KARATE CHAMP

SERVICE BULLETIN

We have identified the following technical
problems on some of the Karate Champ upright
video games manufactured to date. We will
point these problems out to you in order
of priority and prescribe the necessary
modifications needed to fix these problems.

PROBLEM 1 COINAGE PROBLEMS

Symptom: When a coin is inserted into the coin mechanism,
the coin meter registers it but instead of a
credit on the screen, the game resets to the
attraction mode.

Symptom: When a coin is inserted a credit is actually shown
on the screen but when the player button is pushed
to start the game, the screen resets back to the
attraction mode instead of starting normal game
play.

REFER TO SOLUTIONS, A, B, & C and if problem still
persists, perform solution D.

PROBLEM 2 SLOW MOTION VIDEO

Symptom: Infrequently you might experience slow motion
character movement (1/8 normal speed) on the
screen.

Solution: IC MODIFICATION

Remove the PCB from the game and determine
whether you have the DATA EAST part number
DE-0190-0, DE-0190-1, DE-0190-2.

If you have PCB part number DE-0190-0 or
DE-0190-1, the following instructions refer to
the device at location 11K (74LS74) on the
upper PCB.

If you have PCB Part number DE-0190-2, the following
instructions refer to the device at location 12K
(74LS74) on the upper PCB.

a) Carefully cut Pin No. 4 at a point very
    close to the PCB and bend it upward. Be
    Careful not to break the pin off!

b) Carefully solder a short jumper from Pin
    No. 4 to Pin No. 14 of this same device
    (74LS74). NOTE: Pin No. 14 is Vcc (+5v)

    DO NOT over heat the device.

    DO NOT use excess solder..

    DO NOT allow solder bridging to adjacent
           pins on the device.

The schematic of the effected circuit is found
on sheet 1 of 12 of the NO1-80 PCB in your
KARATE CHAMP Player Vs. Player Instruction Manual.

REFER TO DIAGRAM 1

Solution A: ADDITION OF 2 CAPACITORS

For PCB Part Numbers DE-0190-0, DE-0190-1 and
DE-0190-2, perform the following modification
on the device at location H8 (74LS04) on the top
PCB.

a) Carefully solder a 10 MicroFarad (10MFD),
    16 volt tantalum/aluminum capacitor between
    Pin 3 and Pin 7 of the device (pin 7 is
    ground). Be careful to observe the polarity
    of the capacitor! the side marked PLUS (+)
    must be connected to Pin 3.

b) Carefully solder a 10 MicroFarad (10MFD),
    16 volt capacitor between Pin 11 and Pin 7
    of the device. Be careful to observe
    the polarity of the capacitor! the end
    marked PLUS (+) must be connected to Pin 11.

DO NOT overheat the device.

DO NOT apply excess solder.

DO NOT allow solder bridging to adjacent pins
       on the device.

REFER TO DIAGRAM 2

Solution B: COIN DOOR HARNESS MODIFICATION

On the Coin Control Coin Door assembly the
following needs to be done on the harness
coming out of the coin mechanism. Instead
of using Coin 1 socket you want to switch to
Coin 2 socket by using either one of the following
fixes.

c) Using AWG # 18 (or larger) wire, run a ground
   wire from one of the joystick studs on the
   control panel to the ground stud on the power
   supply chassis (for Dynamo produced games, run
   this ground wire to the ground stud at the
   noise filter which is part of the back door
   interlock assemble). DATA EAST produced games
   may already have a ground wire connected to
   one of the joystick mounting studs. If so, this
   wire is probably bundled with the other signal
   wire, and must be clipped out.

   REFER TO DIAGRAM 4

1) On the 6 Pin molex connector having male
   pins. Relocate the wire located in hole
   2 to hole 5.

2) If you do not have a "Pin Pusher type tool"
   you may cut the black wire on the
   Female Pin Side of the molex connector,
   strip the ends of the wire and then
   tie them up to the wire located in hole 2
   of the male pin side of the molex connector.

REFER TO DIAGRAM 3

Solution C: EPROM SPEED VERIFICATION

Examine the proms designated BS 16 through
BS 24 on the PC Board. Refer to the attached
chart and verify that the speed of the proms
designated Bs 16 through BS 24 is 200, 250, or
300 nano-seconds. The manufacturers code
will tell you the speed of the proms. 350 or
450 nano-second proms are slower, and may not
work.

If you have 350 or 450 nano-second Eproms,
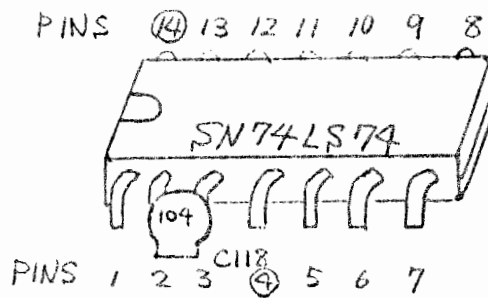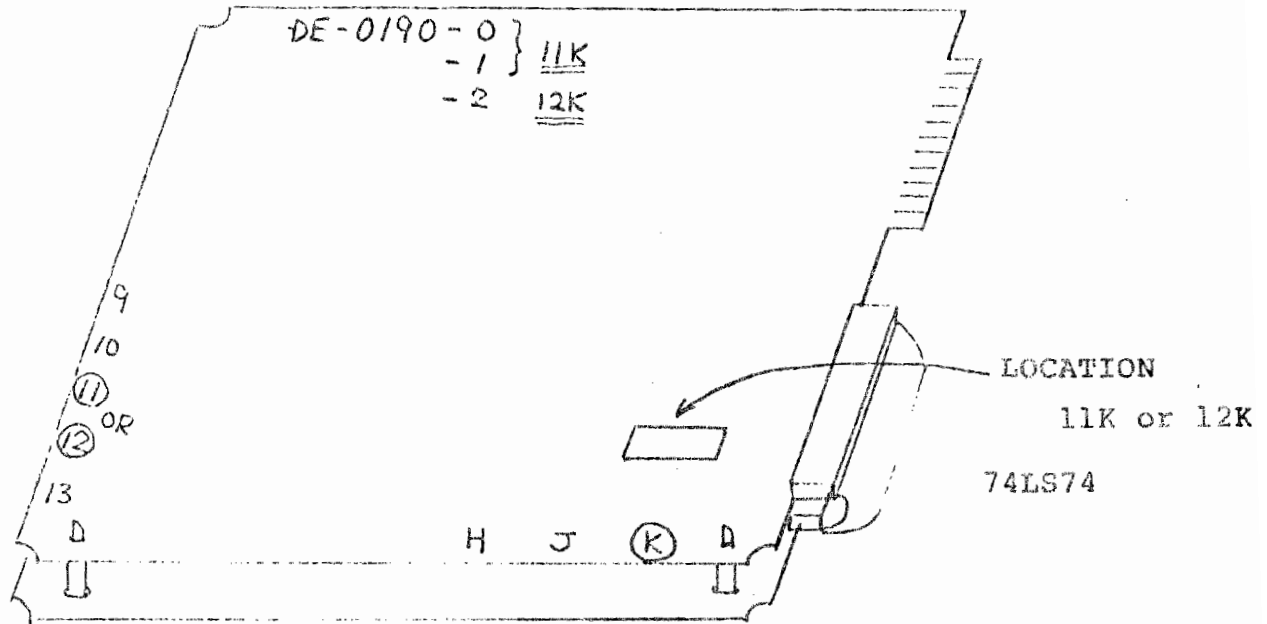call our toll free number to arrange replace-
ment proms.

You will not be receiving a different program
on these Eproms, but rather just faster Eproms.
The need for these Eproms should only occur in
a very few instances and you should not resort
to this unless you have tried all of the above
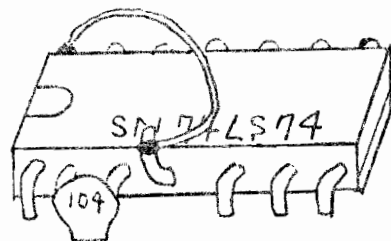procedures in a step by step fashion.

Solution D: GROUNDING

a) Using SWG #18 wire (or larger) jumper from
   the left coin mechanism to the right coin
   mechanism and then to the coin door frame.

b) Run a second ground wire from the coin door
   frame to the ground stud on the power supply
   chassis. Do not run this ground wire to
   the logic ground terminal on the power supply.

NOTE: For games having serial numbers higher than 261000
      (produced by Dynamo) run the ground wire from the
      coin door frame to the ground stud at the noise filter
      which is part of the back door interlock assembly. You
      can locate the game serial number and manufacturer by
      looking at the labels on the back of the cabinet.

DIAGRAM 1

DE-0190-0 ⎫
        -1 ⎭ 11K
        -2   12K

9
10
⑪ OR
⑫
13
D

H   J   Ⓚ   D

LOCATION

11K or 12K

74LS74

PINS ⑭ 13 12 11 10 9 8

SN74LS74

104

C118

PINS 1 2 3 ④ 5 6 7

BEFORE MODIFICATION

SN74LS74

104

WHEN MODIFIED

DIAGRAM 2

PCB

DE-0190-0
      -1
      -2

LOCATION

   8H

PINS 14 13 11 10 8

74LS04

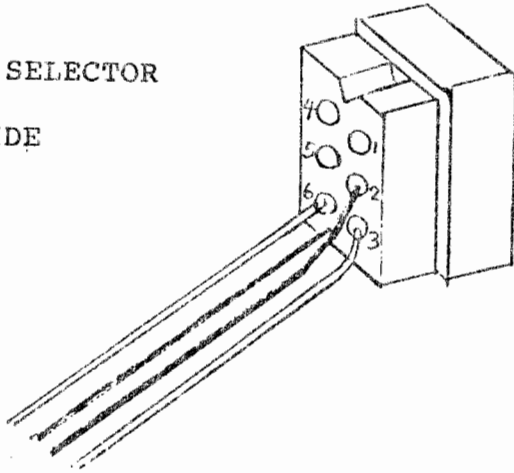PINS 1 2 3 4 5 6 7
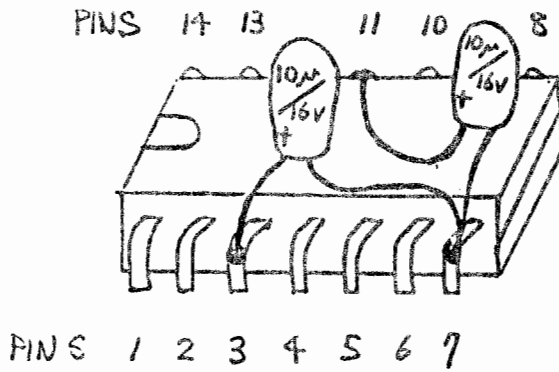
DIAGRAM 3

COIN SELECTOR

SIDE

MAIN HARNESS

SIDE
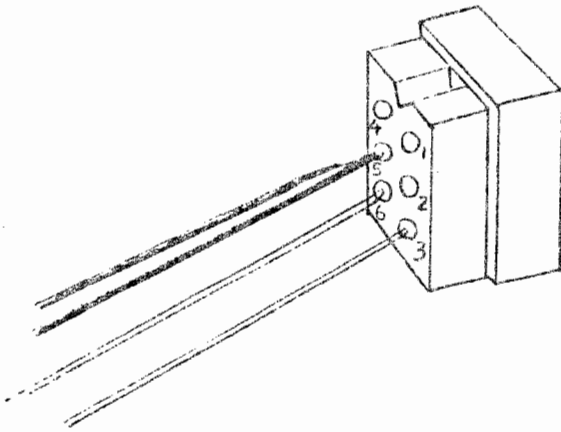
DIAGRAM 4
GROUNDING

CONTROL PANEL

JOYSTICK

JOYSTICK

JOYSTICK

JOYSTICK

EXISTING GROUND WIRE
BUNDLED WITH SIGNAL WIRES
CLIP THIS WIRE!
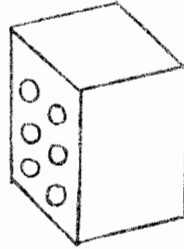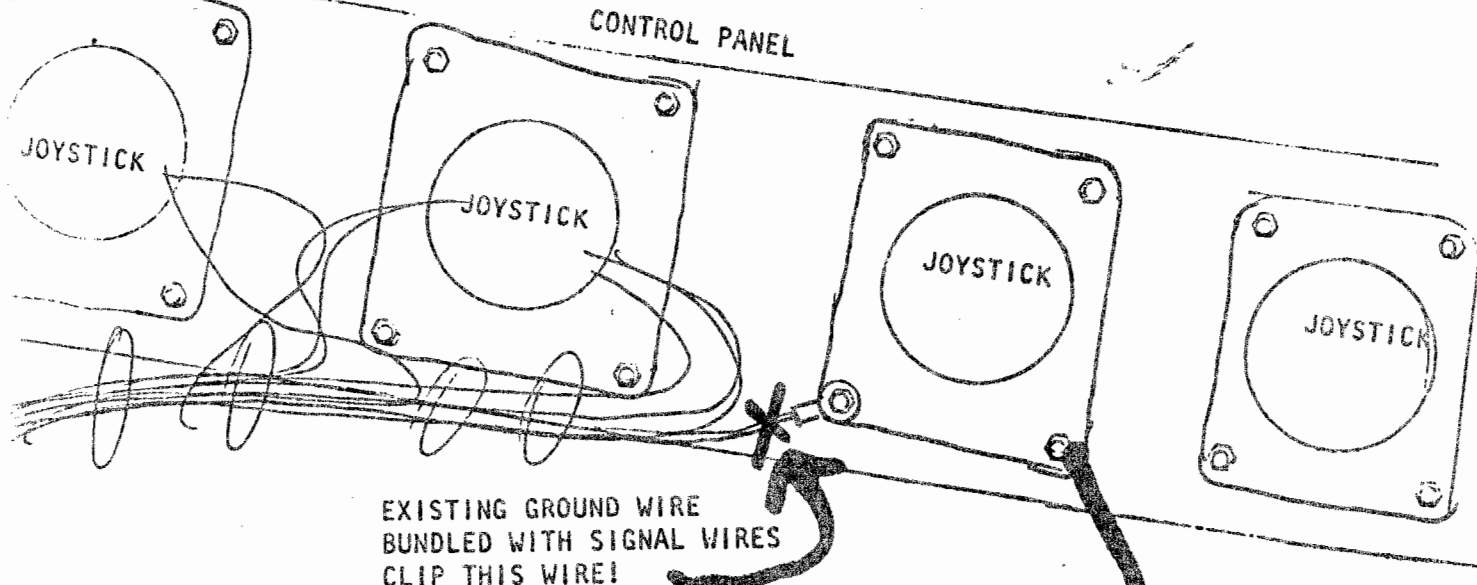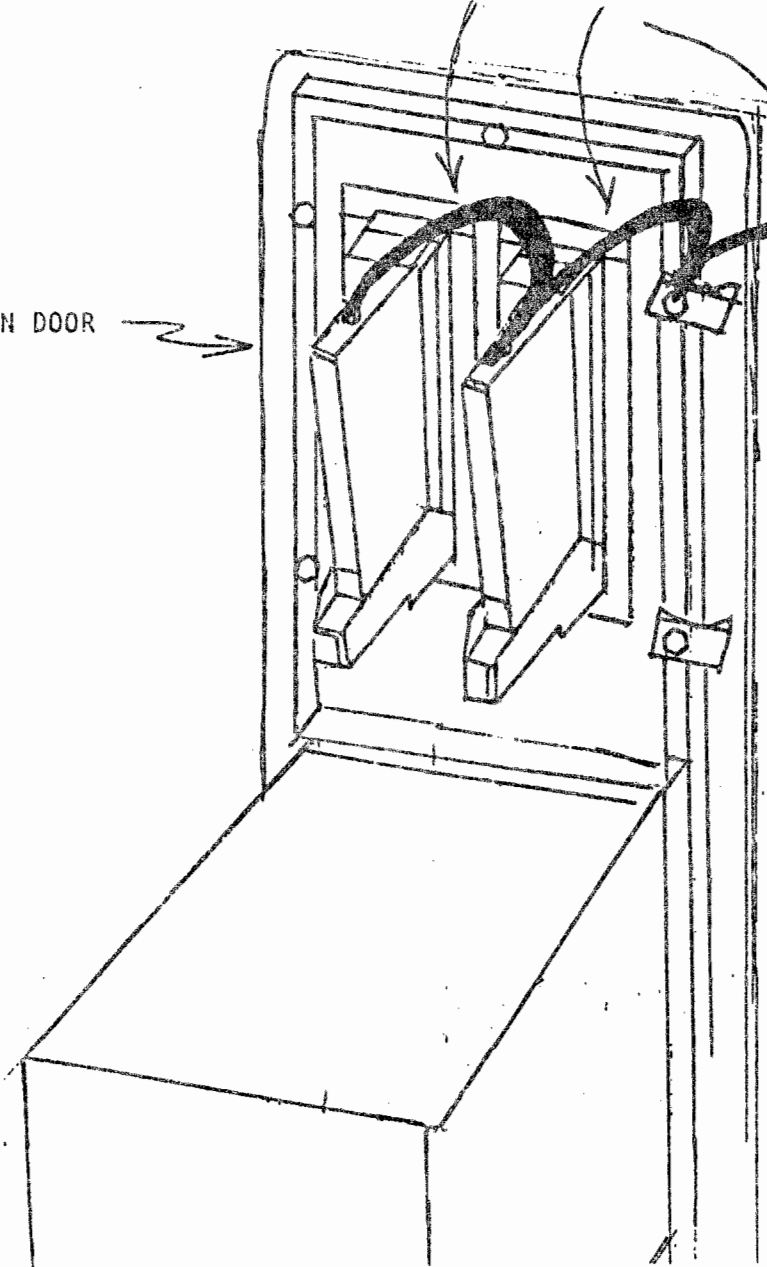
JUMPER LEFT COIN MECH.
TO RIGHT COIN MECH.
TO COIN DOOR FRAME MOUNTING BOLT

ADD THIS WIRE
(use AWG #18
or larger)

COIN DOOR

ROUTE THESE WIRES
TO THE RIGHT OF THE
COIN DOOR AND AWAY
FROM SIGNAL WIRES

TERMINATE THESE WIRES
AT THE GROUNDING STUD
ON THE POWER SUPPLY
CHASSIS FOR DATA EAST
PRODUCED GAMES , OR
AT THE NOISE FILTER
GROUND STUD (DYNAMO GAMES

EPROM SPEED VERIFICATION
CHART

MANUFACTURE	CODE NUMBER	SPEED	MANUFACTURE	CODE NUMBER	SPEED
TI	2764-45	450ns	HITACHI	HN4827128G -25	250n.
	2764-35	350ns		HN4827128G -30	300n.
HITACHI	HN482764	250ns		HN4827128G -45	450n.
	HN482764G	250ns	AMD	AM27128-1DC	150n.
	HN482764-3	300ns		-2DC	200n.
	HN482764-4	450ns		AM27128DC	250n.
	HN482764G-4	450ns		AM27128-3DC	300n.
	HN482764G-2	200ns		-4DC	450n.
FUJITSU	MBM2764-20	200ns		-15DC	150n.
	MBM2764-25	250ns		-20DC	200n.
	MBM2764-30	300ns		-25DC	250n.
OKI	MSM2764AS	450ns		-30DC	300n.
MITSUBISHI	MSL2764K	250ns		-45DC	450n.
NEC	UPD2764D-Z	200ns	MITSUBISHI	MSL27128K	250n.
	UPD2764D	250ns		MSL27128K-2	200n.
	UPD2764D-3	300ns		MSL27128K-3	300n.
	UPD2764D-4	450ns	INTEL	D2764	250n.
AMD	AM2764-20DC	200ns		D27128-4	400n.
	AM2764-2DC				
	AM2764-25DC	250ns			
	AM2764DC				
	AM2764-30DC	300ns			
	AM2764-3DC				
	AM2764-45DC	450ns			
	AM2764-4DC				

Karate Champ (PC-S/82)

○ WIRING HARNESS   CN3 CONNECTOR   CR7E-44DA-3.96E

Control Wires #1 (handwritten, left margin):
- BLUE
- VIOLET
- BROWN
- WHITE
- RED

Control Wires #2 (handwritten, left margin):
- VIOLET
- GRAY
- BLUE

ORANGE (handwritten, next to pin 11)

YELLOW (handwritten, next to pin M)

PART INST. SURFACE		SOLDERING SURFACE	
Pin No	Signal	Pin No.	Signal
1	1P RIGHT – DOWN	A	2P RIGHT – DOWN
2	1P RIGHT – UP	B	2P RIGHT – UP
3	1P RIGHT – LEFT	C	2P RIGHT – LEFT
4	1P RIGHT – RIGHT	D	2P RIGHT – RIGHT
5	1P LEFT – DOWN	E	2P LEFT – DOWN
6	1P LEFT – UP	F	2P LEFT – UP
7	1P LEFT – LEFT	H	2P LEFT – LEFT
8	1P LEFT – RIGHT	J	2P LEFT – RIGHT
9	1P OPTION 1	K	2P OPTION 1
10	1P OPTION 2	L	2P OPTION 2
11	1P SELECT	M	2P SELECT
12	COIN 1	N	COIN 2
13	COIN COUNTER – 1	P	COIN COUNTER – 2
14	TV. BLUE	R	TV. GREEN
15	SYNC.	S	TV. RED
16		T	
17	SOUND (+)	U	SOUND (–)
18	+ 12 V	V	– 5 V
19	+ 5 V	W	+ 5 V
20	+ 5 V	X	+ 5 V
21	GND	Y	GND
22	GND	Z	GND

○ DIP SWITCH SETTINGS

Handwritten left margin:
- ORANGE RED – 6 NO.
- GREEN BLACK – 1 PLAY
- RED YELLOW   2 PLAY

- GREEN RED   L UP
- BLUE RED   L DOWN
- RED   L LEFT
- RED WHITE   L RIGHT

- BLUE YELLOW R UP
- YELLOW GREEN R DOWN
- ORANGE   R LEFT
- BROWN   R RIGHT

NO.	SETTING				OPTION
1	O F F		O N		Type
	TABLE		UP-RIGHT		
2	O F F		O N		Music in Attractive Mode
	NO MUSIC		MUSIC		
3	O F F		O. N		Free Game
	NORMAL		FREE GAME		
4	O F F		O N		Game Difficulty
	EASY		DIFFICULTY		
5	OFF	OFF	O N	O N	Game Charge
6	OFF	O N	OFF	O N	Up-right for Selector-Left
	1 COIN	1	2	3	
	1 PLAY	2	1	1	
7	OFF	OFF	O N	O N	Game Charge
8	OFF	O N	OFF	O N	Table, Up-right for Selector-Right
	1 COIN	1	2	3	
	1 PLAY	2	1	1	