INSTRUCTIONS FOR STUNT PILOT

1. Installation:

   - Attach four (4) 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 voltage areas (100 volts or less) an additional boost in the 50 volt output voltage 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:

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

4. Time Control Jack:

   - Is located on the back door to control the time of the game.

5. Extended Play Jack:

   - Is located on the back door to give an additional time of 100 when a designated score is reached; this score is adjustable.

6. Airplane Control:

   - A slide switch is located on the back door to permit the plane to continue to rotate or stop when the game is over.

   - See separate instructions for all the airplane adjustments and controls.

7. Sound Controls:

   - See separate instructions for individual sound controls.

AIRPLANE ALIGNMENT PROCEDURE

Step #1 Position airplane in the area of the hanger. Raise or lower mirror to cause wheels to appear at ground level. Maintain mirror position and rotate airplane to bridge area. Plane should appear at same relative position to the ground. If plane appears to be at different heights in these two positions, correction can be made by loosening two bolts in mirror shelf and moving one end of shelf in or out to accomplish level flight at these two points.

Step #2 Once plane has been adjusted for level flight at the two positions mentioned above (hanger and bridge), establish ground level at these two positions by either raising or lowering mirror. Maintaining mirror position, rotate plane to the arch area. The airplane should be at this point in the same relative position to ground level. In the event it is necessary to make corrections, loosen two wing bolts in linkage inside back door (left side). By increasing or decreasing length of link, height of airplane can be increased or decreased. When this adjustment has been made bringing landing wheels in contact with ground, wing bolts should be securely tightened. Airplane now should appear to fly at level flight at all altitudes.

Step #3 Adjust Mirror Motor Cam.

Rotate mirror motor to lower airplane to appear below ground level (top wing approximately at ground level). At this position, down motor cam switch should be at break position. This adjustment limits the maximum down travel.

Step #4 Adjusting Commutator and Wiper Finger.

Rough Adjustment

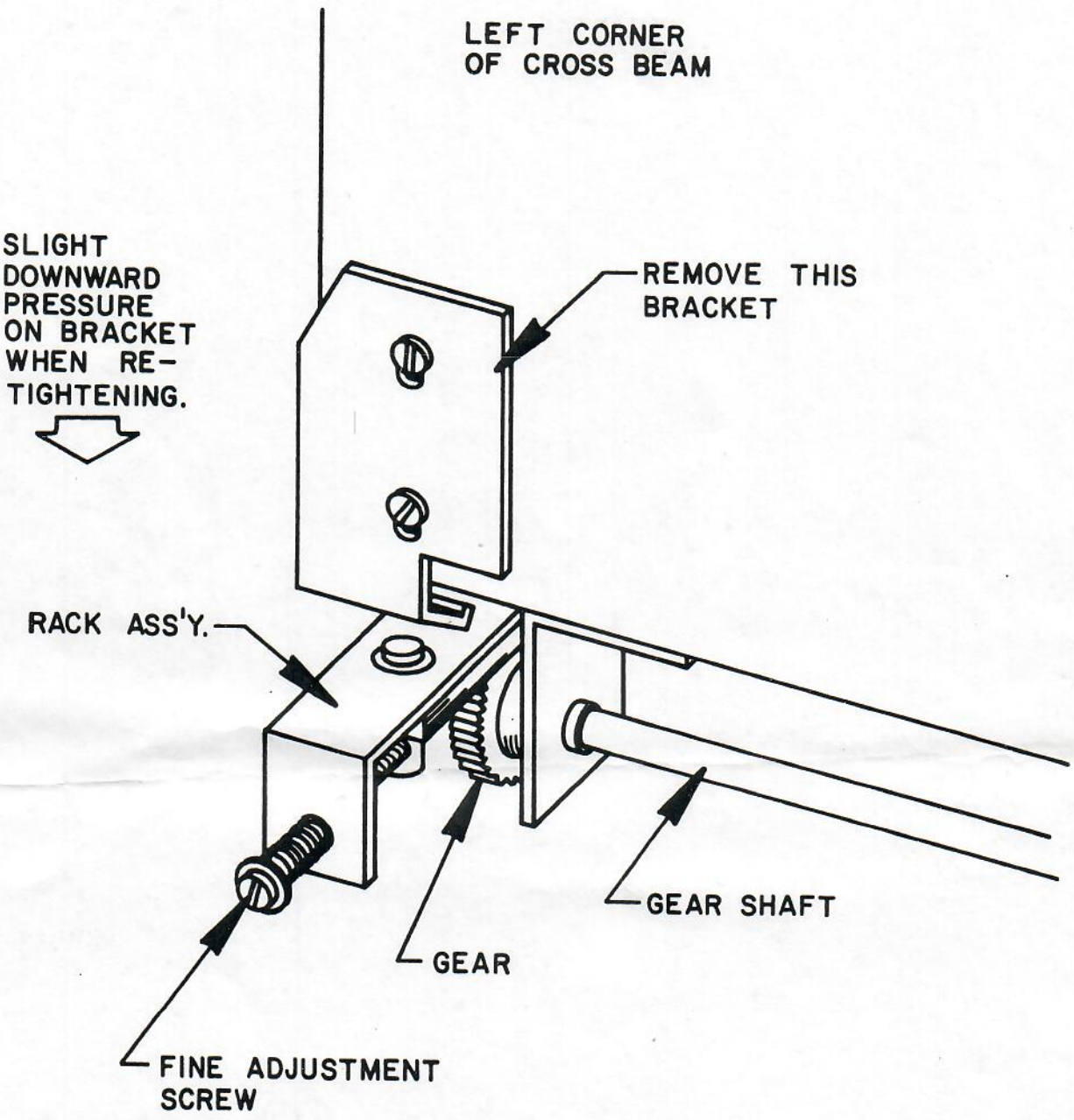
Position airplane in area of hanger with wheels at ground level. Remove bracket at lower left hand corner of cross beam, disengage rack from gear (see attached illustration), rotate gear to bring wiper finger into position adjacent to printed circuit. Re-engage rack to gear selecting tooth which positions wiper finger closest to its proper position. Replace retaining bracket, confining rack and gear in engagement. A slight downward pressure should be exerted on retaining bracket before tightening screws.

Fine Adjustment

After above procedure has been accomplished, a fine adjustment can be achieved. By turning adjusting screw on end of rack mounting plate, bringing corner of wiper finger into contact with edge of printed circuit. This will cause crash condition to occur when airplane descends to this position.

AIRPLANE ALIGNMENT PROCEDURE

(STEP NO. 4 – SEE P. 1)



S T U N T P I L O T

Trouble Shooting the Airplane Flying Horizontal and Vertical

COMPLAINT:

The airplane fails to travel horizontally.

CHECK THE FOLLOWING:

1. Front service switch operation
2. Crash relay switch adjustment (Blue and Yellow-Blue)
3. Reverse relay switches and wiring (Blue and Black-Yellow and Gray-Red)
4. Plane motor operation (#1985)
5. Plane unit assembly binding condition

COMPLAINT:

Airplane travels horizontally too fast (loss of speed control).

CHECK THE FOLLOWING:

1. 2 amp slow blow fuse
2. All amp jack connections speed control unit (PC 548-909)
3. Airplane speed control pot speed control unit
4. Left throttle handle for proper wiper index and adjustment
5. Left throttle handle disc resistors (open condition)
6. Trouble in speed control unit PC 548-909 (Replace unit)

COMPLAINT:

Airplane fails to fly vertically (up and down)

CHECK THE FOLLOWING:

1. Right control stick for proper wiper index and adjustment
2. Defective mirror up or down relay coil (M 36-3300)
3. Mirror up and mirror down relay switch adjustment (Brown-Red and Red-Black)
4. Limit switch adjustment mirror motor cam
   UP - Blue-Yellow and Brown-Red
   DOWN - Orange-Green and Red-Black
5. Operation of mirror motor #1986
6. Mirror and plane assembly linkage adjustment

S T U N T P I L O T

TROUBLE SHOOTING SOUND SYSTEM

COMPLAINT:

Loss of all sound

CHECK THE FOLLOWING:

1. 1/2 Amp slow blow fuse
2. 6 Amp fuse (white)
3. Volume Control operation (Amplifier)
4. Defective speaker or wiring
5. Amp jack connections (all)
6. Game over relay switch (Purple and Yellow-Green)
7. Trouble in amplifier (CM 30-2)

COMPLAINT:

Loss of airplane sound

CHECK THE FOLLOWING:

1. Airplane volume control setting sound generator
2. Wiper adjustment left throttle handle unit
3. Wiper adjustment right control stick unit
4. Game over relay switch (Yellow and Green-White)
5. Crash relay switch (Yellow-Green and Pink)
6. Amp jack connections pin #2 & #9 sound generator unit
7. Left throttle and right control stick units disc for defective resistors
8. Trouble in sound generator unit

COMPLAINT:

Loss of explosion sound

CHECK THE FOLLOWING:

1. Volume control setting sound generator unit
2. Crash relay switch (Yellow-Green and Orange)
3. Control unit disc wiper adjustment and wiring 15° position
4. Amp jack connection pin #11 sound generator unit
5. Trouble in sound generator unit

Trouble Shooting Sound System

COMPLAINT:

Loss of siren sound

CHECK THE FOLLOWING:

1. Volume control setting sound generator unit
2. Siren relay switch (Orange and Red-Blue)
3. Control unit cam switch (Red-Blue and Green-White)
4. Amp jack connection pin #12 sound generator unit
5. Trouble in sound generator unit

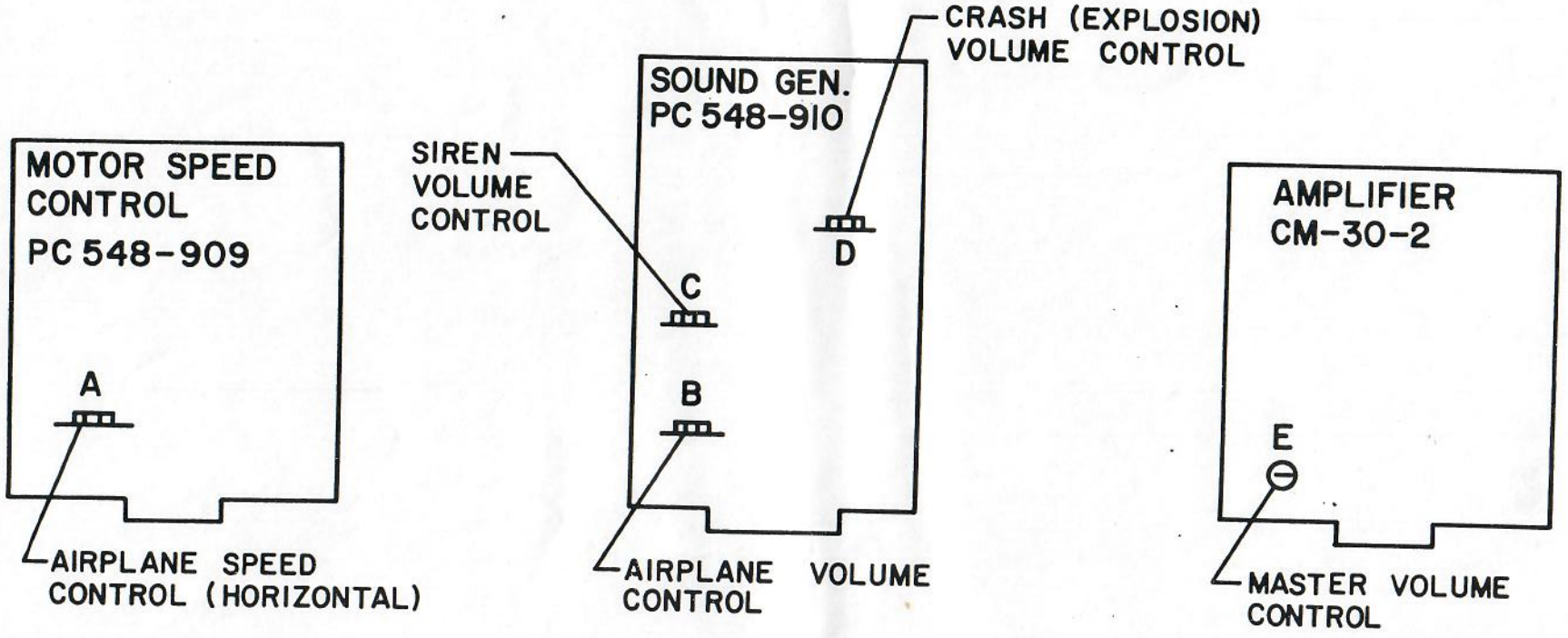
COMPLAINT:

Poor sound

CHECK THE FOLLOWING:

1. Damaged speaker cone
2. Speaker mounting loose
3. Clean game over relay contacts (Purple and Yellow-Green)
4. Trouble in sound generator or amplifier

SOUND & SPEED CONTROLS



- A) TURN CLOCKWISE TO SLOW DOWN MOTOR IN IDLE POSITION.
  CAUTION: IF CONTROL IS TURNED TOO FAR CLOCKWISE, THE PLANE WILL NOT FLY FAST ENOUGH WHEN "THROTTLE" IS OPERATED.

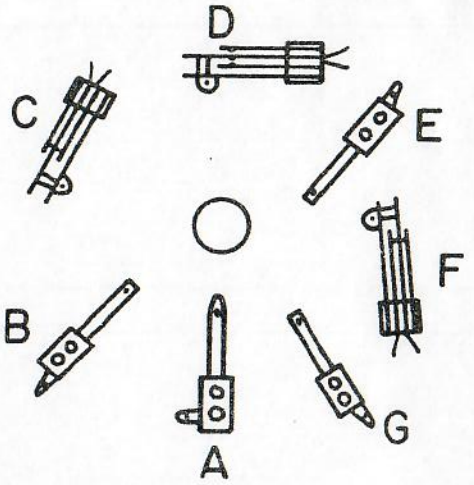
- B,C) INDIVIDUAL SOUNDS MAY BE INCREASED BY ROTATING EACH VOLUME CONTROL IN A COUNTER-CLOCKWISE DIRECTION.

  D) VOLUME MAY BE INCREASED BY ROTATING CONTROL IN A CLOCKWISE DIRECTION.

- E) TO INCREASE ALL SOUNDS, ROTATE IN A CLOCKWISE DIRECTION.

WIPER & SWITCH IDENTIFICATION

AIRPLANE P.C.
PC 548-913



AIRPLANE MOTOR
40-1985 (60C)
40-1991 (50C)
(12 R.P.M.)

A. SEARCH FINGER WIPER
B. LOW SCORE WIPER
C. BRIDGE CRASH CAM SWITCH
D. MOUNTAIN CRASH CAM SWITCH
E. CRASH WIPER
F. HANGER CRASH CAM SWITCH
G. HIGH SCORE WIPER

AIRPLANE SLIDE SW.	CRASH RELAY SERVICE SW.
In up pos. airplane flys at game over. In down pos. airplane does not fly at game over.	For normal operation of game place sw. in up pos. In down pos. sw. opens circuit to crash relay to aid servicing.

UPPER BLACKLITE

BALLAST CE-120 — STARTER FS-2

LOWER BLACKLITE

BALLAST CE-120 — STARTER FS-2

→ MIRROR MOTOR UP LIMIT SWS.

→ MIRROR MOTOR DOWN LIMIT SW.

MIRROR MOTOR
#1986
50 AND 60 CYCLE

25¢ JACK	TIME CONTROL JACK	EXTENDED PLAY JACK
● Jack in top position gives 3 plays.	● 180 – 108 Sec.	● 600 Top pos.
● Drop Jack one position to give 2 plays.	● 160 – 96 Sec.	● 570
● Drop Jack two positions to give one play.	● 140 – 84 Sec.	→ ● 540
↓	→ ● 120 – 72 Sec.	● 510
	● 100 – 60 Sec.	● 480
	Bottom position	● 450
	↓	● 420
		● 390
		● 360
		● 330 Bottom pos.

STUNT PILOT

START

Energized by coin or credit push button switches to reset all units to zero.

GAME OVER

Energized when time has elapsed or if vibration switch is operated

EXTENDED PLAY

Energized by Score units when proper score is made.

CRASH

Energized via airplane position disc when any obstacle is touched by the airplane search finger.

0°

Energized by 0° pos. of Control unit to operate Control Motor and coin switches

345°

Energized by 345° pos. of Control unit to control circuits to start relay and Alternator unit

LOCK

Energized at start of game and opened by Game Over relay.

START SCORE

Energized by 229° or 301° pos. of Control unit when score is made to operate 10-90 score release coil.

20 SCORE

Energized when mountain or arch score pos. is touched by airplane search finger.

40 SCORE

Energized when hanger or bridge score position is touched by the airplane search finger.

PLANE REVERSE

Operated via alternator unit cam switch when crash is made to reverse airplane.

RED CRASH LIGHTS

Energized when crash is made except for bridge, hanger or mountain positions.

MIRROR MOTOR UP

Energized when control stick is pulled to up pos., by a crash or at game over.

MIRROR MOTOR DOWN

Energized when control stick is pushed to down position.

25¢

Gives 2 or 3 plays when energized via 25c coin switch.

SIREN

Energized by 170° position of Control unit when crash is made.

ALTERNATOR UNIT →

Operated when crash is made to reverse airplane

6 AMP
115 Volts

10 AMP
50 Volts

1/2 AMP
SLO-BLO
17 Volts

2 AMP
SLO-BLO
17 Volts

6 AMP
6 Volts

MOTOR SPEED CONTROL MODULE
P. C. 548-909

Controls speed of mirror and airplane motors.

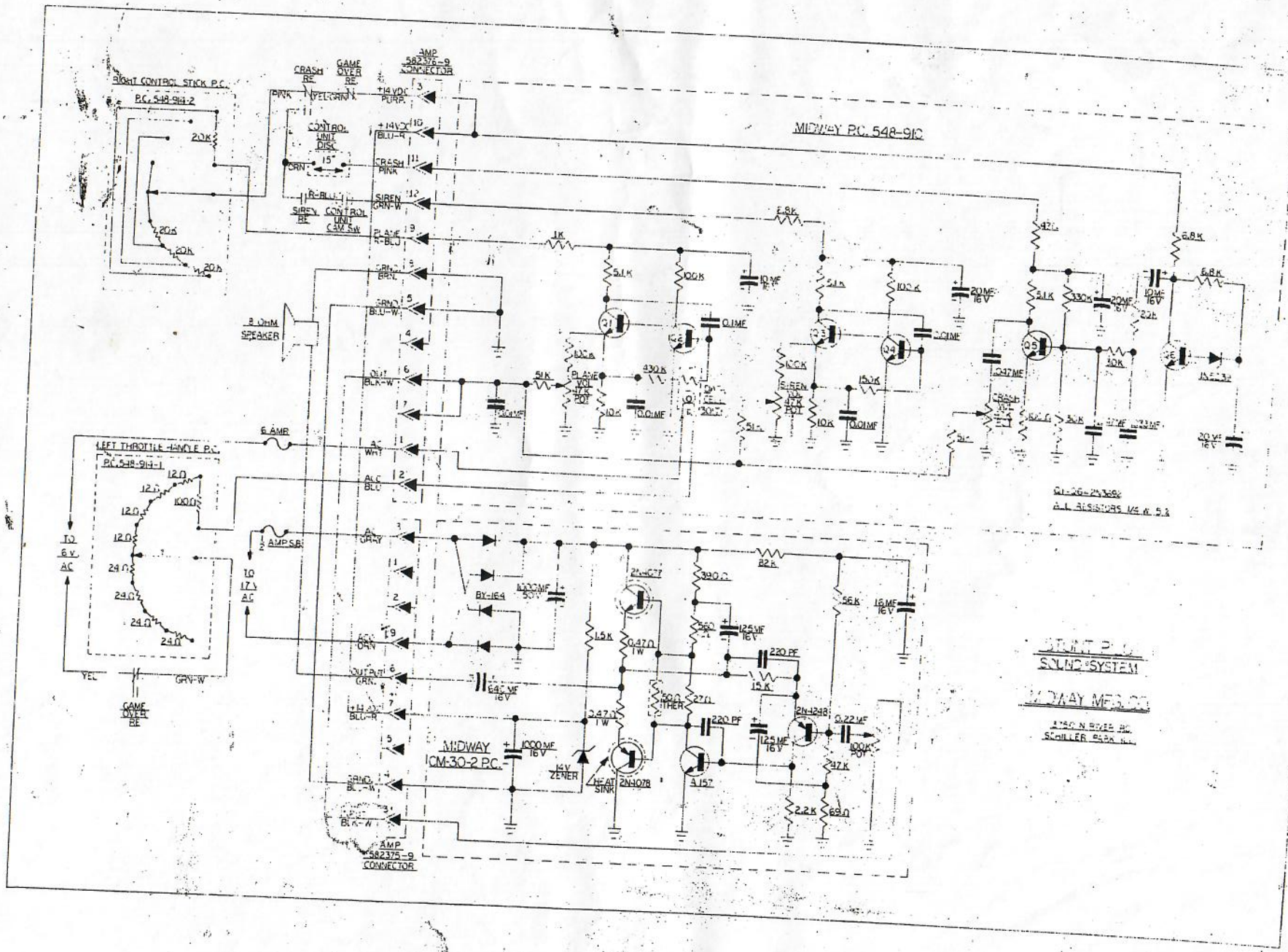
AMBULANCE TURNTABLE MOTOR

#1983 20 RPM

0° position is the bottom switch and operates the ambulance motor.

300° position is the top switch and opens circuits to the crash and siren relays.

STUNT PILOT


MIDWAY P.C. 548-910
RIGHT CONTROL STICK P.C.
P.C. 548-914-2
LEFT THROTTLE HANDLE P.C.
P.C. 548-914-1
AMP 582375-9 CONNECTOR
CRASH RE
GAME OVER RE
SIREN RE
CONTROL UNIT DISC
CONTROL UNIT CAM SW
8 OHM SPEAKER
6 AMP
1/2 AMP S.B.
TO 6 V. AC
TO 17 V. AC
GAME OVER RE
MIDWAY CM-30-2 P.C.
14V ZENER
HEAT SINK
2N4078
A157
2N1248
BX-164
SOUND SYSTEM
MIDWAY MFG. CO.