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**Quality and Innovation Since 1963**  
Printed in Canada

# **LP504D**

*Computer Controlled Lighting System*  
*Système d'Eclairage Contrôlé par Ordinateur*



## ***SERVICE MANUAL***

Designed & Manufactured by  
YORKVILLE SOUND • Toronto, Canada

**IMPORTANT SAFETY INSTRUCTIONS**



**INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.**

**INSTRUCTIONS RELATIVES AU RISQUE DE FEU, CHOC ÉLECTRIQUE, OU BLESSURES AUX PERSONNES.**

**CAUTION:**  
 TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.  
 REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

**AVIS:**  
 N'ENLEVEZ PAS LE COUVERT (OU LE PANNEAU ARRIERE). NE CONTIENT AUCUNE PIECE REPARABLE PAR L'UTILISATEUR.  
 CONSULTEZ UN TECHNICIEN QUALIFIE POUR L'ENTRETIEN.

**Read Instructions:**

The *Owner's Manual* should be read and understood before operation of your unit. Please, save these instructions for future reference.

**Packaging:**

Keep the box and packaging materials, in case the unit needs to be returned for service.

**Warning:**

When using electric products, basic precautions should always be followed, including the following:

**Power Sources:**

Your unit should be connected to a power source only of the voltage specified in the owners manual or as marked on the unit. This unit has a polarized plug. Do not use with an extension cord or receptacle unless the plug can be fully inserted. Precautions should be taken so that the grounding scheme on the unit is not defeated.

**Hazards:**

Do not place this product on an unstable cart, stand, tripod, bracket or table. The product may fall, causing serious personal injury and serious damage to the product. Use only with cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Follow the manufacturer's instructions when installing the product and use mounting accessories recommended by the manufacturer.

The apparatus should not be exposed to dripping or splashing water; no objects filled with liquids should be placed on the apparatus.

Terminals marked with the "lightning bolt" are hazardous live; the external wiring connected to these terminals require installation by an instructed person or the use of ready made leads or cords.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

**Power Cord:**

The AC supply cord should be routed so that it is unlikely that it will be damaged. If the AC supply cord is damaged **DO NOT OPERATE THE UNIT.**

**Service:**

The unit should be serviced only by qualified service personnel.

**Veillez lire le manuel:**

Il contient des informations qui devraient étre comprises avant l'opération de votre appareil. Conservez S.V.P. ces instructions pour consultations ultérieures

**Emballage:**

Conservez la boite au cas ou l'appareil devait étre retourner pour réparation.

**Warning:**

Attention: Lors de l'utilisation de produits électrique, assurez-vous d'adhérer à des précautions de bases incluant celle qui suivent:

**Alimentation:**

L'appareil ne doit étre branché qu'à une source d'alimentation correspondant au voltage spécifié dans le manuel ou tel qu'indiqué sur l'appareil. Cet appareil est équipé d'une prise d'alimentation polarisée. Ne pas utiliser cet appareil avec un cordon de raccordement à moins qu'il soit possible d'insérer complètement les trois lames. Des précautions doivent étre prises afin d'éviter que le système de mise à la terre de l'appareil ne soit désengagé.

**Hazard:**

Ne pas placer cet appareil sur un chariot, un support, un trépied ou une table instables. L'appareil pourrait tomber et blesser quelqu'un ou subir des dommages importants. Utiliser seulement un chariot, un support, un trépied ou une table recommandés par le fabricant ou vendus avec le produit. Suivre les instructions du fabricant pour installer l'appareil et utiliser les accessoires recommandés par le fabricant.

Il convient de ne pas placer sur l'appareil de sources de flammes nues, telles que des bougies allumées.

L'appel ne doit pas étre exposé à des égouttements d'eau ou des éclaboussures et qu'aucun objet rempli de liquide tel que des vases ne doit étre placé sur l'appareil.

Les dispositifs marqués d'une symbole "d'éclair" sont des parties dangereuses au toucher et que les câblages extérieurs connectés à ces dispositifs de connection extérieure doivent étre effectués par un opérateur formé ou en utilisant des cordons déjà préparés.

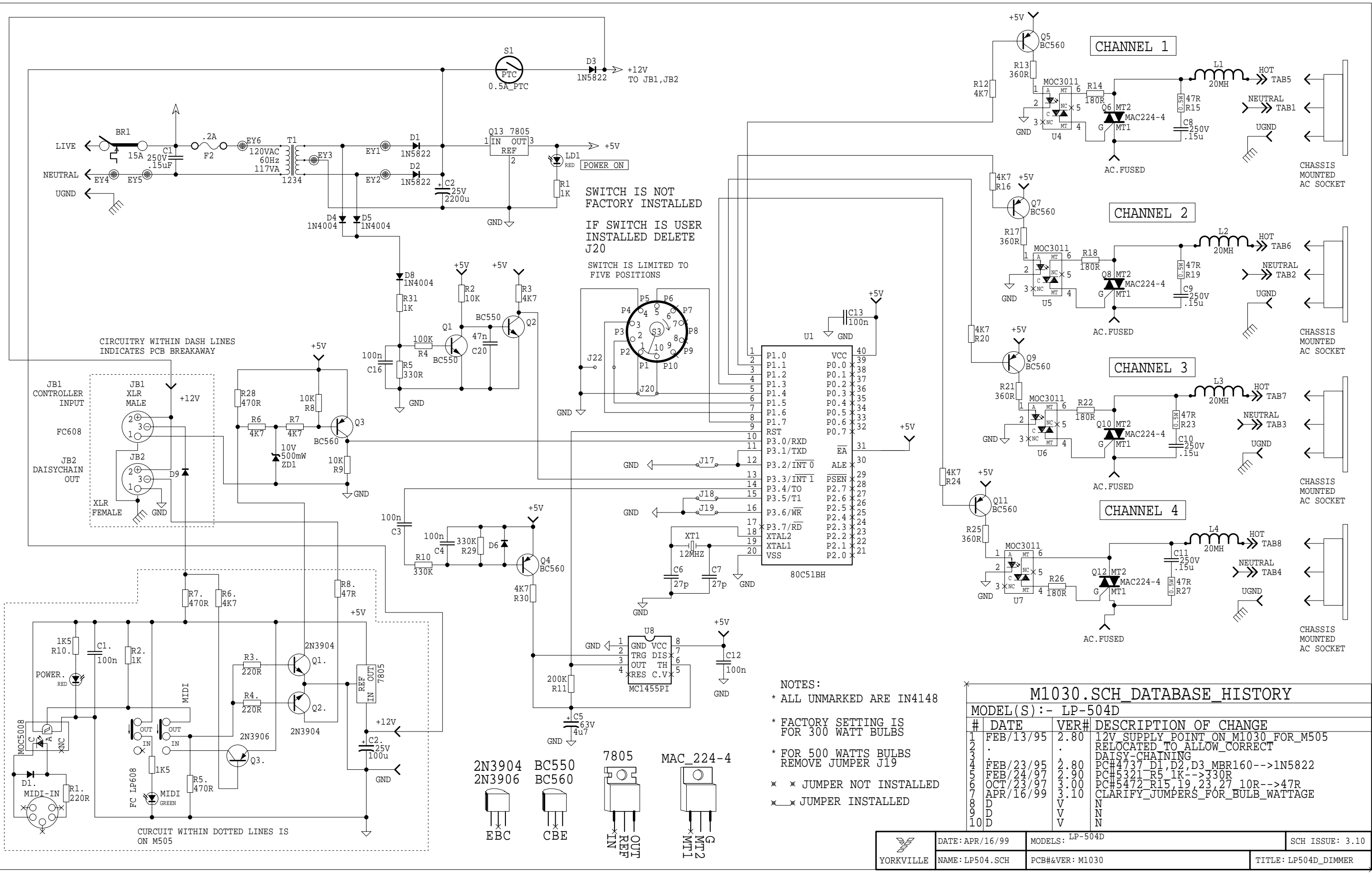
**Cordon d'alimentation:**

Évitez d'endommager le cordon d'alimentation. **N'UTILISEZ PAS L'APPAREIL** si le cordon d'alimentation est endommagé.

**Service:**

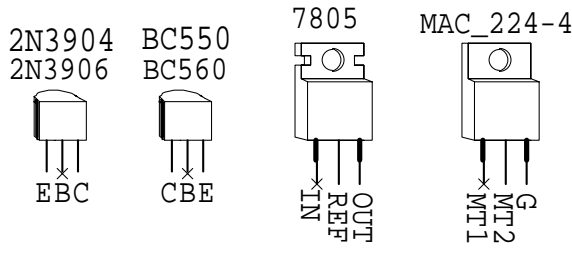
Consultez un technicien qualifié pour l'entretien de votre appareil.

YS No.	Description	Qty.	YS No.	Description	Qty.
3555	40 PIN DUAL IN-LINE IC SOCKET	1			
6939	12MHZ CRYSTAL HC49FOX120	1			
6405	RED 3MM LED 1V7 5MA BRT	2			
6408	GRN 3MM LED 1V9 5MA FROSTED	1			
6825	1N4148 75V 0A45 DIODE T&R	3			
6438	1N4004 400V 1A0 DIODE T&R	3			
6487	1N5822 40V 3A0 DIODE SCHTKY	3			
6461	1N5240BRL 10V0 0W5 ZENER 5% T&R	1			
6855	NJM7805FA TO220 P 5V0 REG IS V1	2			
5101	BC550C TO92 NPN TRAN T&R TB	2			
5102	BC560C TO92 PNP TRAN T&R TB	6			
6789	2N3904 TO92 NPN TRAN TA	2			
6790	2N3906 TO92 PNP TRAN TA	1			
6935	1455P1 IC SINGLE TIMER	1			
6961	80C51BH IC CPU/ROM FOR LP-304	1			
6444	MAC224-4 TO220 40A TRIAC 200V	4			
6862	MOC3011 OPTO-COUPLER	4			
6941	MOC5008 OPTO-COUPLER	1			
6481	0.5A 60 PTC CURRENT LIMITER	1			
5404	.27P 100V 10%CAP T&R BEAD NPO	1			
5308	.47N 50V 10%CAP T&R BEAD X7R	4			
5314	100N 50V 10%CAP T&R BEAD X7R	6			
5827	150N 250V 20%CAP BLK 'X2' 15MM AC	5			
5259	.4U7 63V 20%CAP T&R RAD .2"EL	1			
5267	100U 25V 20%CAP T&R RAD .2"EL	1			
5888	2200U 25V 20%CAP BLK 16X25MM EL	1			
2448	15.0 AMP CIRCUIT BREAKER	1			
3832	.20MH CHOKE HIGH CURRENT	4			
3464	WIRE TO BOARD CRIMP 18-24 AWGT/LEAD	13			
3489	CLIP 250X032 18-22AWG DISCO/INSL	8			
3490	CLIP 250X032 14-16AWG DISCO/INSL	2			
3601	RING TERMINAL 16AWG WIRE & #8 SCREW	3			
3682	250 MALE PCB TAB BULK CARTRIGE	8			
3427	MIDI JCK PCB MT HORZ 5PIN DIN	1			
3922	XLR FEML PCB MT HORZ THIN SNAP-IN	1			
3923	XLR MALE PCB MT HORZ MTHOLE-V SNAP	1			
3451	EYELET SMALL 0.089 OD PLATED	12			
3542	EYELET LARGE SE44 TIN-PLAT BRASS	6			
3414	INTERNATIONAL PC MOUNT FUSEHOLDER	2			
2431	0.200 AMP SLO-BLO .25X1.25 FUSE	1			
3501	B52200F006 COMP WASH #4 SMALL	4			
8471	2" X 4.50" U CLAMP BLACK OXIDE	2			
3513	3/16" HEATSHRINK POLYOLEFIN	0.083			
3685	15 AMP HOUSE SOCKET IVY #5320-I	4			
3795	#8 GROUND LUG ZIERICK 505-169	2			
3810	4" NYLON CABLE TIE	13			
3827	SQUARE BUMPER BUTTON BLACK	5			
8661	BUTTON KNOB FLAT GREY	1			
3479	12'3/16 SJT AC LINE CORD BLACK 250"	1			
3829	HEYCO #1207 STRAIN RELIEF	1			
8900	YORKVILLE WARRANTY CARD 2-YR UNLTD.	1			
8793	4-40 HEX NUT ZINC	4			
8800	6-32 KEPS NUT ZINC	17			
8854	6-32 HEX NUT ZINC CLEAR	2			
3830	TO218 PREGREASED MICA 56-78-2AP	4			
3850	TO-220 PLASTIC TRANSISTOR INSULATOR	4			
4597	22AWG STRAN TC WIR JMP	8			
4599	22AWG SOLID SC WIR T&R JMP	13			
5299	24AWG SOLID SC WIR RAD JMP	4			
4617	1/2W 47R 5% T&R RES	4			
4817	1/4W 47R 5% T&R RES	1			
4819	1/4W 180R 5% T&R RES	4			
4857	1/4W 220R 5% T&R RES	3			
4855	1/4W 330R 5% T&R RES	1			
4881	1/4W 360R 5% T&R RES	2			
4821	1/4W 470R 5% T&R RES	3			
4823	1/4W 1K 5% T&R RES	3			
4824	1/4W 1K5 5% T&R RES	2			
4827	1/4W 4K7 5% T&R RES	9			
4829	1/4W 10K 5% T&R RES	3			
4838	1/4W 100K 5% T&R RES	1			
4886	1/4W 200K 5% T&R RES	1			
4842	1/4W 330K 5% T&R RES	4			
8741	4-40 X 1/2 PAN PH MS JS500	4			
8799	#6 X 1/4 PAN PH TYPE B JS500	2			
8801	6-32 X 3/8 PAN PH TAPTITE JS500	10			
8829	6-32 X 3/8 FLAT PH TAPTITE BO#4 HEA	10			
8806	6-32 X 1/2 PAN PH TAPTITE JS500	5			
8823	6-32 X 1 PAN PH TAPTITE JS500	13			
8802	8-32 X 3/8 PAN QUAD TPTITE JS500	2			
8905	YORKVILLE PRODUCT SCHEMATIC	1			
3744	SNAP IN .375 SPACER RICHCO	5			
8667	SHOULDER WASHER SWS-229 LENGTH 1/8	4			
3511	#6 FLAT WASHER NYLON	2			
3436	DPDT PUSH SW PCMT H BREAK B4 MAKE	1			
3686	SP5T ROTA SW PCMT V BREAK B4 MAKE	1			
1234	G-20/LP-304 LP-504D XFMR	1			

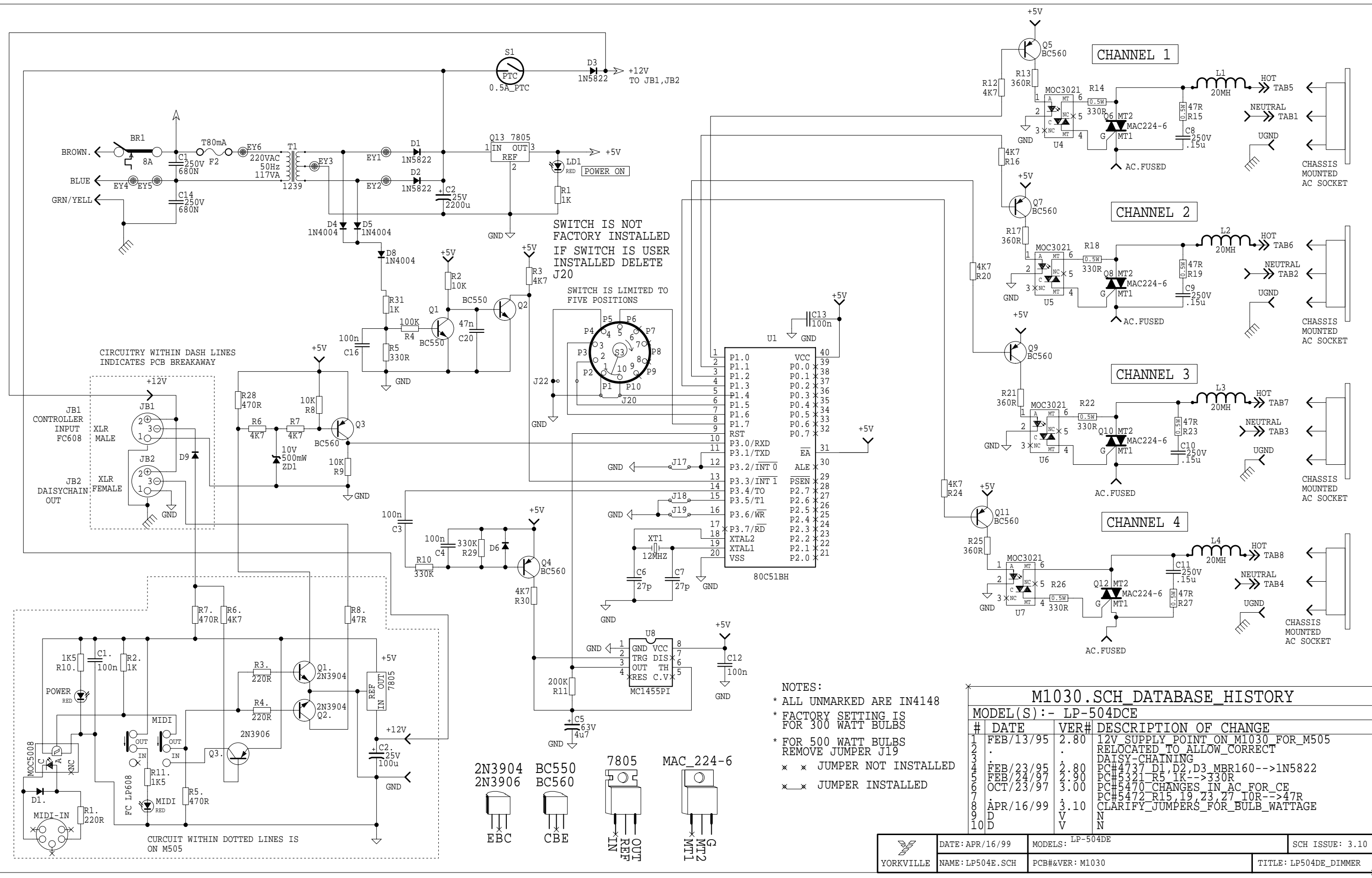


SWITCH IS NOT  
FACTORY INSTALLED  
IF SWITCH IS USER  
INSTALLED DELETE  
J20  
SWITCH IS LIMITED TO  
FIVE POSITIONS

- NOTES:
- \* ALL UNMARKED ARE IN4148
  - \* FACTORY SETTING IS FOR 300 WATT BULBS
  - \* FOR 500 WATTS BULBS REMOVE JUMPER J19
  - \* JUMPER NOT INSTALLED
  - \* JUMPER INSTALLED



M1030.SCH DATABASE HISTORY			
MODEL(S) :- LP-504D			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	FEB/13/95	2.80	12V SUPPLY POINT ON M1030 FOR_M505
2	.	.	RELOCATED TO ALLOW CORRECT
3	.	.	DAISY-CHAINING
4	FEB/23/95	2.80	PC#4737 D1,D2,D3 MBR160-->1N5822
5	FEB/24/97	2.90	PC#5321 R5 1K-->330R
6	OCT/23/97	3.00	PC#5472 R15,19,23,27 10R-->47R
7	APR/16/99	3.10	CLARIFY_JUMPER_S_FOR_BULB_WATTAGE
8	D	V	N
9	D	V	N
10	D	V	N



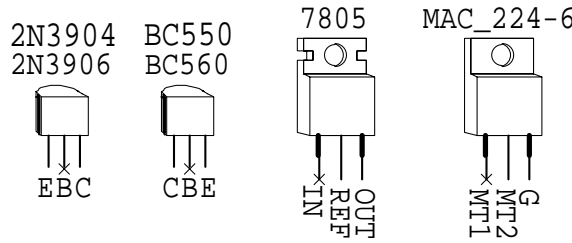
SWITCH IS NOT  
FACTORY INSTALLED  
IF SWITCH IS USER  
INSTALLED DELETE  
J20

SWITCH IS LIMITED TO  
FIVE POSITIONS

CIRCUITRY WITHIN DASH LINES  
INDICATES PCB BREAKAWAY

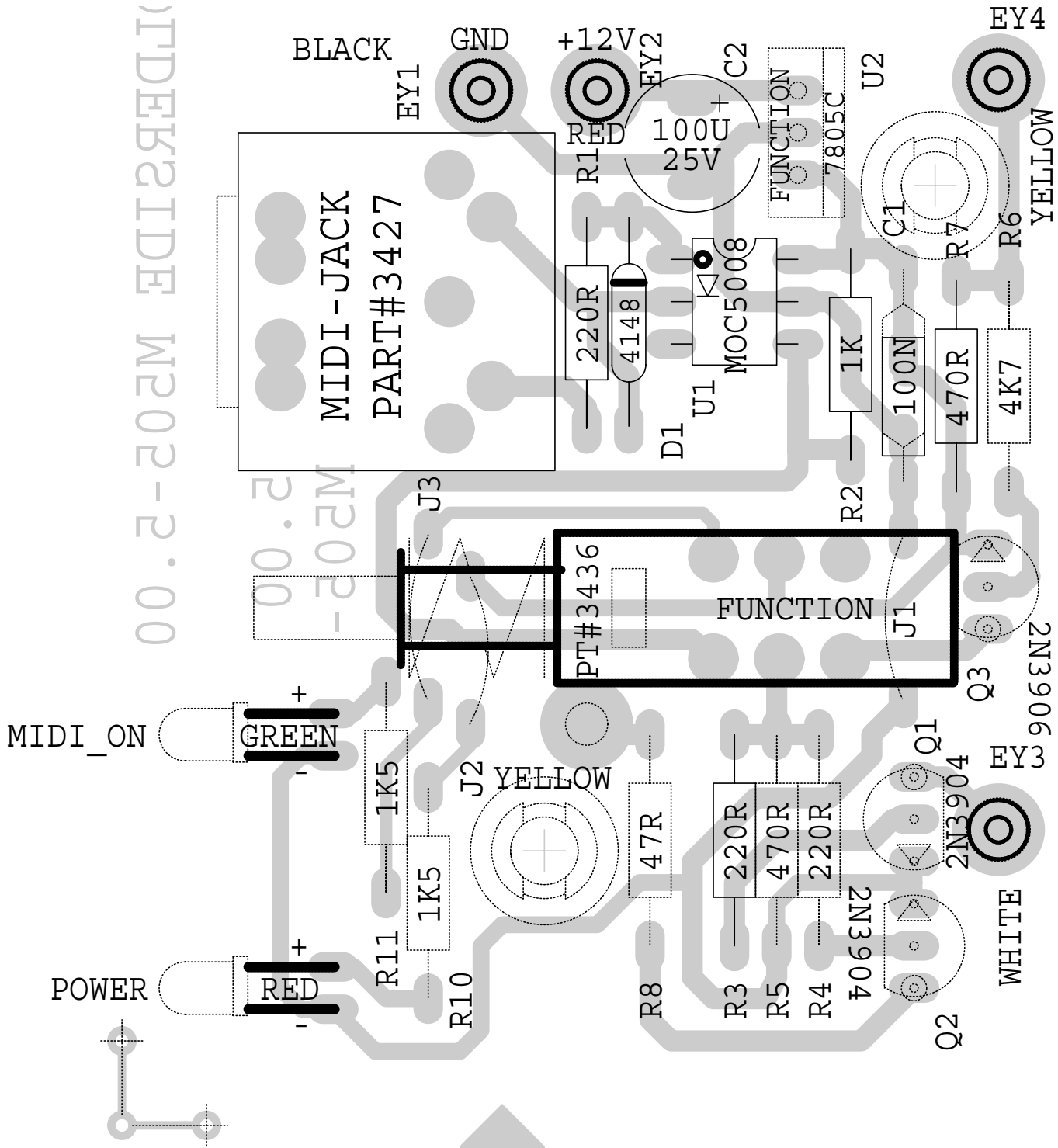
CURCUIT WITHIN DOTTED LINES IS  
ON M505

- NOTES:
- \* ALL UNMARKED ARE IN4148
  - \* FACTORY SETTING IS FOR 300 WATT BULBS
  - \* FOR 500 WATT BULBS REMOVE JUMPER J19
  - \* \* JUMPER NOT INSTALLED
  - \* \* JUMPER INSTALLED



M1030.SCH DATABASE_HISTORY			
MODEL(S) :- LP-504DCE			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	FEB/13/95	2.80	12V SUPPLY POINT ON M1030 FOR M505
2	.	.	RELOCATED TO ALLOW CORRECT
3	.	.	DAISY-CHAINING
4	FEB/23/95	2.80	PC#4737 D1, D2, D3 MBR160-->1N5822
5	FEB/24/97	2.90	PC#5321 R5 1K-->330R
6	OCT/23/97	3.00	PC#5470 CHANGES IN AC FOR CE
7	.	.	PC#5472 R15, 19, 23, 27 10R-->47R
8	APR/16/99	3.10	CLARIFY_JUMPER_FOR_BULB_WATTAGE
9	D	V	N
10	D	V	N

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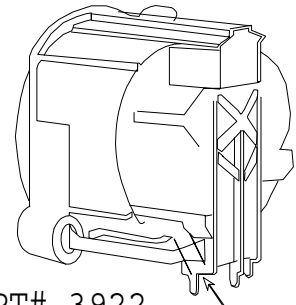


VCD

VCD

SHEAR

10" WIRE



PT# 3922  
THIS CONNECTION MUST BE  
BROKEN HERE

M1030.PCB DATABASE HISTORY			
#	DATE	VER#	DESCRIPTION OF CHANGE
MODEL(S) :- LP-304/304E/504/504E			
1	FEB/22/94	3.80	PC#4739 LP504/504E E POINT OF .12V SUPPLY FOR M505 CHANGED
2	.	.	PC#4737 D1,D2,D3 FROM MBR150 TO 1N5822
3	.	.	PC#4862 PAD ADDED FOR NEW AC CAP
4	JUL/17/95	.	PC#5321 R5 1K-->330R
5	FEB/24/97	3.81	PC#5470 FOR LP304CE C1 150N
6	OCT/09/97	4.00	->680N ADD C14_680N,NEW_XLR'S NEW CHOKE
7	.	.	PC#5472 R15,R19,R23,R27_10R
8	.	.	->47R 1/2W
9	.	.	PC#5524 REDO FOR LP304 CE
10	NOV/20/97	5.00	PC#5720_REDO_RE_CSA_SPACINGS
11	MAY/28/98	6.00	
12	D	V	N
13	D	V	N
14	D	V	N
15	D	V	N
16	D	V	N
17	D	V	N
18	D	V	N
19	D	V	N
20	D	V	N

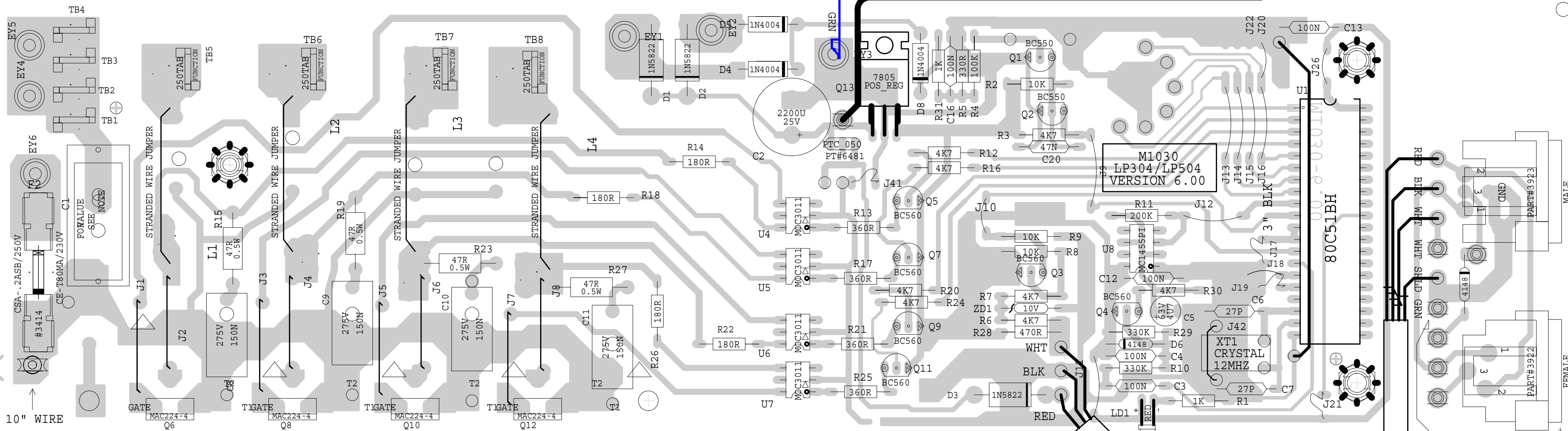
ISSUE# 6.00	PCB# M1030A	MODEL LP504
DATE JUN/01/98		

PRODUCTION NOTES

- 1 ——— INDICATES STRANDED JUMPER WIRE
- 2 ——— INDICATES SOLID WIRE JUMPER
- 3 ▲ INDICATES RTV
- 4 VALUE FOR C1 150N 250V FOR N.A. FOR CE 680N PT#5266
- 5

12" GREEN WIRE TO GRND

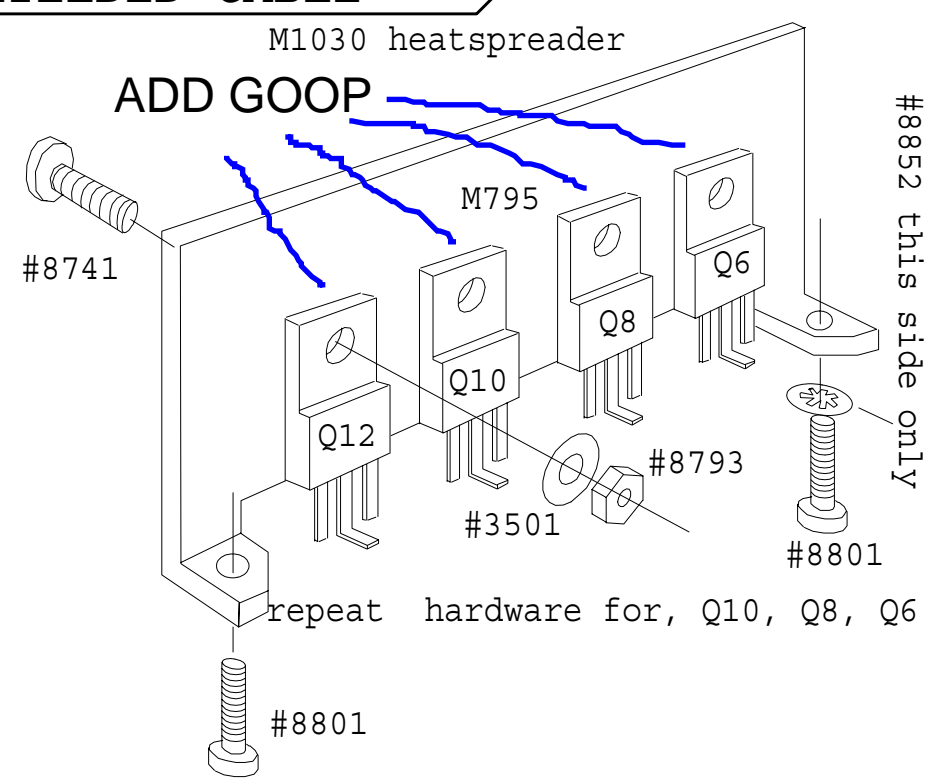
10" RED TO M505



M1030  
LP304/LP504  
VERSION 6.00

BLANK SIZE=13.800"X8.100"

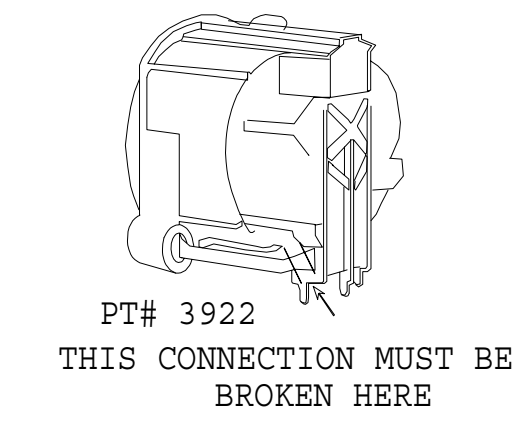
SHIELDED CABLE



NO GRN WIRE FOR LP304

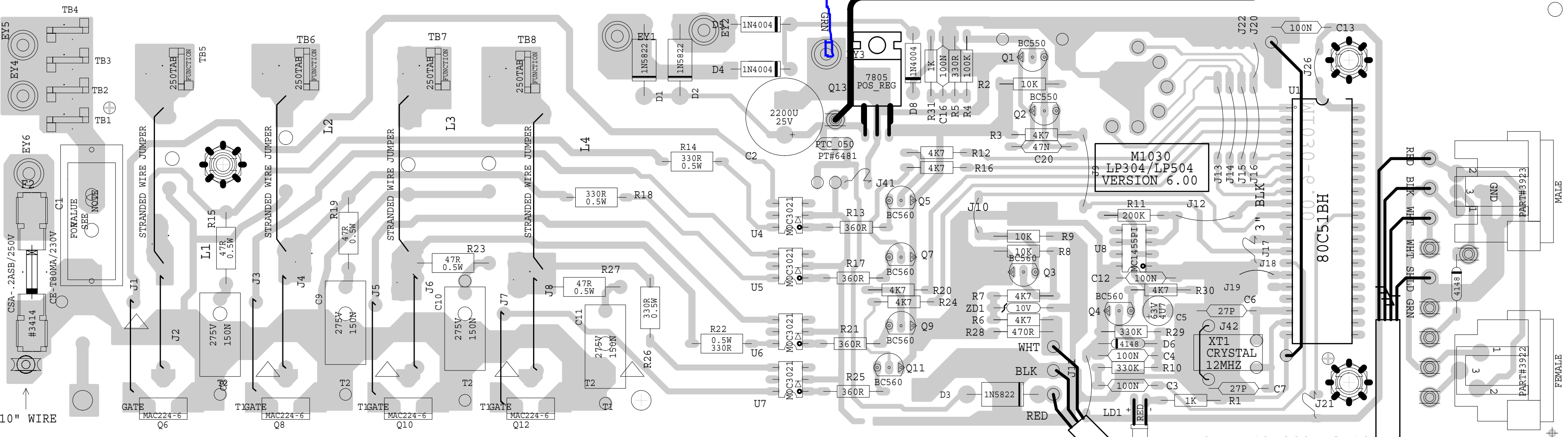
ASSEMBLY M1030-6.C  
PCB MECH M1030-6.C

SHEAR



12" GREEN WIRE TO GRND

10" RED TO M505



BLANK SIZE=13.800"X8.100"

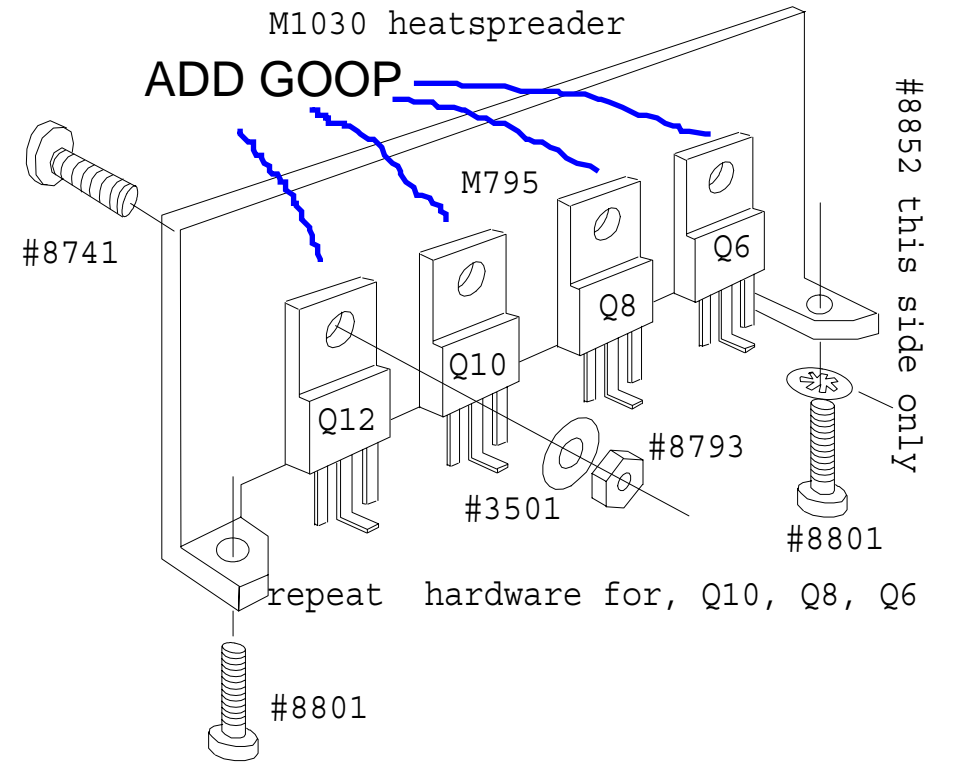
SHIELDED CABLE

M1030.PCB DATABASE HISTORY			
#	DATE	VER#	DESCRIPTION OF CHANGE
MODEL(S) :- LP-304/304E/504/504E			
1	FEB/22/94	3.80	PC#4739 LP504/504E E POINT OF .12V SUPPLY FOR M505 CHANGED
2	.	.	PC#4737 D1,D2,D3 FROM MBR150 TO 1N5822
3	.	.	PC#4862 PAD ADDED FOR NEW AC CAP
4	JUL/17/95	.	PC#5321 R5 1K-->330R
5	FEB/24/97	3.81	PC#5470 FOR LP304CE C1 150N
6	OCT/09/97	4.00	->680N ADD C14_680N,NEW_XLR'S NEW CHOKE
7	.	.	PC#5472 R15,R19,R23,R27_10R
8	.	.	->47R 1/2W
9	.	.	PC#5524 REDO FOR LP304 CE
10	NOV/20/97	5.00	PC#5720_REDO_RE_CSA_SPACINGS
11	MAY/28/98	6.00	
12	D	V	N
13	D	V	N
14	D	V	N
15	D	V	N
16	D	V	N
17	D	V	N
18	D	V	N
19	D	V	N
20	D	V	N

ISSUE# 6.00	PCB# M1030B	MODEL LP504E
DATE JUN/01/98		

PRODUCTION NOTES

- 1 INDICATES STRANDED JUMPER WIRE
- 2 INDICATES SOLID WIRE JUMPER
- 3 INDICATES RTV
- 4 VALUE FOR C1 150N 250V FOR N.A. FOR CE 680N PT#5266
- 5 R26, R22, R14, R18 MUST BE 1/2W SMALL BODY



#8852 this side only