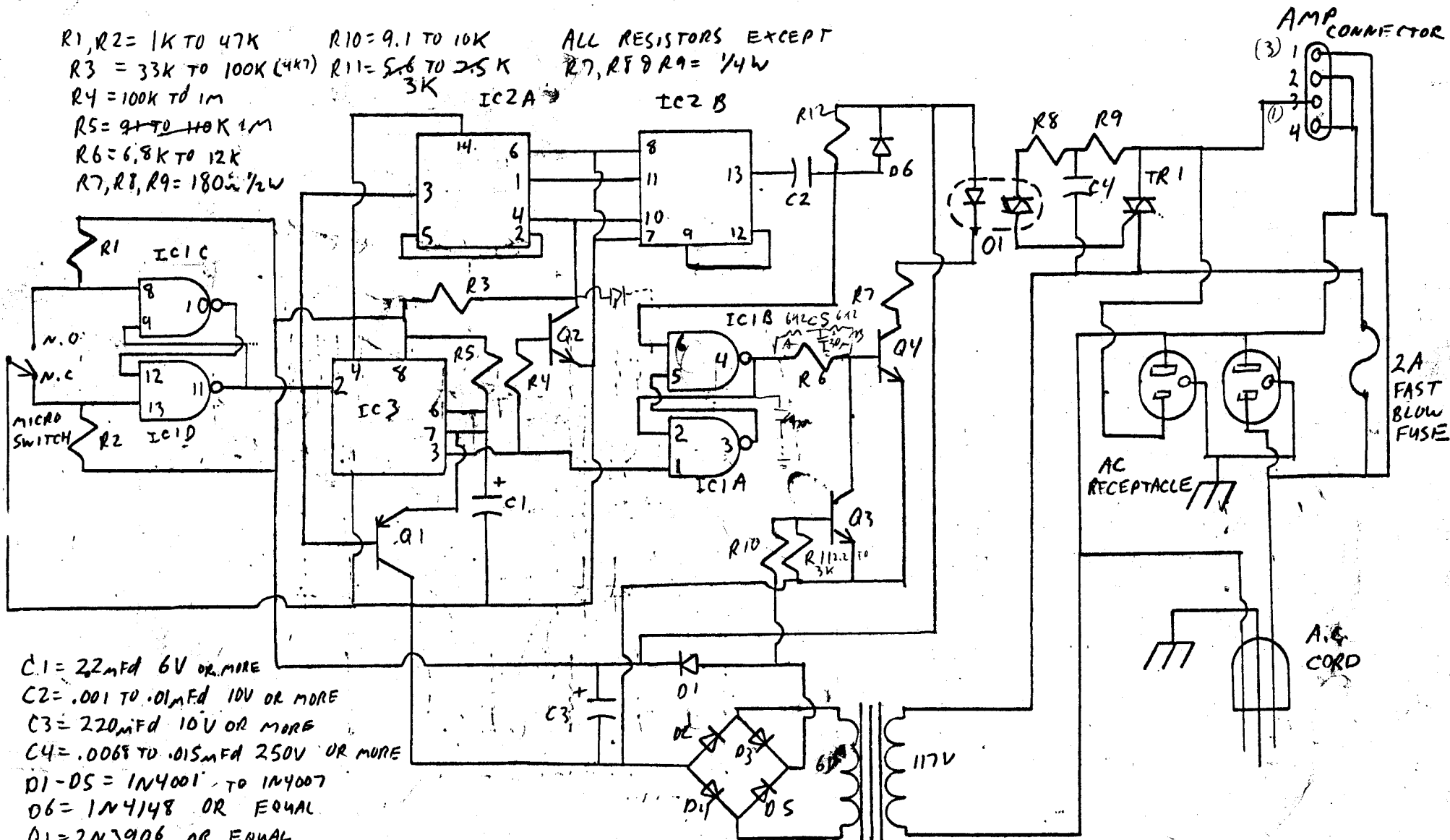


# ELECTRONIC MODULE FOR CAN-AM AMUSEMENTS BOWLING UNIT

$R_1, R_2 = 1K \text{ TO } 47K$       $R_{10} = 9.1 \text{ TO } 10K$      ALL RESISTORS EXCEPT  
 $R_3 = 33K \text{ TO } 100K (44K)$       $R_{11} = 5.6 \text{ TO } 25K$       $R_7, R_8, R_9 = 1/4W$   
 $R_4 = 100K \text{ TO } 1M$       $3K$      IC2A →     IC2B  
 $R_5 = 9.1 \text{ TO } 110K 1M$   
 $R_6 = 6.8K \text{ TO } 12K$   
 $R_7, R_8, R_9 = 180\Omega 1/2W$



$C_1 = 22\mu F \text{ 6V OR MORE}$   
 $C_2 = .001 \text{ TO } .01\mu F \text{ 10V OR MORE}$   
 $C_3 = 220\mu F \text{ 10V OR MORE}$   
 $C_4 = .0068 \text{ TO } .015\mu F \text{ 250V OR MORE}$   
 $D_1 - D_5 = 1N4001 \text{ TO } 1N4007$   
 $D_6 = 1N4148 \text{ OR EQUAL}$   
 $Q_1 = 2N3906 \text{ OR EQUAL}$   
 $Q_2 - Q_4 = 2N3904 \text{ OR EQUAL}$   
 $O_1 = MOC3010 \text{ OR } 3011 \text{ OPTO COUPLER}$   
 $TR_1 = SC141B, TIC216B, IT28 \text{ OR EQUAL TRAC}$   
 $T_1 = 117V \text{ TO } 6V \text{ 100mA TRANSFORMER}$

$IC_1 = CD4011 \text{ OR MC14011 OR EQUAL}$   
 $IC_2 = CD4013 \text{ OR MC14013 OR EQUAL}$   
 $IC_3 = 555 \text{ OR MC1555 OR NE555 OR EQUAL}$

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Mar 25/80  
 D. Fraser

TSL 2N9  
 (403)454-5412

# FRASER ELECTRONICS

Mar. 25/80

P.O. BOX 778 - EDMONTON, ALBERTA T5J 2L4 - (403) ~~442-9859~~ X454-5412

## PARTS LIST FOR ELECTRONIC MODULE FOR BOWLING UNIT (CAN-AM AMUSEMENTS)

Part	Price	Supplier
Metal Case including board flange and mounting brackets	12.00 <sup>15.00</sup>	WC Mfg. & Alectric
Line Cord SJT-8W	1.00 <sup>1.50</sup>	Cosmos
AC Receptacle Slater Speed Wire	.51	EECOL Electric Ltd.
Amp Connector Set with pins	1.35 <sup>1.45</sup>	AMP of Canada
3/8" Grommet	.15	Cardinal
9- 1/8" Dia X 3/16" Long Pop Rivets @.03	.27	Bolt Supply House
1" Cliff Spacer	.07	Fraser Electronics
3 Vaco Push Terminals for micro switch	.30	Cardinal
1- 4/40 Machine Screw 1/2" long	.02	Bolt Supply House
1- 4/40 Nut	.02	Bolt Supply House
1- #4 Lockwasher	.015	Bolt Supply House
5- 6/32 X 1/2" Machine Screws-Roberts Head	.10	Bolt Supply House
4- 6/32 Nuts	.08	Bolt Supply House
4- #6 Lockwashers	.06	Bolt Supply House
4- #6 Sheet metal Screws-Roberts Head	.08	Bolt Supply House
3' each of 3 colors or 18 to 22 Ga. Solid Hook Up Wire @.10/ft.	.90	Cardinal
3' 16 or 18 Ga. Solid Hook Up Wire @.15	.45	Cardinal
3" 3/16" Heat Shrink Tubing @.15	.45	Cardinal
Printed Circuit Board	2.50 <sup>4.00</sup>	Fraser Electronics
SC141B or IT28 Triac (TIC216B)	1.00	Intek (Future)
MOC3010 or MOC3011 Coupler	2.35	Intek
3- 2N3904 or 2N4401 @.15	.45	Intek or Future
1- 2N3906	.14	Intek or Future
1- CD4011 or MC14011	.43	Intek or Future
1- CD4013 or MC14013	.81	Intek or Future
1- 555 Timer	.55	Intek or Future
5- 1N4001 or equal @.10	.50	Intek or Future
1- 1N914 or 1N4148 or equal	.06	Intek or Future
1- 220mFd 10Volt or more Capacitor	.22 <sup>.28</sup>	Intek or All
1- 22mFd 10Volt or more capacitor	.18 <sup>.25</sup>	Intek
1- .01mFd 250 Volt or more Capacitor	.15	Intek
1- .0068mFd 50Volt Capacitor	.15	Fraser Electronics
3- 180ohm 1/2Watt resistors @.03	.09	Fraser Electronics
3- 100Kohm 1/2W resistors @.02	.06	Intek
4- 10K 1/2Watt resistors @.02	.08	Intek
1- 6.8Kohm 1/2Watt resistors	.02	Intek
1- 680K 1/2W resistor	.02	Intek
2- Fuse Clips @.10 <sup>.12</sup>	.20 <sup>.24</sup>	Future
1- 2A Fast Blow Fuse	.20	Cardinal
8- Vero Pins @.02	.16	Fraser Electronics
1/2oz. Solder @\$16.00/lb.	.50	Fraser Electronics
Triac Insulating Hardware for TO-220 Case	.06	Intek or Future
Intek Hardware for Any Triac		
Future Hardware for Future Triac only		
<b>Total</b>	<b>\$28.21</b> Total May Vary	

Intek Electronics-4616-99 St. Edmonton, Alta.  
 Bolt Supply House-116Ave & 150St. Edmonton, Alta.  
 Future may be cheaper on some items than Intek, but does not carry all items

6V POWER TRANSFORMER - 1.25 U.S. = 3.00 CAN  
 2-MICRO SWITCHES = 3.20 CAN

71.00 TOTAL FOR UNIT  
 WITH MICRO SWITCHES  
 + 14.00 FOR HARNESS & LIGHT MOD.