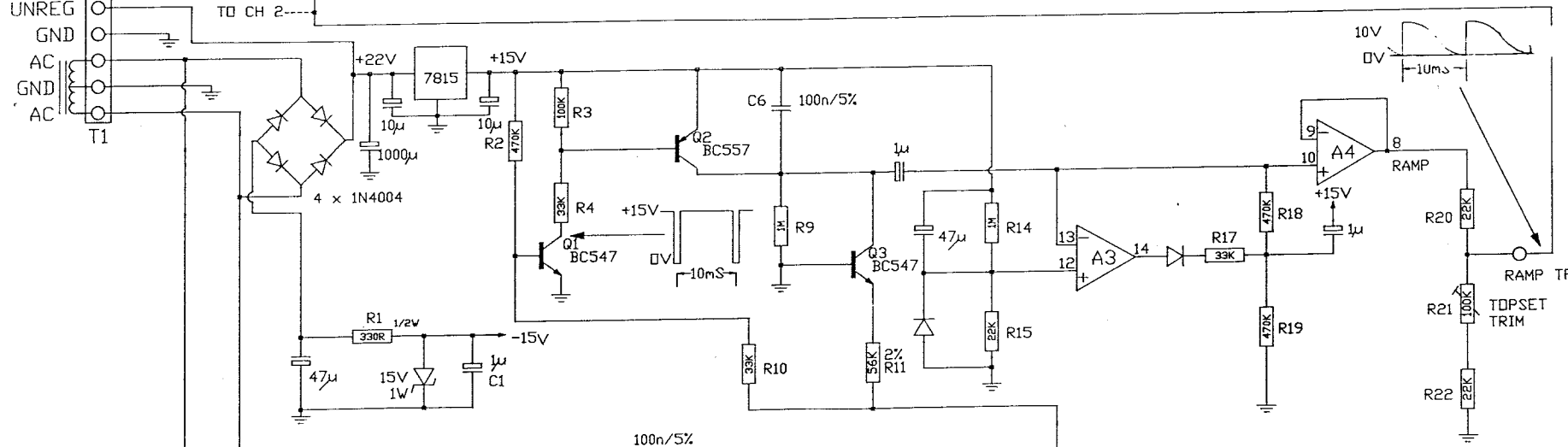
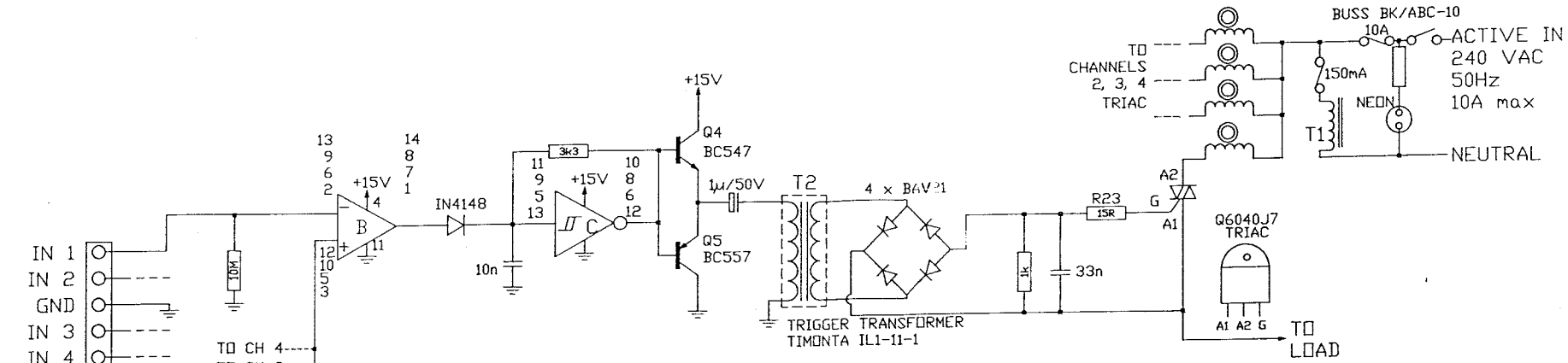


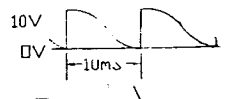
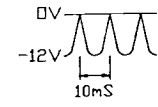
ALL MEASUREMENTS IN MM.		MATERIAL:	
DRAWN BY: R BIRD		SCALE	DATE
(c) JANDS ELECTRONICS P/L			20/5/87
4 CHANNEL DIMMER CARD		DRAWING NO.	
COMPONENT OVERLAY		1265.40/L1.0	
POSITIVE GOING INPUT ONLY			

ALL DIODES 1N4148 UNLESS OTHERWISE STATED



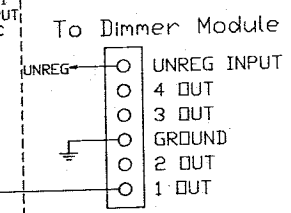
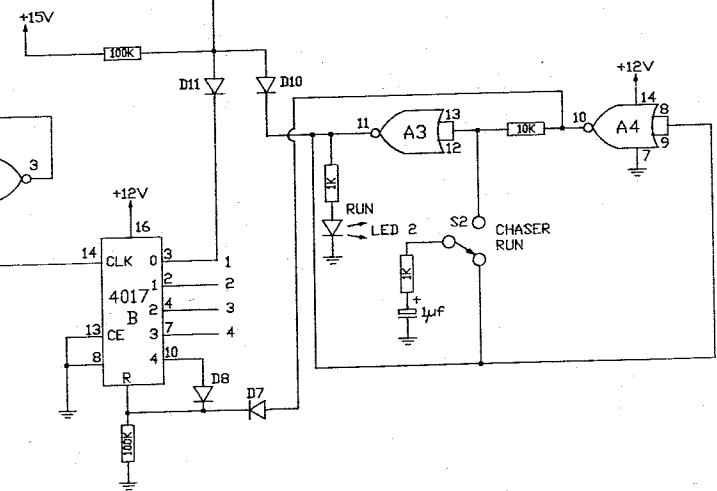
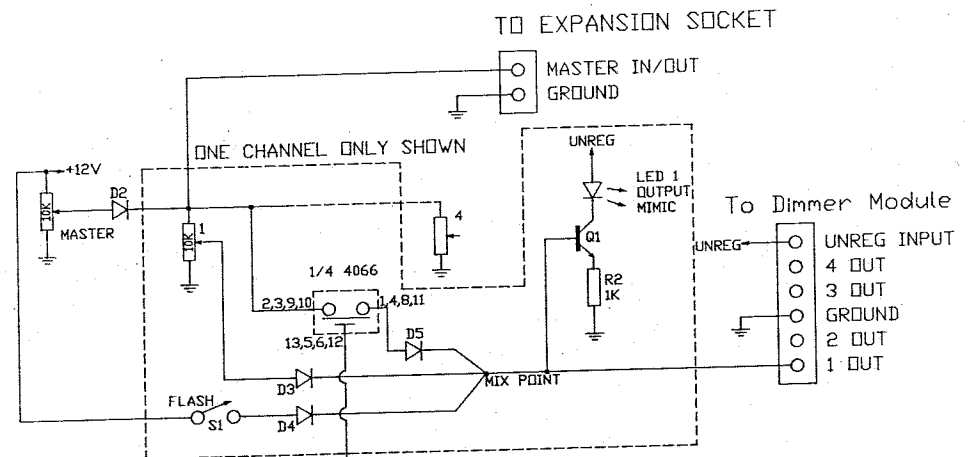
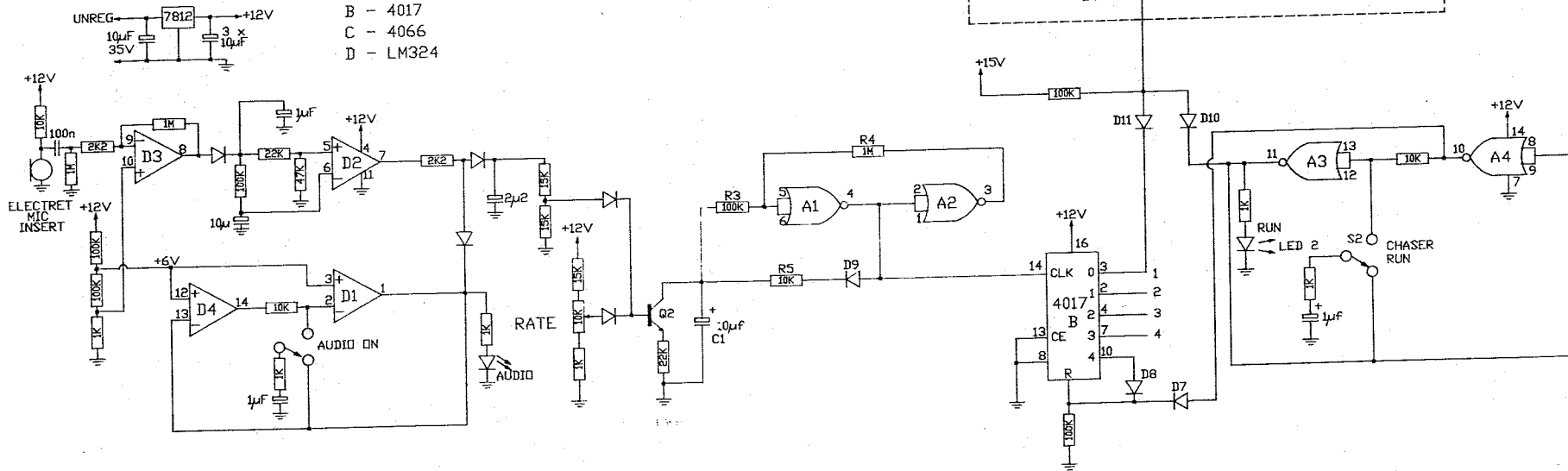
A = TL084
 B = LM324
 C = 40106 or 4584
 ALL DIODES 1N914 UNLESS SHOWN OTHERWISE

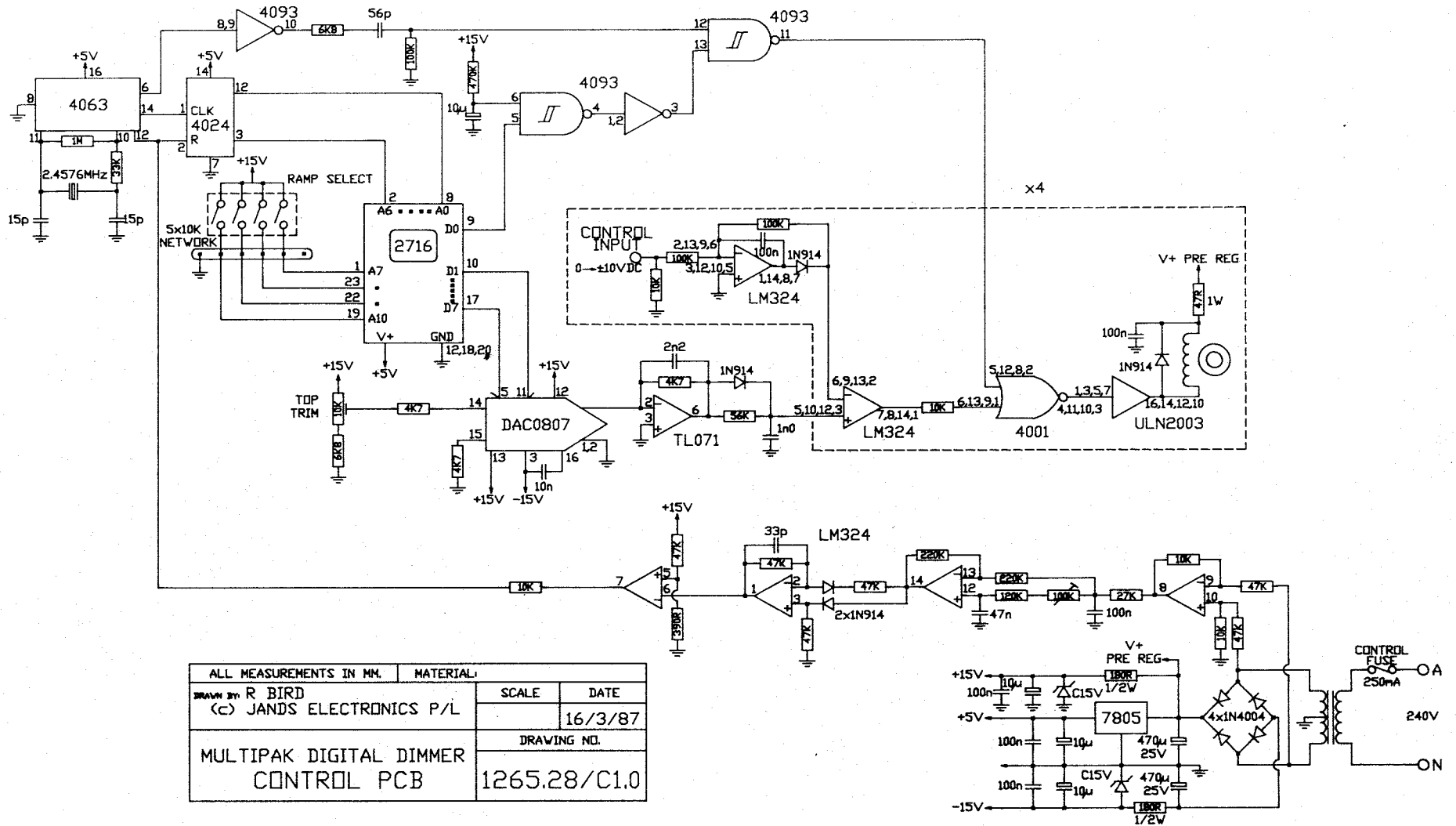
DRAWN BY: R BIRD	N/1: 1	SCALE	DATE
(C) JANDS ELECTRONICS P/L			6/7/87
FOURPAK DIMMER 2.5kw/4 CHANNEL			DRAWING NO. 1265.48/C2.2



DRAWN BY: R BIRD	N/4 1	SCALE	DATE
(C) JANDS ELECTRONICS P/L			9/7/87
FOURPAK CONTROL CIRCUIT		DRAWING NO.	
		1265.48/C1.4	

ALL TRANSISTORS BC547
 ALL DIODES 1N914 UNLESS OTHERWISE STATED
 ALL CAPACITORS 25V MIN. UNLESS OTHERWISE STATED
 A - 4001
 B - 4017
 C - 4066
 D - LM324





ALL MEASUREMENTS IN MM.		MATERIAL	
DRAWN BY R BIRD		SCALE	DATE
(C) JANDS ELECTRONICS P/L			16/3/87
MULTIPAK DIGITAL DIMMER CONTROL PCB		DRAWING NO.	
		1265.28/C1.0	

JANDS PTY. LTD.

39 CHALDER STREET, MARRICKVILLE, N.S.W., AUSTRALIA, 2204

TELEPHONE: 560 5233 (3 LINES)
CABLES: "JANDS", SYDNEY

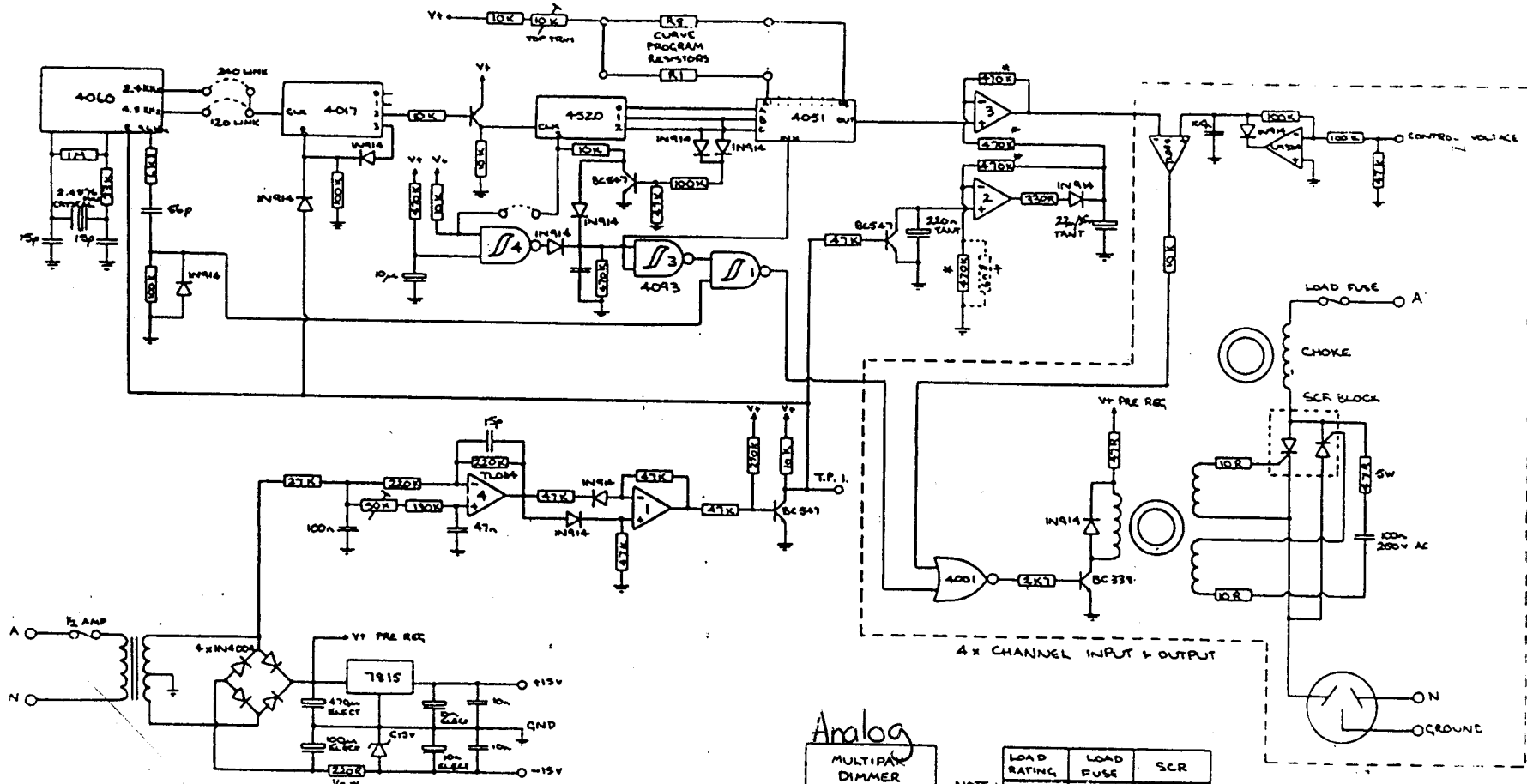
Incorporating: JANDS ELECTRONICS, JANDS LIGHTING,
JANDS LOCATIONAL SOUND.

BRAND

4 PIN CANNON

A	1	A	WHITE	6
B	2	B	BLACK	5
C	3	C	BROWN	4
D	4	D	GREY	3
E	5	E	PURPLE	2
F	6	F	BLUE	1
G	7	G	ORANGE	7
H	8	H	GREY - BLACK - YELLOW - RED	
J	9	I	RED	
K	10	J	YELLOW - BLACK	YELLOW - BLUE
aa		K	- GREEN - GREEN - RED	
		L	- N.C (ORANGE - BLACK)	
L	11	M	YELLOW - WHITE - REDS	
M	12	N	PINK	7

2N 3019



Analog
 MULTIPLEX DIMMER
 2.5 + 5KW
 DRAWN BY M.ELM
 UPDATED 3/7/84

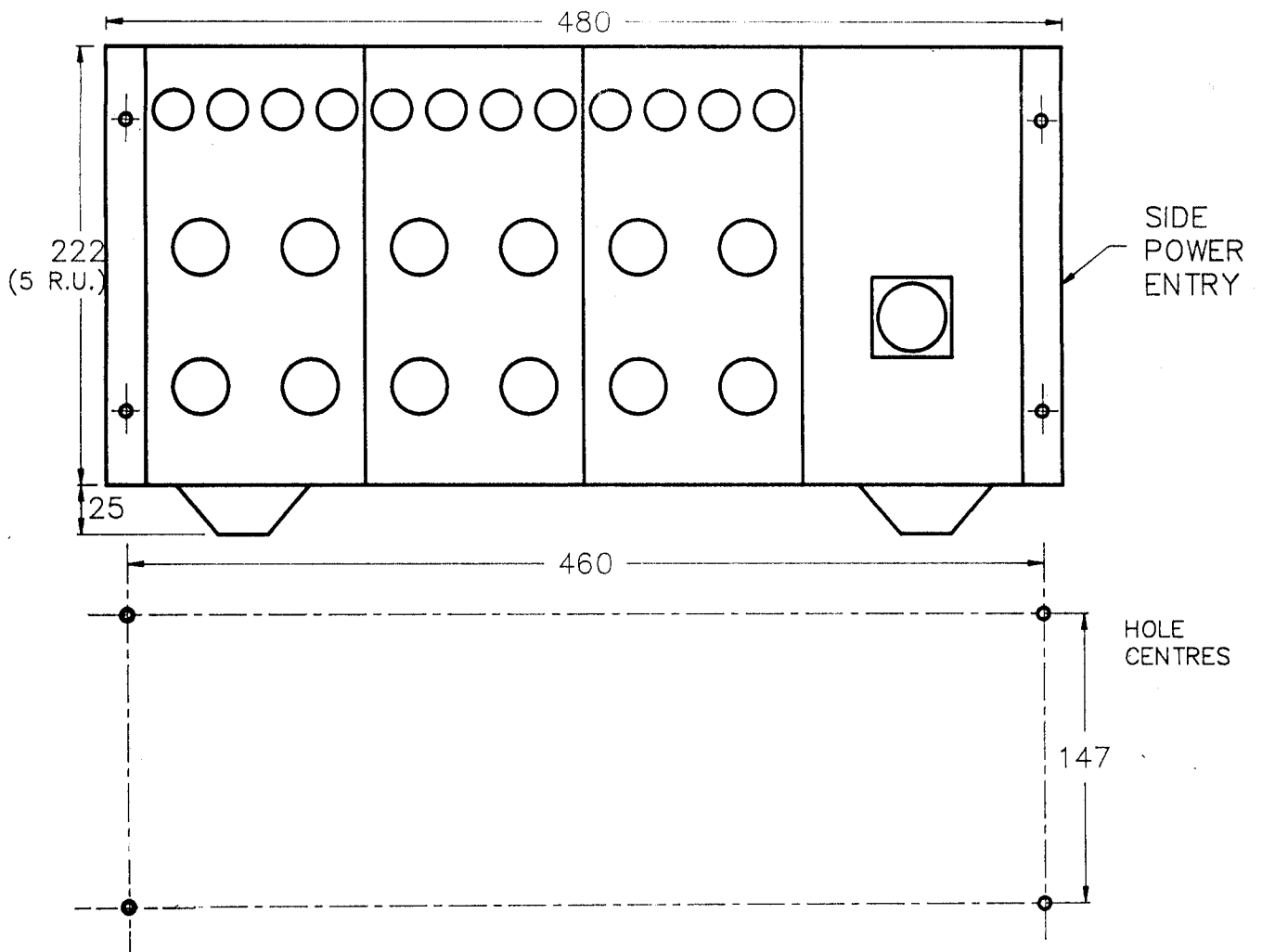
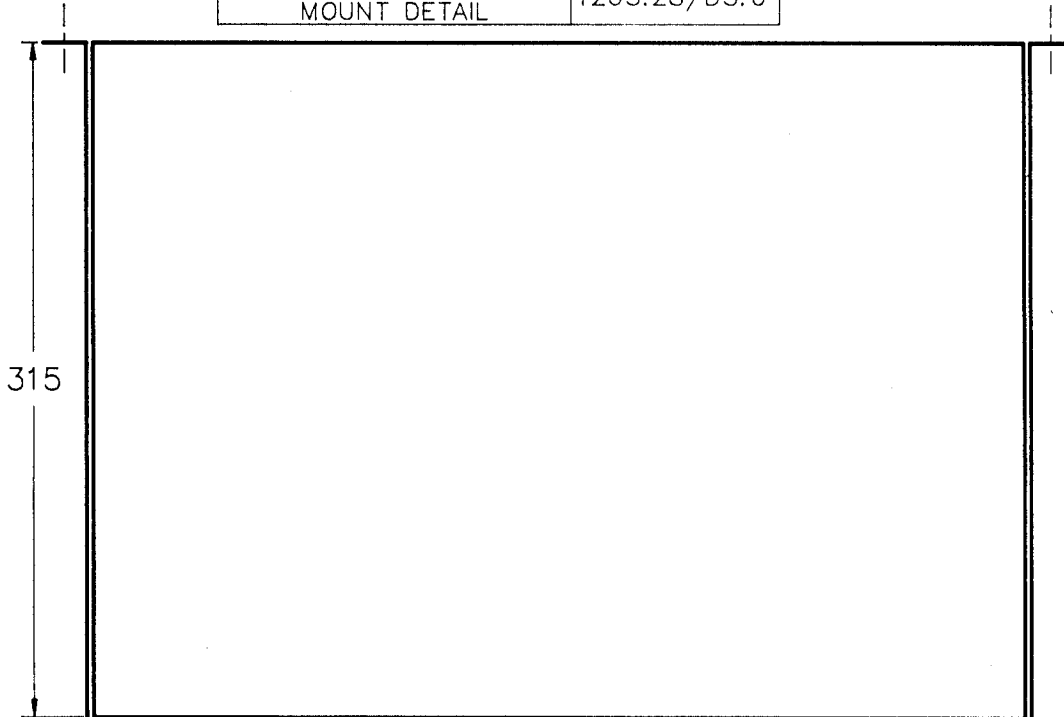
NOTE:

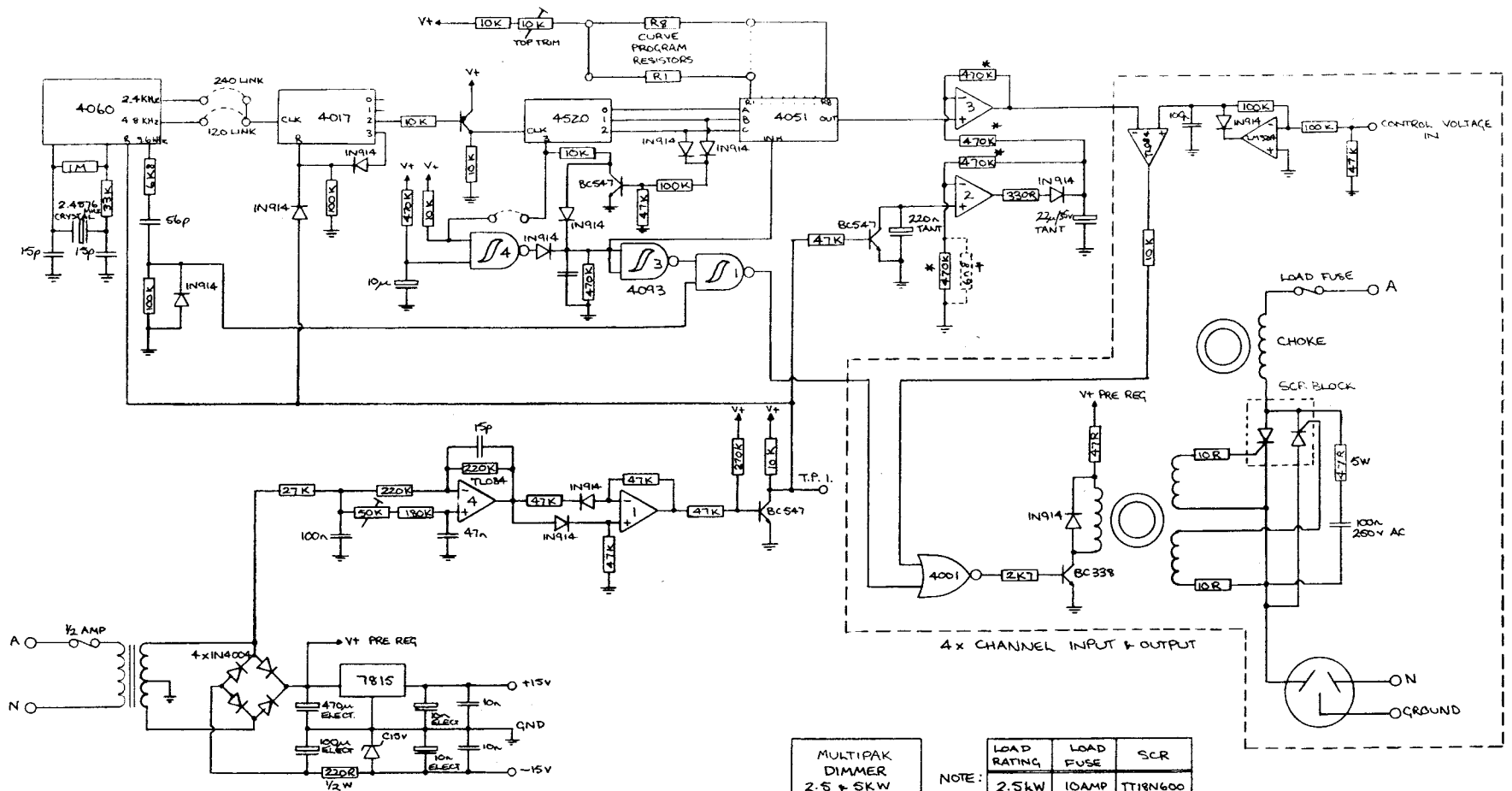
LOAD RATING	LOAD FUSE	SCR
2.5KW	10AMP	TT18N600
5 KW	20AMP	TT32N100

* 470K 1%
 † ONLY NECESSARY FOR NO-ZERO TRIM

FOLDED DIMENSIONS: D:		W:		H:	
FOLD RADI:		ALL DIMENSIONS ±:			
ALL MEASUREMENTS IN MM.		MATERIAL:			
DRAWN BY: R BIRD	N/A:	SCALE	DATE		
(C) JANDS ELECTRONICS P/L		1:2.5	15/12/87		
DWO NAME: MLTWLMT		DRAWING NO.			
MULTIPAK WALL MOUNT DETAIL		1265.28/D5.0			

NOTE: MOUNTING EARS MAY BE REVERSED FOR STANDARD 19" FRONT RACK MOUNTING





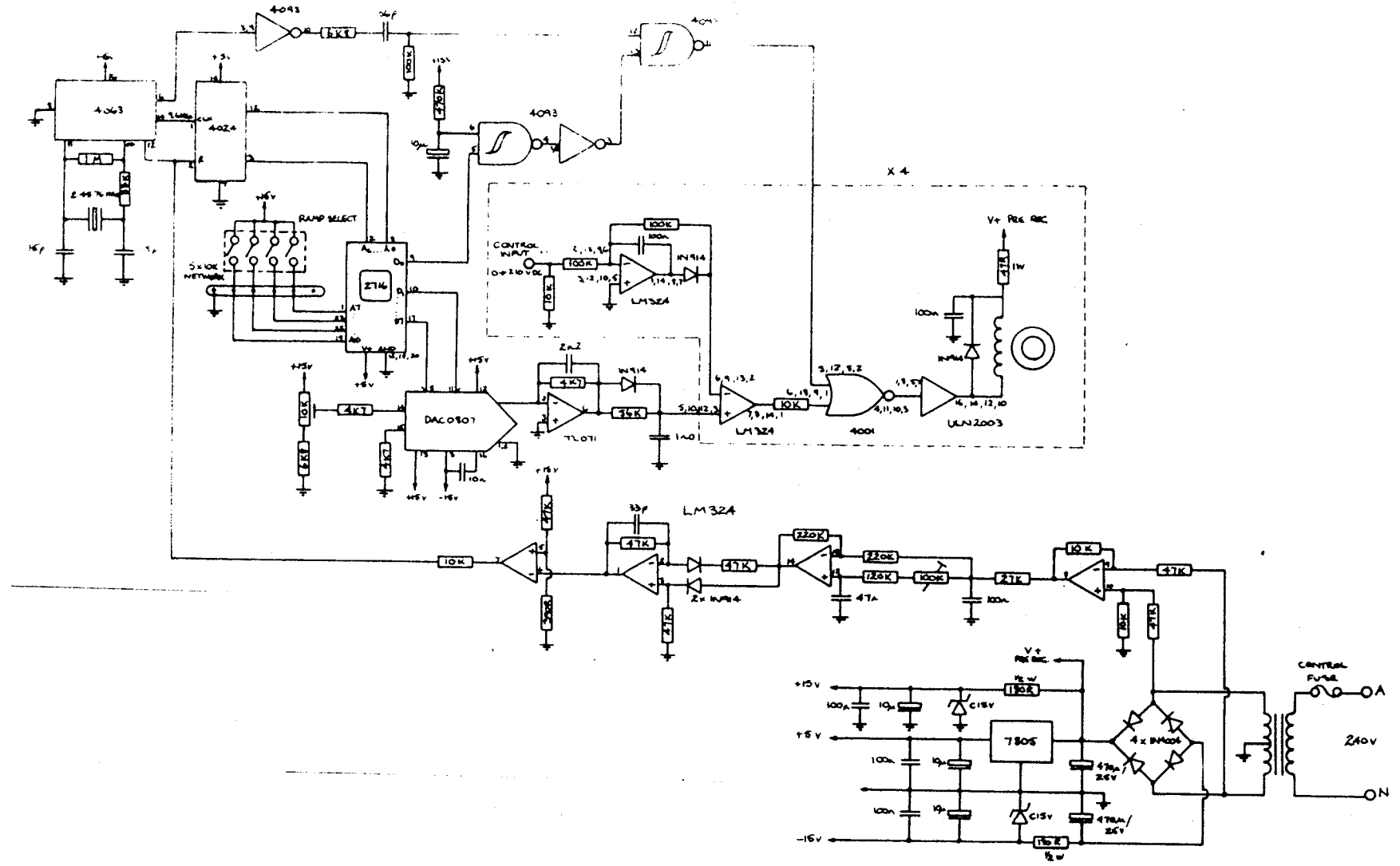
MULTIPAK
DIMMER
2.5 + 5KW
DRAWN BY M.RILEY
UPDATED 3/7/84

NOTE:

LOAD RATING	LOAD FUSE	SCR
2.5kW	10AMP	TT18N600
5 kW	20AMP	TT32N800

* 470K 1%
† ONLY NECESSARY FOR NO-ZERO TRIM

NEW DIGITAL TYPE



ITEM	DESCRIPTION	REQ'D	MATERIAL	REMARKS
JANDS ELECTRONICS P/L		SCALE		PASSED
				DATE
				21-5-85
MULTIPAK DIGITAL DIMMER CONTROL PCB		DRAWN M.RILEY		DRAWING NUMBER
		TRACED		110-78/C1-0
		CHECKED		

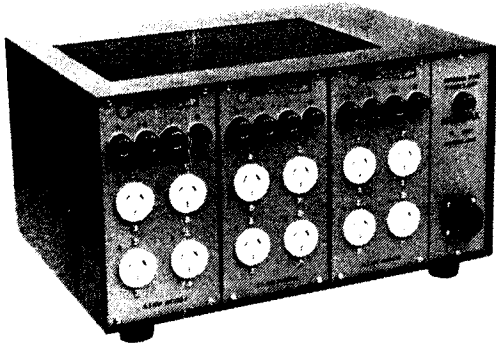
"MULTIPACK" P.C.B. TESTING PROCEDURES.

1. Connect transformer to the 3 P.C.B. pins near regulator with the earth lead ~~to the white~~. DO NOT CONNECT ANY POWER TO SCR BLOCK.
2. Power up and check pre - reg. and post - reg. volts on the regulator.
3. Check for 2.4KHz and 4.8KHz square wave on pins 15 and 13 respectively of 4060.
4. Check for $\div 3$ at output of 4017 (pin 4).
5. Check for addressing of 4051 at pins 9,10,11.
6. Check for ramp at pin 8 of TL084 near regulator.
7. Connect 5 volts to control voltage input #1 (Lowest on Connector) /2,3,4/.
8. Check waveform at pin 8 /14,1,7/ of TL084 (near LM324). Should be pulse - width modulated, rectangular waveform of period 10 msec. and amplitude approx. 13 volts, vary control voltage to check this.
9. Check output of 4001 (pin 10) /11,3,4/. Should be 9.6KHz pulses with envelope as in part (8).
10. Repeat from (7) for inputs 2,3 and 4. (Pin connections in slashes).
11. With mains voltage as reference, adjust "zero - crossing" trimpot so that pulse at T.P.1 centres on zero - crossing point of mains waveform. Check both positive and negative - going transitions.
NOTE:- BOTH TRACES OF C.R.O. MUST BE ALIGNED.
12. Adjust "top trim" trimpot on "personality card" to give full output with a control voltage of 9.7 volts.
13. Check that dimmer works with both positive and negative control voltages.
14. Check for 2 - 5 second turn - on delay on power - up.

Geoff Haines.

4th May, 1984.

JANDS CCT DIMMERS



Over the past 10 years hardly a leading entertainer has toured Australia without at some stage being lit by the Australian designed and manufactured range of Jands dimming equipment. The brand name synonymous with touring is now at long last available to meet your exacting requirements. Jands dimming equipment is built up to a standard not down to a price.

Multipak.

The Multipak dimmer range is designed to be either installed in a permanent situation or as a portable unit. Multipak offers the following features.

- Each channel individually positive or negative control voltage sensing.
- SCR Thyristor.
- Plug in factory trimmed control ramp cards — no field trim required.
- 240 volt direct operation or 240 volt synthesized 120 volt output, i.e. single 120 volt loads can be driven directly from Multipak.
- Dimmer curves available — linear, true power, exponential, linear luminance.
- Noise suppression rated at greater than 350 micro second rise time.
- Rack mountable.

Order Code

R20010
R20022
R20025
R20030
R20034
R20048
M20050
M20052
R20025
M20058
M20060
R20048
M20070
R20048

Multipak — 12 (12 x 2.5kW)
Multipak Module (4 x 2.5kW) only
Multipak Blank Plate
Multipak — 8 (8 x 2.5kW)
Multipak — 4 (4 x 2.5kW)
Rack mounts for sides.
Multipak — 6 (6 x 5kW)
Multipak Module (2 x 5kW) only
Multipak Blank Plate
Multipak — 4 (4 x 5kW)
Multipak — 2 (2 x 5kW)
Rack mounts for sides.
Multipak — 3 (3 x 10 kW)
Rack mounts for sides.

MULTIPATCH PATCH PANEL

The Multipatch patching system is available in two models, one 30 ways and one 60 ways. Each is fitted with a test outlet and circuit breaker for load checking. These units are designed for permanent wall mounting.

Multipatch 30. Can handle up to 30 circuits.
Multipatch 60. Can handle up to 60 circuits.

M00200
M00210

ACCESSORIES

All control desks and dimmers are available complete with road cases custom built in our own factory. For full details consult your nearest Jands CCT Dealer.
As an alternative to road casing a canvas cover is available also as above.

DIMMER ACCESSORIES

14 Pin Cannon Line Plug
14 Pin Cannon Socket (chassis).
14 Pin Cannon Line Socket.
Pin Matrix Pins (packet of 10)
Littlelite 12G Desk Lite

M00101
M00103
M00105
R99015
R99016

CONTROL CABLE

10m Control Lead — 12 Conductor
20m Control Lead — 12 Conductor
30m Control Lead — 12 Conductor
20m Control Lead — 24 Conductor (Rockboard)
40m Control Lead — 24 Conductor (Rockboard)
20m Control Lead — 36 Conductor (Rockboard)
40m Control Lead — 36 Conductor (Rockboard)

R99100
R99102
R99104
R99120
R99122
R99130
R99132

