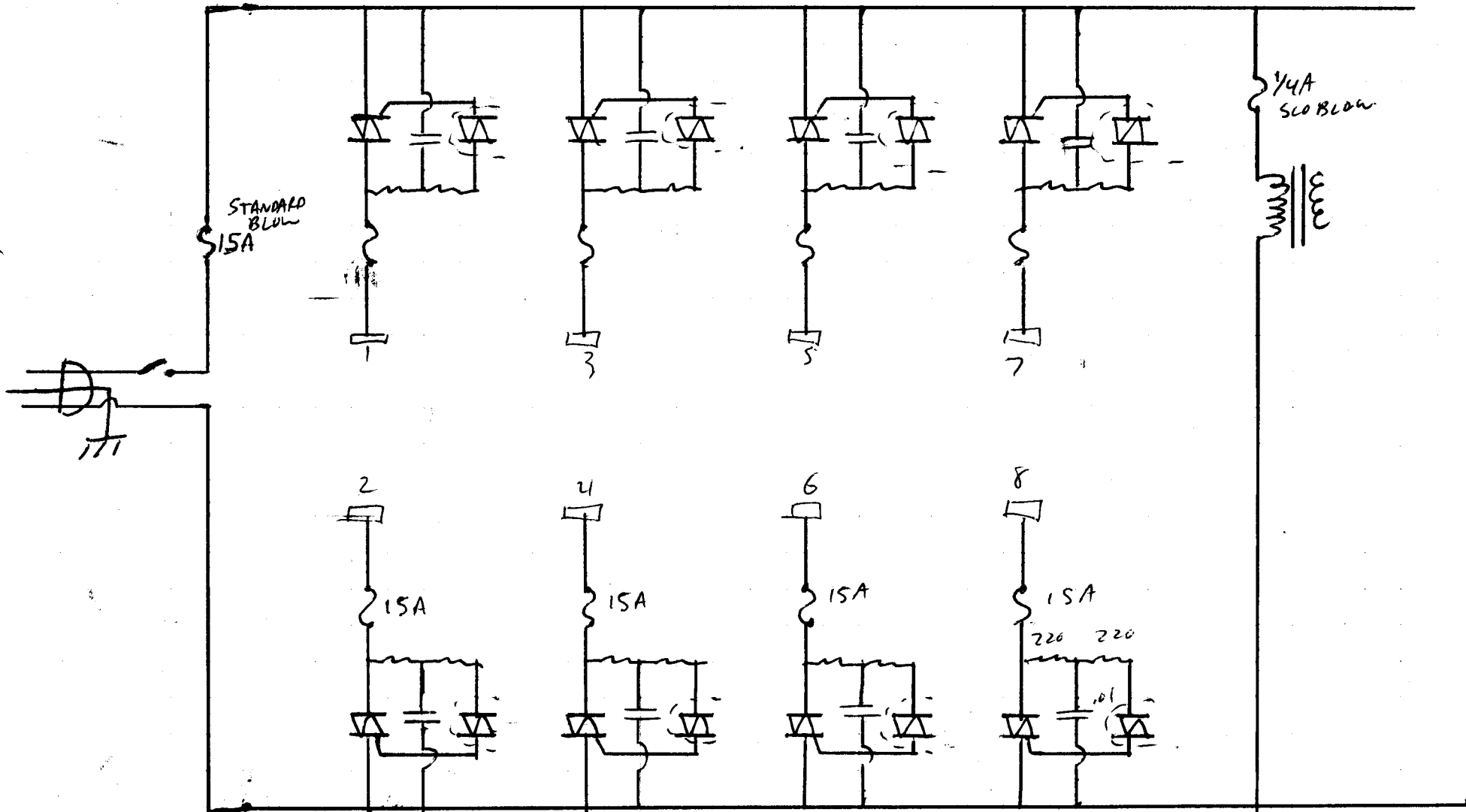


# R6M POWER CIRCUITS

(5)



DETAIL ARE THE SAME AS THE R6 EXCEPT THE OUTPUT CONNECTOR

IS CINCH JONES S2408 AB

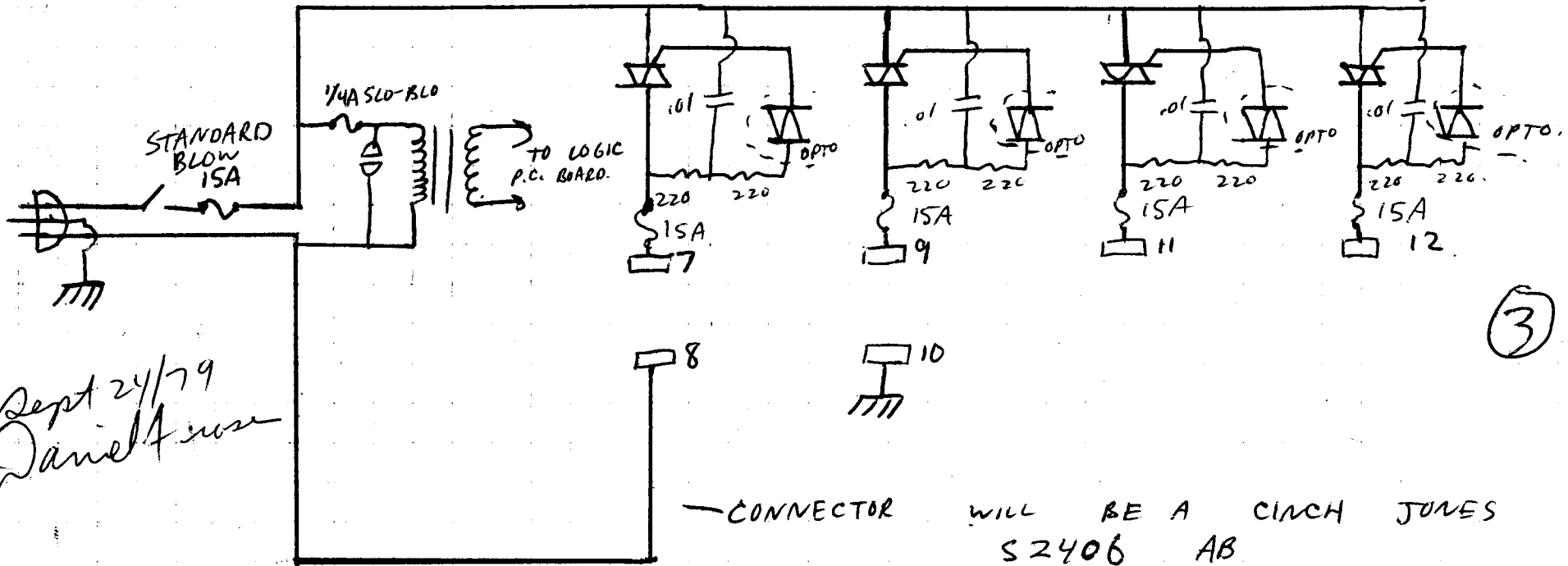
THE LOAD IS A 4x4 MATRIX OF A MULTIPLE OF 16 LAMPS TO PERMIT WHAT IS KNOWN IN THE DISCO TRADE AS A STAR BURST EFFECT

Sept 24/79

Daniel Frown

# R6 POWER CIRCUITS

THE R6 IS RATED AT 1500 WATTS PER CHANNEL LOAD, AND CIRCUITS ARE INTERLOCKED PERMITTING ONLY ONE IN FOUR CHANNELS TO BE ACTIVATED AT ANY ONE TIME.



Sept 24/79  
Daniel Rose

CONNECTOR WILL BE A CINCH JONES S2406 AB

CSA APPROVAL #14279.

- THE TRIACS WILL BE TEXAS INSTRUMENTS TIC253B OR TIC 263B OR EQUAL FROM MOTOROLA OR GE.
- THE OPTO COUPLERS ARE U.L. APPROVED MOTOROLA MOC3010 OR MOC3011 RATED FOR 7500 V BREAKDOWN.
- THIS UNIT ALSO HAS INDIVIDUAL FUSES ON EACH CHANNEL WHICH ARE MOUNTED ON THE P.C. BOARD INSIDE.
- A CSA APPROVED METAL CCAMP STRAIN RELIEF IS PROVIDED FOR THE A.C. CORD
- CSA PILOT CAMP TOO.
- LINE CORD WILL BE LEVITON HB 14-3 SJTW OUTDOOR
- LINE PLUG WILL BE HUBBEL S965VY DEAD FRONT PLUG.
- POWER SWITCH WILL BE A CARLING OR JBT CSA APPROVED TYPE OR EQUAL
- TRANSFORMER WILL BE A HAMMOND 166J8 CSA APPROVED TYPE.
- 15A FUSE HOLDER WILL BE A 20A 125VAC UNIT FROM LITTLE FUSE OR BUSS DEPENDING ON AVAILABILITY.
- THE 1/4A SLOW BLOW FUSE WILL BE MOUNTED ON THE POWER BOARD WITH P.C. MOUNT FUSE CLIPS MADE BY LITTLE FUSE

NOTE - THE R6 is an R3A

with a PROM programmed so  
that only 1 channel at a  
time is used to permit 1800W/CH  
loads. The Triacs are 25A units.

---

The R7 is a manual R3A

The R8 " " " R6

The R9 is an R3A with both manual and  
automatic controls.

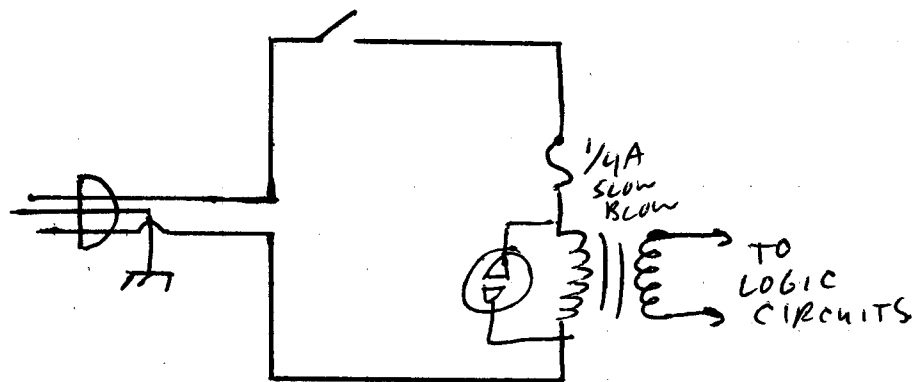


R6 L POWER CIRCUITS.

R3A L

DS-3

- THE DS-3 IS AN AUDIO LIMITER AND TOTALLY DIFFERENT THAN THE R3A OR R6 SERIES, BUT ITS POWER CIRCUIT IS IDENTICAL TO THE R6L OR R3AL



(4)

THESE UNITS CONSIST MERELY OF LOGIC CIRCUITS TO BE USED TO DRIVE SOLID STATE RELAYS OR POWER UNITS PURCHASED SEPERATELY OR BUILT BY THE PURCHASER. THE ONLY OUTPUT IS AT 5V TTL LOGIC LEVELS.

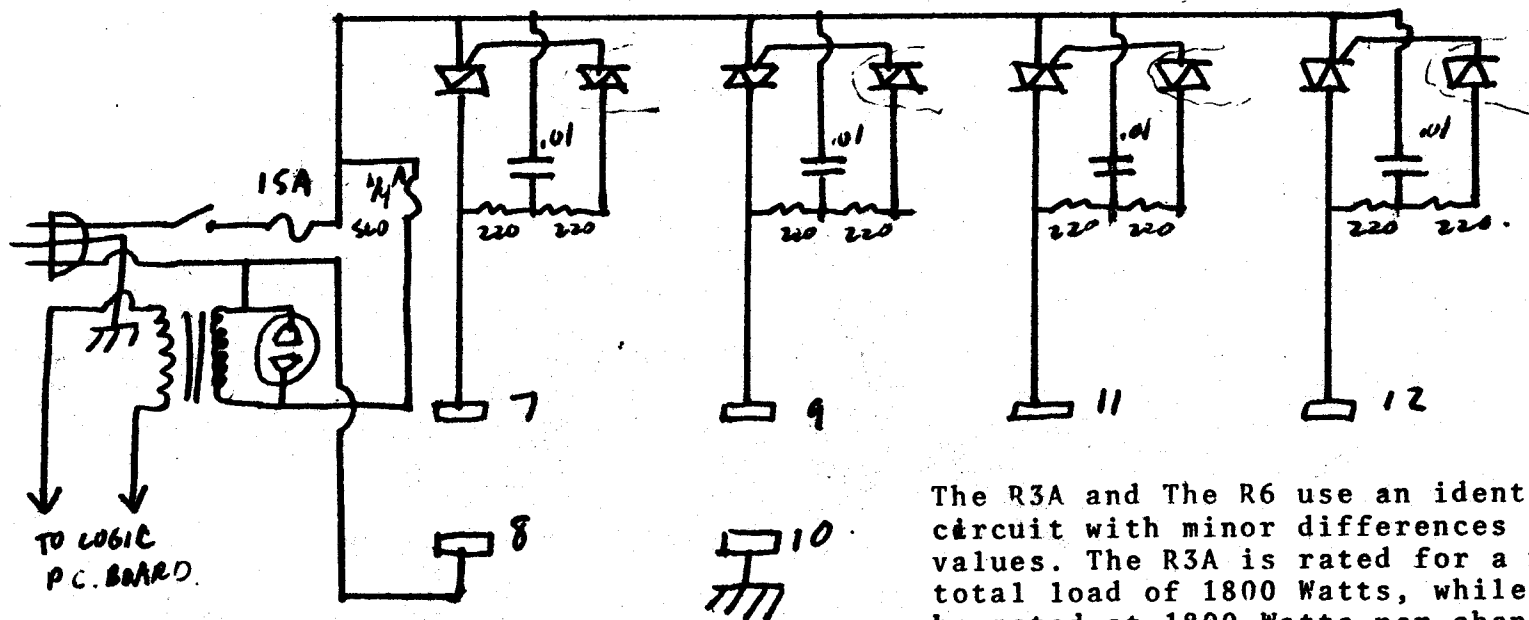
- LINE CORD IS MADE BY "CORDS" AND SUPPLIED BY COSRAD INDUSTRIAL ELECTRONICS IN TORONTO AND IS CSA APPROVED. THE CABLE IS MARKED "CABLE TECH SUPERFLEX SJT 300V 18AWG"
- SWITCH WILL BE SUPPLIED BY ARMADO OF VANCOUVER OR EQUAL AND WILL BEAR THE CSA MARK.
- THE FUSE HOLDER WILL BE FROM LITTLE FUSE OR BUSS.
- THE TRANS FORMER WILL BE EITHER A HAMMOND 166J8, 166 D 20 OR 166E20 WITH A CSA MARK

Sept 24/79  
David Aron

# R3A R6 POWER CIRCUITS

3

R7 R8 Q1 Q1 Q2 Q2 Q3 Q3 Q4 Q4



The R3A and The R6 use an identical power circuit with minor differences in component values. The R3A is rated for a maximum total load of 1800 Watts, while the R6 will be rated at 1800 Watts per channel. The logic

in the R6 will only permit only one out of the four channels to be turned on at any one time, so that this higher rating may be achieved. In the R3A we will use triacs such as the TIC226B or equivalent, which are 8 Amp devices while the R6 will use the TIC253B or equivalent which is rated at 20Amps. These are Texas Instruments devices, though, depending on availability, General Electric or Motorola devices may have to be substituted.

- The output connector will be a Cinch Jones S2406AB or S2406DB(CSA Approval#14279)
- The line cord will be Leviton HB14-3 SJTW Outdoor or CSA Approved equivalent.
- The line plug will be a Hubbel 5965VY Dead Front type.
- The power switch will be either JBT or Carling and will bear the CSA mark
- The transformer will be a CSA approved Hammond 166J8
- The fuse holder will be a 20A type from Littlefuse or Buss depending on availability.
- The 1/4A fuse will be mounted on the triac P.C. board with fuse clips made by Littlefuse.
- The Opto couplers(Q1-04 on schematic) will be Motorola MOC3010 or 3011 and are U.L. approved and are rated at 7500Volts peak guaranteed minimum breakdown voltage.
- The line cord will be clamped by a CSA approved cable clamp as used on electrical boxes.
- The pilot lamp will be a CSA approved type.
- The logic circuitry is completely insulated from the chassis and the audio input is isolated from the circuitry by an input transformer. The audio input jack is a nylon type insulating the audio input from the chassis also.

Oct 14/79  
D. Fran

## OPERATING HINTS FOR THE R3A & R7 SERIES LIGHTING CONTROLLERS

The R3A is an automated unit that changes effects on its own, while the R7 has its effects selected by its operator manually. Each unit has 16 patterns stored in its memory. On the R3A these are changed automatically, while the R7 has a thumbwheel switch on the front panel so the operator can set his effects.

The three effect modifiers are "INVERT, SHIMMER AND REVERSE". On the R3A these are automatic in operation and three LEDs indicate which are active at any one time. The R7 has three switches to control these. The invert switch selects between a light chase and a dark chase. The reverse switch changes the direction of the chase, while the shimmer gives an all flash effect. This is best when the invert is engaged also. Without the invert being engaged, the shimmer effect is not as exciting. Because of this, on the R3A the shimmer will only engage with the invert on also.

The shimmer has another function also. It can be used to turn all of the lights on, either to tell the crowd its time to go, or to test the lamps to check for defective ones. To do this, first turn the audio sensitivity control all of the way down. Second, select the shimmer effect. On the R3A run it on auto chase until the shimmer light lights. Then switch the Auto/Audio switch to Audio and all of the lights will come on and stay on until the operator wishes otherwise.

The "LIGHTS ON" switch switches the lamps off without switching off the logic. This allows a DJ to check the pattern he has before he presents it to the audience. The "BRIGHT" switch is a Bright/Dim selector. There is more data on this on the other sheet enclosed.

On the R7M types there is a small three position toggle switch mounted above the Auto/Audio switch. This controls the direction on the matrix.

When using the unit in the Audio chase mode, if the Audio Chase Sensitivity control is turned up too high, this could stop the chase as much as if it were turned too low due to overloading the trigger circuit. If turning up does not help, try turning it down a bit.

If you have any questions, the dealer can pass them on to us if he is unable to answer them for you. Note, there is no possible combination of control settings that can cause injury or damage to the unit, giving the DJ complete freedom to try any patterns, etc. within the capability of the unit.