

APR 8 - 1980

TAITO AMERICA CORPORATION

1256 ESTES AVENUE • ELK GROVE VILLAGE, IL 60007
(312) 981-1000 • TELEX 253290 CABLE TAMCO ELK GROVE VILLAGE

March 25, 1980

To All Taito Distributors

Dear Distributor,

Our toll free telephone number for technical assistance
is:

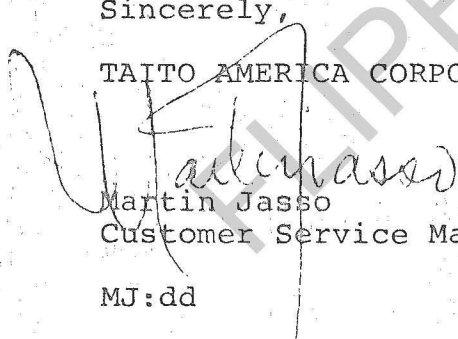
(800) 323-0666

Telephone number (800) 323-2835 previously announced has
been discontinued.

Parts requests should still be called through our regular
telephone line (312) 981-1000, Ext. 215.

Sincerely,

TAITO AMERICA CORPORATION


Martin Jasso
Customer Service Manager

MJ:dd

SEP 2 - RECD

UNIVERSAL U.S.A. INC.
3250 VICTOR STREET
SANTA CLARA, CA. 95050
(408) 727-4591

TO: ALL UNIVERSAL AUTHORIZED DISTRIBUTORS

SUBJECT: RETURN AUTHORIZATION PROGRAM

Universal will be starting a Return Authorization program effective August 15, 1980. This program is designed to provide accurate and prompt service to our customers.

In order for an item to be received at Universal it must have a RA# written clearly on the shipping carton.

Included under this program will be all returned items being shipped to Universal. Examples would be; Return for credit PCB's, repair and return PCB's, monitors, power supplies, parts, ect.

To receive a RA# the Distributor must contact Universal Customer Service before shipping the material. RA#'s will be issued to Universal authorized distributors only.

Thank you for your co-operation in our efforts to better serve you.

Sincerely,



Larry Mc Donald
Customer Service Manager

SERVICE TIPS

FAST AID HOT LINE: 800-323-0666
EXCEPT ILLINOIS: 312-981-1000 Ext. 215
TELEX: 253290



- MANDATORY
- ON FAILURE ONLY
- FOR YOUR INFORMATION

81-13

ATTN: SERVICE MANAGERS

GAME: ALL TAITO GAMES WITH A FMPO01 SWITCHING REGULATOR

SUBJECT: TROUBLESHOOTING CHART

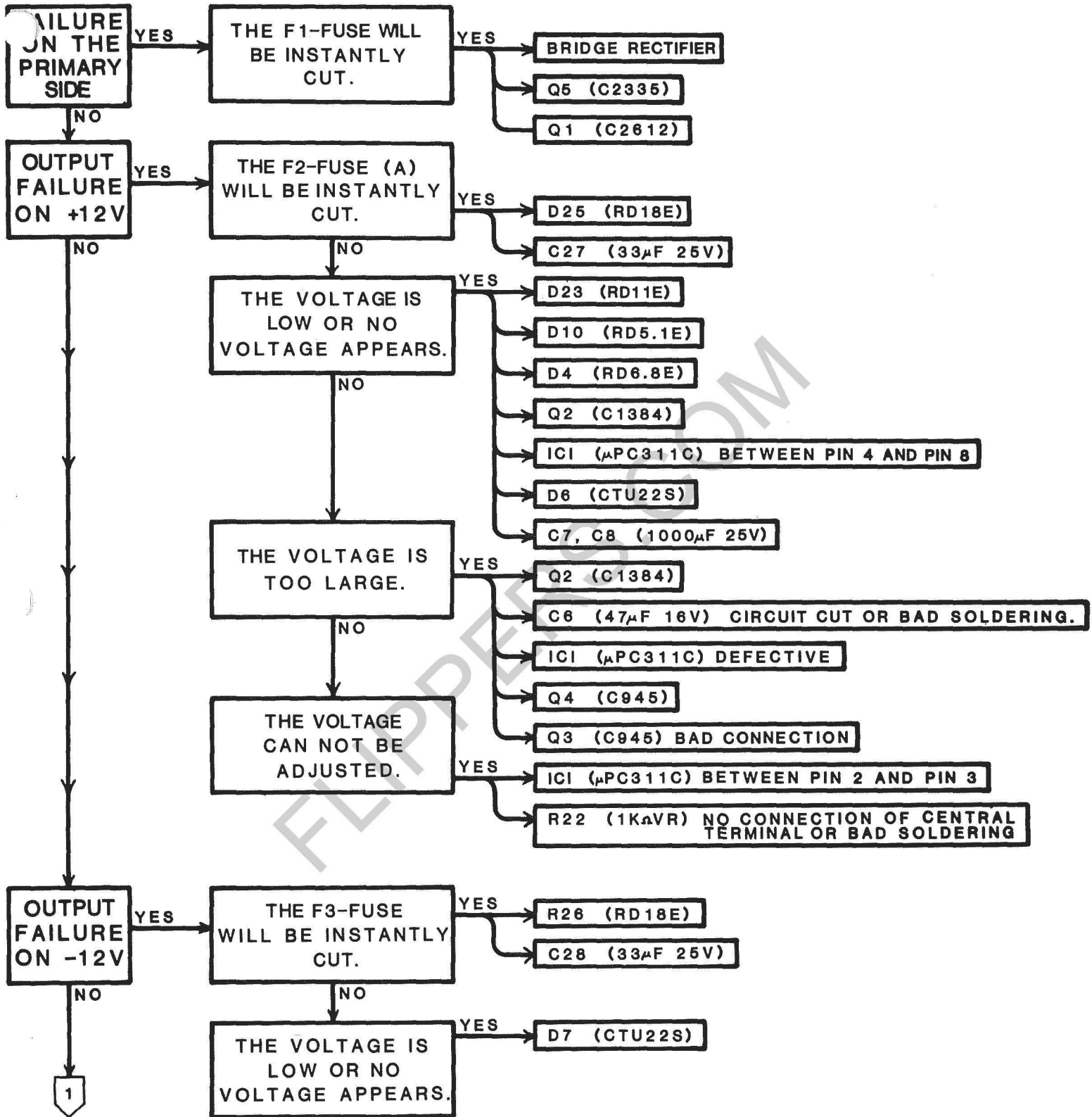
SOLUTION: AS FOLLOWS

PARTS NEEDED: NONE

DISPOSITION OF OLD PARTS: NONE

PROCEDURE: THIS TROUBLESHOOTING PROCEDURE SHOULD BE DONE IN A NO-LOAD
CONDITION WITH THE B-CONNECTOR UNPLUGGED.

YOU WILL BE LOOKING FOR SHORT CIRCUITS EXCEPT WHERE NOTED.



SERVICE TIPS

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TELEX: 253290



81-23

- MANDATORY
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ATTN: SERVICE MANAGERS

SUBJECT: SELF TEST

PROCEDURE: TO START THE SELF TEST TURN THE MACHINE OFF, SET THE SWITCHES (DIP SWITCH 1, SWITCHES 5 AND 6). REFER TO TABLE 1.

MODE 1: MEMORY TEST. WHEN IN THE MEMORY TEST MODE THE FOLLOWING WILL BE DISPLAYED ON THE SCREEN.

U\$R THIS WILL APPEAR MOMENTARILY ON THE SCREEN.
DRAM TEST OK THIS WILL APPEAR ALTERNATELY ON
DRAM THE SCREEN IN A LOOPING MODE.

MODE 2: WATCH DOG TEST. THE FOLLOWING WILL APPEAR ON THE SCREEN.
WATCH DOG TEST
COUNT FROM 1 TO 4. AFTER 4 IS DISPLAYED IT WILL BLANK WHERE THE NUMBERS WERE DISPLAYED AND THEN RECOUNT.

MODE SWITCH	1	2	3	4
5	ON	ON	OFF	OFF
6	ON	OFF	ON	OFF

TABLE 1

MODE 3: FREE RUN TEST. THE FREE RUN TEST HAS SIX (6) DIFFERENT TESTS AS LISTED BELOW.

- A. SOUND TEST
- B. RAM TEST
- C. ROM TEST
- D. MIX MODE TEST
- E. SWITCH PANEL TEST
- F. DIP SWITCH TEST

PRESS THE SERVICE SWITCH TO GO FROM SUB TEST TO SUB TEST OR LET IT STEP BY ITSELF. THE TEST THAT IS BEING RUN WILL BE DISPLAYED.

- A. *SOUND TEST*. THIS IS THE FIRST TEST RUN WHICH TESTS THE SCALE DOWN SOUNDS. THEN IT SCALES UP AT DIFFERENT PITCHES.
- B. *RAM TEST*. THIS TEST WILL DISPLAY CHARACTERS ON THE ENTIRE SCREEN. THE CHARACTERS ARE 4, K, H, BLANKS, E, AND 2, IN THAT ORDER. IF THIS TEST PASSES, "RAM TEST OK" WILL APPEAR ON THE SCREEN.
- C. *ROM TEST*. THIS TEST WILL CHECK THE CHECKSUM OF ALL ROM'S. IF IT PASSES THE TEST 'ROM TEST OK' WILL BE DISPLAYED ON THE SCREEN.
- D. *MIX MODE TEST*. NUMBERS 1 THRU 8 WILL BE SEEN IN THE MIDDLE OF THE SCREEN, EIGHT LUPINS LOOKING LEFT WILL MOVE DIAGONALLY FROM UPPER RIGHT TO LOWER LEFT OF THE SCREEN. THE SAME WILL HAPPEN WITH THE LUPINS, LOOKING RIGHT. THEN IT WILL REPEAT ITSELF WITH THE LUPINS UPSIDE DOWN ON THE SCREEN. THE LUPINS LOOK-LEFT WILL STOP AT THE NUMBERS. THEN ALL SHAPES WILL BE DISPLAYED. THEN THE ENTIRE PATTERN WILL BE REPEATED AGAIN.
- E. *SWITCH PANEL TEST*. IF YOU PRESS A SWITCH OR MOVE THE JOYSTICK, IT WILL BE INDICATED ON THE SCREEN. THE TOP BOXES DISPLAYED ON THE SCREEN ARE USED FOR THE TABLE MODELS.
- F. *DIP SWITCH TEST*. THIS TEST DISPLAYS 0 OR 1 DEPENDING ON IF THE SWITCH IS OFF (0) OR ON (1). THE SOUND TEST WILL THEN BE REPEATED.

MODE 4: PLAY MODE. YOU WILL NEED TO PUT DIP SWITCH 1, SWITCHES 5 AND 6 IN THE OFF POSITION, THEN TURN THE GAME OFF AND ON, TO START THE PLAY MODE CORRECTLY.

ROM ERROR PRINTOUT	ROM CHIP LOCATION
ER0	TOP BOARD 3D
ER1	3C
ER2	3B
ER3	3A

GAME LOCK UP WITH A CHARACTER PATTERN ON SCREEN ROM CHIP AT LOCATION 3A OR ANY OF THE RAM CHIPS (DATA BIT ERROR).

DISPLAY ERRORS (THESE DON'T GET TESTED IN THE TEST)	
	LOCATION
LIGHT BLUE AROUND LUPIN AND COPS	12-M
LIGHT BLUE BACKGROUND	12-L
DARK BLUE AROUND LUPIN AND COPS	13-M
DARK BLUE BACKGROUND	13-L
BLUE AROUND LUPIN AND COPS, LUPIN RED	15-M
BLUE BACKGROUND HALF OF COPS	15-L
NO SOUND	1-H

TO GET OUT OF THE SELF TEST MODE TURN MACHINE OFF AND SET SWITCHES TO OFF THEN TURN THE GAME BACK ON AGAIN.

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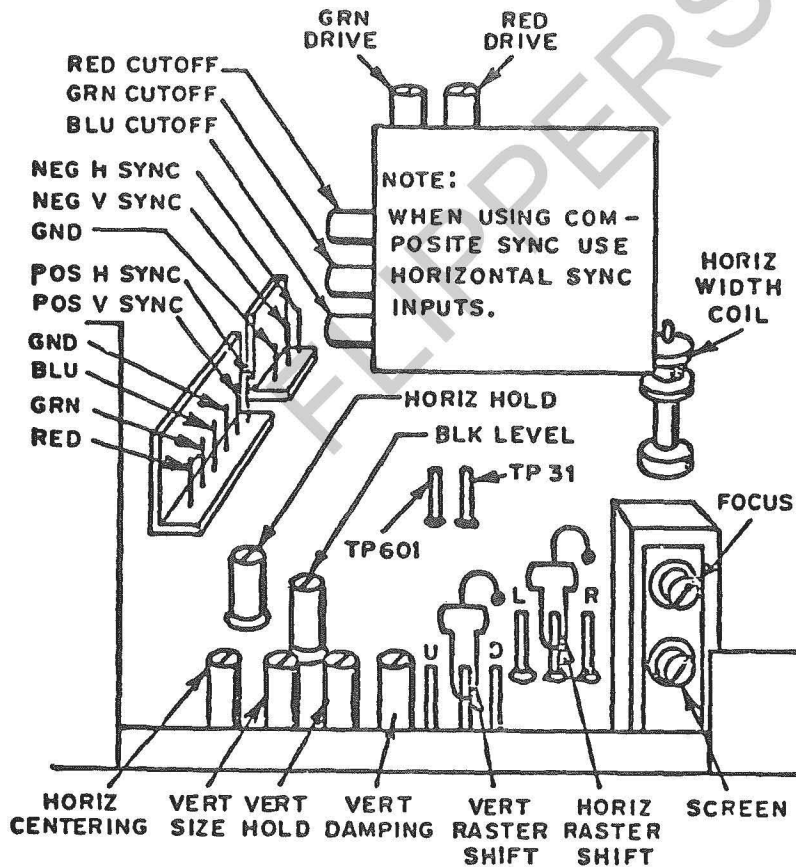


- MANDATORY
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82-17

VERTICAL DEFLECTION CIRCUIT REVISION

NOTE: When requesting service parts, or information be sure to mention the monitors model number and serial number.



All K4900 Series Monitors including, but not limited to, the following model numbers:

- | | |
|-------|--------|
| K4901 | K4952 |
| K4902 | K4956 |
| K4906 | K4956R |
| K4911 | K4961 |
| K4951 | |

TAITO AMERICA CORPORATION
 1256 Estes Ave., Elk Grove Village, IL 60007

1. IDENTIFICATION

This bulletin applies to those monitors with serial numbers of 400001 and above.

They can be identified by the following:

- A) The part number on the deflection yoke is either 2021111258 or 2021111264.
- B) The flyback transformer stabilizing bracket is labeled 611X0005-008.
- C) There is an additional control, the VERTICAL DAMPING CONTROL shown above immediately to the right of the Vertical Hold Control.

2. REASON

The applicable monitors have improved deflection yoke which provides for faster vertical retrace. This permits more lines of video to be displayed. The VERTICAL DAMPING CONTROL permits the user to adjust the uniformity of spacing of the additional lines.

3. ADJUSTMENT OF THE VERTICAL DAMPING CONTROL

The adjustment of the VERTICAL DAMPING CONTROL is important only if the vertical size is adjusted such that the additional lines appear on the screen. Turn up the Black Level Control such that the raster lines can be seen. Adjust the Vertical Damping Control such that the top raster lines are spaced uniformly and not folded over. Return the Black Level Control to the desired setting.

4. YOKE REPLACEMENT

It is IMPERATIVE that deflection yokes with part numbers 2021111258 and 2021111264 be used only with the chassis identified above. They may not be substituted for deflection yokes with part numbers 2021111194 or 2021111201. Conversely deflection yokes numbered 2021111194 and 2021111201 may not be substituted for deflection yokes numbered 2021111258 and 2021111264. Improper matching of chassis and yokes will result in insufficient vertical deflection or improper blanking operation.

* Serial numbers referred to in the above text are Wells-Gardner Serial Numbers.

SERVICE TIPS

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TELEX: 253290



83-1

- MANDATORY
- ON FAILURE ONLY
- FOR YOUR INFORMATION

ATTN: SERVICE MANAGER

GAMES: ALL

SUBJECT: SERVICE TIP INDEX

SOLUTION: ATTACHED IS THE INDEX FOR TAITO AMERICA'S SERVICE TIPS FOR 1982.

PROCEDURE: IF YOU WANT ANY SERVICE TIPS ON THIS LIST, SEND A SELF ADDRESSED STAMPED ENVELOPE TO:

TAITO AMERICA CORPORATION
1256 ESTES AVENUE
ELK GROVE VILLAGE, ILLINOIS 60007

FOR MORE THAN ONE SERVICE TIP SEND A 9" X 12" MAILER.

TAITO AMERICA CORPORATION
1256 Estes Ave., Elk Grove Village, IL 60007

Taito America Corporation
Service Tip Index

Service Tips for 1982

Service Tip
Number

- 82-1 Qix/Monitor 19" Schematic
- 82-3 Qix/Games Freezes Static
- 82-5 Alpine Ski/Joystick
- 82-6 Alpine Ski/ "T" Connector
- 82-7 Alpine Ski/Troubleshooting Chart
- 82-8 Grand Champion/Troubleshooting Block Diagram
- 82-9 Grand Champion/Power Supply Schematic
- 82-10 Grand Champion/Intermittent Reset
- 82-11 Grand Champion/Intermittent Coin Register
- 82-12 Qix/Message Memory Failure
- 82-13 Colony 7/Intermittent Freeze-up
- 82-14 Wild Western/Operators Manual Misprint
- 82-15 Wild Western/Switch Setting for Coinage
- 82-17 Vertical Deflection Circuit Revision
- 82-18 KRAM/No High Score to Date Program
- 82-19 The Electric YoYo/Number of YoYo Settings
- 82-20 Qix, KRAM, Yo Yo, Space Dungeon/ Switch Test
- 82-21 Grand Champion/Intermittent Lock-ups
- 82-22 Kram, Yo Yo, Space Dungeon/Coin Door Processor
- 82-23 Alpine Ski, Wild Western, Jungle Hunt/Power Supply
- 82-23 Grand Champion/Steering Wheel
- 82-24 Jungle Hunt/Troubleshooting Sound Chart

