

2ND PRINTING - NV

**SEGA®**

# *OutRun*

DELUXE TYPE

## OWNER'S MANUAL



**SEGA ENTERPRISES, LTD.**

MANUAL NO. 420-5316



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### SPECIFICATIONS

INSTALLATION SPACE : 1975 mm (77.8 in.) W × 1880 mm (740 in.) D

HEIGHT : 1635 mm (64.4 in.)

POWER : 350 W

C.R.T. : 26"

WEIGHT : 350 kg (770 lbs)

## INTRODUCTION OF THE OWNER'S MANUAL

SEGA ENTERPRISES, LTD., supported by its high electronic technology of LSIs, microprocessors, etc. and a wealth of experience, has for more than 30 years been supplying various innovative and popular game machines to the world market. This OWNER'S manual is intended to provide detailed comments together with all the necessary information covering the operation in general of electronic assemblies, electromechanicals, servicing control, spare parts, etc. as regards the OUT RUN, a new SEGA product. The manual is intended for those who have knowledge of electricity and technical expertise especially in ICs, CRTs, microprocessors, etc. Carefully read so as to acquire sufficient knowledge before working on the machine. Should there be a malfunction, non-technical personnel should under no circumstance touch the interior system.

### 1. HANDLING PRECAUTIONS

When installing or inspecting, be very careful of the following points and pay attention to ensure that the player can enjoy the game safely.

- o Be sure to turn the power off before working on the machine.
- o To insert or pull out the plug quickly is dangerous.
- o It is necessary to make sure that the power cord or the grounding wire is not exposed on the road, etc. in a manner so as to be dangerous. Make sure that grounding connections are made safely at the position where so specified.
- o Do not use any fuse that does not meet the specified rating.
- o Make complete connections for the IC board and other connecters. Insufficient insertion is very dangerous.

Also, for the IC board circuit inspections, only the logic tone is allowed. The use of a tester is not permitted, so be careful in this regard. After confirming that there are no irregularities, turn the power ON.

## 2. PREVENTION OF COUNTERFEITING AND CONVERSION

### LABELLING

To prevent counterfeits and conversions, the following labels are put on all the SEGA products. When handling such goods, be sure to confirm the labels. They are used to prevent illegal acts such as the unauthorized copying of the products and the printed circuit boards thereof or carrying on business by manufacturing similar merchandise or by converting, selling or using such products or printed circuit boards.

#### ORIGINAL SEAL

The following seal is put on the machines manufactured by SEGA.

#### LICENSE SEAL

The following seal is put on the kits, such as the printed circuit boards, of SEGA products.



### COPYRIGHT NOTICE

This SEGA product has the copyright notice as follows:

© SEGA 1986

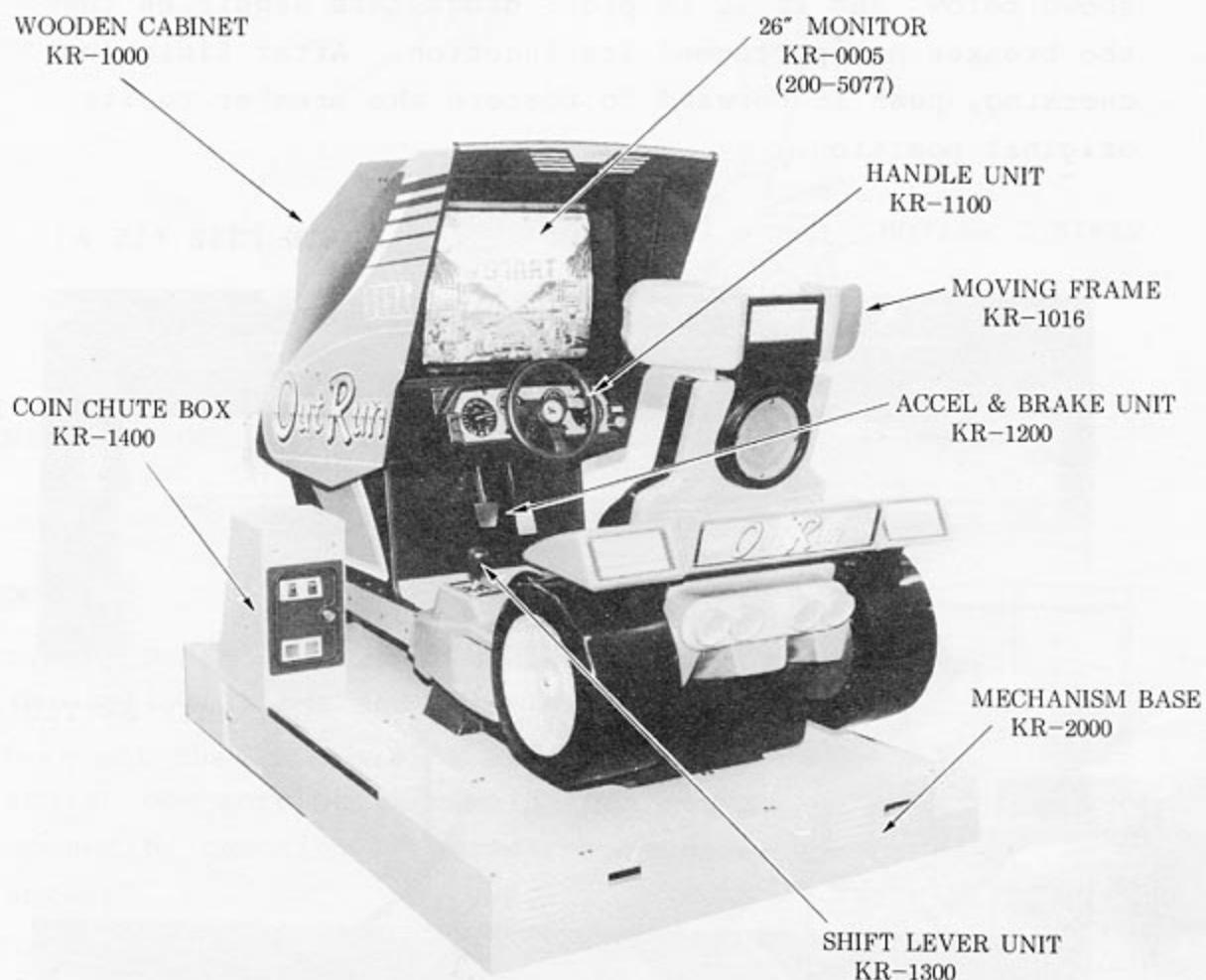
This signifies that this work was disclosed in 1986 and is the property of SEGA ENTERPRISES, LTD.

### 3. PRECAUTIONS CONCERNING THE PLACE OF INSTALLATION

The OUT RUN is an indoor game machine. Absolutely do not install it outside. Even indoors, avoid installing in places mentioned below so as to ensure proper usage:

- o Places subject to rain or water leakage, or condensation due to humidity.
- o In the proximity of an indoor swimming pool and/or shower.
- o Places subject to direct sunlight.
- o Places subject to heat sources from heating units, etc., or hot air.
- o Vicinity of highly inflammable/volatile chemicals or hazardous matter.
- o Sloped surfaces.
- o Vicinity of anti-disaster facilities such us fire exits and fire extinguishers.
- o Places subject to any type of violent impact.
- o Dusty places.

#### 4. NAME OF PARTS



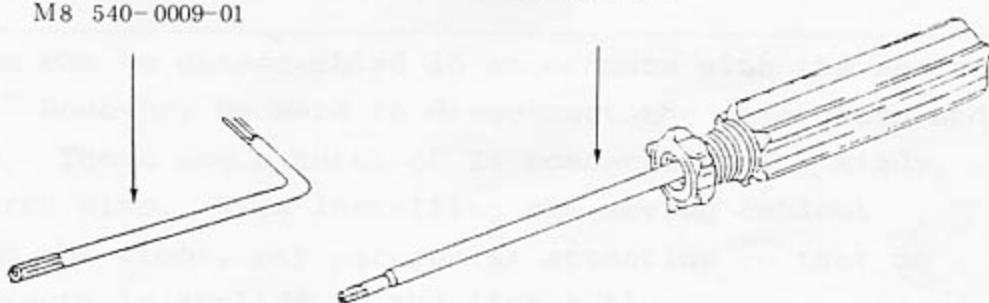
#### TOOLS

(TAMPERPROOF WRENCH)

M4 540-0006-01  
M5 540-0007-01  
M6 540-0015-01  
M8 540-0009-01

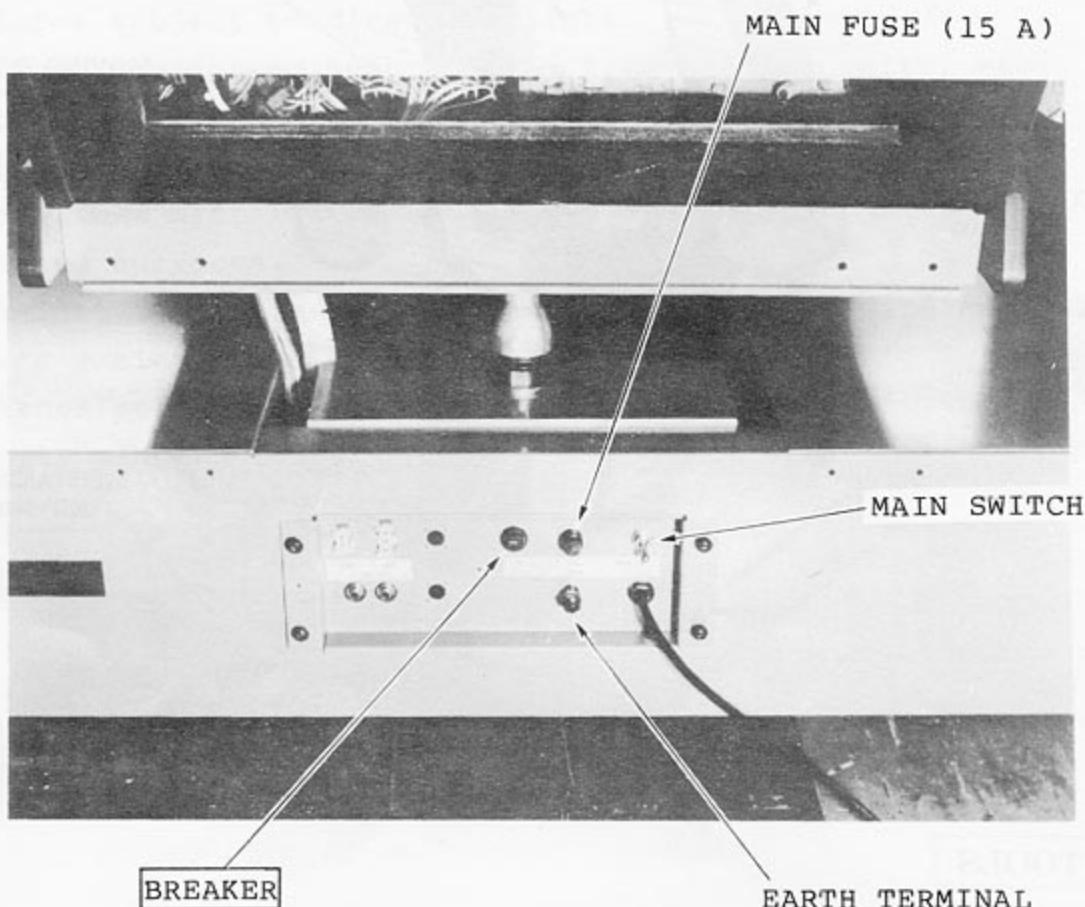
(TAMPERPROOF WRENCH)

M4 540-0018  
M5 540-0017



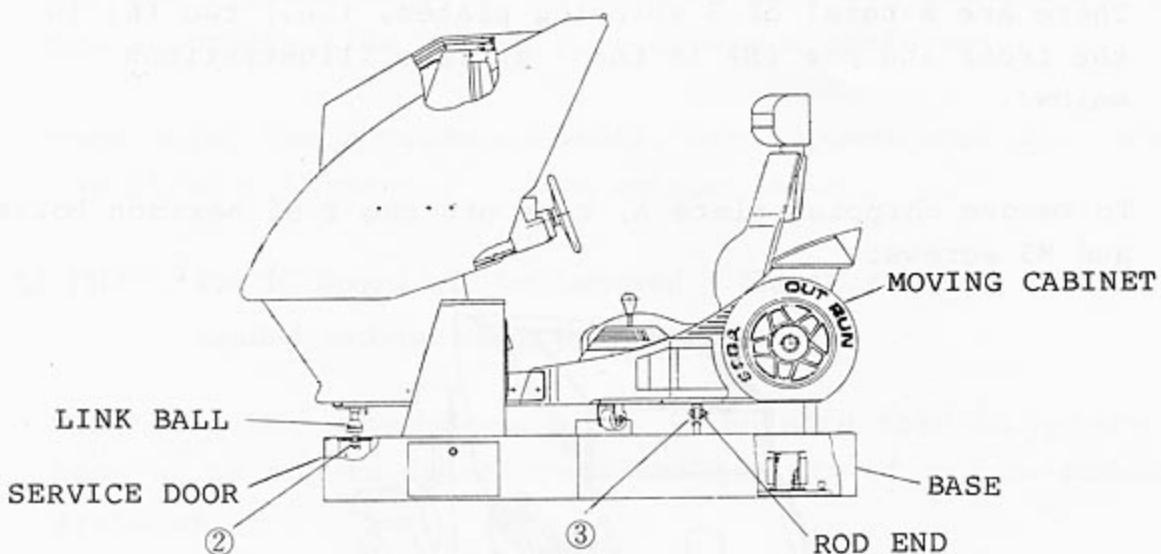
## 5. BREAKER

When the machine is overloaded, the breaker functions and the machine will stop. In such a case, check the breaker shown below, and if it is protruding, this signifies that the breaker has performed its function. After finishing checking, push it forward to restore the breaker to its original position.



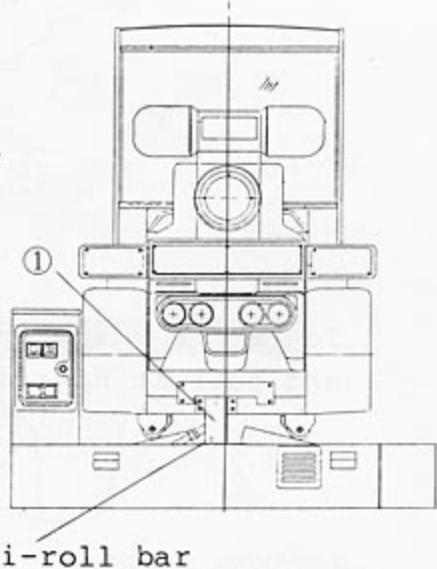
## 6. DISASSEMBLING FOR THE PURPOSE OF TRANSPORTATION

When disassembling for the purpose of transportation, follow the procedure below:



### PROCEDURE

- ① Take off the 4 M8 bolts which secure the anti-roll bar and the moving cabinet.
- ② Take off the link ball's M18 nut located inside the service door which can be opened by removing the 4 tamperproof screws.
- ③ Take off the shoulder screw attached to the rod end.



**Note:** When the shoulder screw is taken off, the moving cabinet will become loose and free. As such, do not allow any unauthorized persons access to it.

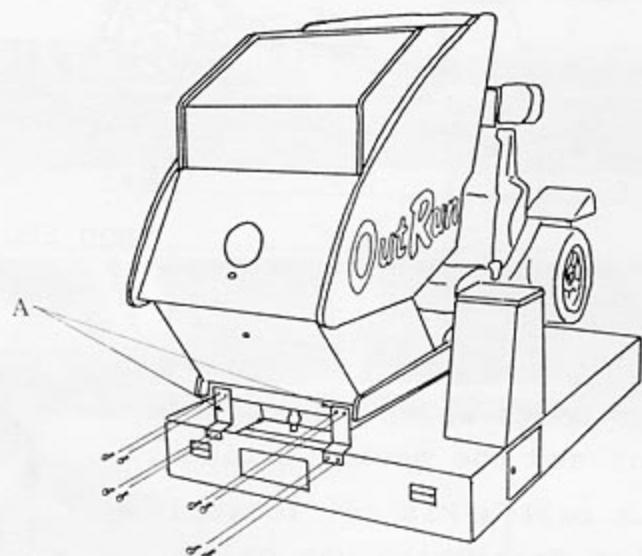
The machine can be disassembled in accordance with the above procedure. However, be sure to disconnect the connectors and cord clamp. There are a total of 28 connectors of 7 kinds, and one earth wire. When installing the moving cabinet directly on the floor, pay particular attention so that no sudden pressure is applied to the link ball.

## 7. REMOVING THE SHIPPING PLATES

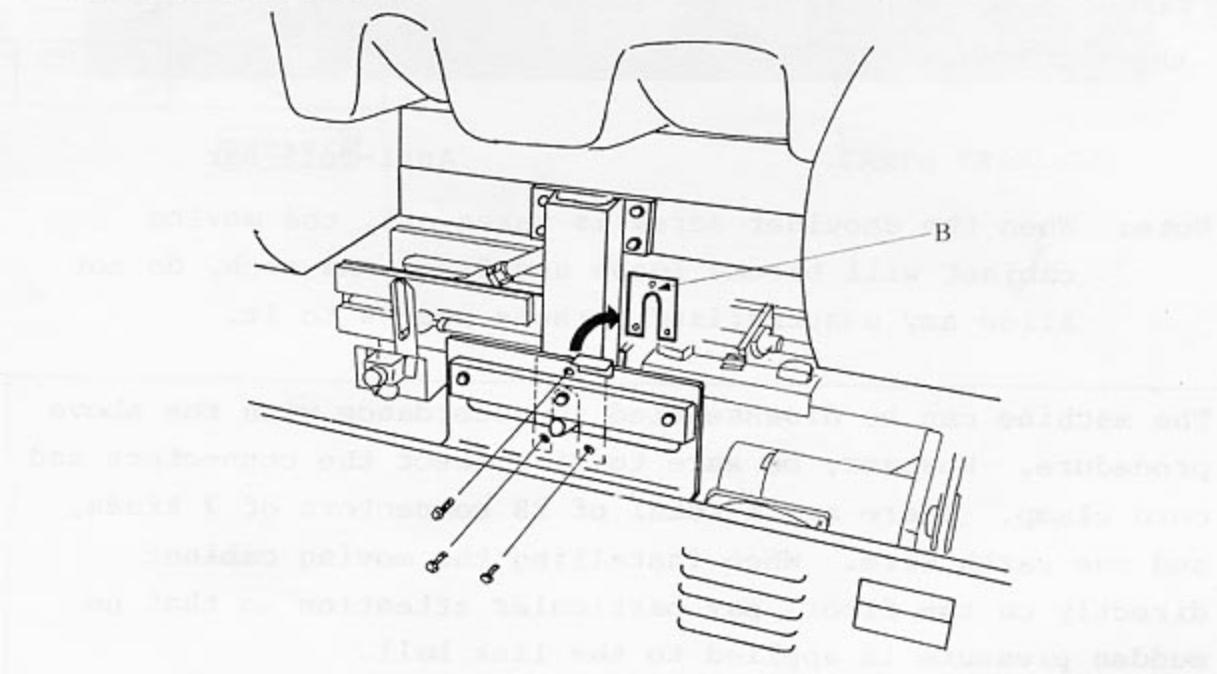
Before using the game, be sure to remove the shipping plates.

There are a total of 3 shipping plates, i.e., two (A) in the front and one (B) in the rear (see illustrations below).

To remove shipping plate A, take off the 2 M6 hexagon bolts and M5 screws.



To remove shipping plate B, take off the 3 M8 hexagon bolts and pull it upward.



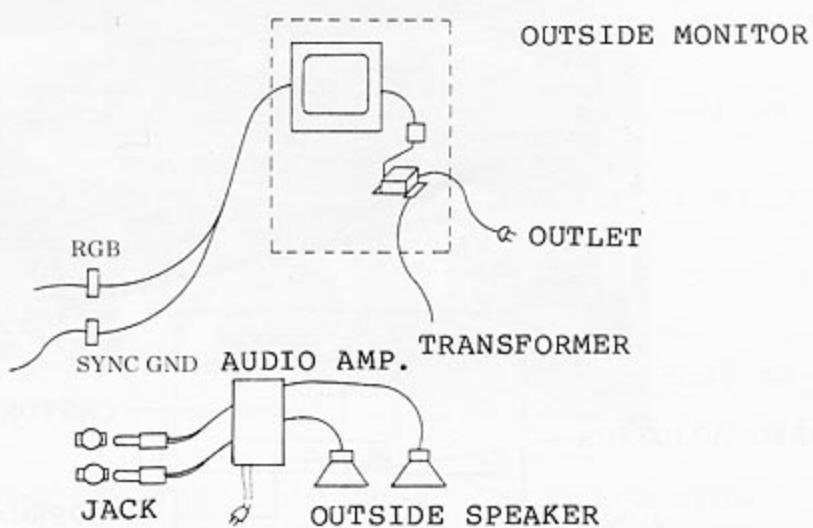
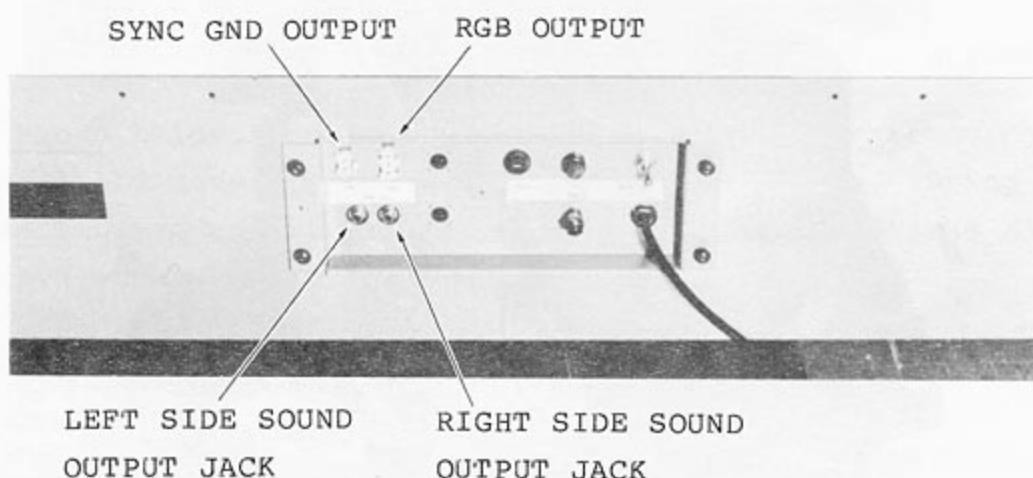
## 8. OUTSIDE MONITOR

- o The outside monitor can be connected via the RGB output/SYNC GND output terminals to the machine.
- o For the outside monitor, be sure to make the connection from the secondary side via an appropriate transformer.

When using the outside speakers, use a power amplifier via the lineout terminals (sound output jacks).

**CAUTION :** The IC board will be damaged if the AC power is directly applied without using the transformer.

- o Make sure that the video cable is no more than 10 meters long so as not to deteriorate the quality of the on-screen graphics.



## 9. PRECAUTIONS FOR INSTALLING AND MOVING THE MACHINE

### PRECAUTIONS FOR INSTALLATION

The machine is provided with 4 castors and 4 adjusters. When installing, make sure that the clearance between the floor and the castor is approximately 5 mm (if the clearance is insufficient, the machine will move and thus create a dangerous situation).

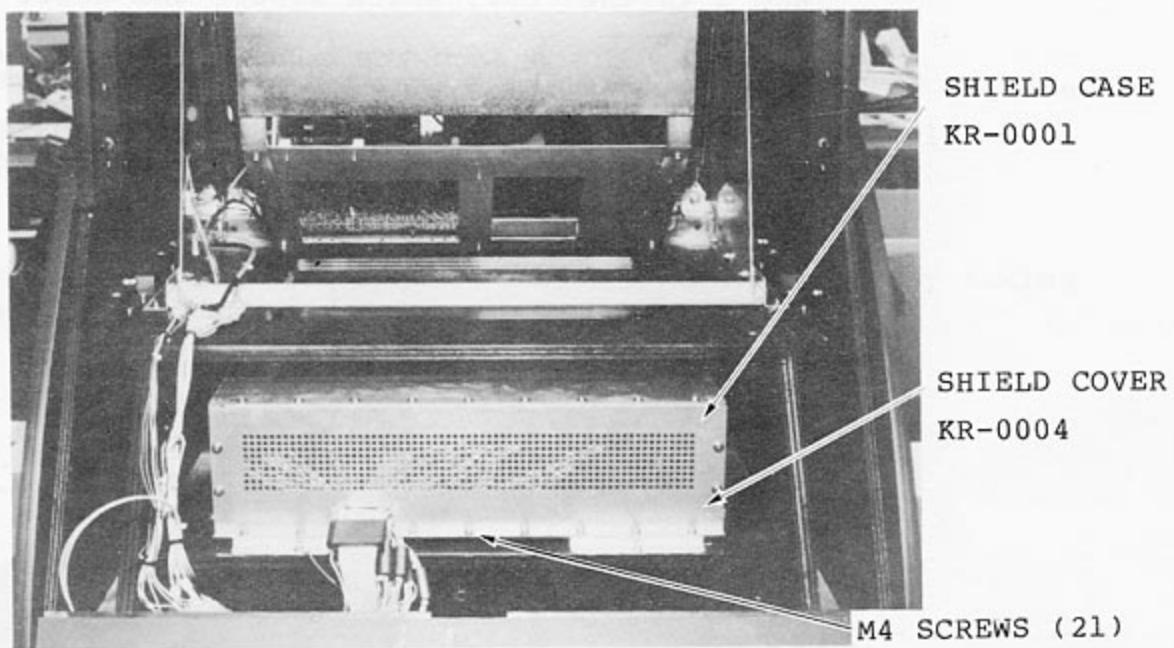
### MOVING THE MACHINE

The machine weighs approximately 350 kg. (770 lbs.) and as such, you should lift up the leg adjuster when moving it about on the floor.

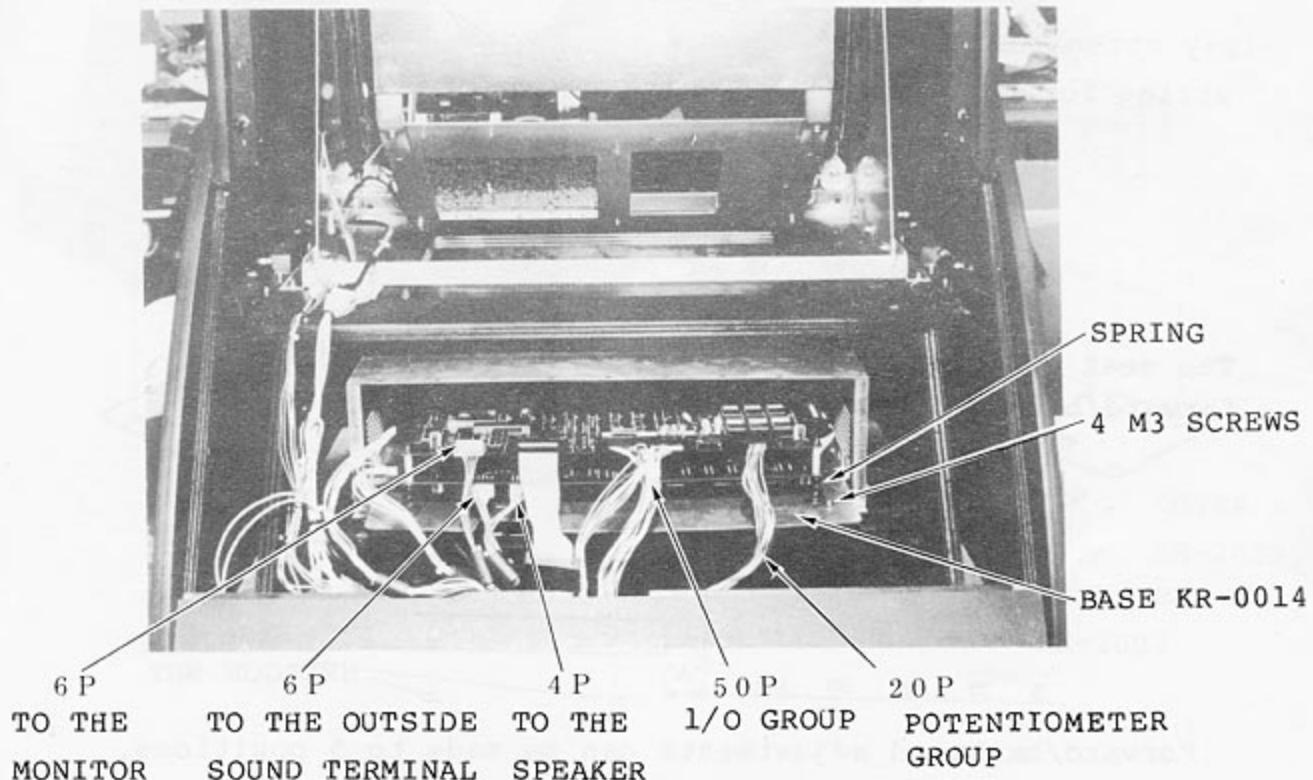


## 10. REMOVING THE GAME BOARD

By opening the cabinet's service door (KR-1005), the board which is located in the shield case as shown below, can be seen.



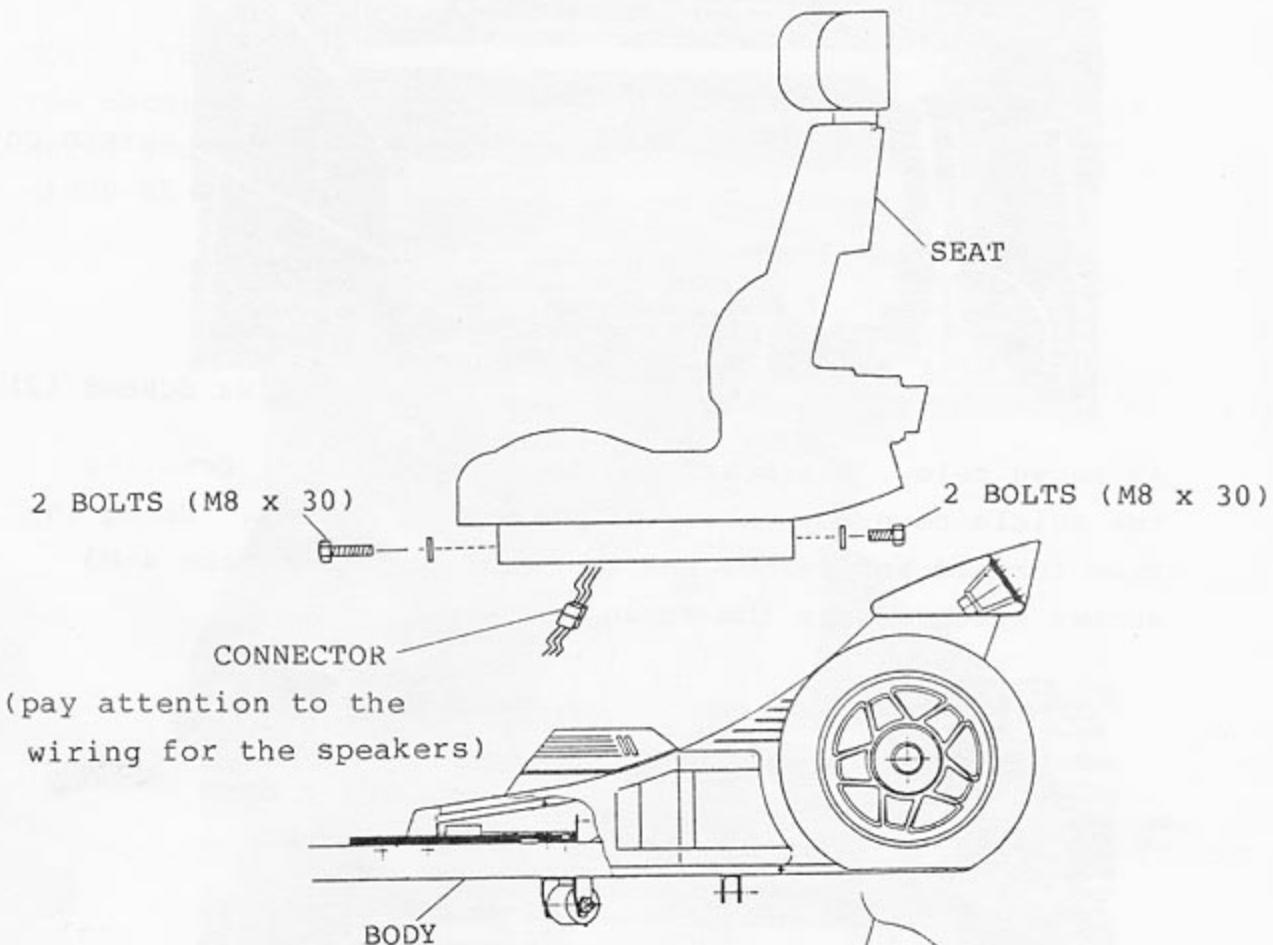
As shown below, the board can be adjusted after removing the shield cover by taking off the 21 M4 screws. Bring the base forward and remove the board by taking off the 4 M3 screws which secure the spring.



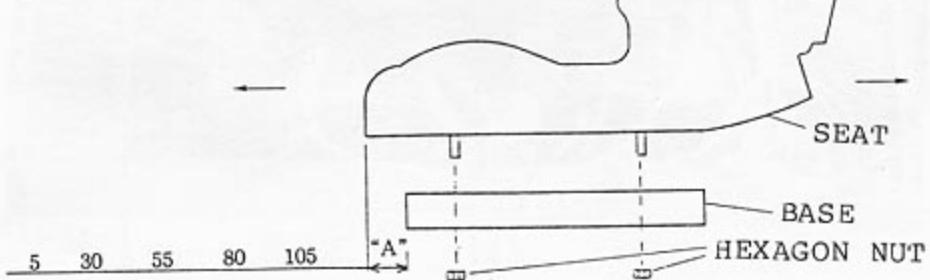
## 11. MOVING THE SEAT POSITION

The machine's seat position can be adjusted in the following procedure:

- PROCEDURE**
1. Remove a total of 4 bolts, i.e., 2 in the front and 2 in the rear, which secure the seat.
  2. Carefully disconnect the connector from the bottom seat.
  3. Make forward or backward adjustments of the seat by removing the 4 hexagon nuts.



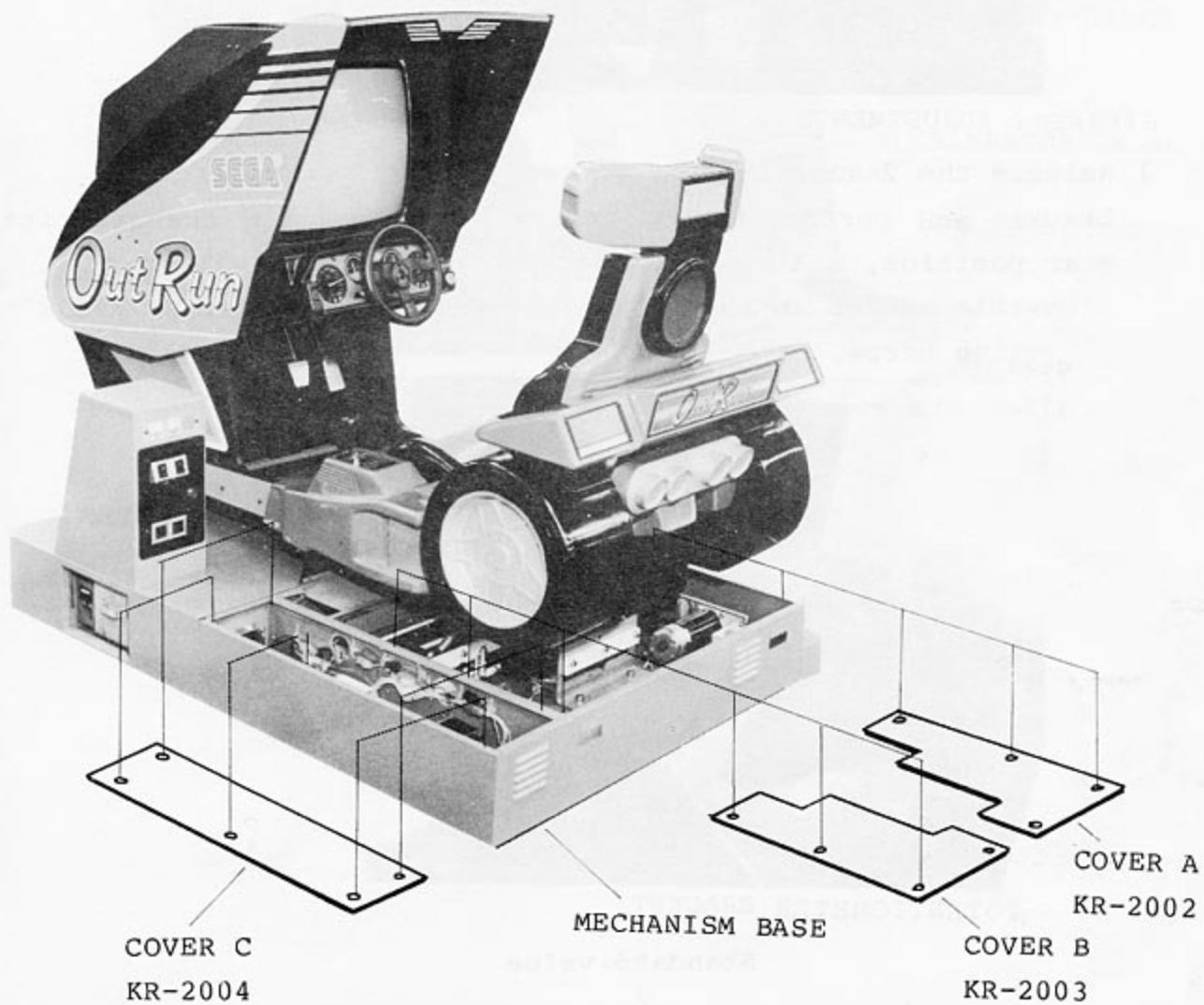
**The seat can be adjusted forward/backward to 5 positions.**



Forward/backward adjustments can be made to 5 positions.

## 12. OPENING THE MECHANISM BASE

- The inside of the mechanism base contains the moving mechanism, which is a special feature of the machine, and the power supply unit.
- Open COVER C when servicing of the power supply is required. The cover can be removed by taking off the 4 M5 x 10 TAMPERPROOF SCREWS.
- When servicing the mechanism, open COVER A and B by taking off each cover 5 M5 x 10 TAMPERPROOF SCREWS.



### 13. DISASSEMBLING AND ADJUSTING THE HANDLE UNIT

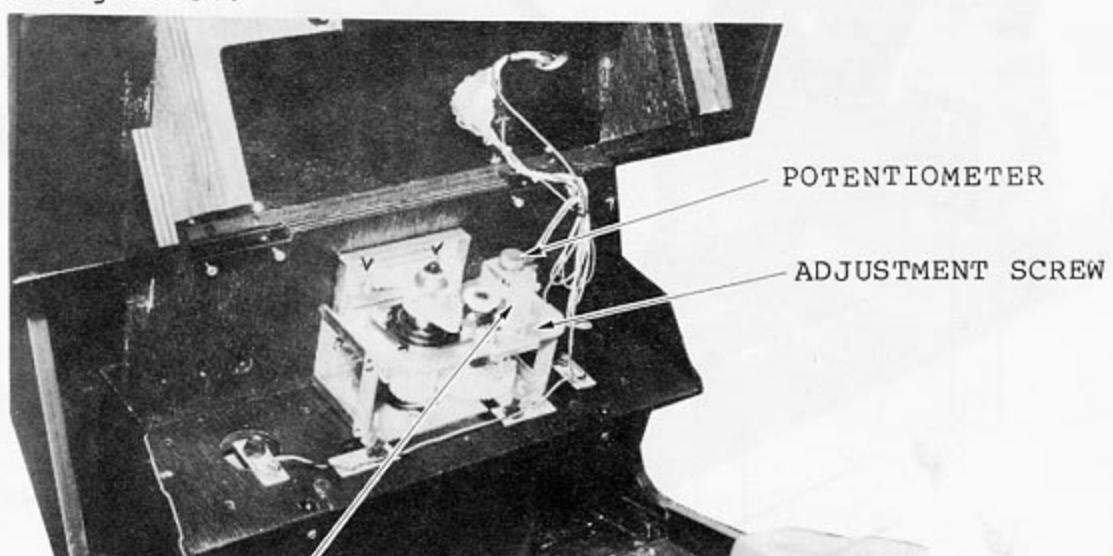
To open the dashboard, take off the 2 M6 TAMPERPROOF screws.

After doing this, the lamp, spring replacements and steering adjustments can be made.

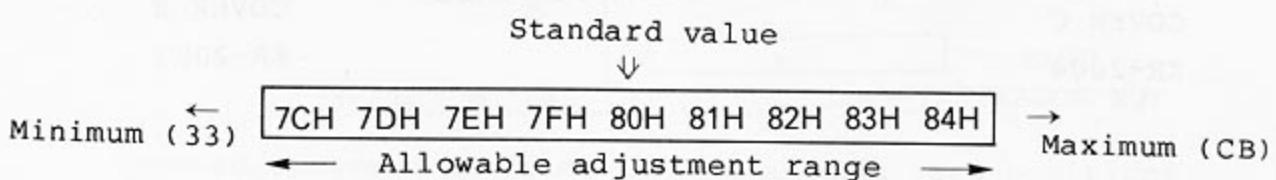


STEERING ADJUSTMENTS

- 1 Release the 2 adjusting screws of the potentiometer bracket and perform the necessary adjustments by changing its gear position, making sure that the variable is within the allowable extent as shown below, and then retighten the adjusting screw.

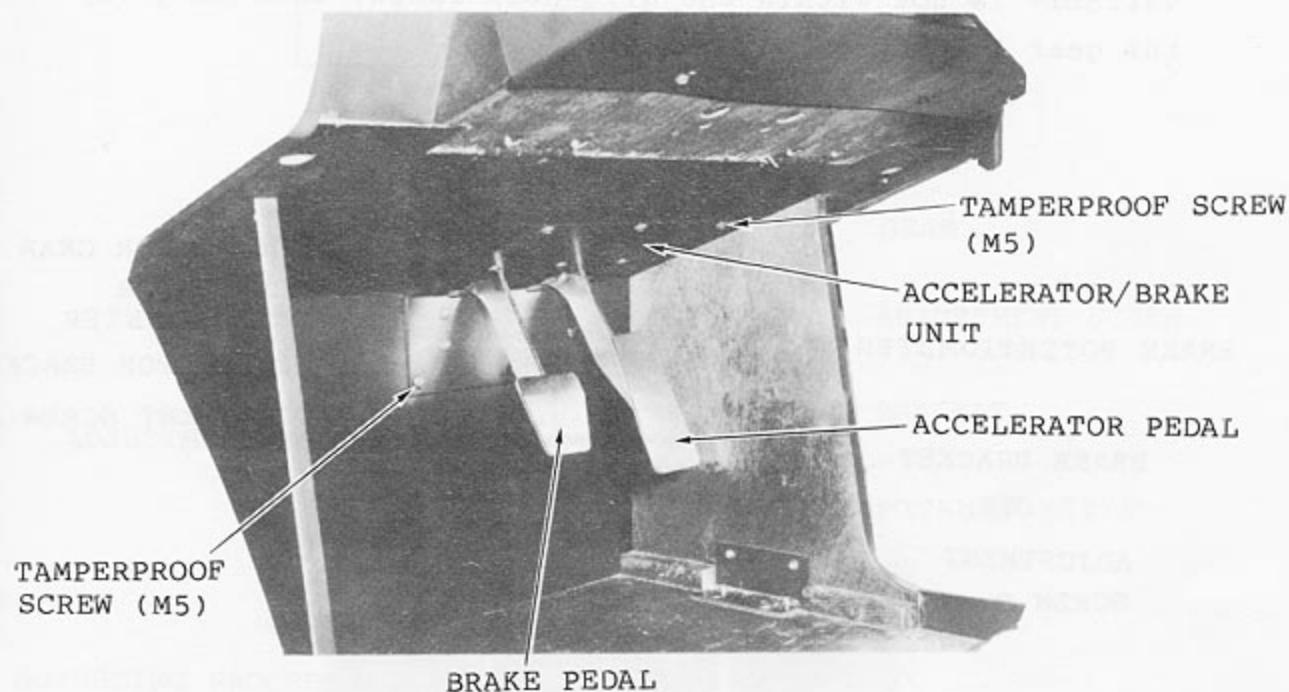


POTENTIOMETER BRACKET



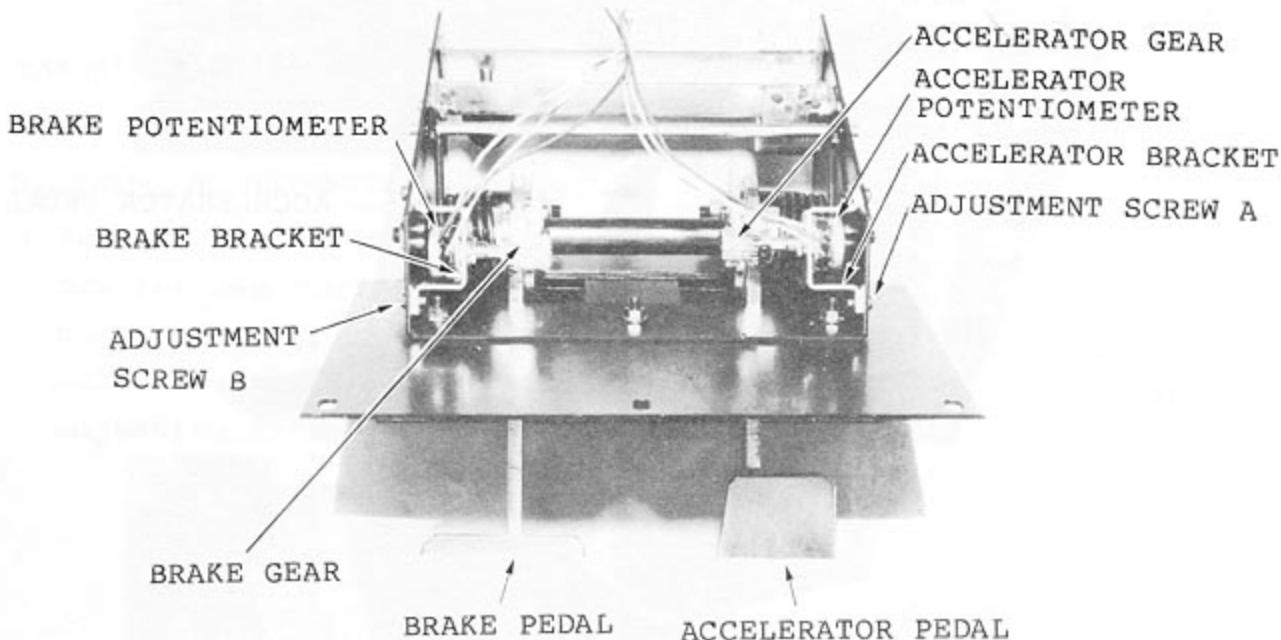
## 14. DISASSEMBLING AND ADJUSTING THE ACCELERATOR AND BRAKE

To remove the accelerator/brake unit, take off the 6 M5 TAMPERPROOF SCREWS.



## 15. ADJUSTING THE ACCELERATOR/BRAKE POTENTIOMETER

- ① Display the SELF-TESTING MODE screen shown on page \_\_\_\_.
- ② Release the adjustment screws, move the bracket, and make adjustments so that the variable becomes 20H when the accelerator/brake is released and returns to its original position.
- ③ Even after the above procedure has been followed, if the variable is not within the allowable range, then slightly turn the gear to make an adjustment.



### ACCELERATOR

Minimum

(20)

Standard



1CH 1DH 1EH 1FH 20H 21H 22H 23H 24H

Maximum (fully open)

(D5)

### Brake

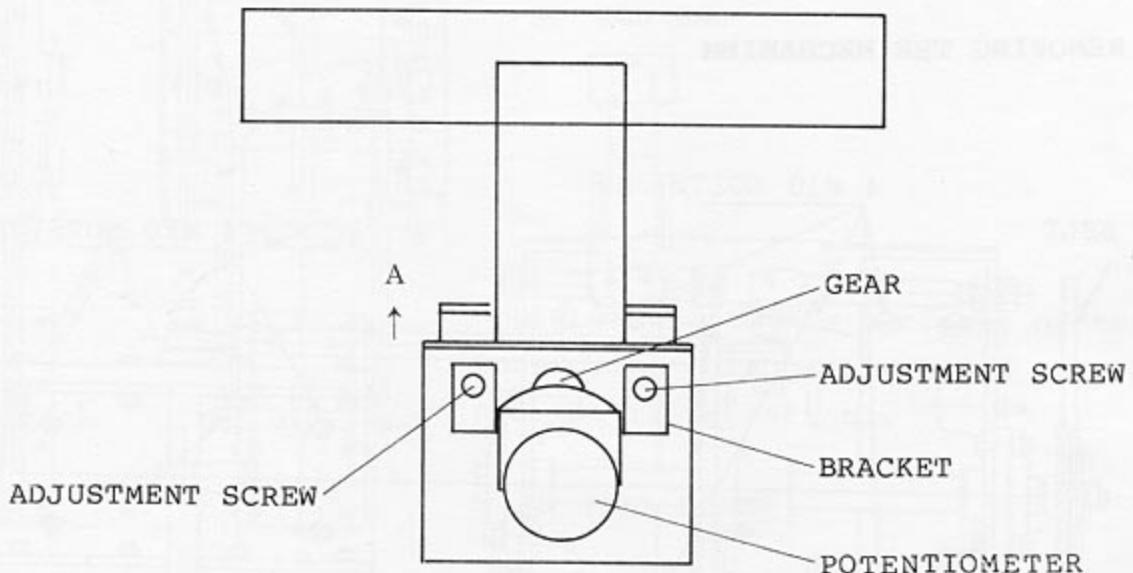
(20)

← Allowable adjustment range →

(CB)

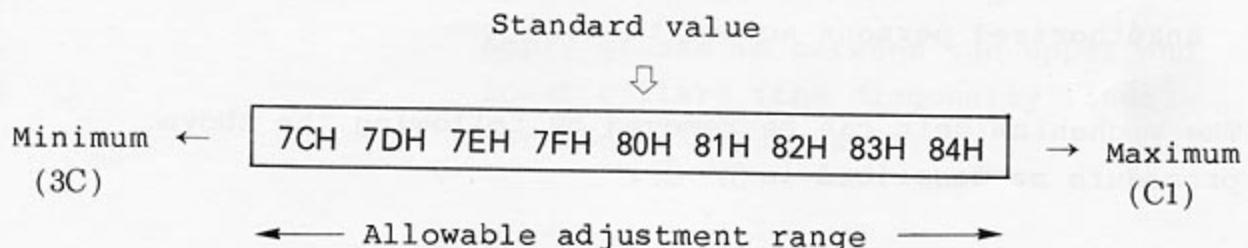
## 16. ADJUSTING THE ROLLING MOVEMENT

Display the SELF-TESTING MODE screen (see page 29). A variable within the 80H ( $\pm 8$ ) allowable range is normal. In SELF-TESTING, when the test item is set for MOVING, the cabinet will move, so pay special attention to this point.



### ADJUSTING PROCEDURE

1. When the cabinet stops in the middle, release the 2 adjustment screws, move the bracket to the right and the left, and make the fine adjustments as well as the backlash adjustments to the gear.
2. When the variable can not be made within the allowable range by performing the fine adjustments, move the bracket in the direction of A and then turn the gear.

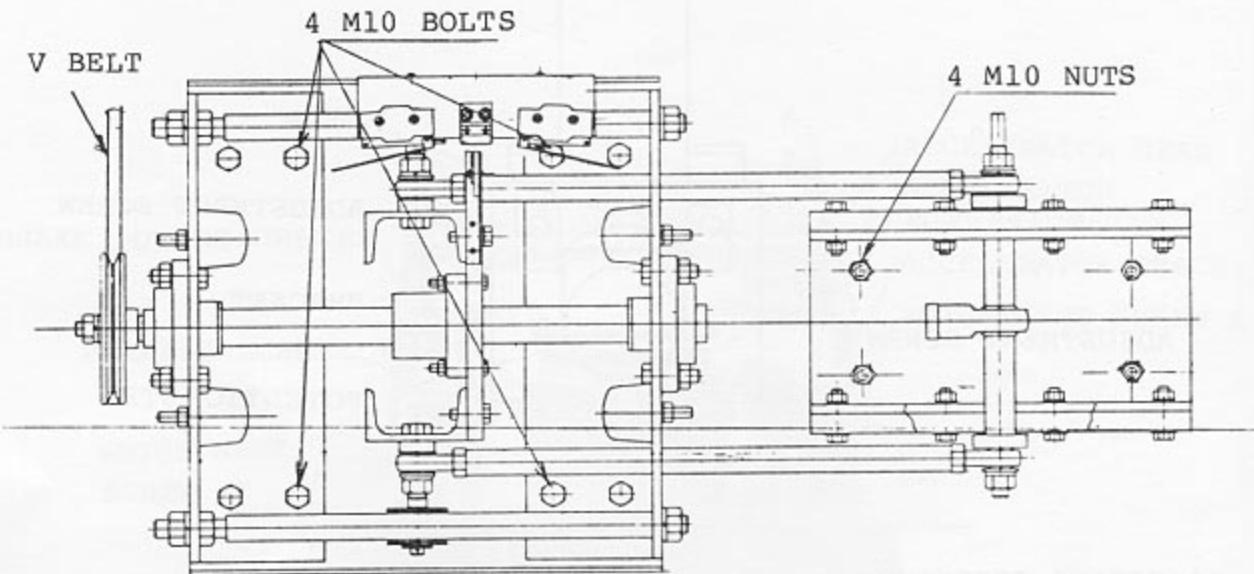


## 17. REMOVING THE MECHANISM UNIT

The mechanism unit can be removed as follows:

**CAUTION:** To avoid any danger when removing the mechanism unit, do not enter the cabinet or lean against it.

### REMOVING THE MECHANISM



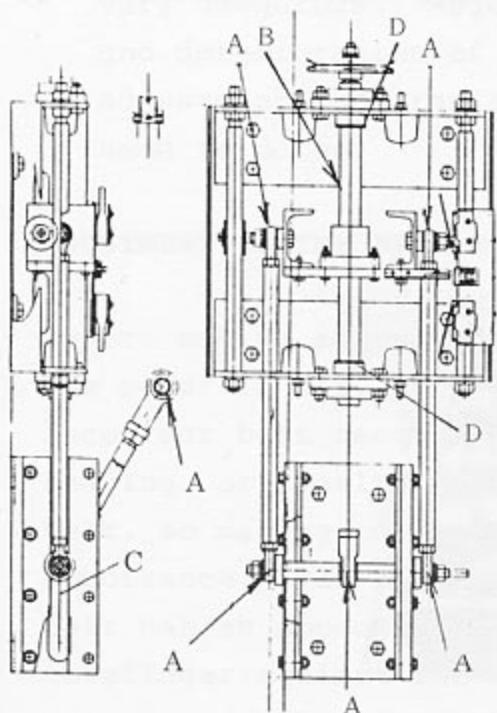
- ① Remove the V BELT (see REPLACING THE BELT).
- ② Remove the limit switch connector.
- ③ Release the shoulder screw of the rod end.  
(Be sure only to release the screw and do not take it off.)
- ④ Take off the 4 nuts and 4 bolts shown above.
- ⑤ Take off the rod end shoulder screw and move the cabinet to the left. (When the shoulder screw is removed, the cabinet becomes free. Pay particular attention so as not to allow unauthorized persons access to it.)

The mechanism unit can be removed by following the above procedure as described in ① ~ ⑤ :

## 18. LUBRICATION

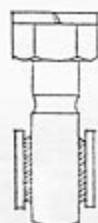
Periodical greasing of the mobile parts are required.

Apply grease in accordance with the following instructions:



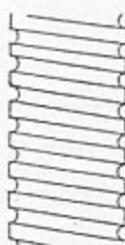
Lubricate the 11 points as per the illustration.

Ⓐ ROD END



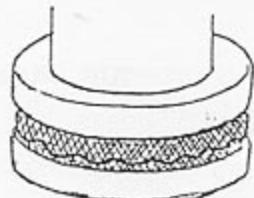
Apply grease to the surfaces of the inner ring (diagonally lined portion as per the illustration).

Ⓑ BALL SCREW



Apply grease to the screw surfaces by hand or a spatula.

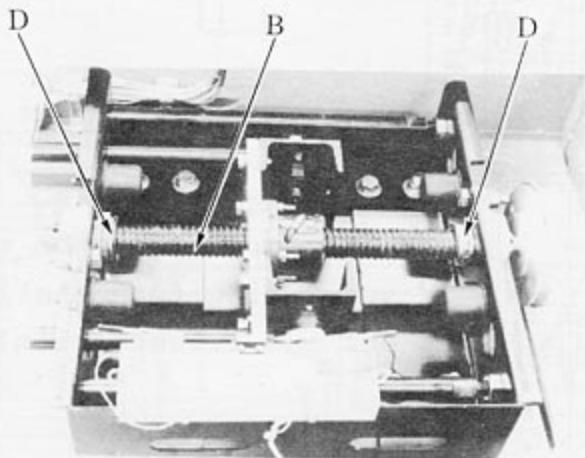
Ⓓ THRUST BEARING



Apply grease in between the upper and lower collars (the diagonally lined portion as illustrated).

DETAILS of (B) and (D)

Apply grease thoroughly, particularly on the (D) portion, to the thrust bearing's steel balls, by using the nozzle container type of spray grease.



When lubricating, so as not to cause any malfunction, make sure that no foreign matter such as dust, etc. gets into the grease.

## 19. ADJUSTMENT AND REPLACEMENT OF THE V BELT

Power for this machine is transmitted by the V belt. If it slips or is torn, it will not work properly and also is very dangerous. Regularly check as to the tension, wear, and deterioration of the belt and make the necessary adjustments and replacements well in advance of the actual need to do so.

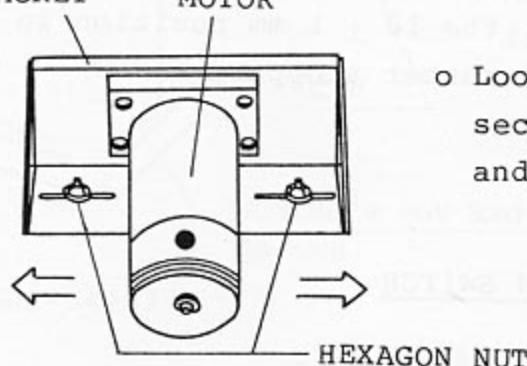
### ADJUSTMENT OF THE BELT TENSION

- \* Before making adjustments of the belt tension, be sure that the power is off.

Incorrect belt tension may cause damage to the shaft and bearing, or result in an earlier than usual wearing out of the belt, so making correct adjustments is of the utmost importance. For belt tension adjustments, make sure that the belt has an approximate slack of 10 mm when applying a forefinger against the middle part in between the 2 pulleys.

- \* Adjusting the V BELT

MOTOR BRACKET                    MOTOR



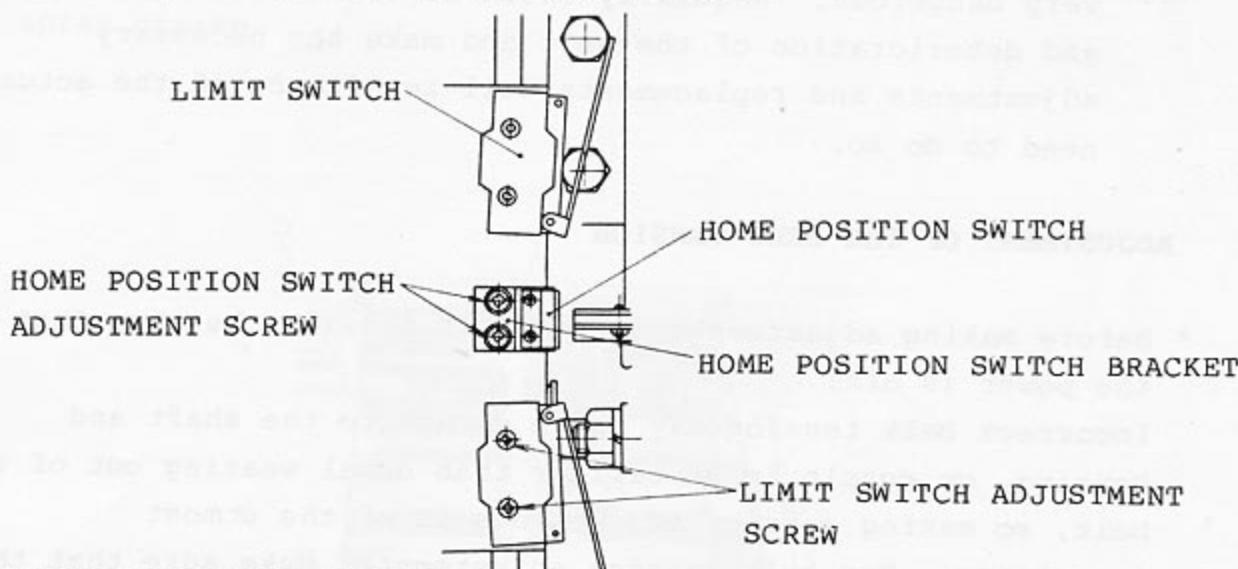
- o Loosen the hexagon nut which secures the motor bracket and the motor.

### BELT REPLACEMENT

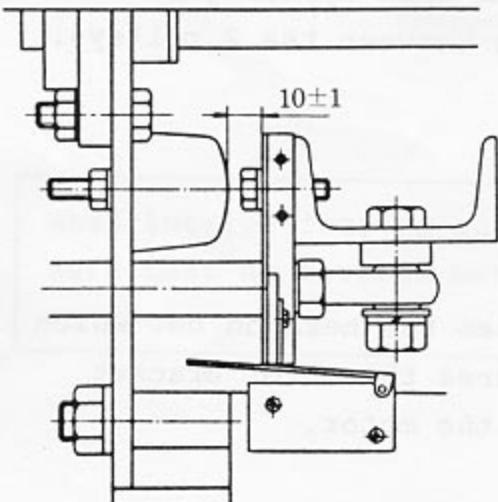
When belts whose surfaces come into contact with the pulleys become worn or damaged, they must be replaced.

## 20. ADJUSTING THE LIMIT SWITCH AND THE HOME POSITION SWITCH

Make adjustments to the limit switch and the home position switch by using the following procedure:

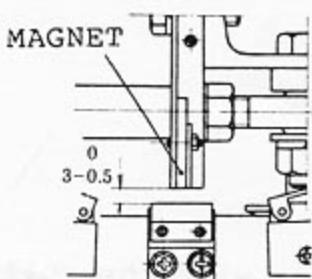


### ADJUSTING THE LIMIT SWITCH



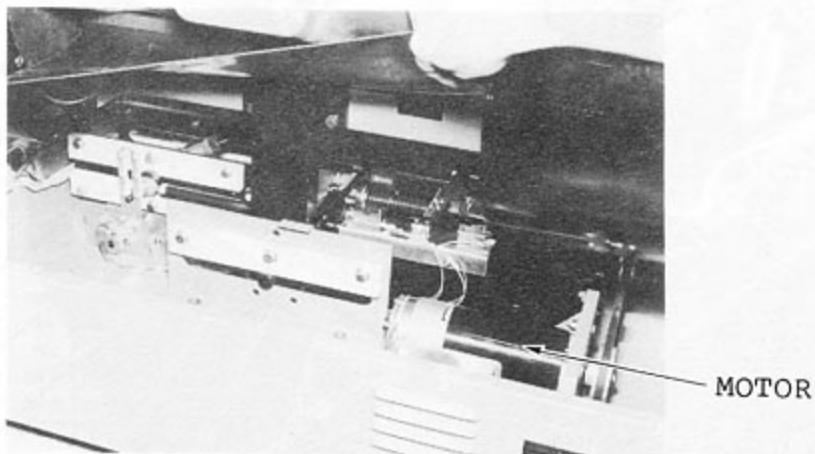
Releasing the adjustment screw causes the LIMIT SWITCH to slide and match the specified position. Turn the pulley by hand and make adjustments in a manner so that as illustrated, the switch works at the  $10 \pm 1$  mm position in front of the rubber stopper.

### ADJUSTING THE HOME POSITION SWITCH



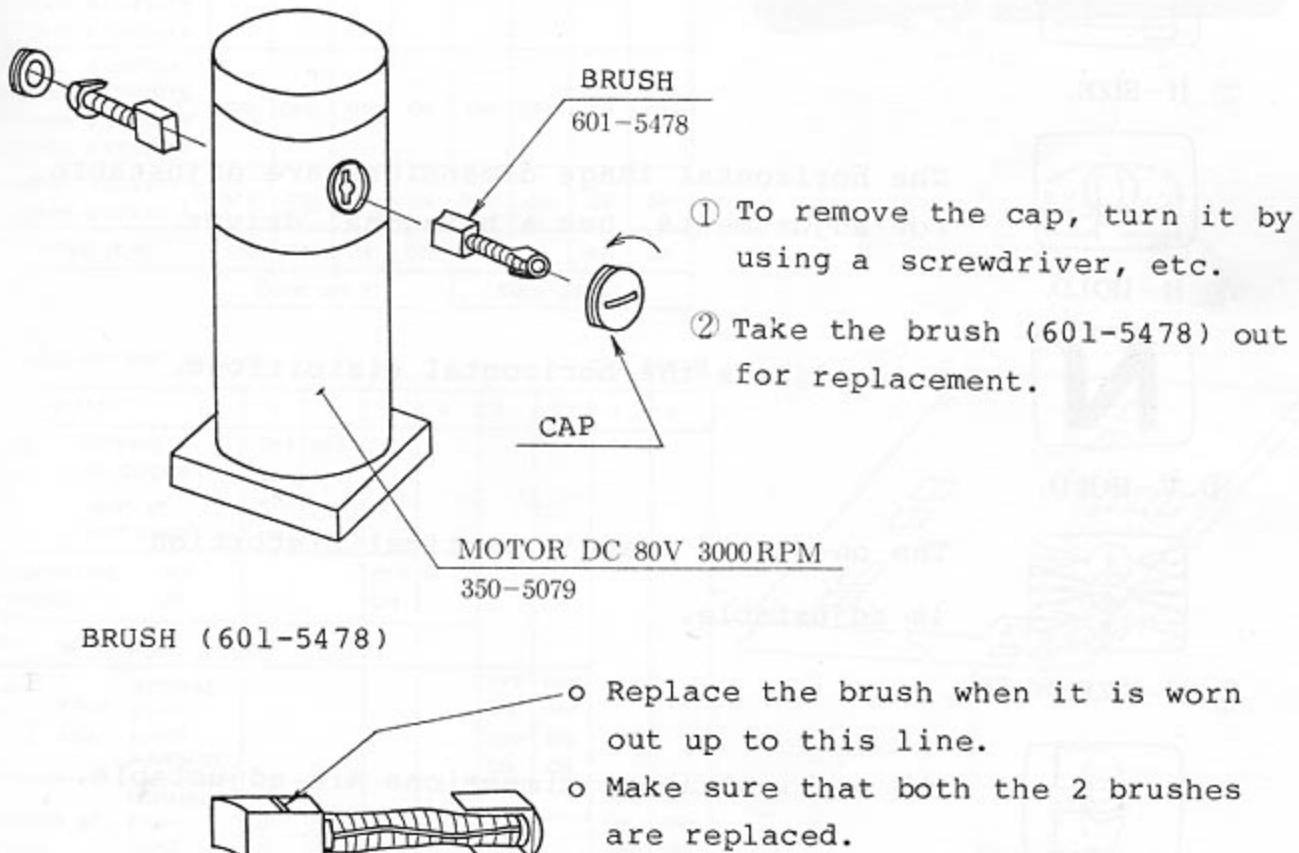
Turn the adjustment screw so as to cause the switch together with the bracket to slide, and make adjustment so that the clearance between the magnet and the home position switch becomes  $3 \pm 0.5$  mm.

## 21. REPLACING THE MOTOR BRUSH

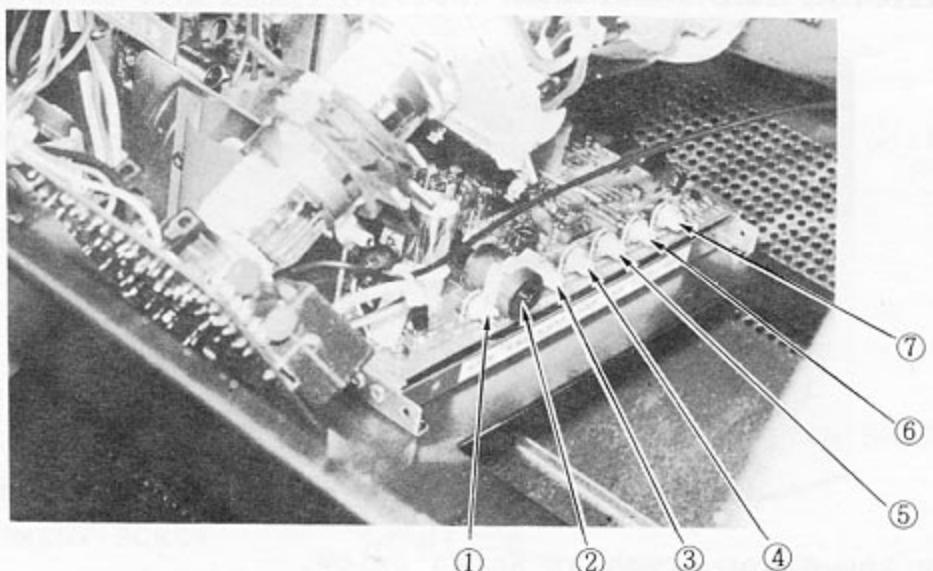


Replace the motor brush as shown below.

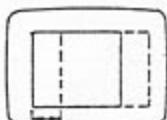
(Normally, replacement once in six months is recommended.)



## 22. ADJUSTMENT FUNCTIONS



① H - POSITION.



The image's horizontal position is adjustable.

② H - SIZE.



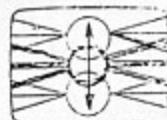
The horizontal image dimensions are adjustable.  
For adjustments, use a hexagonal driver.

③ H - HOLD.



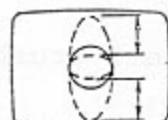
This adjusts the horizontal distortions.

④ V - HOLD.



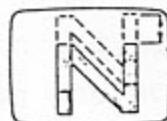
The on-screen image's vertical distortion  
is adjustable.

⑤ V - SIZE.



The vertical image dimensions are adjustable.

⑥ V - POSITION.

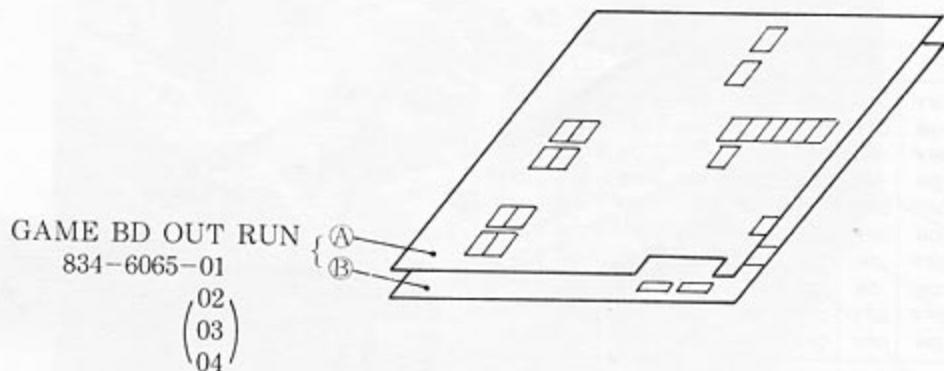


The image's vertical position is adjustable.

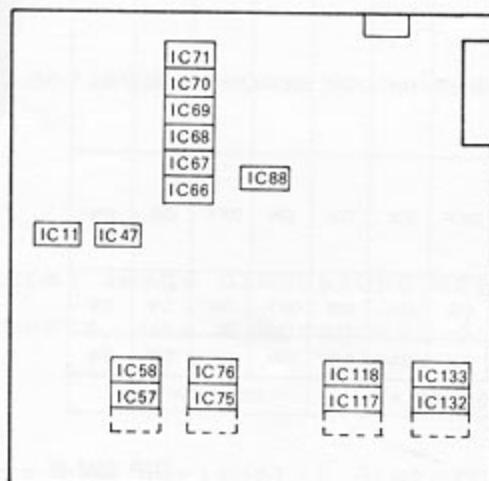
⑦ BRIGHT.

This adjusts the on-screen image brightness.

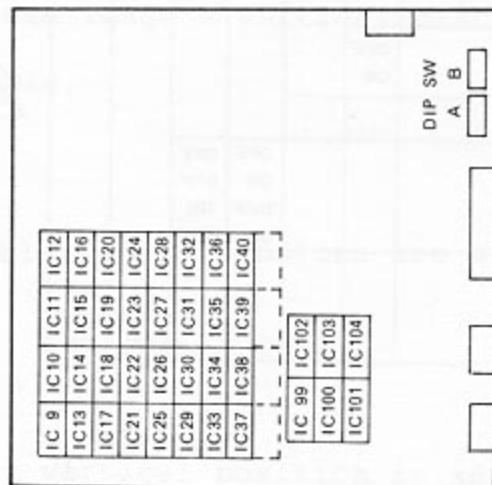
## 24. EPROM/ROM LOCATIONS



Ⓐ CPU BD OUT RUN 837-6063-01 (02)



Ⓑ VIDEO BD OUT RUN 837-6064-01 (02)



ONE TIME ROM TYPE			
GAME BD		834-6065-01	834-6065-02
CPU BD		837-6063-01	837-6063-02
Road Character	IC 11	OPR-10185	
	IC 47	OPR-10186	
Sub Program	IC 76	EPR-10327	
	IC 75	EPR-10328	
	IC 58	EPR-10329	
	IC 57	EPR-10330	
Main Program	IC 133	EPR-10331	EPR-10380
	IC 132	EPR-10332	EPR-10381
	IC 118	EPR-10333	EPR-10382
	IC 117	EPR-10334	EPR-10383
Sound Data	P IC 88	EPR-10187	
	IC 71	OPR-10188	
	IC 70	OPR-10189	
	IC 69	OPR-10190	
	IC 68	OPR-10191	
	IC 67	OPR-10192	
VIDEO BD	IC 66	OPR-10193	
	IC 9	OPR-10194	
	IC 13	OPR-10195	
	IC 17	OPR-10196	
	IC 21	OPR-10197	
	IC 25	OPR-10198	
	IC 29	OPR-10199	
	IC 33	OPR-10200	
	IC 37	OPR-10201	
	IC 10	OPR-10203	
	IC 14	OPR-10204	
	IC 18	OPR-10205	
	IC 22	OPR-10206	
	IC 26	OPR-10207	
	IC 30	OPR-10208	
	IC 34	OPR-10209	
Object	IC 38	OPR-10210	
	IC 11	OPR-10212	
	IC 15	OPR-10213	
	IC 19	OPR-10214	
	IC 23	OPR-10215	
	IC 27	OPR-10216	
	IC 31	OPR-10217	
	IC 35	OPR-10218	
	IC 39	OPR-10219	
	IC 12	OPR-10221	
	IC 16	OPR-10222	
	IC 20	OPR-10223	
	IC 24	OPR-10224	
	IC 28	OPR-10225	
Scroll	IC 32	OPR-10226	
	IC 36	OPR-10227	
	IC 40	OPR-10228	
	IC 104	OPR-10230	
	IC 103	OPR-10231	
	IC 102	OPR-10232	

P : PROGRAM

MASK ROM TYPE			
GAME BD		834-6065-03	834-6065-04
CPU BD		837-6063-01	837-6063-02
Road Character	IC 11	OPR-10185	
	IC 47	OPR-10186	
Sub Program	IC 76	EPR-10327	
	IC 75	EPR-10328	
	IC 58	EPR-10329	
	IC 57	EPR-10330	
Main Program	IC 133	EPR-10331	EPR-10380
	IC 132	EPR-10332	EPR-10381
	IC 118	EPR-10333	EPR-10382
	IC 117	EPR-10334	EPR-10383
Sound Data	P IC 88	EPR-10187	
	IC 71	OPR-10188	
	IC 70	OPR-10189	
	IC 69	OPR-10190	
	IC 68	OPR-10191	
	IC 67	OPR-10192	
VIDEO BD	IC 66	OPR-10193	
	IC 9	MPR-10371	
	IC 13	MPR-10372	
	IC 10	MPR-10373	
	IC 14	MPR-10374	
	IC 11	MPR-10375	
	IC 15	MPR-10376	
	IC 12	MPR-10377	
	IC 16	MPR-10378	
	IC 104	OPR-10230	
	IC 103	OPR-10231	
	IC 102	OPR-10232	
	IC 101	OPR-10266	
	IC 100	OPR-10267	
	IC 99	OPR-10268	

## 25. SELF-TESTING

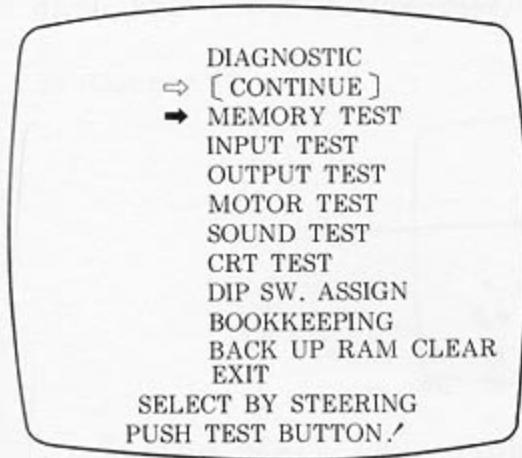
The main purpose of these tests are to check the operations of the game boards, to find the defects if any, to adjust the monitor colors properly, and to make sure the sounds are produced satisfactorily. It is also performed to indicate the assignments of the dip switches, check bookkeeping functions, etc.

### KIND OF TESTS

- 1) Memory Test: To check the EPROM programs and the map area of the RAMs.
- 2) Input Test: To test the operation of the coin switch, shift lever, handle/accelerator, brake, start switch, service switch, etc.
- 3) Output Test: To test the operation of the lamps.
- 4) Motor Test: To check the limit switches and to make adjustments to the machine's rolling function.
- 5) Sound Test: To check the quality of the sounds produced by the PCB and the video disc, and to adjust the balance of the speakers.
- 6) CRT Test: To check if the colors on the monitor are displayed correctly.
- 7) Dip Switch Assignment: To indicate each dip switch assignment.
- 8) Bookkeeping: To indicate information data on average score, average play time, etc.
- 9) Backup RAM  
Clear: When the power is turned off, a backup battery system automatically takes over, thus allowing the continuous storage of all bookkeeping data. Using this item will enable you to clear said data.
- 10) EXIT

## 1. TEST OPERATION

- (1) Push the test switch and Fig. 1 will be shown on the screen.
- (2) Select CONTINUE or INDIVIDUAL by using the START button.



- (3) Move the steering to bring the arrow to the desired position.

FIG. 1

### [CONTINUE]:

- o Bring the arrow sign to CONTINUE first, and move it to one of the tests to start. Push the TEST button, and the tests will be performed in order, one by one, starting from the test where the arrow was originally set to EXIT.
- o If the START button is pushed when the arrow is at CONTINUE, it will change to INDIVIDUAL. Pushing it again returns it to CONTINUE.

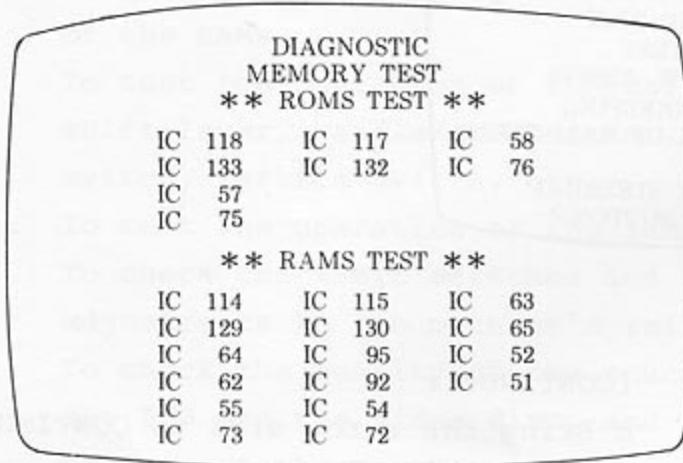
### [INDIVIDUAL]:

- o If the arrow is at INDIVIDUAL first and brought to a certain test which you want to conduct, only that test is performed by pushing the TEST button.

(4) When each test is finished, push the TEST button. In the case of CONTINUE, push the TEST button, and it will automatically go into the following test. If the TEST button is pushed in the case of INDIVIDUAL, FIG. 1 is shown. If you want to end the test mode at this time, bring the arrow to EXIT and push the TEST button again, and it will return to the ADVERTISEMENT mode.

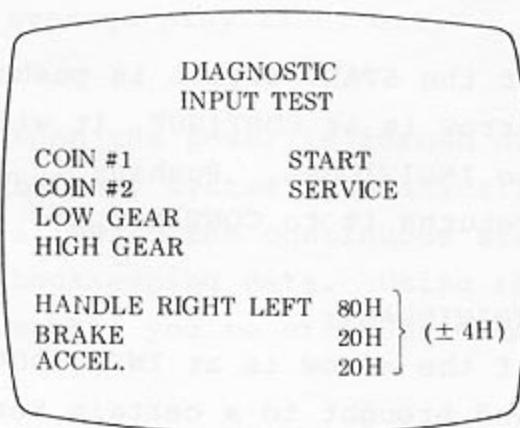
## 2. TEST ITEMS

### (1) Memory Test:



Indication of "GOOD" following the IC No. means the IC is all right. Push the TEST button to proceed to the following test item:

### (2) Input Test



← HANDLE →

← ACCELERATOR →

7CH 7DH 7EH 7FH [80H] 81H 82H 83H 84H

1CH 1DH 1EH 1FH [20H] 21H 22H 23H 24H

Standard value

Standard value

- o Operate the dip switches. When "ON" is indicated at the right side of the corresponding item on the screen, it is OK.
- o If the data value increases when pressure is applied to the accelerator's or brake's pedal, it tests out satisfactorily.
- o When the tests are ended, push the TEST button.

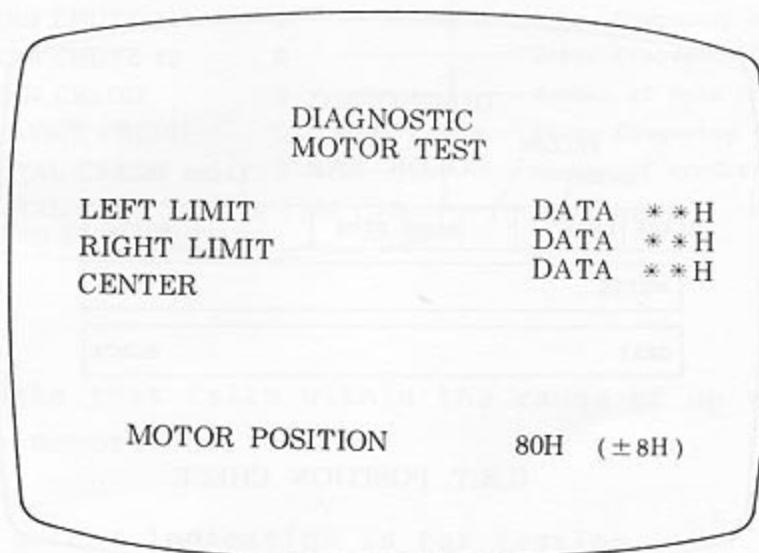
(3) Output Test



If the start LAMP lights up, it is functioning properly.  
Push the TEST button when the testing has been completed.

(4) Motor Test

Adjustment of each limit switch, and adjustment of the rolling vibration.



The value with an asterisk (\*)  
represents the one automatically checked  
during the warm-up time.

For adjustment, see page 13, 15, 16.

The above screen display is for the moving cabinet.

← MOTOR POSITION →

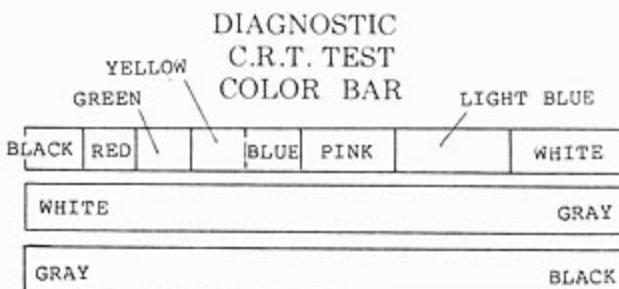
78H 79H 7AH 7BH 7CH 7DH 7EH 7FH [80H] 81H 82H 83H 84H 85H 86H 87H 88H  
Standard value

(5) Sound test

- DIAGNOSTIC  
SOUND TEST
- |                |             |
|----------------|-------------|
| 1. COIN IN     | 10. VOICE 1 |
| 2. CHECK POINT | 11. VOICE 2 |
| 3. SIGNAL 1    | 12. VOICE 3 |
| 4. SIGNAL 2    | 13. VOICE 4 |
| 5. SLIP        | 14. WAVE    |
| 6. SAFETY ZONE | 15. CHEERS  |
| 7. CRASH 1     | 16. MUSIC 1 |
| 8. CRASH 2     | 17. MUSIC 2 |
| 9. REBOUND     | 18. MUSIC 3 |
- SELECT BY STEERING  
PUSH START BUTTON!

When the test has been completed, push the TEST button.

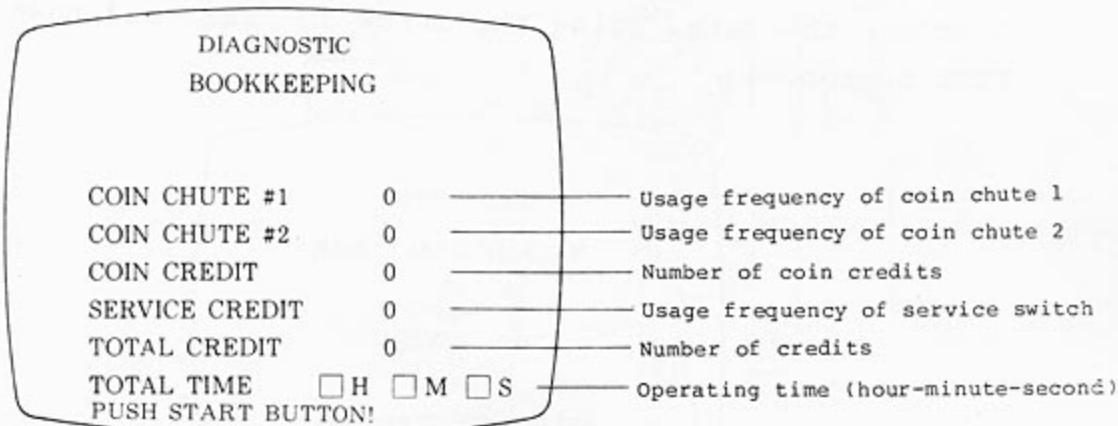
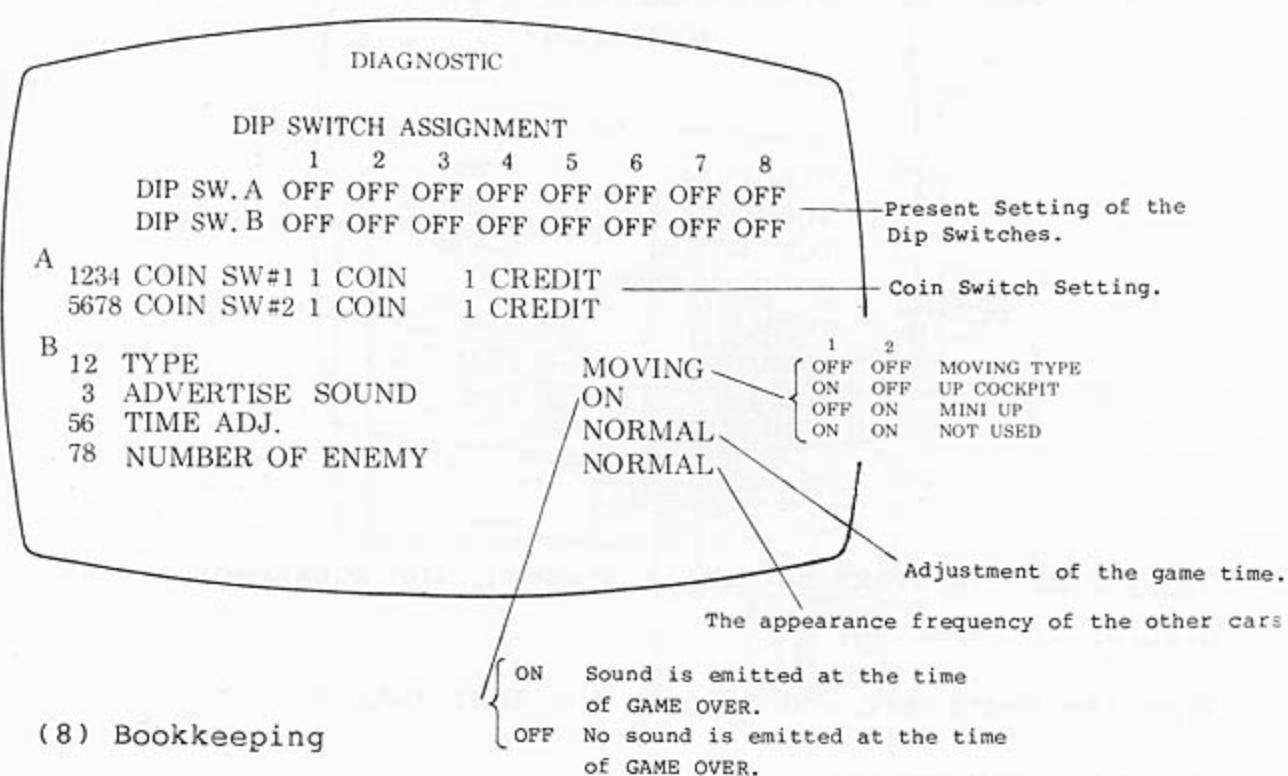
(6) C.R.T. Test



C.R.T. POSITION CHECK

When the test has been completed, push the TEST button.

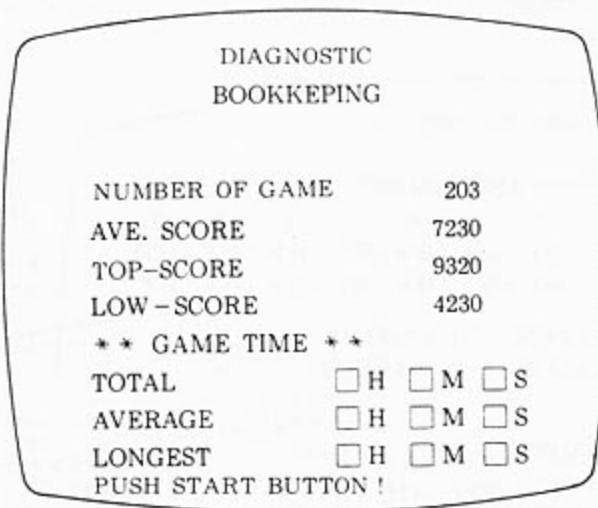
## (7) DIP SWITCH ASSIGNMENTS



\* Only the data that falls within the range of up to 999H 59M 59S can be memorized.

The above screen indication is for testing.

When the tests are finished, push the START button and the following will be shown:



Every time the START button is pressed, the bookkeeping test display is repeated.

- o When the tests are ended, push the TEST button.

#### (9) Backup RAM Clear:

To clear the data, bring the arrow to "YES" and push the TEST button.



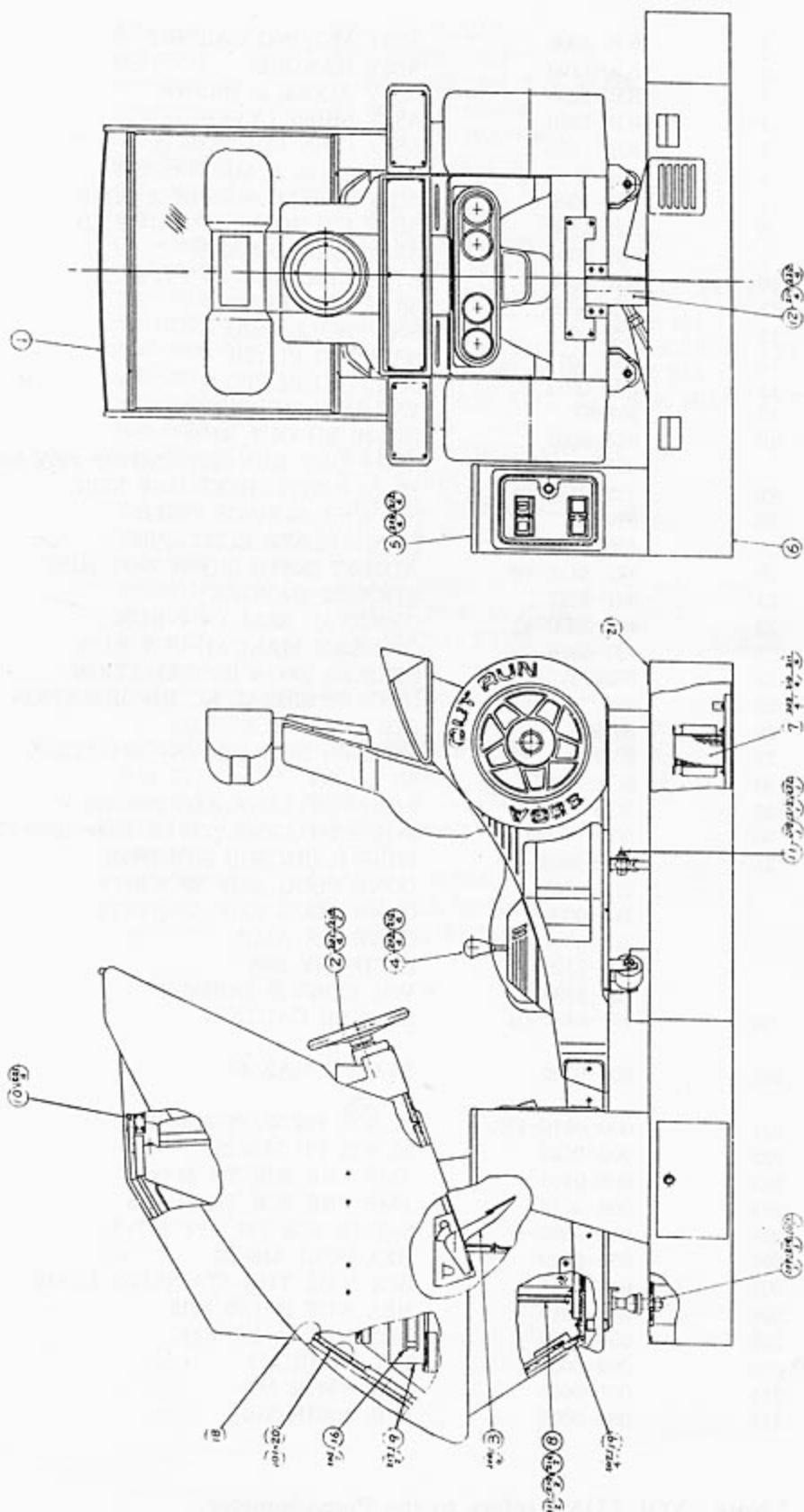
When the test is finished, push the TEST button to end the test (in the case of "INDIVIDUAL," however, the test mode returns to Fig. 1 first).

#### (10) EXIT

In the state as shown in Fig. 1, operate the steering to bring the arrow to EXIT and push the TEST button. The self-testing will then end and return to the ADVERTISEMENT mode.

## 26. PARTS CATALOG

### ① TOP ASSY OUT RUN MOVING DELUXE ( KR-0000 ) ( D-1/3 )



① TOP ASSY OUT RUN MOVING DELUXE ( KR-0000 ) ( D-2/3 )

ITEM NO.	PART NO.	DESCRIPTION
1	KR-1000	ASSY MOVING CABINET
2	KR-1100	ASSY HANDLE
3	KR-1200	ASSY ACCEL & BRAKE
4	KR-1300	ASSY SHIFT LEVER
5	KR-1400	ASSY COIN CHUTE BOX
6	KR-2000	ASSY BASE & MECHANISM
7	KR-4000	ASSY POWER SUPPLY & AMP
8	KR-4100	ASSY SW RGLTR & DRIVE BD
9	KR-0001	ASSY SHIELD BASE
10	KR-0005	ASSY CLR DSPL 26 TYPE
11	KR-0009	SHAFT ROD END
12	KR-0010	ANTI-ROLL SHAFT
13	KR-0011	SHIPPING PLATE A
14	KR-0012	SHIPPING PLATE B
15	80738X	TAG FOR SHIPPING
16	834-6065	GAME BD OUT RUN
	932	SEGA OUT RUN MOVING 90-240V 50/60 Hz
17	422-0159-01	PLAY INSTR SHEET OUT RUN
18	81979	STICKER SERVICE INSTR
19	80027XY	NAME PLATE ELEC SPEC
20	421-6412-01	ADJUST INSTR SHEET OUT RUN
21	421-6241	STICKER DANGER
22	421-5800-45	ORIGINAL SEAL OUT RUN
23	420-5316	OWNER'S MANUAL OUT RUN
24	80207Y	STICKER SEGA INFORMATION
25	83602	STICKER SERIAL NO INFORMATION
26	80198Y	STICKER POSSESSION
27	83618X	STICKER BUSINESS INFORMATION
28	SGB-1035X	KEY BAG
29	SGB-2675	POLYETHYLENE BAG 240×370
30	SGM-3743	POLYETHYLENE COVER 1400×2100×1700
31	SGB-3629-16	WIRE HARN SUB MONITOR
	211-0043	CONN PLUG AMP 2P WHITE
	211-0059	CONN PLUG AMP 3P WHITE
	211-0041	CONN PIN AMP
	390-5129	LAMP 24V 20W
	220-5130	* VOL CONT B-KOHM
34	421-6482-01	STICKER CAUTION
101	601-0769	STAPLE MAX #3
201	000-0516-FS	M SCR PH W/FS M5×16
202	000-0525	M SCR PH M5×25
203	008-0416	TMP PRF SCR TH M4×16
204	008-0516	TMP PRF SCR TH M5×16
205	010-0306-F	S-TITE SCR PH W/F M3×6
206	030-0620	HEX BOLT M6×20
207	046-0001	SCR NAIL THH STAINLESS 1.5×16
208	059-0017	HEX NUT P=1.75 M12
209	059-0020	HEX NUT P=1.5 M18
210	060-0005	FLT WSHR M5
211	061-0005	SPR WSHR M5
212	061-0006	SPR WSHR M6

\* Note : VOL CONT refers to the Potentiometer.

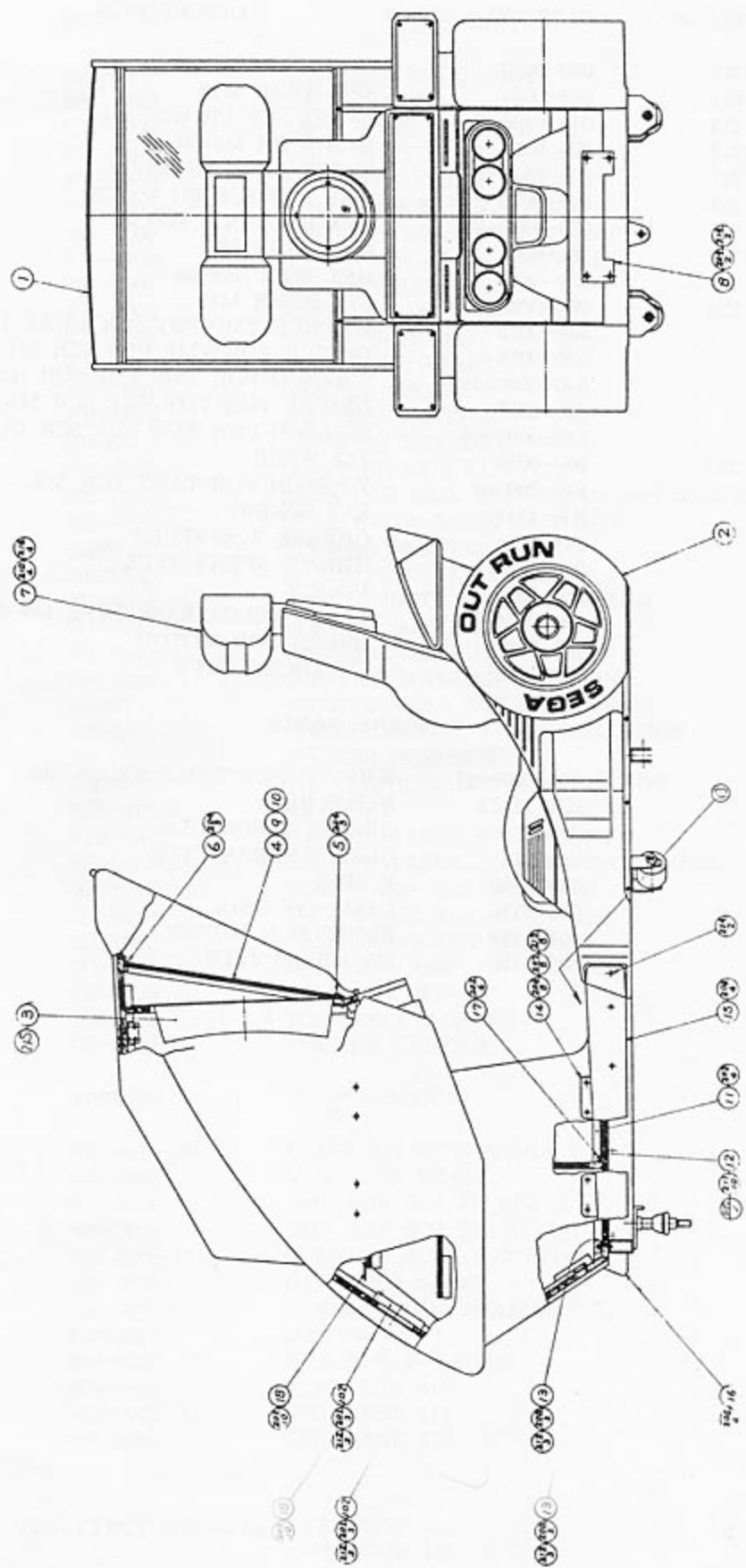
① TOP ASSY OUT RUN MOVING DELUXE ( KR-0000 ) ( D-3/3 )

ITEM NO.	PART NO.	DESCRIPTION
213	069-0030	SPR WSHR M12
214	069-0034	SPR WSHR M18
215	010-0408-F	S-TITE SCR PH W/F M4×8
216	000-0530	M SCR PH M5×30
217	000-0414-FS	M SCR PH W/FS M4×14
218	029-0079	TMP PRF SCR BH M6×35
219	030-0830-B	HEX BOLT BLK M8×30
220	061-0008	SPR WSHR M8
221	030-0820	HEX BOLT M8×20
222	069-0020	FLT WSHR M12
	540-0015	WRENCH TMP PRF SCR DUAL TYPE M6
	540-0018	DRIVER FOR TMP PRF SCR M4
	540-0006-01	WRENCH FOR TMP PRE SCR DUAL TYPE M4
	540-0017	DRIVER FOR TMP PRF SCR M5
	540-0007-01	WRENCH FOR TMP PRF SCR DUAL TYPE MS
223	060-0018	FLT WSHR
	540-009-01	WRENCH FOR TAMP SCR M8
	KR-1111	EXT SPRING
	244-115	GREASE W/SPATULA
	244-118	GREASE SPRAY TYPE
	350-5085	V BELT
	390-0116	LAMP WEDGE BASE TYPE 14V 0.24A
	601-5478	BRUSH FOR MOTOR
	509-5129	SW MICRO TYPE

SPARE PARTS

450-0009-01	WRENCH FOR TAMP SCREW M8
KR-1111X	EXT SPRING
244-115	GREASE W/SPATULA
244-118	GREASE SPRAY TYPE
350-5085	V BELT
390-0116	LAMP 14V 0.24A
601-5478	BRUSH FOR MOTOR
509-5129	SW MICRO TYPE

② ASSY MOVING CABINET ( KR-1000 ) ( D-1/3 )



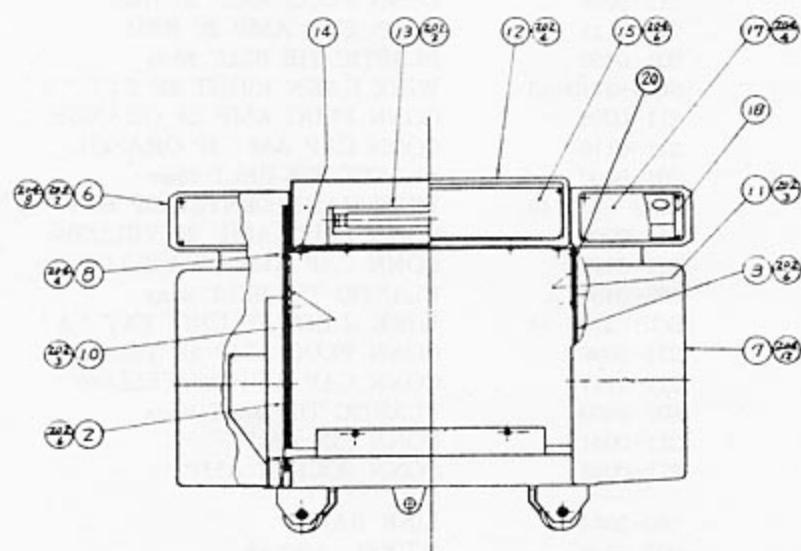
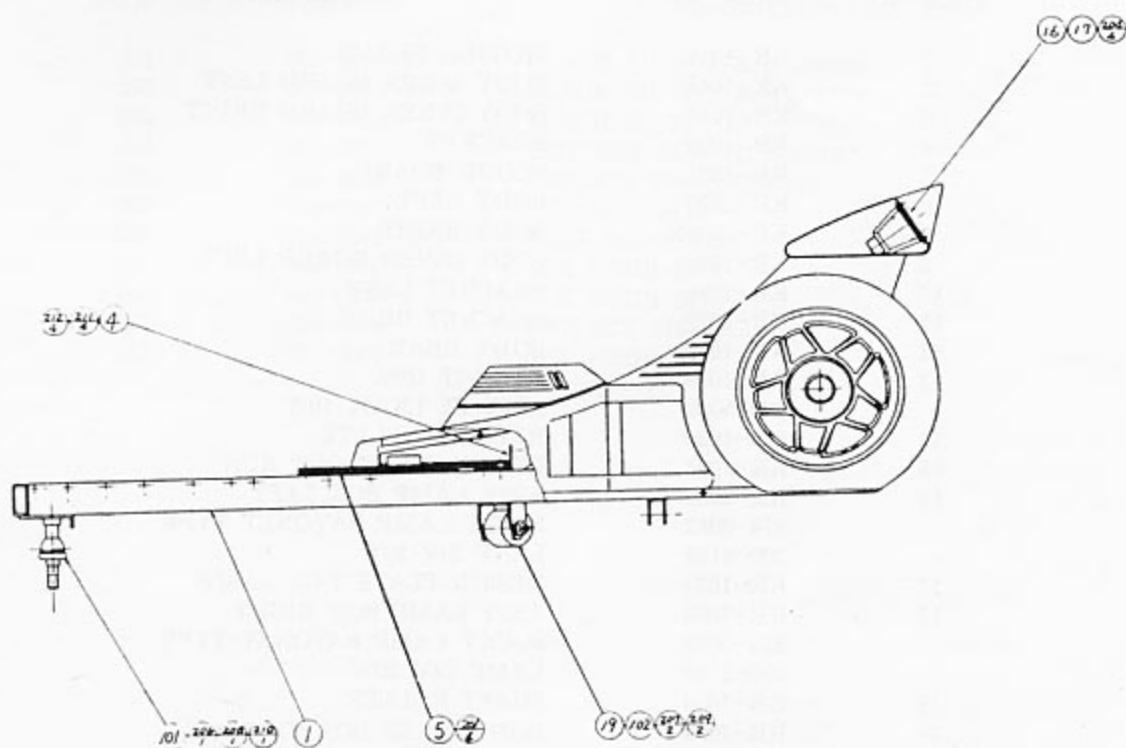
② ASSY MOVING CABINET ( KR-1000 ) ( D-2/3 )

ITEM NO.	PART NO.	DESCRIPTION
1	KR-1001	ASSY SUB CABINET
2	KR-1016	ASSY MOVING FRAME
3	KR-1037	TV MASK 26 TYPE
4	KR-1038	WINDOW GLASS
5	KR-1039	SUPPORTER LOWER
6	KR-1040	SUPPORTER UPPER
7	KR-1041	ASSY SEAT
8	KR-1048	RETAINER PLATE
9	KR-1049	RUBBER PACKING A
10	KR-1050	RUBBER PACKING B
11	KR-1051	PROTECTOR CORNER
12	KR-1052	FLOOR MAT
13	KR-1053	WASHER PLATE
14	KR-1054	RETAINER PLATE
15	KR-1055	SIDE BOARD LEFT
16	KR-1056	SIDE BOARD RIGHT
17	KR-1057	MAT FITTING
18	280-0419	HARNESS LUG
19	KR-1095	FLOOR MAT
23	SGB-3740-19	WIRE HARN AC FAN
	211-0096	CONN PLUG AMP 2P YELLOW
	601-0460	PLASTIC TIE BELT 85mm
24	SGB-3740-23	WIRE HARN DEM COIL EXT
	211-0117	CONN CAP AMP 2P YELLOW
	211-0094	CONN PLUG AMP 2P RED
	601-0460	PLASTIC TIE BELT 85mm
25	SGB-3740-24	WIRE HARN CRT
	211-0096	CONN PLUG AMP 2P YELLOW
	600-5133	CABLE & CONN 300L
26	SGB-3740-32	WIRE HARN HANDLE VR EXT
	211-0099	CONN PLUG AMP 3P YELLOW
	211-0120	CONN CAP AMP 3P YELLOW
	601-0460	PLASTIC TIE BELT 85mm
27	SGB-3740-33	WIRE HARN LAMP EXT
	211-0085	CONN PLUG AMP 2P BROWN
	211-0080	CONN CAP AMP 2P BROWN
28	SGB-3740-34	WIRE HARN START EXT
	211-0100	CONN PLUG AMP 4P RED
	211-0121	CONN CAP AMP 4P RED
	601-0460	PLASTIC TIE BELT 85mm
29	SGB-3740-57	WIRE HARN EARTH
	211-0167	TERM LUG RND ID5
30	SGB-3740-58	WIRE HARN 50P EXT
	211-5105	CONN FEM 50P
	211-0060	CONN CAP AMP 3P WHITE
	211-0046	CONN CAP AMP 6P WHITE
	211-0082	CONN CAP AMP 4P BROWN
	211-0121	CONN CAP AMP 4P RED
	211-0081	CONN CAP AMP 3P BROWN
	211-0116	CONN CAP AMP 2P ORANGE
	211-5047	CONTACT
31	SGB-3740-60	WIRE HARN 20P EXT
	211-0118	CONN CAP AMP 3P RED
	211-0119	CONN CAP AMP 3P ORANGE
	211-0120	CONN CAP AMP 3P YELLOW

② ASSY MOVING CABINET ( KR-1000 ) ( D-3/3 )

ITEM NO.	PART NO.	DESCRIPTION
31	211-5088	CONN FEM 20P
	211-5047	CONTACT
32	SGB-3740-61	WIRE HARN RGB
	211-5034	CONN FEM 6P
	211-0044	CONN CAP AMP 2P WHITE
	211-0060	CONN CAP AMP 3P WHITE
	211-0005	CONN CRIMP LOCK
33	SGB-3740-62	WIRE HARN SOUND EXT
	212-5076	CONN FEM 4P
	212-5034	CONN FEM 6P
	211-0072	CONN CAP AMP 4P WHITE
	211-0083	CONN CAP AMP 6P BROWN
	211-0005	CONN CLAMP LOCK
34	SGB-3740-63	WIRE HARN FAN EXT
	211-0117	CONN CAP AMP 2P YELLOW
	211-0096	CONN PLUG AMP 2P YELLOW
35	SGB-3740-38	WIRE HARN BRAKE LAMP EXT B
	211-0043	CONN PLUG AMP 2P WHITE
	211-0044	CONN CAP AMP 2P WHITE
	601-0460	PLASTIC TIE BELT 85mm
	211-0041	CONN PIN AMP
	211-0042	CONN SOCKET AMP
101	270-5016	FERRITE SLEEVE CORE
201	000-0430	M SCR PH M4×30
202	005-3113-F	W SCR RH W/F 3.1×13
203	006-3113	W SCR FH 3.1×13
204	008-0416	TMP PRF SCR TH M4×16
205	008-0520	TMP PRF SCR TH M5×20
206	008-0825	TMP PRF SCR BH M8×25
207	030-0610	HEX BOLT M6×10
208	030-0625	HEX BOLT M6×25
209	030-0820-B	HEX BOLT BLK M8×20
210	030-0830-B	HEX BOLT BLK M8×30
211	046-0001	SCR NAIL TH STNLS 1.5×16
212	061-0004	SPR WSHR M4
213	061-0006	SPR WSHR M6
214	061-0008	SPR WSHR M8
215	244-098	DOUBLE FACE TAPE 10mm

③ ASSY MOVING FRAME ( KR-1016 ) ( D-1/3 )



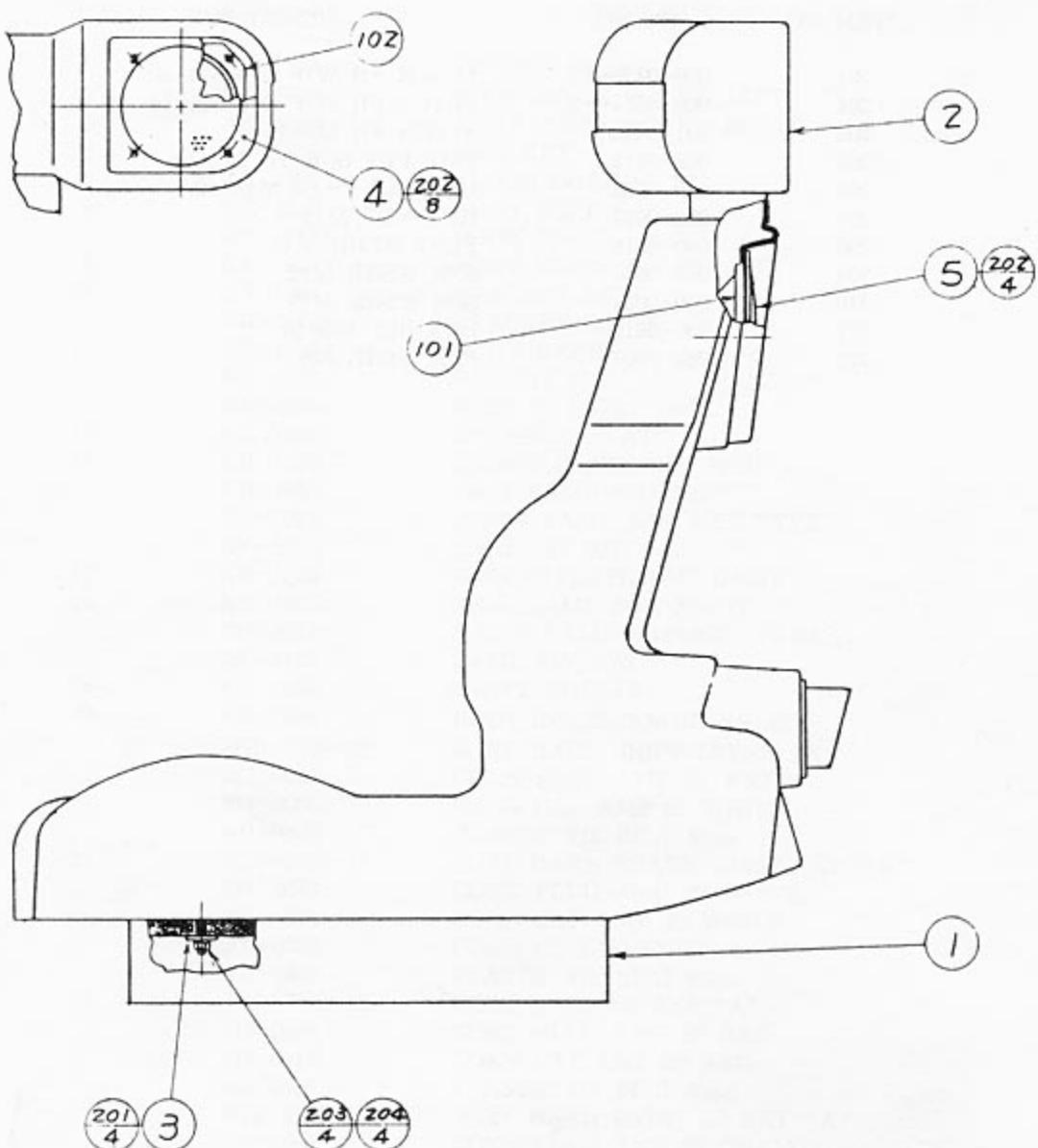
③ ASSY MOVING FRAME ( KR-1016 ) ( D-2/3 )

ITEM NO.	PART NO.	DESCRIPTION
1	KR-1017	MOVING FRAME
2	KR-1018	BODY INNER BOARD LEFT
3	KR-1019	BODY INNER BOARD RIGHT
4	KR-1020	BRACKET
5	KR-1021	FLOOR BOARD
6	KR-1022	BODY LEFT
7	KR-1023X	BODY RIGHT
8	KR-1024	BODY INNER BOARD LEFT
10	KR-1026	BRACKET LEFT
11	KR-1027	BRACKET RIGHT
12	KR-1028	BODY REAR
13	KR-1029	FL UNIT 10W
	390-5099	ASSY FL LIGHT 10W
14	KR-1030	RETAINER PLATE
15	KR-1031	DESIGN PLATE OUT RUN
16	KR-1032	ASSY LAMP BOX LEFT
	214-0012	SOCET LAMP BAYONET TYPE
	390-5129	LANP 24V 20W
17	KR-1034	DESIGN PLATE TAIL LAMP
18	KR-1035	ASSY LAMP BOX RIGHT
	214-0012	SOCKT LAMP BAYONET TYPE
	390-5129	LAMP 24V 20W
19	KR-1058	SHAFT ROLLER
20	KR-1098	BODY INNER BOARD RIGHT
21	SGB-3740-35	WIRE HARN SHIFT LEVER EXT
	211-0059	CONN PLUG AMP 3P WHITE
	211-0060	CONN CAP AMP 3P WHITE
	601-0460	PLASTIC TIE BELT 85mm
22	SGB-3740-37	WIRE HARN BRAKE LAMP EXT "A"
	211-0043	CONN PLUG AMP 2P WHITE
	211-0044	CONN CAP AMP 2P WHITE
	209-0023	CONN CLOSED END
	601-0460	PLASTIC TIE BELT 85mm
23	SGB-3740-41	WIRE HARN SP EXT "A"
	211-0094	CONN PLUG AMP 2P RED
	211-0115	CONN CAP AMP 2P RED
	601-0460	PLASTIC TIE BELT 85mm
24	SGB-3740-43	WIRE HARN RIGHT SP EXT "A"
	211-0095	CONN PLUG AMP 2P ORANGE
	211-0116	CONN CAP AMP 2P ORANGE
	601-0460	PLASTIC TIE BELT 85mm
25	SGB-3740-45	WIRE HARN CENTER SP EXT "A"
	211-0096	CONN PLUG AMP 2P YELLOW
	211-0117	CONN CAP AMP 2P YELLOW
	601-0460	PLASTIC TIE BELT 85mm
26	SGB-3740-54	WIRE HARN FL UNIT EXT "A"
	211-0096	CONN PLUG AMP 2P YELLOW
	211-0117	CONN CAP AMP 2P YELLOW
	601-0460	PLASTIC TIE BELT 85mm
	211-0041	CONN PIN AMP
	211-0042	CONN SOCKET AMP
101	100-5034	LINK BALL
102	601-5548	WHEEL Ø65×48

③ ASSY MOVING FRAME ( KR-1016 ) ( D-3/3 )

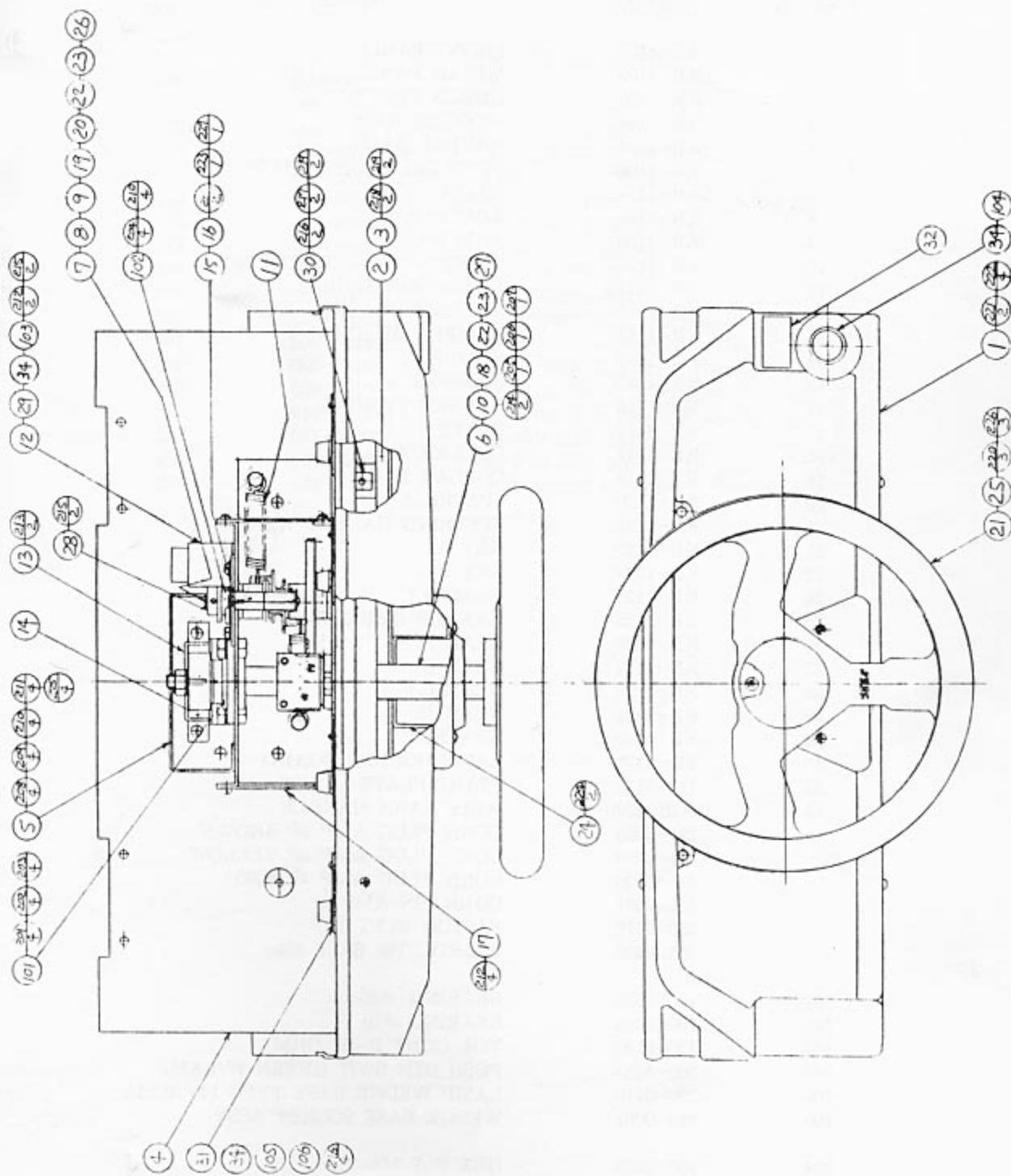
ITEM NO.	PART NO.	DESCRIPTION
201	000-0420-FS	M SCR PH W/F & S M4×20
202	000-0514-FS	M SCR PH W/F & S M5×14
203	001-0410	M SCR FH M4×10
204	008-0412	TMP PRF SCR TH M4×12
206	039-0023	HEX BLT P=1.5 M18×40
207	059-0017	HEX NUT M12
208	060-0018	FLAT WSHR M18
209	069-0030	SPR WSHR M12
210	069-0034	SPR WSHR M18
211	030-0610	HEX BLT M6×10
212	061-0006	SPR WSHR M6

④ ASSY SEAT ( KR-1041 )



ITEM NO.	PART NO.	DESCRIPTION
1	KR-1042	WOODEN BASE
2	KR-1044	SEAT
3	KR-1045	WASHER
4	KR-1046	GUARD PLATE A
5	KR-1047	GUARD PLATE B
6	280-0419	HARNESS LUG
101	130-0018	SPKR 16CM 8Ω
102	130-5010	SPKR 10CM 6 OHM 3W
201	005-3113-F	W SCR PH W/F 3.1×13
202	008-0416	TMP PRF SCR TH M4×16
203	050-0008	HEX NUT M8
204	061-0008	SPR WSHR M8

⑤ ASSY HANDLE ( KR-1100 ) ( D-1/3 )



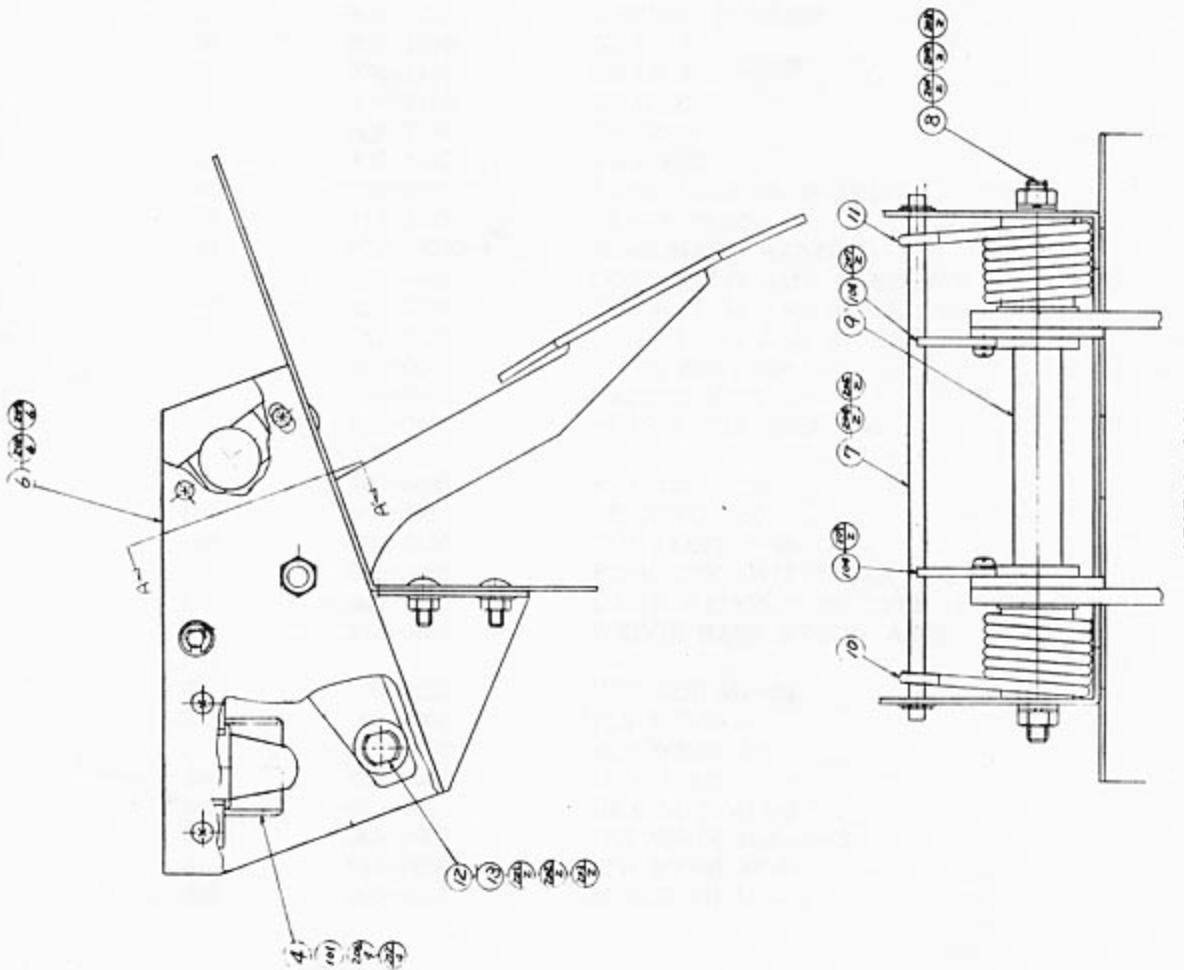
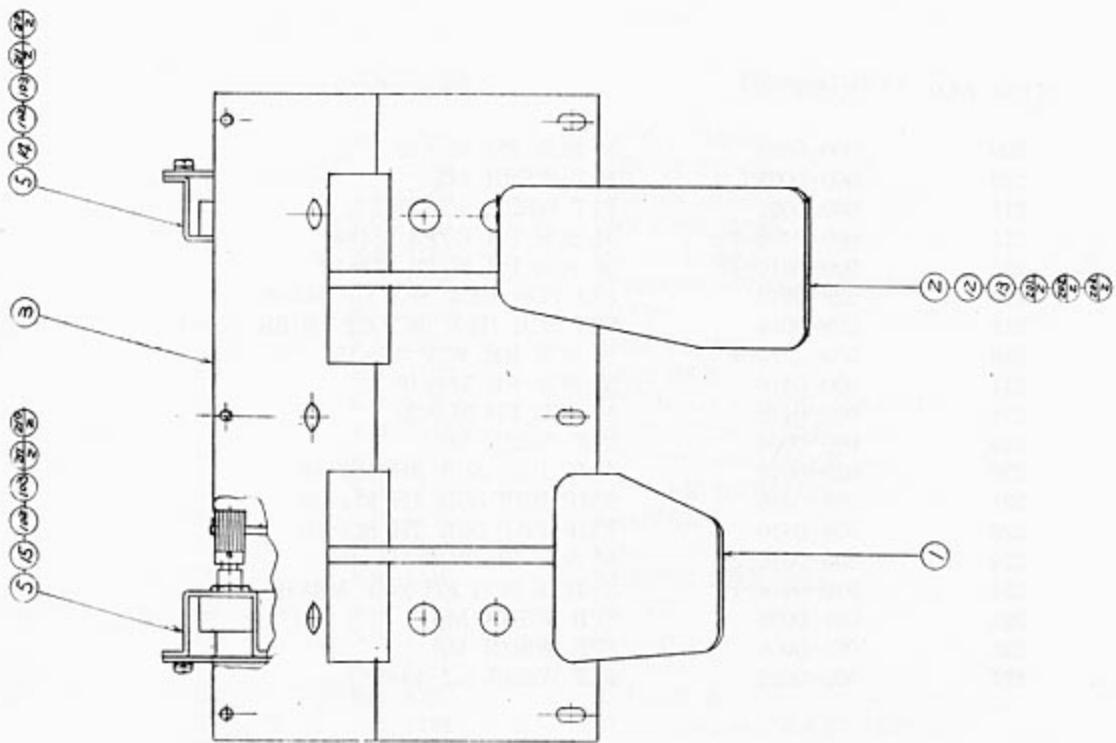
⑤ ASSY HANDLE ( KR-1100 ) ( D-2/3 )

ITEM NO.	PART NO.	DESCRIPTION
1	KR-1101	FRONT PANEL
2	KR-1102	METER PANEL UPPER
3	KR-1103	DESIGN PLATE
4	KR-1104	WOODEN BASE
5	KR-1105	HANDLE BASE
6	KR-1106	STEERING WHEEL SHAFT
7	KR-1107	SHAFT
8	KR-1108	ARM PLATE
9	KR-1109	ARM BAR
10	KR-1110X	STEERING WHEEL STOPPER
11	KR-1111X	EXTENTION SPRING
12	KR-1112	VOLUME BRACKET
13	KR-1113	BUMPER BRACKET
14	KR-1114	BUMPER
15	KR-1115	STOPPER
16	KR-1116	RUBBER STOPPER
17	KR-1117	PLATE
18	KR-1118	COLLAR A
19	KR-1119	COLLAR B
20	KR-1120	SPACER A
21	KR-1121	STEERING HANDLE Ø270
22	KR-1122	KEY A
23	KR-1123	KEY B
24	KR-1124	BRACKET
25	KR-1125	HANDLE EMBLEM
26	KR-1126	GEAR A
27	KR-1127	GEAR B
28	KR-1128	GEAR C
29	KR-1129	GEAR D
30	KR-1140	BRACKET
31	TB-2007	LAMP HOLDER BOARD
32	117-5133	START PLATE
34	SGB-3740-4 211-0085 211-0099 211-0100 211-0041 280-0472 601-0460	WIRE HARN HANDLE CONN PLUG AMP 2P BROWN CONN PLUG AMP 3P YELLOW CONN PLUG AMP 4P RED CONN PIN AMP FASTON RCPT 110 PLASTIC TIE BELT 85mm
101	100-5035	BEARING Ø20
102	100-5015	BEARING Ø10
103	220-5130	VOL CONT B-5K OHM
104	509-5053	PUSH BTN SWIT GREEN W/LAMP
105	390-0116	LAMP WEDGE BASE TYPE 14V 0.24A
106	214-0081	WEDGE BASE SOCKET ASSY
201	030-0825	HEX BLT M8×25
202	060-0008	FLT WSHR M8
203	061-0008	SPR WSHR M8
204	054-0005	U NUT M5
205	050-0010	HEX NUT M10
206	069-0009	FLT WSHR 10.5-28×2
207	061-0010	SPR WSHR M10
208	000-0516	M SCR PH M5×16

⑤ ASSY HANDLE ( KR-1100 ) ( D-3/3 )

ITEM NO.	PART NO.	DESCRIPTION
209	000-0525	M SCR PH M5×25
210	060-0005	FLT WSHR M5
211	069-0001	FLT WSHR 5.5-20×1.6
212	000-0408-FS	M SCR PH W/F/S M4×8
213	000-0510-FS	M SCR PH W/PS M5×10
214	028-0010	SET SCR HEX SKT CP M5×8
215	028-0014	SET SCR HEX SKT CP UNBR M4×4
216	005-3113-F	W SCR RH W/F 3.1×13
217	000-0416	M SCR PH M4×16
218	000-0425	M SCR PH M4×25
219	060-0004	FLT WSHR M4
220	029-0078	TMP PRF SCR BH M6×16
221	008-0416	TMP PRF SCR TH M4×16
222	008-0410	TMP PRF SCR TH M4×10
223	000-0510-S	M SCR PH W/S M5×10
224	010-0416-F	S-TITE SCR PH W/F M4×16
225	061-0005	SPR WSHR M5
226	061-0006	SPR WSHR M6
227	069-0022	FLT WSHR 5.5-14×1

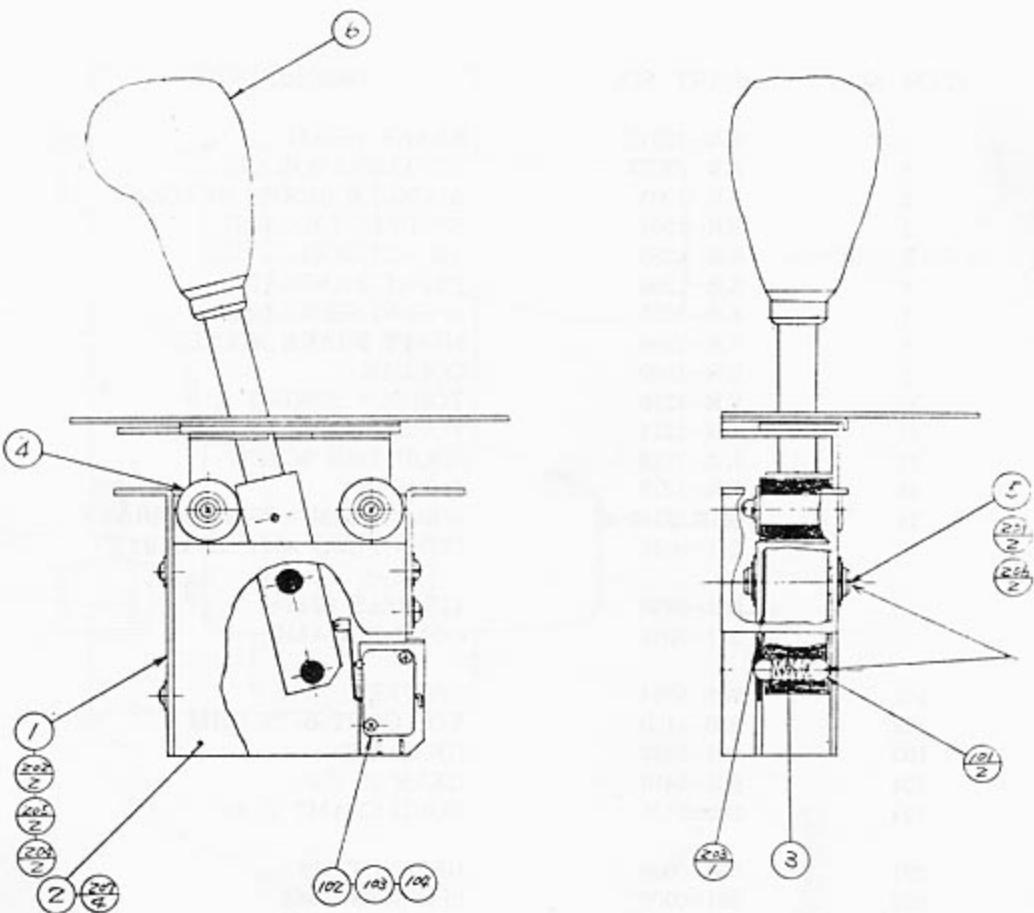
⑥ ASSY ACCEL & BRAKE ( KR-1200 ) ( D-1/2 )



⑥ ASSY ACCEL. & BRAKE ( KR-1200 ) ( D-2/2 )

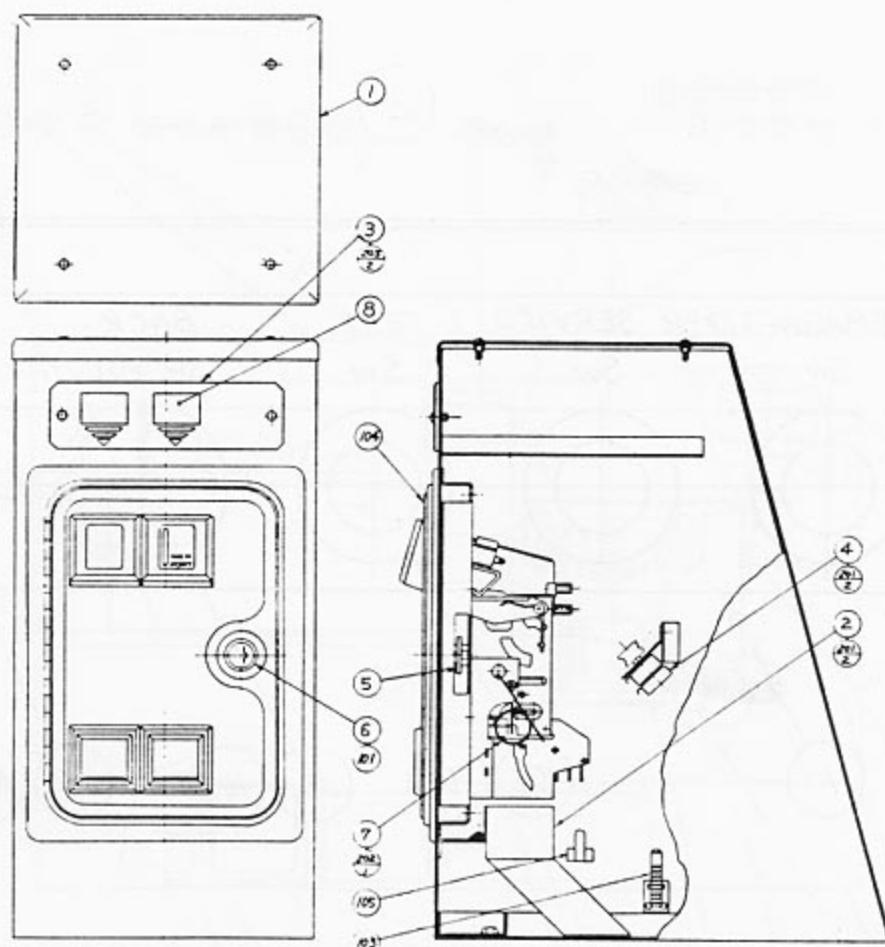
ITEM NO.	PART NO.	DESCRIPTION
1	KR-1201X	BRAKE PEDAL
2	KR-1202X	ACCELERATOR PEDAL
3	KR-1203	ACCEL. & BRAKE BRACKET
4	KR-1204	STOPPER BRACKET
5	KR-1205	VR BRACKET
6	KR-1206	PEDAL BRACKET
7	KR-1207	SPRING SHOULDER
8	KR-1208	SHAFT BRAKE ACCEL.
9	KR-1209	COLLAR
10	KR-1210	TORSION SPRING A
11	KR-1211	TORSION SPRING B
12	KR-1212	SHOULDER SCREW
13	KR-1213	BUMPER
14	SGB-3740-6 211-0045	WIRE HARN ACCEL. & BRAKE CONN PLUG AMP 6P WHITE
	601-0459	TIE BELT 85 mm
	211-0041	CONN PIN AMP
101	601-5564	STOPPER
102	220-5130	VOL CONT B-5K OHM
103	601-5423	GEAR 1/6
104	601-5410	GEAR 15 $\phi$ 6
105	280-0425	CORD CLAMP $\phi$ 10
201	050-0008	HEX NUT M8
202	061-0008	SPR WSHR M8
203	060-0008	FLT WSHR M8
204	060-0006	FLT WSHR M6
205	065-0005	E RING 5 mm
206	000-0514-S	M SCR W/S M5×14
207	000-0408-S	M SCR PH W/S M4×8
208	031-0514	CRG BLT BLK M5×14
209	051-0005	FLG NUT M5
210	028-0002	SET SCR PH SPCL M3×6
211	000-0408-FS	M SCR PH W/FS M4×8
212	054-0005	U-NUT M5

⑦ ASSY SHIFT LEVER ( KR-1300 )



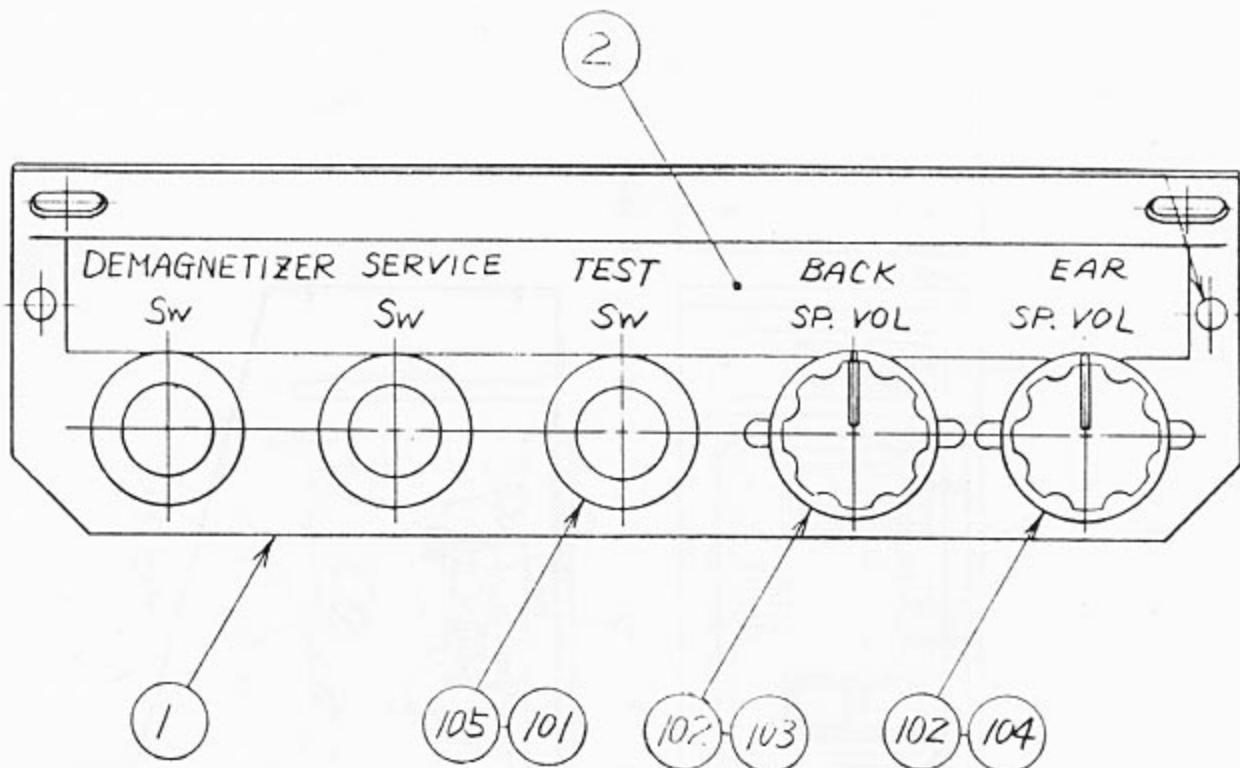
ITEM NO.	PART NO.	DESCRIPTION
1	KR-1301	SHIFT BRACKET A
2	KR-1302	COVER BRACKET A
3	KR-1303	STOPPER
4	TB-2022	COMPRESSION SPRING
	KR-1320	COMPRESSION SPRING
5	KR-1304	SHAFT
6	KR-1305	SUB ASSY SHIFT LEVER
	KR-1313	SHIFT LEVER
7	SGB-3740-5 211-0043 211-0041 280-5015	WIRE HARN SHIFT SW CONN PLUG AMP 2P WHITE CONN PIN AMP FASTON RCPT 187
101	101-0011 101-5004	STEEL BALL NSK Ø7.1438 STEEL BALL Ø8.7
102	509-5088	SW MICRO TYPE
103	310-0012	PAPER INSULATOR
104	117-0141	LOCK PLATE
201	069-0005	FLT WSHR SPECIAL 8.3-14.3×0.5
202	000-0408-FS	M SCR PH W/FS M4×8
203	069-0049	NYLON WASHER SPECIAL 8.5-14×1
204	000-0316	M SCR PH M3×16
205	069-0007	FLT WSHR 4.4-16×1.6
206	065-0006	E RING 6 mm
207	010-0408-F	S-TITE SCR PH W/F M4×8
208	001-0410	M SCR FH M4×10

⑧ ASSY COIN CHUTE BOX ( KR-1400 )



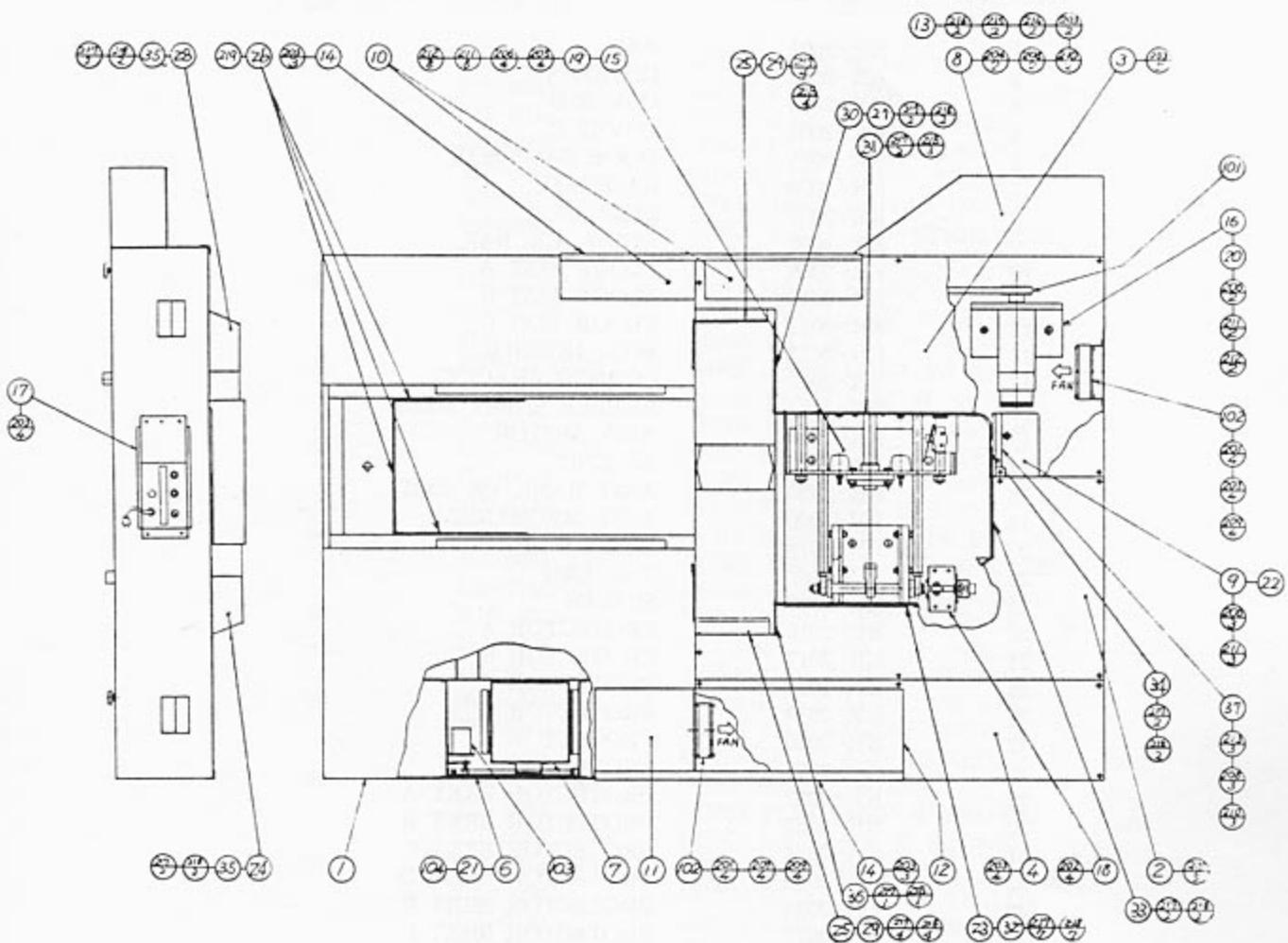
ITEM NO.	PART NO.	DESCRIPTION
1	KR-1401	COIN CHUTE BOX
2	KR-1402	COIN CHUTE
3	KR-1403	DENOMINATION PLATE
4	KR-1404	SW UNIT
5	DP-1167	TNG LKG
6	HN-1050	SPACER RING
7	109-0045	KEY HOLDER
8	MX-1103-02	DENOMI SH 25¢
9	SGB-3740-16 211-0045	WIRE HARN SW UNIT CONN PLUG AMP 6P WHITE
101	220-5044-01	MAGNETIC LOCK W/O KEY
103	280-5008	CORD CLAMP Ø15
104	220-5174-02	ASSY COIN CHUTE DOOR USA 25¢ TWIN
105	280-0425	CORD CLAMP Ø10
106	211-0041	CONN PIN AMP
107	280-5015	FASTON RCPT 187
108	601-0459	TIE BELT 85mm
201	010-0406-F	S-TITE SCREW M4×6
202	000-0306-FS	M SCR M3×6 W/S & F
203	031-0414	CRG BLT M4×14 UCRM
204	051-0004	FLG NUT M4

⑨ SW UNIT ( KR-1404 )



ITEM NO.	PART NO.	DESCRIPTION
1	KR-1405	SW BRACKET
2	421-6414	STICKER SW
3	SGB-3740-15 211-0090 211-0086 211-0085	WIRE HARN SW UNIT CONN PLUG AMP 12P BROWN CONN PLUG AMP 3P BROWN CONN PLUG AMP 2P BROWN
101	509-5028	SW PB IM
102	601-0042	KNOB 22mm
103	220-5173	VOL CONT A-30K OHM
104	220-5172	VOL CONT A-2×30K OHM
105	280-0472	FASTON RCPT 110
106	211-0041	CONN PIN AMP
107	601-0459	TIE BELT 85mm

⑩ ASSY BASE & MECHANISM ( KR-2000 ) ( D-1/4 )



(10) ASSY BASE & MECHANISM ( KR-2000 ) ( D-2/4 )

ITEM NO.	PART NO.	DESCRIPTION
1	KR-2001	BASE
2	KR-2002	COVER A
3	KR-2003	COVER B
4	KR-2004	COVER C
6	KR-2005	DOOR CASH BOX
7	KR-2006	CASH BOX
8	KR-2007	STEP
9	KR-2008	GUIDE A.R. BAR
10	KR-2009	FLOOR MAT A
11	KR-2010	FLOOR MAT B
12	KR-2011	FLOOR MAT C
13	KR-2012	BOLT HOLDER
14	KR-2013	CORNER BRACKET
15	KR-2014	RUBBER SHEET MECH
16	KR-2030	ASSY MOTOR
17	KR-2040	AC UNIT
18	KR-2050	ASSY BANK VR UNIT
19	KR-3000	ASSY MECHANISM
20	RH-3018	RUBBER SHEET
21	DP-1167	TNG LKG
22	KR-2015	SPACER
23	KR-2016	PROTECTOR A
24	KR-2017	PROTECTOR B
25	KR-2018	PROTECTOR C
26	KR-2019	PROTECTOR D
27	KR-2020	PROTECTOR E
28	KR-2021	PROTECTOR F
29	KR-2022	PROTECTOR BRKT A
30	KR-2023	PROTECTOR BRKT B
31	KR-2024	PROTECTOR BRKT C
32	KR-2025	PROTECTOR BRKT D
33	KR-2026	PROTECTOR BRKT E
34	KR-2027	PROTECTOR BRKT F
35	KR-2028	PROTECTOR BRKT G
36	KR-2029	PROTECTOR BRKT H
37	KR-3011	GUIDE SLIDING BAR
40	SGB-3740-17	WIRE HARN COIN METER
	211-0087	CONN PLUG AMP 4P BROWN
41	SGB-3740-22	WIRE HARN D.C. FAN
	211-0095	CONN PLUG AMP 2P ORANGE
42	SGB-3740-25	WIRE HARN LAMP EXT B
	211-0085	CONN PLUG AMP 2P BROWN
	211-0080	CONN CAP AMP 2P BROWN
43	SGB-3740-27	WIRE HARN AC IN
	211-0103	CONN PLUG AMP 6P RED
	211-0124	CONN CAP AMP 6P RED
44	SGB-3740-28	WIRE HARN SW REGU
	211-0094	CONN PLUG AMP 2P RED
	211-0115	CONN CAP AMP 2P RED
45	SGB-3740-29	WIRE HARN DRIVE MOTOR EXT
	211-0085	CONN PLUG AMP 2P BROWN
	211-0080	CONN CAP AMP 2P BROWN
	211-0060	CONN CAP AMP 3P WHITE
46	SGB-3740-30	WIRE HARN AUDIO EXT
	211-0073	CONN PLUG AMP 4P WHITE
	211-0072	CONN CAP AMP 4P WHITE

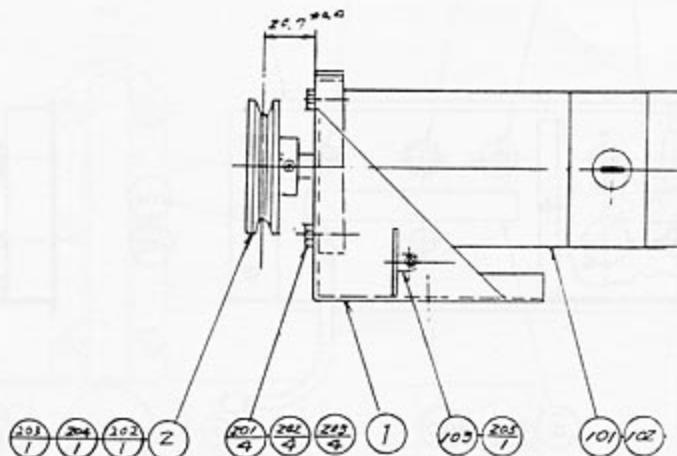
(10) ASSY BASE & MECHANISM ( KR-2000 ) ( D-3/4 )

ITEM NO.	PART NO.	DESCRIPTION
47	SGB-3740-31 211-0043 211-0044 211-0059 211-0060	WIRE HARN R.G.B. EXT CONN PLUG AMP AMP 2P WHITE CONN CAP AMP 2P WHITE CONN PLUG AMP 3P WHITE CONN CAP AMP 3P WHITE
48	SGB-3740-36 211-0095 211-0116	WIRE HARN DC FAN EXT CONN PLUG AMP 2P ORANGE CONN CAP AMP 2P ORANGE
49	SGB-3740-39 211-0098 211-0119	WIRE HARN BANK VR EXT CONN PLUG AMP 3P ORANGE CONN CAP AMP 3P ORANGE
50	SGB-3740-40 211-0102 211-0123	WIRE HARN LIMIT SW EXT CONN PLUG AMP 4P YELLOW CONN CAP AMP 4P YELLOW
51	SGB-3740-42 211-0094 211-0115	WIRE HARN LEFT SP EXT "B" CONN PLUG AMP 2P RED CONN CAP AMP 2P RED
52	SGB-3740-44 211-0095 211-0116	WIRE HARN RIGHT SP EXT "B" CONN PLUG AMP 2P ORANGE CONN CAP AMP 2P ORANGE
53	SGB-3740-46 211-0096 211-0117	WIRE HARN CENTER SP-EXT "B" CONN PLUG AMP 2P YELLOW CONN CAP AMP 2P YELLOW
54	SGB-3740-47 211-0083 211-0088	WIRE HARN AUDIO VR EXT CONN CAP AMP 6P BROWN CONN PLUG AMP 6P BROWN
55	SGB-3740-48 211-0086 211-0081	WIRE HARN SW EXT CONN PLUG AMP 3P BROWN CONN CAP AMP 3P BROWN
56	SGB-3740-49 211-0096 211-0115 211-0080	WIRE HARN DEM EXT CONN PLUG AMP 2P YELLOW CONN CAP AMP 2P RED CONN CAP AMP 2P BROWN
57	SGB-3740-50 211-0073 211-0072	WIRE HARN COIN EXT CONN PLUG AMP 4P WHITE CONN CAP AMP 4P WHITE
58	SGB-3740-51 211-0087 211-0082	WIRE HARN COIN METER EXT CONN PLUG AMP 4P BROWN CONN CAP AMP 4P BROWN
59	SGB-3740-52 211-0086 211-0081 211-0080	WIRE HARN CLUTCH EXT CONN PLUG AMP 3P BROWN CONN CAP AMP 3P BROWN CONN CAP AMP 2P BROWN
60	SGB-3740-53 211-0096 211-0117	WIRE HARN AC FAN EXT CONN PLUG AMP 2P YELLOW CONN CAP AMP 2P YELLOW
61	SGB-3740-55 211-0096 211-0117	WIRE HARN FL UNIT EXT "B" CONN PLUG AMP 2P YELLOW CONN CAP AMP 2P YELLOW
62	SGB-3740-56 211-0096	WIRE HARN CRT EXT CONN PLUG AMP 2P YELLOW
63	SGB-3740-26 211-0104 211-0118 211-0115	WIRE HARN LAMP BD EXT CONN PLUG AMP 6P ORANGE CONN CAP AMP 3P RED CONN CAP AMP 2P RED

(10) ASSY BASE & MECHANISM ( KR-2000 ) ( D-4/4 )

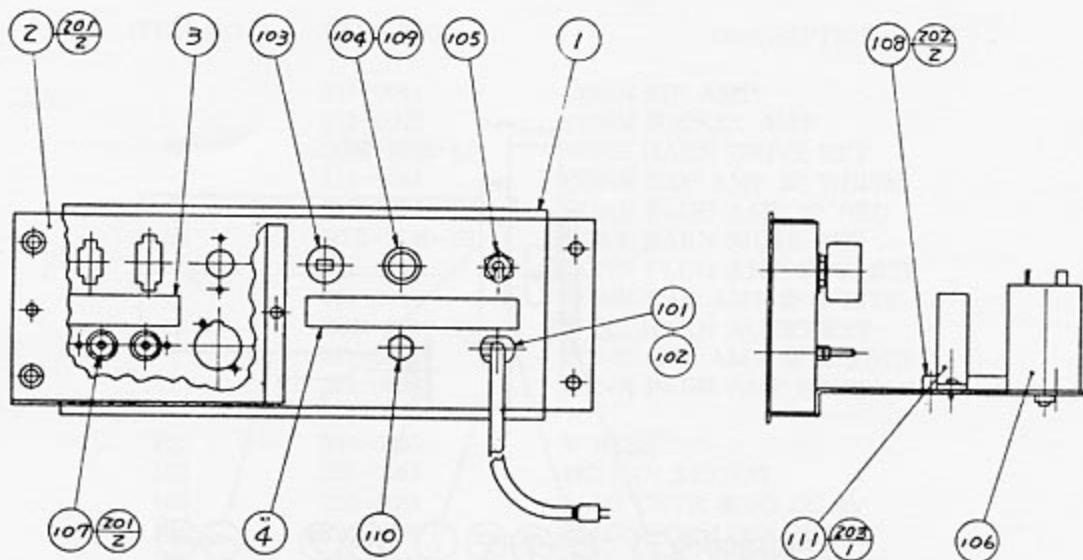
ITEM NO.	PART NO.	DESCRIPTION
64	211-0041	CONN PIN AMP
	211-0042	CONN SOCKET AMP
	SGB-3740-61	WIRE HARN DRIVE EXT
	211-0044	CONN CAP AMP 2P WHITE
	211-0094	CONN PLUG AMP 2P RED
65	SGB-3740-62	WIRE HARN MUTE EXT
	211-0043	CONN PLUG AMP 2P WHITE
	211-0044	CONN CAP AMP 2P WHITE
	SGB-3740-63	WIRE HARN AUDIO EXT
	211-0083	CONN CAP AMP 6P BROWN
	211-0088	CONN PLUG AMP BROWN
101	350-5085	V BELT
102	260-0015	DC FAN MOTOR
103	220-5064	MAG CNTR 6DIG DC 5V
104	220-5046	MAGNETIC LOCK W/KEY
105	310-5008	INSL SPIRAL TUBE ID Ø6
106	310-5010	INSL SPIRAL TUBE ID Ø12
107	310-5018	INSL SPIRAL TUBE ID Ø25
108	601-0460	TIE BELT 85mm
109	601-5526	BUSH 1.6t
201	000-0450	M SCR P-H M4×50
202	000-0510-F3	M SCR P-H W/SF M5×10
203	008-0510	TMP PRF SCR TH M5×10
204	030-0820	HEX BLT M8×20
205	039-0008	HEX BLT S=30 M10×30
206	050-0010	HEX NUT M10
207	060-0004	FLT WSHR M4
208	060-0008	FLT WSHR M8
209	061-0004	SPR WSHR M4
210	061-0008	SPR WSHR M8
211	061-0010	SPR WSHR M10
212	069-0009	FLT WSHR 10.5-28
213	030-0830	HEX BLT M8×30
214	029-0036	M SCR P-H M6×20
215	061-0006	SPR WSHR M6
216	060-0006	FLT WSHR M6
217	029-0047	M SCR PH BLK M4×10
218	069-0024	FLT WSHR BLK M4
219	244-119	DOUBLE FACE TAPE CLOTH

(11) ASSY MOTOR ( KR-2030 )



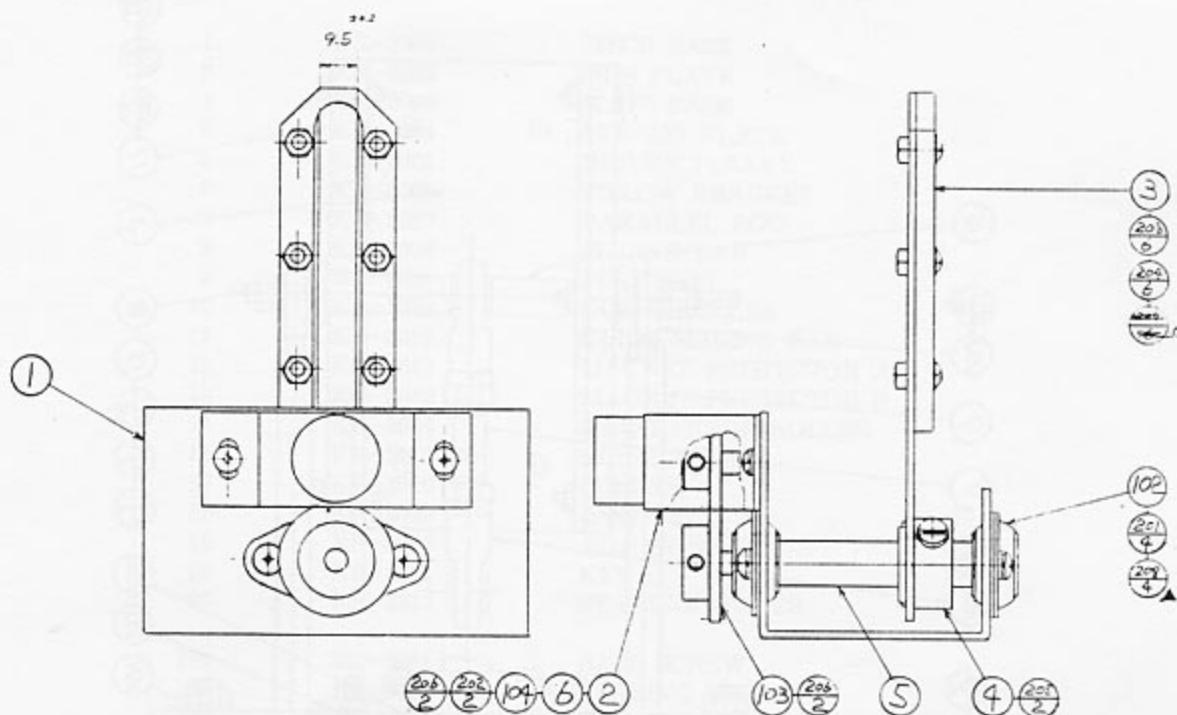
ITEM NO.	PART NO.	DESCRIPTION
1	RH-3501	MOTOR BRACKET
2	RH-3502	DRIVE PULLEY
5	SGB-3740-21 209-0023 211-0085	WIRE HARN DRIVE MOTOR (MFG) CONN CLOSED END CONN PLUG AMP 2P BROWN
6	SGB-3740-18 211-0085 211-0080 211-0041 211-0042	WIRE HARN CLUCH (MFG) CONN PLUG AMP 2P BROWN CONN CAP AMP 2P BROWN CONN PIN AMP CONN SOCKET AMP
101	350-5084	MOTOR DC 80V(DMW 180SB2)
102	117-0184	TERMINAL PLATE IL 4P
103	475-0018	CERAMIC VARISTOR 220V 0.8W
201	030-0630	HEX BLT M6×30
202	050-0006	HEX NUT M6
203	061-0006	SPR WSHR M6
204	028-0007	SET SCR HEX SKT CP UNBR M4×10
205	010-0308-F	S-TITE SCR PH W/F M3×8

(12) AC UNIT ( KR-2040 )



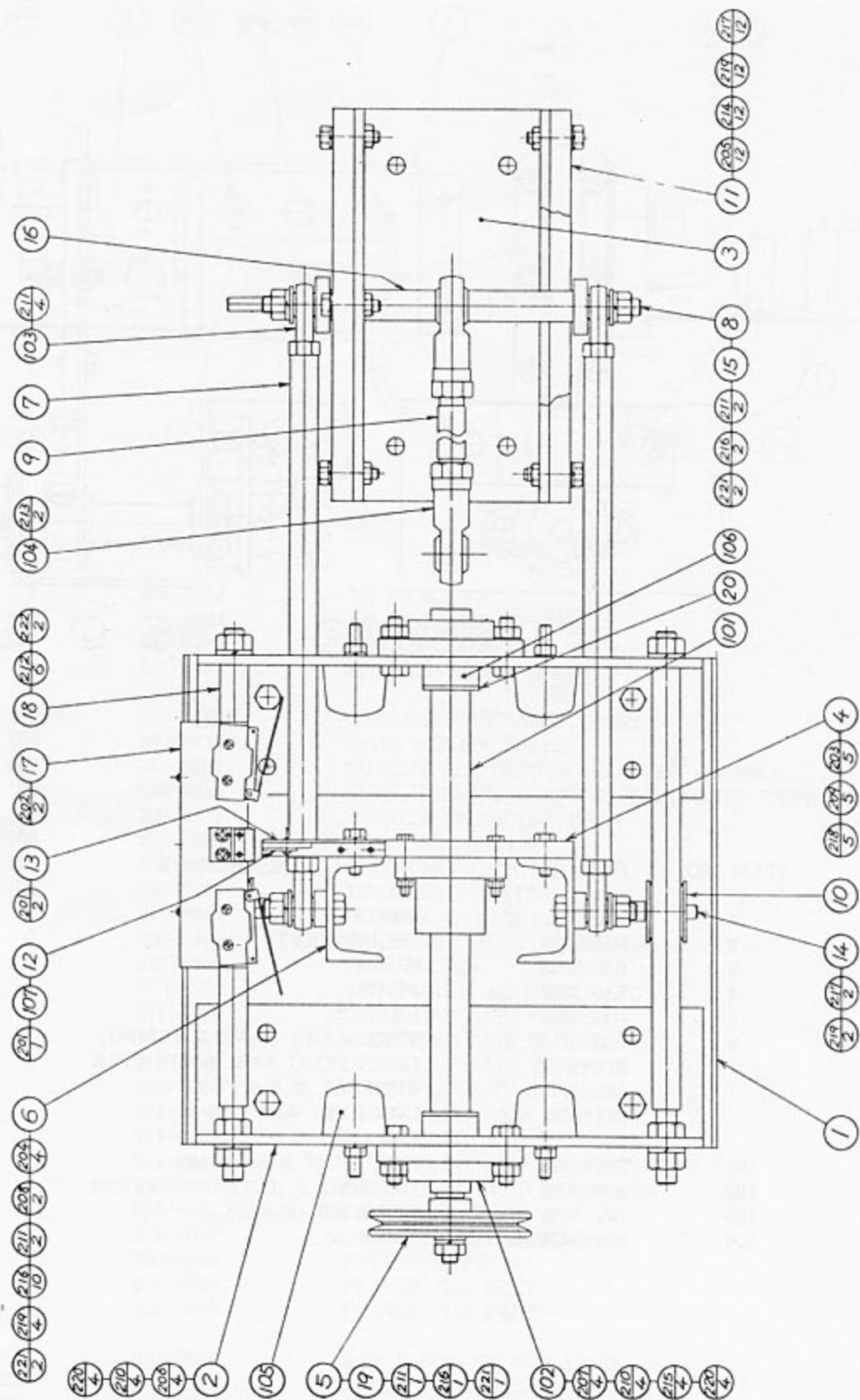
ITEM NO.	PART NO.	DESCRIPTION
1	KR-2041	AC BRACKET
2	KR-2042	AC BRACKET COVER
3	421-6422	STICKER LINE OUT WSTR
4	421-6423	STICKER EARTH WSTR
101	600-0110	CABLE & PLUG ASSY L=2500
102	280-0418	BSHG STRAIN RELIEF
103	512-5003	CIRCUIT PROTECTOR 10A (NRF 110-10A)
104	514-5018	FUSE HOLDER UL (FH-BOI BAYONET TYPE 15A)
105	509-5131	TOGGLE SWITH (ET-125A)
106	270-5008	NOISE FILTER 15A
107	210-5091	2P PHONO JACK
108	117-5128	TERMINAL PLATE
109	514-0043	FUSE 8A 6.4φ×30 mm
110	280-0417	TERM BINDING POST BLANK
111	270-5009	LINE FILTER SGB-3740-1
	211-0124	CONN CAP AMP 6P RED
	211-0115	CONN CAP AMP 2P RED
	211-0044	CONN CAP AMP 2P WHITE
	211-0060	CONN CAP AMP 3P WHITE
	211-0043	CONN PLUG AMP 2P WHITE
	211-0059	CONN PLUG AMP 3P WHITE
	211-0073	CONN PLUG AMP 4P WHITE
	211-0085	CONN PLUG AMP 2P BROWN
	211-0041	CONN PIN AMP
	211-0042	CONN SOCKET AMP
	280-5015	FASTON RCPT 187
	601-0460	PLASTIC TIE BELT
	601-0459	PLASTIC TIE BELT
201	010-0306	S TITE SCR PH W/F M3×6
202	000-0312	M SCR PH M3×12
203	010-0308	S TITE SCR PH W/F M3×8

(13) ASSY BANK VR UNIT ( KR-2050 )



ITEM NO.	PART NO.	DESCRIPTION
1	KR-2051	BRACKET
2	KR-2052	VR BRACKET
3	KR-2053	GUIDE
4	KR-2054	PLATE
5	KR-2055	SHAFT
6	SGB-3740-10 211-0098 601-460 211-0041	WIRE HARN BANK VR (MFG) CONN PLUG AMP 3P ORANGE TIE BELT 85 mm CONN PIN AMP
101	220-5130	VOL CONT B-5KOHM
102	100-5023	BEARING Ø 10 NTN B-BAF1012
103	601-5550	GEAR 40T (m 0.75)
104	601-5424	GEAR 30

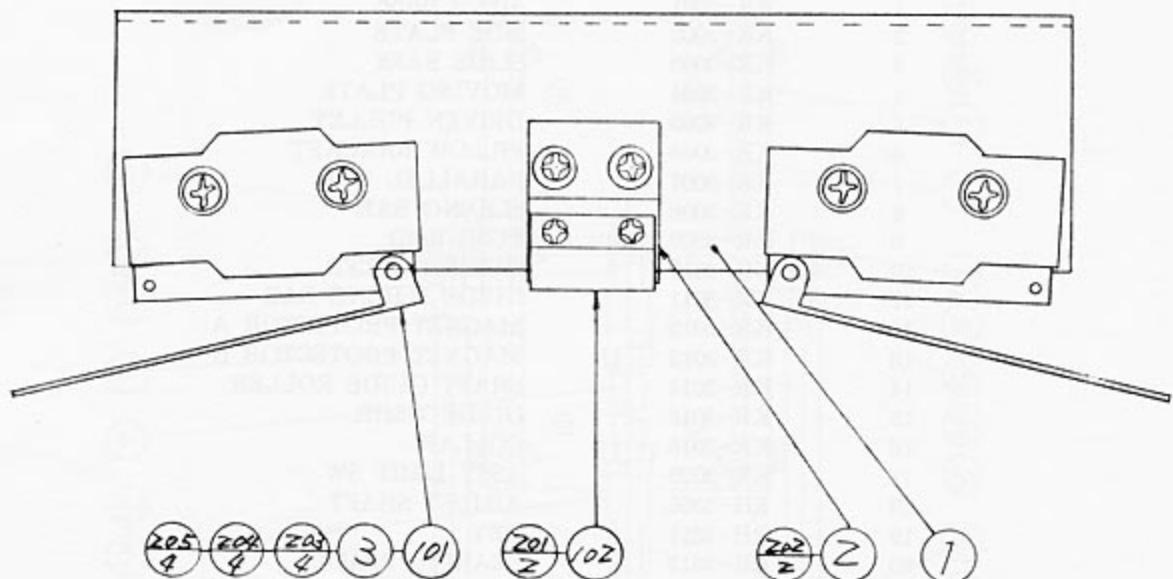
(14) ASSY MECHANISM (KR-3000 ) ( D-1/2 )



(14) ASSY MECHANISM ( KR-3000 ) ( D-2/2 )

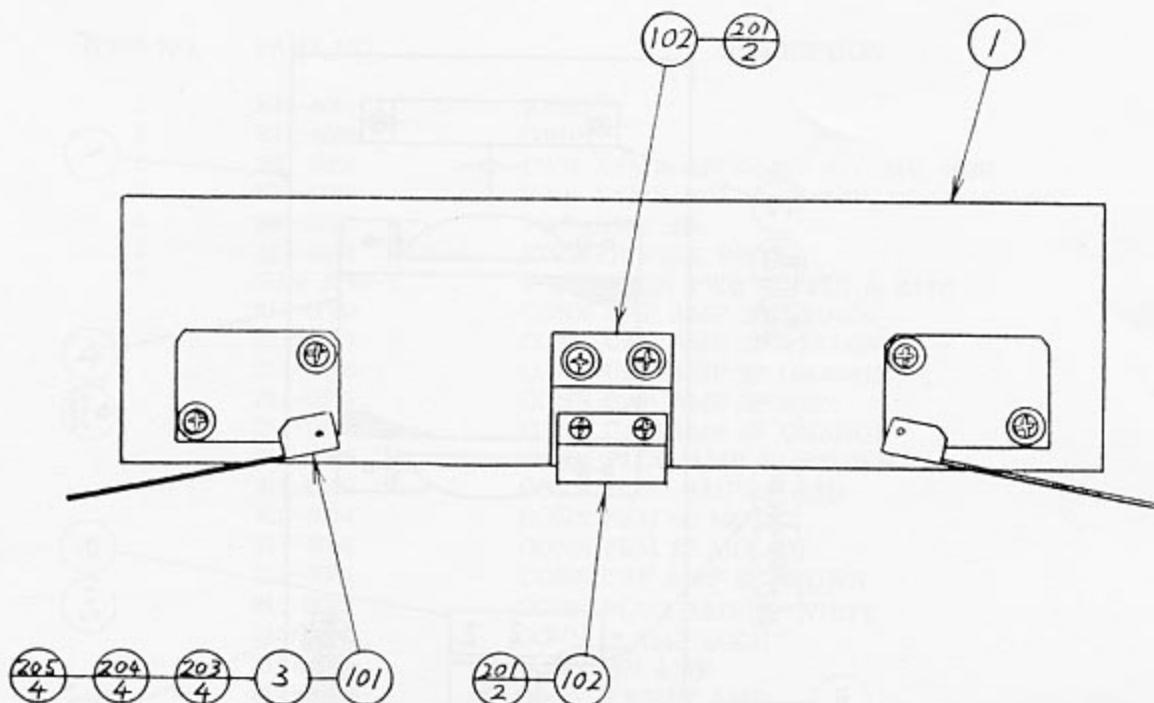
ITEM NO.	PART NO.	DESCRIPTION
1	KR-3001	MECH BASE
2	KR-3002	SIDE PLATE
3	KR-3003	SLIDE BASE
4	KR-3004	MOVING PLATE
5	KR-3005	DRIVEN PULLEY
6	KR-3006	PILLOW BRACKET
7	KR-3007	PARALLEL ROD
8	KR-3008	SLIDING BAR
9	KR-3009	PUSH ROD
10	KR-3010	GUIDE ROLLER
11	KR-3011	GUIDE SLIDING BAR
12	KR-3012	MAGNET PROTECTOR A
13	KR-3013	MAGNET PROTECTOR B
14	KR-3014	SHAFT GUIDE ROLLER
15	KR-3015	GUIDE WSHR
16	KR-3016	COLLAR
17	KR-3020	ASSY LIMIT SW
18	RH-3306	ADJUST SHAFT
19	RH-3311	KEY
20	RH-3313	BEARING SPACER
101	350-5081	BALL SCREW
102	100-5025	BEARING UNIT
103	111-0006	ROD END
104	111-0009	ROD END
105	601-5472	RUBBER STOPPER
106	100-5026	BEARING
107	113-0009	MAGNET
201	000-310-FS	M SCR PH W/SF M3×10
202	000-0510-S	M SCR PH W/S M5×10
203	030-0645	HEX BLT M6×45
204	030-0825	HEX BLT M8×25
205	030-0835	HEX BLT M8×35
206	039-0080	HEX BLT M10×30
207	039-0013	HEX BLT M10×40
208	039-0014	HEX BLT M12×50
209	050-0006	HEX NUT M6
210	050-0010	HEX NUT M10
211	059-0017	HEX NUT M12
212	059-0016	HEX NUT M14
213	059-0020	HEX NUT M18 P=1.5
214	060-0008	FLT WSHR M8
215	060-0010	FLT WSHR M10
216	069-0020	FLT WSHR M12
217	050-0008	HEX NUT M8
218	061-0006	SPR WSHR M6
219	061-0008	SPR WSHR M8
220	061-0010	SPR WSHR M10
221	069-0030	SPR WSHR M12
222	069-0045	SPR WSHR M14

(15) ASSY LIMIT SW ( KR-3020 )



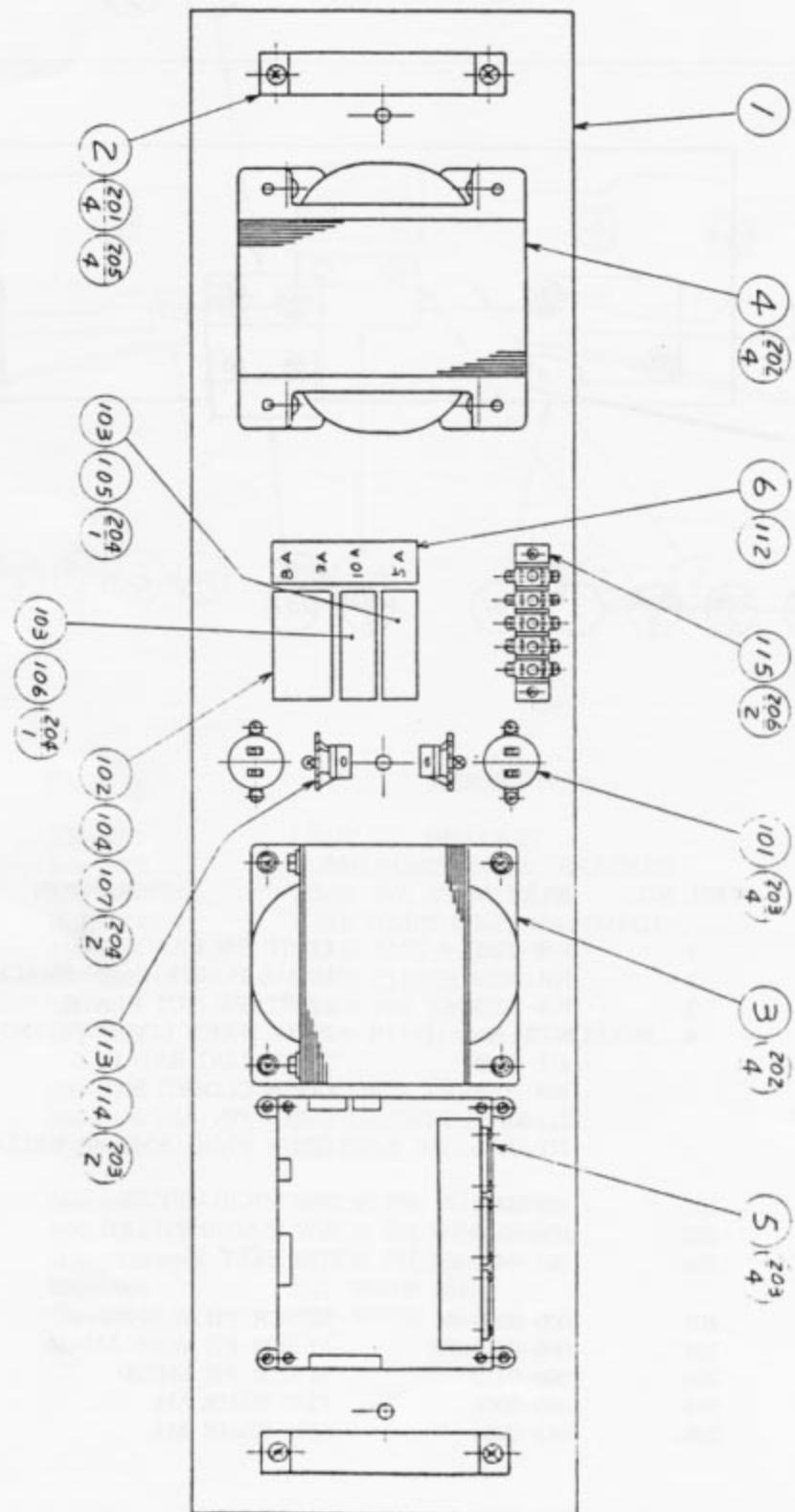
ITEM NO.	PART NO.	DESCRIPTION
1	KR-3021	LIMIT SW. BRACKET
2	KR-3022	HOME POSITION SW. BRACKET
3	KR-3023	LIMIT SW. NUT PLATE
6	SGB-3740-11 211-0167 209-0023 211-0041 211-0102	WIRE HARN LIMIT SW. (MFG) TERM LUG RNDID 5 CONN CLOSED END CONN PIN AMP CONN PLUG ANP 4P YELLOW
101	509-5129	SW. MICO TYPE
102	509-5130	SW. MAGNET TYPE
103	601-0460	TIE BELT 85mm
201	000-0308-S	M SCR PH W/S M3×8
202	000-0410-FS	M SCR PH W/SF M4×10
203	000-0430	M SCR PH M4×30
204	060-0004	FLT WSHR M4
205	061-0004	SPR WSHR M4

(16) ASSY LIMIT SW ( KR-3030 )



ITEM NO.	PART NO.	DESCRIPTION
1	KR-3021	LIMIT SW BRACKET
2	KR-3022	HOME POSITION SW BRACKET
3	KR-3023	LIMIT SW NUT PLATE
6	SGB-3740-11 211-0102 209-0023 211-0041 211-0102	WIRE HARN LIMIT SW (MFG) TERM LUG RND ID 5 CONN CLOSED END CONN PIN ANP CONN PLUG AMP 4P YELLOW
101	509-5129	SW MICRO TYPE
102	509-5130	SW MAGNET TYPE
103	601-0460	TIE BELT 85mm
201	000-0308-S	M SCR PH W/S M3+8
202	000-0410-FS	M SCR PH W/SF M4×10
203	000-0430	M SCR PH M4×30
204	060-0004	FLT WSHR M4
205	061-0004	SPR WSHR M4

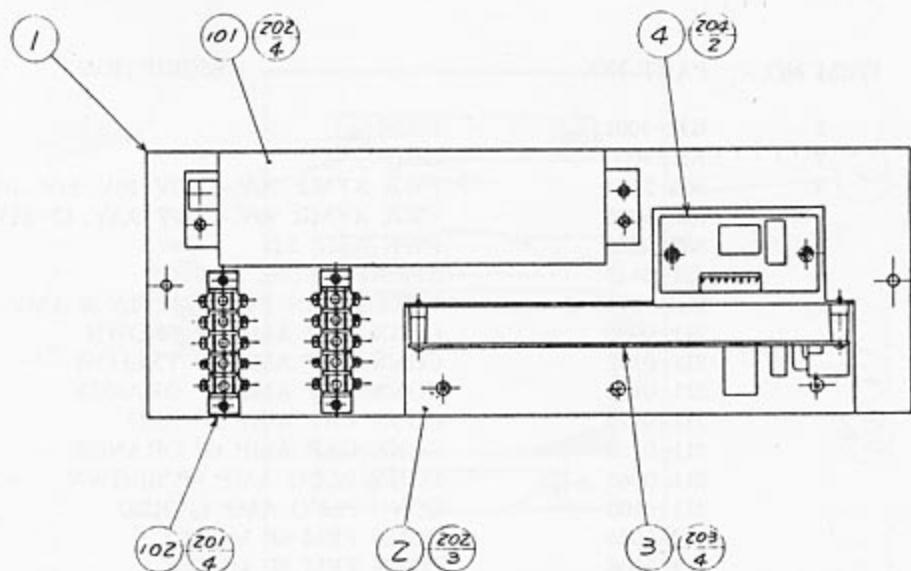
(17) ASSY POWER SUPPLY & AMP ( KR-4000 ) ( D-1/2 )



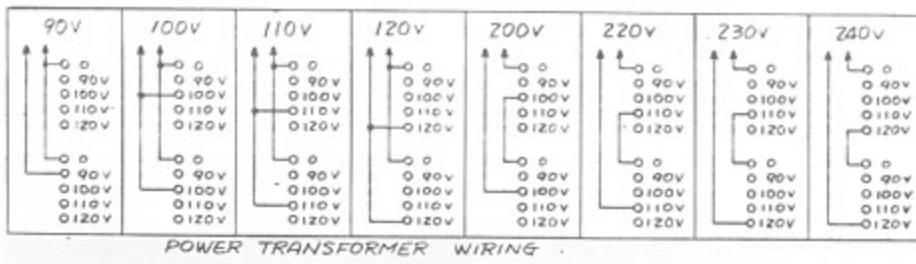
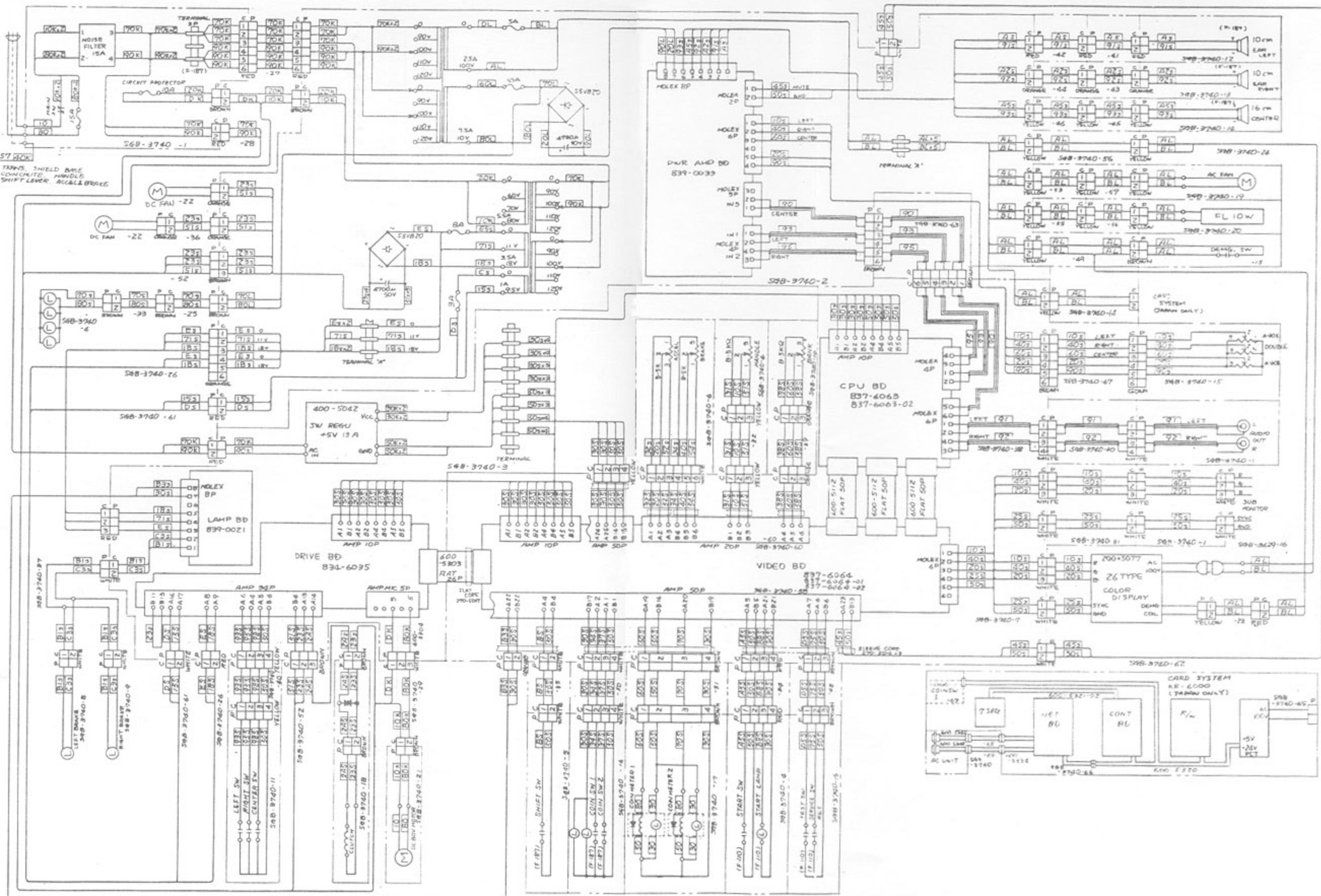
(17) ASSY POWER SUPPLY & AMP ( KR-4000 ) ( D-2/2 )

ITEM NO.	PART NO.	DESCRIPTION
1	KR-4001	BASE
2	RH-4002	GRIP
3	560-5084	PWR XFMR 90V~240V 10V, 24V, 100V
4	560-5085	PWR XFMR 90V~240V 9.5V, 13-18V, 60-80V
5	839-0033	PWR AMP BD
6	421-6448	STICKER FUSE INSTR
7	SGB-3740-2	WIRE HARN PWR SUPPLY & AMP
	211-0080	CONN CAP AMP 2P BROWN
	211-0117	CONN CAP AMP 2P YELLOW
	211-0116	CONN CAP AMP 2P ORANGE
	211-0115	CONN CAP AMP 2P RED
	211-0125	CONN CAP AMP 6P ORANGE
	211-0088	CONN PLUG AMP 6P BROWN
	211-0103	CONN PLUG AMP 6P RED
	212-5034	CONN FEM 6P MOLEX
	212-5066	CONN FEM 3P MOLEX
	212-0081	CONN CAP AMP 3P BROWN
	211-0043	CONN PLUG AMP 2P WHITE
	211-0005	CONN CLAMP LOCK
	211-0041	CONN PIN AMP
	211-0042	CONN SOCKET AMP
	212-5033	CONN FEM 2P MOLEX
	212-5076	CONN FEM 4P MOLEX
	212-5067	CONN FEM 8P MOLEX
101	150-0173	CAP E 4700μF 50V C-TYPE
102	514-0064	FUSE HOLDER 2P W/COVER
103	514-0065	FUSE HOLDER 1P W/COVER
104	514-0036	FUSE 3A 6.4×30mm
105	514-0034	FUSE 5A 6.4×30mm
106	514-0035	FUSE 10A 6.4×30mm
107	514-0043	FUSE 8A 6.4×30mm
108	280-5008	CORD CLAMP Ø15
109	280-5015	FASTON RCPT 187
110	280-0419	HARN LUG
111	601-0460	PLASTIC TIE BELT
112	601-0769	STAPLE MAX #3
113	117-0184	TERMINAL PLATE IL 4P
114	480-0157	DIODE BRIDGE S 5VB 20
115	117-5131	TERMINAL PLATE 5P
201	000-0514	M SCR PH
202	000-0516-FS	M SCR PH W/F & S M5×16
203	005-3113	W SCR RH 3.1×13
204	005-3520	W SCR RH 3.5×20
205	061-0005	S WASHER M5
206	005-3116	W SCR RH 3.1×16

(18) ASSY SW REGU & DRIVE BD ( KR-4100 )



ITEM NO.	PART NO.	DESCRIPTION
1	KR-4101	WOODEN BASE
2	KR-4102	BRACKET
3	834-6035	DRIVE BD OUT RUN
4	839-0021	LAMP DRIVE BD OUT RUN
5	SGB-3740-3	WIRE HARN SW REGLTR
	211-0043	CONN PLUG AMP 2P WHITE
	211-0044	CONN CAP AMP 2P WHITE
	211-0094	CONN PLUG AMP 2P RED
	211-0086	CONN PLUG AMP 3P BROWN
	211-0097	CONN PLUG AMP 3P RED
	211-0123	CONN CAP AMP 4P YELLOW
	211-5046	CONN FEM 34P AMP
	212-5067	CONN FEM 8P MOLEX
	211-5101	CONN FEM 10P AMP
	211-0041	CONN PIN AMP
	211-0042	CONN SOCKET AMP
	211-0005	CONN CLAMP LOCK
	211-5047	CONTACT
	211-0095	CONN PLUG AMP 2P ORANGE
6	600-5303	ASSY FEM & F.C. 26P
7	600-5304	ASSY WIRE HARN MIC 5P
101	400-5042	SW RGLTR 90V~240V 5V 13A
102	117-5131	TERMINAL PLATE 5P
103	280-0419	HARN LUG
104	601-0460	PLASTIC TIE BELT
105	280-5015	FASTON RCPT 187
106	211-0167	TERM LUG RND ID5
107	270-5016	FERRITE SLEEVE CORE
201	005-3116	W SCR R.H. 3.1×16
202	005-3513-F	W SCR R.H W/F 3.5×13
203	010-0310-F	S-TITE SCR PH W/F M3×10
204	010-0316-F	S-TITE SCR PH W/F M3×16



27. WIRING DIAGRAM



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