Self-Test Procedure Part 1

Operator Information Display

The information below is displayed on the screen if you set the self-test switch to **on** during the attract mode. Look at the displayed numbers for SECONDS ON and SECONDS PLAYED. If these numbers run together vertically, make adjustments to the X and Y outputs of the game PCB.

To continue with self-test, rotate the control knob until the message FOR SELF TEST PRESS FIRE AND SUPERZAPPER appears on the monitor. Then press both FIRE and SUPERZAP-PER. To end the operator information display, set self-test switch to off.

To erase High Score Table:

1. Turn control knob until top line reads PRESS FIRE AND START 2 TO ZERO HIGH SCORES.

2. Press both FIRE and START 2. 3. The word ERASING appears and blinks on the screen until the entire table is erased. Wait until the word ERASING disappears before continuing with other tests.

To erase Game Times:

1. Turn control knob until top line reads PRESS FIRE AND START 1 TO ZERO TIMES.

2. Press both FIRE and START 1.

3. The word ERASING appears and blinks on the screen until the entire table is erased. Wait until the word ERASING disappears before continuing with other tests.

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Drawing Package Supplement

Operation, Maintenance, and Service Manual

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Self-Test Procedure Part 2

Figure 5). Press RE- plays the picture be-

SET on the PCB, or low. No sounds are

2. Activate start, As switch activates,

fire, Superzap, slam, you'll hear a beep and

and coin switches.* 0 changes to 1 on the screen.

counterclockwise. the screen will in-

4. Observe the Each frame corner

Activate SLAM A white cross hatch

Activate SLAM Tests purple, cyan,

switch.

position.

10. When satisfied with test, set selftest switch to off

white frame around should be within the outside of the ½-inch of each moni-

crease with counter clockwise motion, and decrease with clockwise motion.

tor bezel corner.

pattern appears. A

at the bottom of the

playing a large "plus" sign. Audio I/O 1 and 2 alternate to produce four tones. The two tones should sound like one tone.

yellow, white, green,

blue, and red for color and intensity. Displays seven groups of vertical lines, each with right line the brightest

and left line the dim-

and corners of the monitor. Rotate the control knob to change color.

played on the screen.

trip the coin counters as long as you are in self-test.

tern touches the sides Manual).

*Activate coin switches by inserting at least one coin in each coin slot. You will not

turn power off and produced.

Set self-test

on again.

switch to on (see

Test Passes

After about 5 sec-

onds, the monitor dis-

Test Fails RAM FAILURE is indicated by a sequence of 1 to 12 tones. You will hear a short low

tone and see a short flash on the LED start pushbutton for each good RAM chip, and a

long high tone accompanied by a long pulse on the start pushbutton for a failing RAM

chip. The test stops with the first failing RAM. To restart the sequence, press RESET

on the PCB, or power game to off, then to on again. Identify the bad RAM chip with the

table below. Example: four short low tones followed by a long high tone indicates

ROM FAILURE is indicated by a vertical pair of hexadecimal numbers on the top of the

screen. The top number indicates the location of the failing ROM(s). Ignore the bottom hexadecimal number in the pair. Identify the bad ROM with the table immediately

Bad ROM Chip Location

M/N1

N/P3*

EAROM, Audio and Math Box Failure are indicated by a single letter in the center of

*If this ROM is bad, you will hear a continuous low tone, and the program may be un-

** Math-box failure is explained in TM-195, Tempest Troubleshooting Guide.

You will not hear a beep and 0 will remain on the screen for the defective switch.

If screen is not centered and symmetrical on the monitor, adjust video pots (see

Tempest Drawing Package) on the main PCB. If character set is incorrect, check Vec-

Use this pattern for tracking adjustments (see the Color X-Y Monitor Manual).

EAROM

Audio 1

Audio 2

RAM Math Box * *

the display. Identify the failure with the table below.

Displayed Letter

able to display a screen image.

3. Rotate encoder The center right hexa- Incorrect progression of numbers indicates encoder wheel harness wires were con-

character set appears tor ROMs (see Troubleshooting Guide).

ter of the screen dis-

wheel clockwise and decimal number on nected incorrectly. No number change indicates encoder wheel is bad or harness

6. Activate SLAM Horizontal and vertical Lines not crossing indicates video pot on main PCB needs adjusting (see Drawing

8. Activate SLAM A checkerboard pat- Use this pattern for purity and convergence adjustments (see Color X-Y Monitor

9. Activate SLAM A white frame is dis-

lines cross in the cen-

Consult TempestTM Troubleshooting Guide.

PCB Location

Analog Vector-Generator PCB

PCB Location

C3 (Aux. PCB)

B/C2 (Aux. PCB)

C/D2 (Aux. PCB)

Bad RAM Chip Location

on Analog Vector-Generator

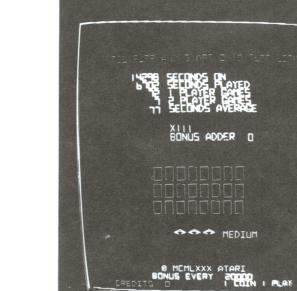
failure of RAM at location M3.

Long High Tone

PCB

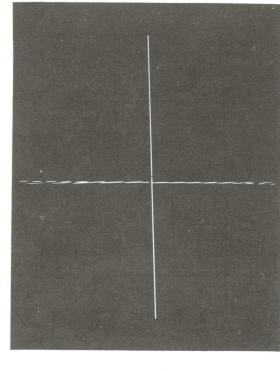
2nd

12th

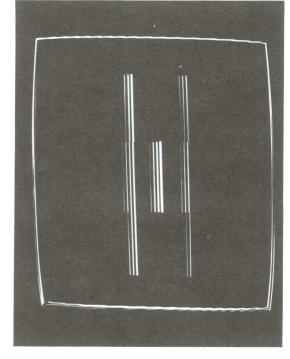


Self-Test Screens

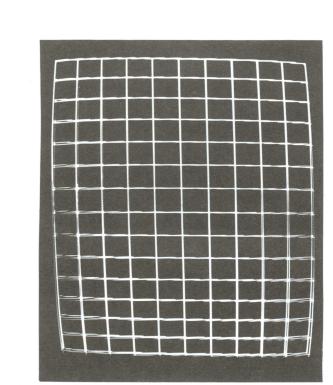
Screen #1



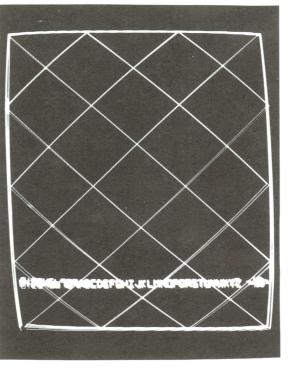
Screen #4



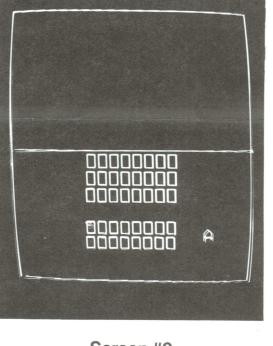
Screen #5



Screen #6



Screen #3



Screen #2



Screen #7

