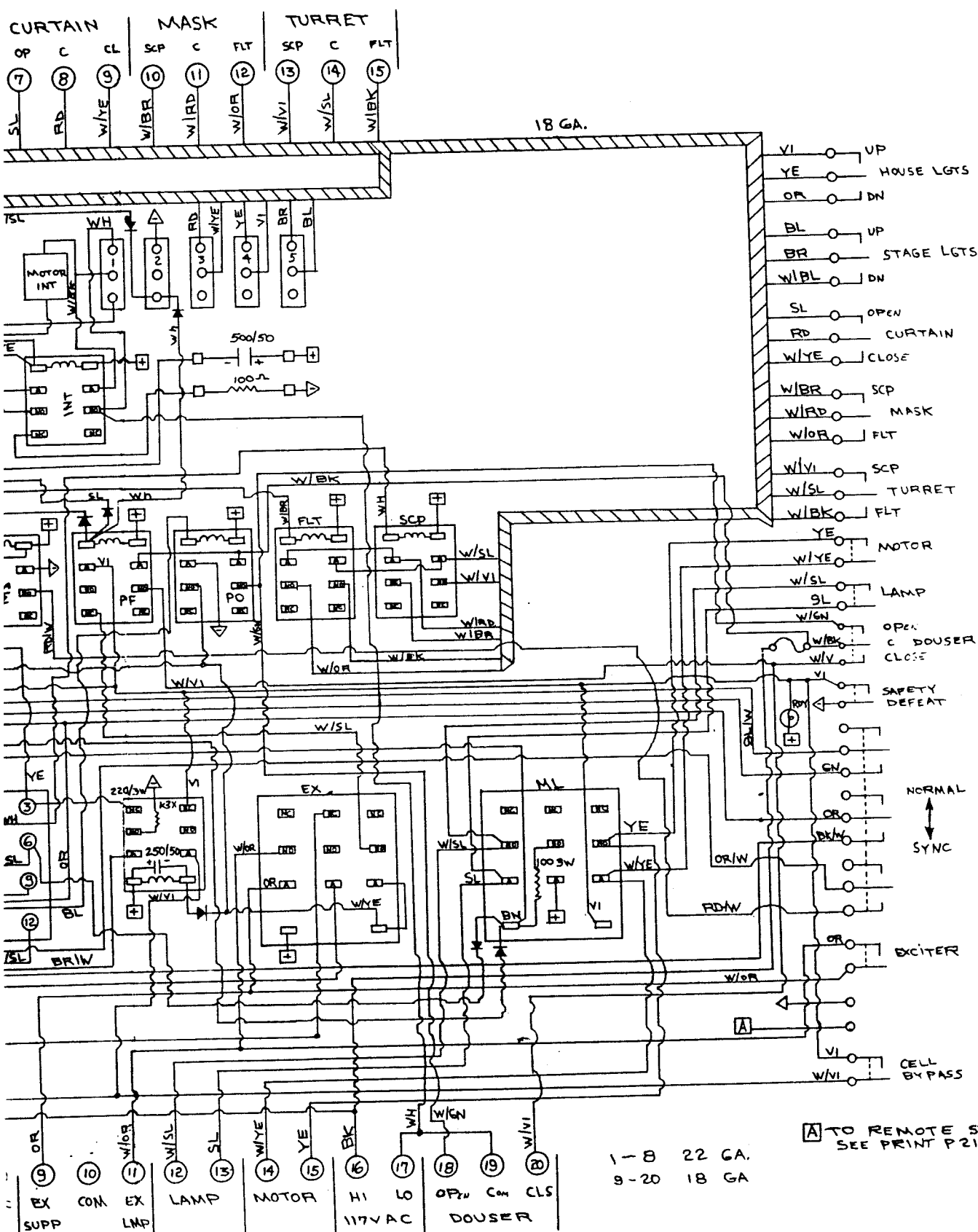


CAM ADJUST		
RUN		
NO	ID	SET
1	HOLD	+1
2	CURTAIN OP	+7
3	HSE LGTS DN	+7
4	STG LGTS DN	+1
INT		
1	HOLD	+1
2	DOUSER OFF	+7
3	CURTAIN CLS	+1
4	HSE LGTS UP	+1
5	STG LGTS UP	+7

S306 SYNC	
1	(-) COMMON
2	START 1
3	START 2
4	STOP 2
5	STOP 1

S312 CONTROL	
1	(-) 24VDC
2	(+) 24VDC
3	INT (-)
4	FLAT (-)
5	SCOPE (-)
6	STOP (-)
7	LGTS UP (-)
8	START (-)
9	READY (-)
10	MOTOR (+)
11	PIX ON (-)
12	LOAD (-)

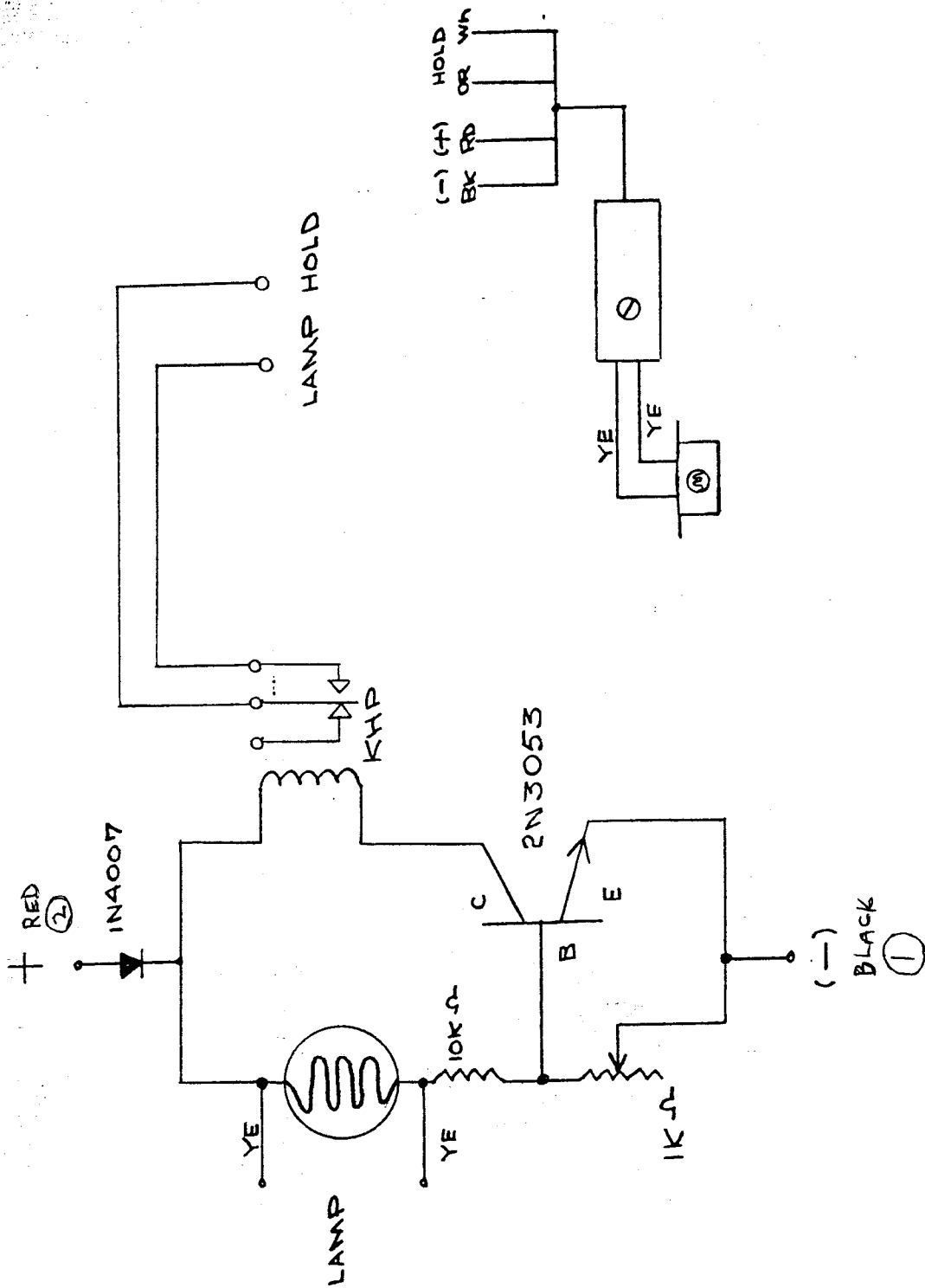




A TO REMOTE STRIP
SEE PRINT P218B

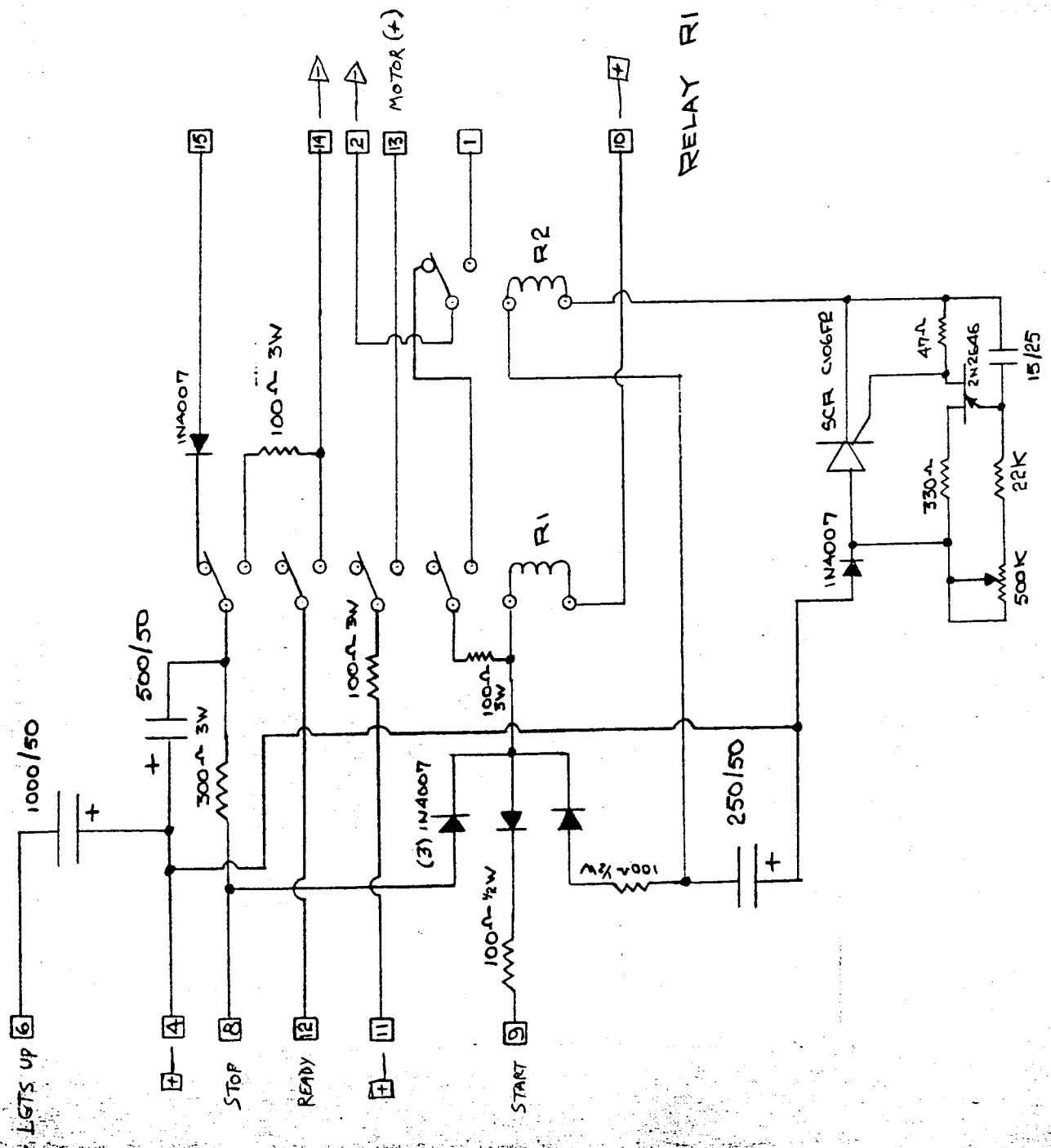
1-8 22 GA.
9-20 18 GA

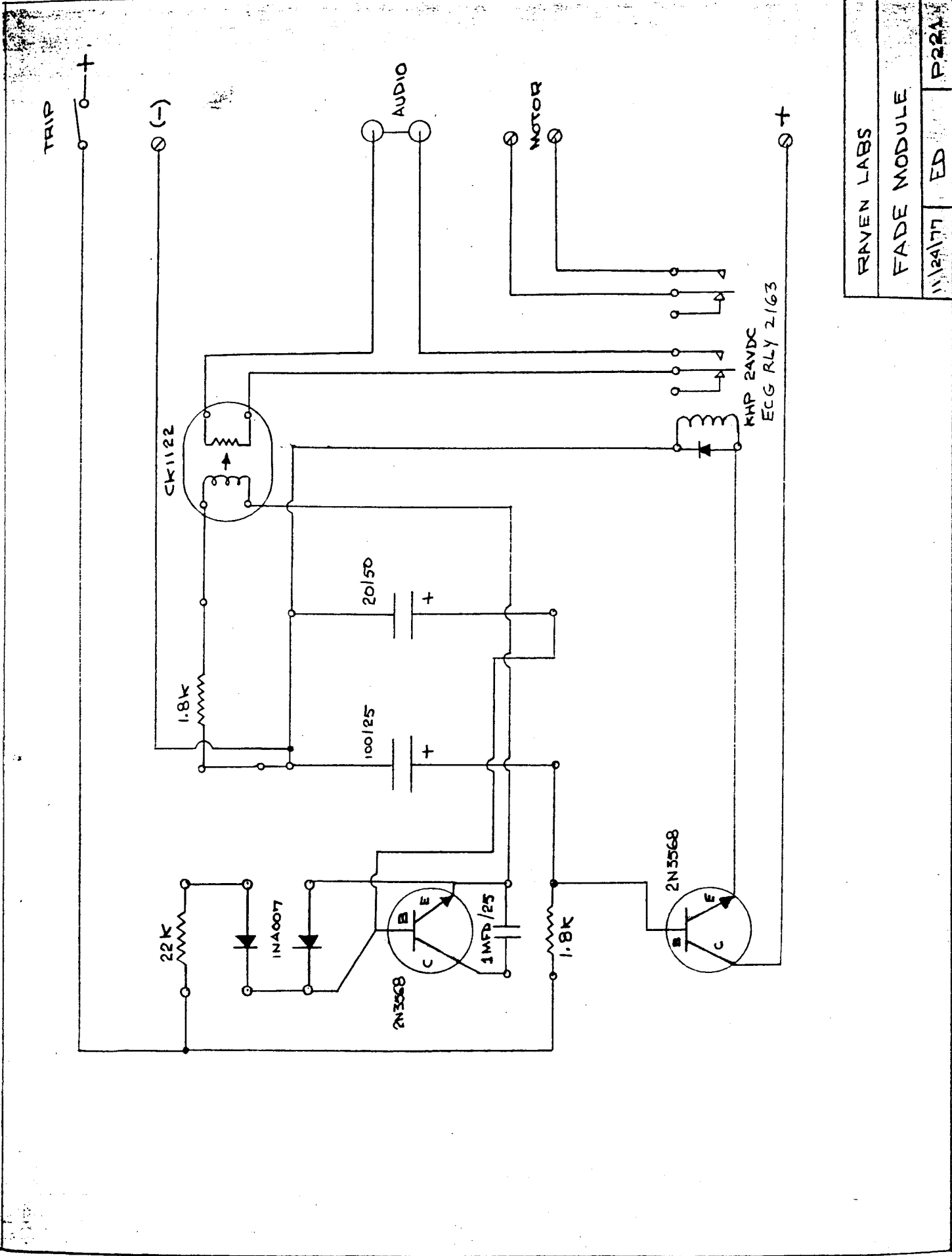
RAVEN LABS		
COMMANDER HSC CAB		
10120177	ED	P218B



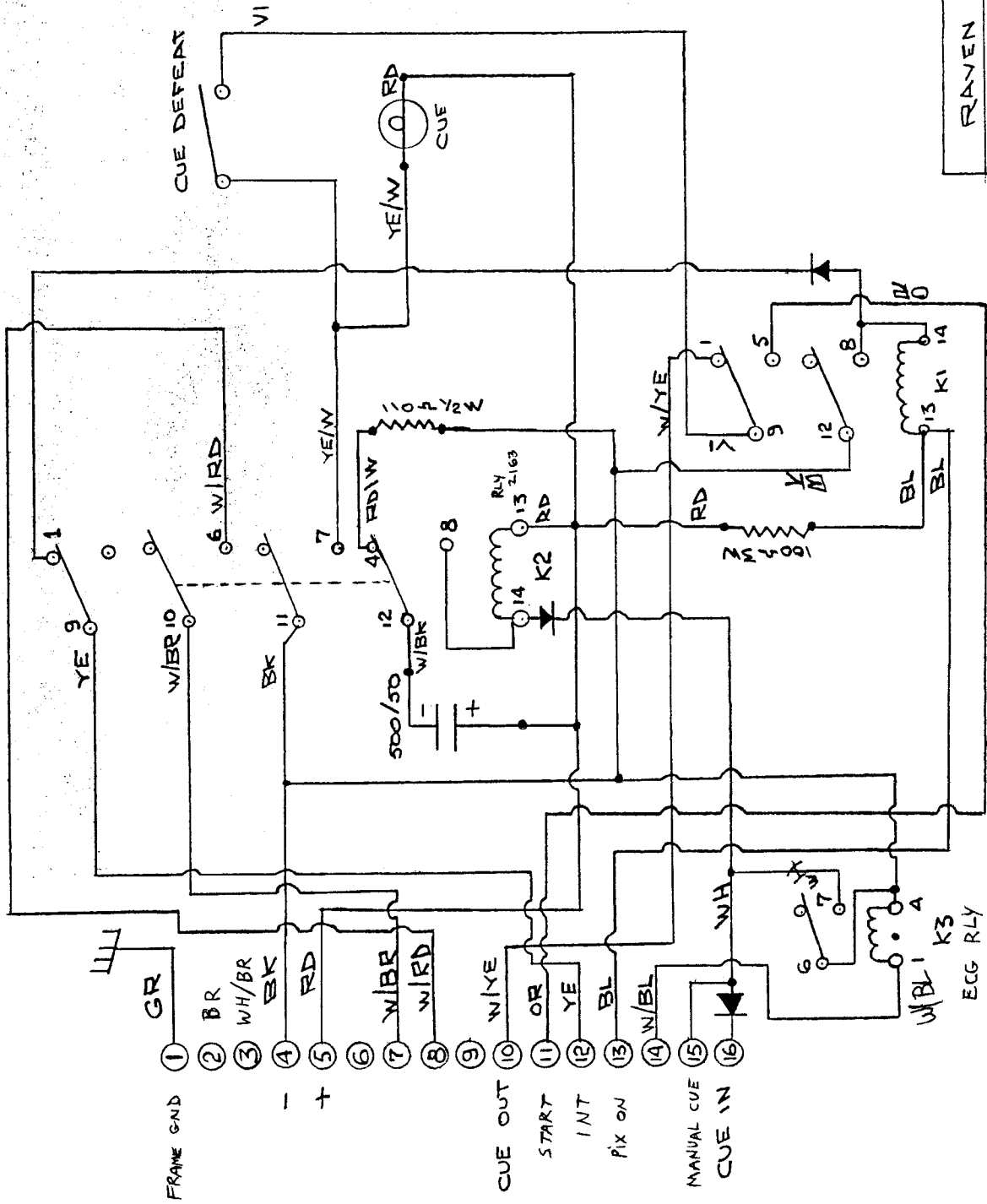
RAVEN LABS
 LAMP FAIL CIRCUIT
 11/24/77 ED P219

RELAY R1 + R2 - KHP 24VDC
 P4B KH4703-1 4PDT





RAVEN LABS	
FADE MODULE	
11/24/77	ED
P22A	



RAVEN LABS
 COMMANDER MC
 3/28/79 ED P236C

EGG RLY 2163

EGG RLY
 2543