

ASTRO FIGHTER

Gremlin®/SEGA®

MANUAL PART NO. 420-0410
or
420-0411



OWNER'S MANUAL

ASTRO FIGHTER
OPERATING INSTRUCTIONS
AND
SERVICE MANUAL

INTRODUCTION . . .

This is an electronic game that makes extensive use of digital integrated circuitry and television monitor circuitry. This manual assumes the maintenance technician possesses a general knowledge of solid state circuitry microprocessor, TTL digital integrated circuitry and T.V. monitor concepts. Any individual **not** knowledgeable in these areas **should not** attempt repair of the electronic portion of this game. **It should be noted that any attempt to repair the game in the field without the express consent of the factory will immediately void the warranty!!!**

IMPORTANT NOTES . . .

An important service note is posted in this game and is repeated here for emphasis:

If at any time the T.V. screen shows a meaningless display or the game otherwise malfunctions, simply drop a coin into the coin mechanism. This should correct the problem. If not, the game requires service.

The circuitry in this game has been arranged so that the insertion of a quarter through the coin mechanism will reset the restart in the system. This clears up temporary problems caused by power line disturbances, static, etc.

ALSO . . .

Never replace any components with anything other than exact replacement parts. (See Parts List located on Service Schematics.)

Never remove circuit boards/connections while power is on.

Do Not replace the fuse with anything other than the proper value. A blown fuse indicates an overload condition within the game. Replacing the fuse with a higher value can cause severe damage to internal components if an overload occurs.

Always consult the manual before attempting repairs.

Correspondence regarding this game should be addressed to:

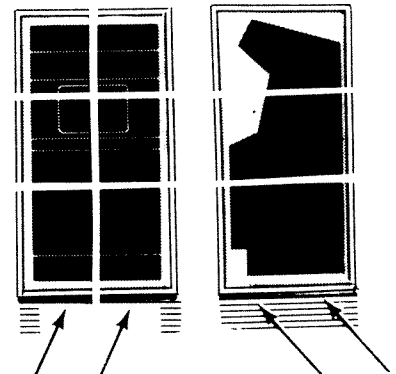
GREMLIN INDUSTRIES, INC.
8401 Aero Drive
San Diego, California 92123
(714) 277-8700

REPACKAGING INSTRUCTIONS . . .

Arcade
25 1/4" W x 87" H x 28" D
64.77cm W x 170.18cm H x 71.12cm D
290 lbs./132 kg.

Arcade Version

1. Carefully lay game on its side.
2. Attach pallet with **four** 5/16" - 18 x 1-3/4" bolts, as shown.
3. See Final Reccrating Instructions, below.



Mini-Video Version

1. Place game upright inside bottom cover.
2. Slide cover over game. Add protective packing material.
3. Place top cover over side cover.
4. See Final Reccrating Instructions, below.

MiniVideo
22" H x 21" W x 20" D
55.88cm H x 53.34cm W x 50.8cm D
80 lbs./36 kg.



Cocktail Version

1. Place game inside carton.
2. Add protective packing material.
3. Place inside protective top cover over unit.
4. Close flaps and secure with shipping tape.
5. See Final Reccrating Instructions, below.

Cocktail
22" W x 34" L x 24 1/4" H
55.88cm W x 93.98cm L x 62.23cm H
80 lb./36 kg.



FINAL RECCRATING INSTRUCTIONS . . .

Place game upright. Tape down game keys. Then, crate the game using appropriate shock-absorbent packing material. Include packing on edges of game. **Secure package with strapping.**

Note . . . If the game is to be shipped to Gremlin Industries for service or repair, attach a tag identifying the distributor and indicate the service or repair to be done. Include the full serial number of the game.

All items must be shipped prepaid.

GAME CONCEPT . . .

ASTRO FIGHTER is a 1 or 2 player game of space adventure. Two players may take turns, competing for high score. The player's warship faces meteor showers and four lines of enemy defense forces in an effort to reach THE MASTER and destroy it. Besides the challenges to fighting ability, the player's warship has an expendable supply of fuel that must last through the fight with THE MASTER. Two player controls are provided: a joystick enables the player to maneuver his warship from side to side; and a missile firing button.

The play begins with your warship at the bottom of the screen facing a barrage of yellow meteors that will destroy your warship, if hit. All action appears from the top of the screen and descends to the bottom throughout the game.

You are given a full supply of fuel in the beginning of play. This supply will steadily be consumed as you play and you must defeat THE MASTER before you can refuel. You will want to watch this gauge carefully throughout the game; a blue line will show your present fuel condition at all times.

After the initial meteor shower, you will face 11 enemy warships. They will appear in a pyramid formation with the wide row emerging from the top of the screen first. The enemy will move from side to side and is capable of firing not only straight ahead, but to its left and right. As you destroy the enemy ships, the action of the remainder is intensified.

If an enemy warship gets past you and reaches the bottom of the screen, regardless of how many previous warships, or formations, you have destroyed, the original group of defenders will reappear and your warship will be advanced one step closer to the enemy. Essentially, you will begin again, only closer, and you will have used precious fuel in the meantime.

After you have conquered the first formation of enemy warships, you will face a new formation of 12 warships, staggered six across and two deep.

After defeating the second formation, you will face a force of 12 warships that are not in a formation, but are randomly scattered in front of you.

Following the victory of having blasted away the third line of defenses, you will now face 15 enemy warships, five across and three deep, in your efforts to reach THE MASTER and defeat it. The vertical columns of this defense force will be varied in their distance to your warship.

If you succeed in defeating all 15 of the enemy warships, you are now ready to meet, and destroy, THE MASTER.

A pattern will emerge on the screen resembling a corridor that your warship is traveling along. The stars will become brighter and THE MASTER will appear. THE MASTER's body will expand and contract as it moves across the screen, back and forth, while firing vicious missiles at you. THE MASTER's missiles are random and may be fired in any direction.

THE MASTER can only be defeated by a direct hit in the eye. This is the only way you can destroy THE MASTER.

When you have destroyed THE MASTER, a fuel pipe will link-up with your warship and your supply will, again, be full. You are now ready for more combat in your efforts to, once again, seek and destroy THE MASTER. But, beware...the meteor showers and enemy action are now intensified and your challenge is more difficult.

Throughout the play, a watchful eye must be kept on your fuel gauge. If your supply is exhausted at any time before you destroy THE MASTER...your warship will explode!

Player 1 and player 2 scores are displayed at the top of the screen and the high score from past games will be displayed.

The operator may select the number of credits per coin. In addition, the operator may enable the one-player, or two-player switch, located inside the unit.

OPTIONS SELECT AND SOUND CONTROL ADJUSTMENTS

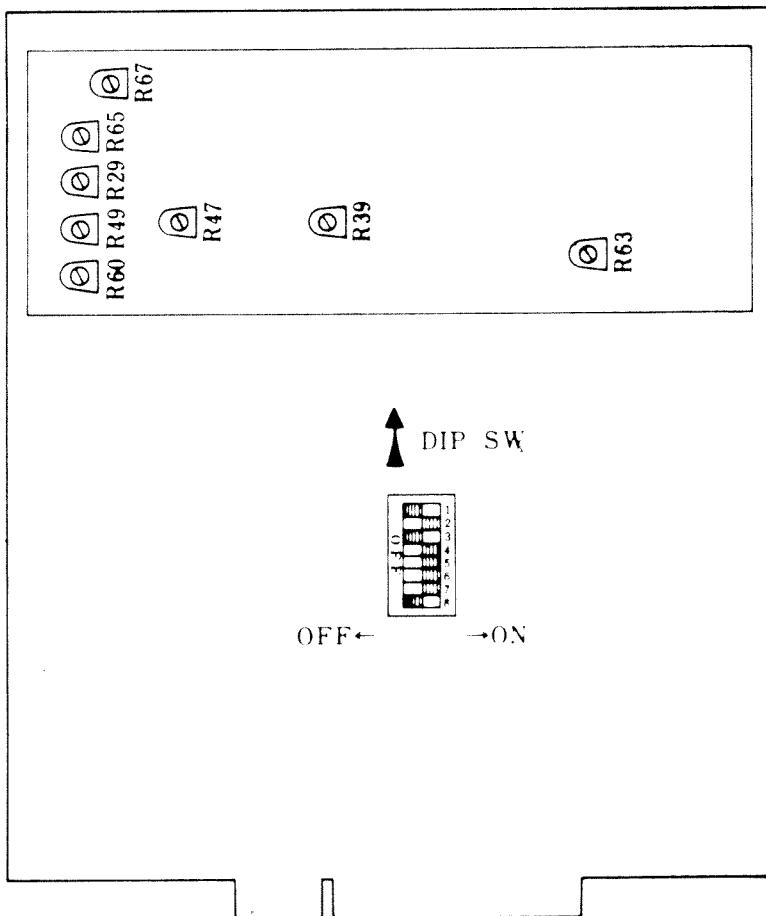
DIP Switch No.

- 1 Not Used
- 2 ON BONUS awarded for each row eliminated
OFF BONUS awarded after formation eliminated
- 3 ON No Replay
OFF Replay

| | | | | |
|---|-----|-------------|-------------|-------------|
| 4 | OFF | ON | OFF | ON |
| 5 | OFF | OFF | ON | ON |
| | | 1COIN·1PLAY | 2COIN·1PLAY | 1COIN·2PLAY |

| | | | | |
|---|--------|--------|--------|--------|
| 6 | OFF | OFF | ON | ON |
| 7 | OFF | ON | OFF | ON |
| | 9 JUMP | 7 JUMP | 5 JUMP | 3 JUMP |

- 8 On Upright or Mini-Video model
OFF Cocktail or Slimline model



SOUND ADJUSTMENTS

- R29 Explosion Sound
- R39 Firing Sound
- R49 Master's Dying Sound
- R60 Firing Decay
- R63 Music Sound
- R65 High Pitch Tone Control
- R67 Main Volume Control
- R47 Factory Adjusted...Do Not Set

Grenth Industries, Inc.
San Diego, California 92123

PARTS
LIST

TITLE ASSY HARNESS
MASTER A F

800-3010
DWG NO

SH 1
OF 3

A

REV

DRAWN MAHONEY

ENGR

CHECK *John P. Fay*

APPR

REVISION DESCRIPTION

DRAFT

CHECK

APPR

A 2-6-80 RELEASED

2-8-80

J.M.

J.P.F.

| Gremlin Industries, Inc. San Diego, California 92123 | PARTS LIST | TITLE TOP ASSEMBLY ASTRO FIGHTER ENG WHT | 700-0005 DWG NO | SH 1 OF 5 | A REV |
|--|---|---|--------------------|--------------|----------|
| USE WITH 800-30071 FOR PARTS LOCATIONS | DRAWN Ron Howter CHECK Steven J. Fay | ENGR APPR | | | |
| LTR | DATE | REVISION DESCRIPTION | DRAFT | CHECK | APPR |
| A | 2-11-80 | RELEASED 2-8-80 | REV | SPF | SPF |
| | | REFER TO HEXAGON CALL OUT ON SHEETS 3 AND 4 FOR LOCATION OF PARTS LISTED HERE. | | | |
| | | | R7Kavince | | |

| | | | | | | |
|--|-------------|--|---|---------------------------|--------------|----------|
| Gremlin Industries, Inc. San Diego, California 92123 | | PARTS LIST | TITLE TOP ASSEMBLY MICROFIGHTER, ENG W/G | 700-0006 DWG NO | SH 1 OF 2 | A REV |
| USE WITH 700-0005 FOR FINAL ASSEMBLY | | DRAWN <i>Ron Kauschke</i> | ENGR | | | |
| | | CHECK <i>John J. King</i> | APPR | | | |
| LTR | DATE | REVISION DESCRIPTION | DRAFT | CHECK | APPR | |
| A | 2-11-80 | RELEASED | <i>Ksil</i> | <i>gff</i> | <i>gff</i> | |
| | | | | | | |
| | | | | | | |
| | | REFER TO HEXAGON CALL-OUTS ON 700-0005 FOR | | | | |
| | | LOCATION OF PARTS LISTED HERE. | <i>RKauschke</i> | | | |
| | | | | | | |

Greenhill Industries, Inc.
San Diego, California 92123

PARTS LIST

TITLE
ASSEMBLY CONTROL PNL
ASTRO FIGHTER

800-3009
DWG NO

SH 1
OF 3

A
REV

SHEET 3 IS "D" SIZE

DRAWN MAHONEY

ENGR

CHECK *St. J. Fay*

APPR

LTR DATE

REVISION DESCRIPTION

DRAFT

APPR

A 2-8-80



RELEASED

2-8-80

J.M.

St. J. Fay

St. J. Fay

| | | | | | | | | | | | |
|--|--|-----------------------------|--|---|--|---|--|--|--|-----------------|--|
| Gremlin Industries, Inc. San Diego, California 92123 | | PARTS LIST | | TITLE ASSY-GAME ASTRO FIGHTER COCKTAIL (ENGLISH) | | DWG NO 700-0007 | | SH 1 OF 5 | | REV A | |
| SHT 4, 5 ARE "D" SIZE | | | | DRAWN Wynema 2-12-80 ENGR | | | | | | | |
| CHECK Scott Cameron 2-1980 APPR | | | | DRAFT WJB | | CHECK  | | APPR  | | | |
| LTR DATE | | REVISION DESCRIPTION | | | | | | | | | |
| A 2-19-80 | | RELEASED | | | | | | | | | |

Gremlin Industries, Inc.
San Diego, California 92123

PARTS LIST

TITLE ASSY-GAME
ASTRO FIGHTER
COCKTAIL (ENGLISH)

DWG NO 700-00037

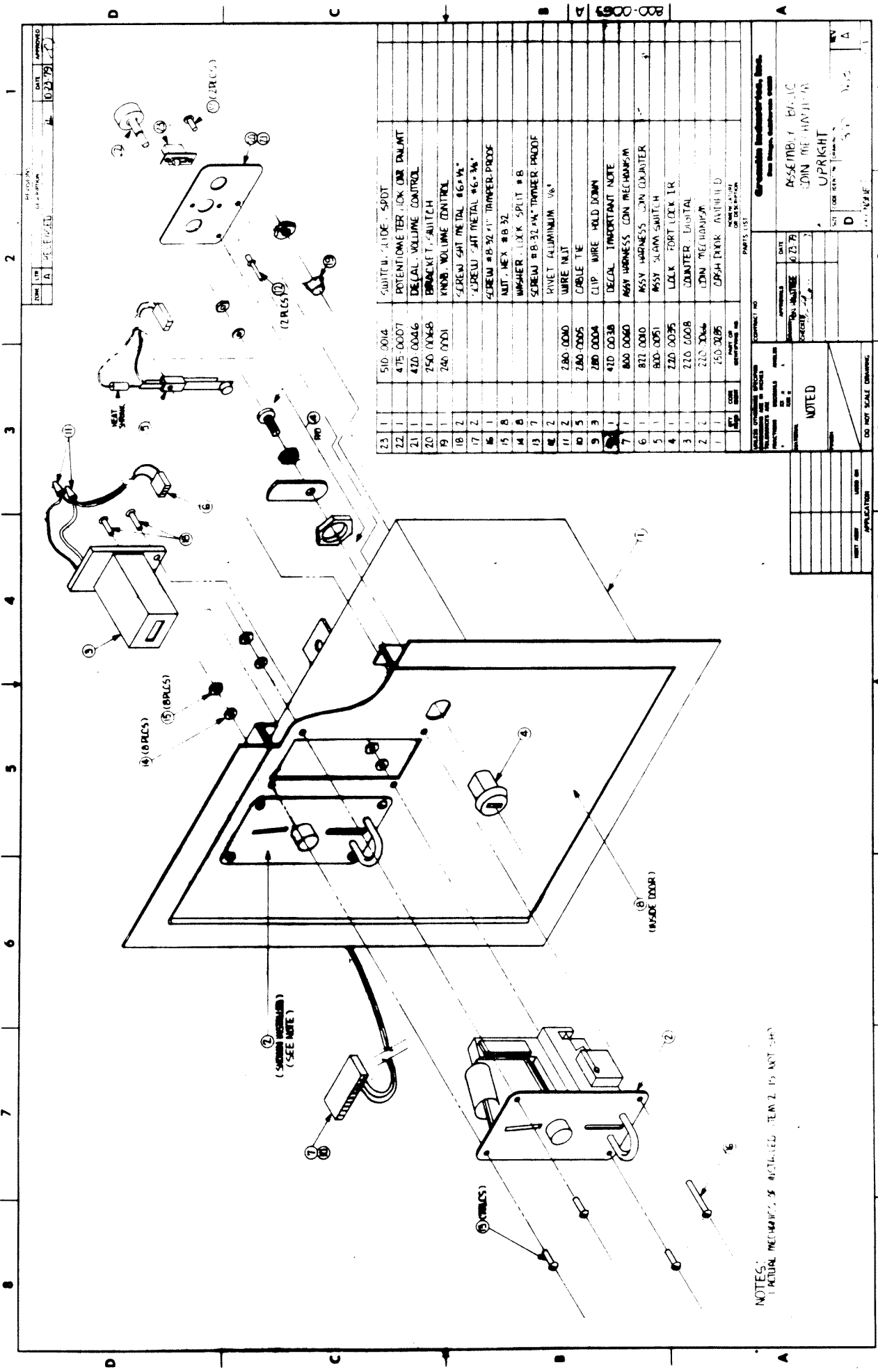
SH 2 OF 5

REV A

| ITEM NO | PART NO | QTY PER ASSY | | | DESCRIPTION | REF DES |
|---------|----------|--------------|--|--|-----------------------------------|------------|
| | | | | | | |
| 1 | 253-0141 | 2 | | | GRAPHIC CONT PANEL | |
| 2 | 253-0142 | 1 | | | GRAPHIC GAME SELECT | |
| 3 | 280-0075 | 6 | | | NUT WIRE LG. | |
| 4 | 420-0370 | 1 | | | DECAL COIN ENTRY | |
| 5 | 420-0371 | 1 | | | DECAL COIN INFO | |
| 6 | 420-0404 | 2 | | | TABLE GRAPHIC | |
| 7 | 420-0411 | | | | MANUAL ASTRO FIGHTER | (COCKTAIL) |
| 8 | 478-0001 | 1 | | | THERMISTER | |
| 9 | 560-0046 | 1 | | | ISOLATION XFMR | |
| 10 | 800-0072 | 1 | | | ASSY POWER SUPPLY | |
| 11 | 800-3022 | 1 | | | ASSY MASTER HARNESS | |
| 12 | 800-3023 | 1 | | | ASSY POWER HARNESS | |
| 13 | 800-3024 | 1 | | | ASSY HARN VOL CONT | |
| 14 | 800-3026 | 1 | | | ASSY FUSE BLOCK | |
| 15 | 800-3027 | 1 | | | ASSY GROUND STRAP | |
| 16 | 800-3028 | 1 | | | ASSY EMI HARN | |
| 17 | 807-0010 | 1 | | | ASSY HARNESS SPEAKER | |
| 18 | 834-0010 | 1 | | | ASSY SPECIAL DUAL JAPAN | |
| 19 | 834-5000 | 1 | | | ASSY GAME ELECTRONICS | (SEGA) |
| 20 | 600-0001 | 1 | | | CORD, LINE, 3COND | |
| 21 | | 8 | | | SCREW PHL. PN. HD. 6x1/2 SH. MTL. | |
| 22 | | 6 | | | SCREW PHL. PN. HD. 8x1/2 SH. MTL. | |

| Gremlin Industries, Inc. San Diego, California 92113 | | PARTS LIST | TITLE TOP ASSY GAME, ASTRO FIGHTER SLIMLINE | 700-0008 DWG NO | SH 1 OF 6 | A REV |
|--|--------|--------------------------|---|--------------------|--------------------|----------|
| SHTS. 4-6 ARE "D" SIZE | | DRAWN MAHONEY | ENGR | | | |
| | | CHECK <i>[Signature]</i> | APPR | | | |
| LTR | DATE | REVISION DESCRIPTION | DRAFT | CHECK | APPR | |
| A | 3-3-80 | RELEASED | J.M. | <i>[Signature]</i> | <i>[Signature]</i> | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| ITEM NO | PART NO | DESCRIPTION | REF DES | PARTS LIST | | QTY PER ASSY | |
|---------|----------|-------------------------------------|---------|------------|--|--------------|--|
| | | | | | | | |
| 1 | 800-3026 | ASSY FUSE BLOCK | | | | | |
| 2 | 834-5000 | ASSY GAME ELECTRONICS | | | | | |
| 3 | 560-0046 | ISOLATION XFMR | | | | | |
| 4 | 800-3031 | ASSY VOL CONT BLOCK | | | | | |
| 5 | 250-0048 | CLIP SWITCH | | | | | |
| 6 | 800-0072 | ASSY PWR SUPPLY DUAL | | | | | |
| 7 | 478-0001 | THERMISTOR | | | | | |
| 8 | 253-0150 | CONTROL PANEL GRAPHIC | | | | | |
| 9 | 834-0013 | SLIMLINE CABINET (NO ELECT) | | | | | |
| 10 | 253-0151 | GRAPHIC COIN INFO | | | | | |
| 11 | 420-0421 | TABLE GRAPHIC | | | | | |
| 12 | 253-0149 | GRAPHIC GAME SELECT | | | | | |
| 13 | 252-0078 | SUPPORT BLOCK REAR A/F UPRIGHT | | | | | |
| 14 | 252-0079 | SUPPORT BLOCK FRONT A/F UPRIGHT | | | | | |
| 15 | 140-0047 | GAME BASE, SLIMLINE | | | | | |
| 16 | 252-0081 | MTG. BLOCK | | | | | |
| 17 | 252-0082 | BLK STNDFF ISOLATION XFMR | | | | | |
| 18 | 252-0083 | PWR SUPPLY MTG. BLOCK | | | | | |
| 19 | 280-0004 | CLIP, WIRE HOLD DOWN | | | | | |
| 20 | | #6 x 1/2" PAN HD. SHIT. MTL. SCREW | | | | | |
| 21 | | #8 x 1" FLAT HD. WOOD SCREW | | | | | |
| 22 | | #8 x 1" PAN HD. SHIT. MTL. SCREW | | | | | |
| 23 | | #10 x 1 3/4" FLT. HD. WOOD SCREW | | | | | |
| 24 | | #10 x 1/2" PAN HD. SHIT. MTL. SCREW | | | | | |
| 25 | | #8 FLAT WASHER | | | | | |



| QTY | PART NO. | DESCRIPTION |
|-----|----------|--------------------------------|
| 23 | 510 0014 | SWITCH, SLIDE, SPOT |
| 22 | 475 0007 | POTENTIOMETER LOCK (ON PAINT) |
| 21 | 470 0046 | DECAL, VOLUME CONTROL |
| 20 | 750 0048 | BRACKET, SWITCH |
| 19 | 740 0001 | KNOB, VOLUME CONTROL |
| 18 | 2 | SCREW, SAT METAL #6x1/2" |
| 17 | 2 | SCREW #8-32x1/4" TRIMMER PROOF |
| 16 | 1 | NUT, HEX #8-32 |
| 15 | 8 | WASHER, LOCK SPLIT #8 |
| 14 | 8 | SCREW #8-32x1/4" TRIMMER PROOF |
| 13 | 7 | PIVET ALUMINUM 1/8" |
| 12 | 2 | WIRE NUT |
| 11 | 2 | CABLE TIE |
| 10 | 5 | CLIP, WIRE HOLD DOWN |
| 9 | 3 | DECAL, IMPORTANT NOTE |
| 8 | 800 0060 | WASHERNESS CON MECHANISM |
| 7 | 822 0010 | WASHERNESS CON COAXIAL |
| 6 | 800 0095 | WASHERNESS CON SWITCH |
| 5 | 220 0035 | LOCK PORT LOCK IR |
| 4 | 270 0008 | COUNTER, DIGITAL |
| 3 | 210 3066 | CON MECHANISM |
| 2 | 250 0025 | ORPH DOOR, AVIATION D |
| 1 | 1 | CONSOLE, AVIATION D |

CONTRACT NO. _____

DATE: 02/79

ASSEMBLY: B-1-C

UPRIGHT

DO NOT SCALE DRAWING.

NOTES:

1. LOCAL MECHANISMS & MOUNTING (SEE 2) IS NOT SHOWN.

8

7

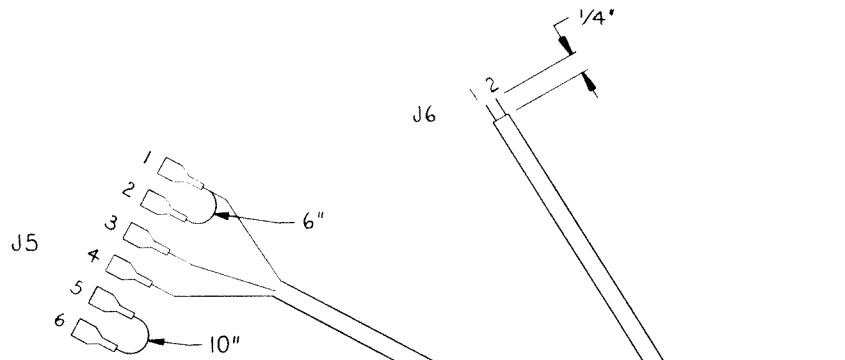
6

5

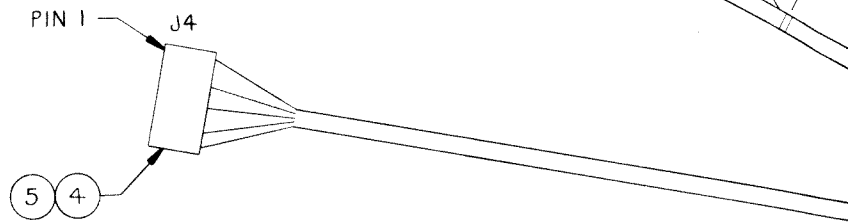
NOTES:

1. SECURE HARNESS USING ITEM 8,
APPROX EVERY 6 INCHES.

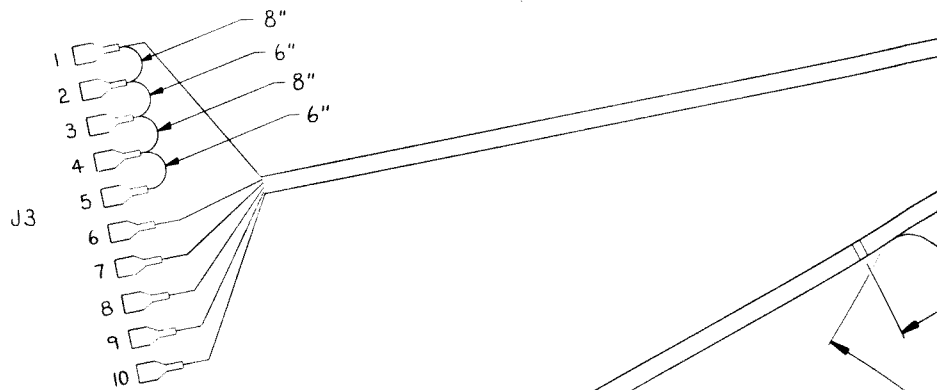
D



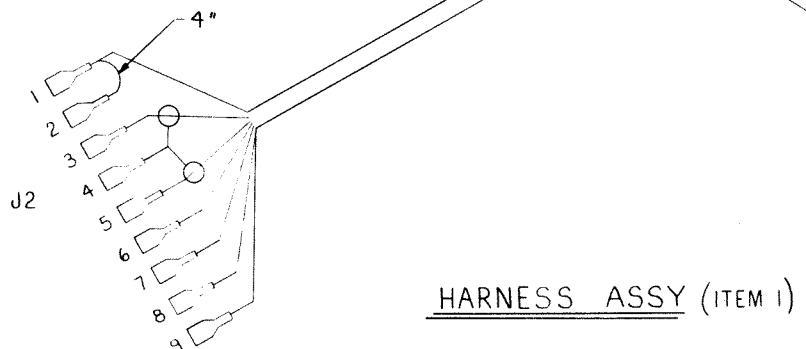
C



B



A



HARNESS ASSY (ITEM 1)

8

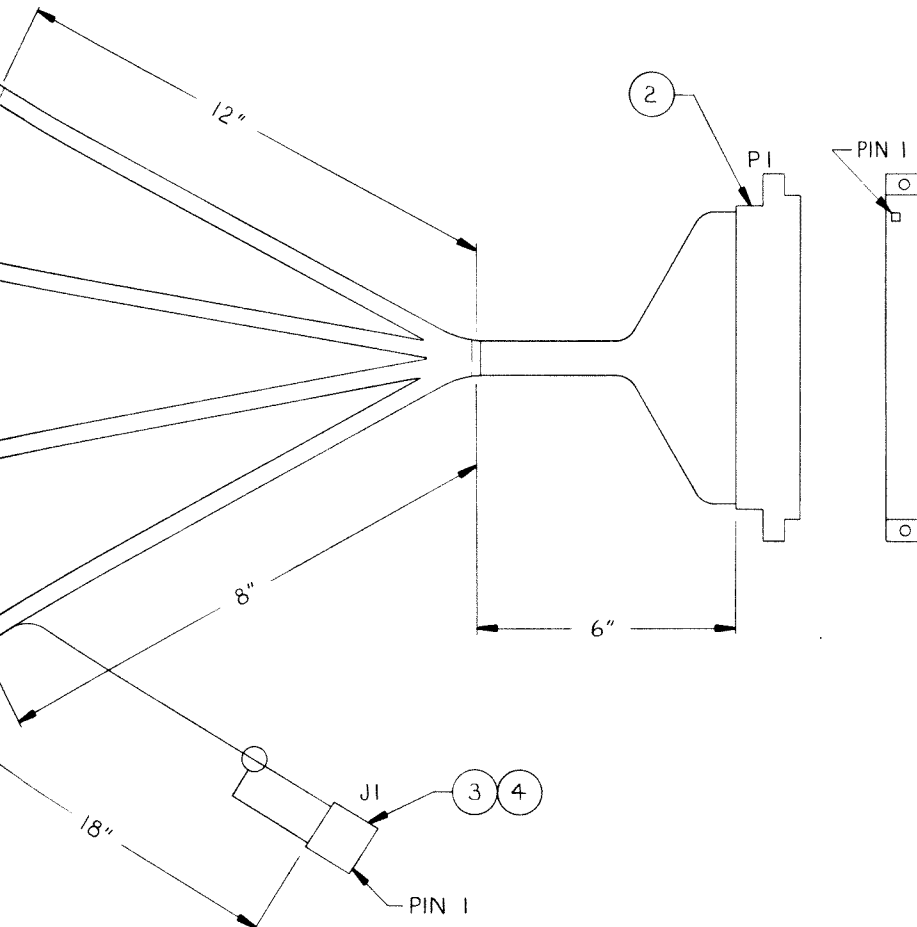
7

6

5

| REVISIONS | | | | |
|-----------|-----|-------------|--------|--------------------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | 2-8-80 | <i>[Signature]</i> |

| NO. | FROM | TO | COLOR | INCH |
|------|-------|--------------|---------------|------|
| 47 | J5-5 | J5-6 | JUMPER | 10 |
| 46 | J2-4 | J1-1 | SHLD. CA. GND | 42 |
| 45 | J2-5 | J1-4 | SHLD. CA. WHT | 42 |
| 44 | PI-22 | | | |
| 43 | PI-21 | | | |
| 42 | PI-20 | | | |
| 41 | PI-19 | | | |
| 40 | PI-18 | J2-9 | WHT/VIO | 60 |
| 39 | PI-17 | | | |
| 38 | PI-16 | | | |
| 37 | PI-15 | | | |
| 36 | PI-14 | | | |
| 35 | PI-13 | | | |
| 34 | PI-12 | | | |
| 33 | PI-11 | | | |
| 32 | PI-10 | | | |
| 31 | PI-9 | J2-5 | WHT/BLU | 60 |
| 30 | PI-8 | J5-3 | WHT/GRN | 60 |
| 29 | PI-7 | J2-4 | SHLD. CA. GND | 42 |
| 28 | PI-6 | J4-8 | BLK | 20 |
| 27 | PI-5 | J4-5 | BLU | 20 |
| 26 | PI-4 | J4-1 | RED | 20 |
| 25 | PI-3 | | | |
| 24 | PI-2 | | | |
| 23 | PI-1 | J2-1,2 J5-4 | BLK | 60 |
| 22 | PI-Z | J6-2 | WHT/YEL | 47 |
| 21 | PI-Y | J6-1 | WHT/ORN | 47 |
| 20 | PI-X | | | |
| 19 | PI-W | | | |
| 18 | PI-V | J2-6 | WHT/RED | 60 |
| 17 | PI-U | PI-R | JUMPER | 2 |
| 16 | PI-T | PI-P | JUMPER | 2 |
| 15 | PI-S | PI-N | JUMPER | 2 |
| 14 | PI-R | J3-10 | WHT/BRN | 65 |
| 13 | PI-P | J3-9 | WHT/BLK | 58 |
| 12 | PI-N | J3-8 | GRY | 59 |
| 11 | PI-M | J3-7 | VIO | 66 |
| 10 | PI-L | J3-6 | YEL | 61 |
| 9 | PI-K | J2-7 | ORN | 60 |
| 8 | PI-J | J5-1,2 | BRN | 60 |
| 7 | PI-H | J2-3 | SHLD. CA. WHT | 42 |
| 6 | PI-F | J4-7 | WHT | 20 |
| 5 | PI-E | J4-3 | GRN | 20 |
| 4 | PI-D | | | |
| 3 | PI-C | | | |
| 2 | PI-B | | | |
| 1 | PI-A | J3-1,2,3,4,5 | BLK | 62 |
| WIRE | FROM | TO | COLOR | INCH |



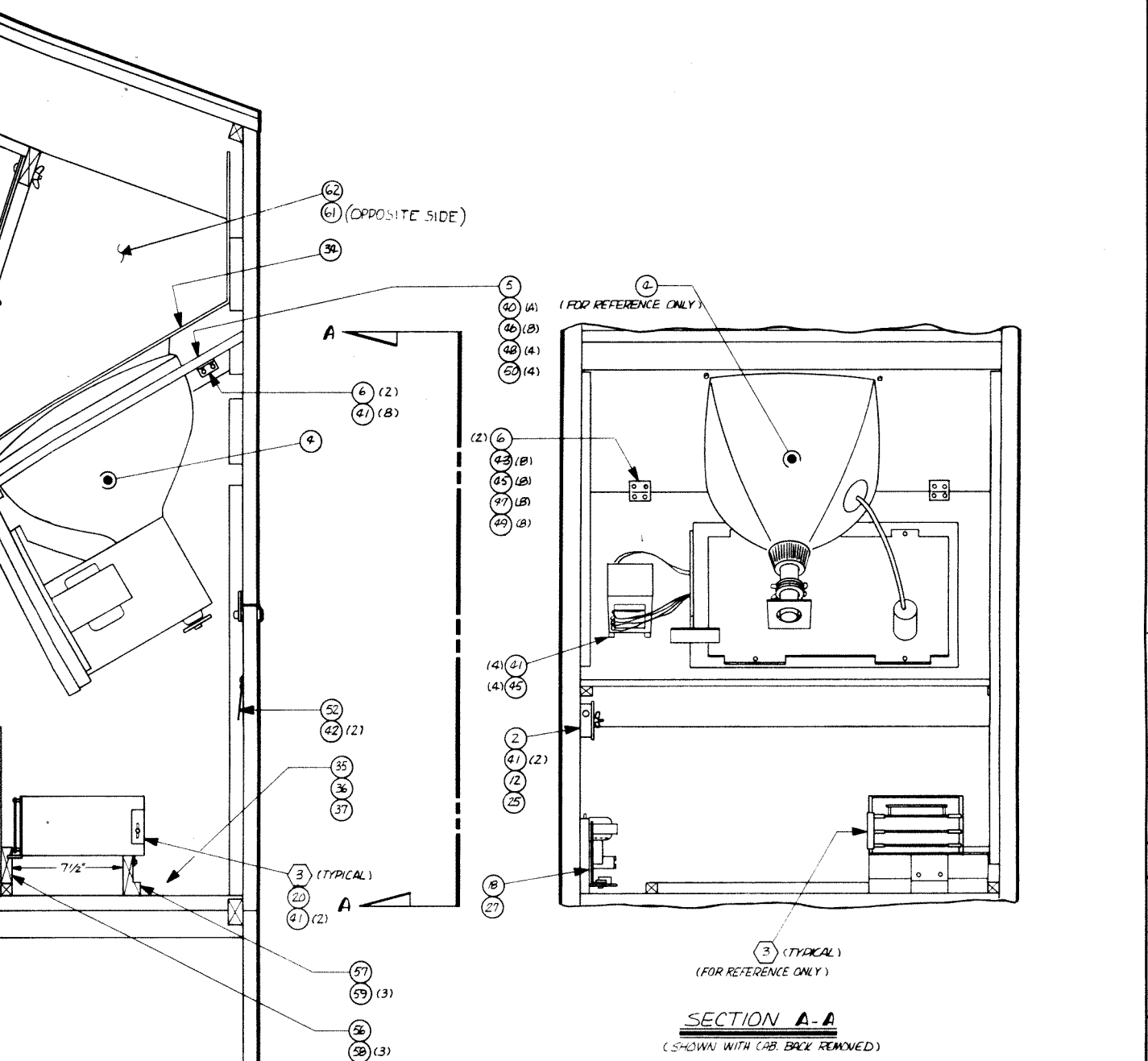
D
C
B
A
800-3010

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|--------------------------|-------------------------|--|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | Gremlin Industries, Inc. San Diego, California 92123 |
| FRACTIONS ± | DECIMALS .XX ± .XXX ± | ANGLES ± | |
| MATERIAL | NOTED | | APPROVALS |
| FINISH | | | DATE |
| NEXT ASSY | USED ON | APPLICATION | DO NOT SCALE DRAWING |
| | | SCALE NONE | SHEET 3 OF 3 |

| | | |
|--|----------------|-------------|
| Gremlin Industries, Inc. San Diego, California 92123 | | |
| ASSY HARNESS MASTER A F | | |
| SIZE | CODE IDENT NO. | DRAWING NO. |
| D | | 800-3010 |
| SCALE NONE | | REV. A |

4 3 2 1

| REVISIONS | | | | |
|-----------|-----|-------------|--------|-------------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| | A | RELEASED | 2-8-80 | [Signature] |



SECTION A-A
(SHOWN WITH CAB. BACK REMOVED)

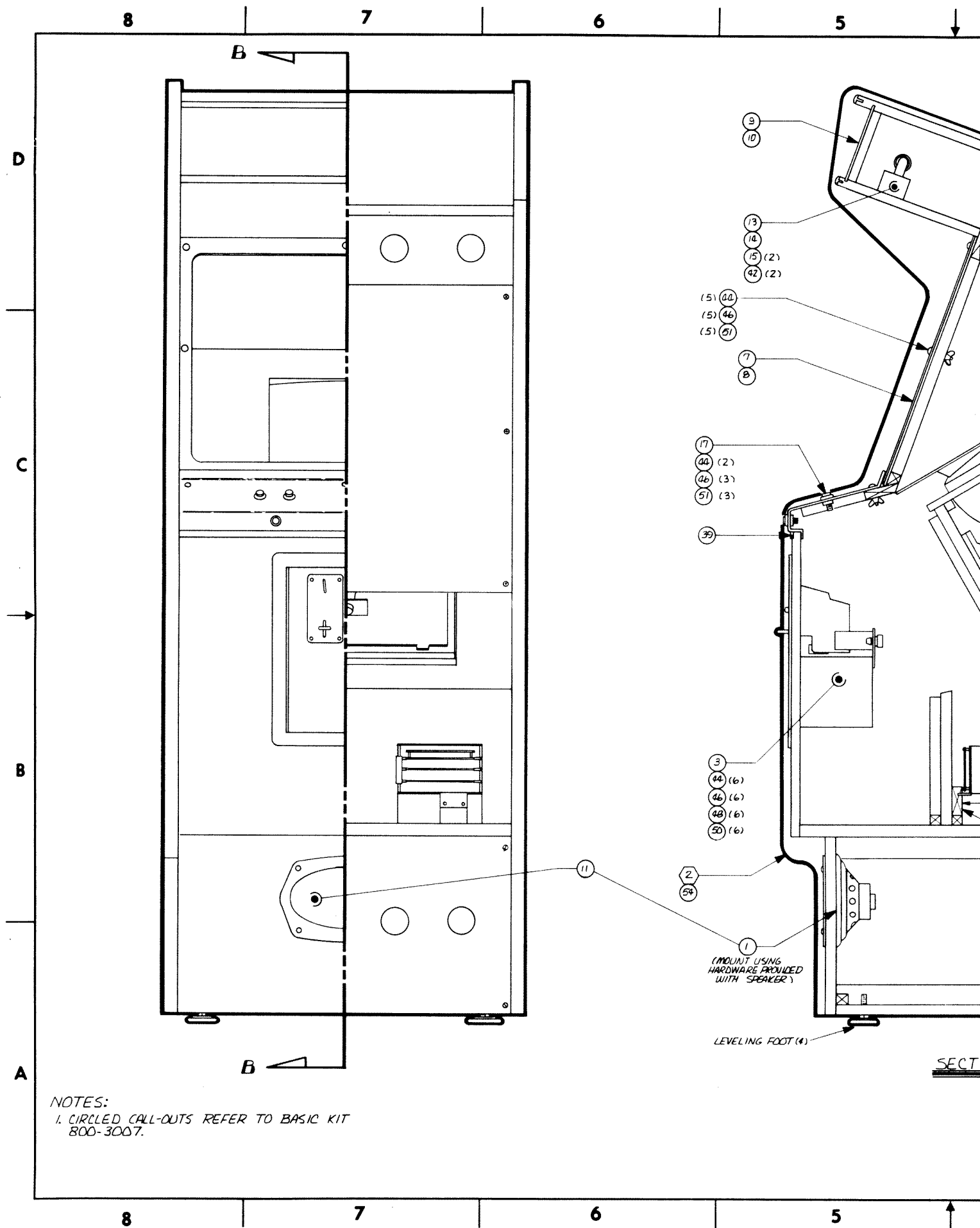
SECTION B-B

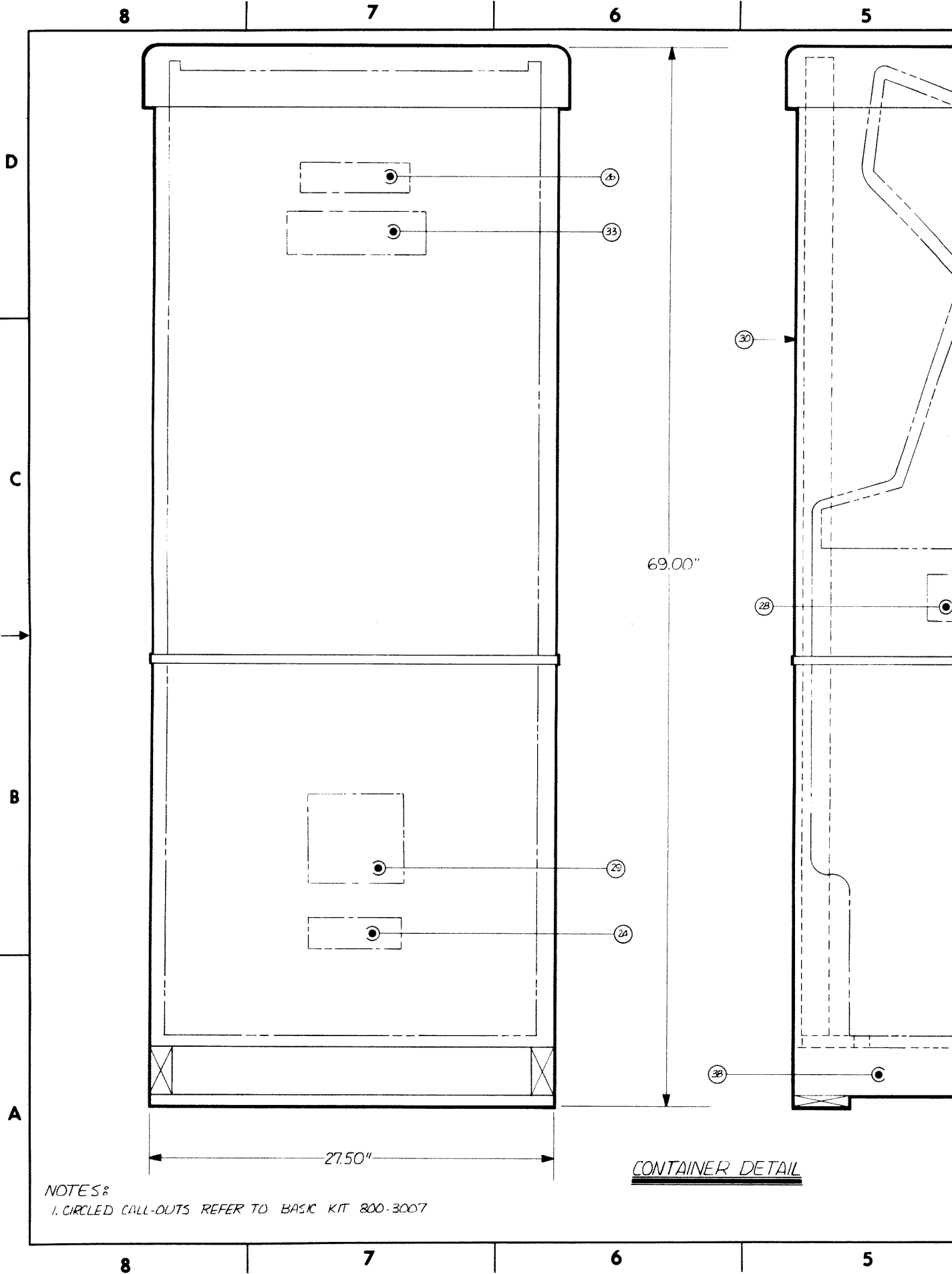
| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|----------|------------|-------------------------|-----------------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| PARTS LIST | | | |
|---|----------------------|---|---------------------------------|
| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | | |
| FRACTIONS | DECIMALS | ANGLES | |
| ± | .XX ± | ± | |
| | .XXX ± | | |
| MATERIAL | | CONTRACT NO. | |
| NOTED | | Gremlin Industries, Inc. San Diego, California 92123 | |
| FINISH | | APPROVALS | DATE |
| | | [Signature] | 2-7-80 |
| | | CHECKED | DATE |
| | | [Signature] | 2-8-80 |
| NEXT ASSY | USED ON | SIZE | CODE IDENT NO. DRAWING NO. REV. |
| | | D | 700-0005 A |
| APPLICATION | DO NOT SCALE DRAWING | SCALE NONE | SHEET 3 OF 5 |

D
C
B
A
700-0005

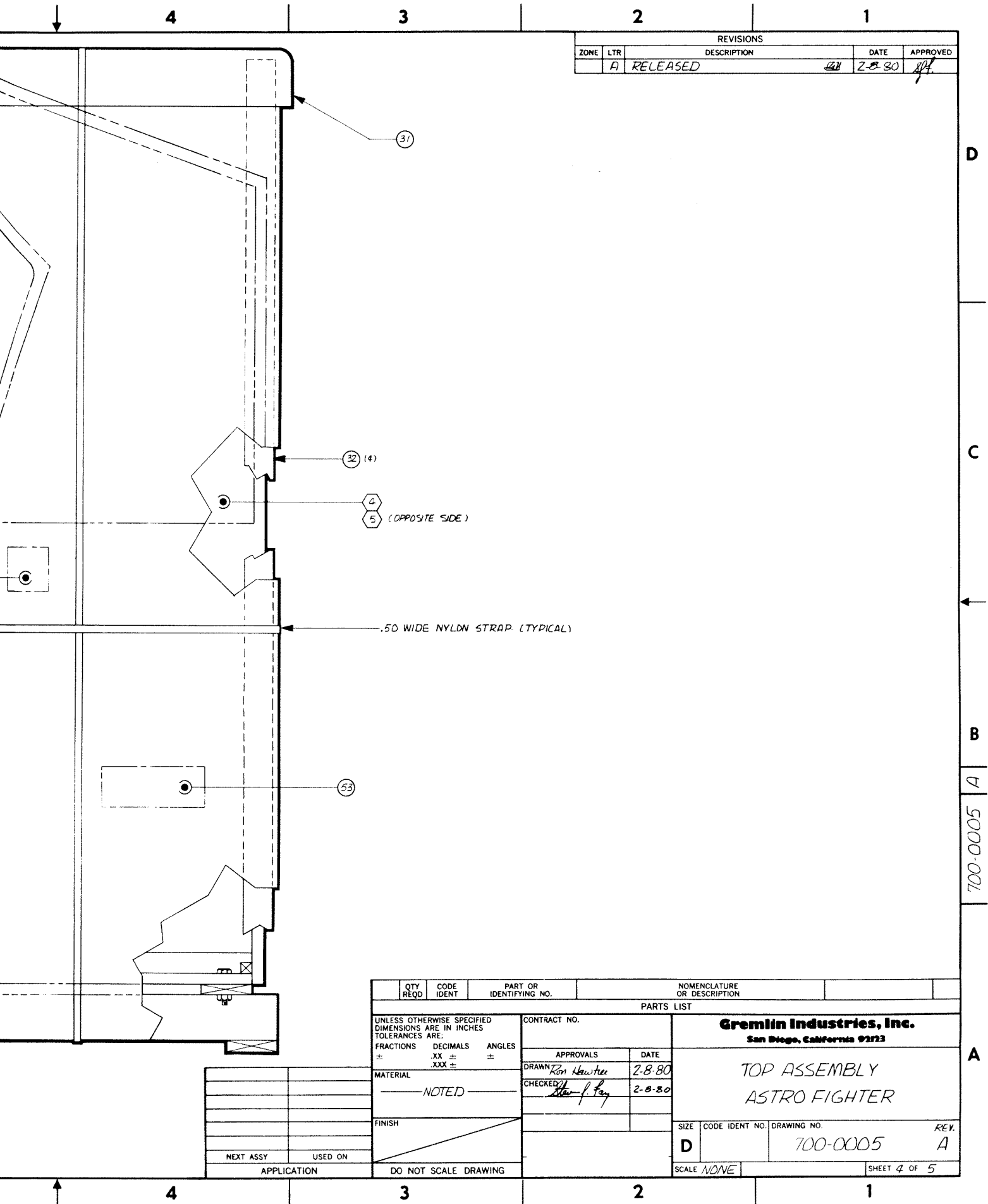
4 3 2 1





NOTES:
 1. CIRCLED CALL-OUTS REFER TO BASIC KIT 800-3007

CONTAINER DETAIL



| REVISIONS | | | | |
|-----------|-----|-------------|--------|-------------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | 2-8-80 | [Signature] |

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|--|-----------------|--------------------------------|--|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS | DECIMALS | ANGLES | Gremlin Industries, Inc. San Diego, California 92123 |
| ± | .XX ± .XXX ± | ± | |
| MATERIAL | NOTED | | APPROVALS DATE DRAWN <i>Ron Newtree</i> 2-8-80 CHECKED <i>Steve P. Ray</i> 2-8-80 |
| FINISH | | | SIZE CODE IDENT NO. DRAWING NO. REV. D 700-0005 A |
| NEXT ASSY | USED ON | SCALE <i>NONE</i> SHEET 4 OF 5 | |
| APPLICATION | | DO NOT SCALE DRAWING | |

700-0005 A

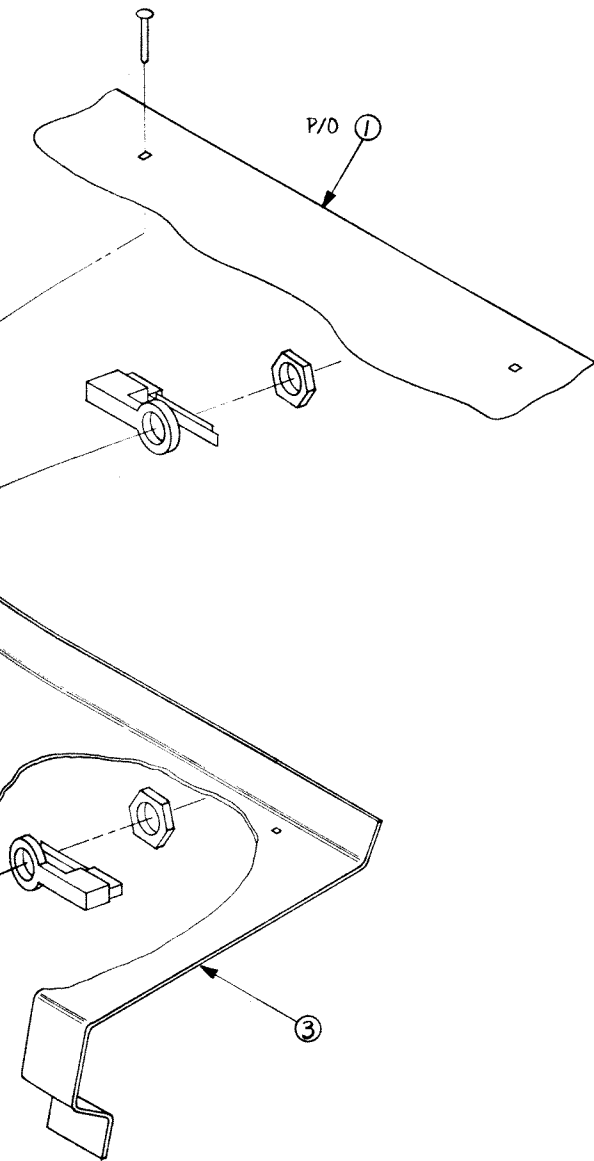
4

3

2

1

| REVISIONS | | | | |
|-----------|-----|-------------------|------------|--------------------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | J.M 2-8-80 | <i>[Signature]</i> |
| B | | CHG'D PER ECN 378 | SB 3-10-80 | <i>[Signature]</i> |



D

C

B

B

800-3009

A

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | |
|---|--------------------------|----------------------------|-----------------------------|--|
| | | | PARTS LIST | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | | Gremlin Industries, Inc. San Diego, California 92123 |
| FRACTIONS ± | DECIMALS .XX ± .XXX ± | ANGLES ± | APPROVALS | |
| MATERIAL | | DRAWN MAHONEY | | DATE 2-8-80 |
| FINISH | | CHECKED <i>[Signature]</i> | | DATE 2-8-80 |
| NEXT ASSY | USED ON | SIZE D | CODE IDENT NO. | DRAWING NO. 800-3009 |
| APPLICATION | | SCALE NONE | | REV. B |
| DO NOT SCALE DRAWING | | | | SHEET 3 OF 3 |

4

3

2

1

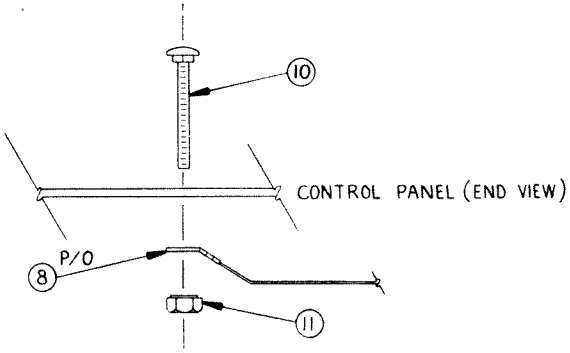
8

7

6

5

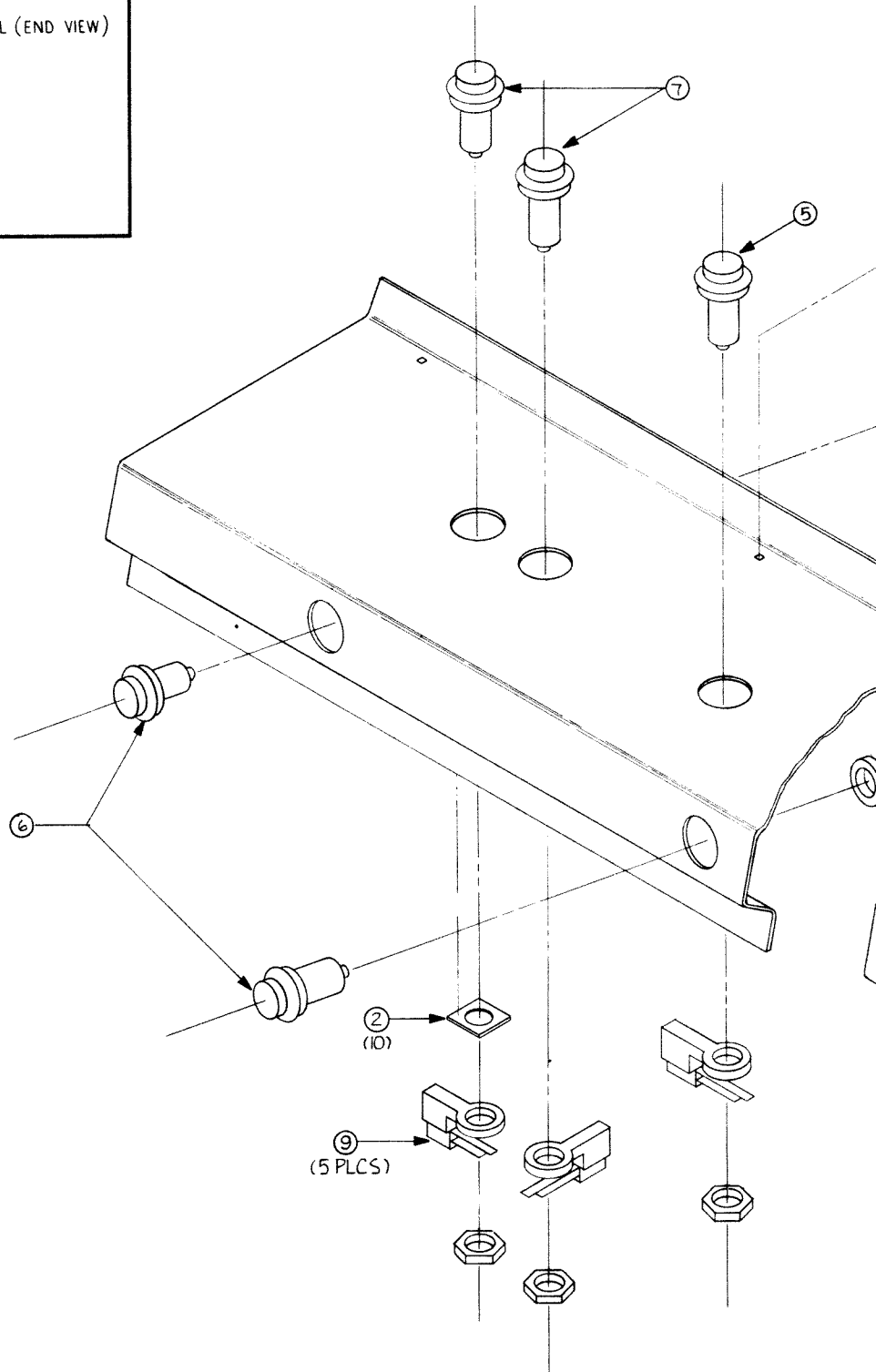
D



C

B

A



NOTES:

8

7

6

5

4

3

D

C

B

A

HOLDER, FUSE
 PANEL MOUNT
 P/N: 514-0005
 FUSE, 2A SLO-BLO
 P/N: 5K-0001

BRACKET, SWITCH
 P/N: 250-0390

P/O FUSEHOLDER

NOTES: ⚠ ALL QUICK CONNECTS TO BE SECURED TO WIRE WITH SHRINK TUBING

| | |
|-------------|---------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | A/F CKT |
| NEXT ASSY | USED ON |
| APPLICATION | |

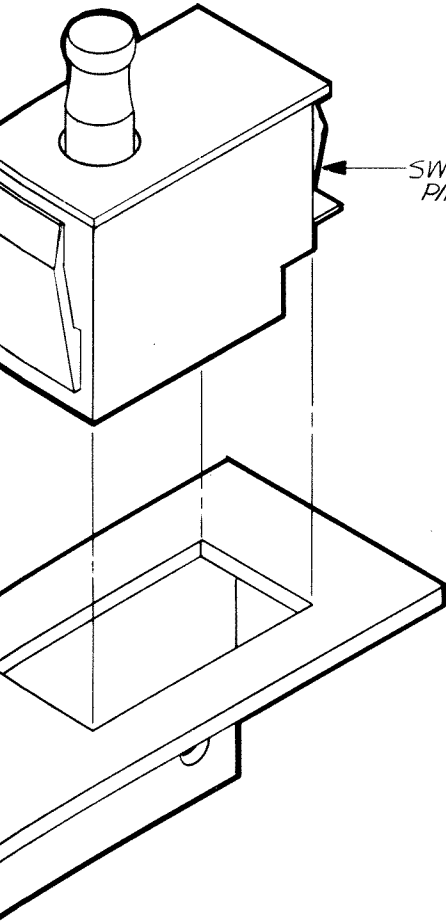
4

3

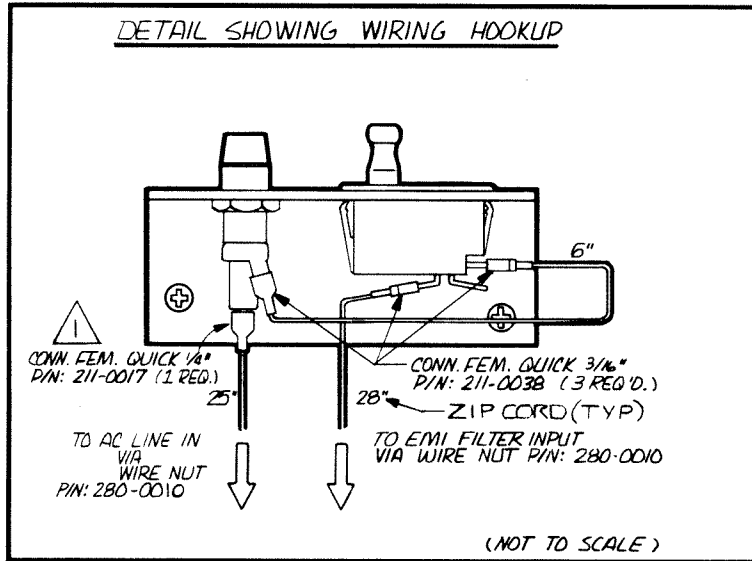
2

1

| REVISIONS | | | | |
|-----------|-----|----------------------------|---------|--------------------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | 2-13-80 | <i>[Signature]</i> |
| A | | B.O.M. CHG. (WIRE NUT P/N) | 3-27-90 | <i>[Signature]</i> |



SWITCH, SPDT, CHERRY P/N: 510-0013



D

C

A

B

A

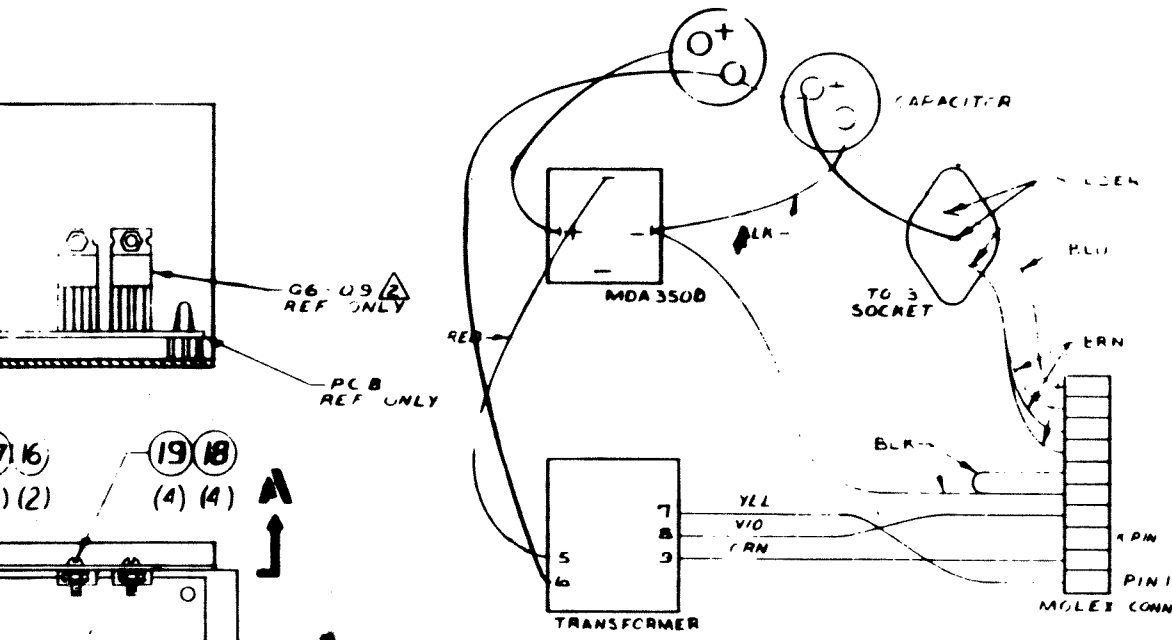
800-3026

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | |
|---|------------|----------------------------|---|-------------|
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | | |
| FRACTIONS | DECIMALS | ANGLES | Gremlin Industries, Inc. San Diego, California 92123 ASS'Y. FUSEBLOCK | |
| ± | .XX ± | ± | | |
| | .XXX ± | | | |
| MATERIAL | | APPROVALS | DATE | |
| NOTED | | DRAWN <i>Fon Hawhee</i> | 2-13-80 | |
| | | CHECKED <i>[Signature]</i> | 2-13-80 | |
| FINISH | | SIZE | CODE IDENT NO. | DRAWING NO. |
| DO NOT SCALE DRAWING | | C | | 800-3026 |
| | | SCALE 2X | | REV. A |
| | | SHEET / OF / | | |

2

1

| REVISIONS | | | | |
|-----------|-----|-------------|-------------|----------|
| REV | LTG | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | WJB 12-3-79 | |
| B | | REVISION | WJB 1-1-80 | |



WIRING DIAGRAM

SEE DETACHED PARTS LIST

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO | NOMEN CLATURE OR DES NATION |
|---|------------|------------------------|---|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS | DECIMALS | ANGLES | Growth Industries, Inc. San Diego, California 92108 ASSY POWER SUPPLY DUAL GAMES |
| ± | 0.01 | ± | |
| APPROVALS | | DATE | |
| DESIGNED BY | | 11-20-79 | |
| CHECKED BY | | 12-3-79 | |
| DRAWN BY | | | |
| MATERIAL | | | |
| TESTING | | | |
| REVISIONS | | | |
| NOT ASSY | | USED ON | |
| APPLICATION | | DO NOT SCALE DRAWING | |
| SIZE | | CODE IDENT NO | DRAWING NO |
| D | | | 810-0077 |
| SCALE 1:1 | | REV B | |
| | | SHEET 3 OF | |

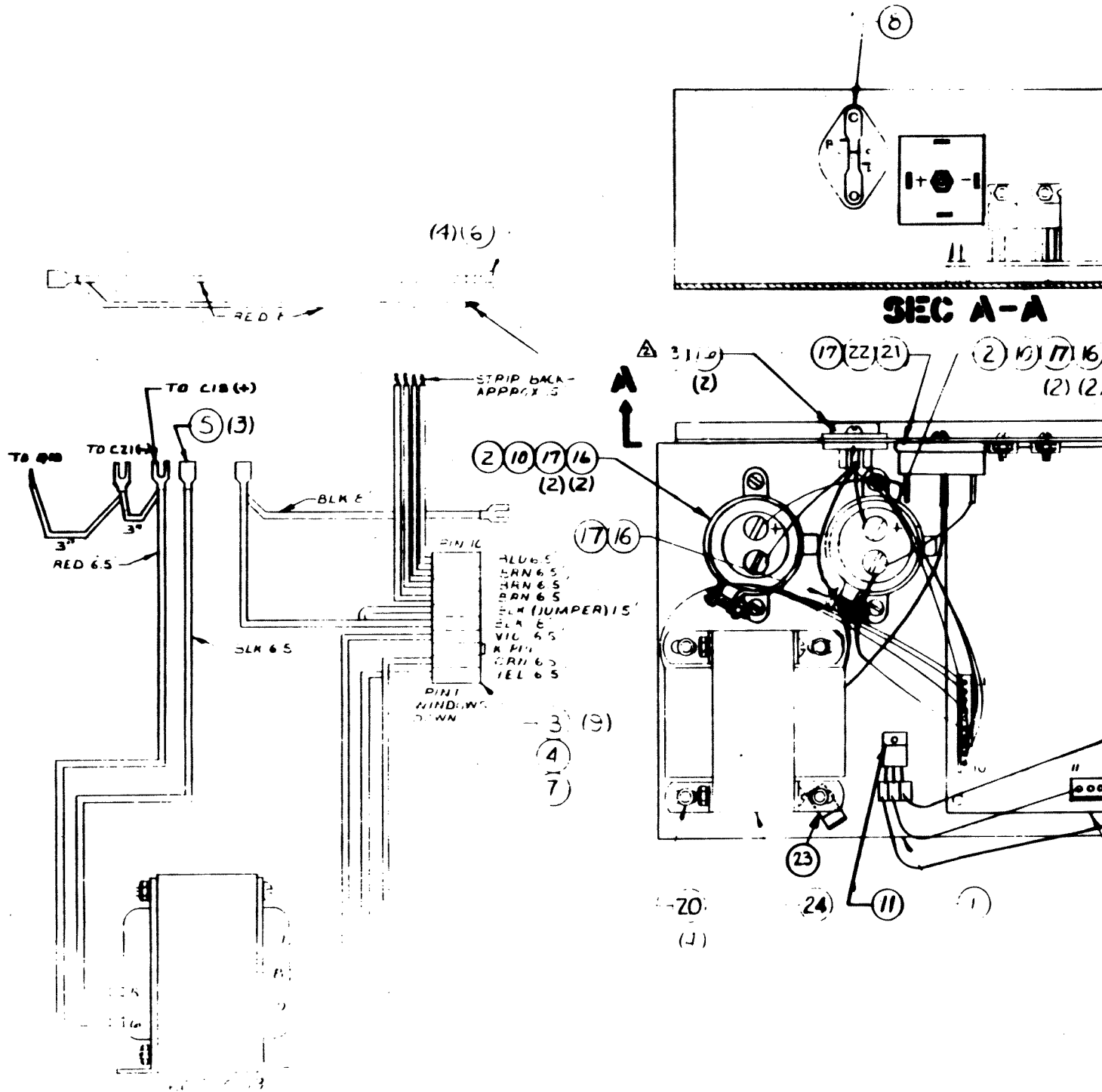
1512100-005

D

C

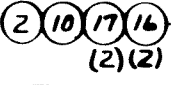
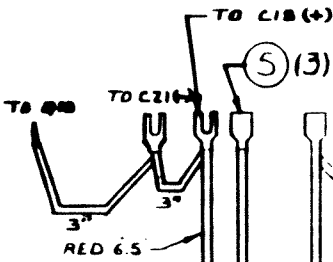
B

A

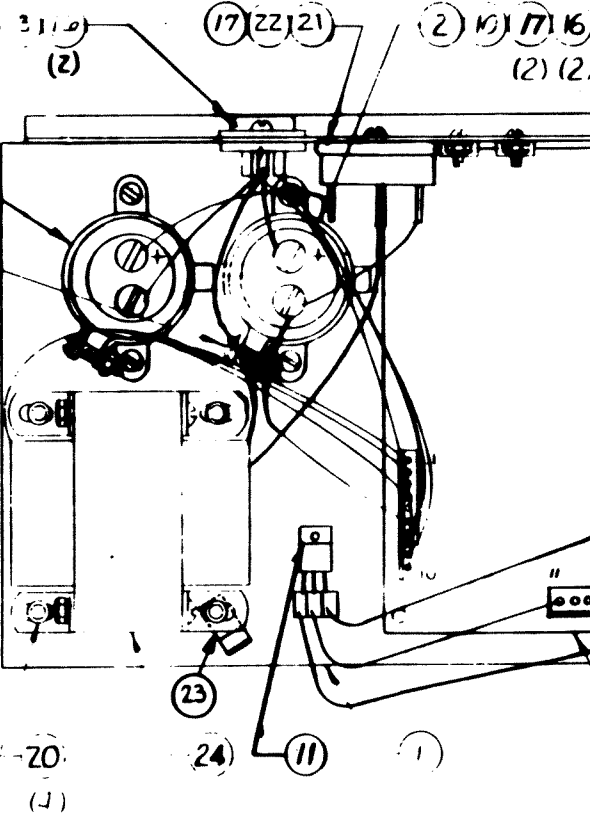
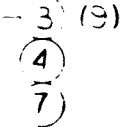


(4)(6)

SEC A-A

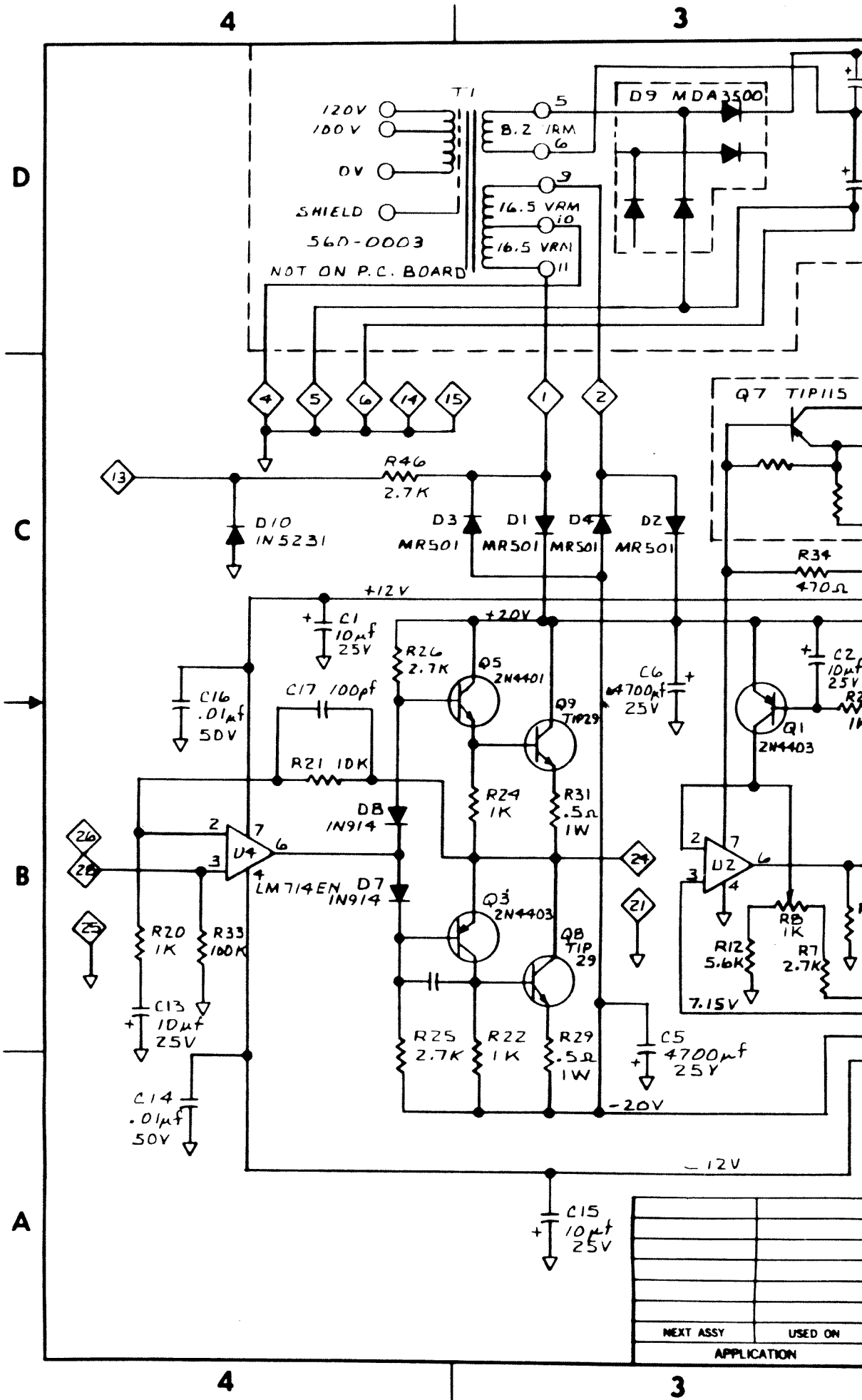


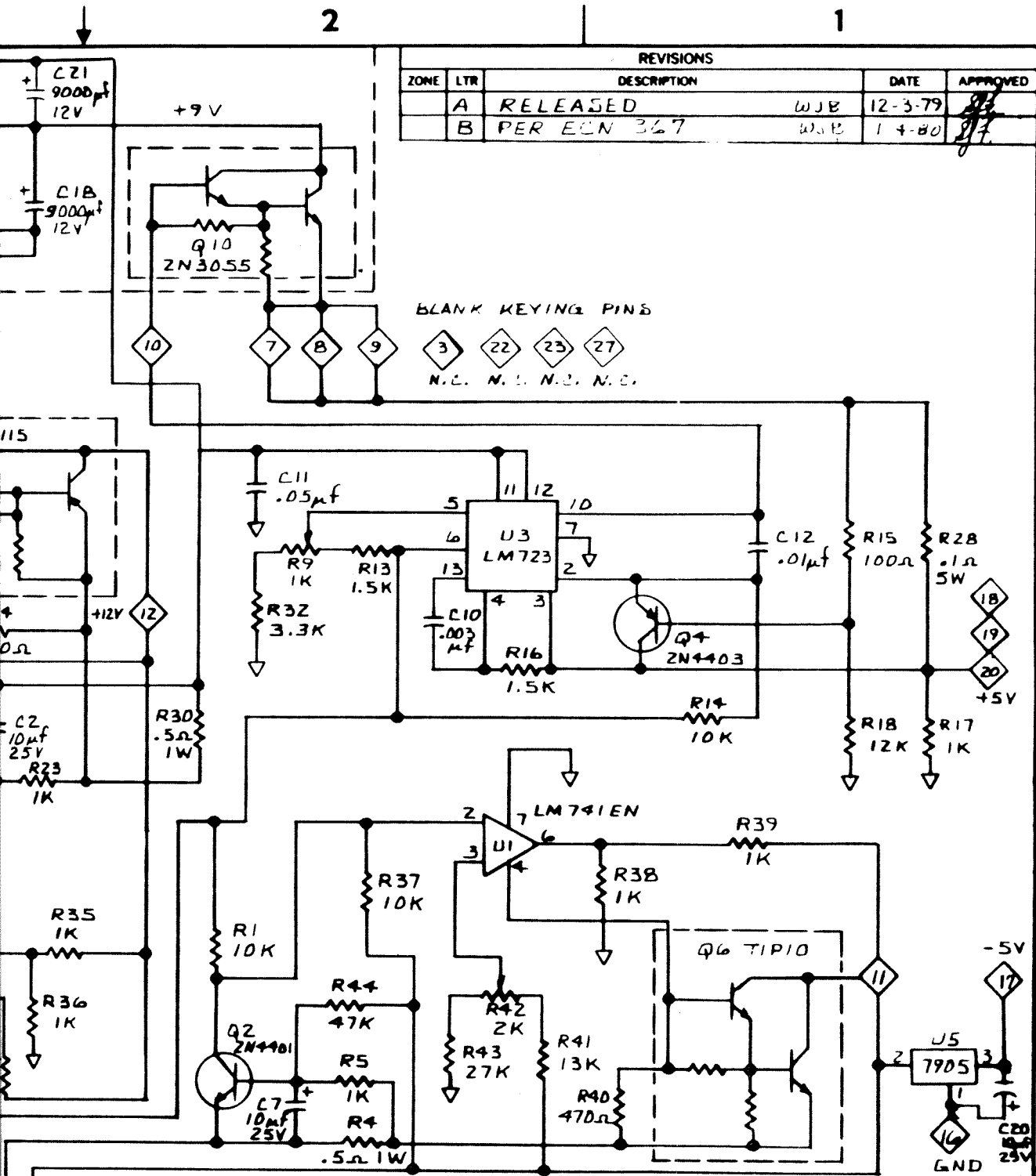
- ALU 6.5
- BRN 6.5
- GRN 6.5
- BLK (JUMPER) 15
- BLK E
- VIO 6.5
- K PIN
- GRN 6.5
- YEL 6.5



ALL STARS TO BE MOUNTED WITH INSULATING PASTE & INSULATING HARDWARE BE ANS # 22 SA UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED





| REVISIONS | | | | |
|-----------|-----|-------------|------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | WJB | 12-3-79 |
| B | | PER ECN 367 | WJB | 1-4-80 |

BLANK KEYING PINS
 3 22 23 27
 N.C. N.C. N.C. N.C.

D
C
B
A
800-0072

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|------------|-------------------------|---|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS | DECIMALS | ANGLES | Green Industries, Inc. San Diego, California 92123 |
| = | .XX ± | = | |
| MATERIAL | XXX ± | | APPROVALS: _____ DATE: 12-3-79 DRAWN: <i>Wynema</i> CHECKED: <i>[Signature]</i> 12-3-79 |
| FINISH | | | SCHEMATIC POWER SUPPLY DUAL GAMES |
| DO NOT SCALE DRAWING | | SIZE: C | CODE IDENT NO.: DRAWING NO.: 800-0072 REV: B |
| | | SCALE: NONE | SHEET 4 OF 4 |

4

3

2

1

| REVISIONS | | | | |
|-----------|-----|-------------|--------------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| | A | RELEASED | J.M. 2/17/80 | 20 |

D

C

B

A

700-0007

5

19 22 23
(2) (2)

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | |
|--|----------------------|-------------------------|--|---------------------------------------|
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | Gremlin Industries, Inc. San Diego, California 92123 | |
| FRACTIONS ± | DECIMALS .XX ± | ANGLES ± | | |
| MATERIAL | FINISH | APPROVALS | DATE | ASTRO FIGHTER COCKTAIL |
| | | DRAWN MAHONEY | 2-14-80 | |
| | | CHECKED | | |
| NEXT ASSY | USED ON | SCALE NONE | SIZE D | CODE IDENT NO. DRAWING NO. 700-0007 A |
| APPLICATION | DO NOT SCALE DRAWING | SCALE NONE | | SHEET 4 OF 5 |

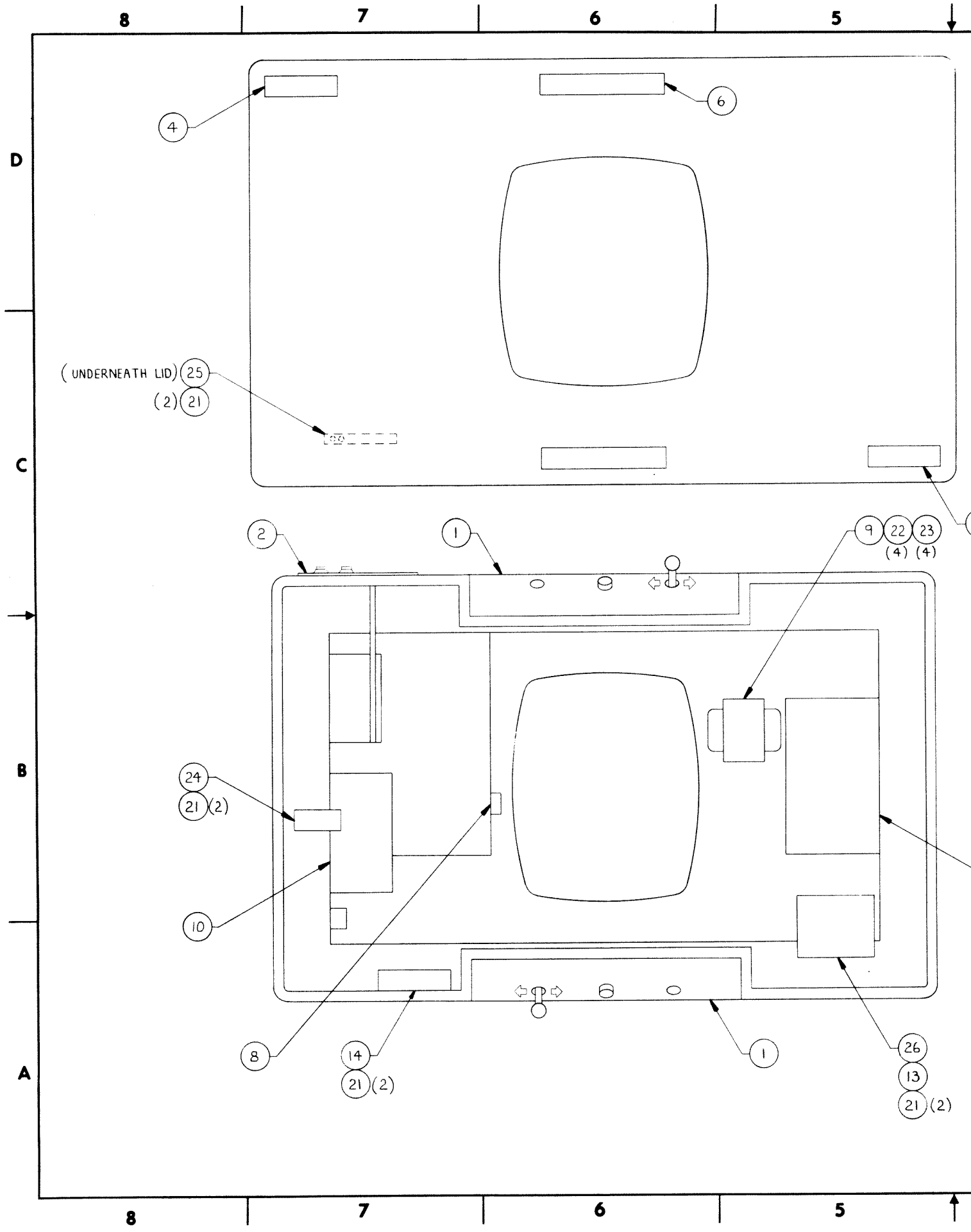
4

3

2

1

A



8

7

6

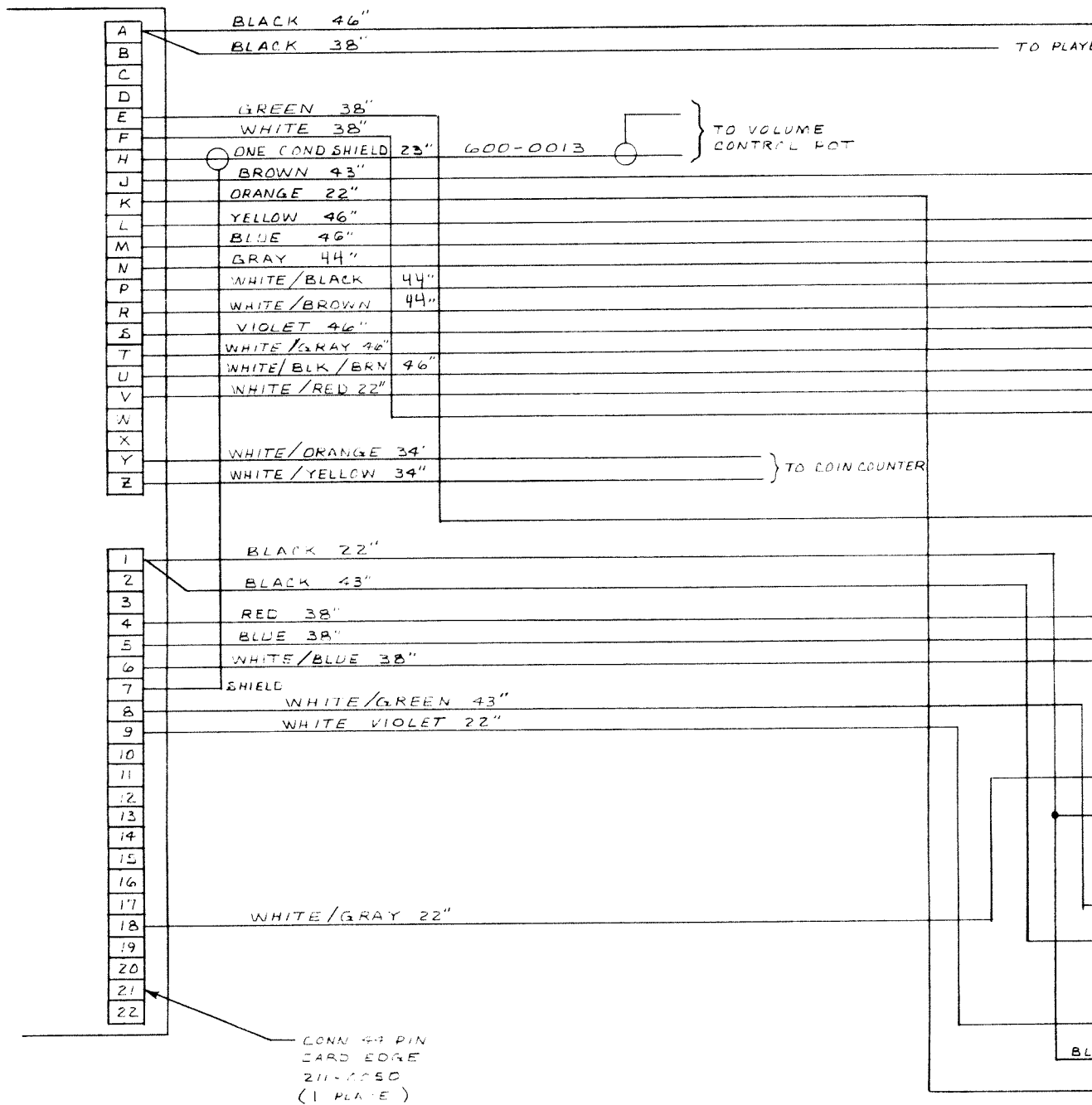
5

D

C

B

A



- NOTES:
1. DIRECTION A RED BACK 1/4"
 2. ALL WIRE 22 GA.
 3. SOLDER CONNECTIONS

8

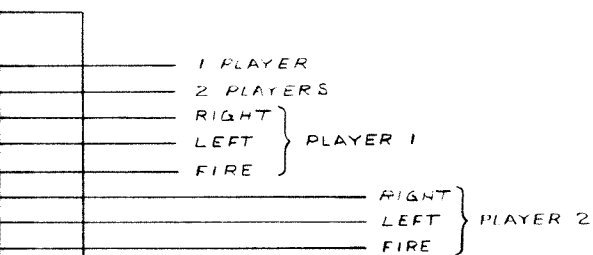
7

6

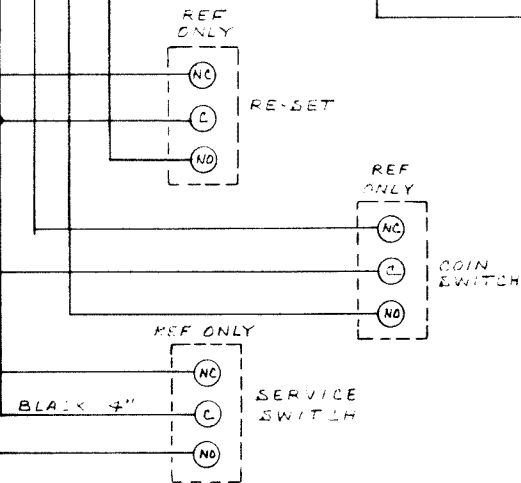
5

| REVISIONS | | | | |
|-----------|-----|-------------|-------------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | WJB 2-19-80 | |

TO PLAYER 2
PLAYER 1



CONN CAP AMP
211-0046
CONN PIN AMP
211-0041
(5 PLACES)



| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|------------|---|--|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± .XX ± ± | | CONTRACT NO. | Gremlin Industries, Inc. San Diego, California 92123 |
| MATERIAL | | APPROVALS DATE <i>[Signature]</i> 2-12-80 | |
| FINISH | | CHECKED <i>[Signature]</i> | ASSEMBLY — HARNESS MASTER A/F COCKTAIL |
| NEXT ASSY | USED ON | SCALE <i>NONE</i> | SIZE CODE IDENT NO. DRAWING NO. REV D 800-3022 A |
| APPLICATION | | DO NOT SCALE DRAWING | SHEET 1 OF 1 |

D
C
B
A
800-3022 A

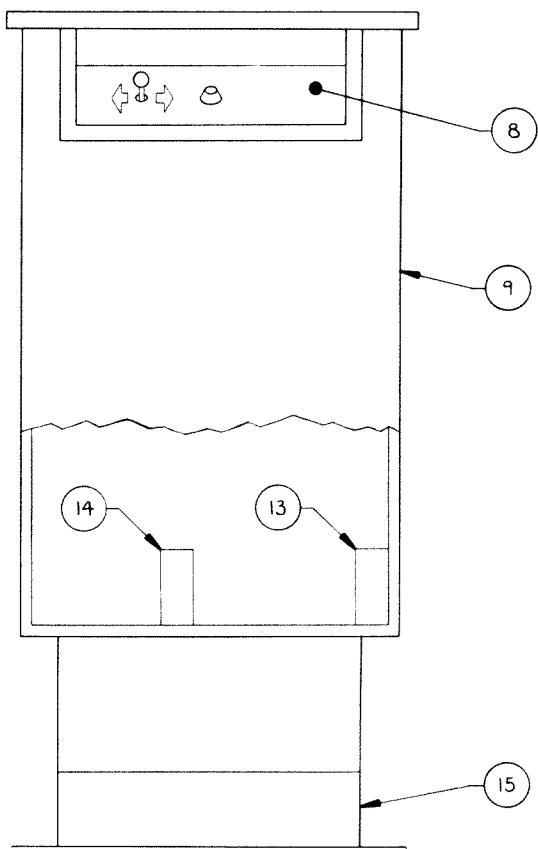
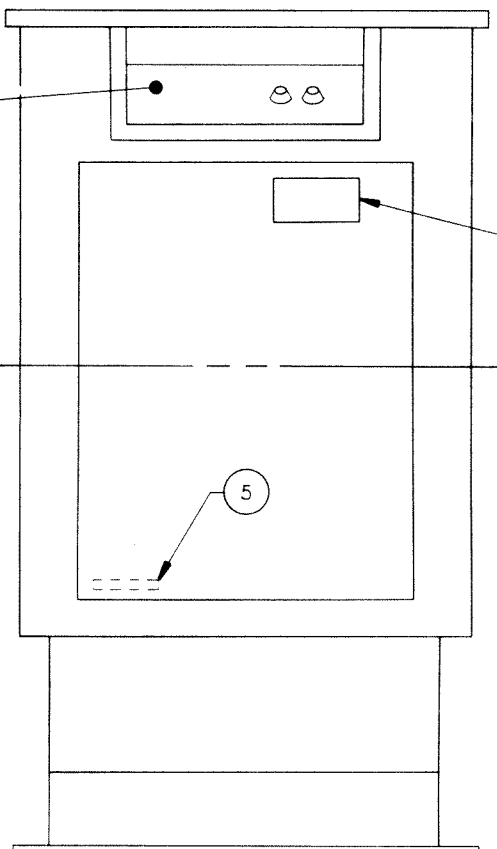
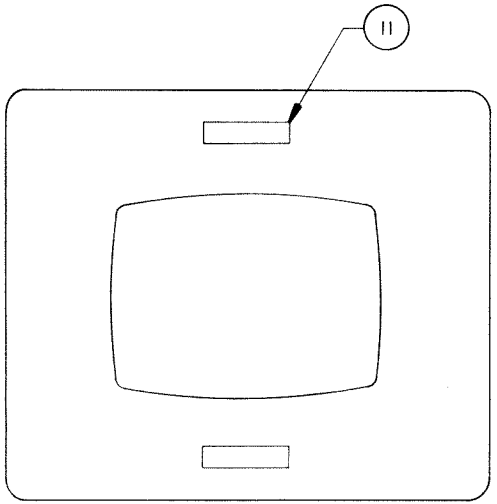
4

3

2

1

| REVISIONS | | | | |
|-----------|-----|-------------|--------|-----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | 3-3-80 | <i>RC</i> |



D
C
B
A
700-0008

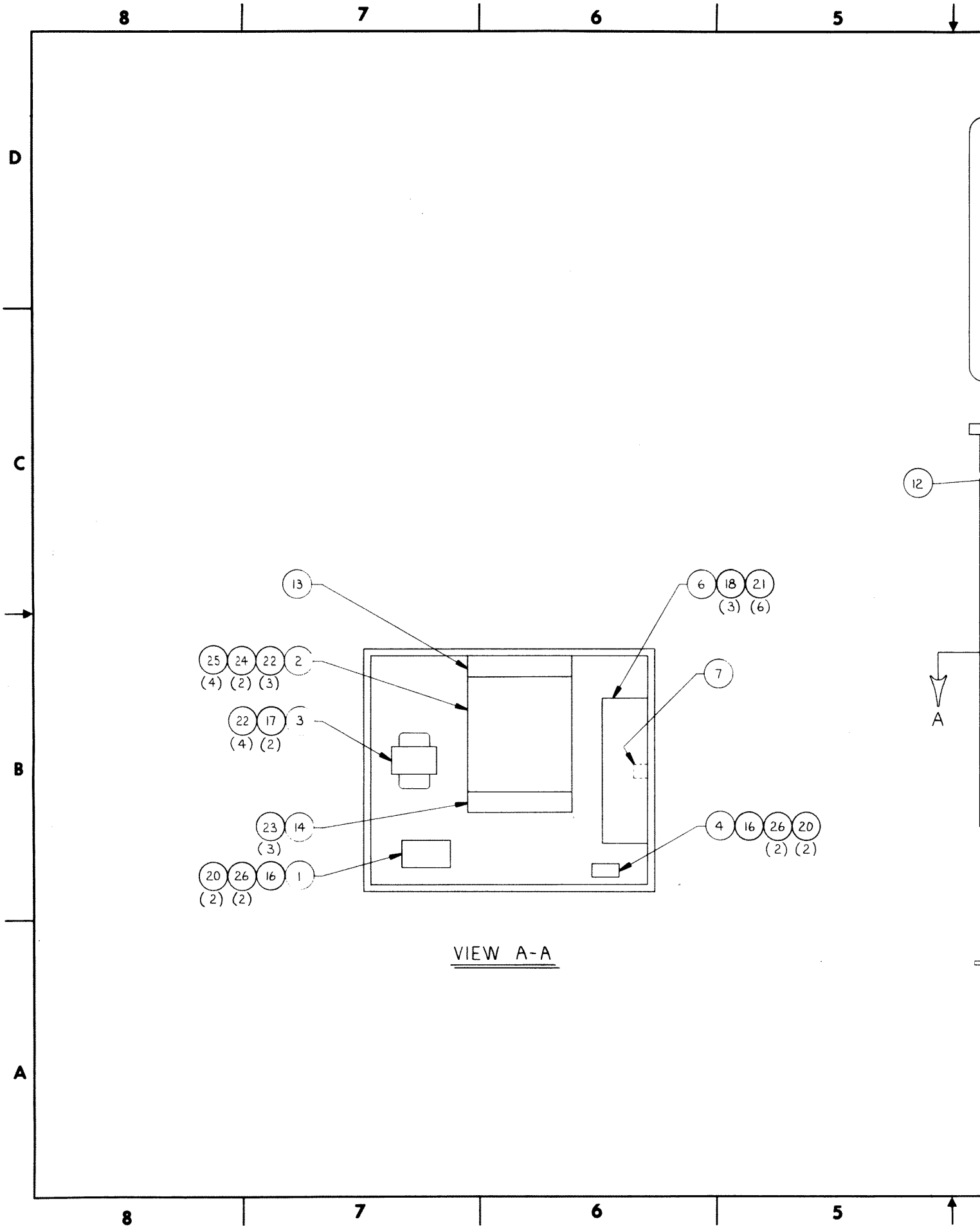
| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | |
|---|-----------------|----------------------------|--|---|
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | | |
| FRACTIONS | DECIMALS | ANGLES | Gremlin Industries, Inc. San Diego, California 92123 | |
| ± | .XX ± .XXX ± | ± | | |
| MATERIAL | | APPROVALS | DATE | ASSY, TOP GAME, SLIMLINE ASTRO FIGHTER |
| FINISH | | DRAWN <i>MAHONEY</i> | 2-29-80 | |
| NEXT ASSY | | CHECKED <i>[Signature]</i> | DATE <i>3-3-80</i> | SIZE D CODE IDENT NO. 700-0008 DRAWING NO. 700-0008 REV A |
| APPLICATION | | DO NOT SCALE DRAWING | | SCALE 1/4 SHEET 4 OF 6 |

4

3

2

1



8

7

6

5

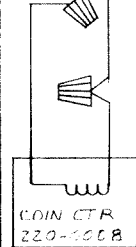
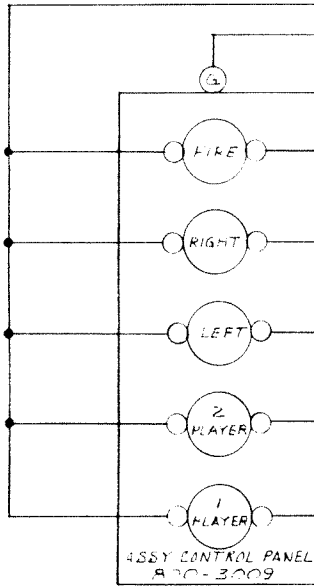
D

ASSY GAME ELECTRONICS ASTRO FIGHER
834-3000

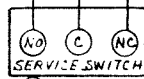
ASSY HARNESS MASTER AF 800-3010

A B C D E F G H J K L M N P R S T U V W X Y Z 1 2 3 4 5 6 7 8 9

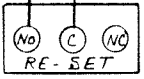
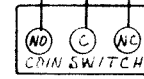
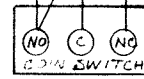
C



B

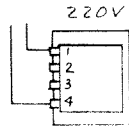
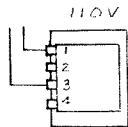
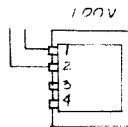


ASSY. COIN MECH AF 800-3008



A

1 TRANSFORMER OPTIONS:



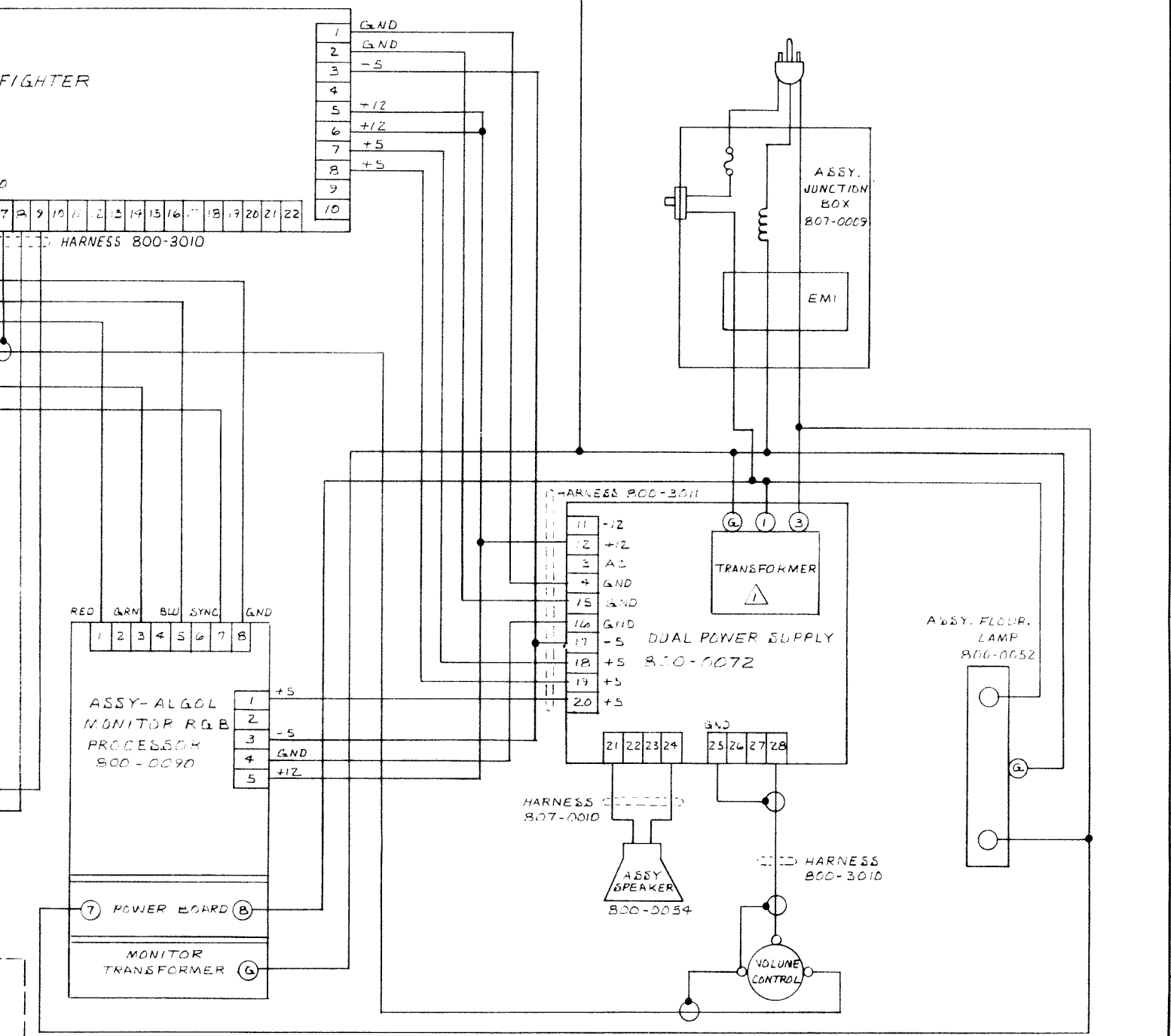
8

7

6

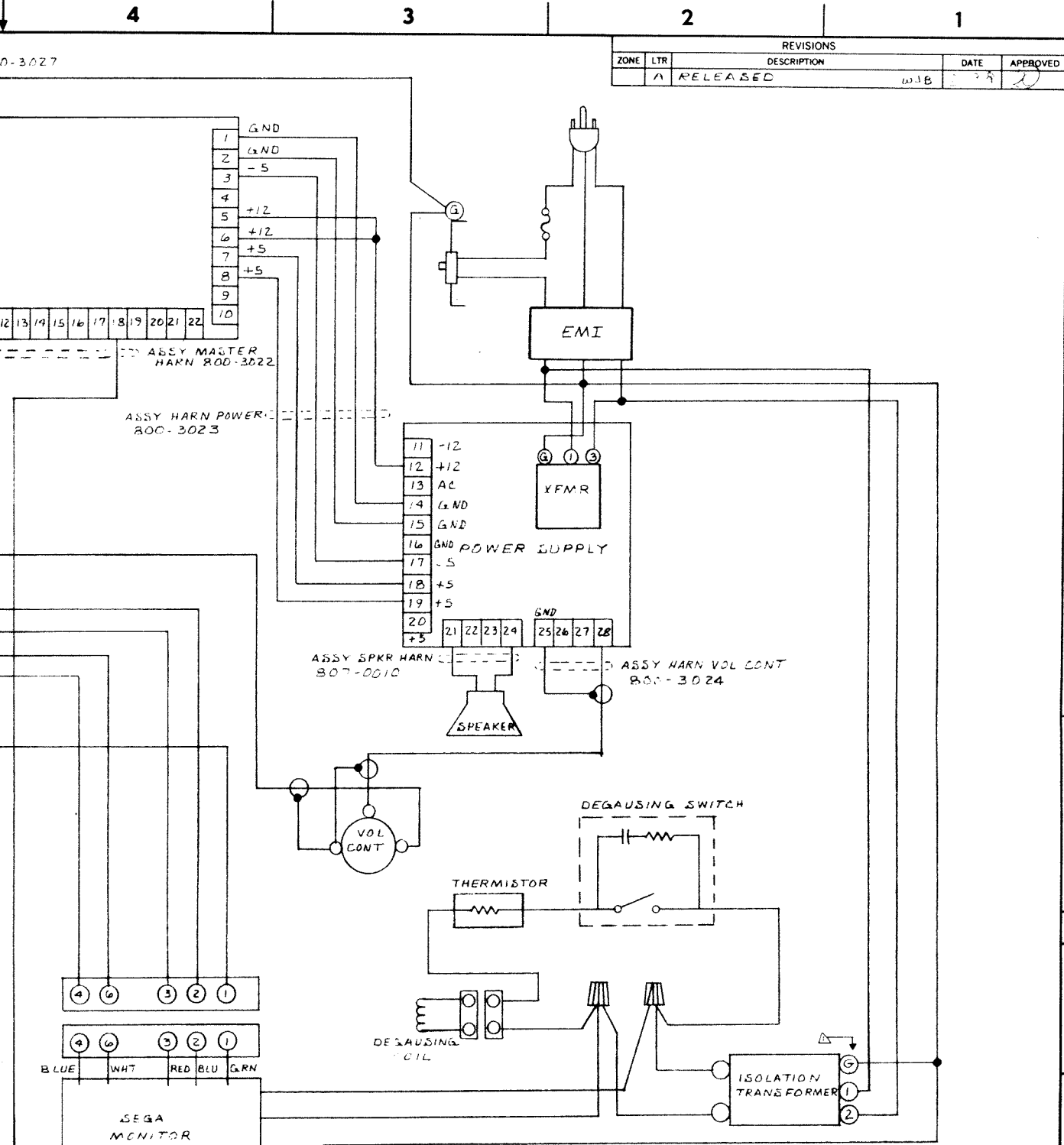
5

| REVISIONS | | | | |
|-----------|-----|-------------|-------------|--------------------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| | A | RELEASED | WJB 2-11-80 | <i>[Signature]</i> |



| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|----------------------|-------------------------|--|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS ± | DECIMALS .XX ± | ANGLES ± | Gremlin Industries, Inc. San Diego, California 92123 |
| | .XXX ± | | |
| MATERIAL | FINISH | APPROVALS | DATE |
| | | <i>[Signature]</i> | 2-11-80 |
| | | <i>[Signature]</i> | 2-11-80 |
| NEXT ASSY | USED ON | SIZE | CODE IDENT NO. |
| | | D | 700-0005 |
| APPLICATION | DO NOT SCALE DRAWING | DRAWING NO. | REV |
| | | | A |
| | | SCALE NONE | SHEET 5 OF 5 |

D
C
B
A
700-0005



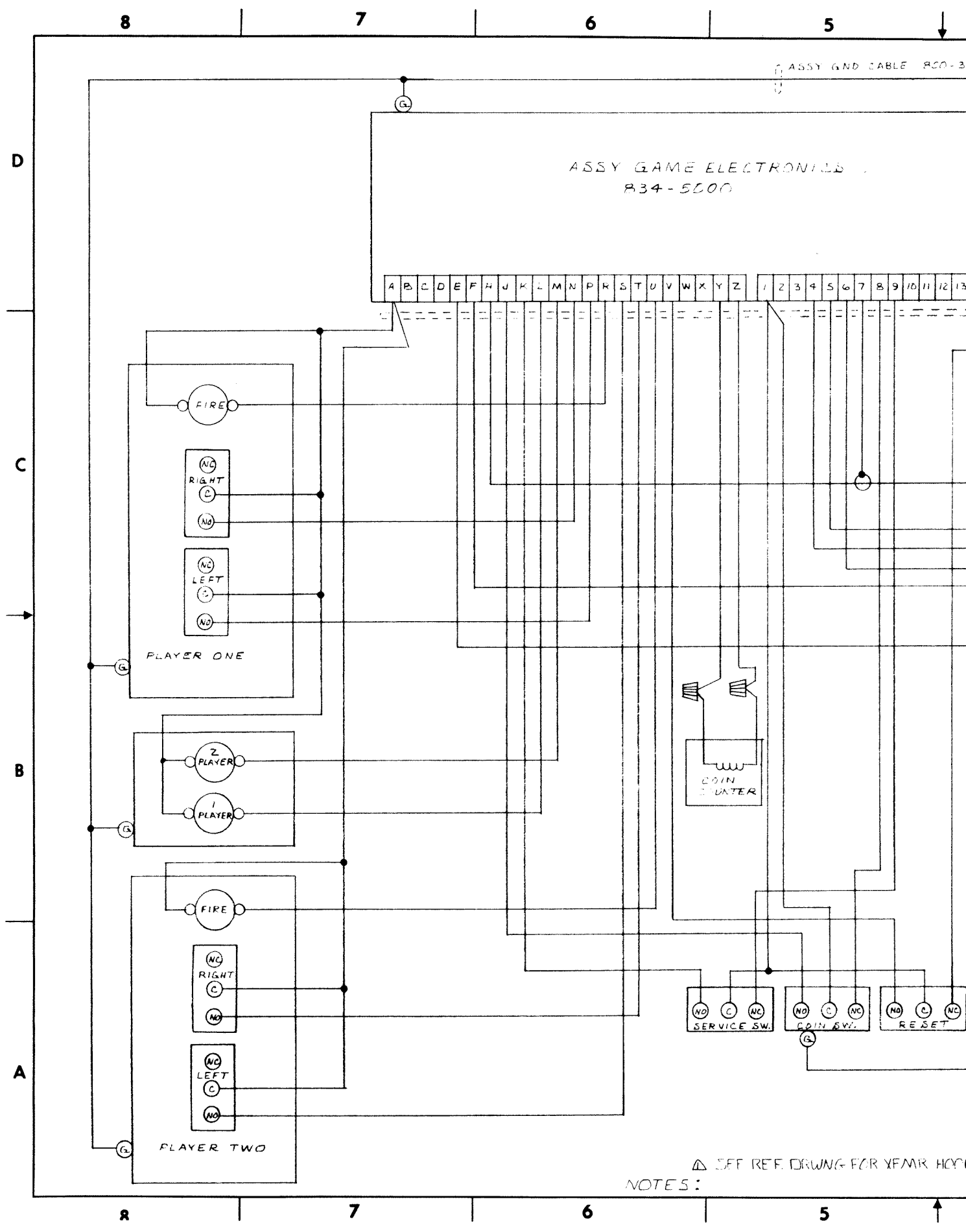
| REVISIONS | | | | |
|-----------|-----|-------------|----------|-------------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | 10-18-80 | [Signature] |

700-0007 A

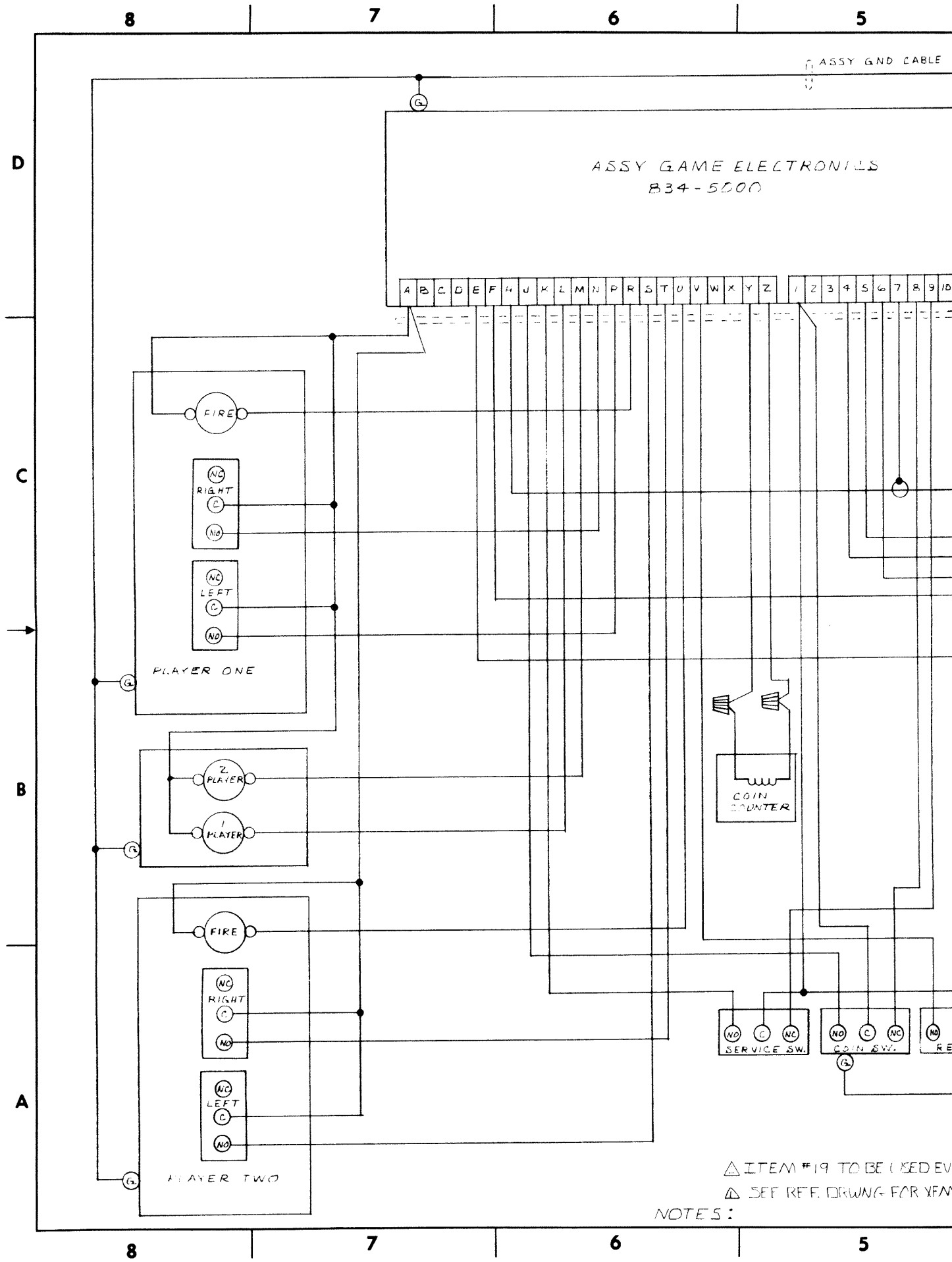
| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|--------------------------|-------------------------|--|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | Gremlin Industries, Inc. San Diego, California 92123 |
| FRACTIONS ± | DECIMALS .XX ± .XXX ± | ANGLES ± | |
| MATERIAL | APPROVALS | | WIRING DIAGRAM ASTRO FIGHTER COCKTAIL |
| FINISH | DATE | | |
| NEXT ASSY | USED ON | SIZE | CODE IDENT NO. |
| APPLICATION | DO NOT SCALE DRAWING | D | 700-0007 |
| | | SCALE NONE | REV A |
| | | | SHEET 5 OF 5 |

HOOKUP

4 3 2 1

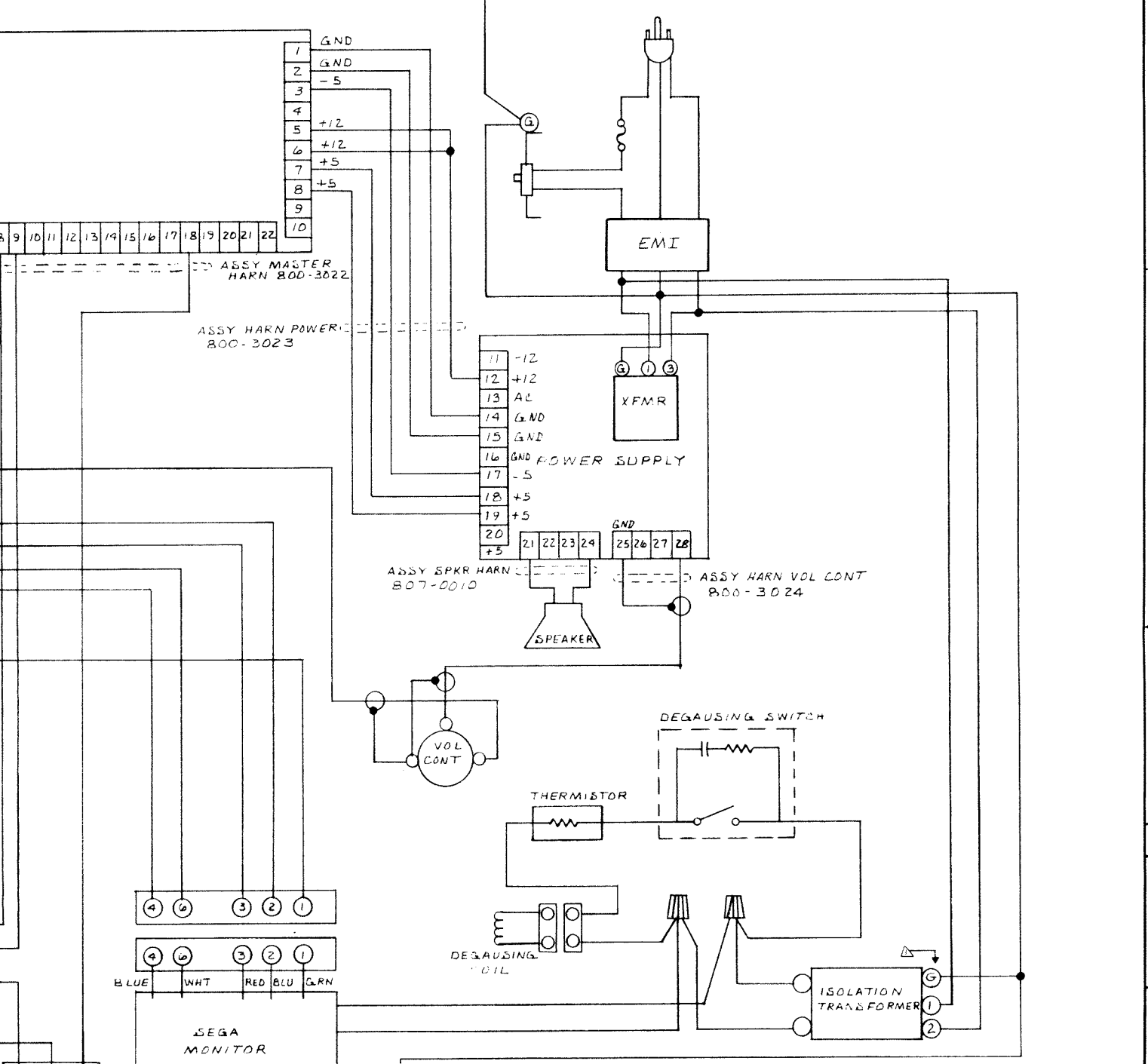


NOTES: Δ SEE REF. DRAWING FOR YEAR MARK HOOD



CABLE 800-3032

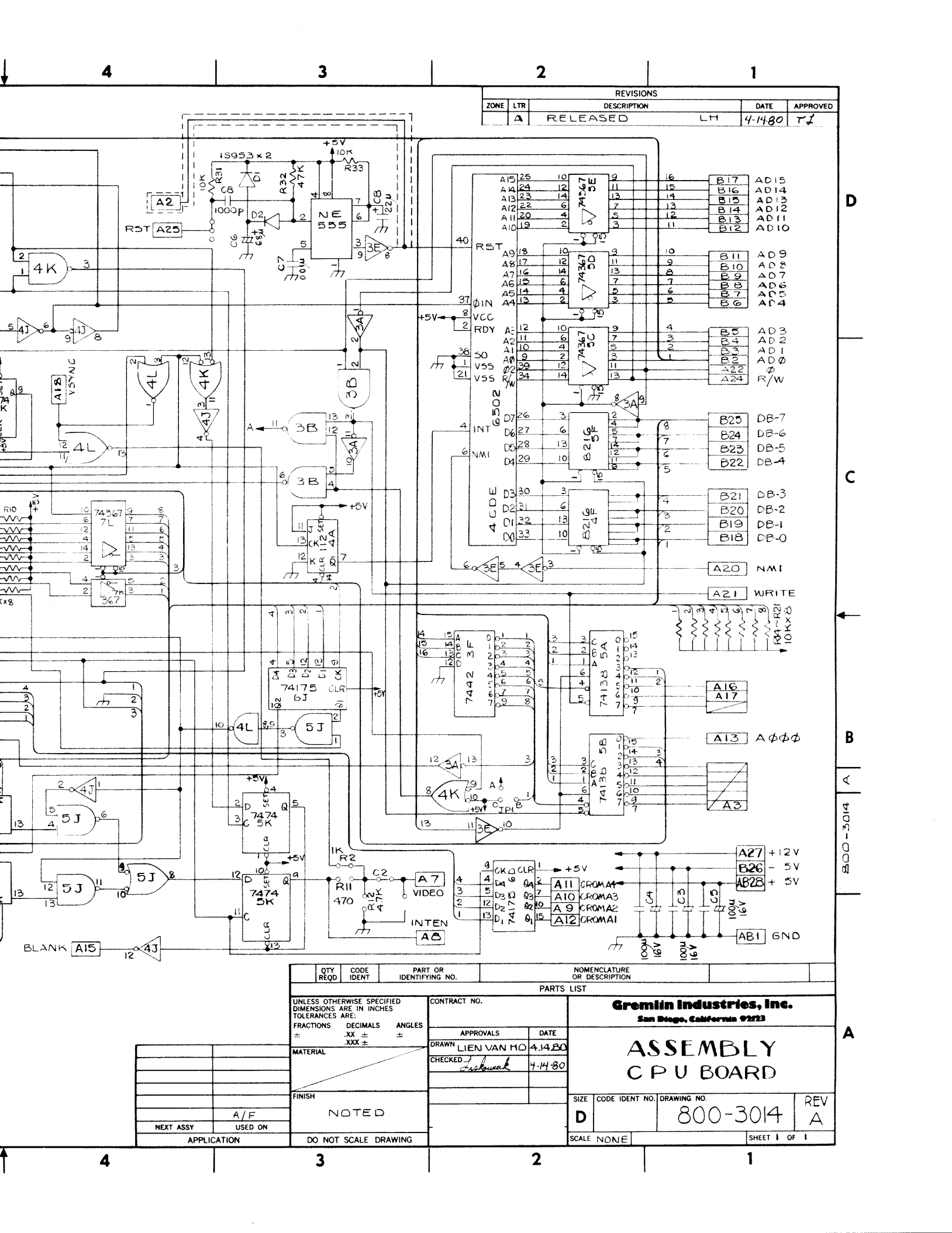
| REVISIONS | | | | |
|-----------|-----|-------------|---------|--------------------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| | A | RELEASED | 2-26-80 | <i>[Signature]</i> |



| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|------------|--|-----------------------------|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS | DECIMALS | ANGLES | |
| ± | ± | ± | |
| MATERIAL | | APPROVALS | DATE |
| FINISH | | <i>Alvina</i> | 2-26-80 |
| NEXT ASSY | | CHECKED | <i>[Signature]</i> 2-26-80 |
| USED ON | | Gremlin Industries, Inc. San Diego, California 92123 | |
| APPLICATION | | WIRING DIAGRAM ASTRO FIGHTER SLIMLINE | |
| DO NOT SCALE DRAWING | | SIZE | CODE IDENT NO. DRAWING NO. |
| | | D | 700-0008 |
| | | SCALE | REV |
| | | NONE | A |
| | | SHEET 6 OF 6 | |

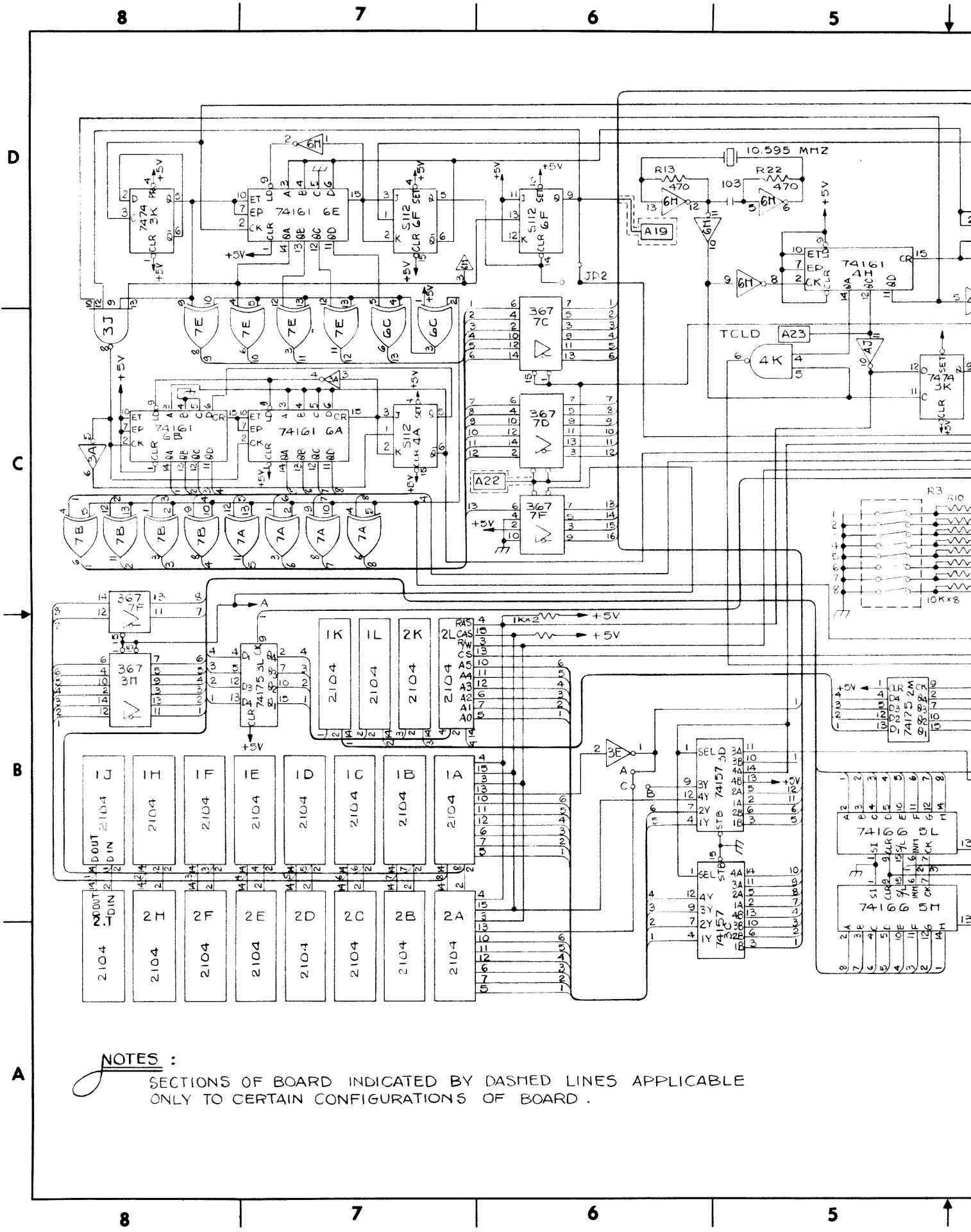
EVERY 10" ON CAE SIDES
XFMR HOOP'P

D
C
B
A
700-0008 A



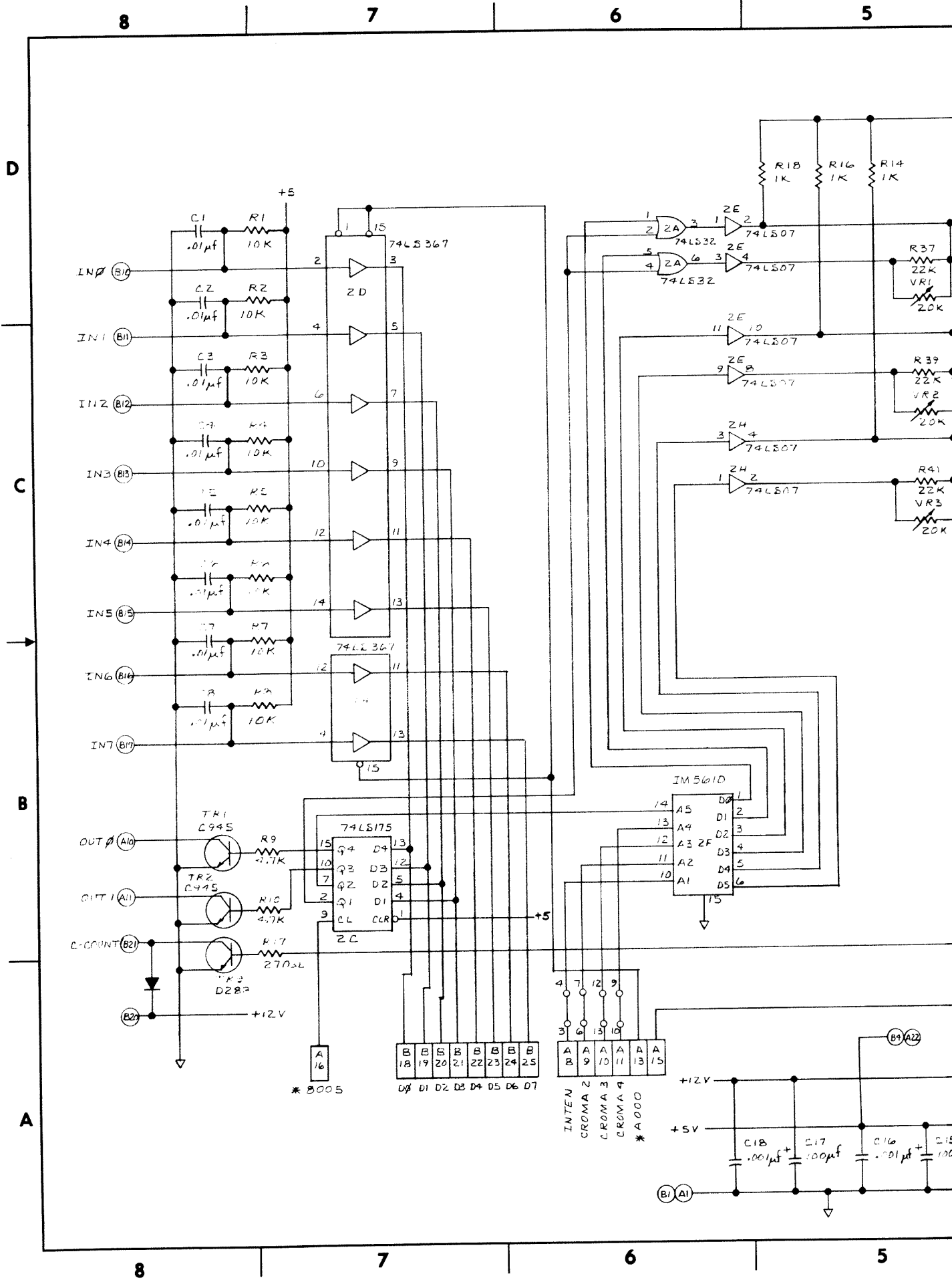
| REVISIONS | | | | |
|-----------|-----|-------------|------------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | LH 4-14-80 | TJ |

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|------------|---|-----------------------------|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS | DECIMALS | ANGLES | |
| ± | ± | ± | |
| MATERIAL | | APPROVALS | DATE |
| | | DRAWN | 4-14-80 |
| | | CHECKED | 4-14-80 |
| FINISH | | <p>Gremlin Industries, Inc. San Diego, California 92123</p> <h2 style="margin: 0;">ASSEMBLY</h2> <h2 style="margin: 0;">CPU BOARD</h2> | |
| NOTED | | | |
| A/F | | | |
| NEXT ASSY USED ON | | | |
| APPLICATION | | SIZE | CODE IDENT NO. |
| DO NOT SCALE DRAWING | | D | 800-3014 |
| | | SCALE | REV |
| | | NONE | A |
| | | | SHEET 1 OF 1 |

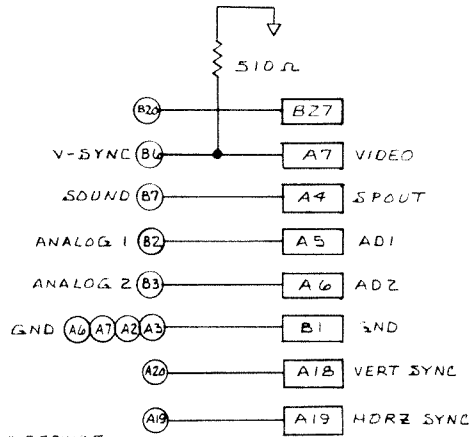
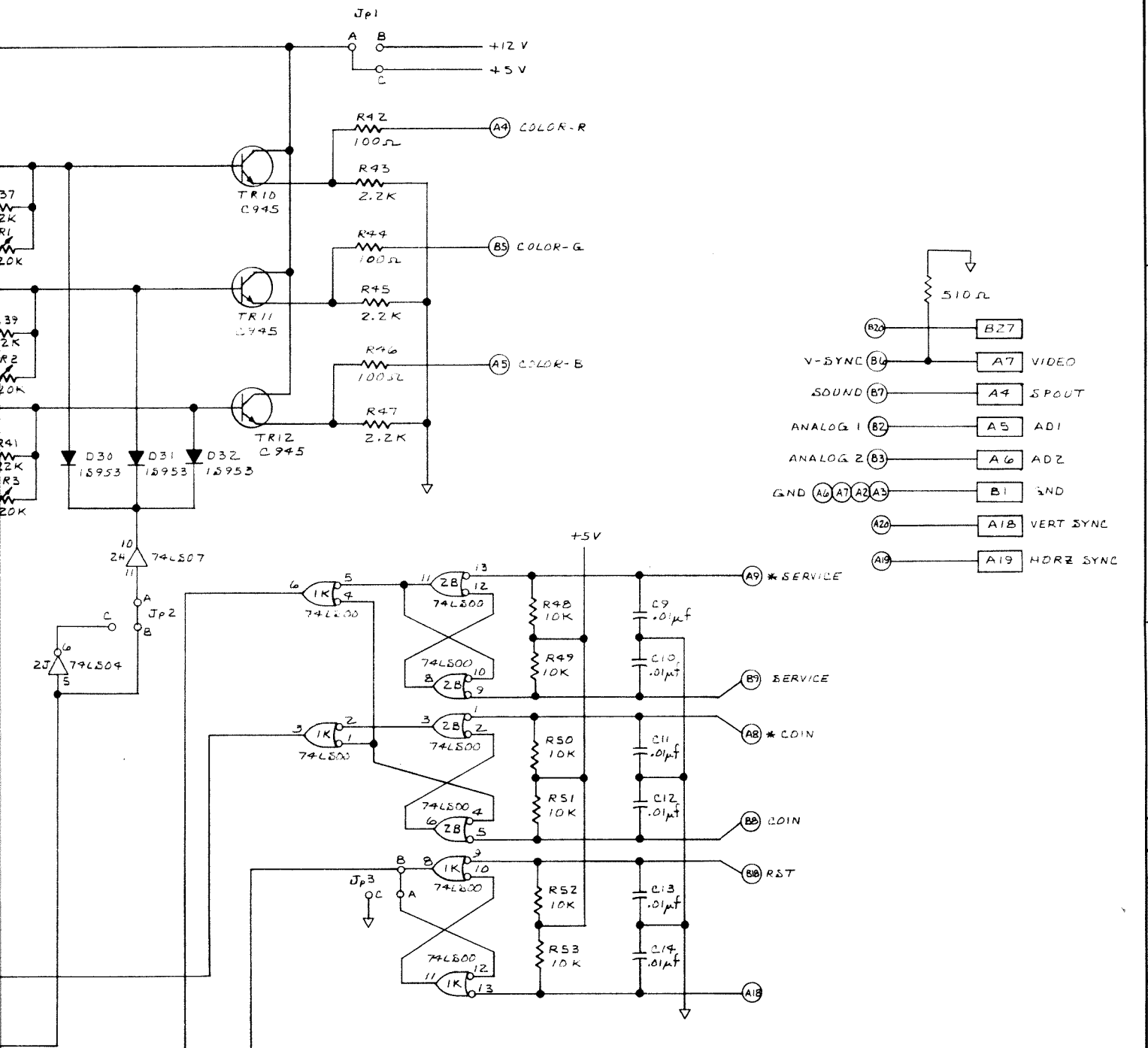


NOTES :

SECTIONS OF BOARD INDICATED BY DASHED LINES APPLICABLE ONLY TO CERTAIN CONFIGURATIONS OF BOARD .



| REVISIONS | | | | |
|-----------|-----|-------------|---------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | 4-14-80 | T.J. |



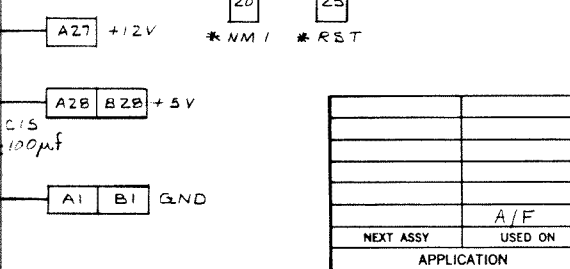
D
C
B
A
800-3015

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | |
|---|----------------|-------------------------|-----------------------------|---------|
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | | |
| FRACTIONS ± | DECIMALS .XX ± | ANGLES ± | APPROVALS | DATE |
| | | | <i>Wysyma</i> | 3-24-80 |
| | | | CHECKED <i>Sidman</i> | 4-14-80 |
| MATERIAL | | FINISH | | |
| A/F | | DO NOT SCALE DRAWING | | |
| NEXT ASSY USED ON | | SCALE NONE | | |
| APPLICATION | | SHEET 1 OF 1 | | |

Gremlin Industries, Inc.
San Diego, California 92123

SCHEMATIC —
I/O BOARD

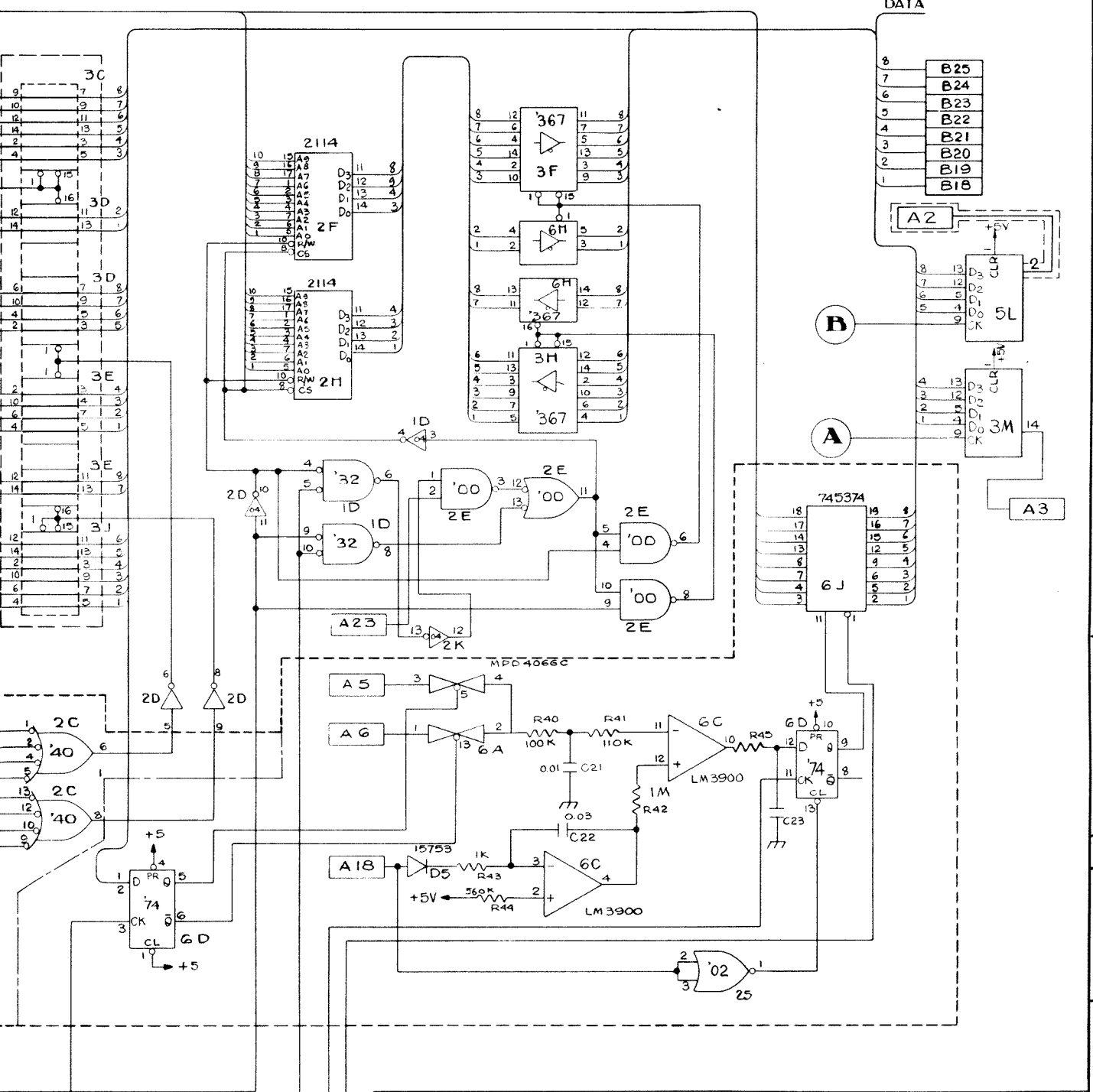
SIZE: **D** CODE IDENT NO: **800-3015** DRAWING NO: **800-3015** REV: **A**



A

4 3 2 1

| REVISIONS | | | | |
|-----------|-----|-------------|--------------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| | A | RELEASED | L.H. 4-14-80 | TL |



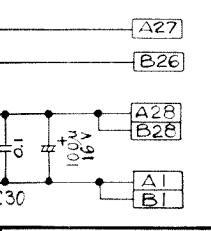
D
C
B
A
800-3016

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|--|------------|---------------------------------|-----------------------------|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS | DECIMALS | ANGLES | |
| ± | .XX ± | ± | |
| ± | .XXX ± | | |
| MATERIAL | | APPROVALS | |
| FINISH | | DATE | |
| NOTED | | DRAWN LIEN VAN MO 4-2-80 | |
| NEXT ASSY USED ON | | CHECKED <i>Liskawal</i> 4-14-80 | |
| APPLICATION | | SIZE CODE IDENT NO. DRAWING NO. | |
| DO NOT SCALE DRAWING | | D 800-3016 | |
| | | REV A | |
| | | SCALE NONE SHEET 1 OF 2 | |

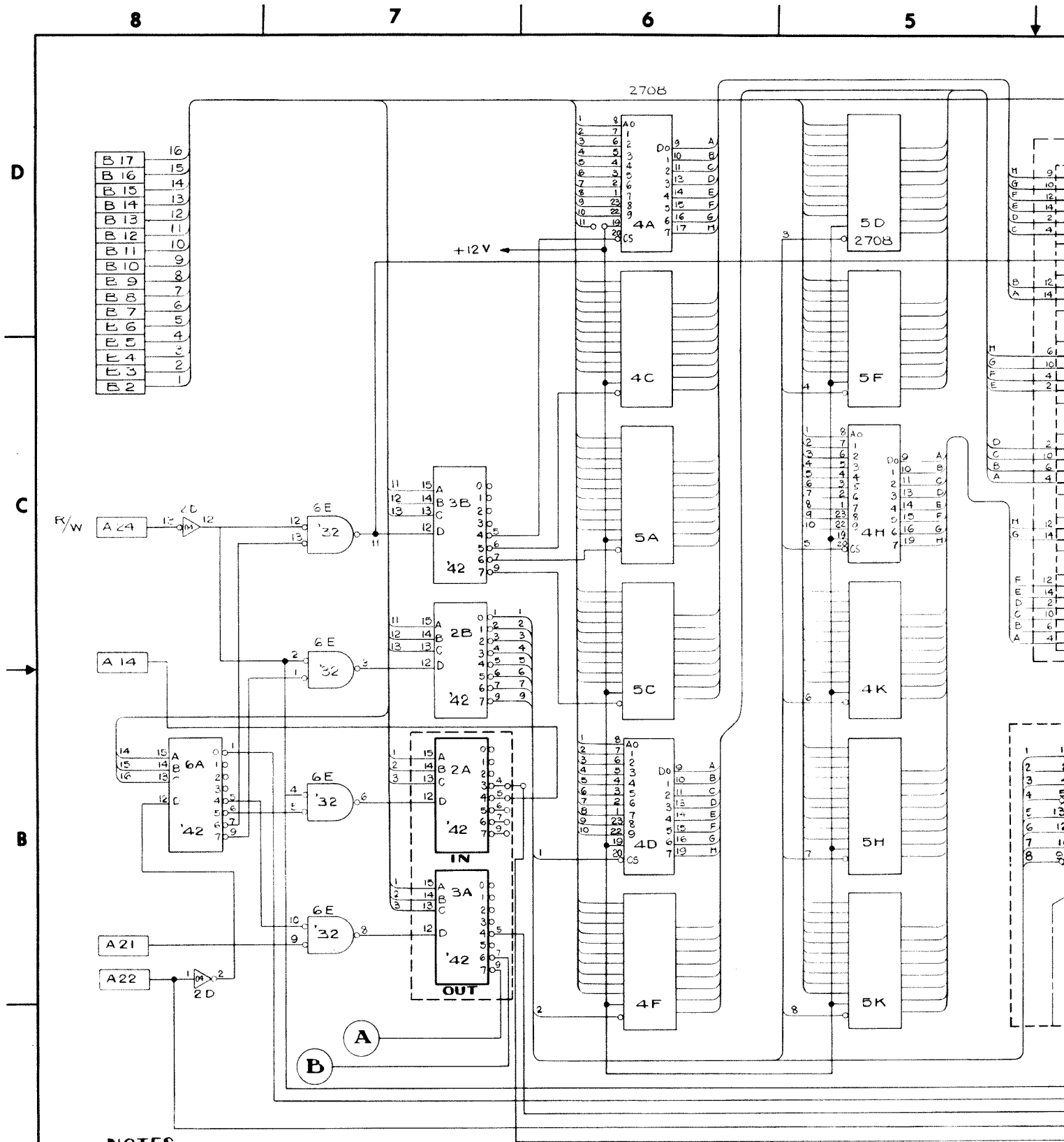
Gremlin Industries, Inc.
San Diego, California 92123

ASSEMBLY ROM BOARD

| | |
|----------------------|-----|
| A27 | B26 |
| A28 | B28 |
| A1 | B1 |
| APPLICATION | |
| DO NOT SCALE DRAWING | |

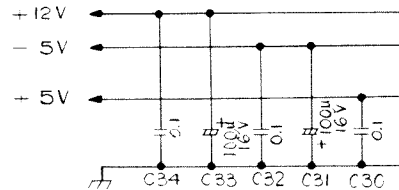


4 3 2 1



NOTES:

1. SECTIONS OF BOARD INDICATED BY DASHED LINES APPLICABLE ONLY TO CERTAIN CONFIGURATIONS OF BOARDS.
2. 2708 PIN # 21 - 5V, # 24 + 5V, # 19 + 12V, # 12 GND.
3. 2114 # 9 GND, # 18 + 5V.
4. 3C, 3D, 3E, 3J, - WILL EITHER BE JUMPED OR USE 74LS367



A

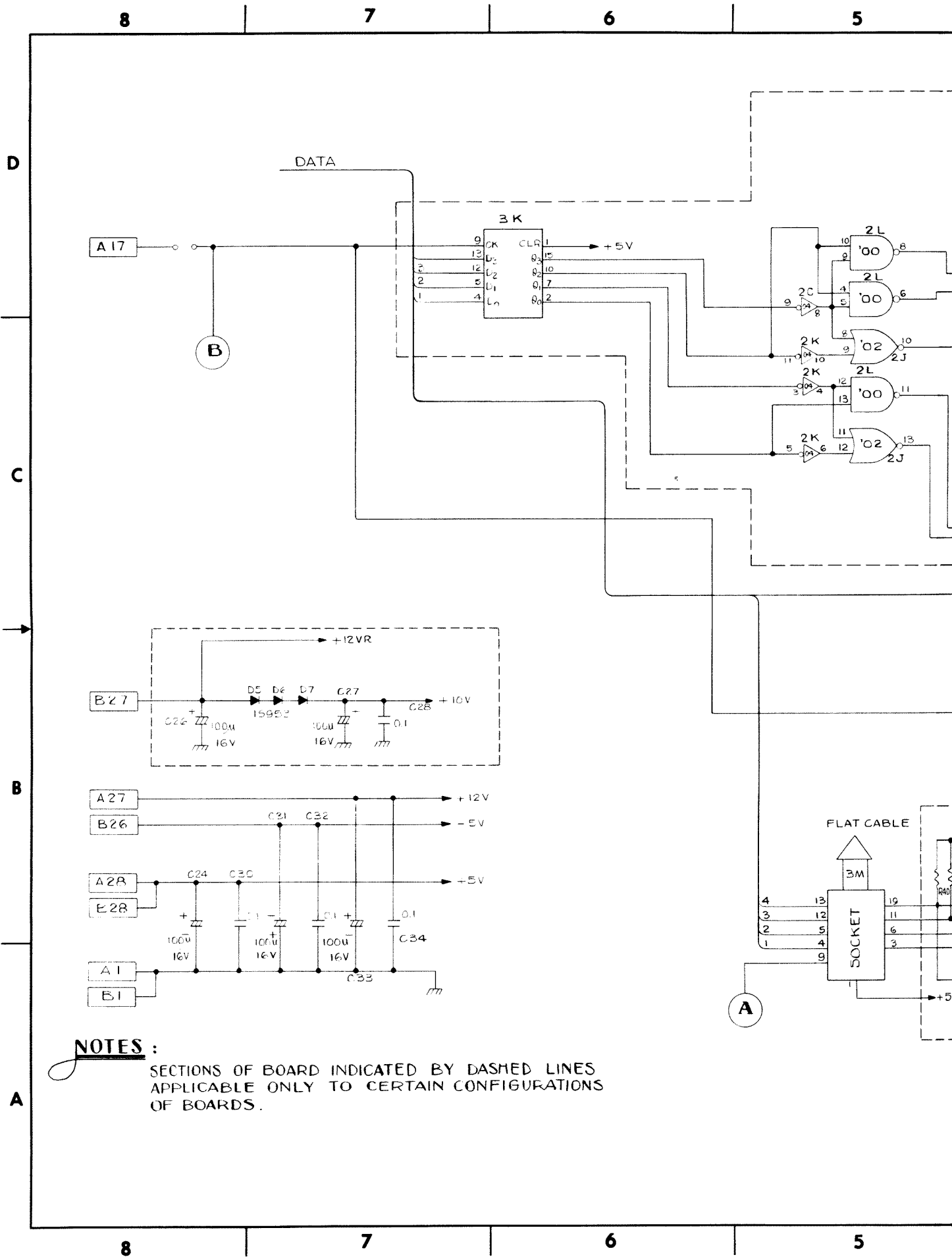
8

7

6

5

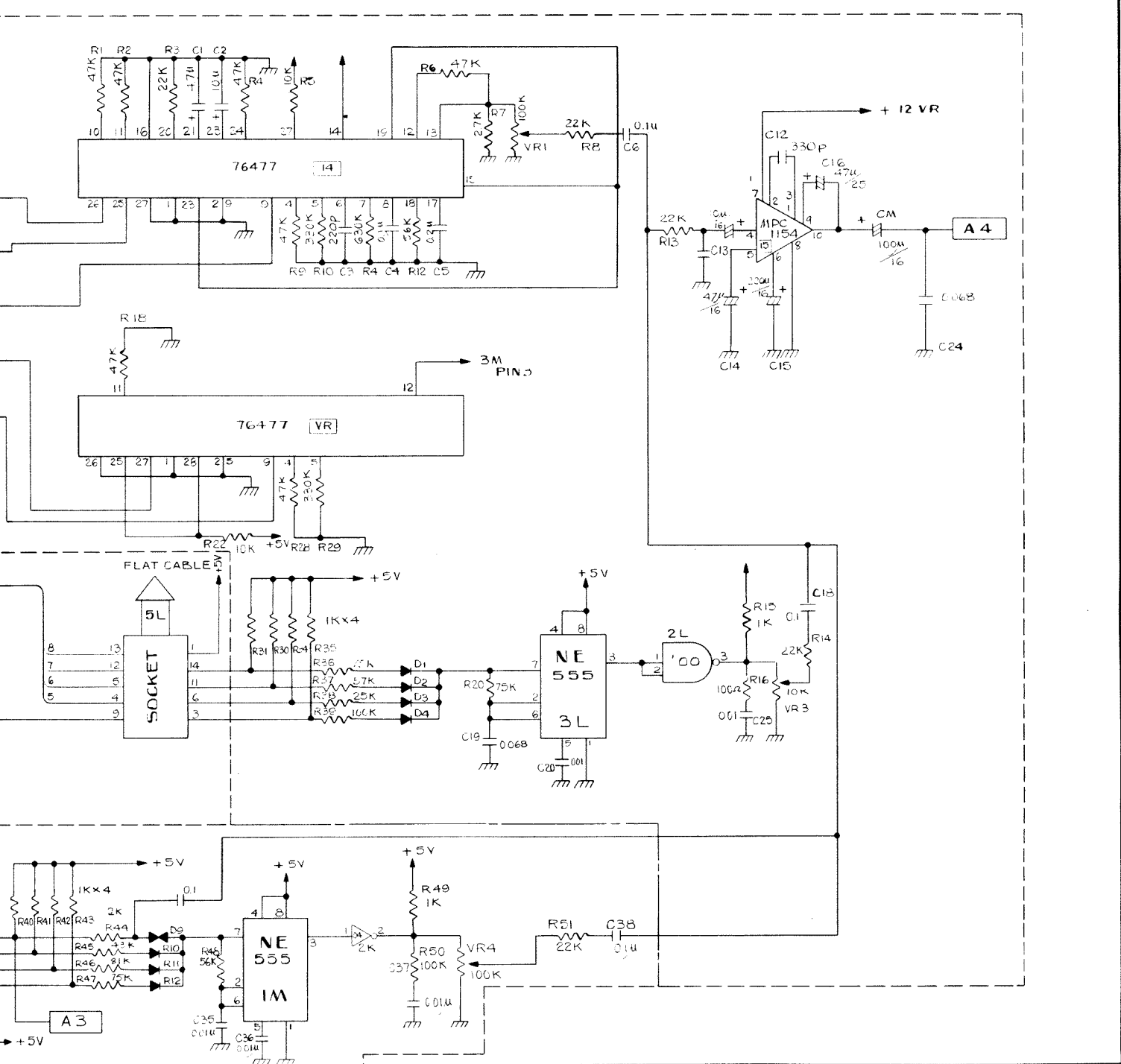
↑



NOTES :

SECTIONS OF BOARD INDICATED BY DASHED LINES APPLICABLE ONLY TO CERTAIN CONFIGURATIONS OF BOARDS.

| REVISIONS | | | | |
|-----------|-----|-------------|------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| A | | RELEASED | LH | 4-14-80 |



| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|----------------|------------------------------------|-----------------------------|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS ± | DECIMALS .XX ± | ANGLES ± | APPROVALS |
| MATERIAL | | DATE | |
| FINISH | | DRAWN LIEN VAN HO 4-8-80 | |
| NOTED | | CHECKED <i>[Signature]</i> 4-14-80 | |
| NEXT ASSY USED ON | | SIZE CODE IDENT NO. DRAWING NO. | |
| APPLICATION | | D 800-3016 A | |
| DO NOT SCALE DRAWING | | SCALE NONE | |

Gremlin Industries, Inc.
San Diego, California 92123

ASSEMBLY ROM BOARD

SIZE CODE IDENT NO. DRAWING NO. REV
D 800-3016 A

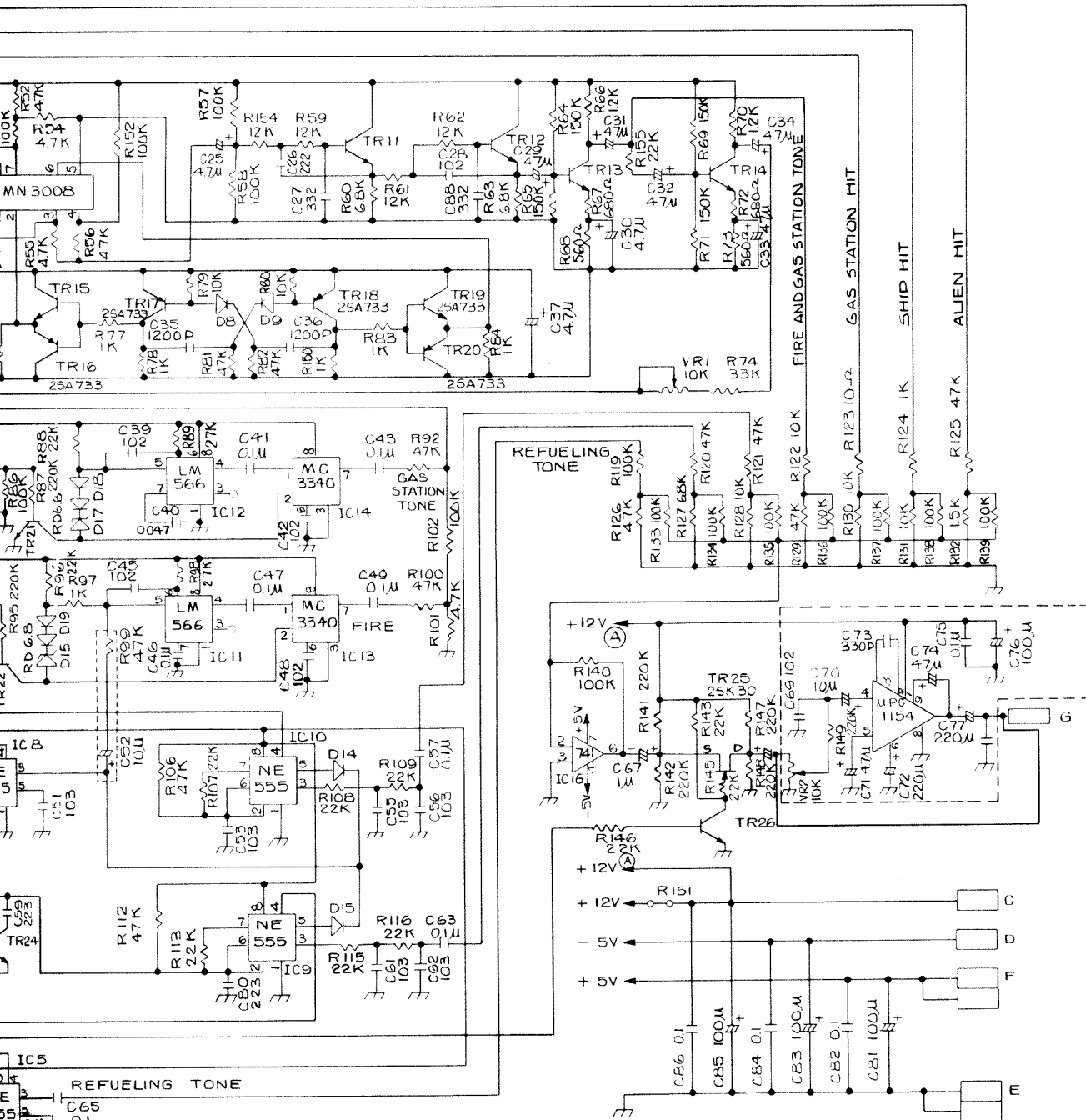
4

3

2

1

| REVISIONS | | | | |
|-----------|-----|-------------|---------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| | A | RELEASED | 4-14-80 | T.L. |



D

C

B

A

800-3017

| QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|----------------|---------------------------------|-----------------------------|
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS ± | DECIMALS .XX ± | ANGLES ± | APPROVALS |
| MATERIAL | | DATE | |
| FINISH | | DRAWN LIEN VAN HO | |
| NOTED | | CHECKED <i>Tschank</i> | |
| DO NOT SCALE DRAWING | | DATE 3.24.80 | |
| APPLICATION | | DATE 4-14-80 | |
| NEXT ASSY USED ON | | SIZE CODE IDENT NO. DRAWING NO. | |
| A/F | | D 800-3017 | |
| SCALE NONE | | DRAWING NO. 800-3017 | |
| SHEET 1 OF 1 | | REV A | |

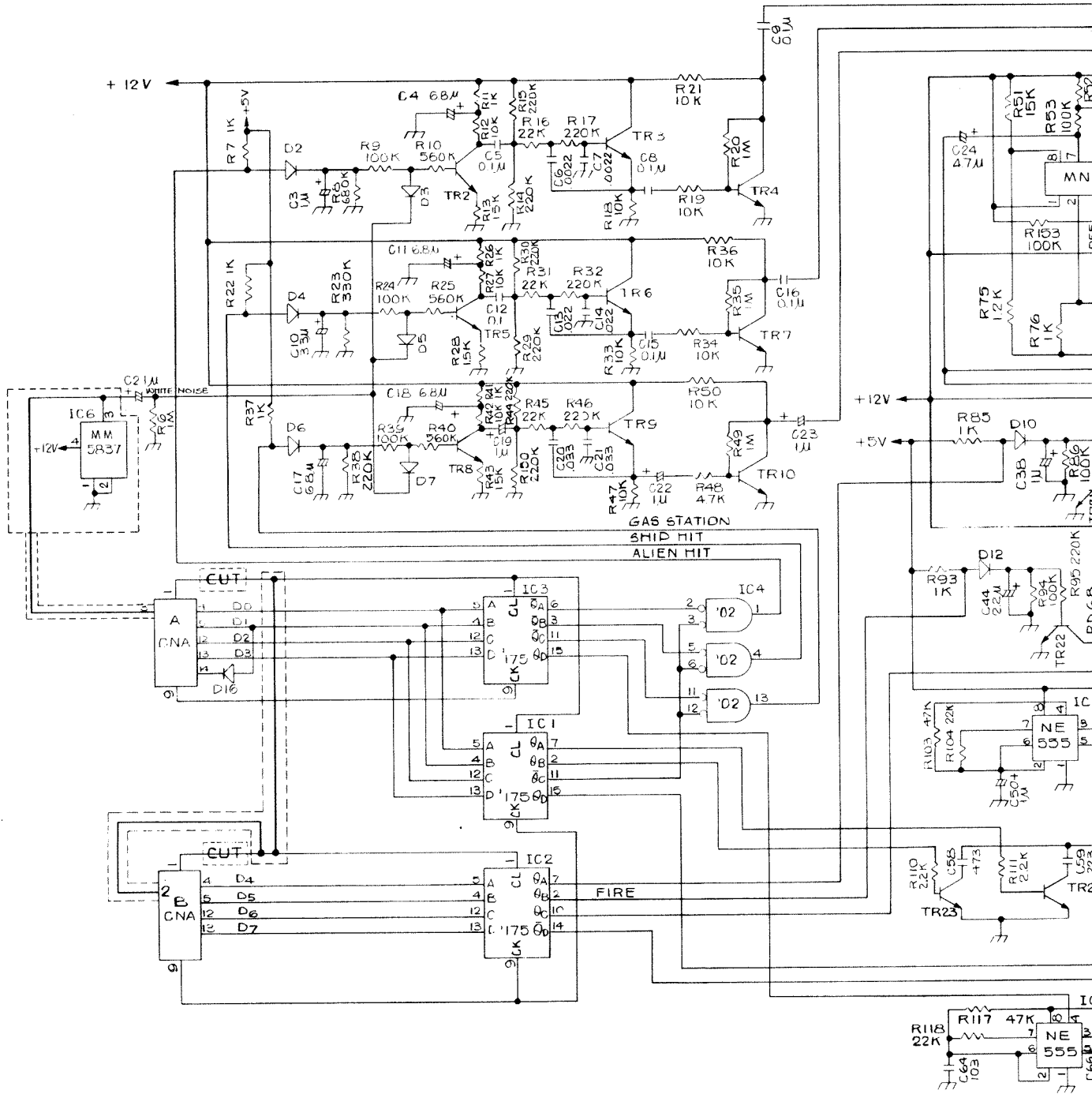
A

4

3

2

1



NOTES:
 SECTIONS OF BOARD INDICATED BY
 DASHED LINES APPLICABLE ONLY
 TO CERTAIN CONFIGURATIONS OF
 BOARDS.