

GENERAL INSTRUCTIONS FOR TWIN PIRATE GUN

1. INSTALLATION -

- Remove each rifle assembly from shipping carton and install as per enclosed drawing.
- Attach four cabinet levelers to bottom of cabinet. The power is controlled by a switch located on top of the cabinet. Plug line cord into A.C. only, 60 cycles, 115 volts.

2. VOLTAGE CONTROL -

- In low line areas (100 volts or less), an additional boost in the 50 volt output of the transformer may be obtained by removing the wire from the 50 volt position of the transformer, and rewiring to the 55 volt position.

3. 25¢ JACK -

- Located on back door to control 1, 2, or 3 plays for a quarter.

4. EXTENDED PLAY JACK -

- Located on back door to give either extended play (additional units of time), or 1 replay.

5. TOP SCORE CONTROL JACK -

- Located on back door and is adjustable from conservative (highest score values), to liberal (lowest score values).

6. TIME CONTROL JACK -

- Located on back door and is adjustable from 30 to 50 time units.

7. SOUND VOLUME CONTROLS -

- Located on Amplifier Unit (P.C. 569-907). To increase volume, rotate controls as indicated by arrows on Amplifier Unit.

8. PHOTOCCELL SENSITIVITY CONTROLS -

- Located on Photocell Detector Unit (P.C. 569-921). To increase sensitivity of each target, rotate controls as indicated by arrows on Detector Unit.

9. TRIGGER CONTROL SLIDE SWITCH -

- Located on back door. In 'ON' position, each trigger must be released after every shot (single shot operation). In 'OFF' position, trigger may be held in a depressed state (rapid fire).

MIDWAY MFG. CO.

3750 River Road

Schiller Park, Ill.

6 AMP
115 VOLTS
LINES

3 AMP
1st GUN
SOLENOID

3 AMP
2nd GUN
SOLENOID

10 AMP
50 VOLTS
COILS

6 AMP
14 VOLTS
GUN LITE

10 AMP
12 VOLTS
LITES

2 AMP
SLO-BLO
15 VOLTS
AMP.

2 AMP
SLO-BLO
12 VOLTS
SPEED CONTROL

2 AMP
SLO-BLO
12 VOLTS

2 AMP
SLO-BLO
15 VOLTS
AMP.

TIME CONTROL

- 50 TOP POSITION
- 45
- 40
- 35
- 30 BOTTOM POSITION

SCORE CONTROL

- CONSERVATIVE: Jack in top position for highest values
- AVERAGE: Drop Jack one position for average values
- LIBERAL: Drop Jack two positions for lowest values.

25c

- Jack in top position gives 3 plays.
- Drop Jack one position to give 2 plays.
- Drop Jack two positions to give 1 play.

REPLAY

- Extended Play Position
- Replay Position

RIGHT
CLIMBING
PIRATE

TO
INCREASE
SENSITIVITY
ROTATE
AS
INDICATED

FRONT
BOAT

REAR
BOAT

PROGRAM STEP-UP UNIT

BOAT PROGRAM

RESET

Operates Boat Motor to the right.

TRIP

Operates Boat Motor to the left.

P.C. 569-921
PHOTO
CELL
DETECTOR

LEFT
CLIMBING
PIRATE

TO
INCREASE
SENSITIVITY
ROTATE
AS
INDICATED

ALL
POP-UP
TARGETS

P.C. 569-907
AMPLIFIER
UNIT

2nd PLAYER
HIT SOUND

2nd PLAYER
GUN SOUND

TO INCREASE
VOLUMES
ROTATE AS
INDICATED

2nd PLAYER
MASTER
VOLUME
CONTROL

TRIGGER
CONTROL
SLIDE
SWITCH

ON

← →

OFF

*SINGLE
SHOT*

*Auto-
matic*

CAUTION

WHEN SERVICING OR ADJUSTING PHOTO CELLS, BE SURE LOWER BACK DOOR IS IN PLACE TO PREVENT ADDITIONAL AMBIENT LIGHT FROM SHINING ON PHOTO CELLS.

1st PLAYER GUN
ANTI-RESIDUAL
RESISTOR

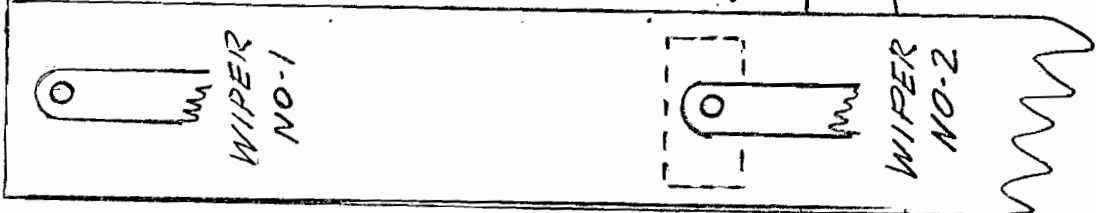
2nd PLAYER GUN
ANTI-RESIDUAL
RESISTOR

TWIN PIRATE 5-74

TWIN PIRATE GUN

JACK KEY

L & R CLIMBING PIRATES



PARROT

OCTAPUS

TWO SHIP PIRATES

TWO MOVING BOATS

WIPER NO-1
 PARROT
 OCTOPUS
 L & R CLIMBING PIRATES

WIPER NO 2
 SHIP PIRATE
 L & R BOATS

STYLUS PC-RIGHT 569 925

Amperex Electronic Corporation

A DIVISION OF AMPEREX ELECTRONIC COMPANY

ELECTRO-OPTICAL DEVICES DIVISION

P.O. Box 278
Telephone: 401/762-3800

Slater'sville, R.I. 02876
TWX: 710/382-6332

TYPE
RPY58

PHOTO-CONDUCTIVE
CELL

The Amperex RPY58 is a small, plastic encapsulated cadmium sulfide photoconductive cell with side sensitivity. The device consists of two cells in series and is intended for use in toys, cameras, exposure meters, light control equipment and for general industrial use.

ELECTRICAL DATA

GENERAL

The electrical properties of CdS cells are dependent on many factors, such as illumination, color, temperature of the light source, voltage, current, temperature, total time of operation in the circuit and time of operation during the last 24 hours prior to the measurement. The following basic characteristics are therefore only checkpoints of the electrical properties of these devices measured with defined values of the various conditions and at delivery.

BASIC CHARACTERISTICS AT $T_A = 25^\circ\text{C}$, ILLUMINATION WITH COLOR TEMPERATURE OF 2700°K AND AT DELIVERY

	SYMBOL	MIN.	TYP.	MAX.	UNIT
Initial Dark Resistance measured with 50 Vdc applied via 1 M Ω , 20 secs after switching off the illumination	r_{d0}	200	—	—	k Ω
Initial Illumination Resistance measured at 1 Vdc, illumination = 5 footcandles after 16 hours in darkness	r_{l0}	0.35	0.6	1.4	k Ω
Initial Drift	D_0	—	0	—	%
$F_{4700} (= \frac{r_{l1} \text{ at } 4700^\circ\text{K}}{r_{l1} \text{ at } 2700^\circ\text{K}} \text{ at constant illumination})$		—	1.2	—	

ABSOLUTE MAXIMUM RATINGS

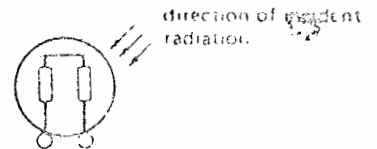
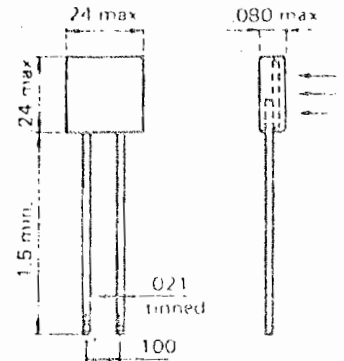
Cell Voltage d.c. and repetitive peak pulse, t_{imp} max 5 ms	V			max. 50 V
p.r.f. max. once per minute	V			max. 100 V
Power Dissipation $t_{av} = 0.5$ s	P			see page 3
Cell Current, d.c. and rms	I			max. 25 mA
Ambient Temperature, Storage and Operating	T_A			min. -40°C
Storage	T_A			max. $+50^\circ\text{C}$
Operating	T_A			max. $+70^\circ\text{C}$

SOLDERING

The device may be soldered direct into the circuit but heat conducted to the seals should be kept to a minimum by using a thermal shunt.

It may be dip soldered at a solder temperature of 270°C for a maximum of 2 secs up to a point .24 in. from the envelope.

150 Ω LITE
5K DARK

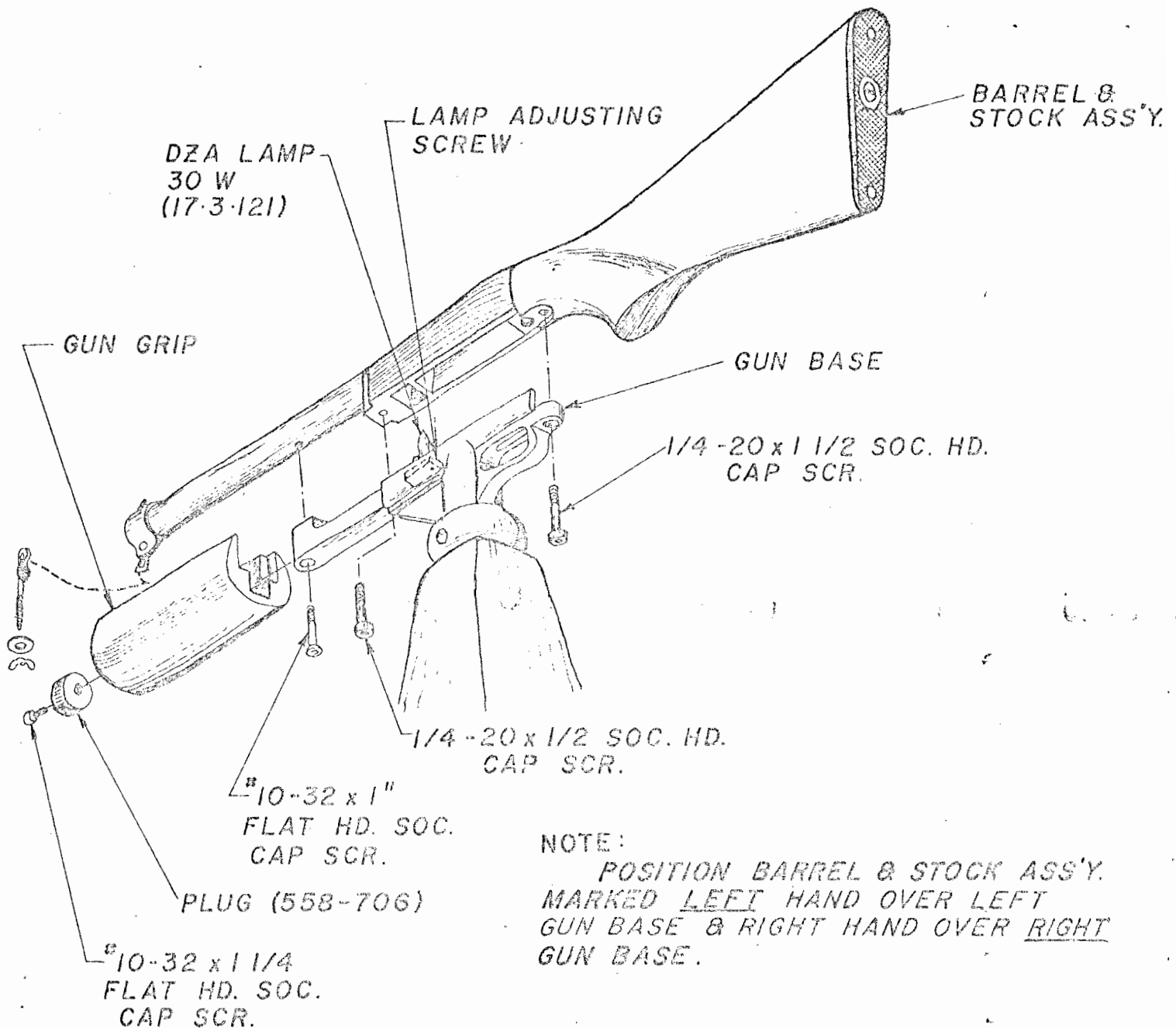


Dimensions in inches

OUTLINE DRAWING

Amperex

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HOW TO ASSEMBLE SHOT GUN

- I. REMOVE ALL PROTECTIVE COVER FROM GUN BASE.
 - A. POSITION BARREL & STOCK ASS'Y. OVER GUN BASE MAKE CERTAIN THAT HOLES IN BARREL & STOCK ASS'Y. ARE IN LINE.
 - B. ASSEMBLE BARREL & STOCK ASS'Y. WITH (3) SCREWS AS SHOWN.
 - C. POSITION GUN GRIP AS SHOWN & ASSEMBLE WITH PLUG & (1) SCREW.

LAMP ADJUSTMENT

THE LAMP IS ADJUSTED AT THE FACTORY. AFTER REPLACING A LAMP IT MUST BE ADJUSTED FOR MAX. SPOT OF LIGHT. ADJUST BY LOWERING OR RAISING AT ADJUSTING SCREW.

TWIN PIRATE

Trouble Shooting Target Operation

COMPLAINT:

Ship and front-rear boats fail to move.

CHECK THE FOLLOWING:

1. Game over relay switch adjustment (Brown-Black and Orange).
2. MT-32 transformer and associated wiring.
3. 3 amp slow blow fuses (two).
4. Motor speed unit jack connection pins #2, #3, #9, #10, and #16.
5. Motor speed control unit (PC 569-918).

COMPLAINT:

Ship fails to oscillate (move).

CHECK THE FOLLOWING:

1. 12VDC ship oscillating motor and associated wiring (40-2300).
2. Ship unit binding condition.
3. Motor speed unit jack connection pin #1.
4. Motor speed unit (PC 569-918).

COMPLAINT:

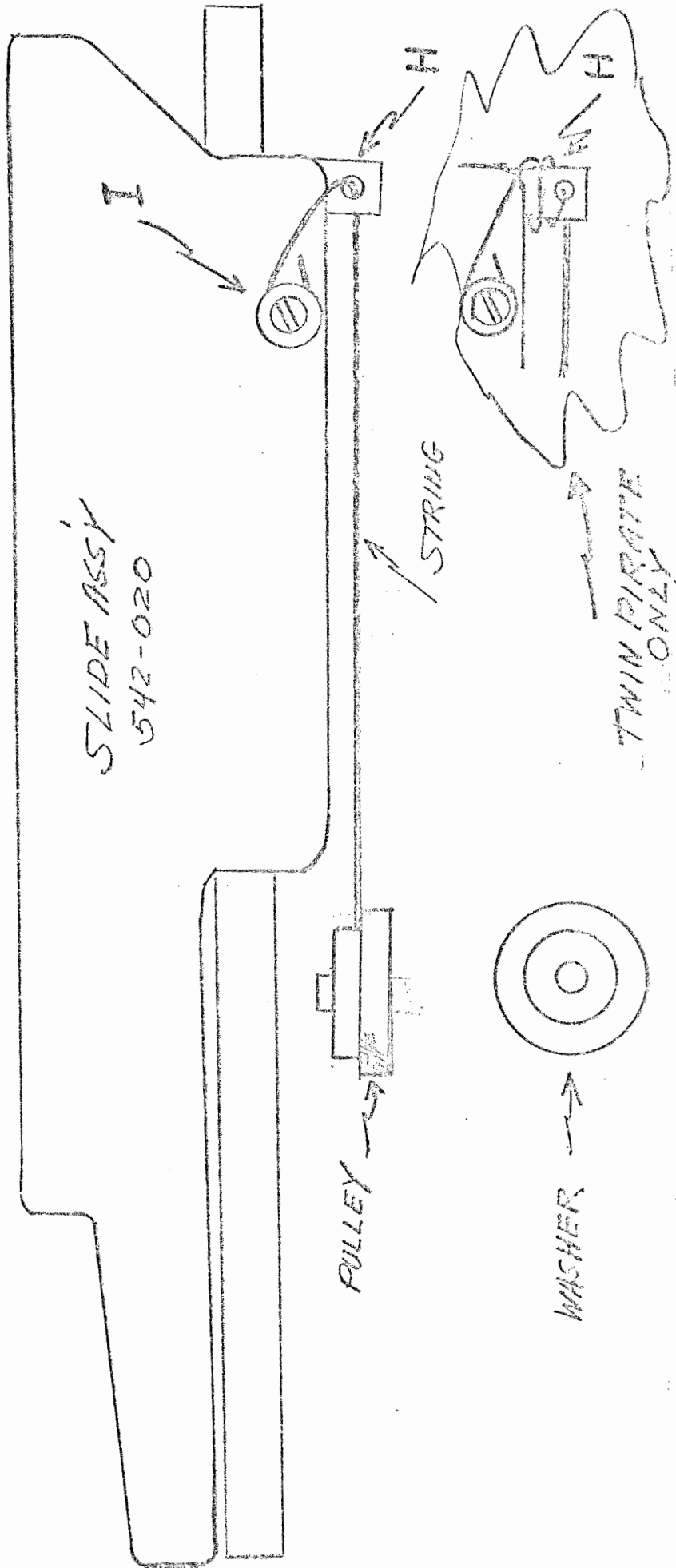
Front and rear boats fail to move.

CHECK THE FOLLOWING:

1. 12VDC boat motor binding condition and associated wiring (40-2300).
2. Motor speed unit jack connection pins #17 and #18.
3. Program unit wiper adjustment (PC 569-929).

DIAGRAM FOR RESTRINGING CARRIAGE

To restring drive string remove retaining ring and washer from drive post and lift off pulley. Take a one foot piece of same string, lace thru hole and loop around oilite with a slip knot. Replace pulley on post. Replace washer and retaining ring, lace string thru hole in L bracket and end up winding string around grommet and anchor screw (I), snug but not tight.



UNIVERSITY MICROFILMS INTERNATIONAL
SERIALS ACQUISITION
300 N ZEEB RD
ANN ARBOR MI 48106-1500

TWIN PIRATE

Trouble Shooting Sound System

COMPLAINT:

Loss of all sound (both players).

CHECK THE FOLLOWING:

1. Amplifier volume control setting 1st and 2nd player (master).
2. Lock relay switch adjustment (Orange-White and Black-Red).
3. Blown 2 amp slow blow fuse (two).
4. MT-32 transformer and associated wiring.
5. Amplifier unit jack connection pins #1, #5, and #18.
6. Defective amplifier unit (PC 569-907).

COMPLAINT:

Loss of gun sound 1st or 2nd player.

CHECK THE FOLLOWING:

1. Amplifier gun sound volume control setting 1st or 2nd player (two 50K pots).
2. Trigger switch adjustment 1st player (Black-Red and Black-White) or 2nd player (White-Brown and Black-Red).
3. Amplifier unit jack connection pins #3, #4, #9, #11, #15 and #17.
4. Left or right speaker and associated wiring (4" 8 ohm).
5. Defective amplifier unit (PC 569-907).

COMPLAINT:

Loss of hit sound 1st or 2nd player (scoring good).

CHECK THE FOLLOWING:

1. Amplifier volume control setting 1st or 2nd player (two 50K pots).
2. 1st player or 2nd player score relay switch adjustment (Blue-Black and Gray or Green and Gray).
3. Amplifier unit jack connection pins #8 and #12.
4. Defective amplifier (PC 569-907).

COMPLAINT:

Loss of background sound.

CHECK THE FOLLOWING:

1. Game over relay switch adjustment pink and purple (117V).
2. Amplifier unit jack connection pins #6, #7, and #13 (PC 569-907).
3. Tape unit pre amp unit jack connection pins #4, #5, #8, and #9 (PC 569-923).
4. Tape unit cartridge defective or inserted incorrectly.
5. Trouble in tape unit.

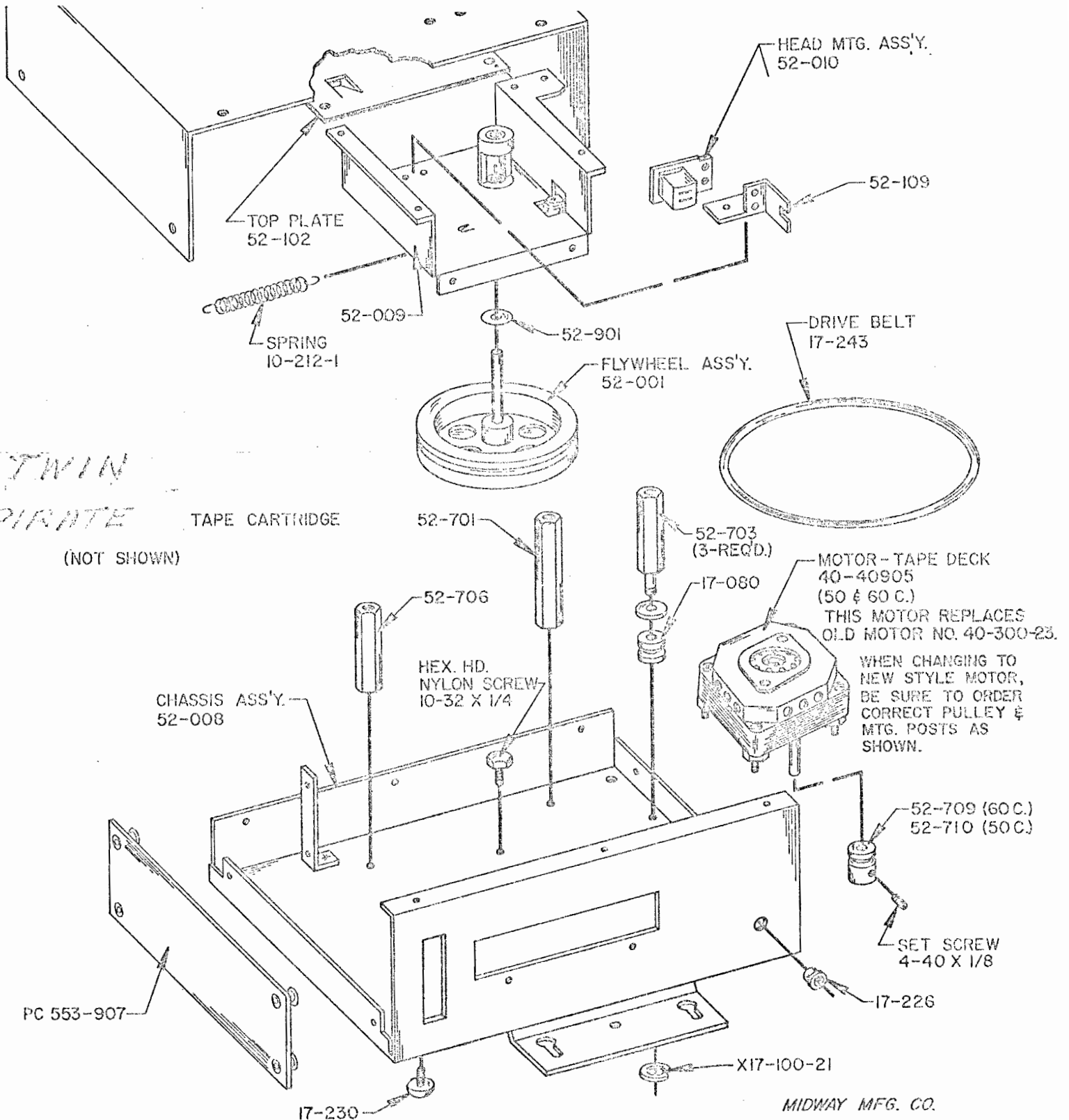
COMPLAINT:

Poor sound.

CHECK THE FOLLOWING:

1. Damaged speaker cone.
2. Speaker mounted loose.

3. Defective tape unit cartridge.
4. Poor tape unit motor speed (117 volts - #40-40905).
5. Trouble in tape unit pre amp or amplifier.



3. Amplifier unit jack connection pin #16.
4. Photocell detector unit (PC 569-921).

COMPLAINT:

Loss of pop-up target hits (octopus, parrot, left and right pirate).

CHECK THE FOLLOWING:

1. Photocell detector hit adjustment control pot (47K).
2. Photocell detector unit jack connection pin #14.
3. Defective octopus, parrot, left or right pirate pop-up target photocell or associated wiring (RPY56).
4. Photocell detector (PC 569-921).

COMPLAINT:

Loss of front or rear boat hits.

CHECK THE FOLLOWING:

1. Photocell detector hit adjustment control pots (47K).
2. Photocell detector unit jack connection pins #2 and #3.
3. Defective front or rear boat target photocell or associated wiring (RPY-56).
4. Photocell detector unit (PC 569-921).

COMPLAINT:

Loss of left or right climbing pirates.

CHECK THE FOLLOWING:

1. Photocell detector hit adjustment pots (47K).
2. Photocell detector jack connection pins #4 and #13.
3. Defective right or left climbing pirate photocell or associated wiring (RPY-56).
4. Photocell detector unit (PC 569-921).



AMP INCORPORATED
HARRISBURG, PENNA.

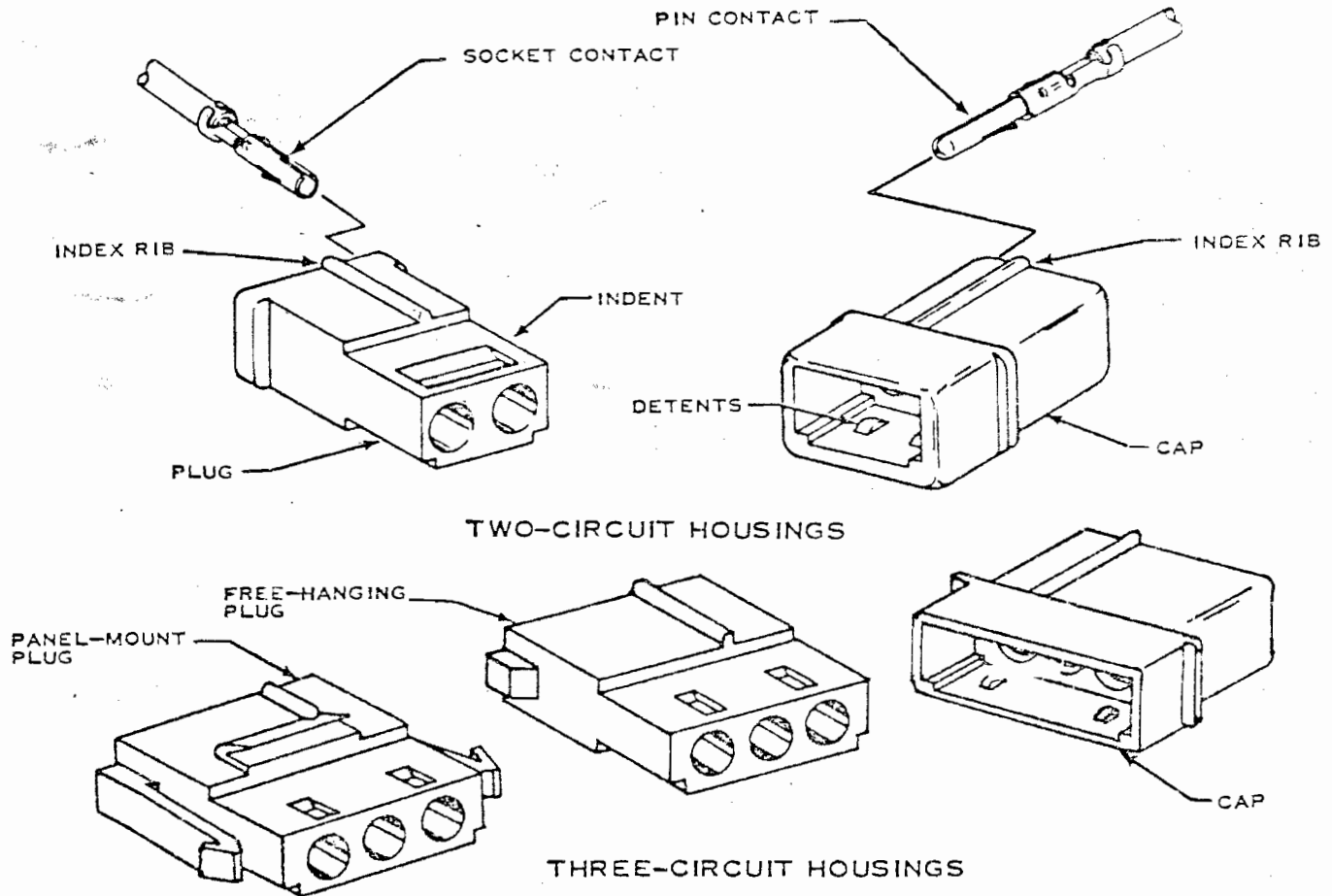
A-MP* DENTENT-ENGAGEMENT
MATE-N-LOK*
CONNECTORS

IS 7201

RELEASED 3-25-65

REVISED 7-15-66

AUTOMATIC MACHINE DIVISION



NUMBER OF CIRCUITS	PLUG NUMBER	CAP NUMBER	CONNECTOR TYPE
2	480318	480319	FREE-HANGING
2	480393	—	FREE-HANGING
3	480303	480305	FREE-HANGING
3	480304	480305	PANEL-MOUNT
3	480388	480387	FREE-HANGING

FIG. 1

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1. Each MATE-N-LOK Connector consists of two Housings (a Plug and a Cap) and Pin and Socket Contacts. The Cap accepts Pin Contacts. The Plug accepts Socket Contacts. See Figure 1. Read these instructions carefully before assembling the Connector.

2. CONTACT CRIMPING

- (a) To determine which Contacts to use in these Housings, see AMP Instruction Sheet No. 7300.
- (b) Crimp Contacts in Strip Form using the proper A-MP Auto-Machine Applicator according to the AMP Instruction Sheet shipped with the Applicator.
- (c) Crimp Loose-Piece (LP) Contacts with the proper Hand Tool.

*Trademark of AMP Incorporated



**A-MP DUO-TYNE* FLAG
PRINTED CIRCUIT BOARD
RIGHT ANGLE EDGE CONNECTOR**

IS-7047	
REL.	1-24-63
REV.	

1. For Contact Crimping Instructions, see A-MP Instruction Sheet No. 1814 and A-MP Instruction Manual shipped with A-MP Auto-Machine Applicator.
2. Insert Contact (No. 60215-4) into bottom of Housing as far as it will go. See Figure 1. Pull back lightly on wire to make sure Contact is latched in place.

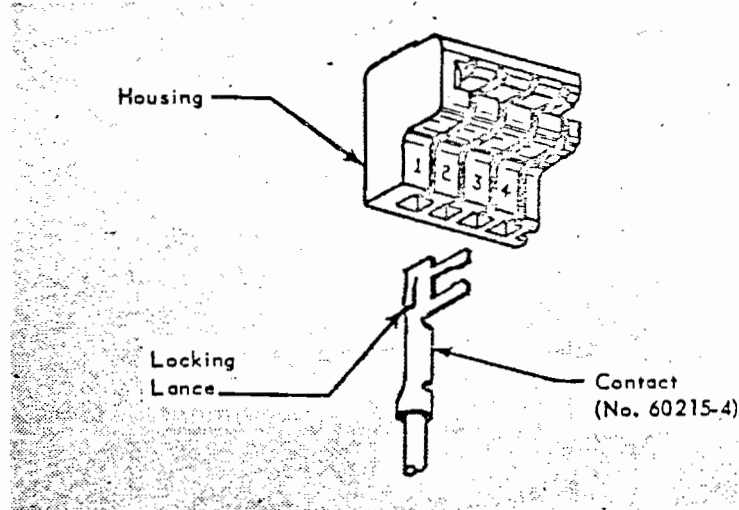


Fig. 1

3. Contact extraction.
 - (a) Insert Extraction Tool (No. 810992) into Top of Housing until locking lance on Contact is depressed.
 - (b) Pull Contact out thru bottom of Housing. See Figure 2.

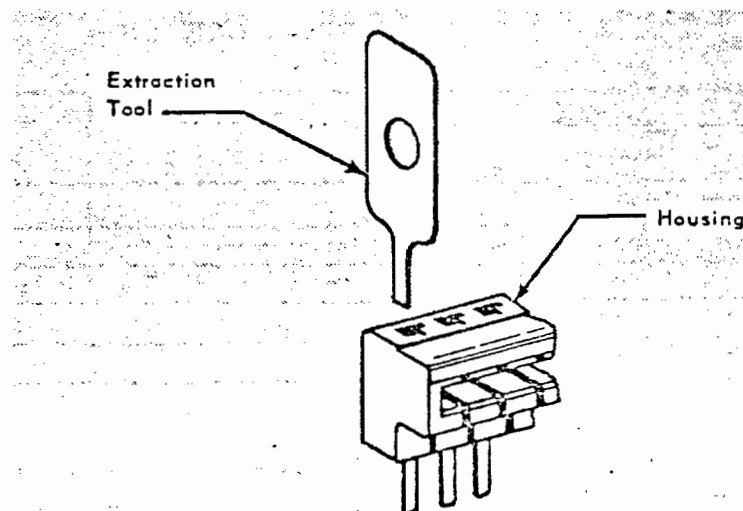


Fig. 2