

ASTRON BELT

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TEMPORARY INSTRUCTION MANUAL

Bally

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2. TEST PROCEDURES

- 1) Fig. 8 is shown when TEST SW. is pushed

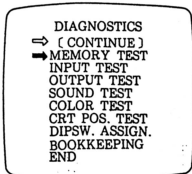


FIG. 8

- Bring the arrow sign (by operating control lever) to CONTINUE first, and move it to one of the tests to start. push START button, and the tests will be performed in order starting from the test where the arrow was originally set to the END one by one.
 - If START button is pushed when the arrow is at CONTINUE it will change to INDIVIDUAL. Pushing it again returns it to CONTINUE.
 - If the arrow is at INDIVIDUAL first and brought to a certain test which you want to perform, only that test is performed by pushing the START button.
- 2) When each test is finished in the case of CONTINUE push START button, and it will go into the following test. If START button is pushed in the case of INDIVIDUAL FIG. 8 is shown. If you want to end the test mode at this time, bring the arrow to END and push START button, and it will return to ADVERTISEMENT mode.

3. TEST ITEMS

(1) Memory Test :

Indication of "GOOD" following the IC No. means the IC is all right.
Push START button to go into following test item.

| DIAGNOSTICS | |
|--------------|-------------|
| MEMORY TEST | |
| RAMS CHECK | |
| IC. 37 GOOD | IC. 5 GOOD |
| IC. 69 GOOD | IC. 6 GOOD |
| | IC. 12 GOOD |
| | IC. 13 GOOD |
| EPROMS CHECK | |
| IC. 3 GOOD | IC. 18 GOOD |
| IC. 10 GOOD | IC. 29 GOOD |

(2) Input Test

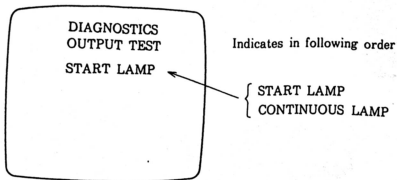
- Operate control lever and switches as indicated on the screen.
When "ON" is indicated at the right side of a certain tested item the item is OK.
- Operate dip switches. If the indication of "ON" or "OFF" alternates at this time the switch is working OK.

| DIAGNOSTICS | |
|-------------|------------------------------|
| INPUT TEST | |
| RIGHT ON | COIN #1 |
| LEFT | COIN #2 |
| UP | TEST |
| DOWN | SERV. |
| FIRE | START |
| | CONT. |
| | 1 2 3 4 5 6 7 8 |
| DIPSW. A | OFF ON ON OFF ON OFF ON ON |
| DIPSW. B | ON OFF OFF OFF OFF ON ON OFF |

NOTICE : When you test the START button or TEST SW., push it for a reasonable short period of time. If the pushing pressure lasts for 1 second or longer the computer takes it as a input for END of TESTS.

- When the test is ended push START button for more than 1 second.

(2) OUTPUT TEST

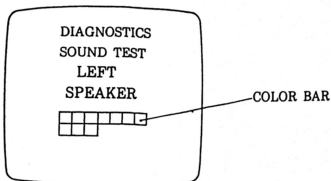


- If the lamp lights up it is functioning properly.

Above tests proceed automatically until START button is pushed at which time it moves on to the following test.

(4) Sound Test

The sounds are produced by the indicated speaker. A little later the indicator disappears and the sounds stop.



Testing order :

- LEFT SPEAKER
- RIGHT SPEAKER
- LEFT-RIGHT BALANCE ADJUST
- VIBRASEAT CHECK

The indication on the screen changes as follows if START button is pushed when test- (d) is finished.

DIAGNOSTICS
SOUND TEST

PUSH FIRE BUTTON !

This is to test all sound effects.

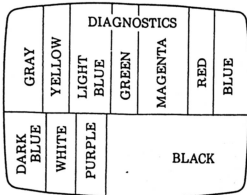
As FIRE button is pushed repeatedly, each sound is produced by speakers and the names of each are indicated one by one.

SOUND (a) PLAYER SHIP SOUND
 (b) PLAYER FIRE SOUND
 (c) ENEMY FIRE SOUND
 (d) ALARM 1
 (e) ALARM 2
 (f) ALARM 3
 (g) ALARM 4 -(Repeats)

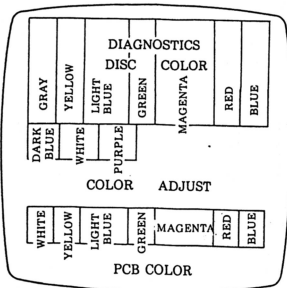
If START button is pushed, it stops repeating and goes to the next test step.

(5) Color Test

The "COLOR ADJUSTMENT" indicator appears on the screen temporarily after which it disappears and the color bar is indicated. The color bar signal is sent from the disc.



- o When the adjustment is finished put START button and the indicator changes as follows :



↔ Colors sent from the Disc

↔ Colors sent from the PCB

The purpose of this indication is for comparison of the two sources. Adjust each source to balance the two by means of rotating VR 6,7 and 8 of color de-modulator attached to CRT unit.

| BOOKKEEPING | | |
|--------------------|-----------|---|
| PUSH FIRE BUTTON ! | | |
| COIN CHUTE 1 | 000 | 1 |
| COIN CHUTE 2 | 000 | 2 |
| COIN CREDIT | 000 | 3 |
| SERVICE CREDIT | 000 | 4 |
| TOTAL CREDIT | 000 | 5 |
| * TOTAL TIME | 00H00M00S | 6 |
| TOTAL BONUS SHIP | 000 | 7 |

- 1 Coin number that passed through coin chute 1
- 2 Coin number that passed through coin chute 2
- 3 Total credit number operated by coin switches.
- 4 Free play number by SERVICE SWITCH.
- 5 Total credit number by coin and service switches.
- 6 Total operating time. (Hour-Minute-Second)
- 7 Total reserve ship number earned.

After confirming the above data push the FIRE button and proceed to indicate the information as shown below.

| BOOKKEEPING | | |
|--------------------|--|----------------------|
| PUSH FIRE BUTTON ! | | |
| ** SINGLE GAME ** | 1 | Credit game |
| NUMBER OF GAMES | 203 | Total games number |
| AVE. SCORE | 7230 | Average score points |
| HI - SCORE | 9320 | Highest score points |
| LOW-SCORE | 4230 | Lowest score points |
| ** GAME TIME ** | | |
| TOTAL | <input type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> S | Total game time |
| AVERAGE | <input type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> S | Average game times |
| LONGEST | <input type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> S | Longest game times |

(SINGLE GAME) indication in above screen changes to (2 CONTINUOUS GAMES), BY PUSHING FIRE button, and all data changes accordingly.

When the gathering of information is over push START button. Now all testing is finished and it returns to ADVERTISEMENT mode.

All above data regarding the bookkeeping disappears from the memory if main switch is off at anytime.

4. SCREEN MAP

o ADVERTISE (DEMONSTRATION)

INSERT COINS
FOR GAME CREDITS.
CREDITS CAN BE USED
FOR INDIVIDUAL OR
CONTINUOUS PLAY.

ASTRON BELT GAME
© SEGA 1983
FILM SEQUENCE
© TOEI 1979
CREDIT 0

o Wording for 1 game credit.

PUSH START BUTTON
FOR INDIVIDUAL PLAY

ASTRON BELT GAME
© SEGA 1983
FILM SEQUENCE
© TOEI 1979
CREDIT 1

o Wording for 2 or more game credits.

PUSH START BUTTON
FOR INDIVIDUAL PLAY
OR
PUSH CONTINUE BUTTON
FOR CONTINUOUS PLAY.

ASTRON BELT GAME
© SEGA 1983
FILM SEQUENCE
© TOEI 1979
CREDIT 5

o INDIVIDUAL PLAY

| | |
|---------------|---------------|
| SINGLE GAME | SCORE |
| HI-SCORE | 1 2 3 4 5 6 0 |
| 6 5 4 3 2 1 0 | |

TIME : 35

o Wording in the case where player, who has run out of time, is shifting to his holding of reserve ships.

| | |
|---------------|---------------|
| 2 CONT. GAMES | SCORE |
| HI-SCORE | 2 3 4 5 6 0 0 |
| 6 5 4 3 2 1 0 | |


EXTENDED PLAY

TIME : 00

o CONTINUOUS PLAY

| | |
|---------------|---------------|
| SINGLE GAME | SCORE |
| HI-SCORE | 3 4 5 6 7 0 0 |
| 6 5 4 3 2 1 0 | |

PLAYER'S RESERVE SHIPS



○ CREDIT IS LEFT

PUSH START BUTTON
FOR NEW INDIVIDUAL PLAY
OR
PUSH CONTINUE BUTTON
FOR CONTINUOUS PLAY
FROM LAST SCENE.

ASTRON BELT GAME
© SEGA 1983

FILM SEQUENCE
© TOEI 1979

CREDIT 2

○ OPTION

YOU NOW HAVE THE
OPTION TO CONTINUE
FROM LAST SCENE
BY INSERTING COINS
WITHIN 10 COUNT-DOWN

10

CREDIT 0

○ Wording for the game which has entered into continuous play.

2 CONT GAMES SCORE
HI-SCORE 4567800
0543210

CONTINUOUS PLAY

TIME : 60

○ Wording for the player ship having reached the final scoring scene.


CONGRATULATIONS !
YOU HAVE REPULSED THE
ENEMY BUT OTHERS
ARE ON THEIR WAY TO
CONQUER THE EARTH !
PREPARE FOR THE NEXT
CHALLENGE.
GOOD LUCK TO YOU.

◦ RANKING LIST

ENTER YOUR INITIALS
SINGLE GAME
HI-SCORE 6543210 ABC
1 6543210 ABC
2 5432160 TTC
3 4321650 CCA
4 3216540 DEF
5 2165430 GHI
6 1654320 JKL
7 987650 POR
CREDIT 0

RANKING LIST
SINGLE GAME
HI-SCORE 6543210 ABC
12 890120
13 678900
14 665430
15 654320
16 643210
17 632100
18 567890
CREDIT 0

YOUR SCORE & RANKING



8. EPROM / PROM LOCATION (ASTRON BELT)

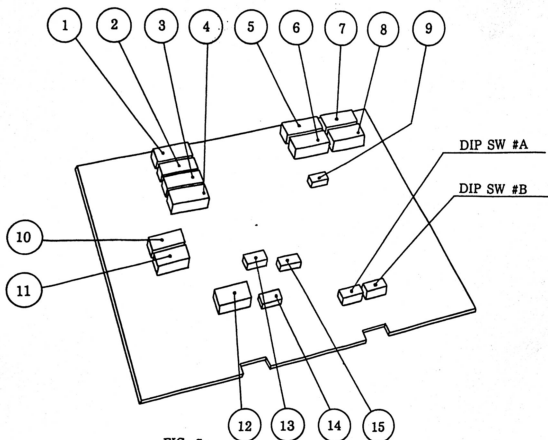


FIG. 7

| ASSY IC BOARD NO. | | 834-5174 | | | |
|----------------------|---------------|----------|--|--|--|
| ① | EPROM PROGRAM | 316-5282 | | | |
| ② | EPROM " | 316-5283 | | | |
| ③ | EPROM " | 316-5284 | | | |
| ④ | EPROM " | 316-5285 | | | |
| ⑤ | EPROM OBJECT | 316-5286 | | | |
| ⑥ | NOT USED | --- | | | |
| ⑦ | EPROM OBJECT | 316-5338 | | | |
| ⑧ | NOT USED | --- | | | |
| ⑨ | ROM CONTROL | 316-5277 | | | |
| ⑩ | EPROM FIX C/G | 316-5280 | | | |
| ⑪ | EPROM FIX C/G | 316-5281 | | | |
| ⑫ | ROM COLOR | 316-5279 | | | |
| ⑬ | ROM CONTROL | 316-5276 | | | |
| ⑭ | ROM CONTROL | 316-5278 | | | |
| ⑮ | ROM CONTROL | 316-5275 | | | |

ADJUSTMENTS FOR IC BOARD (ASTRON BELT)

| COIN/CREDIT OPTIONS SWITCH | | DIP SW #A | | | | | | | |
|----------------------------|------------|-----------|-----|-----|-----|------------|-----|-----|-----|
| OPTION | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 COIN | 1 CREDIT | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| 1 COIN | 2 CREDITS | ON | OFF | OFF | OFF | ON | OFF | OFF | OFF |
| 1 COIN | 3 CREDITS | OFF | ON | OFF | OFF | ON | ON | OFF | OFF |
| 1 COIN | 4 CREDITS | ON | ON | OFF | OFF | ON | ON | OFF | OFF |
| 1 COIN | 5 CREDITS | OFF | OFF | ON | OFF | OFF | OFF | ON | OFF |
| 1 COIN | 6 CREDITS | ON | OFF | ON | OFF | ON | OFF | ON | OFF |
| 2 COINS | 1 CREDIT | OFF | ON | ON | OFF | OFF | ON | ON | OFF |
| 3 COINS | 1 CREDIT | ON | ON | ON | OFF | ON | ON | ON | OFF |
| 4 COINS | 1 CREDIT | OFF | OFF | OFF | ON | OFF | OFF | OFF | ON |
| 2 COINS | 3 CREDITS | ON | OFF | OFF | ON | ON | OFF | OFF | ON |
| 2 COINS | 1 CREDIT | | | | | | | | |
| 4 COINS | 2 CREDITS | OFF | ON | OFF | ON | OFF | ON | OFF | ON |
| 5 COINS | 3 CREDITS | | | | | | | | |
| 6 COINS | 4 CREDITS | | | | | | | | |
| 2 COINS | 1 CREDIT | ON | ON | OFF | ON | ON | ON | OFF | ON |
| 4 COINS | 3 CREDITS | | | | | | | | |
| 1 COIN | 1 CREDIT | | | | | | | | |
| 2 COINS | 2 CREDITS | | | | | | | | |
| 3 COINS | 3 CREDITS | OFF | OFF | ON | ON | OFF | OFF | ON | ON |
| 4 COINS | 4 CREDITS | | | | | | | | |
| 5 COINS | 6 CREDITS | | | | | | | | |
| 1 COIN | 1 CREDITS | | | | | | | | |
| 2 COINS | 2 CREDITS | | | | | | | | |
| 3 COINS | 3 CREDITS | ON | OFF | ON | ON | ON | OFF | ON | ON |
| 4 COINS | 5 CREDITS | | | | | | | | |
| 1 COIN | 1 CREDITS | OFF | ON | ON | ON | OFF | ON | ON | ON |
| 2 COINS | 3 CREDITS | | | | | | | | |
| 1 COIN | 2 CREDITS | | | | | | | | |
| 2 COINS | 4 CREDITS | ON | ON | ON | ON | ON | ON | ON | ON |
| 3 COINS | 6 CREDITS | | | | | | | | |
| 4 COINS | 8 CREDITS | | | | | | | | |
| 5 COINS | 11 CREDITS | | | | | | | | |
| COINSW #1 | | | | | | COIN SW #2 | | | |

OPTION SWITCH SETTING

DIP SW#B

| OPTION | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---------------|---------------------|-----|-----|-----|-----|-----|-----|-----|----------|
| ADVERTISE | ON | OFF | | | | | | | |
| SOUND | OFF | ON | | | | | | | |
| PLAY | 60 SEC. | | OFF | OFF | | | | | |
| TIMER | 50 SEC. | | ON | OFF | | | | | |
| | 40 SEC. | | OFF | ON | | | | | NOT USED |
| | ∞ SEC. | | ON | ON | | | | | |
| NORMAL GAME | | | | | OFF | | | | |
| HARD GAME | | | | | ON | | | | |
| RESERVE | 5000, 10000, 20000 | | | | | OFF | OFF | | |
| SHIPS | 5000, 20000, 40000 | | | | | ON | OFF | | |
| SCORE | 10000, 20000, 30000 | | | | | OFF | ON | | |
| | 10000, 20000, 40000 | | | | | ON | ON | | |
| CONTINUE GAME | | | | | | | | OFF | |
| SELECT GAME | | | | | | | | ON | |

CONNECTION TO VIDEO DISC PLAYER

