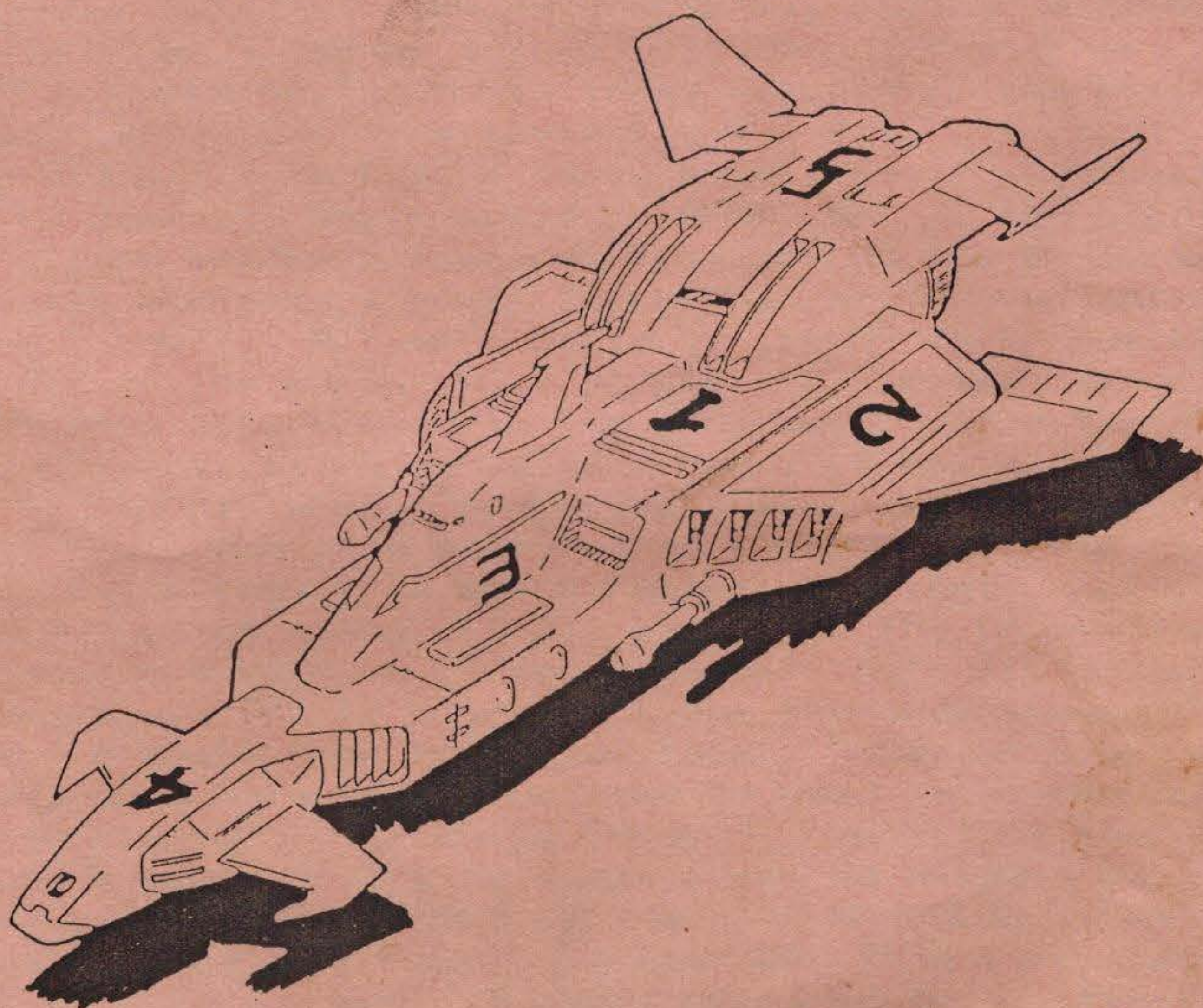




SERVICE INSTRUCTION



Nichibutsu

INTRODUCTION

Earth has lived in peace for a great time period since the threat of atomic weapons was abolished.

At the end of this era , the mightiest weapons were stored in warehouses deep underground . A great and powerful flying airship was created , but never utilized . It was dismantled and then each of the five components were stored in underground hangers . The main ship was called WINGER . It could be flown alone or joined with any of the other pieces. The people of Earth hid these weapons so the reminder of war would be absent from their lives .

They did not know that a force beyond their imagination was soon to dominate their world , MANDOLAR , the mighty metallic wizard suddenly appeared from the depths of darkened space , with him came a great force that would now control all of the lands . A fierce airforce joined in to quickly over run all of the Earth .What people who survived after the evil MANDOLAR's attack fled to the underwater world that had once serve as a vacation paradise . Now , it was a prison . MANDOLAR , in his wisdom awoke the sleeping dinosaurs to again walk the green lush pastures of Earth . This was done to prevent Earthlings from again recapturing their world .

WINGER , which helps shuttle people to the underwater paradise must now be used to serve as mankind's final hope . It's advanced electronic gear can sense the underground hangers and elevate them to the surface . Once the components are freed , more defensive power can be used . MANDOLAR however has placed " Titanium Locks " on all of the underground hangers realizing mankind has no weapons to destroy them . Unknown to the evil wizard MANDOLAR , the earthlings prepare to conquer the intruder from dark space . WINGER at this very moment is being prepared for battle at the base deep under the ocean .

Man's hope is that they can recover all the components for each WINGER , and then wipe the enemy off the face of the Earth . This game takes place as this situation has developed . If your mission is successful , the future of Earth will be secured .

Good luck !

HOW TO PLAY

- * Control WINGER with 8 way joystick .
- * Use FIRE button to destroy all enemies and ground fortresses .
- * As HANGERS appear , destroy the LOCKs that surround them . As each new COMPONENT is freed - dock with it !
- * Each component increases the combined firepower or special powers of the entire ship . WINGER is part one and is equipted with double cannons forward .
- * Use FORMATION button after each component is added to attack with greater power . The pieces will split up into a flight formation and spread beams all over the skies .

COMPONENT	ADDS EXTRA	FORMATION
2	Double forward Cannons	MOON Form.
3	Double Rear Cannons	EXTEND Form.
4	Invinsible Forward Beam	CYCLONE Form.
5	Rear Shield	CROSS Form.

- * After all Five components are docked , WINGER becomes a FIREBIRD that is invinsible for 8 seconds .
- * The number of times that you can attack in formation is indicated by F at the bottom center of the screen

KIT CONTENTS :

1. NICHIBUTSU PRINTED CIRCUIT BOARD	1	pc
2. FCC STICKER	1	
3. MARQUEE	1	
4. SIDE DECALS	2	
5. WIRING HARNESS	1	
6. 8-WAY JOYSTICK	1	
7. BUTTON / SWITCH ASSEMBLY	4	
8. CONTROL PANEL OVERLAY	1	
9. INSTRUCTION MANUAL	1	

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* TERRA CRESTA *

USER INFORMATION

F.C.C. REGULATION COMPLIANCE

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications.

It has been tested and found to comply with the limits for a CLASS "A" computing device pursuant to subpart 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.

F.C.C. requires that the STICKER that comes with the KIT must be on the back of your machine or elsewhere visible when inspected.

SERVICE INFORMATION

NICHIBUTSU will repair and exchange parts or replace P.C.Board in the event of manufacturing defect for ninety day after original purchase.

Mail-in service can be obtained during the warranty period by sending the product postage prepaid, to the nearest distributor or NICHIBUTSU USA CORP. (California).

A purchase receipt or other proof of date of original purchase will be required before warranty performance is rendered.

It is important that the enclosed registration card be filled out entirely and send-in for your protection in case of product failure.

MONITOR

The P.C.Board in this kit can use with :

- Any VERTICALLY mounted Raster Scan Monitor .
- Negative Composite SYNC (synchronization) .

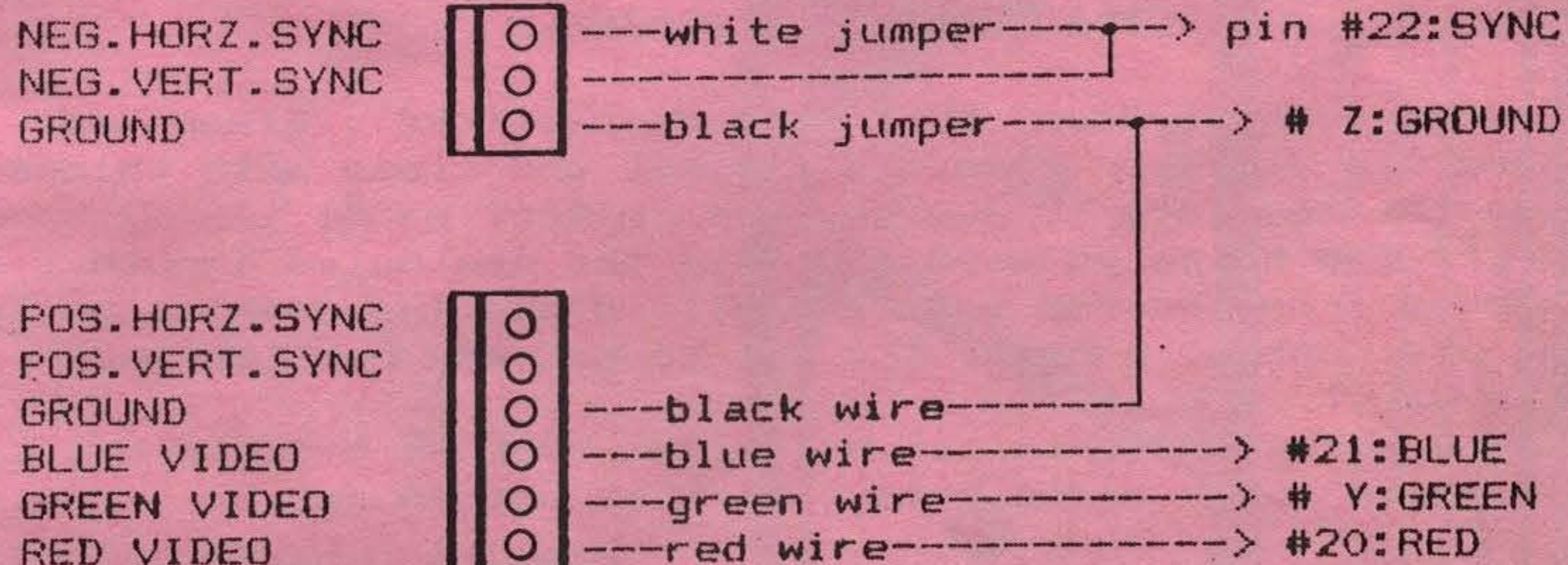
The wires of the new harness to the monitor are color coded to indicate the RED , BLUE , GREEN video signals to the monitor . The BLACK is used for GROUND (0 V) and the WHITE is for NEGATIVE SYNC .

Attach the wires from the P.C.Board to the monitor's main circuit board as shown below .

*for WELLS-GARDNER MONITOR

&

*for ELECTROHOME MONITOR



WIRING CONNECTOR

SOLDER SIDE

A	p1-UP	w/brown
B	p1 - LEFT	w/orange
C	p1- SHOOT	w/green
D	p2 - UP	
E	p2 - LEFT	
F	p2 - SHOOT	
H	COIN 1	w/purple
J	GND	
K	GND	black
L	+ 5 V	red
M	+ 12 V	yellow
N		
P	+ 5 V	red
R	GND	black
S	GND	black
T	1 player	brown
U	TEST	orange
V	COUNTER 1	w/gray
W	SP (+)	purple
X		
Y	GREEN	
Z	GND	black

PARTS SIDE

1	p1 - DOWN	w/red
2	p1 - RIGHT	w/yel
3	p1 - FORMATION	w/blu
4	p2 - DOWN	
5	p2 - RIGHT	
6	p2 - FORMATION	
7	COIN 2	
8	GND	black
9	GND	
10	+ 5 V	red
11		
12	+ 12 V	
13	+ 5 V	
14	GND	
15	GND	
16	2 players	PURPLE w/blue
17	SERVICE	w/blk
18	COUNTER 2	
19	SP (-)	gray
20	RED	
21	BLUE	
22	SYNC	white

Note : pin # 4-6 should be NO CONNECTION in upright

CONTROL PANEL

1. Remove control panel buttons and joysticks . Clean and sand old vinyl or remove old vinyl and clean with thinner.
2. Use the template to design your control panel .
3. Drill the holes as need and file the new holes smooth .
4. Remove from the top and carefully place the overlay on top of old control panel . Try not to get any bubbles under the vinyl .
5. Use a razor knife to cut holes for buttons & joysticks . To avoid cut a wrong hole , mark it before cut .

Important note :

TERRA CRESTA will not work perfectly with some wide-gap leafswitch joystick .

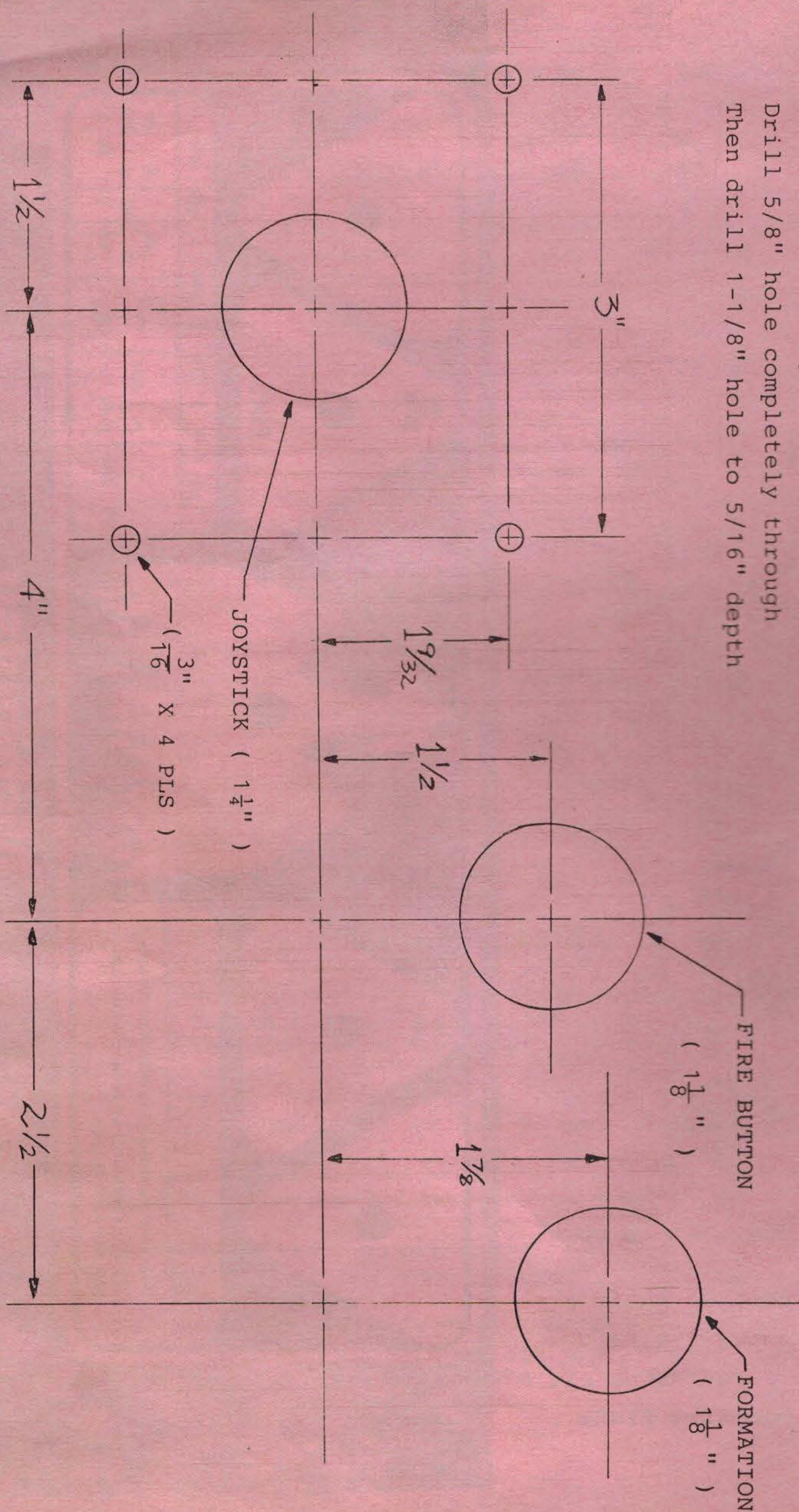
A new joystick - made by COIN CONTROLS - is included , To avoid a bad control , replace with this joystick when converting to TERRA CRESTA .

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 CONTROL PLATE TEMPLATE

* These dimensions are refer to
 metal control panels .

* For wood control panels :
 Drill 5/8" hole completely through
 Then drill 1-1/8" hole to 5/16" depth



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DIP SWITCH ADJUSTMENTS

SWITCH 1

		1	2	3	4	5	6	7	8
Number of player	3 4 5 6	OFF ON	OFF OFF						
Bonus	20000& 80000 50000&110000 20000&110000 50000&140000			OFF ON	OFF OFF				
Demo Sound	WITH WITHOUT					OFF ON			
Type	TABLE UPRIGHT						OFF ON		

*

*

SWITCH 2

		1	2	3	4	5	6	7	8
: 1 Coin 1 Credit		OFF	OFF						
COIN : 1 " 2 "		ON	OFF						
1 : 2 " 1 "		OFF	ON						
: FREE PLAY		ON	ON						
: 1 Coin 3 Credit				OFF	OFF				
Coin : 1 " 6 "				ON	OFF				
2 : 2 " 3 "				OFF	ON				
: 3 " 1 "				ON	ON				
Difficulty	EASY HARD					OFF ON			
Screen Inversion							ON		

*

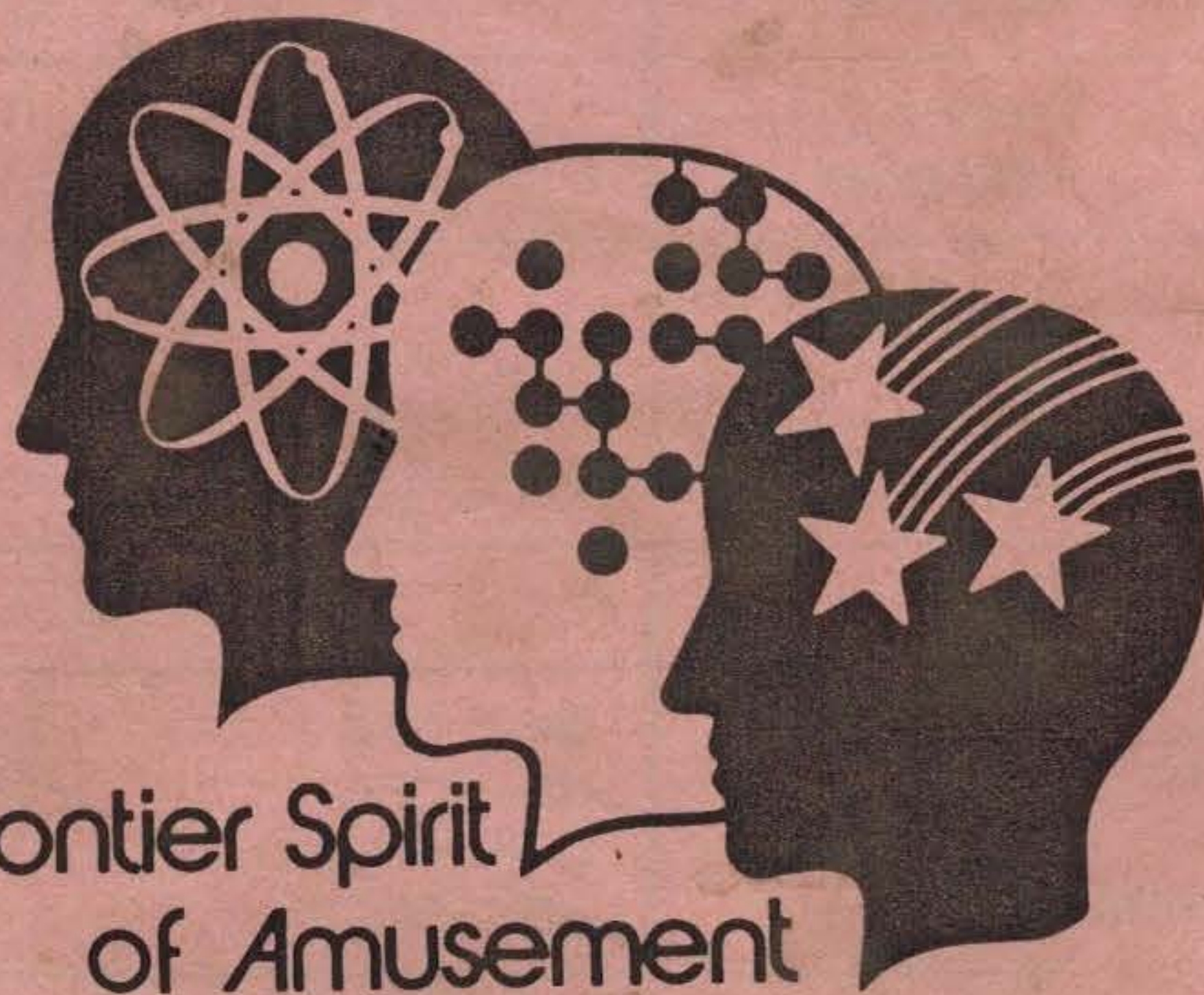
*

- Recommended setting mark < * >

- Switch 7 & 8 must be OFF



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Frontier Spirit
of Amusement

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