

ELECTROCOIN AUTOMATICS LTD

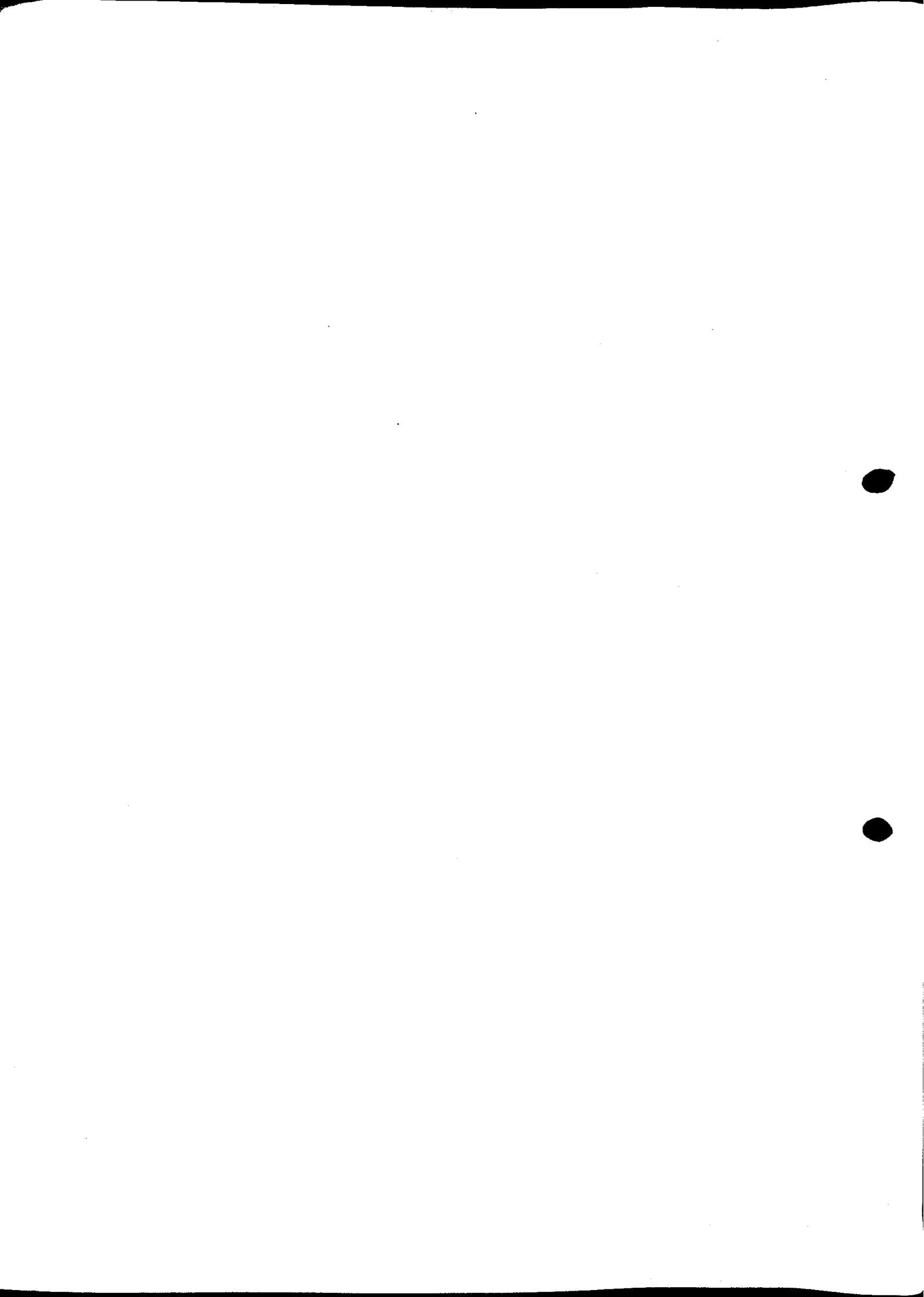
UPRIGHT

SERVICE MANUAL



J A L E C O

PART NO 64046



PRECAUTIONS TO BE OBSERVED WHEN INSTALLING MACHINE

THIS VIDEO GAME IS FOR INDOOR USE ONLY.
WHEN INSTALLING AVOID PLACES MENTIONED BELOW

1. PLACES SUBJECT TO CONDENSATION DUE TO HUMIDITY.
2. IN THE PROXIMITY OF AN INDOOR SWIMMING POOL OR SHOWER.
3. PLACES SUBJECT TO DIRECT SUNLIGHT.
4. VICINITY OF HIGHLY INFLAMMABLE/VOLATILE CHEMICALS.
5. UNEVEN SURFACES.
6. VICINITY OF FIRE EXITS AND FIRE EXTINGUISHERS.
7. DUSTY ATMOSPHERE.

INSTALLATION

IT IS IMPORTANT TO AVOID ROUGH HANDLING OF THIS MACHINE AS CERTAIN PARTS ARE FRAGILE.

UPON REMOVAL OF THE SHIPPING CARTON EXAMINE THE EXTERIOR OF THE CABINET FOR DENTS, CHIPS OR BROKEN PARTS.

ACCESS TO THE APPLIANCE SHOULD ONLY BE MADE BY QUALIFIED PERSONNEL FOR ANY PURPOSE.

INSPECT THE INTERIOR OF THE CABINET AS FOLLOWS:

A) CHECK THAT ALL THE PLUG IN CONNECTORS ARE FIRMLY SEATED i.e. THE EDGE CONNECTOR ON THE CPU BOARD. IF ANY CONNECTORS ARE FOUND UNPLUGGED IT IS IMPORTANT WHEN RE-PLUGGING NOT TO FORCE THE CONNECTORS TOGETHER. AS SOME MAY BE KEYED AND ONLY GO ON IN THE PROPER ORIENTATION.

B) CHECK THAT ALL PLUG-IN INTEGRATED CIRCUITS AND SUB BOARDS ON THE GAME PCB ARE FIRMLY SEATED IN THEIR SOCKETS.

C) CHECK ALL SUB ASSEMBLIES SUCH AS THE POWER SUPPLY FOR SECURE MOUNTING.

ENSURE THE MAINS SUPPLY IS CORRECT FOR OPERATION OF THE MACHINE, AND THAT THE SUPPLY HAS A GOOD EARTH CONNECTION.

SAFETY/MAINTENANCE

THIS VIDEO GAME REQUIRES CERTAIN MAINTENANCE TO KEEP IT IN GOOD WORKING ORDER.

IT IS ADVISED THAT THE SITE MANAGER CHECKS THE SERVICEABILITY OF THE MACHINE DAILY.

WARNING

HIGH VOLTAGES EXIST WITHIN THE MACHINE SO IT IS ADVISABLE THAT ONLY QUALIFIED SKILLED PERSONNEL SHOULD TOUCH ANY INTERNAL PARTS OF THE MACHINE. THE HIGH VOLTAGES PRESENT MAY CAUSE SHOCK OR EVEN FATALITY WITH MISUSE. ALWAYS TURN THE MACHINE OFF BEFORE COMMENCING ANY WORK.

HIGH VOLTAGES MAY EXIST IN ANY MONITOR UNIT, EVEN WITH THE POWER DISCONNECTED. USE EXTREME CAUTION AND DO NOT TOUCH ELECTRICAL PARTS, OR THE YOKE WITH YOUR HANDS OR WITH METAL OBJECTS HELD IN YOUR HANDS. INFORMATION ON THE MONITOR FUSES ARE CONTAINED IN THE MONITOR MANUAL SUPPLIED WITH THIS MACHINE.

CAUTION

DO NOT USE FUSES OTHER THAN THOSE SPECIFIED, FOR THE CONTINUED PROTECTION OF YOUR GAME.

NEVER CONNECT OR DISCONNECT ANY CONNECTORS OF THE PCB, OR RESET THE DIP SWITCH SETTINGS WHILE THE POWER IS ON.

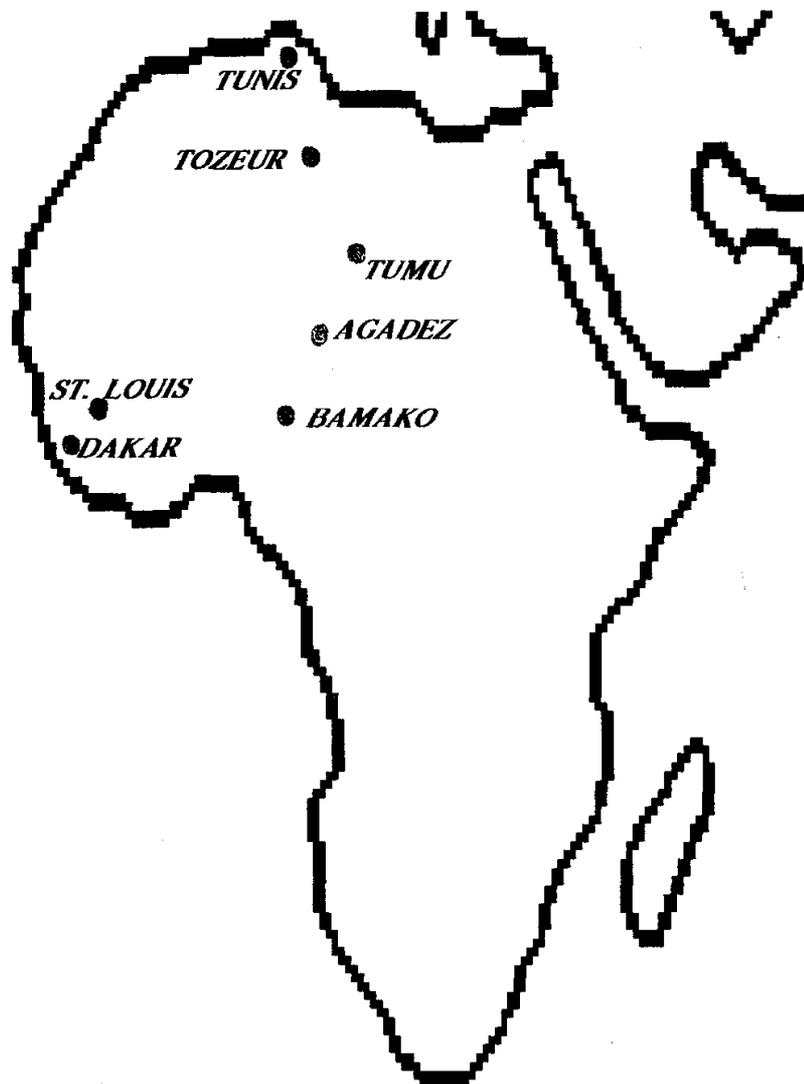
REGULARLY CLEAN THE OUTSIDE OF THE CABINET. DO NOT DRY WIPE ANY OF THE ACRYLIC PANELS, BECAUSE ANY DUST CAN SCRATCH THE SURFACE AND RESULT IN FOGGING THE PLASTIC. ACRYLIC SURFACES MAY BE CLEANED WITH ANY NON-ABRASIVE HOUSEHOLD CLEANER.

GAME DESCRIPTION

The BIG RUN is a race against time. You start at Tunis in North Africa then pass through six stages before you reach your destination which is Dakar in Western Africa. To reach Dakar you will pass through some of the most hazardous terrain like sand, dirt tracks and hairpin turns. You can automatically move other drivers out of your way by blasting your horn. But watch out! If you ram another driver you will end up in a fiery crash scene. You'll need all your driving skills to endure this rally.
Good Luck!

STAGES

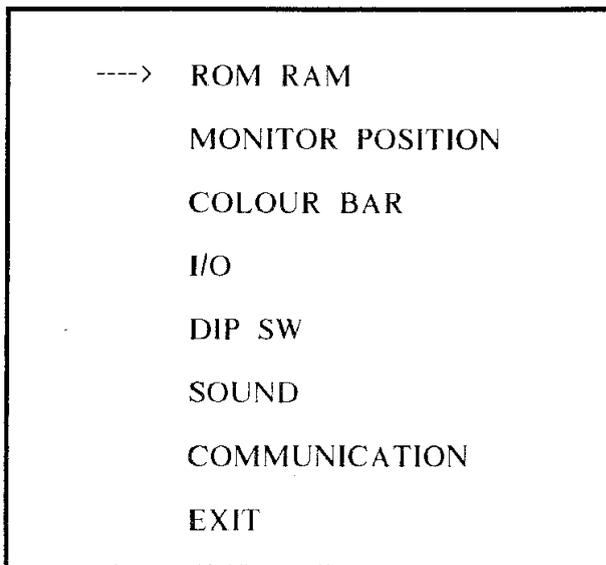
- | | | | |
|----|-----------|----|-----------|
| 1. | TUNIS | TO | TOZEUR |
| 2. | TOZEUR | TO | TUMU |
| 3. | TUMU | TO | AGADEZ |
| 4. | AGADEZ | TO | BAMAKO |
| 5. | BAMAKO | TO | ST. LOUIS |
| 6. | ST. LOUIS | TO | DAKAR |



TEST MENU

1. To enter the Test Menu press the test switch which is situated inside the Coin Door on the Service Bracket.

On pressing the Test Switch the Monitor will display the different test selection.
(See diagram below).



To select which test you want press the Start Button and the arrow will move down. Once you have made your selection press the Test Switch.

- | | | |
|------------------|---|--|
| ROM RAM | = | This will check the ROM and RAM chips. |
| Monitor Position | = | This allows you to set the picture up using a grid. |
| Colour Bar | = | Using this Test allows you to get right monitor colour settings. |
| I/O | = | This Test checks the buttons or switches. |
| DIP SW | = | This tells you what the Dip Switches are set at. |
| SOUND | = | This checks the sound ROMS and RAMS. |
| Communication | = | This will check the machine as car No1 when linked to others. |
| EXIT | = | Press the Test Switch and you Exit from the Test Menu. |

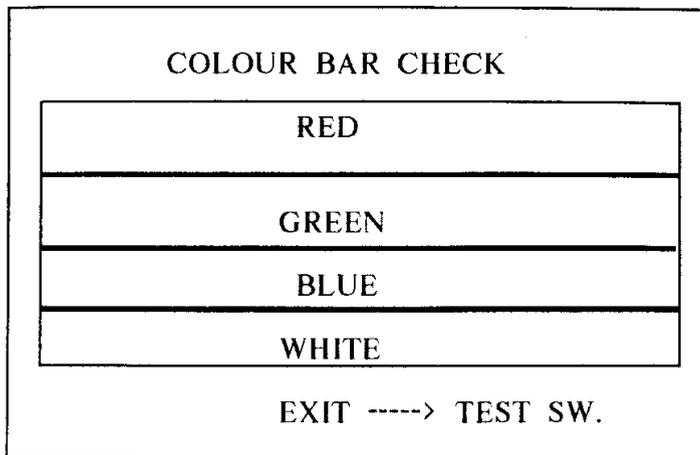
1. ROM RAM CHECK

ROM RAM CHECK	
MAIN	
VRAM	
SCRATCH	RAM
COLOUR	RAM
ROAD COM	RAM
OBJECT	RAM
PROGRAM	ROM
ROAD	
SCRATCH	RAM
ATTRIBUTE	RAM
ROAD COM	RAM
PROGRAM	ROM
EXIT ----> TEST SW.	

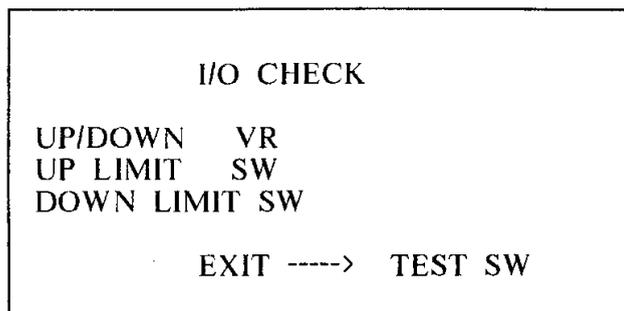
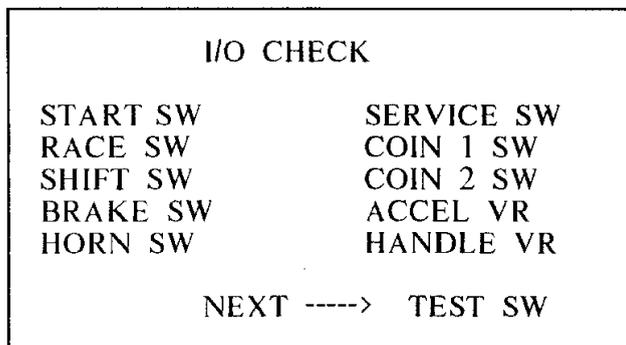
2. MONITOR POSITION CHECK

MONITOR POSITION CHECK	
[Grid]	
EXIT --> TEST SW.	

3. COLOUR BAR CHECK



4. I/O CHECK



5. DIP SW CHECK

DIP SW CHECK	
DIP SW. 1	
1 2 3 4	
PLAYER CAR NO. 1	
DIP SW. 2	
1 2 3 4 5 6 7 8	
COIN SW 1	1 COIN 1 CREDIT
COIN SW 2	1 COIN 1 CREDIT
DEMO SOUND	ON
FREE PLAY	OFF
DIP SW 3	
1 2 3 4 5 6 7 8	
TIMER START	15 SEC. START
DIFFICULTY	NORMAL
CABINET MOVING	ON
EXIT -----> TEST SW.	

6. SOUND CHECK

SOUND CHECK	
SOUND ROM 1	OK
SOUND ROM 2	OK
SOUND RAM 1	OK
SOUND RAM 2	OK
EXIT -----> TEST SW.	

7. COMMUNICATION CHECK

COMMUNICATION CHECK

CAR NO. 1

CAR NO. 2 OK

CAR NO. 3 NOT CONNECTED

CAR NO. 4 WAITING

EXIT ----> TEST SW.

BIG RUN

DIP SWITCH #2

		1	2	3	4	5	6	7	8
PLAYER ONE	1 COIN 1 CREDIT	OFF	OFF	OFF					
	1 COIN 2 CREDITS	ON	OFF	OFF					
	1 COIN 3 CREDITS	OFF	ON	OFF					
	1 COIN 4 CREDITS	ON	ON	OFF					
	2 COINS 1 CREDIT	OFF	OFF	ON					
	3 COINS 1 CREDIT	ON	OFF	ON					
4 COINS 1 CREDIT	OFF	ON	ON						
FREE PLAY	ON	ON	ON						
PLAYER TWO	1 COIN 1 CREDIT				OFF	OFF	OFF		
	1 COIN 2 CREDITS				ON	OFF	OFF		
	1 COIN 3 CREDITS				OFF	ON	OFF		
	1 COIN 4 CREDITS				ON	ON	OFF		
	2 COIN 1 CREDIT				OFF	OFF	ON		
	3 COINS 1 CREDIT				ON	OFF	ON		
4 COINS 1 CREDIT				OFF	ON	ON			
FREE PLAY				ON	ON	ON			
SOUND IN ATTRACT MODE	WITH WITHOUT							OFF ON	
FREE PLAY	OFF ON								OFF ON

DIP SWITCH #3

		1	2	3	4	5	6	7	8
AUTO START (IN 15 SECONDS)	WITH WITHOUT	OFF ON					OFF OFF	OFF OFF	OFF OFF
DIFFICULTY LEVEL	EASY NORMAL DIFFICULT MOST DIFFICULT		ON OFF ON OFF	ON OFF OFF ON			OFF OFF OFF OFF	OFF OFF OFF OFF	OFF OFF OFF OFF
VIBRATING STEERING	OFF ON				OFF ON		OFF OFF	OFF OFF	OFF OFF
CONTINUOUS PLAY	OFF ON					OFF	ON	OFF	OFF

PINOUT INFORMATION

<u>PIN</u>	<u>COLOUR</u>		<u>FUNCTION</u>
1.	YEL/BLK	10p	MICROSWITCH OR N.P.N OPEN COLLECTOR INPUT.
2.	N/C	10p	MICROSWITCH OR N.P.N. OPEN COLLECTOR INPUT.
3.	WHT/BLU	10p	PNP INPUT (MS 111/SENTINEL)
4.	N/C	20p	INPUT (MICROSWITCH)
5.	WHT/GRN	20p	INPUT (MS 111/SENTINEL)
6.	N/C	50p	INPUT (MICROSWITCH)
7.	WHT/BLK	50p	INPUT (MS 111/SENTINEL)
8.	N/C	£1	INPUT (MICROSWITCH)
9.	WHT/YEL	£1	INPUT (MS 111/SENTINEL)
10.	BLU/BLK	0	VOLTS (10p INHIBIT)
11.	BLU/YEL	0	VOLTS (20p INHIBIT)
12.	BLU/ORG	0	VOLTS (50p INHIBIT)
13.	BLU/WHT	0	VOLTS (£1 INHIBIT)
14.	BLACK	0	VOLTS
15.	BLACK	0	VOLTS
16.	N/C	0	VOLTS
17.	N/C	0	VOLTS
18.	ORANGE	+ 12v	DC
19.	ORANGE	+ 12v	DC
20.	ORANGE	+ 12v	DC
21.	BLU/VIO	-	POSITIVE COMMON FOR MS111/SENTINEL
22.	WHT/RED		METER OUTPUT (NPN OPEN COLLECTOR)
23.	ORG/BLK		CREDIT OUTPUT (NPN OPEN COLLECTOR)
24.	N/C	0	VOLTS

NOTES:-

- 1) Use 0 volts for negative common if plugging into MS 125 seperator unit.
- 2) Ensure that there is no coin meter connected across any input, eg. via a microswitch or an adaptor card.

NOTE: On most unigame adaptors pin 10 is linked to pin 24, and pin 11 is linked to pin 25, these links should be removed completely. Then short pin 11 to pin 12 on the adaptor card. This then uses the output from the credit board meter drive.

- 3) The meter will always total cash in 10p units regardless of any credit setting.
- 4) More than one coin mech may be fed into the PCB.

e.g. A) S10 (up to four)
 B) S10 X MS 111
 C) S10 X MS 125
 D) S10 X Sentinel

- 5) Most credit boards are supplied with a standard credit loom.
 (Part No 16315) fitted with a male 6 way amp mate 'N' lock connector.

Pinouts are shown below.

<u>PIN</u>	<u>COLOUR</u>		<u>FUNCTION</u>
1.	ORANGE	+12v	DC SUPPLY
2.	PINK	+5v	DC (LAMP SUPPLY)
3.	N/C		
4.	WHT/RED		TO COIN METER
5.	BLACK	0v	DC
6.	ORG/BLK		COIN INPUT TO GAME PCB.

DIP SWITCH SETTINGS V-2

<u>FUNCTION</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
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<u>Bonus Games</u>								Not used
--------------------	--	--	--	--	--	--	--	----------

None	on	on						
For every 50p	off	on						
For every £1	on	off						
For every £2	off	off						

1 Pulse per credit								on
2 Pulses per credit								off

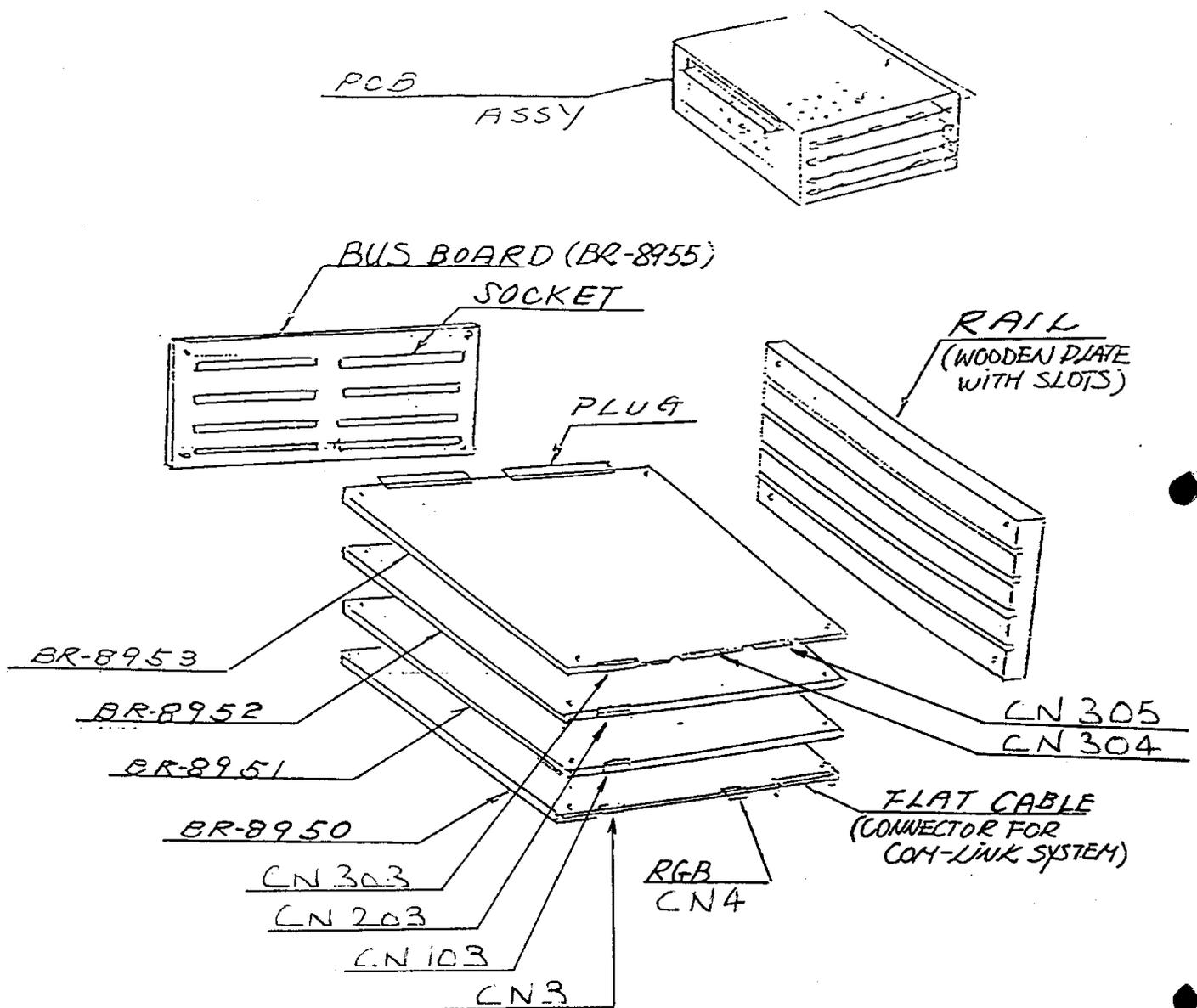
Price per play

10p				on	on	on
20p				off	on	on
30p				on	off	on
40p				off	off	on
50p				on	on	off
60p				off	on	off
£1				on	off	off
£2				off	off	off

Please Note:- A bonus game will only be awarded if the game price of play is less than the bonus value set. Also if a mixture of coins are inserted, the time interval between coins inserted must be of less than 5 seconds for the bonus to be awarded.

EXAMPLES OF SETTINGS (FOR £1 INSERTED).

Price of Play	Bonus Games	Credits	Bonus	Total
10p	off	10	None	10
10p	For every 50p	10	2	12
10p	For every £1	10	1	11
20p	off	5	None	5
20p	For every 50p	5	2	7
20p	For every £1	5	1	6
30p	off	3	None	3
30p	For every 50p	3	2	5
30p	For every £1	3	1	4
40p	off	2	None	3
40p	For every 50p	2	2	4
40p	For every £1	2	1	3
50p	off	2	None	2
50p	For every £1	2	1	3



BR-8955	-----	BUS PCB
BR-8953	-----	INPUT/OUTPUT PCB
BR-8952	-----	ROAD PCB
BR-8951	-----	OBJECT PCB
BR-8950	-----	MAIN PCB
BR-8957	-----	SHOCK GENERATOR PCB
BR-8956	-----	COM-LINK PCB (OPTIONAL)

* When assembling the PCB's for "Big Run" there is no particular order in which the PCB's should be assembled. However, as the I/O board (Numbered: BR-8953) generates the utmost heat, it is advisable that this board be set to the outer-most side of the other three boards and that it gets maximum cooling.

CONNECTOR INFORMATION

CN4

1.	VIDEO RED	RED
2.	VIDEO GREEN	GRN
3.	VIDEO BLUE	BLU
4.	VIDEO GROUND	BLK
5.	VIDEO SYNC	WHT

CN704

1.	+12v	RED/BLK
2.	N/C	
3.	GROUND	BLK/RED

CN3

1.	+5v	PNK
2.	+5v	PNK
3.	GROUND	BLK
4.	GROUND	BLK

CN703

1.	GROUND	BLK
2.	N/C	RED
3.	+12v	RED

N103

1.	+5v	PNK
2.	+5v	PNK
3.	GROUND	BLK
4.	GROUND	BLK

CN702

1.	SIGNAL	WHT/BLK
2.	GROUND	WHT/GRY

CN203

1.	+5v	PNK
2.	+5v	PNK
3.	GROUND	BLK
4.	GROUND	BLK

CN701

1.	0v	BLK/RED
2.	10vac	YEL/BLU
3.	0v	WHT/BLK
4.	19vac	YEL/BLK

CN303

1.	+12v	ORG
2.	N/C	
3.	+5v	PNK
4.	+5v	PNK
5.	GROUND	BLK
6.	GROUND	BLK

TRANSFORMER O/P

1.	0v	WHT/BLK
2.	19vac	YEL/BLK
3.	0v	BLK/RED
4.	10vac	YEL/BLU

INTERNAL MAINS

1.	240vac	BRN
2.	EARTH	GRN/YEL
3.	0v	BLU

CONNECTOR INFORMATION

SUPPLY ADAPTOR (A)

1.	+5vdc	PNK
2.	+5vdc	PNK
3.	N/C	
4.	GROUND	BLK
5.	GROUND	BLK
6.	GROUND	BLK
7.	GROUND	BLK
8.	+12v	ORG
9.	N/C	

SUPPLY ADAPTOR (B)

1.	+5vdc	PNK
2.	+5vdc	PNK
3.	+5vdc	PNK
4.	+5vdc	PNK
5.	GROUND	BLK
6.	GROUND	BLK
7.	GROUND	BLK
8.	GROUND	BLK
9.	+12vdc	ORG
10.	+12vdc	ORG
11.	N/C	
12.	N/C	

SERV/VOLUME

1.	GROUND	BLK
2.	TEST SW	YEL/ORG
3.	SERVICE SW	RED/ORG
4.	VOL. 1	YEL/RED
5.	VOL. 1	YEL/BRN
6.	VOL. 1	YEL/GRN
7.	VOL. 2	GRY/RED
8.	VOL. 2	GRY/YEL
9.	VOL. 2	GRY/BLU

CN 304

+5VDC	PNK	A 1	PNK	+5VDC
		B 2	YEL/BLU	ACCEL
		C 3	BLU/YEL	STEERING
GROUND	BLK/GRY	D 4	BLK/BLU	GROUND
		E 5		
		F 6		
		H 7		
		J 8		
		K 9		
		L 10		
		M 11		
		N 12		
		P 13		
		R 14		
		S 15		
START SW	KEYWAY	T 16	KEYWAY	
RACE SW	GRN/BLK	U 17	ORG/BLK	COIN 1
SW GROUND	GRN/RED	V 18	YEL/BLK	COIN 2
	BLK	W 19	RED/ORG	SERVICE SW
		X 20	YEL/ORG	TEST SW
		Y 21	BLK/BRN	SW GROUND
		Z 22		
HORN SW	WHT/BLK	AA 23	PNK/BLK	GEAR SW
		AB 24	BLK/GRN	SW GROUND
		AC 25		
		AD 26		
GROUND	BLK/PNK	AE 27		
		AF 28		

CN 305

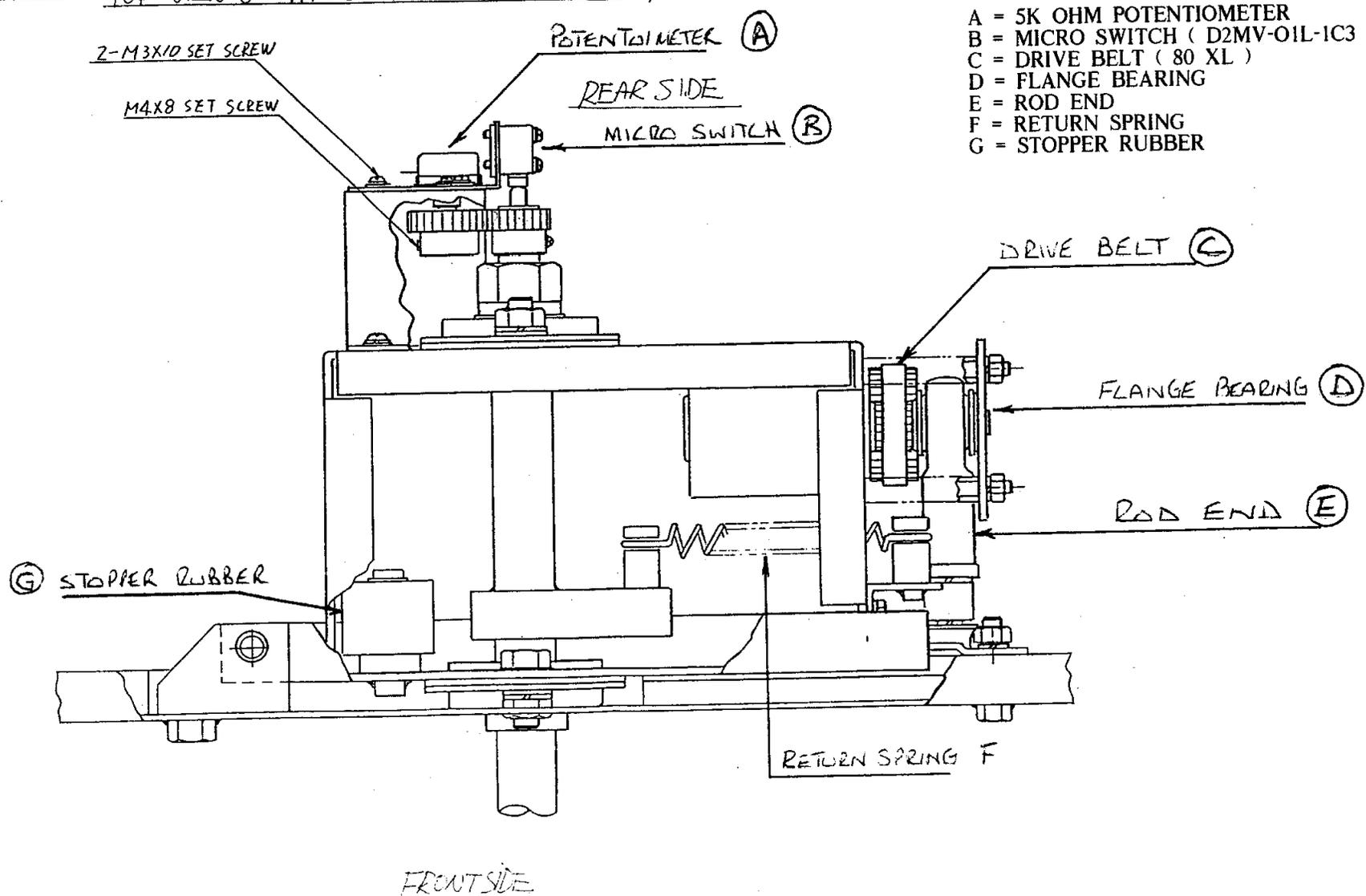
+12v	YEL	A 1		
START LAMP	BLU/BLK	B 2	WHT/ORG	METER 1
RACE LAMP	BLU/VIO	C 3	WHT/YEL	METER 2
		D 4		
+12v DC	ORG	E 5	RED/BLK	+13v
		F 6	BLK/RED	GROUND
		H 7		
	WHT/BLK	J 8		
		K 9	WHT/GRY	
		L 10		
		M 11		
		N 12		
		P 13		
		R 14		
VOL 2	GRY/RED	S 15	YEL/RED	VOL 1
VOL 2	GRY/YEL	T 16	YEL/BRN	VOL 1
VOL 2	GRY/BLU	U 17	YEL/GRN	VOL 1
		V 18		
	KEYWAY	W 19	KEYWAY	
		X 20		
SPEAKER 2	ORG/RED	Y 21	GRY/WHT	SPEAKER 1
SPEAKER 2	ORG/BLU	Z 22	GRY/BLK	SPEAKER 1

JALECO

BIG RUN

**STEERING
WHEEL
ASSEMBLY**

TOP VIEW OF THE STEERING-WHEEL ASSEMBLY



- A = 5K OHM POTENTIOMETER
- B = MICRO SWITCH (D2MV-01L-1C3)
- C = DRIVE BELT (80 XL)
- D = FLANGE BEARING
- E = ROD END
- F = RETURN SPRING
- G = STOPPER RUBBER

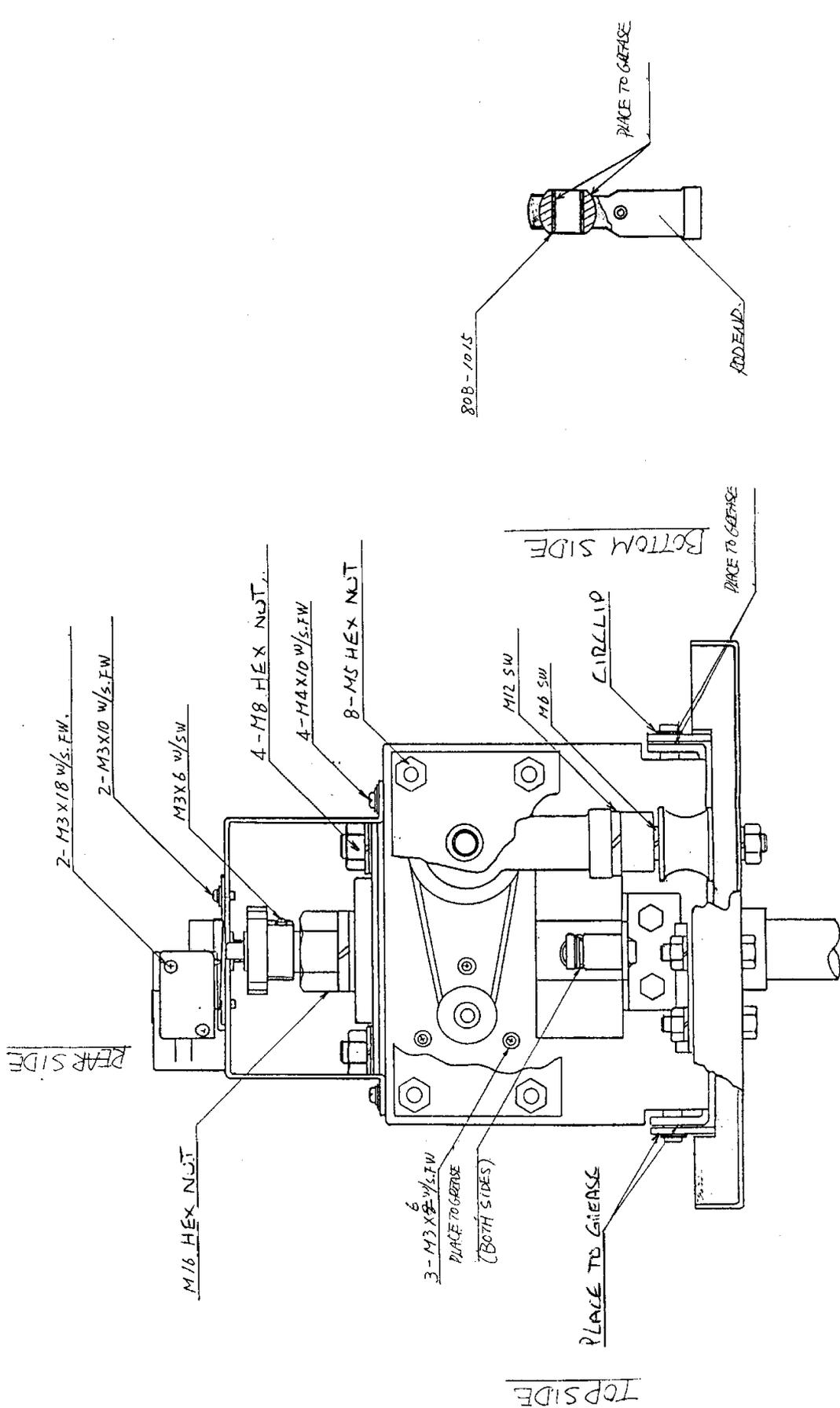
FRONTSIDE

△	· ·				材質	名称	
△	· ·				処理	STEERING WHEEL ASSEMBLY DRAWINGS	
△	· ·				記号	年月日	改訂個所
	承認	検図	検図	担当	個数	図番	
					公差		
					尺度	/	

記事
SHEET A

1 2 3 4 5 6 7 8 9

SIDE VIEW OF THE STEERING WHEEL ASSEMBLY.

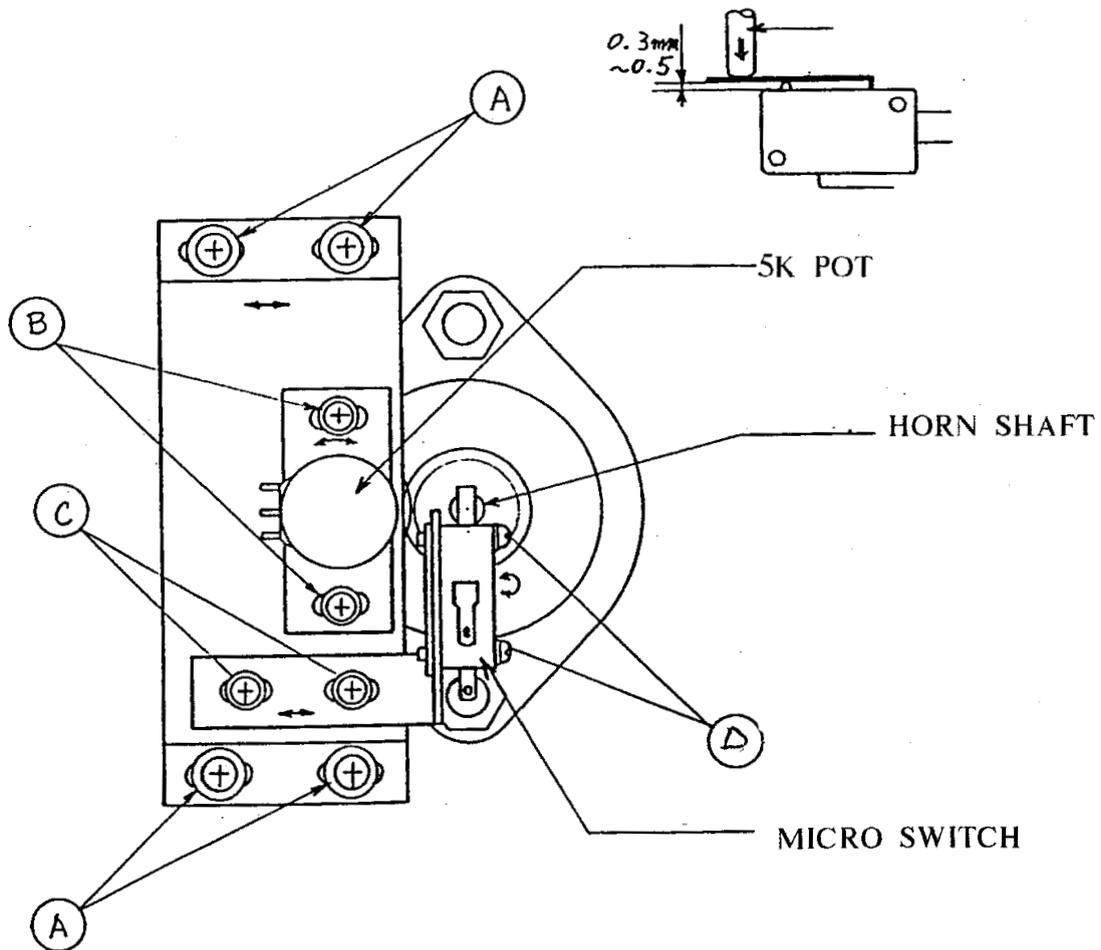


△	...	材料	名称
△	...	処理	
△	...	担当	
承認	年月日	改訂	箇所
検図	検図	担当	
		個数	
		公差	
		尺度	
		図番	

SHEET B

STEERING POT/BUTTON ASSY

WHEN THE HORN BUTTON IS
PRESSED FULLY, THE GAP
SHOULD BE AS SHOWN BELOW.

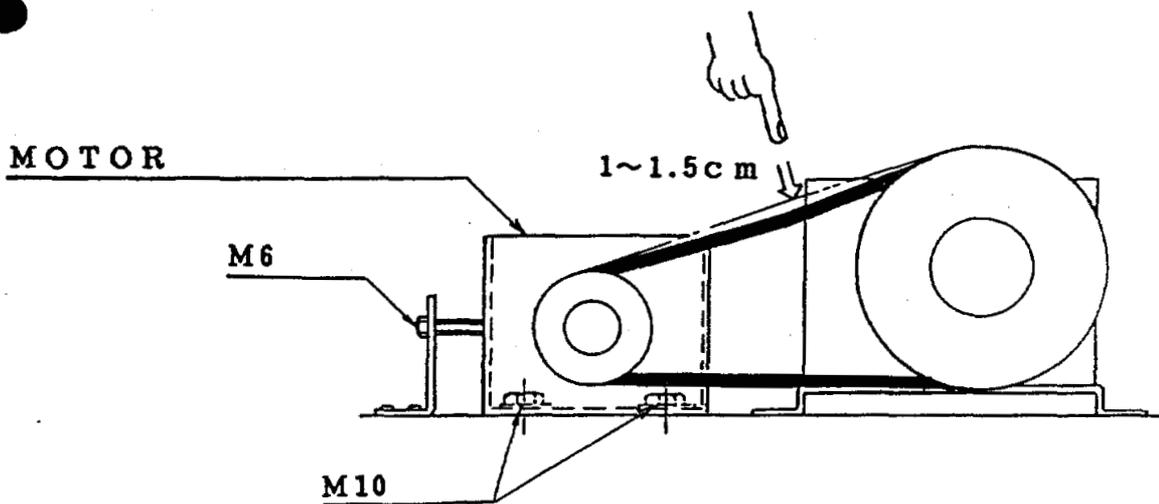


- A = M4 x 10 POZI HD SCREWS
- B = M3 x 10 POZI HD SCREWS
- C = M3 x 10 POZI HD SCREWS
- D = M3 x 18 POZI HD SCREWS

DRIVE BELT

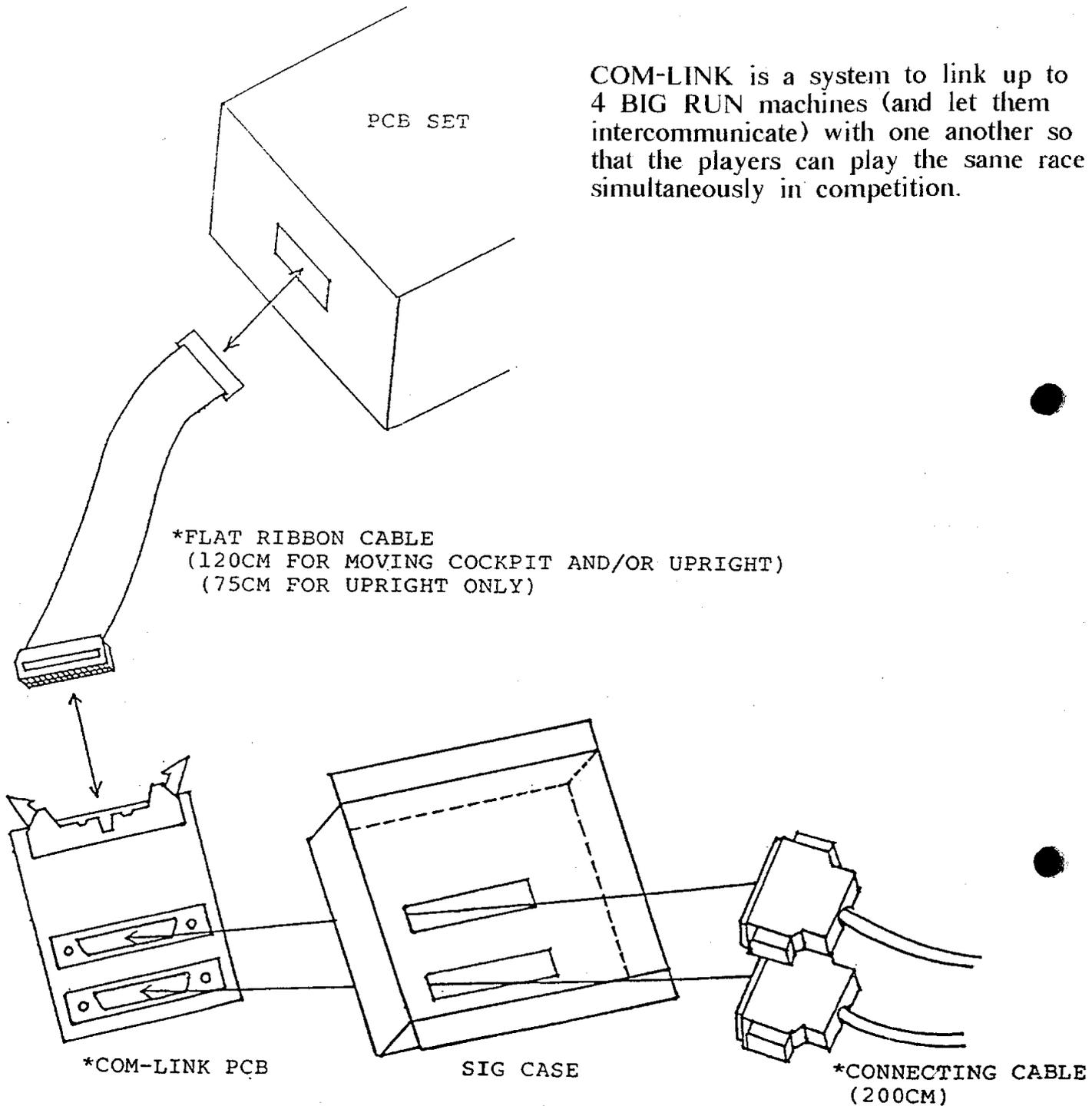
TO ENSURE THE CORRECT OPERATION OF THE STEERING UNIT VIBRATION THE DRIVE BELT MUST BE AT THE RIGHT TENSION. THEREFORE A SLACK OF APPROX 1 TO 1.5cm MUST BE PRESENT.

SEE DIAGRAM BELOW



COM - LINK SYSTEM

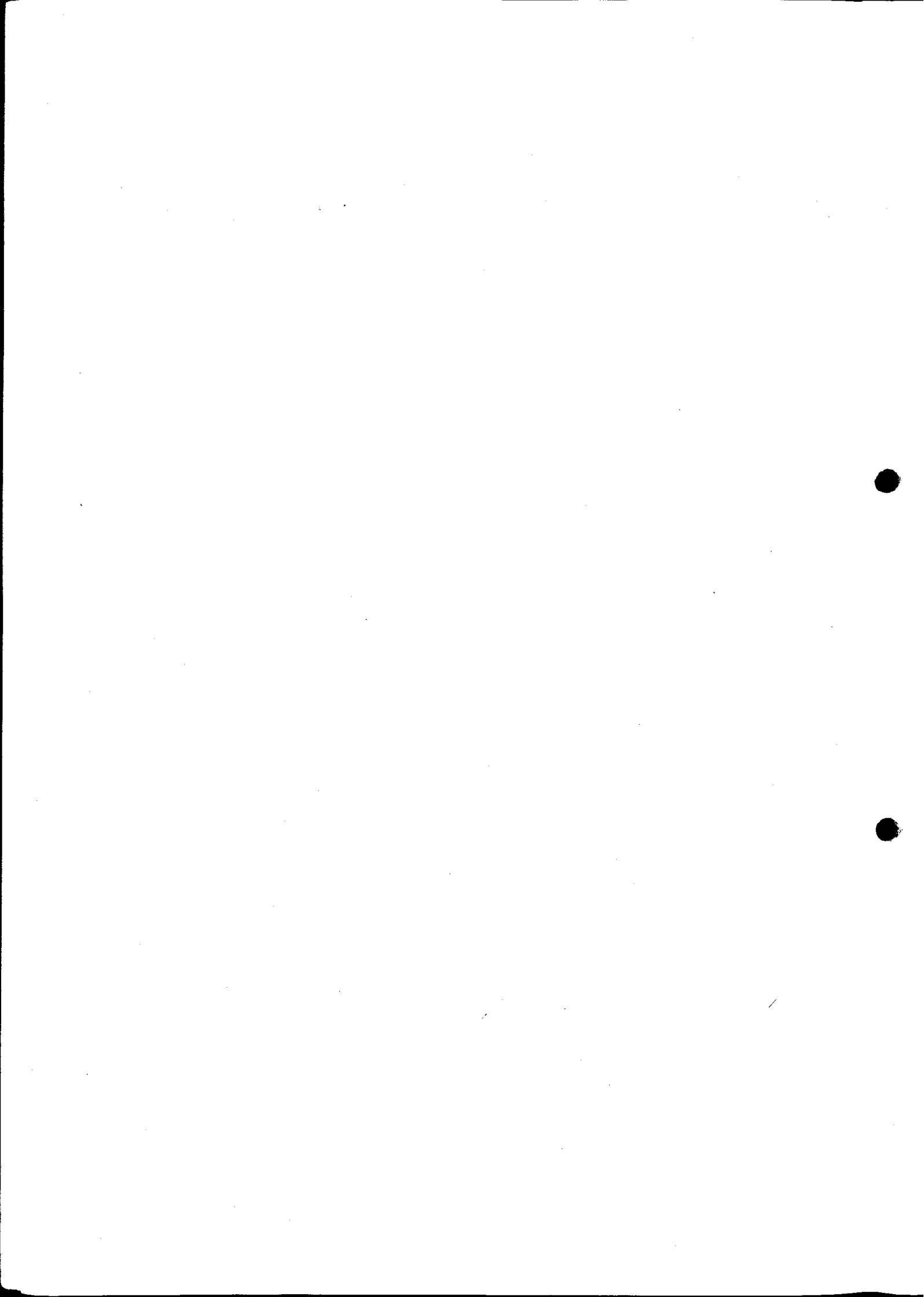
COM-LINK is a system to link up to 4 BIG RUN machines (and let them intercommunicate) with one another so that the players can play the same race simultaneously in competition.



OPTIONAL ACCESSORIES FOR COM-LINK

- *FLAT CABLE (120CM)
- *COM-LINK PCB
- *4-PIECE SET OF HEXAGONAL SCREWS (FOR USE WITH COM-LINK PCB)
- *CONNECTING CABLE (TO LINK 2 MACHINES)







ELECTROCOIN AFTERSALES & SERVICE LTD

The above company has been formed as part of the Electrocoin Automatics Group at the Cardiff factory to provide the AfterSales Service necessary to support the variety of machines manufactured by Electrocoin Automatics Ltd. The company will be responsible for servicing both Spares and Technical requirements for all U.K. manufactured Electrocoin machines, all "Famous Games" products, and all Board Games distributed by Electrocoin Ltd.

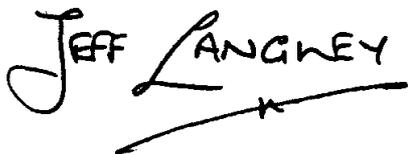
Normal working hours are Monday to Friday 08.00 to 17.30 and Saturday morning 08.00 to 12.30.

AfterSales & Service Tel No: 0222 373059 during working hours,
0836 536195 after hours/weekends.
Please contact the following staff for:-

PARTS ENQUIRIES	- GARY SCOBLE
TECHNICAL INFORMATION	- IAN COLLEY
ACCOUNTS ENQUIRIES	- JULIE TIPPER
WORKSHOP MANAGER	- MIKE CALLAN
CREDIT CONTROLLER	- IAN HEPPENSTALL

PLEASE REMEMBER, TO HELP US HELP YOU, PROMPT RETURN OF FAULTY PARTS IS ESSENTIAL.

Assuring you of the best attention at all times.



JEFF LANGLEY
General Manager

ELECTROCOIN AFTERSALES & SERVICE LTD.