
Konami®
KICKER
™

Konami

# SHAO-LIN'S ROAD™

With kicks and other Secret Power, escape from the evil temple and travel SHAO-LIN'S Road to freedom!!




- Use attack button for death kicks!
- Use attack & jump button together for flying kicks!






- Catch the purple ball! Use attack button and joystick for boomerans effect!!!



- Catch the yellow ball. Blow away your enemies!!
- Catch the green ball. Destroy attackers with deadly whirling ball!!!



SHAO-LIN'S ROAD

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Konami

№ 500678

# ★ KICKER CONVERSION KIT ★

# INSTRUCTION MANUAL



**Konami Inc.**

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# Konami Inc.

Konami®

**Ben Har-El**
President

Dear Operator:

There are 1.5 Million CHILDREN REPORTED MISSING each year in America. Some of these children are players in our Arcades.

We at Konami feel that it is our responsibility to participate in combating this Real and Growing problem. Won't You Help Us Find The Children?

Konami is working in cooperation with CHILD FIND, INC., a not-for-profit corporation organized to aid parents, legal authorities and the F.B.I. in the finding of missing children. In an effort to do so, we have attached to our kits and video games, a poster and a decal showing photos of children that are listed with Child Find as missing.

Because of the tremendous exposure your gameroom or location can provide, we ask that you PROMINENTLY DISPLAY the posters and place the decals on each of the Konami games. We, and the parents of these children are very greatful for any help that you give us in assisting this extremely important program.

If it is possible for you to assist Child Find further by sending a tax deductible donation or if you would like to volunteer any time or services, please contact Child Find at:

CHILD FIND, INC.
P. O. BOX 277
New Paltz, NY 12561
Phone: (914) 255-1848

Again, thank you very much for helping us to help find the children. We deeply appreciate your concern and cooperation.

Best regards,

KONAMI INC.

Ben Har-El
President

PLEASE DON'T FORGET TO DISPLAY THE POSTERS AND DECALS!

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# CONVERSION KIT CONTENTS:

- **MAIN PRINTED CIRCUIT BOARD**
- **P.C.B. CAGE (FCC REQUIRED)**
- **CONNECTING WIRING HARNESS**
- **6 SETS — BUTTON ASSEMBLIES**
- **4-WAY JOYSTICK**
- **MARQUEE (HEADER)**
  **(1/8" acrylic sheet)**
- **ONE SET SIDE PANEL GRAPHICS (left & right)**
- **CONTROL PANEL OVERLAY**
- **CONTROL PANEL DECALS**
  **instruction decals/button decals (2 sets)**
- **MANUAL**
- **REGISTRATION CARD**

**REPLACEMENT ACCESSORIES ARE AVAILABLE THROUGH YOUR DISTRIBUTOR.**

**THIS KIT USABLE FOR COCKTAIL AND UPRIGHT VIDEO GAMES WITH A RASTAR SCAN MONITOR WHICH IS OR CAN BE MOUNTED VERTICALLY.**

# KICKER INTRODUCTION

KONAMI CONVERSION KITS are the most complete conversion kits available today. Every detail has been carefully considered, designed and packaged to provide you the means of easily producing a professional conversion.

These kits have all the accessories to easily convert your UPRIGHT or COCKTAIL video game.

We strongly urge you to FULLY STUDY this instruction manual BEFORE you begin your conversion. It contains step-by-step instructions, schematic diagrams and suggestions on how to install your Konami Conversion Kit and maximize your profits.

KICKER can be installed in any vertically mounted rastar scan monitor game.

Everything you will need to construct your new game is provided in this kit. All accessory parts — wiring harness, joystick, etc. are custom made for KICKER by top engineers experienced in the coin-op industry. A 4-way joystick (as provided) MUST be used.

The Player Instruction and Button Control decals are made of a non-destructible acrylic material specifically to keep the player from peeling them off. Should you convert a cocktail table game, KICKER is supplied with 2 sets of button decals.

## SAVE YOURSELF TIME AND MONEY

The following P.C.B.'s are interchangeable with KICKER P.C.B.'s

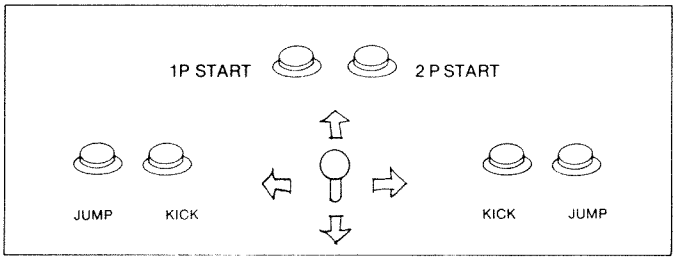
Super Cobra • Scramble • Pooyan • Locomotion • Circus Charlie
L'il Hustler • Juno First • Time Pilot • Gyruss • Tutankham • Turtles
Super Basketball • Mega Zone • Pandora's Palace • Time Pilot '84 • Track 'n' Field • Hypersports
Frogger (60% — check pin print-out) • Amidar • Roc 'N Rope • The End

In other words, your KICKER will plug right into existing edge connectors of the games listed above — be sure to check your pin print-out. (Keep in mind that Kicker is designed as a vertical game.)

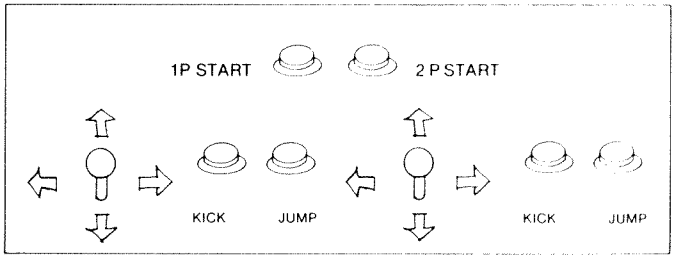
## NEW FEATURE — DUAL CONTROL

By moving SW#2 of dip switch bank #3 to the "on" position, you are now in the dual control upright mode. This allows you to set up an upright game with two sets of controls rather than one set. The first set of controls should be hooked up to the 1P set of wires; the second set to the 2P wires (see wiring diagrams). Each player still challenges the "computer-controlled" opponent (alternating play). This does not allow simultaneous interaction of players on the video screen.

**SINGLE CONTROL LAYOUT**




**DUAL CONTROL LAYOUT**



# PUTTING YOUR BEST GAME FORWARD

**PREPARATION:**

For best results, all old graphics should be removed completely from the cabinet. "Stick-on" graphics can be removed by using a hairdryer or hot air device. The heat from the dryer will loosen the adhesive, allowing you to easily peel them off — any adhesive residue can be cleaned off with acetone and a soft dry cloth. (DO NOT USE ACETONE ON SURFACES PAINTED WITH FLAT PAINT).

**TOOLS YOU NEED:**

1. Foaming Aerosol (such as "Windex").
2. Soft Squeegee.
3. X-Acto Knife.

**SIDE PANEL DECALS**

1. Spray area of cabinet where Side Panel decals are to be applied with foaming aerosol or a mild soap solution.
2. Remove protective backing from decals.
3. Position decals into place.
4. With a soft squeegee, beginning from the center of the decal, slowly and evenly press out excess foam until you achieve a smooth finish.
5. Allow to set approximately 2 to 3 hours before handling. Maximum adherence is achieved in 48 to 72 hours.
6. Trim side decal to fit your cabinet.

**CONTROL PANEL OVERLAY:**

1. Refer to Recommended Control Panel Layout on page 4.
2. Drill any new holes needed.
3. Plug any holes that will not be used. (A permanent epoxy filler works well for this step.)
4. Pre-position the overlay prior to removing the backing.
5. Slowly apply the overlay — inch by inch on the control panel, removing the backing as you apply it.
6. Once it's in place, by using an X-Acto knife, cut around the button and joystick placements.

**INSTRUCTION/BUTTON DECALS:**

Apply the Player Instruction, Button and 1 Player/2 Player decals in their respective positions. Apply pressure liberally. Allow to set as long as possible before putting game on location.

**NOTE:** Maximum adherence is achieved in 48 to 72 hours.

# MARQUEE

**(WEAR PROTECTIVE GLASSES WHILE TRIMMING MARQUEE)**

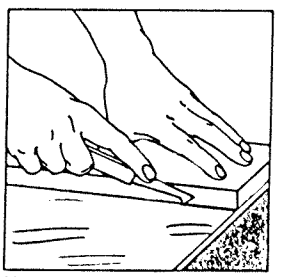
1/8" Acrylic Marquee should be cut to fit your game. DO NOT remove protective mask until this is done.

One way of cutting your Marquee is as follows: (Be sure to protect painted side of Marquee from any surface which may scratch or mar finish).

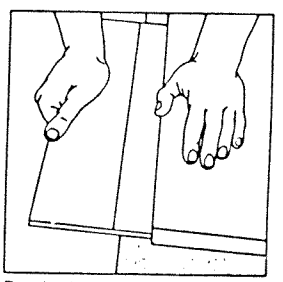
**CUTTING WITH A KNIFE OR SCRIBER**

Acrylic sheet up to 3/16" thick may be cut by a method similar to that used for cutting window glass. Use a scriber of some kind — a scribing knife such as the one pictured, a metal scriber, an awl, or even a sturdy craft knife — to score the sheet. Draw the scriber several times (7 or 8 times for a 3/16" thick piece) along a straight edge held firmly in place. It is best not to remove the protective masking. Make the cuts carefully using firm, even pressure. For best results make each stroke cleanly off the edge of the sheet.

Then, clamp the acrylic sheet or hold it rigidly under a straight edge with the scribe mark hanging just over the edge of a table. Protect your hands with a cloth, and apply a sharp downward pressure to the other side of the sheet. It will break along the scratch. Scrape the edges to smooth any sharp corners. This method is not recommended for long breaks or thick material.



Always draw the scribing knife along a straight edge.



Break sheet over edge of table after scribing.

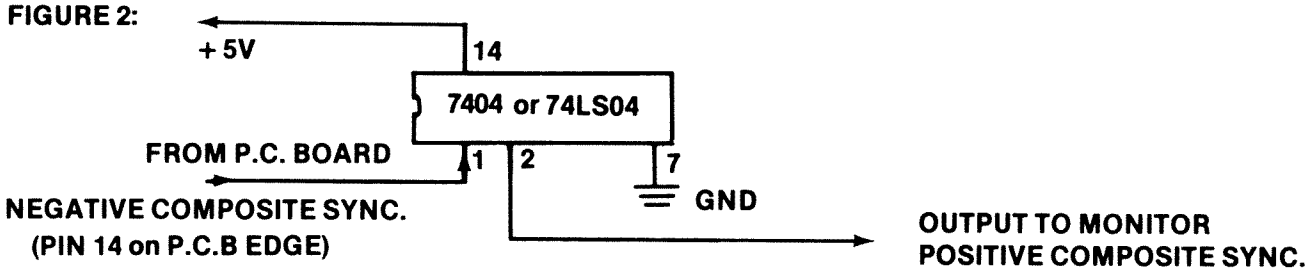
# KICKER: MONITOR SPECIFICATIONS

Kicker requires a vertically mounted monitor. It also generates composite negative sync. If your monitor is composite positive sync, you will have to change to composite negative sync.

(1) To alternate composite positive sync to composite negative sync, use 7404 IC or 74LS04 IC. The signal on the output pin from the P.C.B. is a combination of H-sync and V-sync.

**NOTE:** Please refer to Figure 2.

**FIGURE 2:**

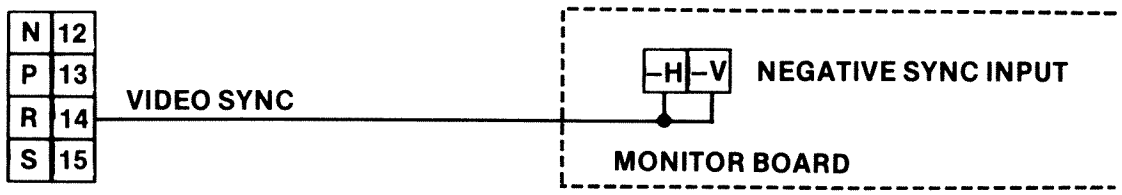



(+ 5V and GND should be taken out of the P.C. Board.)

(2) Separate Sync modification for KICKER if your monitor has "Separate Sync" input. (For example "Electrohome brand" and Wells-Gardner brand.")

**Step 1**

**WIRING HARNESS**

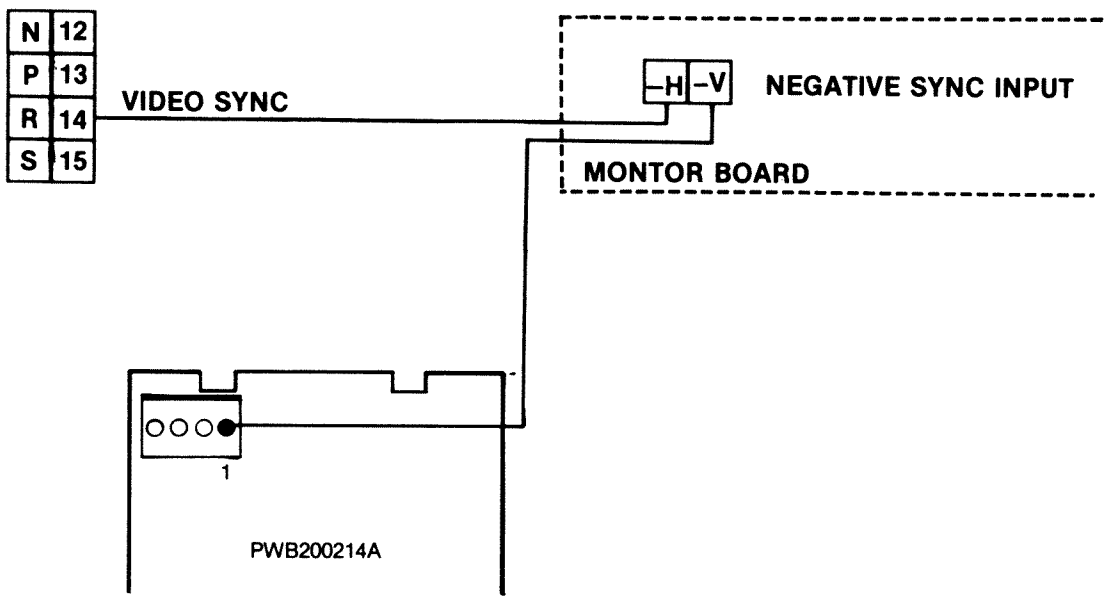



If the picture is still not stable...

**Step 2**

Prepare Hook-up wire. (For example "Electrohome brand.")

**WIRING HARNESS**



# KICKER: MONITOR INFO.

## SERVICE INSTRUCTIONS

NOTE: All monitors are equipped with automatic degaussing coils (L701) which demagnetize the picture tube every time the monitor is turned on after being off for a minimum of 5 minutes. Should any part of the chassis become magnetized it will be necessary to degauss the affected area with a manual degaussing coil. Move the coil slowly around the CRT face and all surrounding metal parts. Then slowly withdraw for a distance of 6 feet before turning off.

### 1.0 BLACK LEVEL CONTROL ADJUSTMENT

This control has been set at the factory and should not need further attention, however, when the game is connected a slight adjustment of VR201 may be necessary to obtain the proper black level (the black portion of the picture just extinguished).

### 2.0 VERTICAL SIZE (HEIGHT)

Location of this control is shown in Fig. 1. This control must be adjusted slowly, if necessary, until the picture or test pattern attains the correct vertical proportions.

### 3.0 CIRCUIT PROTECTION

A 4.0A pigtail fuse, mounted on the Main Board has been provided to protect the Power Output Circuit.

### 4.0 FOCUS

Adjust the focus control, located on the HV unit (T352), for maximum over-all defination and fine picture detail.

### 5.0 HORIZONTAL HOLD CONTROL ADJUSTMENT, VR351 (See Fig. 1)

A warm-up period of at least five minutes should be allowed before alignment is carried out. With the monitor being driven from the game signal, short TP601 to TP31. Adjust VR351 until the picture stops sliding horizontally. Remove the short.

### 6.0 HORIZONTAL VIDEO POSITION

If the video is off center on the raster some compensation can be made by adjusting this control.

### 7.0 VERTICAL RASTER POSITION ADJUSTMENT

If the video is off center vertically, (short dimension of picture tube) some compensation can be made by moving the vertical raster position adjustment jumper to either positions "U" or "D".

### 8.0 HORIZONTAL RASTER POSITION ADJUSTMENT

If the video is off center horizontally (long dimension of the picture tube) some compensation can be made by moving the horizontal raster position adjustment jumper to either positions "R" or "L".

### 9.0 HORIZONTAL WIDTH ADJUSTMENT

The horizontal width coil is a hexagonal tuning tool adjustment. This control must be adjusted slowly, if necessary, until the picture or test pattern attains the correct horizontal proportions.

* KONAMI GAMES ARE ALL NEGATIVE COMPOSIT SYNC. USE THE THREE PIN CONNECTOR ON THE MONITOR.

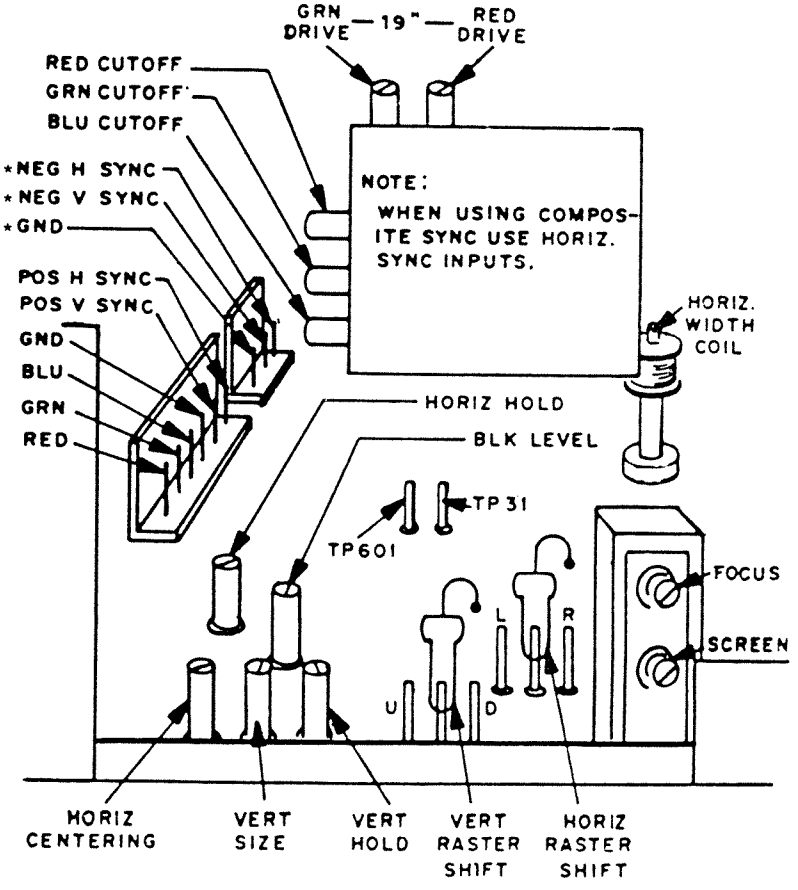



FIGURE 1

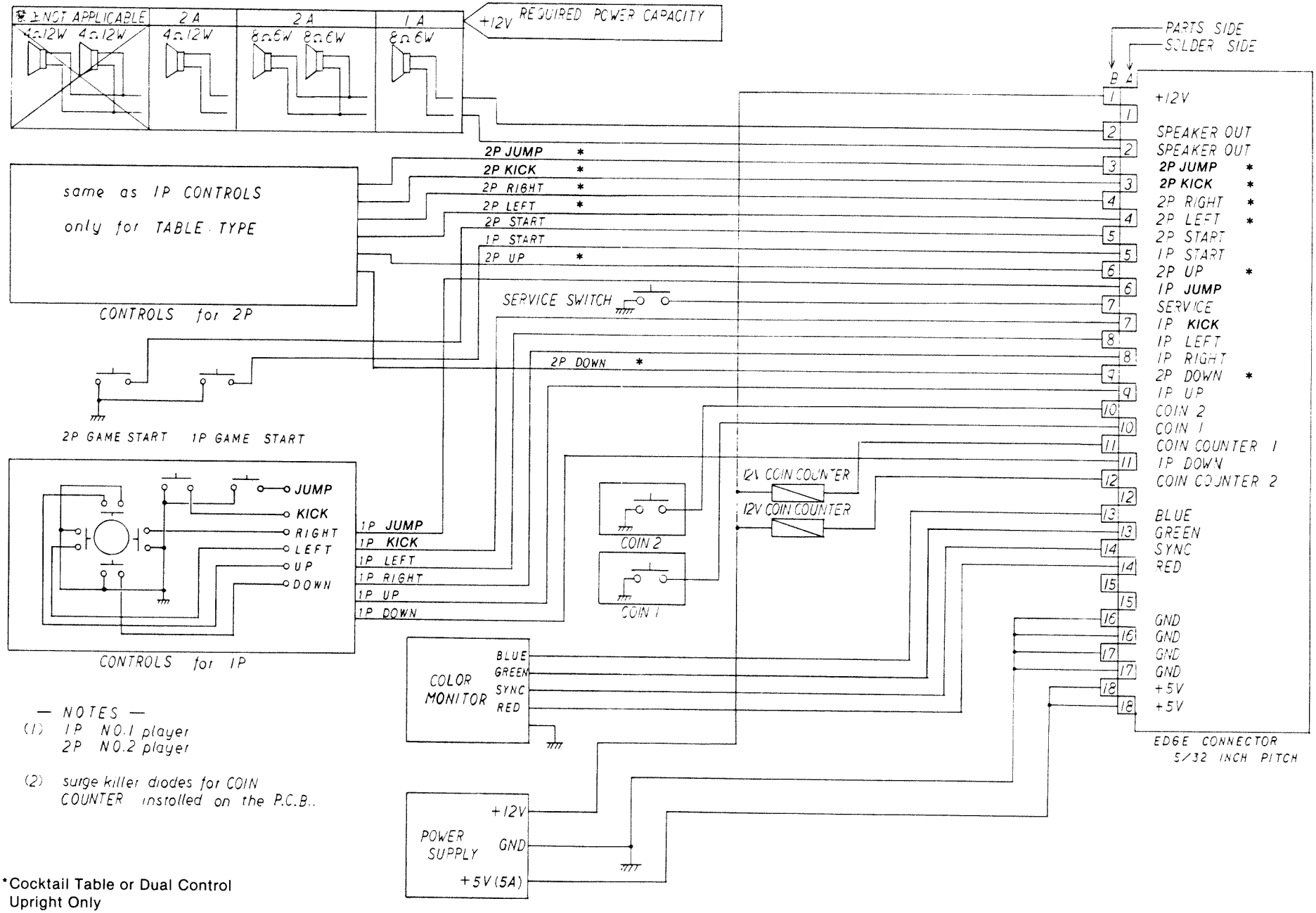
# KICKER: WIRING HARNESS

| WIRE COLOR KEY: | Unlettered Side (Solder Side) | | | Lettered Side (Parts Side) | |
|---|---|---|---|---|---|
| | **(EMPTY)** | **A** | **1** | + 12V DC | ORANGE |
| RED/GREEN | SPEAKER OUT | B | 2 | SPEAKER OUT | ORANGE/GREEN |
| RED/YELLOW | * 2P KICK | C | 3 | 2P JUMP * | ORANGE/YELLOW |
| BROWN/YELLOW | * 2P LEFT | D | 4 | 2P RIGHT* | BLUE/YELLOW |
| VIOLET/WHITE | 1P START | E | 5 | 2P START | VIOLET/YELLOW |
| ORANGE/WHITE | 1P JUMP | F | 6 | 2P UP* | BLACK/YELLOW |
| RED/WHITE | 1P KICK | H | 7 | SERVICE SW | ORANGE/GRAY |
| BLUE/WHITE | 1P RIGHT | J | 8 | 1P LEFT | BROWN/WHITE |
| BLACK/WHITE | 1P UP | K | 9 | 2P DOWN* | GRAY/YELLOW |
| RED/GRAY | COIN 1 | L | 10 | COIN 2 | BLUE/GRAY |
| GRAY/WHITE | 1P DOWN | M | 11 | COIN COUNTER 1 | GREEN/GRAY |
| WHITE/PINK | (NOT USED) | N | 12 | COIN COUNTER 2 | YELLOW/GRAY |
| GREEN/BROWN | VIDEO GREEN | P | 13 | VIDEO BLUE | BLUE/BROWN |
| RED/BROWN | VIDEO RED | R | 14 | VIDEO SYNC | WHITE/BROWN |
| | (EMPTY) | S | 15 | (NOT USED) | YELLOW/PINK |
| BLACK | GND | T | 16 | GND | BLACK |
| BLACK | GND | U | 17 | GND | BLACK |
| RED | + 5V DC | V | 18 | + 5VDC | RED |

(BASE COLOR/LINE COLOR)

*Cocktail Table or Dual Control Upright Only

# KICKER
# WIRING DIAGRAM




— NOTES —

(1) 1P NO.1 player
2P NO.2 player

(2) surge killer diodes for COIN COUNTER installed on the P.C.B..

*Cocktail Table or Dual Control Upright Only

# KICKER: TECHNICAL INFORMATION

(1) Required Power Capacity

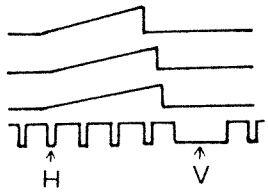
+5V DC 7A or more.

+12V DC See Figure 1 below

**Figure 1:**

| SPEAKER | 8Ω 6W | 8Ω6W 8Ω6W | 4Ω12W | 4Ω12W 4Ω12W |
|---|---|---|---|---|
| **Required Power Capacity** | **12V 1A** | **12V 2A** | **12V 2A** | **Not Applicable** |

(2) Signal output
R(red) analog, positive
G(green) analog, positive
B(blue) analog, positive
Sync. H-V composite negative




## DIAGNOSTIC PROCEDURES

**AUTOMATIC SELF-TEST** — Upon "Power On", this system will automatically test ROMS and VIDEO RAMS. The screen will display pass or conditions as follows:

ROM 1 OK
ROM 2 OK = TEST PASSED

RAM 1 OK
RAM 2 OK = TEST PASSED

If there is a poblem, before contacting your distributor:
1. Check that all chips on board and wiring connections are tight.
2. Check output from power supply at the board. (Do not just check at the power supply as voltage drops may occur over the length of the wire.)

**MANUAL TEST** — A more detailed five step diagnostic may be performed by moving SW3 of Dip Switch Bank #3 to the "on" position while power to game is off. Turn power "on" and proceed as follows:

1. COLOR TEST
The screen will display V RAM color & OBJ color blocks. If a block shows any irregularities (e.g., lines or dots in color blocks), this could be due to a failure of VIDEO RAM, COLOR RAM, or OBJ CIRCUITS. Use these blocks to further adjust monitor focus and colors.

2. SWITCH TEST
From color test, press One Player Start and the screen will display all switches with a zero (0) to the right. When a switch is activated the zero (0) should change to a one (1).

3. COIN COUNTER TEST
From switch test, press One Player Start and the screen will display "coin counter". While number one (1) is shown, counter one should pulse eight times. When number two (2) is shown, counter two should pulse eight times also.

4. DIP SWITCH SETTINGS
Press Player 1 and the screen will display most of the programmable features with their respective settings. These settings should correspond to the positions of the dip switches.

5. SOUND TEST
From dip switch settings, press One Player Start. The game will go through all sounds of Kicker's program.

TO EXIT DIAGNOSTICS —
TURN POWER OFF AND RETURN SW3 TO OFF POSITION. THEN TURN POWER BACK ON.

# DIP SWITCH SETTINGS

## DIP SW No. 1 Settings

Coin 1 Switch Set

| SW | 4 | 3 | 2 | 1 | COIN | PLAY |
|---|---|---|---|---|---|---|
| • | OFF | OFF | OFF | OFF | 1 | 1 |
| | | | OFF | ON | 1 | 2 |
| | | | ON | OFF | 1 | 3 |
| | | | ON | ON | 1 | 4 |
| | OFF | ON | OFF | OFF | 1 | 5 |
| | | | OFF | ON | 1 | 6 |
| | | | ON | OFF | 1 | 7 |
| | | | ON | ON | 2 | 1 |
| | ON | OFF | OFF | OFF | 2 | 3 |
| | | | OFF | ON | 2 | 5 |
| | | | ON | OFF | 3 | 1 |
| | | | ON | ON | 3 | 2 |
| | ON | ON | OFF | OFF | 3 | 4 |
| | | | OFF | ON | 4 | 1 |
| | | | ON | OFF | 4 | 3 |
| | | | ON | ON | FREE PLAY | |

Coin 2 Switch Set

| SW | 8 | 7 | 6 | 5 | COIN | PLAY |
|---|---|---|---|---|---|---|
| • | OFF | OFF | OFF | OFF | 1 | 1 |
| | | | OFF | ON | 1 | 2 |
| | | | ON | OFF | 1 | 3 |
| | | | ON | ON | 1 | 4 |
| | OFF | ON | OFF | OFF | 1 | 5 |
| | | | OFF | ON | 1 | 6 |
| | | | ON | OFF | 1 | 7 |
| | | | ON | ON | 2 | 1 |
| | ON | OFF | OFF | OFF | 2 | 3 |
| | | | OFF | ON | 2 | 5 |
| | | | ON | OFF | 3 | 1 |
| | | | ON | ON | 3 | 2 |
| | ON | ON | OFF | OFF | 3 | 4 |
| | | | OFF | ON | 4 | 1 |
| | | | ON | OFF | 4 | 3 |
| | | | ON | ON | INVALIDITY | |

## DIP SWITCH NO. 2 SETTINGS

THE NUMBER OF PLAYER'S LIFE

| SW | 1 | 2 | NUMBER |
|---|---|---|---|
| • | OFF | OFF | 2 |
| | ON | OFF | 3 |
| | OFF | ON | 5 |
| | ON | ON | 7 |

CHANGE OF TABLE OR UP-RIGHT

| SW | 3 | TYPE |
|---|---|---|
| | OFF | TABLE |
| • | ON | UP-RIGHT |

BONUS SET

| SW | 4 | 5 | BONUS POINTS |
|---|---|---|---|
| • | OFF | OFF | At 30,000 Pts. & Every 70,000 Pts. Thereafter |
| | ON | OFF | At 40,000 Pts. & Every 80,000 Pts. Thereafter |
| | OFF | ON | 40000 PTS |
| | ON | ON | 50000 PTS |

Difficulty of the Game

| SW | 6 | 7 | DIFFICULTY |
|---|---|---|---|
| | OFF | OFF | EASY |
| • | ON | OFF | NORMAL |
| | OFF | ON | DIFFICULT |
| | ON | ON | VERY DIFFICULT |

SOUND IN ATTRACT MODE

| SW | 8 | SOUND |
|---|---|---|
| | OFF | OFF |
| • | ON | ON |

## DIP SWITCH NO. 3 SETTINGS

Video Screen Flip

| SW | 1 | |
|---|---|---|
| • | OFF | NORMAL |
| | ON | UPSIDE DOWN |

Single/Dual Control Upright

| SW | 2 | TYPE |
|---|---|---|
| • | OFF | SINGLE UPRIGHT CONTROL |
| | ON | DUAL UPRIGHT CONTROL |

Game Test Mode

| SW | 3 | MODE |
|---|---|---|
| • | OFF | GAME MODE |
| | ON | CHECK MODE |

*SW 4: NOT USED

•SHOWS NORMAL SETTING

## USER INFORMATION

# WARNING

## F. C. C. REGULATION COMPLIANCE

THE P.C. BOARD CAGE* SUPPLIED WITH THIS CONVERSION KIT MUST BE UTILIZED AND TERMINATED TO GROUND AT THE TIME OF INSTALLATION.

THIS IS TO AVOID RADIO FREQUENCY RADIATION AND COMPLY WITH THE LIMITS FOR A CLASS "A" COMPUTING DEVICE PURSUANT TO SUB-PART "J" OF PART 15 OF F.C.C. RULES, WHICH ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST SUCH INTERFERENCE WHEN OPERATED IN A COMMERCIAL ENVIRONMENT.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE INTERFERENCE - IN WHICH CASE, THE USER AT HIS OWN EXPENSE, WILL BE REQUIRED TO TAKE WHATEVER MEASURES MAY BE REQUIRED TO CORRECT THE INTERFERENCE.

*The P.C.B. Cage furnished with this kit has been designed by Konami to afford easy access to the board. Once installed, the cage can be opened by simply removing 2 screws.

Konami®

**1555 BRUMMEL AVENUE, ELK GROVE VILLAGE, IL 60007**
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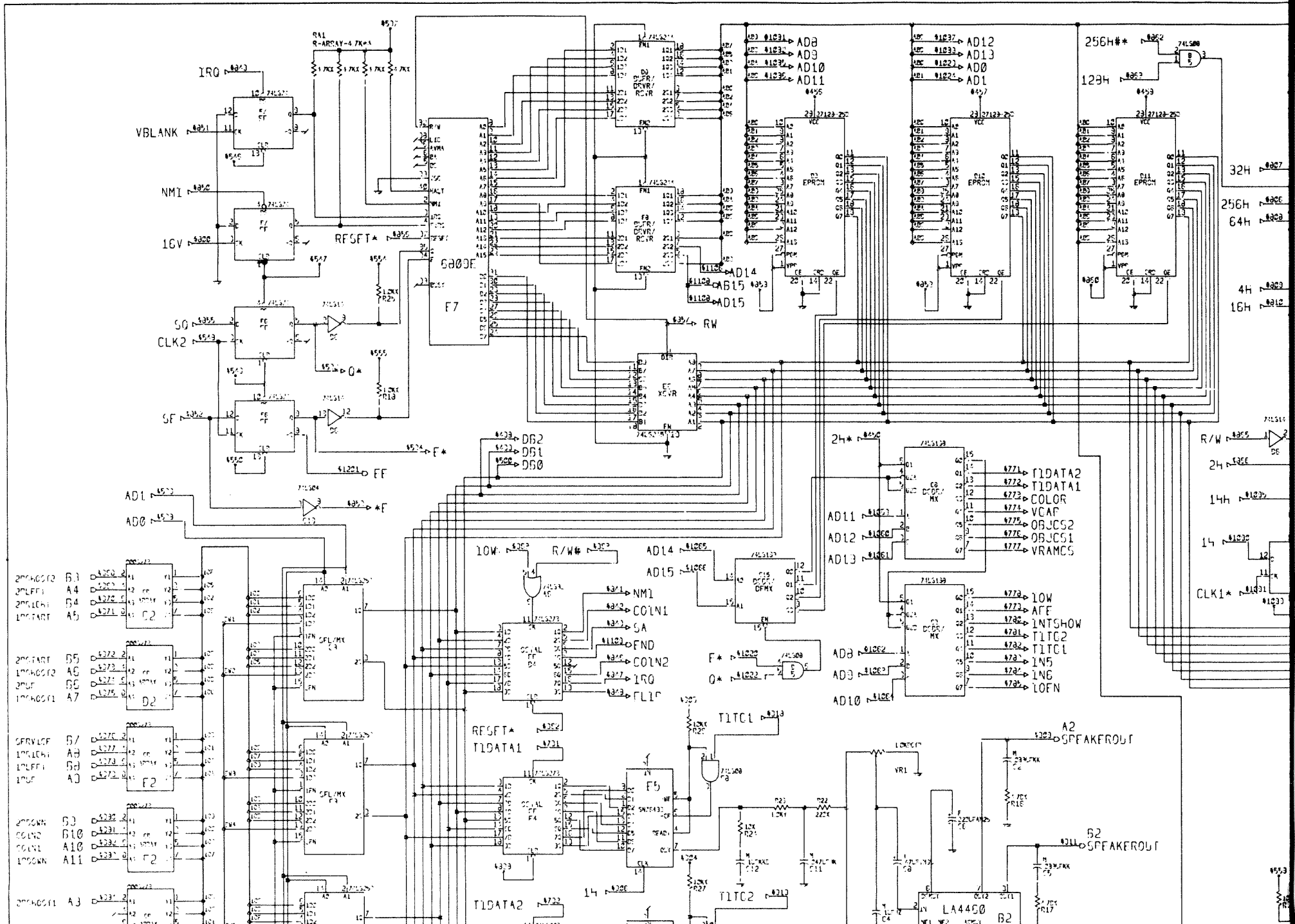
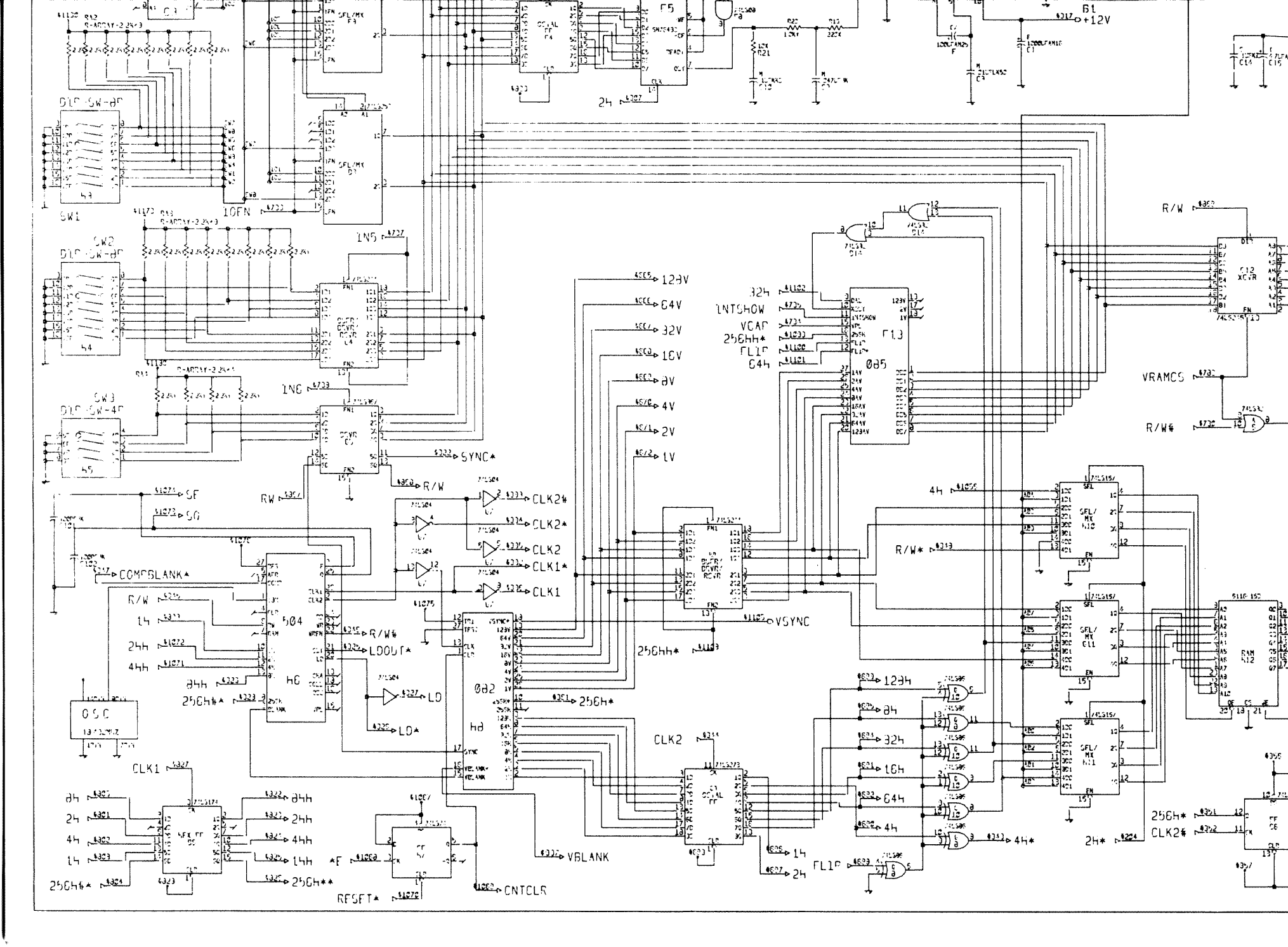
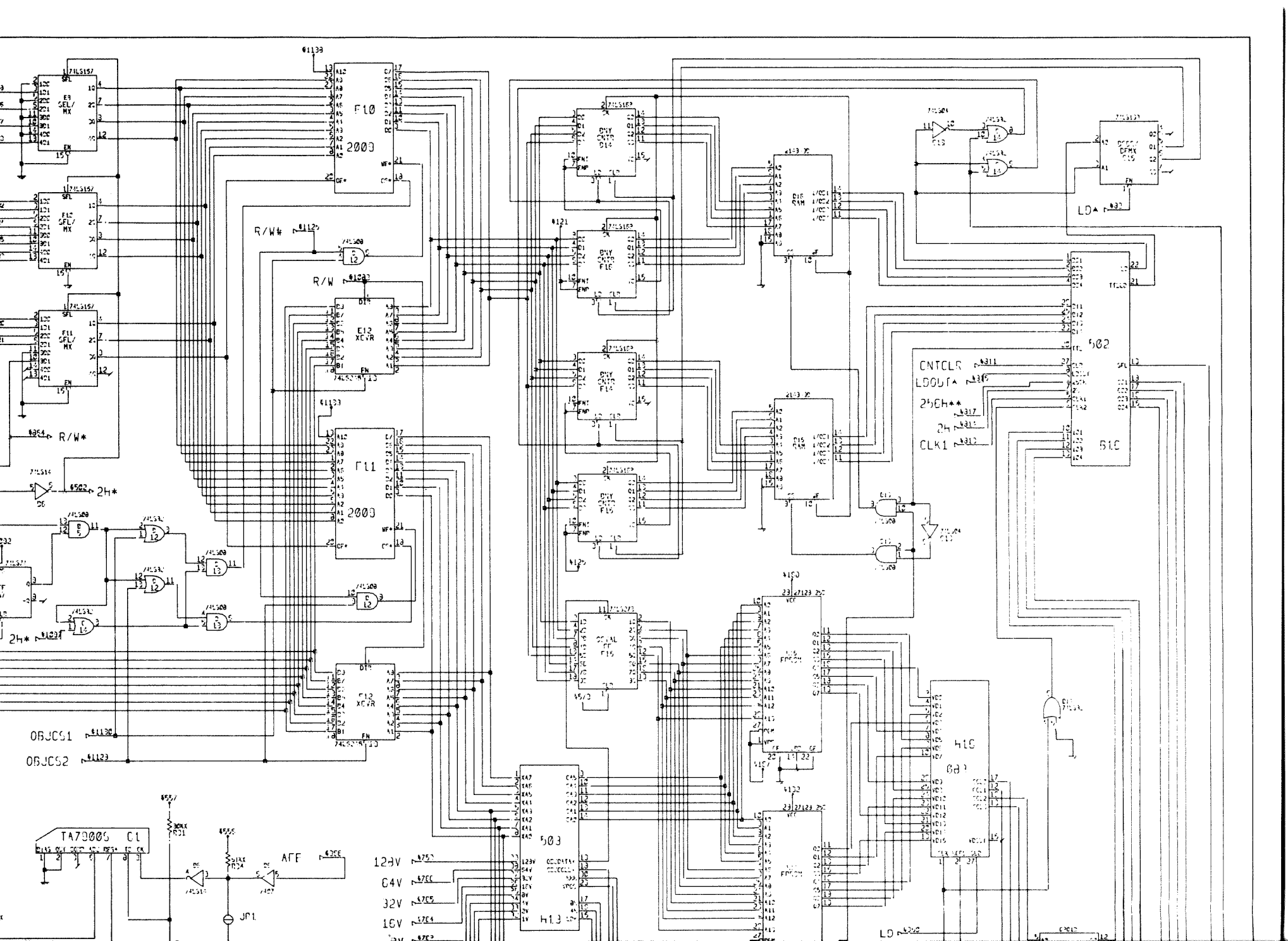


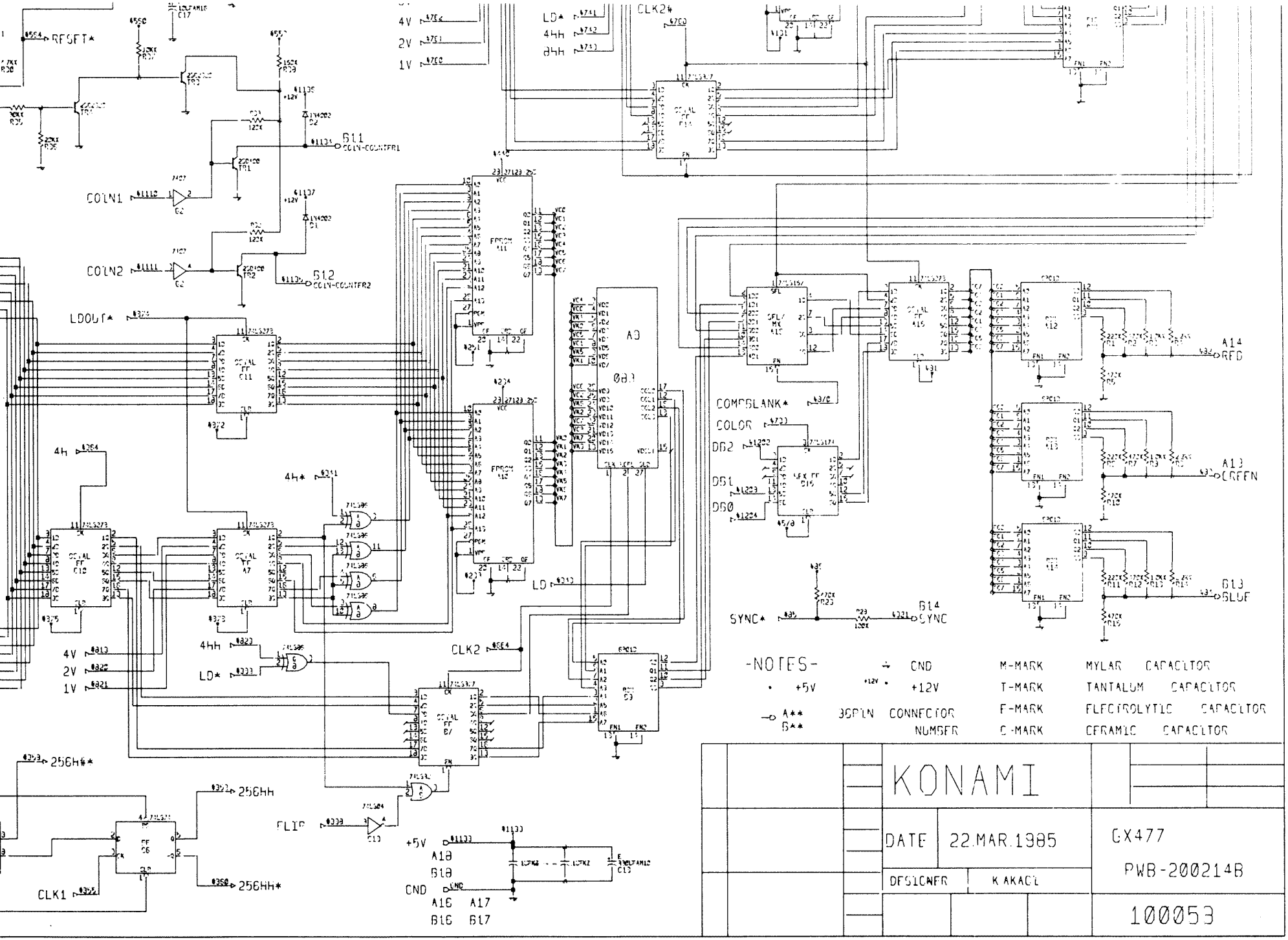
IRQ
VBLANK
NMI
16V
SQ
CLK2
SF
RESET*
6809E
F7
RW
AD8
AD9
AD10
AD11
AD12
AD13
AD0
AD1
AD14
AB15
AD15
256H#*
128H
32H
256H
64H
4H
16H
R/W
2H
14H
1H
CLK1*
DB2
DB1
DB0
AD1
AD0
*F
2H*
TIDATA2
TIDATA1
COLOR
VCAP
OBJCS2
OBJCS1
VRAMCS
IOW
AFF
INTSHOW
TITC2
TITC1
IN5
IN6
IOFN
IOW
R/W#
NMI
COIN1
SA
FND
COIN2
IRQ
FLIP
F*
Q*
TITC1
TITC2
TIDATA1
TIDATA2
A2
SPEAKEROUT
B2
SPEAKEROUT
LA4460
B2



SW1
SW2
SW3
DIP-SW-8P
DIP-SW-4P
IOFN
IN5
IN6
SYNC*
R/W
SF
SG
COMPBLANK*
R/W#
LDOUT*
LD
LD*
CLK1
CLK2
CLK2#
CLK1*
CLK1#
OSC
RESET*
CNTCLR
VBLANK
VSYNC
256H*
128V
64V
32V
16V
8V
4V
2V
1V
INTSHOW
VCAP
FLIP
R/W*
VRAMCS
R/W#
+12V
B1
F5
F13
085
082
504
H6
H8
SFL/MX
RAM
XCVR



F10
2009
F11
2009
E12
XCVR
F12
XCVR
E9
SEL/
MX
E10
SEL/
MX
E11
SEL/
MX
R/W*
R/W
2H*
OBJCS1
OBJCS2
TA7900S C1
AFE
JP1
128V
64V
32V
16V
503
H13
502
B10
CNTCLR
LDOUT*
256H**
2H
CLK1
LD*
LD


RESET*
COIN1
COIN2
B11
COIN-COUNTER1
B12
COIN-COUNTER2
LDOUT*
4H
4H*
LD*
LD
CLK2
CLK1
4V
2V
1V
4HH
256H*
256HH
256HH*
FLIP
+5V
GND
A18
B18
A16
A17
B16
B17
COMPBLANK*
COLOR
DG2
DG1
DG0
SYNC*
A14
RED
A13
GREEN
B13
BLUE
B14
SYNC
-NOTES-
+5V
GND
+12V
A**
B**
36PIN CONNECTOR NUMBER
M-MARK MYLAR CAPACITOR
T-MARK TANTALUM CAPACITOR
E-MARK ELECTROLYTIC CAPACITOR
C-MARK CERAMIC CAPACITOR
KONAMI
DATE 22.MAR.1985
DESIGNER K.AKAGI
GX477
PWB-200214B
100053