

6

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4

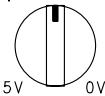
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2

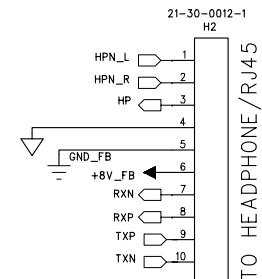
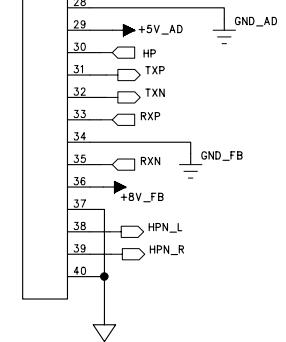
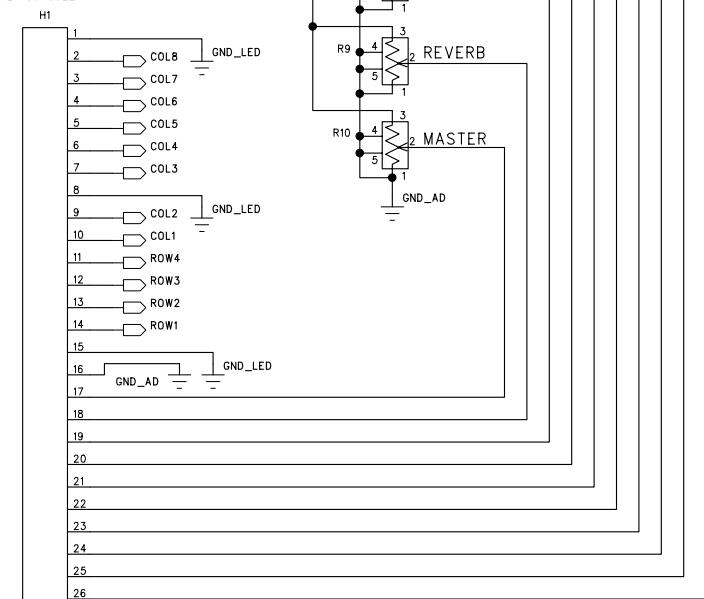
1

# USER INTERFACE

POTS ARE BACKWARDS!  
MIN: 5V  
MAX: 0V



21-30-0022 H1

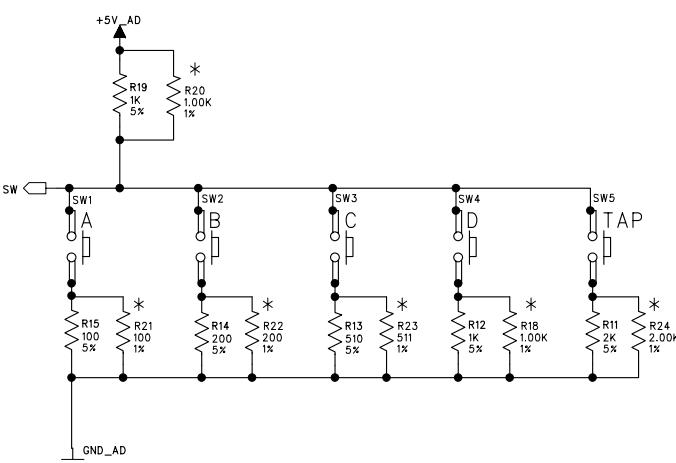
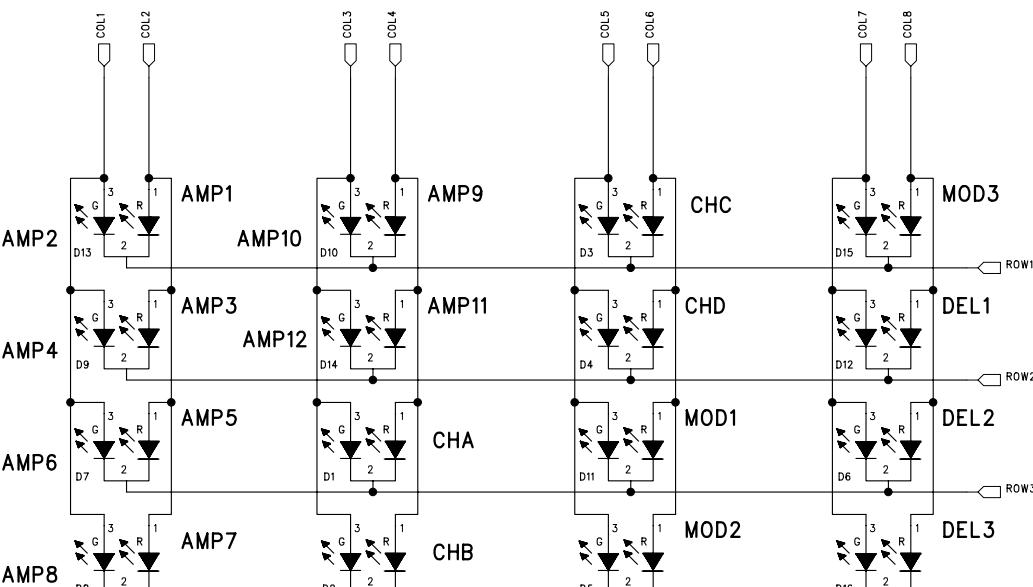


TO HEADPHONE/RJ45

\* = DO NOT INSTALL

| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |          |                                 |
|--|----------|---------------------------------|
| ECO NO:                                      | DATE:    | DESCRIPTION:                    |
| 0314803                                      | 05.22.03 | Released to MFG as rev.A - (mh) |

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| SWITCH  | SW1   | SW2   | SW3   | SW4   | SW5   |
|---------|-------|-------|-------|-------|-------|
| VOLTAGE | 0.45V | 0.83V | 1.69V | 2.50V | 3.33V |

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| COMPANY: | LINE 6                          | A                       |
|----------|---------------------------------|-------------------------|
| TITLE:   | SPIDER II SERIES USER INTERFACE | A                       |
| PROGRAM: | PADS POWER LOGIC V5.0           | REV:                    |
| DRAWN:   | G. Kirtley                      | DATED:                  |
|          |                                 | 05/23/03                |
| CHECKED: | Name (F.Last)                   | DATED:                  |
|          |                                 | 00/00/01                |
| SCALE:   | 1:1                             | SIZE:                   |
|          | C                               | PART NUMBER: 35-00-0219 |
| SHEET:   | 1                               | OF 2                    |

6

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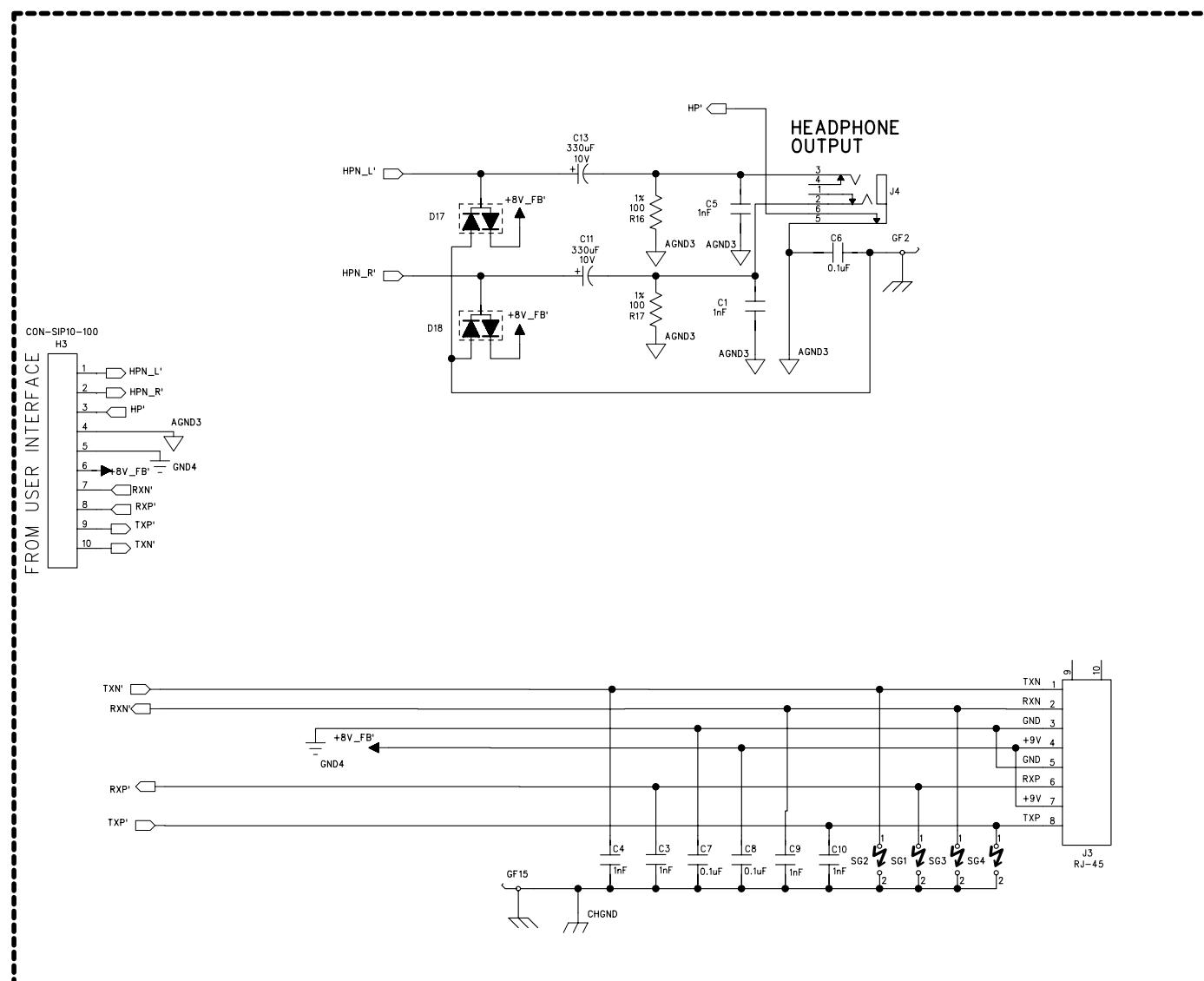
3

2

1

| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |          |                                 |
|--|----------|---------------------------------|
| ECO NO:                                      | DATE:    | DESCRIPTION:                    |
| 0314803                                      | 05.22.03 | Released to MFG as rev.A - (mh) |
|  |          |                                 |

# HEADPHONE/RJ-45 BREAK-AWAY PCB



THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LINE 6 INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF LINE 6 INC. IS PROHIBITED

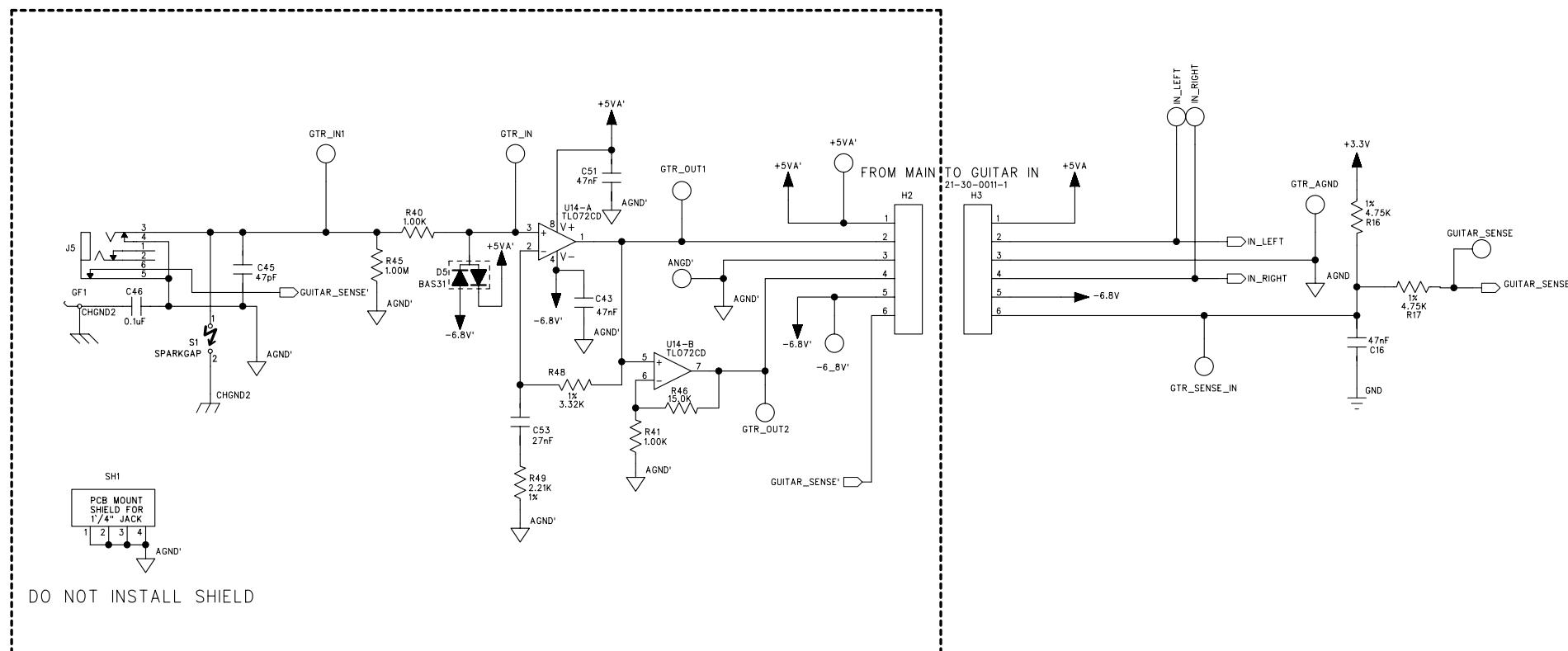
|           |   |                         |
|-----------|---|-------------------------|
| COMPANY:  | LINE 6  | REV:                    |
| TITLE:    | SPIDER II SERIES USER INTERFACE<br>HEADPHONE/RJ-45 BREAK-AWAY PCB               |                         |
| PROGRAM:  | PADS POWER LOGIC V5.0   |                         |
| DRAWN:    | 05/23/03  | REV:                    |
| CHECKED:  | 00/00/01  | A                       |
| FILENAME: | G:/CLIENTS/FFD/Spider II/PCBs/User Interface - 0219/Rev A/Spider II_UI_RevA.sch |                         |
| SCALE:    | 1:1   | SHEET: 2 OF 2           |
| SIZE:     | C   | PART NUMBER: 35-00-0223 |

| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |          |   |
|--|----------|---|
| ECO NO:                                      | DATE:    | DESCRIPTION:  |
| N/A  | 08.26.03 | Changed C58 from film to X7R.                         |
| 0325801                                      | 09.15.03 | Combined COMBO and HEAD FLASH p/n to 45-02-0011. - MH |

D

D

## GUITAR IN BREAK-AWAY PCB



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|              |  |
|--------------|--|
| COMPANY:     | LINE 6   |
| TITLE:       | SPIDER II SERIES MAIN GUITAR IN BREAK-AWAY PCB                             |
| PROGRAM:     | PADS POWER LOGIC V5.0  |
| FILENAME:    | G:/CLIENTS/FFD/Spider II/PCBs/Main - 0220/Rev D/Spider 212 Main Rev D2.sch |
| DRAWN:       | G. Kirtley   |
| DATED:       | 08/26/03   |
| CHECKED:     | Name (F.Last)  |
| DATED:       | 00/00/01   |
| SCALE:       | 1:1  |
| SIZE:        | C  |
| PART NUMBER: | 35-00-0224   |
| SHEET:       | 1 OF 5   |

C

C

B

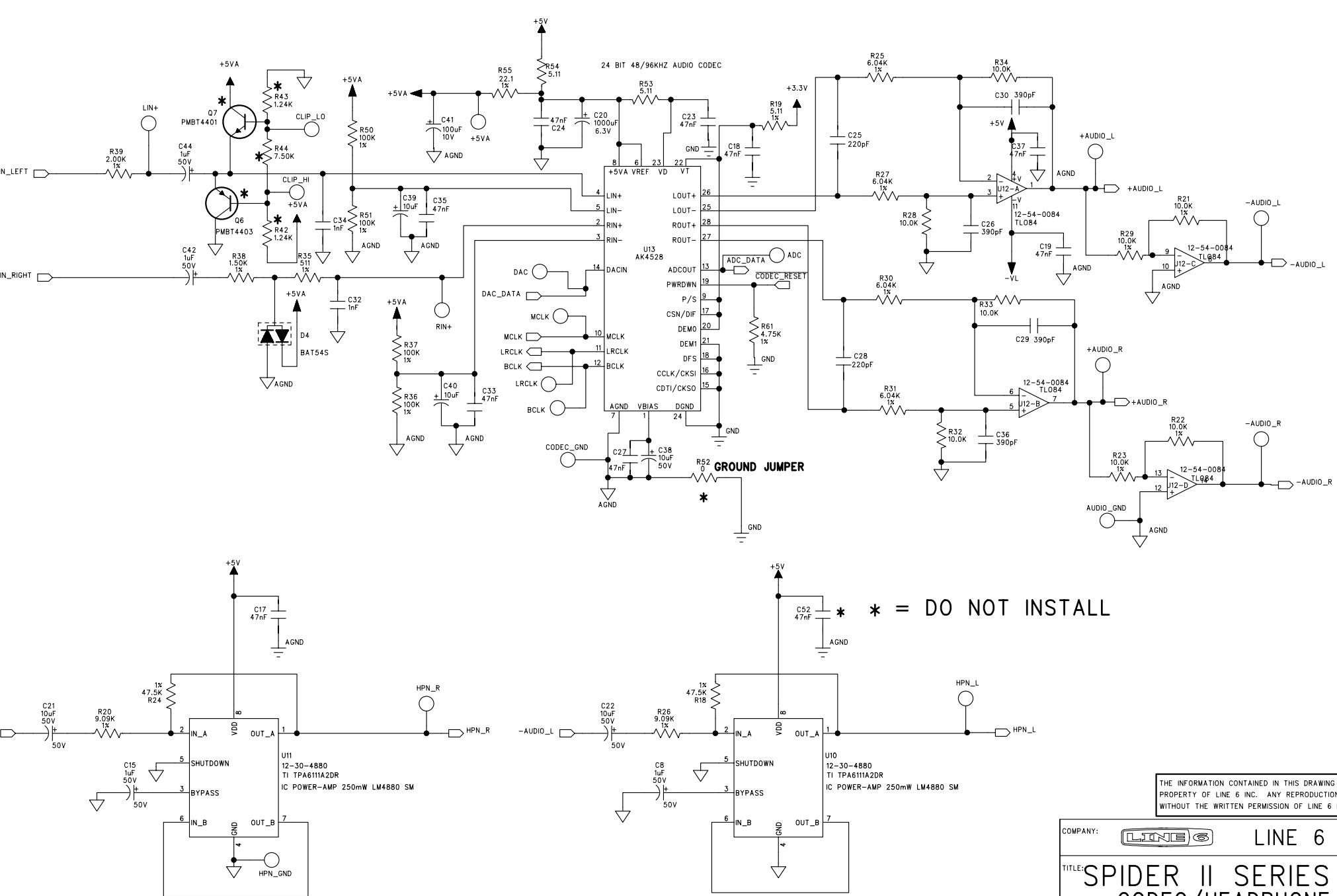
B

A

A

# CODEC/HEADPHONE AMP

| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |       |              |
|--|-------|--------------|
| ECO NO:                                      | DATE: | DESCRIPTION: |
|  |       |              |
|  |       |              |



Headphone Amplifiers

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|              |  |
|--------------|--|
| COMPANY:     | LINE 6   |
| TITLE:       | SPIDER II SERIES MAIN CODEC/HEADPHONE AMP                                  |
| PROGRAM:     | PADS POWER LOGIC V5.0  |
| REV:         | D3   |
| DRAWN:       | G. Kirtley   |
| DATED:       | 08/26/03   |
| FILENAME:    | G:/CLIENTS/FFD/Spider II/PCBs/Main - 0220/Rev D/Spider 212 Main Rev D2.sch |
| CHECKED:     | Name (F.Last)  |
| DATED:       | 00/00/01   |
| SCALE:       | 1:1  |
| SIZE:        | C  |
| PART NUMBER: | 35-00-0220   |
| SHEET:       | 2 OF 5   |

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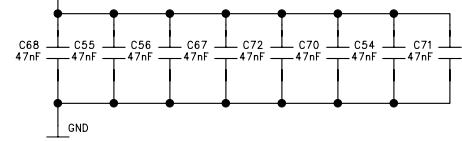
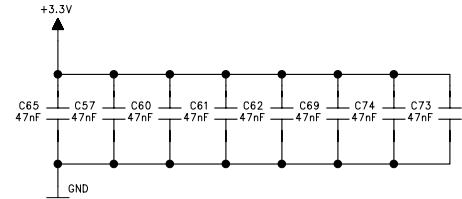
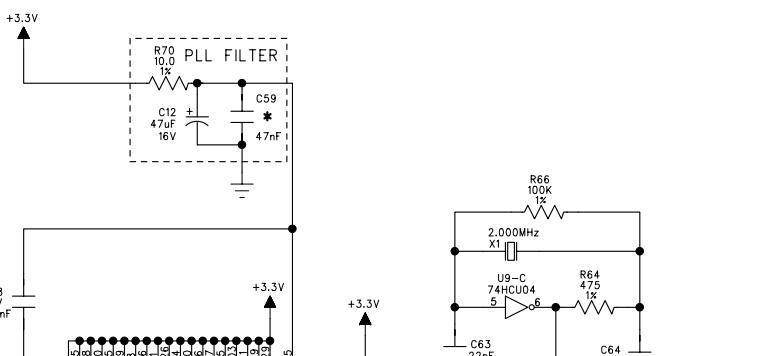
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2

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# DIGITAL

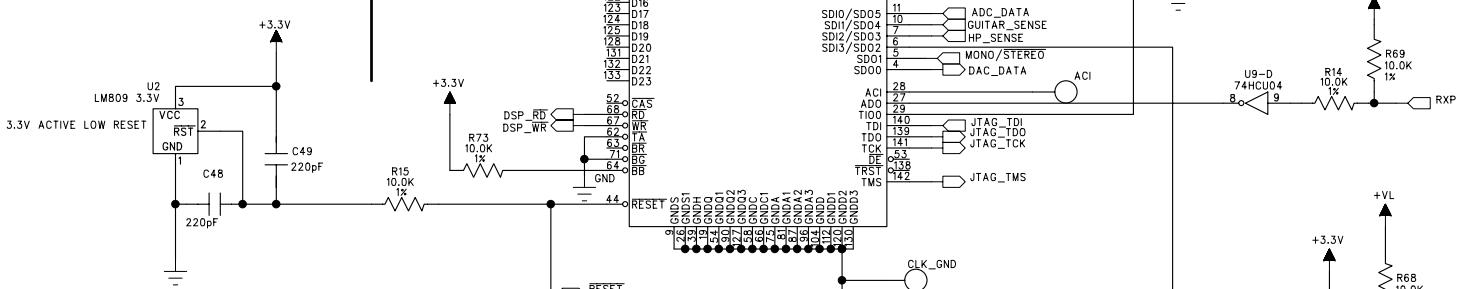
| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |       |              |
|--|-------|--------------|
| ECO NO:                                      | DATE: | DESCRIPTION: |
|  |       |              |

**DSP DECOUPLING****DSPMEM\_A(00:17)**

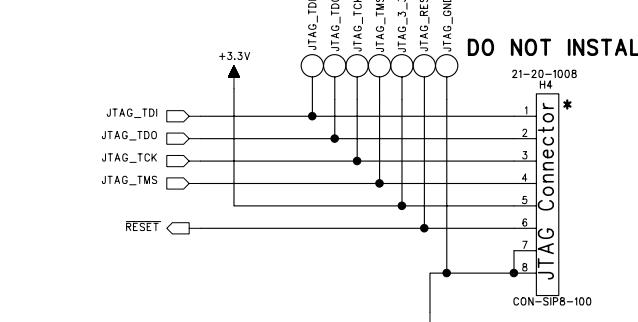
|            |    |     |
|------------|----|-----|
| DSPMEM_A00 | 72 | A0  |
| DSPMEM_A01 | 73 | A1  |
| DSPMEM_A02 | 74 | A2  |
| DSPMEM_A03 | 77 | A3  |
| DSPMEM_A04 | 78 | A4  |
| DSPMEM_A05 | 79 | A5  |
| DSPMEM_A06 | 80 | A6  |
| DSPMEM_A07 | 81 | A7  |
| DSPMEM_A08 | 82 | A8  |
| DSPMEM_A09 | 85 | A9  |
| DSPMEM_A10 | 88 | A10 |
| DSPMEM_A11 | 89 | A11 |
| DSPMEM_A12 | 92 | A12 |
| DSPMEM_A13 | 93 | A13 |
| DSPMEM_A14 | 94 | A14 |
| DSPMEM_A15 | 97 | A15 |
| DSPMEM_A16 | 98 | A16 |
| DSPMEM_A17 | 99 | A17 |

**DSPMEM\_D(00:23)**

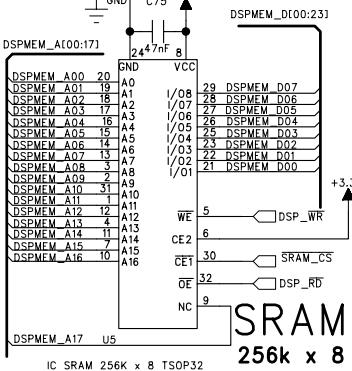
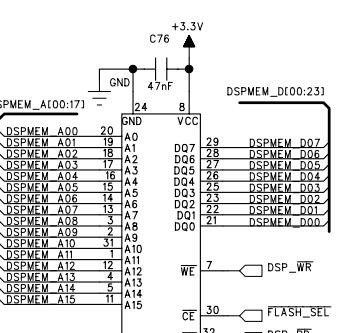
|            |     |     |
|------------|-----|-----|
| DSPMEM_D00 | 100 | D0  |
| DSPMEM_D01 | 101 | D1  |
| DSPMEM_D02 | 102 | D2  |
| DSPMEM_D03 | 105 | D3  |
| DSPMEM_D04 | 106 | D4  |
| DSPMEM_D05 | 107 | D5  |
| DSPMEM_D06 | 108 | D6  |
| DSPMEM_D07 | 109 | D7  |
| DSPMEM_D08 | 110 | D8  |
| DSPMEM_D09 | 111 | D9  |
| DSPMEM_D10 | 112 | D10 |
| DSPMEM_D11 | 113 | D11 |
| DSPMEM_D12 | 114 | D12 |
| DSPMEM_D13 | 115 | D13 |
| DSPMEM_D14 | 116 | D14 |
| DSPMEM_D15 | 117 | D15 |
| DSPMEM_D16 | 122 | D16 |
| DSPMEM_D17 | 123 | D17 |
| DSPMEM_D18 | 124 | D18 |
| DSPMEM_D19 | 125 | D19 |
| DSPMEM_D20 | 126 | D20 |
| DSPMEM_D21 | 132 | D21 |
| DSPMEM_D22 | 133 | D22 |
| DSPMEM_D23 | 134 | D23 |



IC 24-BIT DSP SM TQFP144 DSPB5636PV120



21-20-1008 H4

**SRAM  
256k x 8****FLASH  
64k x 8**

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|              |  |                 |
|--------------|--|-----------------|
| COMPANY:     | LINE 6   |                 |
| TITLE:       | SPIDER II SERIES MAIN DIGITAL  |                 |
| PROGRAM:     | PADS POWER LOGIC V5.0  |                 |
| REV:         | D3   |                 |
| DRAWN:       | G. Kirtley   | DATED: 08/26/03 |
| FILENAME:    | G:/CLIENTS/FFD/Spider II/PCBs/Main - 0220/Rev D/Spider 212 Main Rev D2.sch |                 |
| CHECKED:     | Name (F.Last)  | DATED: 00/00/01 |
| SCALE:       | 1:1  | SIZE: C         |
| PART NUMBER: | 35-00-0220   |                 |
| SHEET:       | 3 OF 5   |                 |

# INTERFACE

6

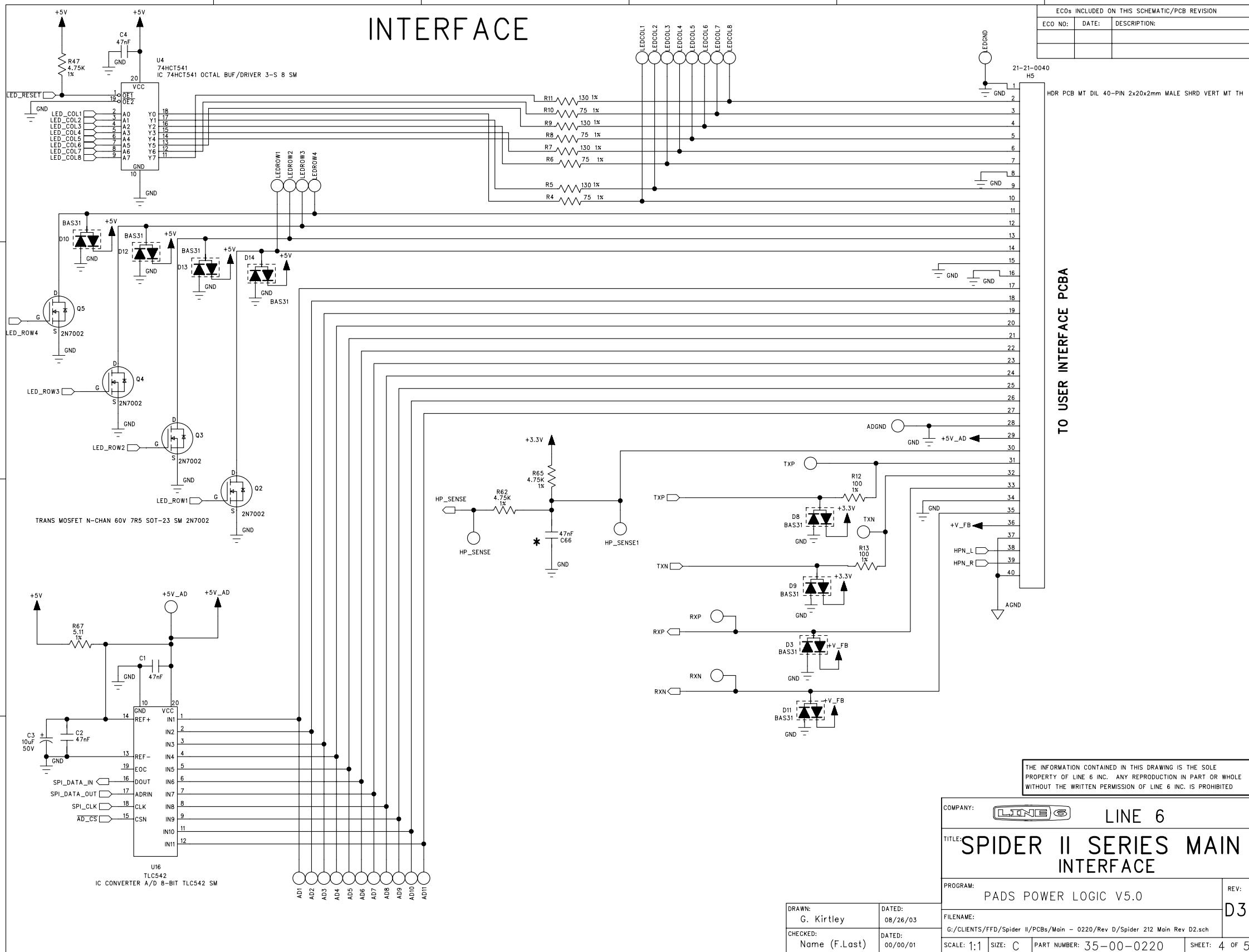
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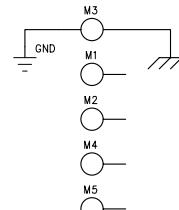
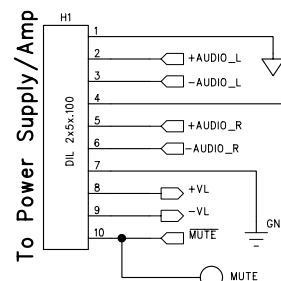
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3

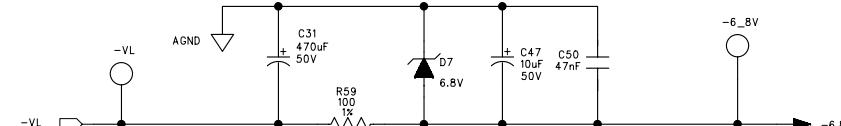
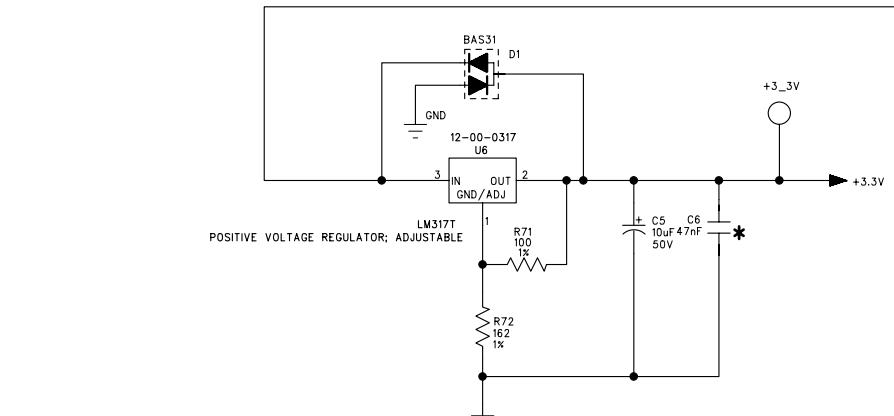
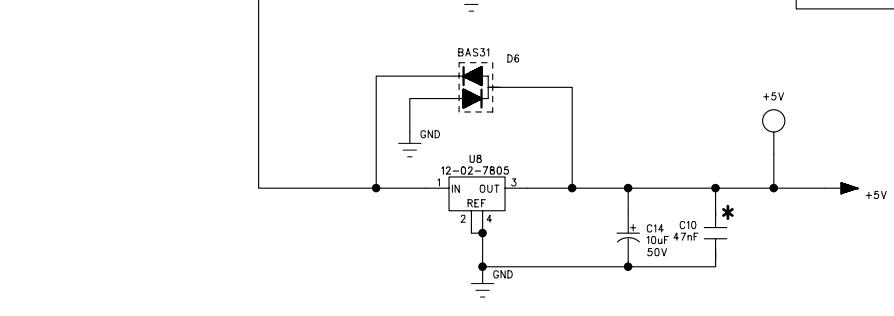
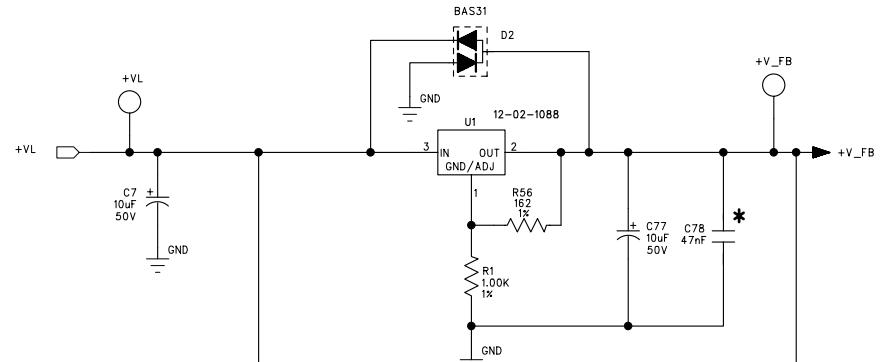
2

1

# POWER



- |      |      |
|------|------|
| FID1 | FID5 |
| ●    | ●    |
| FID2 | FID6 |
| ●    | ●    |
| FID3 | FID7 |
| ●    | ●    |
| FID4 |      |
| ●    |      |



| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |         |                            |
|--|---------|----------------------------|
| ECO NO:                                      | DATE:   | DESCRIPTION:               |
|  | 7/31/03 | Changed R1 = 1K, R56 = 162 |
|  |         |                            |

GND and AGND connected at supply

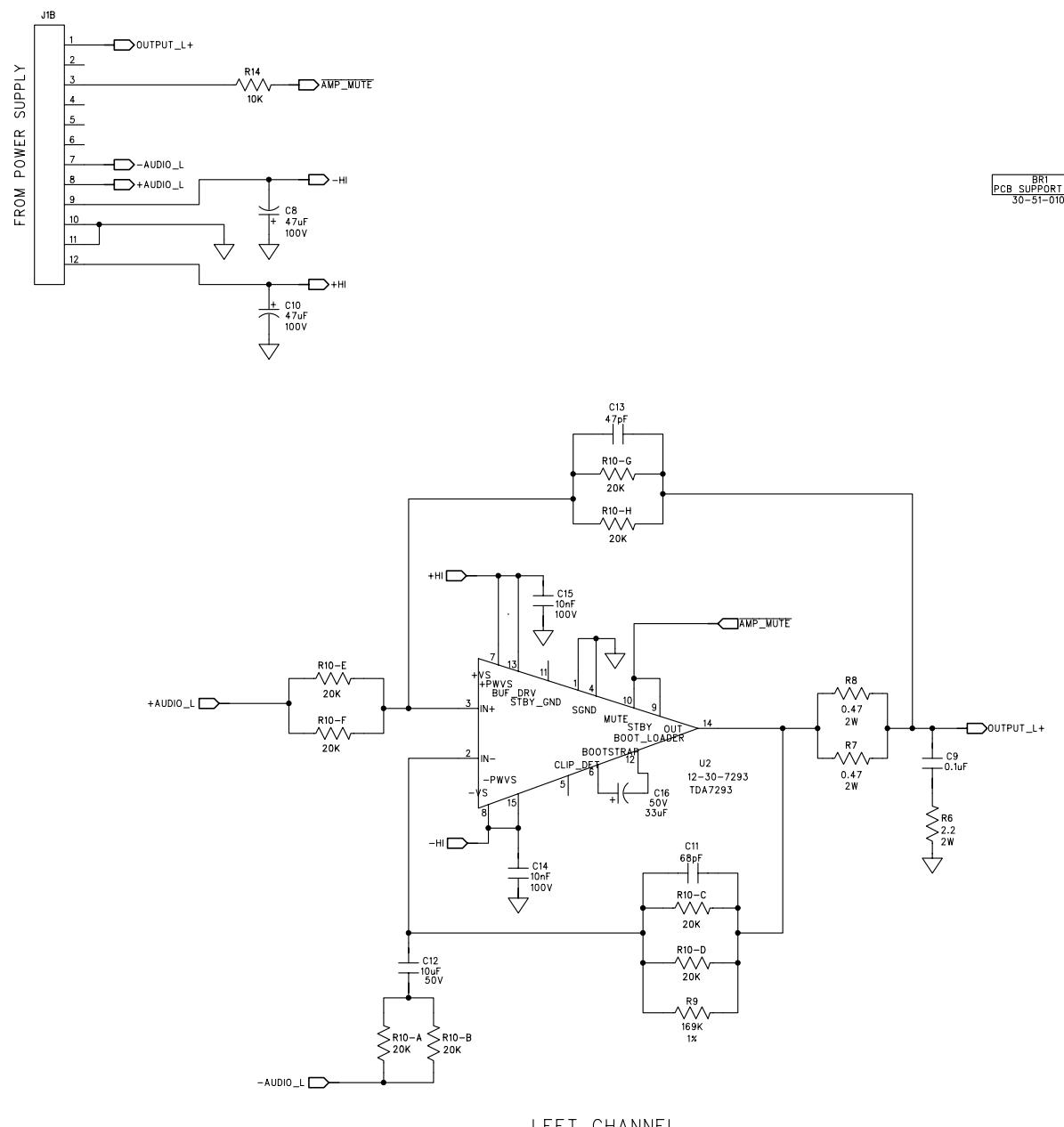
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|              |  |
|--------------|--|
| COMPANY:     | LINE 6   |
| TITLE:       | SPIDER II SERIES MAIN POWER  |
| PROGRAM:     | PADS POWER LOGIC V5.0  |
| FILENAME:    | G:/CLIENTS/FFD/Spider II/PCBs/Main - 0220/Rev D/Spider 212 Main Rev D2.sch |
| DRAWN:       | G. Kirtley   |
| DATED:       | 08/26/03   |
| CHECKED:     | Name (F.Last)  |
| DATED:       | 00/00/01   |
| SCALE:       | 1:1  |
| SIZE:        | C  |
| PART NUMBER: | 35-00-0220   |
| SHEET:       | 5 OF 5   |

REV:  
D3

## POWER AMP

| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |          |                                 |
|--|----------|---------------------------------|
| ECO NO:                                      | DATE:    | DESCRIPTION:                    |
| 0314803                                      | 05.22.03 | Released as rev.A to MFG - (mh) |

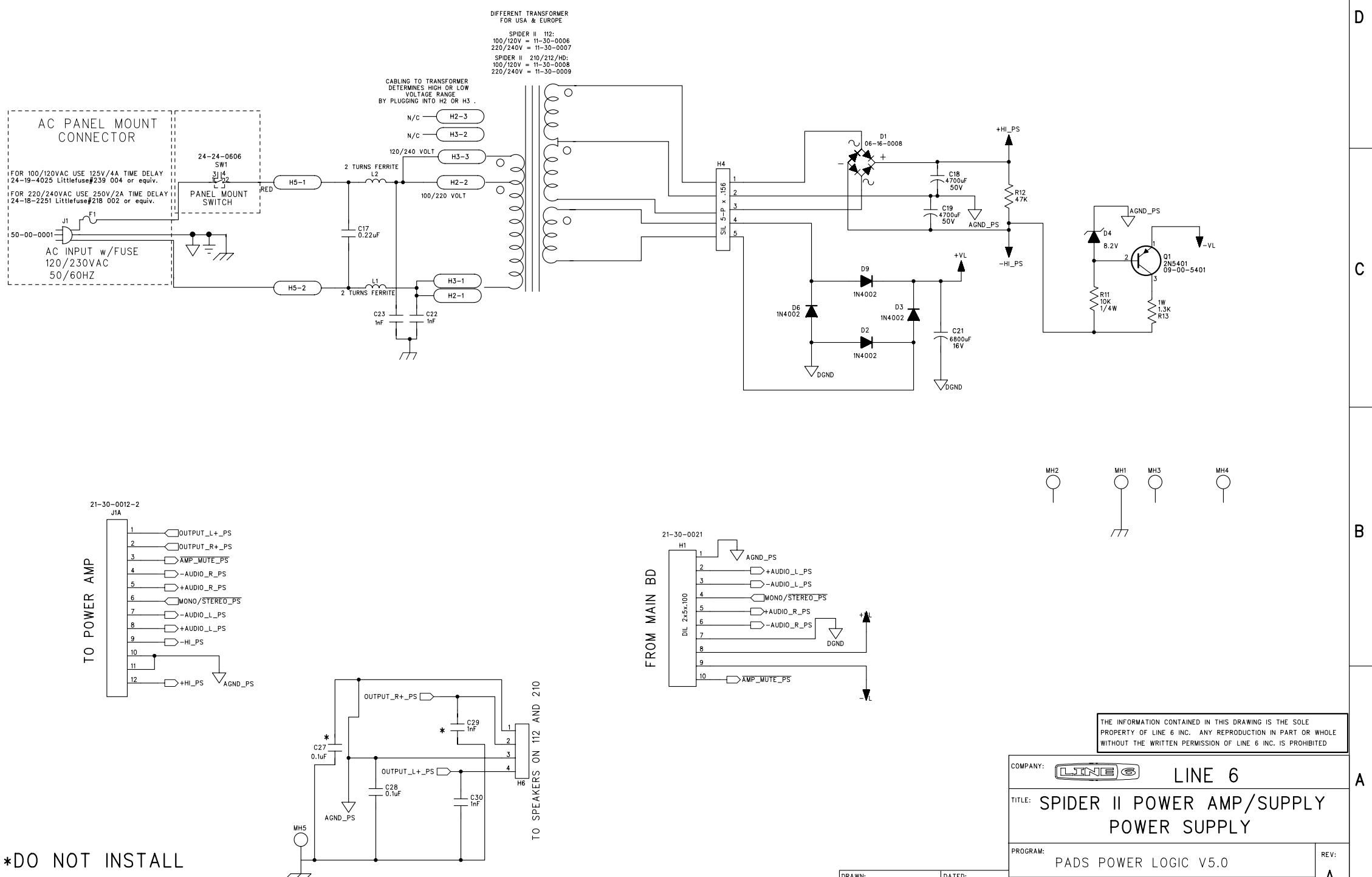


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|              |                                |                 |
|--------------|--------------------------------|-----------------|
| COMPANY:     | LINE 6                         | LINE 6          |
| TITLE:       | SPIDER II POWER AMP/SUPPLY     | 112 POWER AMP   |
| PROGRAM:     | PADS POWER LOGIC V5.0          | REV: A          |
| DRAWN:       | T. BURTON                      | DATED: 05/20/03 |
| FILENAME:    | G:/CLIENTS/FFD/Spider II/PCBs/ |                 |
| CHECKED:     |                                | DATED: Date     |
| SCALE:       | 1:1                            | SIZE: C         |
| PART NUMBER: | 35-00-0217                     | HEET: 1 OF 2    |

# POWER SUPPLY

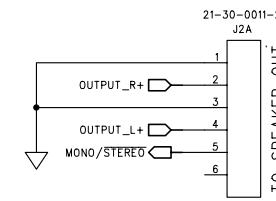
| ECOS INCLUDED ON THIS SCHEMATIC/PCB REVISION |       |              |
|--|-------|--------------|
| ECO NO:                                      | DATE: | DESCRIPTION: |
|  |       |              |



# POWER AMP

| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |          |                                 |
|--|----------|---------------------------------|
| ECO NO:                                      | DATE:    | DESCRIPTION:                    |
| 0314803                                      | 05.22.03 | Released to MFG as rev.A - (mh) |
|  |          |                                 |

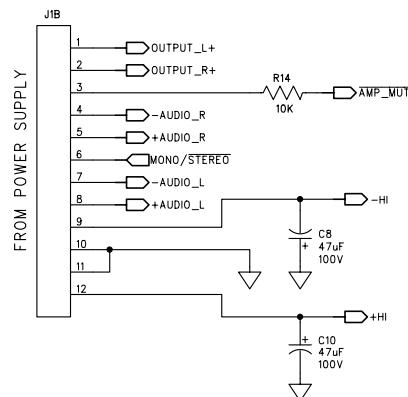
21-30-0011-2



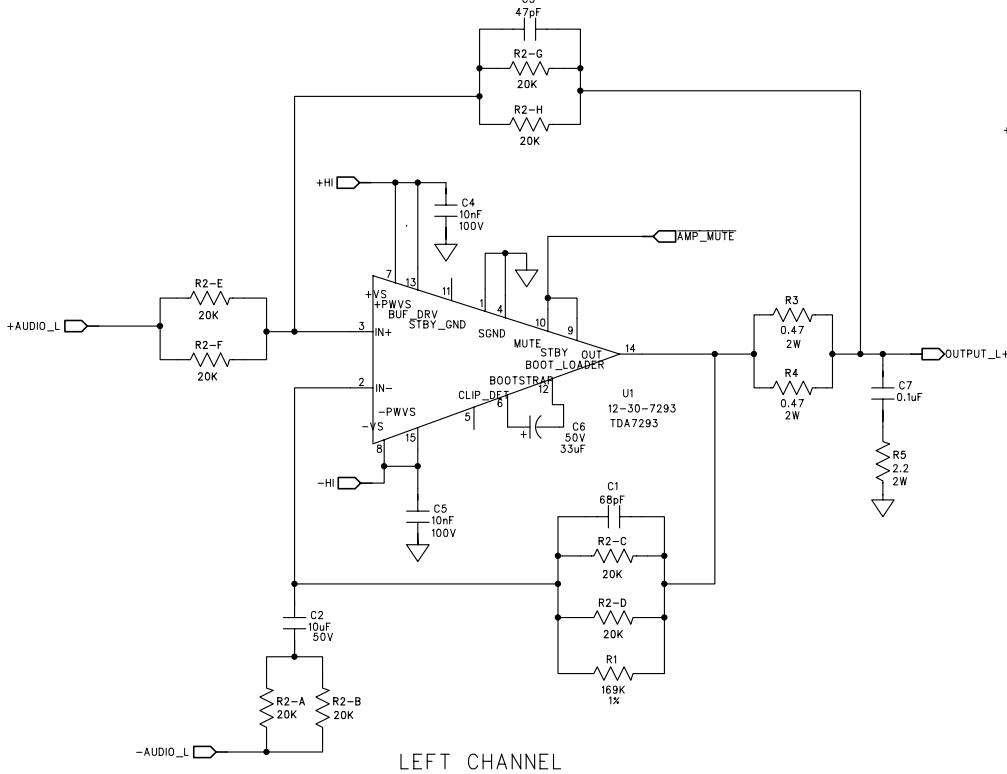
JP-1 JUMPER SELECTION

| Speakers | Config.     | JP-1 Status    |
|----------|-------------|----------------|
| 2 X 12   | STEREO      | Install        |
| 2 X 10   | STEREO      | Install        |
| HEAD     | MONO/STEREO | Do Not Install |

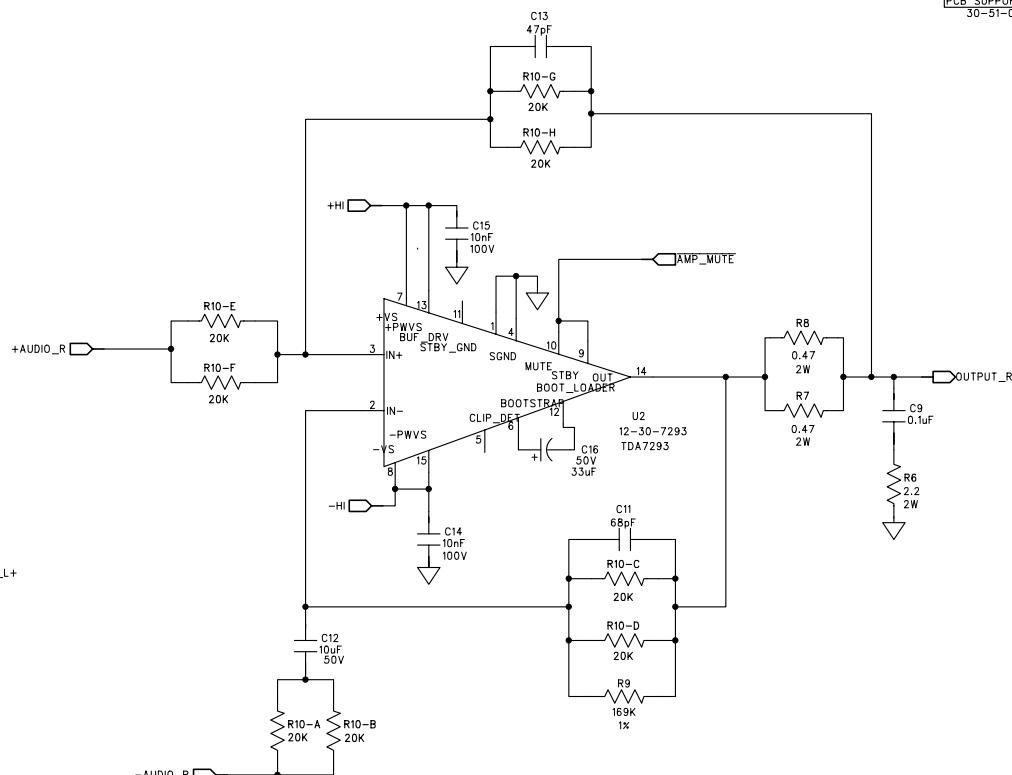
STEREO = LOW  
MONO = HI  
(PULL-UP ON SIGNAL AT MAIN BOARD)



MONO/STEREO  01-12-0000  
JP1  
AGND



LEFT CHANNEL



RIGHT CHANNEL

|   |                            |           |
|---|----------------------------|-----------|
| THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LINE 6 INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF LINE 6 INC. IS PROHIBITED |                            |           |
| COMPANY:  | LINE 6                     | LINE 6    |
| TITLE:  | SPIDER II POWER AMP/SUPPLY | POWER AMP |
| PROGRAM:  | PADS POWER LOGIC V5.0      | REV: A    |

DRAWN:  
T. BURTONDATED:  
05/20/03CHECKED:  
DateDATED:  
Date

SCALE: 1:1

SIZE: C

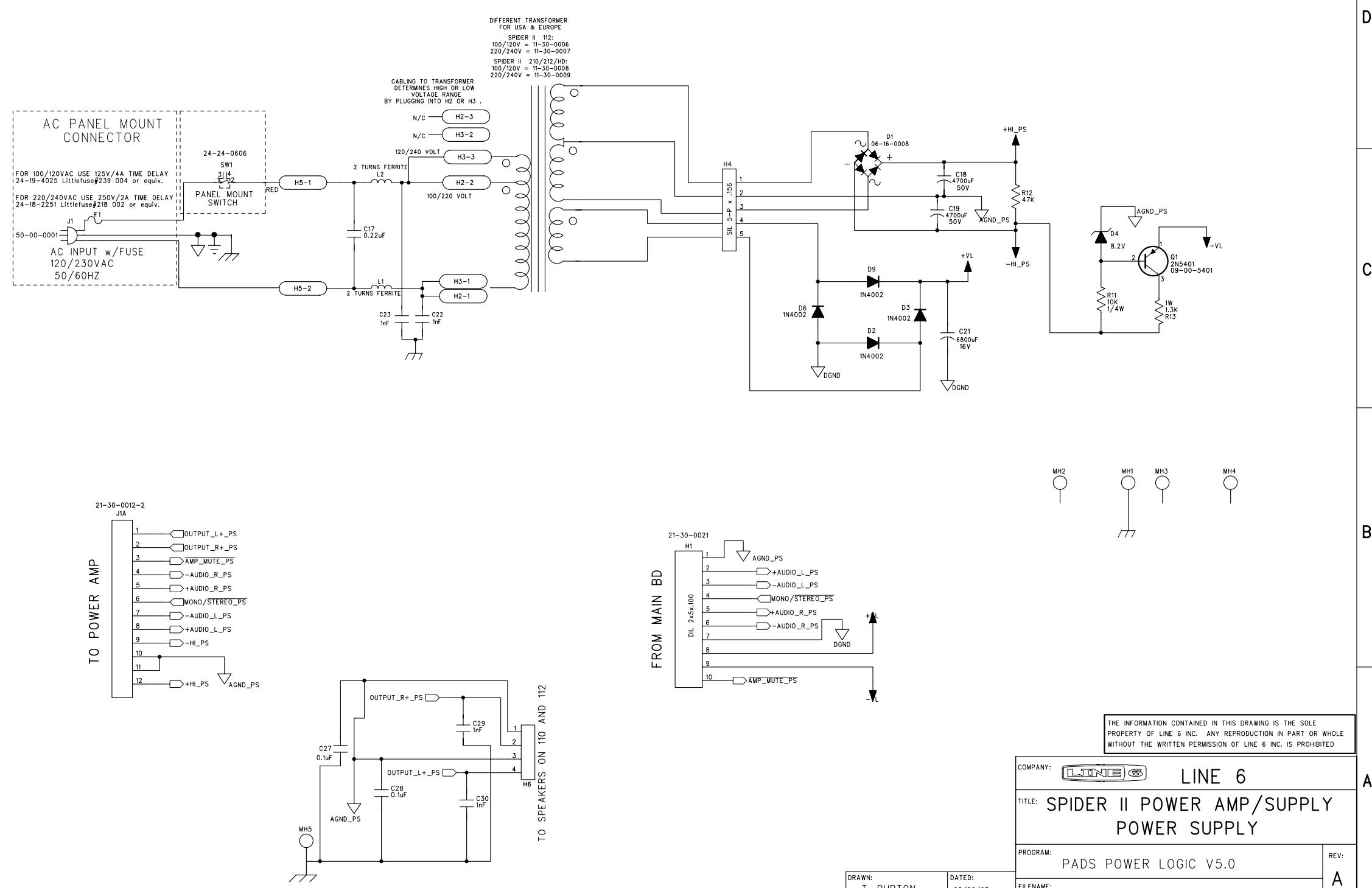
PART NUMBER: 35-00-0221

SHEET: 1 OF 3

BRI  
PCB SUPPORT CLIP  
30-51-0105

## POWER SUPPLY

| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |         |                                 |
|--|---------|---------------------------------|
| ECO NO:                                      | DATE:   | DESCRIPTION:                    |
| 0314803                                      | 05.2203 | Released to MFG as rev.A - (mh) |
|  |         |                                 |



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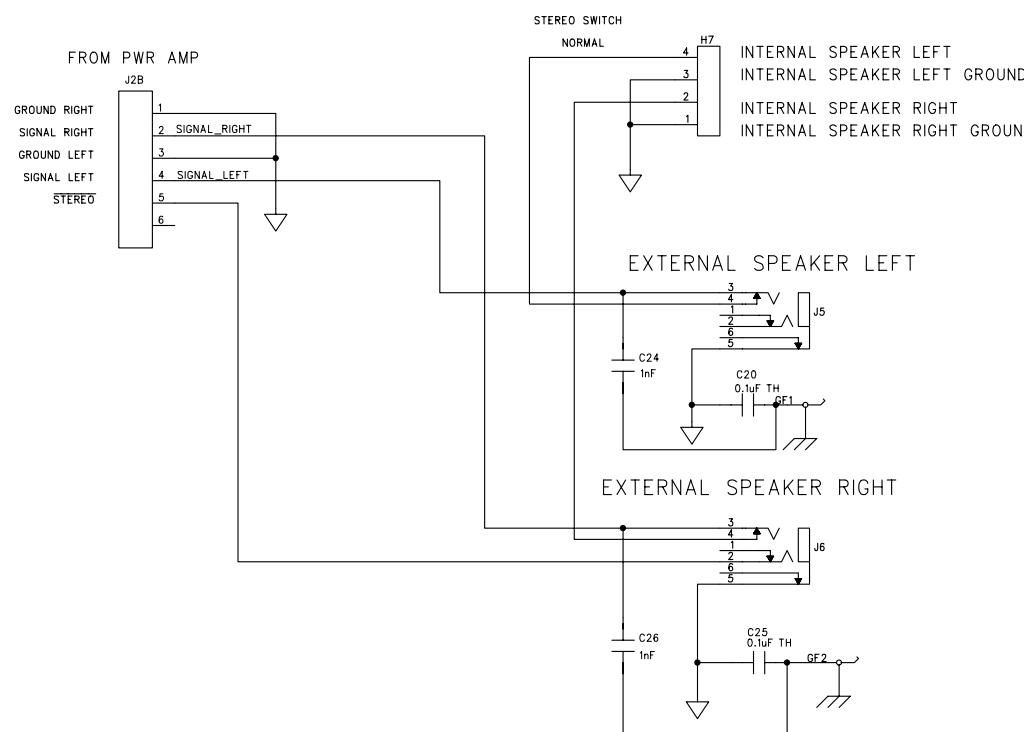
3

2

1

# SPEAKER OUTPUT PCB

| ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION |          |                                 |
|--|----------|---------------------------------|
| ECO NO:                                      | DATE:    | DESCRIPTION:                    |
| 0314803                                      | 05.22.03 | Released to MFG as rev.A - (mh) |
|  |          |                                 |



THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LINE 6 INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF LINE 6 INC. IS PROHIBITED

|  |                 |
|--|-----------------|
| COMPANY: <b>LINE 6</b>                               | LINE 6          |
| TITLE: <b>SPIDER II POWER AMP/SUPPLY SPEAKER OUT</b> |                 |
| PROGRAM: <b>PADS POWER LOGIC V5.0</b>                |                 |
| REV: A   |                 |
| DRAWN: T. BURTON                                     | DATED: 05/20/03 |
| CHECKED:   | DATED:          |
| SCALE: 1:1   | SIZE: C         |
| PART NUMBER: 35-00-0218                              |                 |
| SHEET: 3 OF 3  |                 |

**Line 6 Bill of Materials Report**

Parent Item: 99-020-0615 (SPIDER 2 HD US)

| item_desc_1              | comp_item_r  | comp_item_desc_1               | qty_pc reference_1                                      |
|--------------------------|--------------|--------------------------------|---|
| SPIDER 2 HD US           | 21-37-1160   | CABLE PWR UL/CSA SJT 8.2ft Blk | 1   |
| SPIDER 2 HD US           | 40-00-0012   | GUIDE POP-TOP SPIDER2          | 1   |
| SPIDER 2 HD US           | 40-00-0018   | MANUAL USER SPIDER2 SERIES     | 1   |
| SPIDER 2 HD US           | 40-03-2000   | CARD REGISTRATION UNIVERSAL    | 1 ADDED PER ECO#0326102.                                |
| SPIDER 2 HD US           | 40-10-0059   | FOAM CORNER PE-LAMINATE 1.75"  | 8   |
| SPIDER 2 HD US           | 40-10-0085   | CARTON SHIPPING DW FOL         | 1   |
| SPIDER 2 HD US           | 40-20-0010   | BAG PLASTIC 43"x38"x.004 CLEAR | 1   |
| SPIDER 2 HD US           | 40-20-0011   | BAG PLASTIC 10 x 16 2 mil      | 1   |
| SPIDER 2 HD US           | 40-25-0020   | LABEL INSPECTION QUALITY       | 1   |
| SPIDER 2 HD US           | 40-25-0100   | LABEL BAR CODE SERIAL NUMBER   | 1   |
| SPIDER 2 HD US           | 59-00-0605   | ASSY UNIT COMPLETE             | 1   |
| ASSY UNIT COMPLETE       | 30-00-1128   | SCREW 10-32 x 1-3/4 OVAL       | 4 CABINET TOP - CHASSIS                                 |
| ASSY UNIT COMPLETE       | 30-03-0112   | WASHER FINISHING #10 FLANGED   | 4 CABINET TOP - CHASSIS                                 |
| ASSY UNIT COMPLETE       | 50-03-0004   | ASSY CABINET SPIDER2-HD        | 1   |
| ASSY CABINET SPIDER2-HD  | 30-00-0812   | SCREW w/WAX 8 x 3/4 PTB        | 14 CABINET ASSY - CORNER SCREWS                         |
| ASSY CABINET SPIDER2-HD  | 30-00-1024   | SCREW 10-24 x 1IN OVAL CTSK    | 2 CABINET ASSY - HANDLE SCREWS                          |
| ASSY CABINET SPIDER2-HD  | 30-00-6839   | SCREW WOOD 10-12 x 7/8" PPZ    | 4 CABINET ASSY - RUBBER FEET                            |
| ASSY CABINET SPIDER2-HD  | 30-00-8112   | SCR WOOD #8 x 1 1/2" OVAL SCTK | 5 CABINET ASSY - BAFFLE BOARD SIDES AND BOTTOM          |
| ASSY CABINET SPIDER2-HD  | 30-03-0112   | WASHER FINISHING #10 FLANGED   | 5 CABINET ASSY - BAFFLE BOARD SIDES AND BOTTOM          |
| ASSY CABINET SPIDER2-HD  | 30-06-1024   | NUT-T 10-24 X 5/16 STEEL       | 2 CABINET ASSY - HANDLE AND BAFFLE BOARD                |
| ASSY CABINET SPIDER2-HD  | 30-28-0002   | CORNER LEFT HI-DENSITY         | 1 CABINET ASSY - FRONT LEFT CORNER                      |
| ASSY CABINET SPIDER2-HD  | 30-28-0003   | CORNER RIGHT HI-DENSITY        | 1 CABINET ASSY - FRONT RIGHT CORNER                     |
| ASSY CABINET SPIDER2-HD  | 30-28-0004   | CORNER BACK HI-DENSITY         | 6 CABINET ASSY - TOP BACK AND BOTTOM                    |
| ASSY CABINET SPIDER2-HD  | 30-33-0029   | CABINET PARTICLE BOARD 5/8IN   | 1   |
| ASSY CABINET SPIDER2-HD  | 30-36-0005   | COVER VINYL TEXTURED BLACK     | 0.75 CABINET ASSY                                       |
| ASSY CABINET SPIDER2-HD  | 30-39-0006   | GRILL-CLOTH BLACK WEAVE        | 0.2 BAFFLE BOARD  |
| ASSY CABINET SPIDER2-HD  | 30-57-0580   | HANDLE/STRAP HEAVY DUTY BLACK  | 1 CABINET ASSY - TOP                                    |
| ASSY CABINET SPIDER2-HD  | 30-57-0581   | END CAPS, BLACK, TEXTURED FINI | 2 CABINET ASSY - TOP                                    |
| ASSY CABINET SPIDER2-HD  | 30-75-0008   | FOOT RUBBER 1.50" I.D. x .75"H | 4   |
| ASSY UNIT COMPLETE       | 50-04-0003-1 | ASSY E/M CHASSIS SPIDER2       | 1   |
| ASSY E/M CHASSIS SPIDER2 | 11-30-0008   | XFMR 100/120VAC 50/60Hz 86mm   | 1   |
| ASSY E/M CHASSIS SPIDER2 | 21-34-0044-2 | CBL 18AWG 3PIN SIL .256 273.0  | 1 POWER SUPPLY PCBA to POWER SWITCH to AC RECEPTACLE    |
| ASSY E/M CHASSIS SPIDER2 | 24-19-4025   | FUSE 4A/125v                   | 1 AC RECEPTACLE FUSE CLIP.                              |
| ASSY E/M CHASSIS SPIDER2 | 21-34-1015   | CBL FSTN .187-RCPT/.250-F FLAG | 1 AC SWITCH to AC RECEPTACLE                            |
| ASSY E/M CHASSIS SPIDER2 | 24-21-0002   | ACTUATOR SWITCH SINGLE ROUND   | 5 M1-5 ON USER INTERFACE PCBA                           |
| ASSY E/M CHASSIS SPIDER2 | 24-24-0606   | SWITCH POWER ROCKER 6A/250VAC  | 1 CHASSIS   |
| ASSY E/M CHASSIS SPIDER2 | 30-00-0018   | SCREW SELF-TAP 6-32 x .75 PFZ  | 4 CHASSIS - HEATSINK                                    |
| ASSY E/M CHASSIS SPIDER2 | 30-00-0043   | SCREW 6-32 x 5/16 w/LK WASH    | 11 GND WIRE AND MAIN AND POWER SUPPLY PCBA'S to CHASSIS |

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| ASSY E/M CHASSIS SPIDER2    | 30-00-1033   | SCREW 10-32 x 3/8IN SCH STL    | 4 F/P to CHASSIS   |
| ASSY E/M CHASSIS SPIDER2    | 30-00-6103   | NUT HEX M9-0.75 ZINC           | 10 F/P TO CHASSIS - POTS                                 |
| ASSY E/M CHASSIS SPIDER2    | 30-06-0832   | NUT .335 HEX 8-32 STL ZINC W/  | 4 TRANSFORMER TO CHASSIS                                 |
| ASSY E/M CHASSIS SPIDER2    | 30-24-0003   | CABLE-TIE 4" CLEAR             | 4  |
| ASSY E/M CHASSIS SPIDER2    | 30-28-0212-1 | PANEL FRONT PLASTIC GREY       | 1 CHASSIS  |
| ASSY E/M CHASSIS SPIDER2    | 30-45-0007   | KNOB SPLINE .77DIA x .76 METAL | 10 FRONT PANEL - POTS                                    |
| ASSY E/M CHASSIS SPIDER2    | 30-51-0149   | CHASSIS 626 x 129.54 x 86.61mm | 1  |
| ASSY E/M CHASSIS SPIDER2    | 30-63-0010   | FOAM w/ADHSV 26.5x 1/4x 1/16IN | 5 CHASSIS  |
| ASSY E/M CHASSIS SPIDER2    | 30-75-9600   | GROMMET RUBBER 7/16-D x        | 1 CHASSIS - SPEAKER WIRES                                |
| ASSY E/M CHASSIS SPIDER2    | 40-25-0015   | LABEL GROUND SYMBOL            | 1 CHASSIS - INSIDE BY GND WIRE                           |
| ASSY E/M CHASSIS SPIDER2    | 40-25-0018   | STICKER LINE6 LOGO OVAL        | 1 PLASTIC FRONT PANEL                                    |
| ASSY E/M CHASSIS SPIDER2    | 50-00-0001   | ASSY RECEPTACLE-A/C w/GND      | 1 CHASSIS - POWER SUPPLY PCBA                            |
| ASSY RECEPTACLE-A/C w/GND   | 21-14-0002   | JACK IEC w/FUSE MALE 3-PIN     | 1  |
| ASSY RECEPTACLE-A/C w/GND   | 21-34-1116   | Cable, Earthing                | 1 GROUND   |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0218   | PCBA SPEAKER OUT SPIDER2       | 1  |
| PCBA SPEAKER OUT SPIDER2    | 03-00-0104   | CAP CER DISC 100nF 50V 20% TH  | 2 C20,C25  |
| PCBA SPEAKER OUT SPIDER2    | 03-36-0102   | CAP ESTR 1nF 100V 5% TH        | 2 C24,C26  |
| PCBA SPEAKER OUT SPIDER2    | 21-00-6616   | JACK 1/4" TRS 6-PIN PCB MT     | 2 J5-6   |
| PCBA SPEAKER OUT SPIDER2    | 21-20-1564   | HDR PCB MT SIL 4-PIN X .156    | 1 H7   |
| PCBA SPEAKER OUT SPIDER2    | 30-18-3030   | CLIP GND PCB .30x.30x.07       | 2 GF1-2  |
| PCBA SPEAKER OUT SPIDER2    | 35-00-0218   | PCB SPEAKER OUT REV.A SPIDER2  | 1  |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0219   | PCBA USER INTERFACE SPIDER2    | 1  |
| PCBA USER INTERFACE SPIDER2 | 01-12-0101   | RES CARBON FILM 100R 1/4W 5%   | 1 R15  |
| PCBA USER INTERFACE SPIDER2 | 01-12-0102   | RES CARBON FILM 1K 1/4W 5% TH  | 2 R12,R19  |
| PCBA USER INTERFACE SPIDER2 | 01-12-0201   | RES CARBON FILM 200R 1/4W 5%   | 1 R14  |
| PCBA USER INTERFACE SPIDER2 | 01-12-0202   | RES CARBON FILM 2.0K 1/4W 5%   | 1 R11  |
| PCBA USER INTERFACE SPIDER2 | 01-12-0511   | RES CARBON FILM 510R 1/4W 5%   | 1 R13  |
| PCBA USER INTERFACE SPIDER2 | 01-48-6103   | POT MONO 10KB LINEAR TAPER     | 10 R1-10   |
| PCBA USER INTERFACE SPIDER2 | 03-00-0104   | CAP CER DISC 100nF 50V 20% TH  | 1 C12  |
| PCBA USER INTERFACE SPIDER2 | 18-06-0002   | LED RED/GRN 3-P COM CATH       | 16 D1-16   |
| PCBA USER INTERFACE SPIDER2 | 21-30-0012-1 | CBL SIL 10-PIN 2.54 x 76.2mm   | 1 H2 on user interface PCB to H3 on break-away PCB       |
| PCBA USER INTERFACE SPIDER2 | 21-30-0022   | CAB DIL 40 PIN .100 PITCH 3.0  | 1 H1   |
| PCBA USER INTERFACE SPIDER2 | 24-31-1105   | SWITCH TACT 6mm SQ 4-PIN TH    | 5 SW1-5  |
| PCBA USER INTERFACE SPIDER2 | 30-15-0018   | SPACER LED .560 LG             | 16 D1-16   |
| PCBA USER INTERFACE SPIDER2 | 35-00-0219   | PCB USER INTERFACE REV.A       | 1  |
| PCBA MAIN SPIDER2-HD        | 45-02-0012   | IC PROGRAMMED FLASH            | 1  |
| PCBA MAIN SPIDER2-HD        | 50-02-0220   | PCBA MAIN (non-programmed)     | 1  |
| PCBA MAIN (non-programmed)  | 01-24-1000   | RES 100R 1% 0805               | 4 R12-13,R59,R71   |
| PCBA MAIN (non-programmed)  | 01-24-1001   | RES 1.00K 1% 0805              | R56 removed per ECO#321204<br>1 R1 added per ECO 0321204 |
| PCBA MAIN (non-programmed)  | 01-24-1002   | RES 10.0K 1% 0805              | 14 R2-3,R14-15,R21-23,R28-29,R32-34,R68-69               |
| PCBA MAIN (non-programmed)  | 01-24-1003   | RES 100K 1% 0805               | 5 R36-37,R50-51,R66                                      |
| PCBA MAIN (non-programmed)  | 01-24-10R0   | RES 10.0R 1% 0805              | 1 R70  |
| PCBA MAIN (non-programmed)  | 01-24-1300   | RES 130R 1% 0805               | 4 R5,R7,R9,R11   |

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| PCBA MAIN (non-programmed) | 01-24-1501 | RES 1.50K 1% 0805              | 1 R38  |
| PCBA MAIN (non-programmed) | 01-24-1620 | RES 162R 1% 0805               | 2 R56,R72 r56 added per ECO 321204                                       |
| PCBA MAIN (non-programmed) | 01-24-2001 | RES 2.00K 1% 0805              | 1 R39  |
| PCBA MAIN (non-programmed) | 01-24-22R1 | RES 22.1R 1% 0805              | 1 R55  |
| PCBA MAIN (non-programmed) | 01-24-4750 | RES 475R 1% 0805               | 1 R64  |
| PCBA MAIN (non-programmed) | 01-24-4751 | RES 4.75K 1% 0805              | 10 R16-17,R47,R57-58,R60-63,R65  |
| PCBA MAIN (non-programmed) | 01-24-4752 | RES 47.5K 1% 0805              | 2 R18,R24  |
| PCBA MAIN (non-programmed) | 01-24-5110 | RES 511R 1% 0805               | 1 R35  |
| PCBA MAIN (non-programmed) | 01-24-5R11 | RES 5.11R 1% 0805              | 4 R19,R53-54,R67   |
| PCBA MAIN (non-programmed) | 01-24-6041 | RES 6.04K 1% 0805              | 4 R25,R27,R30-31   |
| PCBA MAIN (non-programmed) | 01-24-75R0 | RES 75R 1% 0805                | 4 R4,R6,R8,R10   |
| PCBA MAIN (non-programmed) | 01-24-9091 | RES 9.09K 1% 0805              | 2 R20,R26  |
| PCBA MAIN (non-programmed) | 03-10-0107 | CAP ELEC 100uF 10V 20% RADIAL  | 1 C41  |
| PCBA MAIN (non-programmed) | 03-10-6108 | CAP ELEC 1000uF 6.3V 20%       | 1 C20  |
| PCBA MAIN (non-programmed) | 03-12-0476 | CAP ELEC 47uF 16V 20% RADIAL   | 1 C12  |
| PCBA MAIN (non-programmed) | 03-12-1477 | CAP ELEC 470uF 16V 20% RADIAL  | 1 C31  |
| PCBA MAIN (non-programmed) | 03-18-0105 | CAP ELEC 1uF 50V 20% RADIAL    | 4 C8,C15,C42,C44   |
| PCBA MAIN (non-programmed) | 03-18-0106 | CAP ELEC 10uF 50V 20% RADIAL   | 11 C3,C5,C7,C14,C21-22,C38-40,C47,C77                                    |
| PCBA MAIN (non-programmed) | 03-46-0332 | CAP X7R 3.3nF 50V 20% 1206     | 1 C58  |
| PCBA MAIN (non-programmed) | 03-50-0220 | CAP NPO 22pF 50V 20% 0805      | 1 C63  |
| PCBA MAIN (non-programmed) | 03-50-0470 | CAP NPO 47pF 50V 10% 0805      | 1 C64  |
| PCBA MAIN (non-programmed) | 03-52-0102 | CAP X7R 1nF 50V 20% 0805       | 2 C32,C34  |
| PCBA MAIN (non-programmed) | 03-52-0221 | CAP X7R 220pF 50V 20% 0805     | 4 C25,C28,C48-49   |
| PCBA MAIN (non-programmed) | 03-52-0391 | CAP X7R 390pF 50V 20% 0805     | 4 C26,C29-30,C36   |
| PCBA MAIN (non-programmed) | 03-52-0473 | CAP X7R 47nF 50V 20% 0805      | 33 C1-2,C4,C9,C16-19,C23-24,C27,C33,C35,C37,C50,C54-57,C60-62,C65,C67-76 |
| PCBA MAIN (non-programmed) | 06-23-0054 | DIODE SCHOTTKY DUAL 30V 200mA  | 1 D4   |
| PCBA MAIN (non-programmed) | 06-28-8468 | DIODE ZENER 6.8V 5% 350mW      | 1 D7   |
| PCBA MAIN (non-programmed) | 06-34-0031 | DIODE GEN PUR DUAL 120V        | 11 D1-3,D6,D8-14   |
| PCBA MAIN (non-programmed) | 09-06-7002 | TRANS MOSFET N-CHAN 60V 7R5    | 5 Q1-5   |
| PCBA MAIN (non-programmed) | 11-00-2000 | CRYSTAL 2.000MHz HC49 TH       | 1 X1   |
| PCBA MAIN (non-programmed) | 12-00-0317 | IC VREG ADJ 1.2-25V 1.5 AMP    | 1 U6   |
| PCBA MAIN (non-programmed) | 12-02-1088 | IC REG ADJ TO-220 TH LM1086    | 1 U1   |
| PCBA MAIN (non-programmed) | 12-02-7805 | IC REG +5v 1.5 Amp TH          | 1 U8   |
| PCBA MAIN (non-programmed) | 12-30-4880 | IC POWER-AMP 250mW TI          | 2 U10-11   |
| PCBA MAIN (non-programmed) | 12-54-0084 | IC OP AMP QUAD TL084CD SM      | 1 U12  |
| PCBA MAIN (non-programmed) | 12-64-0542 | IC CONVERTER A/D 8-BIT TLC542  | 1 U16  |
| PCBA MAIN (non-programmed) | 12-64-4528 | IC CONVERTER 24B 48/96KHz      | 1 U13  |
| PCBA MAIN (non-programmed) | 15-62-1004 | IC 74HCU04 UNBUFFERED HEX      | 1 U9   |
| PCBA MAIN (non-programmed) | 15-64-0541 | IC 74HCT 541 OCTAL BUF/DRIVER  | 1 U4   |
| PCBA MAIN (non-programmed) | 15-72-0001 | IC SRAM-256K x 8 TSOP32 SM     | 1 U5   |
| PCBA MAIN (non-programmed) | 15-78-0003 | IC FLASH 512K Bit (64Kx8) 70nS | 1 U3   |
| PCBA MAIN (non-programmed) | 15-86-6362 | IC DSP 24-BIT TQFP144 SM       | 1 U7   |
| PCBA MAIN (non-programmed) | 15-92-5809 | IC RESET 3.3V 5% ACTIVE-LOW    | 1 U2   |

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| PCBA MAIN (non-programmed)   | 21-20-1008   | HDR PCB MT SIL 8-PIN 1x8x .100 | 1 H4                                      |
| PCBA MAIN (non-programmed)   | 21-20-2010   | HDR PCB MT DIL 10-PIN 2x5x100  | 1 H1                                      |
| PCBA MAIN (non-programmed)   | 21-21-0040   | HDR PCB MT DIL 40-PIN 2x20x2mm | 1 H5                                      |
| PCBA MAIN (non-programmed)   | 21-30-0011-1 | CAB RIBBON SIL 6-PIN           | 1 H3 on main to H2 on guitar in breakaway |
| PCBA MAIN (non-programmed)   | 30-00-0607   | SCREW 6-32 x 7/16IN w/LK WASH  | 2 U1, U6                                  |
| PCBA MAIN (non-programmed)   | 30-12-0632   | STANDOFF HEX .250 6-32 F-F 1IN | 2 U1,U6                                   |
| PCBA MAIN (non-programmed)   | 30-15-0007   | INSULATOR XTAL 4.9mm C-C       | 1 INSTALL UNDER X1                        |
| PCBA MAIN (non-programmed)   | 35-00-0220   | PCB MAIN REV.D SPIDER2 SERIES  | 1   |
| ASSY E/M CHASSIS SPIDER2     | 50-02-0220-1 | PCBA MAIN SPIDER2-COMBO SERIES | 1 ADDED PER ECO#0325801.                  |
| PCBA MAIN SPIDER2-COMBO SERI | 45-02-0011   | IC PROGRAMMED FLASH v1.00      | 1   |
| PCBA MAIN SPIDER2-COMBO SERI | 50-02-0220   | PCBA MAIN (non-programmed)     | 1   |
| ASSY E/M CHASSIS SPIDER2     | 50-02-0221-1 | PCBA POWER AMP w/HEATSINK      | 1   |
| PCBA POWER AMP w/HEATSINK    | 30-00-0010   | SCREW 8-32 x 9/16 SKT-CAP      | 2 HEATSINK CLAMPS                         |
| PCBA POWER AMP w/HEATSINK    | 30-00-0028   | SCREW 8-32 x 5/16" SHCS        | 1 SUPPORT BRACKET BR1                     |
| PCBA POWER AMP w/HEATSINK    | 30-03-0002   | WASHER #8 .293 x.174x .040     | 3 (2) CLAMPS (1) SUPPORT BRKT             |
| PCBA POWER AMP w/HEATSINK    | 30-06-0007   | NUT .344 HEX 8-32 STEEL ZINC   | 3 (2) CLAMPS (1) SUPPORT BRKT             |
| PCBA POWER AMP w/HEATSINK    | 30-51-0059-3 | HEATSINK 4.0 IN LG AL ALY BLK  | 1 POWER AMP PCBA                          |
| PCBA POWER AMP w/HEATSINK    | 30-51-0073   | CLAMP HEATSINK TO-220          | 2 HEATSINK - POWER AMPS                   |
| PCBA POWER AMP w/HEATSINK    | 30-51-0105   | BRKT SUPPORT .565 x .530 x     | 1 BR1                                     |
| PCBA POWER AMP w/HEATSINK    | 30-63-0006   | PAD THERMAL 6mil 25mm x 30mm   | 2 HEATSINK - POWER AMP                    |
| PCBA POWER AMP w/HEATSINK    | 50-02-0221   | PCBA POWER AMP SPIDER2         | 1   |
| PCBA POWER AMP SPIDER2       | 01-12-0000   | RES CARBON FILM 0R 1/4W 5% TH  | 1 JP1.                                    |
| PCBA POWER AMP SPIDER2       | 01-00-0103   | RES 10K 5% 0805                | 1 R14                                     |
| PCBA POWER AMP SPIDER2       | 01-23-02R2   | RES METAL OXIDE 2.2R 3W 5% TH  | 2 R5,R6. Added per ECO#0336302.           |
| PCBA POWER AMP SPIDER2       | 01-22-0R47   | RES METAL OXIDE 0.47R 2W 5% TH | 4 R3-4,R7-8                               |
| PCBA POWER AMP SPIDER2       | 01-24-1693   | RES 169K 1% 0805               | 2 R1,R9                                   |
| PCBA POWER AMP SPIDER2       | 01-60-0203   | RES NETWORK ISOLATED 20K       | 2 R2,R10                                  |
| PCBA POWER AMP SPIDER2       | 03-18-0336   | CAP ELEC 33uF 50V 20% RADIAL   | 2 C6,C16                                  |
| PCBA POWER AMP SPIDER2       | 03-18-1106   | CAP ELEC 10uF 50V 20% BI-POLAR | 2 C2,C12                                  |
| PCBA POWER AMP SPIDER2       | 03-22-0476   | CAP ELEC 47uF 100V 20% RADIAL  | 2 C8,C10                                  |
| PCBA POWER AMP SPIDER2       | 03-24-0564   | CAP MET-POLY 0.56uF 100VDC 5%  | 2 C7,C9. Added per ECO#0336302.           |
| PCBA POWER AMP SPIDER2       | 03-52-0470   | CAP X7R 47pF 50V 20% 0805      | 2 C3,C13                                  |
| PCBA POWER AMP SPIDER2       | 03-52-0680   | CAP X7R 68pF 50V 20% 0805      | 2 C1,C11                                  |
| PCBA POWER AMP SPIDER2       | 03-52-1103   | CAP X7R 10nF 100V 10% 0805     | 4 C4-5,C14-15                             |
| PCBA POWER AMP SPIDER2       | 12-30-7293   | IC POWER-AMP 100W TDA7293      | 2 U1-2                                    |
| PCBA POWER AMP SPIDER2       | 21-30-0011-2 | CAB RIBBON SIL 6-PIN           | 1 J2A on power amp to J2B on speaker out  |
| PCBA POWER AMP SPIDER2       | 35-00-0221   | PCB POWER AMP REV.A SPIDER2    | 1 BREAKAWAY OF PWR SUPPLY                 |
| ASSY E/M CHASSIS SPIDER2     | 50-02-0222   | PCBA POWER SUPPLY SPIDER2      | 1   |
| PCBA POWER SUPPLY SPIDER2    | 01-12-0103   | RES CARBON FILM 10K 1/4W 5% TH | 1 R11                                     |
| PCBA POWER SUPPLY SPIDER2    | 01-12-0473   | RES CARBON FILM 47K 1/4W 5% TH | 1 R12                                     |
| PCBA POWER SUPPLY SPIDER2    | 01-20-0132   | RES METAL OXIDE 1.3K 1W 5% TH  | 1 R13                                     |
| PCBA POWER SUPPLY SPIDER2    | 03-00-0104   | CAP CER DISC 100nF 50V 20% TH  | 2 C27-28                                  |
| PCBA POWER SUPPLY SPIDER2    | 03-12-0688   | CAP ELEC 6800uF 16V 20% RADIAL | 1 C21                                     |

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| PCBA POWER SUPPLY SPIDER2   | 03-18-0478   | CAP ELEC 4700uF 50V 20% SNAPIN | 2 C18-19   |
| PCBA POWER SUPPLY SPIDER2   | 03-36-0102   | CAP ESTR 1nF 100V 5% TH        | 2 C29-30   |
| PCBA POWER SUPPLY SPIDER2   | 03-41-0224   | CAP X-CAP 0.22uF 275VAC 20%    | 0 C17  |
| PCBA POWER SUPPLY SPIDER2   | 03-75-0102   | CAP Y-CAP 1nF 250VAC 20% TH    | 2 C22-23   |
| PCBA POWER SUPPLY SPIDER2   | 06-04-4002   | DIODE SMALL-SIGNAL 100V 30A    | 4 D2-3,D6,D9   |
| PCBA POWER SUPPLY SPIDER2   | 06-08-0820   | DIODE ZENER 8.2V 5% 500mW      | 1 D4   |
| PCBA POWER SUPPLY SPIDER2   | 06-16-0008   | DIODE BRIDGE-RECT 8A 600V      | 1 D1   |
| PCBA POWER SUPPLY SPIDER2   | 09-00-5401   | TRANS PNP SMALL-SIGNAL 2N5401  | 1 Q1   |
| PCBA POWER SUPPLY SPIDER2   | 11-10-2020   | CHOKE WIDE BAND 1-5 TURNS      | 2 L1-2   |
| PCBA POWER SUPPLY SPIDER2   | 21-20-1564   | HDR PCB MT SIL 4-PIN X .156    | 1 H6   |
| PCBA POWER SUPPLY SPIDER2   | 21-20-1565   | HDR PCB MT SIL 5-PIN X .156    | 1 H4   |
| PCBA POWER SUPPLY SPIDER2   | 21-20-3122   | HDR PCB MT SIL 2-PIN x 7.92mm  | 1 H5   |
| PCBA POWER SUPPLY SPIDER2   | 21-20-3123   | HDR PCB MT SIL 3-PIN X 7.92mm  | 2 H2-3   |
| PCBA POWER SUPPLY SPIDER2   | 21-30-0012-2 | CBL SIL 12-PIN 2.54 x 76.2mm   | 1 J1A on power supply PCB to J1B on power amp break-away |
| PCBA POWER SUPPLY SPIDER2   | 21-30-0021   | CAB DIL 10 PIN .100 PITCH 3.0  | 1 H1   |
| PCBA POWER SUPPLY SPIDER2   | 35-00-0222   | PCB POWER SUPPLY REV.A         | 1  |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0223   | PCBA HEADPHONE/RJ45 SPIDER2    | 1  |
| PCBA HEADPHONE/RJ45 SPIDER2 | 01-24-1000   | RES 100R 1% 0805               | 2 R16-17   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 03-10-0331   | CAP ELEC 330uF 10V 20% RADIAL  | 2 C11,C13  |
| PCBA HEADPHONE/RJ45 SPIDER2 | 03-52-0102   | CAP X7R 1nF 50V 20% 0805       | 6 C1,C3-5,C9-10  |
| PCBA HEADPHONE/RJ45 SPIDER2 | 03-52-0104   | CAP X7R 0.1uF 50V 20% 0805     | 3 C6-8   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 06-34-0031   | DIODE GEN PUR DUAL 120V        | 2 D17-18   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 21-00-6616   | JACK 1/4" TRS 6-PIN PCB MT     | 1 J4   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 21-16-0045   | JACK RJ-45 8-PIN FEMALE        | 1 J3   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 30-18-3030   | CLIP GND PCB .30x.30x.07       | 2 GF2,GF15   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 35-00-0223   | PCB HEADPHONE/RJ45 REV.A       | 1 BREAKAWAY OF USER INTERFACE PCBA                       |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0224   | PCBA GUITAR INPUT SPIDER2      | 1  |
| PCBA GUITAR INPUT SPIDER2   | 01-24-1001   | RES 1.00K 1% 0805              | 2 R40-41   |
| PCBA GUITAR INPUT SPIDER2   | 01-24-1004   | RES 1.00M 1% 0805              | 0 R45  |
| PCBA GUITAR INPUT SPIDER2   | 01-24-1502   | RES 15.0K 1% 0805              | 1 R46  |
| PCBA GUITAR INPUT SPIDER2   | 01-24-2211   | RES 2.21K 1% 0805              | 1 R49  |
| PCBA GUITAR INPUT SPIDER2   | 01-24-3321   | RES 3.32K 1% 0805              | 1 R48  |
| PCBA GUITAR INPUT SPIDER2   | 03-24-0273   | CAP MET-POLY 27nF 50V 5% TH    | 1 C53  |
| PCBA GUITAR INPUT SPIDER2   | 03-52-0104   | CAP X7R 0.1uF 50V 20% 0805     | 1 C46  |
| PCBA GUITAR INPUT SPIDER2   | 03-52-0470   | CAP X7R 47pF 50V 20% 0805      | 1 C45  |
| PCBA GUITAR INPUT SPIDER2   | 03-52-0473   | CAP X7R 47nF 50V 20% 0805      | 2 C43,C51  |
| PCBA GUITAR INPUT SPIDER2   | 06-34-0031   | DIODE GEN PUR DUAL 120V        | 1 D5   |
| PCBA GUITAR INPUT SPIDER2   | 12-54-0072   | IC OP-AMP DUAL TL072CD SM      | 1 U14  |
| PCBA GUITAR INPUT SPIDER2   | 21-00-6616   | JACK 1/4" TRS 6-PIN PCB MT     | 1 J5   |
| PCBA GUITAR INPUT SPIDER2   | 30-18-3030   | CLIP GND PCB .30x.30x.07       | 1 GF1  |
| PCBA GUITAR INPUT SPIDER2   | 35-00-0224   | PCB GUITAR INPUT REV.D         | 1 BREAKAWAY OF MAIN PCBA                                 |

**Line 6 Bill of Materials Report****Parent Item: 99-010-1615 (SPIDER 2 212 US)**

| item_desc_1                    | comp_item_no | comp_item_desc_1               | qty_reference_1                               |
|--------------------------------|--------------|--------------------------------|---|
| SPIDER 2 212 US                | 21-37-1160   | CABLE PWR UL/CSA SJT 8.2ft Blk | 1   |
| SPIDER 2 212 US                | 40-00-0012   | GUIDE POP-TOP SPIDER2          | 1   |
| SPIDER 2 212 US                | 40-00-0018   | MANUAL USER SPIDER2 SERIES     | 1   |
| SPIDER 2 212 US                | 40-03-2000   | CARD REGISTRATION UNIVERSAL    | 1 ADDED PER ECO#0326102.                      |
| SPIDER 2 212 US                | 40-10-0006B  | FOAM CORNER PE-LAM 1.5pcf      | 4   |
| SPIDER 2 212 US                | 40-10-0006T  | FOAM CORNER PE-LAM 1.5pcf TOP  | 4   |
| SPIDER 2 212 US                | 40-10-0067   | CARTON GIFT SPIDER2-212        | 1   |
| SPIDER 2 212 US                | 40-10-0086   | CARTON SHIPPING 212-COMBO      | 1   |
| SPIDER 2 212 US                | 40-20-0010   | BAG PLASTIC 43"x38"x.004 CLEAR | 1   |
| SPIDER 2 212 US                | 40-20-0011   | BAG PLASTIC 10 x 16 2 mil      | 1   |
| SPIDER 2 212 US                | 40-25-0020   | LABEL INSPECTION QUALITY       | 1   |
| SPIDER 2 212 US                | 40-25-0100   | LABEL BAR CODE SERIAL NUMBER   | 1   |
| SPIDER 2 212 US                | 59-00-1605   | ASSY UNIT COMPLETE SPIDER2 212 | 1   |
| ASSY UNIT COMPLETE SPIDER2 212 | 11-20-1208   | SPEAKER 12" 8-OHM CELESTION    | 2 CABINET GRILL                               |
| ASSY UNIT COMPLETE SPIDER2 212 | 21-34-0020-2 | CBL SIL 4-PIN .156 x 15 IN     | 1 SPEAKER OUT PCBA (H7) to SPEAKERS.          |
| ASSY UNIT COMPLETE SPIDER2 212 | 30-00-0033   | SCREW 10-24 x7/8 TRUSS HD PHH  | 8 SPEAKERS                                    |
| ASSY UNIT COMPLETE SPIDER2 212 | 30-00-0048   | SCREW 10-32 x 1-IN OVAL CTSK   | 2 CABINET SIDES - CHASSIS                     |
| ASSY UNIT COMPLETE SPIDER2 212 | 30-00-1128   | SCREW 10-32 x 1-3/4 OVAL       | 4 CABINET TOP - CHASSIS                       |
| ASSY UNIT COMPLETE SPIDER2 212 | 30-03-0112   | WASHER FINISHING #10 FLANGED   | 6 CABINET TOP & SIDES - CHASSIS               |
| ASSY UNIT COMPLETE SPIDER2 212 | 50-03-0003   | ASSY CABINET SPIDER2           | 1 ADDED PER ECO#0326101.                      |
| ASSY CABINET SPIDER2           | 30-00-0812   | SCREW w/WAX 8 x 3/4 PTB        | 14 CABINET ASSY-CORNER SCREWS.                |
| ASSY CABINET SPIDER2           | 30-00-1024   | SCREW 10-24 x 1IN OVAL CTSK    | 2 CABINET ASSY-HANDLE SCREWS.                 |
| ASSY CABINET SPIDER2           | 30-00-8112   | SCR WOOD #8 x 1 1/2" OVAL SCTK | 3 CABINET ASSY-BAFFLE BOARD SIDES AND BOTTOM. |
| ASSY CABINET SPIDER2           | 30-03-0112   | WASHER FINISHING #10 FLANGED   | 3 CABINET ASSY-BAFFLE BOARD SIDES AND BOTTOM. |
| ASSY CABINET SPIDER2           | 30-06-1024   | NUT-T 10-24 X 5/16 STEEL       | 10 CABINET ASSY-HANDLE & BAFFLE BOARD.        |
| ASSY CABINET SPIDER2           | 30-28-0002   | CORNER LEFT HI-DENSITY         | 1 CABINET ASSY-FRONT LEFT CORNER.             |
| ASSY CABINET SPIDER2           | 30-28-0003   | CORNER RIGHT HI-DENSITY        | 1 CABINET ASSY-FRONT RIGHT CORNER.            |
| ASSY CABINET SPIDER2           | 30-28-0004   | CORNER BACK HI-DENSITY         | 6 CABINET ASSY-TOP BACK AND BOTTOM.           |
| ASSY CABINET SPIDER2           | 30-33-0030   | CABINET PARTICLE BOARD 5/8IN   | 1   |
| ASSY CABINET SPIDER2           | 30-36-0005   | COVER VINYL TEXTURED BLACK     | 0.9 CABINET ASSY.                             |
| ASSY CABINET SPIDER2           | 30-39-0006   | GRILL-CLOTH BLACK WEAVE        | 1 BAFFLE BOARD.                               |
| ASSY CABINET SPIDER2           | 30-57-0580   | HANDLE/STRAP HEAVY DUTY BLAC   | 1 CABINET ASSY-TOP.                           |
| ASSY CABINET SPIDER2           | 30-57-0581   | END CAPS, BLACK, TEXTURED FINI | 2 CABINET ASSY-TOP.                           |
| ASSY CABINET ALDERWOOD 26.19 x | 30-00-0824   | SCREW #6 PBS x 1.5" PPB        | 3   |
| ASSY CABINET ALDERWOOD 26.19 x | 30-00-0858   | SCREW #8 x 5/8IN PHIL-TRUSS    | 14  |
| ASSY CABINET ALDERWOOD 26.19 x | 30-03-0112   | WASHER FINISHING #10 FLANGED   | 3   |
| ASSY CABINET ALDERWOOD 26.19 x | 30-06-1024   | NUT-T 10-24 X 5/16 STEEL       | 10  |
| ASSY CABINET ALDERWOOD 26.19 x | 30-28-0002   | CORNER LEFT HI-DENSITY         | 1   |

|                             |                    |                                |   |
|-----------------------------|--------------------|--------------------------------|---|
| ASSY CABINET ALDERWOOD      | 26.19 x 30-28-0003 | CORNER RIGHT HI-DENSITY        | 1   |
| ASSY CABINET ALDERWOOD      | 26.19 x 30-28-0004 | CORNER BACK HI-DENSITY         | 6   |
| ASSY CABINET ALDERWOOD      | 26.19 x 30-36-0001 | VINYL, BLACK-BRONCO            | 0.93  |
| ASSY CABINET ALDERWOOD      | 26.19 x 30-39-0001 | GRILL-CLOTH BLACK #BY4584-22   | 0.28  |
| ASSY UNIT COMPLETE SPIDER2  | 212 50-04-0003-1   | ASSY E/M CHASSIS SPIDER2       | 1   |
| ASSY E/M CHASSIS SPIDER2    | 11-30-0008         | XFMR 100/120VAC 50/60Hz 86mm   | 1   |
| ASSY E/M CHASSIS SPIDER2    | 21-34-0044-2       | CBL 18AWG 3PIN SIL .256 273.0  | 1 POWER SUPPLY PCBA to POWER SWITCH to AC RECEPTACLE    |
| ASSY E/M CHASSIS SPIDER2    | 24-19-4025         | FUSE 4A/125v                   | 1 AC RECEPTACLE FUSE CLIP.                              |
| ASSY E/M CHASSIS SPIDER2    | 21-34-1015         | CBL FSTN .187-RCPT/.250-F FLAG | 1 AC SWITCH to AC RECEPTACLE                            |
| ASSY E/M CHASSIS SPIDER2    | 24-21-0002         | ACTUATOR SWITCH SINGLE ROUND   | 5 M1-5 ON USER INTERFACE PCBA                           |
| ASSY E/M CHASSIS SPIDER2    | 24-24-0606         | SWITCH POWER ROCKER 6A/250VA   | 1 CHASSIS   |
| ASSY E/M CHASSIS SPIDER2    | 30-00-0018         | SCREW SELF-TAP 6-32 x .75 PFZ  | 4 CHASSIS - HEATSINK                                    |
| ASSY E/M CHASSIS SPIDER2    | 30-00-0043         | SCREW 6-32 x 5/16 w/LK WASH    | 11 GND WIRE AND MAIN AND POWER SUPPLY PCBA'S to CHASSIS |
| ASSY E/M CHASSIS SPIDER2    | 30-00-1033         | SCREW 10-32 x 3/8IN SCH STL    | 4 F/P to CHASSIS  |
| ASSY E/M CHASSIS SPIDER2    | 30-00-6103         | NUT HEX M9-0.75 ZINC           | 10 F/P TO CHASSIS - POTS                                |
| ASSY E/M CHASSIS SPIDER2    | 30-06-0832         | NUT .335 HEX 8-32 STL ZINC W/  | 4 TRANSFORMER TO CHASSIS                                |
| ASSY E/M CHASSIS SPIDER2    | 30-24-0003         | CABLE-TIE 4" CLEAR             | 4   |
| ASSY E/M CHASSIS SPIDER2    | 30-28-0212-1       | PANEL FRONT PLASTIC GREY       | 1 CHASSIS   |
| ASSY E/M CHASSIS SPIDER2    | 30-45-0007         | KNOB SPLINE .77DIA x .76 METAL | 10 FRONT PANEL - POTS                                   |
| ASSY E/M CHASSIS SPIDER2    | 30-51-0149         | CHASSIS 626 x 129.54 x 86.61mm | 1   |
| ASSY E/M CHASSIS SPIDER2    | 30-63-0010         | FOAM w/ADHSV 26.5x 1/4x 1/16IN | 5 CHASSIS   |
| ASSY E/M CHASSIS SPIDER2    | 30-75-9600         | GROMMET RUBBER 7/16-D x        | 1 CHASSIS - SPEAKER WIRES                               |
| ASSY E/M CHASSIS SPIDER2    | 40-25-0015         | LABEL GROUND SYMBOL            | 1 CHASSIS - INSIDE BY GND WIRE                          |
| ASSY E/M CHASSIS SPIDER2    | 40-25-0018         | STICKER LINE6 LOGO OVAL        | 1 PLASTIC FRONT PANEL                                   |
| ASSY E/M CHASSIS SPIDER2    | 50-00-0001         | ASSY RECEPTACLE-A/C w/GND      | 1 CHASSIS - POWER SUPPLY PCBA                           |
| ASSY RECEPTACLE-A/C w/GND   | 21-14-0002         | JACK IEC w/FUSE MALE 3-PIN     | 1   |
| ASSY RECEPTACLE-A/C w/GND   | 21-34-1116         | Cable, Earthing                | 1 GROUND  |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0218         | PCBA SPEAKER OUT SPIDER2       | 1   |
| PCBA SPEAKER OUT SPIDER2    | 03-00-0104         | CAP CER DISC 100nF 50V 20% TH  | 2 C20,C25   |
| PCBA SPEAKER OUT SPIDER2    | 03-36-0102         | CAP ESTR 1nF 100V 5% TH        | 2 C24,C26   |
| PCBA SPEAKER OUT SPIDER2    | 21-00-6616         | JACK 1/4" TRS 6-PIN PCB MT     | 2 J5-6  |
| PCBA SPEAKER OUT SPIDER2    | 21-20-1564         | HDR PCB MT SIL 4-PIN X .156    | 1 H7  |
| PCBA SPEAKER OUT SPIDER2    | 30-18-3030         | CLIP GND PCB .30x.30x.07       | 2 GF1-2   |
| PCBA SPEAKER OUT SPIDER2    | 35-00-0218         | PCB SPEAKER OUT REV.A SPIDER2  | 1   |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0219         | PCBA USER INTERFACE SPIDER2    | 1   |
| PCBA USER INTERFACE SPIDER2 | 01-12-0101         | RES CARBON FILM 100R 1/4W 5%   | 1 R15   |
| PCBA USER INTERFACE SPIDER2 | 01-12-0102         | RES CARBON FILM 1K 1/4W 5% TH  | 2 R12,R19   |
| PCBA USER INTERFACE SPIDER2 | 01-12-0201         | RES CARBON FILM 200R 1/4W 5%   | 1 R14   |
| PCBA USER INTERFACE SPIDER2 | 01-12-0202         | RES CARBON FILM 2.0K 1/4W 5%   | 1 R11   |
| PCBA USER INTERFACE SPIDER2 | 01-12-0511         | RES CARBON FILM 510R 1/4W 5%   | 1 R13   |
| PCBA USER INTERFACE SPIDER2 | 01-48-6103         | POT MONO 10KB LINEAR TAPER     | 10 R1-10  |
| PCBA USER INTERFACE SPIDER2 | 03-00-0104         | CAP CER DISC 100nF 50V 20% TH  | 1 C12   |
| PCBA USER INTERFACE SPIDER2 | 18-06-0002         | LED RED/GRN 3-P COM CATH       | 16 D1-16  |

|                             |              |                               |  |
|-----------------------------|--------------|-------------------------------|--|
| PCBA USER INTERFACE SPIDER2 | 21-30-0012-1 | CBL SIL 10-PIN 2.54 x 76.2mm  | 1 H2 on user interface PCB to H3 on break-away PCB                       |
| PCBA USER INTERFACE SPIDER2 | 21-30-0022   | CAB DIL 40 PIN .100 PITCH 3.0 | 1 H1   |
| PCBA USER INTERFACE SPIDER2 | 24-31-1105   | SWITCH TACT 6mm SQ 4-PIN TH   | 5 SW1-5  |
| PCBA USER INTERFACE SPIDER2 | 30-15-0018   | SPACER LED .560 LG            | 16 D1-16   |
| PCBA USER INTERFACE SPIDER2 | 35-00-0219   | PCB USER INTERFACE REV.A      | 1  |
| PCBA MAIN SPIDER2-HD        | 45-02-0012   | IC PROGRAMMED FLASH           | 1  |
| PCBA MAIN SPIDER2-HD        | 50-02-0220   | PCBA MAIN (non-programmed)    | 1  |
| PCBA MAIN (non-programmed)  | 01-24-1000   | RES 100R 1% 0805              | 4 R12-13,R59,R71 R56 removed per ECO#321204                              |
| PCBA MAIN (non-programmed)  | 01-24-1001   | RES 1.00K 1% 0805             | 1 R1 added per ECO 0321204   |
| PCBA MAIN (non-programmed)  | 01-24-1002   | RES 10.0K 1% 0805             | 14 R2-3,R14-15,R21-23,R28-29,R32-34,R68-69                               |
| PCBA MAIN (non-programmed)  | 01-24-1003   | RES 100K 1% 0805              | 5 R36-37,R50-51,R66  |
| PCBA MAIN (non-programmed)  | 01-24-10R0   | RES 10.0R 1% 0805             | 1 R70  |
| PCBA MAIN (non-programmed)  | 01-24-1300   | RES 130R 1% 0805              | 4 R5,R7,R9,R11   |
| PCBA MAIN (non-programmed)  | 01-24-1501   | RES 1.50K 1% 0805             | 1 R38  |
| PCBA MAIN (non-programmed)  | 01-24-1620   | RES 162R 1% 0805              | 2 R56,R72 r56 added per ECO 321204                                       |
| PCBA MAIN (non-programmed)  | 01-24-2001   | RES 2.00K 1% 0805             | 1 R39  |
| PCBA MAIN (non-programmed)  | 01-24-22R1   | RES 22.1R 1% 0805             | 1 R55  |
| PCBA MAIN (non-programmed)  | 01-24-4750   | RES 475R 1% 0805              | 1 R64  |
| PCBA MAIN (non-programmed)  | 01-24-4751   | RES 4.75K 1% 0805             | 10 R16-17,R47,R57-58,R60-63,R65  |
| PCBA MAIN (non-programmed)  | 01-24-4752   | RES 47.5K 1% 0805             | 2 R18,R24  |
| PCBA MAIN (non-programmed)  | 01-24-5110   | RES 511R 1% 0805              | 1 R35  |
| PCBA MAIN (non-programmed)  | 01-24-5R11   | RES 5.11R 1% 0805             | 4 R19,R53-54,R67   |
| PCBA MAIN (non-programmed)  | 01-24-6041   | RES 6.04K 1% 0805             | 4 R25,R27,R30-31   |
| PCBA MAIN (non-programmed)  | 01-24-75R0   | RES 75R 1% 0805               | 4 R4,R6,R8,R10   |
| PCBA MAIN (non-programmed)  | 01-24-9091   | RES 9.09K 1% 0805             | 2 R20,R26  |
| PCBA MAIN (non-programmed)  | 03-10-0107   | CAP ELEC 100uF 10V 20% RADIAL | 1 C41  |
| PCBA MAIN (non-programmed)  | 03-10-6108   | CAP ELEC 1000uF 6.3V 20%      | 1 C20  |
| PCBA MAIN (non-programmed)  | 03-12-0476   | CAP ELEC 47uF 16V 20% RADIAL  | 1 C12  |
| PCBA MAIN (non-programmed)  | 03-12-1477   | CAP ELEC 470uF 16V 20% RADIAL | 1 C31  |
| PCBA MAIN (non-programmed)  | 03-18-0105   | CAP ELEC 1uF 50V 20% RADIAL   | 4 C8,C15,C42,C44   |
| PCBA MAIN (non-programmed)  | 03-18-0106   | CAP ELEC 10uF 50V 20% RADIAL  | 11 C3,C5,C7,C14,C21-22,C38-40,C47,C77                                    |
| PCBA MAIN (non-programmed)  | 03-46-0332   | CAP X7R 3.3nF 50V 20% 1206    | 1 C58  |
| PCBA MAIN (non-programmed)  | 03-50-0220   | CAP NPO 22pF 50V 20% 0805     | 1 C63  |
| PCBA MAIN (non-programmed)  | 03-50-0470   | CAP NPO 47pF 50V 10% 0805     | 1 C64  |
| PCBA MAIN (non-programmed)  | 03-52-0102   | CAP X7R 1nF 50V 20% 0805      | 2 C32,C34  |
| PCBA MAIN (non-programmed)  | 03-52-0221   | CAP X7R 220pF 50V 20% 0805    | 4 C25,C28,C48-49   |
| PCBA MAIN (non-programmed)  | 03-52-0391   | CAP X7R 390pF 50V 20% 0805    | 4 C26,C29-30,C36   |
| PCBA MAIN (non-programmed)  | 03-52-0473   | CAP X7R 47nF 50V 20% 0805     | 33 C1-2,C4,C9,C16-19,C23-24,C27,C33,C35,C37,C50,C54-57,C60-62,C65,C67-76 |
| PCBA MAIN (non-programmed)  | 06-23-0054   | DIODE SCHOTTKY DUAL 30V 200mA | 1 D4   |
| PCBA MAIN (non-programmed)  | 06-28-8468   | DIODE ZENER 6.8V 5% 350mW     | 1 D7   |
| PCBA MAIN (non-programmed)  | 06-34-0031   | DIODE GEN PUR DUAL 120V       | 11 D1-3,D6,D8-14   |
| PCBA MAIN (non-programmed)  | 09-06-7002   | TRANS MOSFET N-CHAN 60V 7R5   | 5 Q1-5   |
| PCBA MAIN (non-programmed)  | 11-00-2000   | CRYSTAL 2.000MHz HC49 TH      | 1 X1   |

|                                |              |                                |   |
|--------------------------------|--------------|--------------------------------|---|
| PCBA MAIN (non-programmed)     | 12-00-0317   | IC VREG ADJ 1.2-25V 1.5 AMP    | 1 U6                                      |
| PCBA MAIN (non-programmed)     | 12-02-1088   | IC REG ADJ TO-220 TH LM1086    | 1 U1                                      |
| PCBA MAIN (non-programmed)     | 12-02-7805   | IC REG +5v 1.5 Amp TH          | 1 U8                                      |
| PCBA MAIN (non-programmed)     | 12-30-4880   | IC POWER-AMP 250mW TI          | 2 U10-11                                  |
| PCBA MAIN (non-programmed)     | 12-54-0084   | IC OP AMP QUAD TL084CD SM      | 1 U12                                     |
| PCBA MAIN (non-programmed)     | 12-64-0542   | IC CONVERTER A/D 8-BIT TLC542  | 1 U16                                     |
| PCBA MAIN (non-programmed)     | 12-64-4528   | IC CONVERTER 24B 48/96KHz      | 1 U13                                     |
| PCBA MAIN (non-programmed)     | 15-62-1004   | IC 74HCU04 UNBUFFERED HEX      | 1 U9                                      |
| PCBA MAIN (non-programmed)     | 15-64-0541   | IC 74HCT 541 OCTAL BUF/DRIVER  | 1 U4                                      |
| PCBA MAIN (non-programmed)     | 15-72-0001   | IC SRAM-256K x 8 TSOP32 SM     | 1 U5                                      |
| PCBA MAIN (non-programmed)     | 15-78-0003   | IC FLASH 512K Bit (64Kx8) 70ns | 1 U3                                      |
| PCBA MAIN (non-programmed)     | 15-86-6362   | IC DSP 24-BIT TQFP144 SM       | 1 U7                                      |
| PCBA MAIN (non-programmed)     | 15-92-5809   | IC RESET 3.3V 5% ACTIVE-LOW    | 1 U2                                      |
| PCBA MAIN (non-programmed)     | 21-20-1008   | HDR PCB MT SIL 8-PIN 1x8x .100 | 1 H4                                      |
| PCBA MAIN (non-programmed)     | 21-20-2010   | HDR PCB MT DIL 10-PIN 2x5x100  | 1 H1                                      |
| PCBA MAIN (non-programmed)     | 21-21-0040   | HDR PCB MT DIL 40-PIN 2x20x2mm | 1 H5                                      |
| PCBA MAIN (non-programmed)     | 21-30-0011-1 | CAB RIBBON SIL 6-PIN           | 1 H3 on main to H2 on guitar in breakaway |
| PCBA MAIN (non-programmed)     | 30-00-0607   | SCREW 6-32 x 7/16IN w/LK WASH  | 2 U1, U6                                  |
| PCBA MAIN (non-programmed)     | 30-12-0632   | STANDOFF HEX .250 6-32 F-F 1IN | 2 U1,U6                                   |
| PCBA MAIN (non-programmed)     | 30-15-0007   | INSULATOR XTAL 4.9mm C-C       | 1 INSTALL UNDER X1                        |
| PCBA MAIN (non-programmed)     | 35-00-0220   | PCB MAIN REV.D SPIDER2 SERIES  | 1   |
| ASSY E/M CHASSIS SPIDER2       | 50-02-0220-1 | PCBA MAIN SPIDER2-COMBO SERIE  | 1 ADDED PER ECO#0325801.                  |
| PCBA MAIN SPIDER2-COMBO SERIES | 45-02-0011   | IC PROGRAMMED FLASH v1.00      | 1   |
| PCBA MAIN SPIDER2-COMBO SERIES | 50-02-0220   | PCBA MAIN (non-programmed)     | 1   |
| ASSY E/M CHASSIS SPIDER2       | 50-02-0221-1 | PCBA POWER AMP w/HEATSINK      | 1   |
| PCBA POWER AMP w/HEATSINK      | 30-00-0010   | SCREW 8-32 x 9/16 SKT-CAP      | 2 HEATSINK CLAMPS                         |
| PCBA POWER AMP w/HEATSINK      | 30-00-0028   | SCREW 8-32 x 5/16" SHCS        | 1 SUPPORT BRACKET BR1                     |
| PCBA POWER AMP w/HEATSINK      | 30-03-0002   | WASHER #8 .293 x.174x .040     | 3 (2) CLAMPS (1) SUPPORT BRKT             |
| PCBA POWER AMP w/HEATSINK      | 30-06-0007   | NUT .344 HEX 8-32 STEEL ZINC   | 3 (2) CLAMPS (1) SUPPORT BRKT             |
| PCBA POWER AMP w/HEATSINK      | 30-51-0059-3 | HEATSINK 4.0 IN LG AL ALY BLK  | 1 POWER AMP PCBA                          |
| PCBA POWER AMP w/HEATSINK      | 30-51-0073   | CLAMP HEATSINK TO-220          | 2 HEATSINK - POWER AMPS                   |
| PCBA POWER AMP w/HEATSINK      | 30-51-0105   | BRKT SUPPORT .565 x .530 x     | 1 BR1                                     |
| PCBA POWER AMP w/HEATSINK      | 30-63-0006   | PAD THERMAL 6mil 25mm x 30mm   | 2 HEATSINK - POWER AMP                    |
| PCBA POWER AMP w/HEATSINK      | 50-02-0221   | PCBA POWER AMP SPIDER2         | 1   |
| PCBA POWER AMP SPIDER2         | 01-12-0000   | RES CARBON FILM 0R 1/4W 5% TH  | 1 JP1.                                    |
| PCBA POWER AMP SPIDER2         | 01-00-0103   | RES 10K 5% 0805                | 1 R14                                     |
| PCBA POWER AMP SPIDER2         | 01-23-02R2   | RES METAL OXIDE 2.2R 3W 5% TH  | 2 R5,R6.      Added per ECO#0336302.      |
| PCBA POWER AMP SPIDER2         | 01-22-0R47   | RES METAL OXIDE 0.47R 2W 5% TH | 4 R3-4,R7-8                               |
| PCBA POWER AMP SPIDER2         | 01-24-1693   | RES 169K 1% 0805               | 2 R1,R9                                   |
| PCBA POWER AMP SPIDER2         | 01-60-0203   | RES NETWORK ISOLATED 20K       | 2 R2,R10                                  |
| PCBA POWER AMP SPIDER2         | 03-18-0336   | CAP ELEC 33uF 50V 20% RADIAL   | 2 C6,C16                                  |
| PCBA POWER AMP SPIDER2         | 03-18-1106   | CAP ELEC 10uF 50V 20% BI-POLAR | 2 C2,C12                                  |
| PCBA POWER AMP SPIDER2         | 03-22-0476   | CAP ELEC 47uF 100V 20% RADIAL  | 2 C8,C10                                  |

|                             |              |                                |  |                        |
|-----------------------------|--------------|--------------------------------|--|------------------------|
| PCBA POWER AMP SPIDER2      | 03-24-0564   | CAP MET-POLY 0.56uF 100VDC 5%  | 2 C7,C9.   | Added per ECO#0336302. |
| PCBA POWER AMP SPIDER2      | 03-52-0470   | CAP X7R 47pF 50V 20% 0805      | 2 C3,C13   |                        |
| PCBA POWER AMP SPIDER2      | 03-52-0680   | CAP X7R 68pF 50V 20% 0805      | 2 C1,C11   |                        |
| PCBA POWER AMP SPIDER2      | 03-52-1103   | CAP X7R 10nF 100V 10% 0805     | 4 C4-5,C14-15  |                        |
| PCBA POWER AMP SPIDER2      | 12-30-7293   | IC POWER-AMP 100W TDA7293      | 2 U1-2   |                        |
| PCBA POWER AMP SPIDER2      | 21-30-0011-2 | CAB RIBBON SIL 6-PIN           | 1 J2A on power amp to J2B on speaker out                 |                        |
| PCBA POWER AMP SPIDER2      | 35-00-0221   | PCB POWER AMP REV.A SPIDER2    | 1 BREAKAWAY OF PWR SUPPLY                                |                        |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0222   | PCBA POWER SUPPLY SPIDER2      | 1  |                        |
| PCBA POWER SUPPLY SPIDER2   | 01-12-0103   | RES CARBON FILM 10K 1/4W 5% TH | 1 R11  |                        |
| PCBA POWER SUPPLY SPIDER2   | 01-12-0473   | RES CARBON FILM 47K 1/4W 5% TH | 1 R12  |                        |
| PCBA POWER SUPPLY SPIDER2   | 01-20-0132   | RES METAL OXIDE 1.3K 1W 5% TH  | 1 R13  |                        |
| PCBA POWER SUPPLY SPIDER2   | 03-00-0104   | CAP CER DISC 100nF 50V 20% TH  | 2 C27-28   |                        |
| PCBA POWER SUPPLY SPIDER2   | 03-12-0688   | CAP ELEC 6800uF 16V 20% RADIAL | 1 C21  |                        |
| PCBA POWER SUPPLY SPIDER2   | 03-18-0478   | CAP ELEC 4700uF 50V 20% SNAPIN | 2 C18-19   |                        |
| PCBA POWER SUPPLY SPIDER2   | 03-36-0102   | CAP ESTR 1nF 100V 5% TH        | 2 C29-30   |                        |
| PCBA POWER SUPPLY SPIDER2   | 03-41-0224   | CAP X-CAP 0.22uF 275VAC 20%    | 0 C17  |                        |
| PCBA POWER SUPPLY SPIDER2   | 03-75-0102   | CAP Y-CAP 1nF 250VAC 20% TH    | 2 C22-23   |                        |
| PCBA POWER SUPPLY SPIDER2   | 06-04-4002   | DIODE SMALL-SIGNAL 100V 30A    | 4 D2-3,D6,D9   |                        |
| PCBA POWER SUPPLY SPIDER2   | 06-08-0820   | DIODE ZENER 8.2V 5% 500mW      | 1 D4   |                        |
| PCBA POWER SUPPLY SPIDER2   | 06-16-0008   | DIODE BRIDGE-RECT 8A 600V      | 1 D1   |                        |
| PCBA POWER SUPPLY SPIDER2   | 09-00-5401   | TRANS PNP SMALL-SIGNAL 2N5401  | 1 Q1   |                        |
| PCBA POWER SUPPLY SPIDER2   | 11-10-2020   | CHOKE WIDE BAND 1-5 TURNS      | 2 L1-2   |                        |
| PCBA POWER SUPPLY SPIDER2   | 21-20-1564   | HDR PCB MT SIL 4-PIN X .156    | 1 H6   |                        |
| PCBA POWER SUPPLY SPIDER2   | 21-20-1565   | HDR PCB MT SIL 5-PIN X .156    | 1 H4   |                        |
| PCBA POWER SUPPLY SPIDER2   | 21-20-3122   | HDR PCB MT SIL 2-PIN x 7.92mm  | 1 H5   |                        |
| PCBA POWER SUPPLY SPIDER2   | 21-20-3123   | HDR PCB MT SIL 3-PIN X 7.92mm  | 2 H2-3   |                        |
| PCBA POWER SUPPLY SPIDER2   | 21-30-0012-2 | CBL SIL 12-PIN 2.54 x 76.2mm   | 1 J1A on power supply PCB to J1B on power amp break-away |                        |
| PCBA POWER SUPPLY SPIDER2   | 21-30-0021   | CAB DIL 10 PIN .100 PITCH 3.0  | 1 H1   |                        |
| PCBA POWER SUPPLY SPIDER2   | 35-00-0222   | PCB POWER SUPPLY REV.A         | 1  |                        |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0223   | PCBA HEADPHONE/RJ45 SPIDER2    | 1  |                        |
| PCBA HEADPHONE/RJ45 SPIDER2 | 01-24-1000   | RES 100R 1% 0805               | 2 R16-17   |                        |
| PCBA HEADPHONE/RJ45 SPIDER2 | 03-10-0331   | CAP ELEC 330uF 10V 20% RADIAL  | 2 C11,C13  |                        |
| PCBA HEADPHONE/RJ45 SPIDER2 | 03-52-0102   | CAP X7R 1nF 50V 20% 0805       | 6 C1,C3-5,C9-10  |                        |
| PCBA HEADPHONE/RJ45 SPIDER2 | 03-52-0104   | CAP X7R 0.1uF 50V 20% 0805     | 3 C6-8   |                        |
| PCBA HEADPHONE/RJ45 SPIDER2 | 06-34-0031   | DIODE GEN PUR DUAL 120V        | 2 D17-18   |                        |
| PCBA HEADPHONE/RJ45 SPIDER2 | 21-00-6616   | JACK 1/4" TRS 6-PIN PCB MT     | 1 J4   |                        |
| PCBA HEADPHONE/RJ45 SPIDER2 | 21-16-0045   | JACK RJ-45 8-PIN FEMALE        | 1 J3   |                        |
| PCBA HEADPHONE/RJ45 SPIDER2 | 30-18-3030   | CLIP GND PCB .30x.30x.07       | 2 GF2,GF15   |                        |
| PCBA HEADPHONE/RJ45 SPIDER2 | 35-00-0223   | PCB HEADPHONE/RJ45 REV.A       | 1 BREAKAWAY OF USER INTERFACE PCBA                       |                        |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0224   | PCBA GUITAR INPUT SPIDER2      | 1  |                        |
| PCBA GUITAR INPUT SPIDER2   | 01-24-1001   | RES 1.00K 1% 0805              | 2 R40-41   |                        |
| PCBA GUITAR INPUT SPIDER2   | 01-24-1004   | RES 1.00M 1% 0805              | 0 R45  |                        |
| PCBA GUITAR INPUT SPIDER2   | 01-24-1502   | RES 15.0K 1% 0805              | 1 R46  |                        |

|                           |            |                             |                          |
|---------------------------|------------|-----------------------------|--------------------------|
| PCBA GUITAR INPUT SPIDER2 | 01-24-2211 | RES 2.21K 1% 0805           | 1 R49                    |
| PCBA GUITAR INPUT SPIDER2 | 01-24-3321 | RES 3.32K 1% 0805           | 1 R48                    |
| PCBA GUITAR INPUT SPIDER2 | 03-24-0273 | CAP MET-POLY 27nF 50V 5% TH | 1 C53                    |
| PCBA GUITAR INPUT SPIDER2 | 03-52-0104 | CAP X7R 0.1uF 50V 20% 0805  | 1 C46                    |
| PCBA GUITAR INPUT SPIDER2 | 03-52-0470 | CAP X7R 47pF 50V 20% 0805   | 1 C45                    |
| PCBA GUITAR INPUT SPIDER2 | 03-52-0473 | CAP X7R 47nF 50V 20% 0805   | 2 C43,C51                |
| PCBA GUITAR INPUT SPIDER2 | 06-34-0031 | DIODE GEN PUR DUAL 120V     | 1 D5                     |
| PCBA GUITAR INPUT SPIDER2 | 12-54-0072 | IC OP-AMP DUAL TL072CD SM   | 1 U14                    |
| PCBA GUITAR INPUT SPIDER2 | 21-00-6616 | JACK 1/4" TRS 6-PIN PCB MT  | 1 J5                     |
| PCBA GUITAR INPUT SPIDER2 | 30-18-3030 | CLIP GND PCB .30x.30x.07    | 1 GF1                    |
| PCBA GUITAR INPUT SPIDER2 | 35-00-0224 | PCB GUITAR INPUT REV.D      | 1 BREAKAWAY OF MAIN PCBA |

**Line 6 Bill of Materials Report**

**Parent Item: 99-010-1515 (SPIDER 2 210 US)**

| item_desc_1                    | comp_item_n  | comp_item_desc_1               | qty.reference_1                                 |
|--------------------------------|--------------|--------------------------------|---|
| SPIDER 2 210 US                | 21-37-1160   | CABLE PWR UL/CSA SJT 8.2ft Blk | 1   |
| SPIDER 2 210 US                | 40-00-0012   | GUIDE POP-TOP SPIDER2          | 1   |
| SPIDER 2 210 US                | 40-00-0018   | MANUAL USER SPIDER2 SERIES     | 1   |
| SPIDER 2 210 US                | 40-03-2000   | CARD REGISTRATION UNIVERSAL    | 1 ADDED PER ECO#0326102.                        |
| SPIDER 2 210 US                | 40-10-0005   | FOAM CORNER PE-LAM 1.5pcf      | 4   |
| SPIDER 2 210 US                | 40-10-0066   | CARTON GIFT SPIDER2-210        | 1   |
| SPIDER 2 210 US                | 40-20-0010   | BAG PLASTIC 43"x38"x.004 CLEAR | 1   |
| SPIDER 2 210 US                | 40-20-0011   | BAG PLASTIC 10 x 16 2 mil      | 1   |
| SPIDER 2 210 US                | 40-25-0020   | LABEL INSPECTION QUALITY       | 1   |
| SPIDER 2 210 US                | 59-00-1505   | ASSY UNIT COMPLETE SPIDER2 210 | 1   |
| ASSY UNIT COMPLETE SPIDER2 210 | 11-20-0000   | SPEAKER 10" 8-OHM CELESTION    | 2 CABINET GRILL                                 |
| ASSY UNIT COMPLETE SPIDER2 210 | 30-00-0033   | SCREW 10-24 x7/8 TRUSS HD PHH  | 8 SPEAKERS                                      |
| ASSY UNIT COMPLETE SPIDER2 210 | 30-00-0048   | SCREW 10-32 x 1-IN OVAL CTSK   | 2 CABINET SIDES - CHASSIS                       |
| ASSY UNIT COMPLETE SPIDER2 210 | 30-00-1128   | SCREW 10-32 x 1-3/4 OVAL       | 4 CABINET TOP - CHASSIS                         |
| ASSY UNIT COMPLETE SPIDER2 210 | 30-03-0112   | WASHER FINISHING #10 FLANGED   | 6 CABINET TOP & SIDES - CHASSIS                 |
| ASSY UNIT COMPLETE SPIDER2 210 | 40-25-0100   | LABEL BAR CODE SERIAL NUMBER   | 1   |
| ASSY UNIT COMPLETE SPIDER2 210 | 50-03-0002   | ASSY CABINET SPIDER2           | 1   |
| ASSY CABINET SPIDER2           | 30-00-0812   | SCREW w/WAX 8 x 3/4 PTB        | 14 CABINET ASSEMBLY - CORNER SCREWS             |
| ASSY CABINET SPIDER2           | 30-00-1024   | SCREW 10-24 x 1IN OVAL CTSK    | 2 CABINET ASSY - HANDLE SCREWS                  |
| ASSY CABINET SPIDER2           | 30-00-8112   | SCR WOOD #8 x 1 1/2" OVAL SCTK | 3 CABINET ASSY - BAFFLE BOARD AND BOTTOM        |
| ASSY CABINET SPIDER2           | 30-03-0112   | WASHER FINISHING #10 FLANGED   | 3 CABINET ASSY - BAFFLE BOARD SIDES AND BOTTOM  |
| ASSY CABINET SPIDER2           | 30-06-1024   | NUT-T 10-24 X 5/16 STEEL       | 10 CABINET ASSY - HANDLE & BAFFLE BOARD         |
| ASSY CABINET SPIDER2           | 30-28-0002   | CORNER LEFT HI-DENSITY         | 1 CABINET ASSY - FRONT LEFT CORNER              |
| ASSY CABINET SPIDER2           | 30-28-0003   | CORNER RIGHT HI-DENSITY        | 1 CABINET ASSY - FRONT RIGHT CORNER             |
| ASSY CABINET SPIDER2           | 30-28-0004   | CORNER BACK HI-DENSITY         | 6 CABINET ASSY - TOP BACK AND BOTTOM            |
| ASSY CABINET SPIDER2           | 30-33-0031   | CABINET PARTICLE BOARD 5/8IN   | 1   |
| ASSY CABINET SPIDER2           | 30-36-0005   | COVER VINYL TEXTURED BLACK     | 1 CABINET ASSY                                  |
| ASSY CABINET SPIDER2           | 30-39-0006   | GRILL-CLOTH BLACK WEAVE        | 0 BAFFLE BOARD.                                 |
| ASSY CABINET SPIDER2           | 30-57-0580   | HANDLE/STRAP HEAVY DUTY BLACK  | 1 CABINET ASSY - TOP                            |
| ASSY CABINET SPIDER2           | 30-57-0581   | END CAPS, BLACK, TEXTURED FINI | 2 CABINET ASSY - TOP                            |
| ASSY UNIT COMPLETE SPIDER2 210 | 50-04-0002-1 | ASSY E/M CHASSIS SPIDER2       | 1   |
| ASSY E/M CHASSIS SPIDER2       | 11-30-0008   | XFMR 100/120VAC 50/60Hz 86mm   | 1 CHASSIS                                       |
| ASSY E/M CHASSIS SPIDER2       | 21-34-0020-2 | CBL SIL 4-PIN .156 x 15 IN     | 1 POWER AMP PCBA to SPEAKERS                    |
| ASSY E/M CHASSIS SPIDER2       | 21-34-0044-2 | CBL 18AWG 3PIN SIL .256 273.0  | 1 POWER SUPPLY to POWER SWITCH to AC RECEPTACLE |
| ASSY E/M CHASSIS SPIDER2       | 21-34-1015   | CBL FSTN .187-RCPT/.250-F FLAG | 1 AC SWITCH Tto AC RECEPTACLE                   |
| ASSY E/M CHASSIS SPIDER2       | 24-19-4025   | FUSE 4A/125v                   | 1   |
| ASSY E/M CHASSIS SPIDER2       | 24-21-0002   | ACTUATOR SWITCH SINGLE ROUND   | 5 M1-5 ON USER INTERFACE PCB                    |
| ASSY E/M CHASSIS SPIDER2       | 24-24-0606   | SWITCH POWER ROCKER 6A/250VAC  | 1 CHASSIS                                       |
| ASSY E/M CHASSIS SPIDER2       | 30-00-0018   | SCREW SELF-TAP 6-32 x .75 PFZ  | 4 CHASSIS - HEATSINK                            |

|                                |              |                                |   |
|--------------------------------|--------------|--------------------------------|---|
| ASSY E/M CHASSIS SPIDER2       | 30-00-0043   | SCREW 6-32 x 5/16 w/LK WASH    | 11 GND WIRE AND MAIN AND POWER SUPPLY PCBA'S to CHASSIS |
| ASSY E/M CHASSIS SPIDER2       | 30-00-1033   | SCREW 10-32 x 3/8IN SCH STL    | 4 F/P to CHASSIS  |
| ASSY E/M CHASSIS SPIDER2       | 30-00-6103   | NUT HEX M9-0.75 ZINC           | 10 F/P to CHASSIS - POTS                                |
| ASSY E/M CHASSIS SPIDER2       | 30-06-0832   | NUT .335 HEX 8-32 STL ZINC W/  | 4 TRANSFORMER - CHASSIS                                 |
| ASSY E/M CHASSIS SPIDER2       | 30-24-0003   | CABLE-TIE 4" CLEAR             | 4   |
| ASSY E/M CHASSIS SPIDER2       | 30-28-0210-1 | PANEL FRONT PLASTIC GREY       | 1 CHASSIS   |
| ASSY E/M CHASSIS SPIDER2       | 30-45-0007   | KNOB SPLINE .77DIA x .76 METAL | 10 FRONT PANEL - POTS                                   |
| ASSY E/M CHASSIS SPIDER2       | 30-51-0148   | CHASSIS 550 x 129.54 x 86.61mm | 1   |
| ASSY E/M CHASSIS SPIDER2       | 30-63-0010   | FOAM w/ADHSV 26.5x 1/4x 1/16IN | 5 CHASSIS   |
| ASSY E/M CHASSIS SPIDER2       | 30-75-9600   | GROMMET RUBBER 7/16-D x        | 1 CHASSIS - SPEAKER WIRES                               |
| ASSY E/M CHASSIS SPIDER2       | 40-25-0015   | LABEL GROUND SYMBOL            | 1 CHASSIS - INSIDE BY GND WIRE                          |
| ASSY E/M CHASSIS SPIDER2       | 40-25-0018   | STICKER LINE6 LOGO OVAL        | 1 PLASTIC FRONT PANEL                                   |
| ASSY E/M CHASSIS SPIDER2       | 50-00-0001   | ASSY RECEPTACLE-A/C w/GND      | 1 CHASSIS - POWER SUPPLY PCBA                           |
| ASSY RECEPTACLE-A/C w/GND      | 21-14-0002   | JACK IEC w/FUSE MALE 3-PIN     | 1   |
| ASSY RECEPTACLE-A/C w/GND      | 21-34-1116   | Cable, Earthing                | 1 GROUND  |
| ASSY E/M CHASSIS SPIDER2       | 50-02-0219   | PCBA USER INTERFACE SPIDER2    | 1   |
| PCBA USER INTERFACE SPIDER2    | 01-12-0101   | RES CARBON FILM 100R 1/4W 5%   | 1 R15   |
| PCBA USER INTERFACE SPIDER2    | 01-12-0102   | RES CARBON FILM 1K 1/4W 5% TH  | 2 R12,R19   |
| PCBA USER INTERFACE SPIDER2    | 01-12-0201   | RES CARBON FILM 200R 1/4W 5%   | 1 R14   |
| PCBA USER INTERFACE SPIDER2    | 01-12-0202   | RES CARBON FILM 2.0K 1/4W 5%   | 1 R11   |
| PCBA USER INTERFACE SPIDER2    | 01-12-0511   | RES CARBON FILM 510R 1/4W 5%   | 1 R13   |
| PCBA USER INTERFACE SPIDER2    | 01-48-6103   | POT MONO 10KB LINEAR TAPER     | 10 R1-10  |
| PCBA USER INTERFACE SPIDER2    | 03-00-0104   | CAP CER DISC 100nF 50V 20% TH  | 1 C12   |
| PCBA USER INTERFACE SPIDER2    | 18-06-0002   | LED RED/GRN 3-P COM CATH       | 16 D1-16  |
| PCBA USER INTERFACE SPIDER2    | 21-30-0012-1 | CBL SIL 10-PIN 2.54 x 76.2mm   | 1 H2 on user interface PCB to H3 on break-away PCB      |
| PCBA USER INTERFACE SPIDER2    | 21-30-0022   | CAB DIL 40 PIN .100 PITCH 3.0  | 1 H1  |
| PCBA USER INTERFACE SPIDER2    | 24-31-1105   | SWITCH TACT 6mm SQ 4-PIN TH    | 5 SW1-5   |
| PCBA USER INTERFACE SPIDER2    | 30-15-0018   | SPACER LED .560 LG             | 16 D1-16  |
| PCBA USER INTERFACE SPIDER2    | 35-00-0219   | PCB USER INTERFACE REV.A       | 1   |
| ASSY E/M CHASSIS SPIDER2       | 50-02-0220-1 | PCBA MAIN SPIDER2-COMBO SERIES | 1   |
| PCBA MAIN SPIDER2-COMBO SERIES | 45-02-0011   | IC PROGRAMMED FLASH v1.00      | 1   |
| PCBA MAIN SPIDER2-COMBO SERIES | 50-02-0220   | PCBA MAIN (non-programmed)     | 1   |
| PCBA MAIN (non-programmed)     | 01-24-1000   | RES 100R 1% 0805               | 4 R12-13,R59,R71      R56 removed per ECO#321204        |
| PCBA MAIN (non-programmed)     | 01-24-1001   | RES 1.00K 1% 0805              | 1 R1 added per ECO 0321204                              |
| PCBA MAIN (non-programmed)     | 01-24-1002   | RES 10.0K 1% 0805              | 14 R2-3,R14-15,R21-23,R28-29,R32-34,R68-69              |
| PCBA MAIN (non-programmed)     | 01-24-1003   | RES 100K 1% 0805               | 5 R36-37,R50-51,R66                                     |
| PCBA MAIN (non-programmed)     | 01-24-10R0   | RES 10.0R 1% 0805              | 1 R70   |
| PCBA MAIN (non-programmed)     | 01-24-1300   | RES 130R 1% 0805               | 4 R5,R7,R9,R11  |
| PCBA MAIN (non-programmed)     | 01-24-1501   | RES 1.50K 1% 0805              | 1 R38   |
| PCBA MAIN (non-programmed)     | 01-24-1620   | RES 162R 1% 0805               | 2 R56,R72 r56 added per ECO 321204                      |
| PCBA MAIN (non-programmed)     | 01-24-2001   | RES 2.00K 1% 0805              | 1 R39   |
| PCBA MAIN (non-programmed)     | 01-24-22R1   | RES 22.1R 1% 0805              | 1 R55   |
| PCBA MAIN (non-programmed)     | 01-24-4750   | RES 475R 1% 0805               | 1 R64   |
| PCBA MAIN (non-programmed)     | 01-24-4751   | RES 4.75K 1% 0805              | 10 R16-17,R47,R57-58,R60-63,R65                         |

|                            |              |                                |  |
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| PCBA MAIN (non-programmed) | 01-24-4752   | RES 47.5K 1% 0805              | 2 R18,R24  |
| PCBA MAIN (non-programmed) | 01-24-5110   | RES 511R 1% 0805               | 1 R35  |
| PCBA MAIN (non-programmed) | 01-24-5R11   | RES 5.11R 1% 0805              | 4 R19,R53-54,R67   |
| PCBA MAIN (non-programmed) | 01-24-6041   | RES 6.04K 1% 0805              | 4 R25,R27,R30-31   |
| PCBA MAIN (non-programmed) | 01-24-75R0   | RES 75R 1% 0805                | 4 R4,R6,R8,R10   |
| PCBA MAIN (non-programmed) | 01-24-9091   | RES 9.09K 1% 0805              | 2 R20,R26  |
| PCBA MAIN (non-programmed) | 03-10-0107   | CAP ELEC 100uF 10V 20% RADIAL  | 1 C41  |
| PCBA MAIN (non-programmed) | 03-10-6108   | CAP ELEC 1000uF 6.3V 20%       | 1 C20  |
| PCBA MAIN (non-programmed) | 03-12-0476   | CAP ELEC 47uF 16V 20% RADIAL   | 1 C12  |
| PCBA MAIN (non-programmed) | 03-12-1477   | CAP ELEC 470uF 16V 20% RADIAL  | 1 C31  |
| PCBA MAIN (non-programmed) | 03-18-0105   | CAP ELEC 1uF 50V 20% RADIAL    | 4 C8,C15,C42,C44   |
| PCBA MAIN (non-programmed) | 03-18-0106   | CAP ELEC 10uF 50V 20% RADIAL   | 11 C3,C5,C7,C14,C21-22,C38-40,C47,C77                                    |
| PCBA MAIN (non-programmed) | 03-46-0332   | CAP X7R 3.3nF 50V 20% 1206     | 1 C58  |
| PCBA MAIN (non-programmed) | 03-50-0220   | CAP NPO 22pF 50V 20% 0805      | 1 C63  |
| PCBA MAIN (non-programmed) | 03-50-0470   | CAP NPO 47pF 50V 10% 0805      | 1 C64  |
| PCBA MAIN (non-programmed) | 03-52-0102   | CAP X7R 1nF 50V 20% 0805       | 2 C32,C34  |
| PCBA MAIN (non-programmed) | 03-52-0221   | CAP X7R 220pF 50V 20% 0805     | 4 C25,C28,C48-49   |
| PCBA MAIN (non-programmed) | 03-52-0391   | CAP X7R 390pF 50V 20% 0805     | 4 C26,C29-30,C36   |
| PCBA MAIN (non-programmed) | 03-52-0473   | CAP X7R 47nF 50V 20% 0805      | 33 C1-2,C4,C9,C16-19,C23-24,C27,C33,C35,C37,C50,C54-57,C60-62,C56,C67-76 |
| PCBA MAIN (non-programmed) | 06-23-0054   | DIODE SCHOTTKY DUAL 30V 200mA  | 1 D4   |
| PCBA MAIN (non-programmed) | 06-28-8468   | DIODE ZENER 6.8V 5% 350mW      | 1 D7   |
| PCBA MAIN (non-programmed) | 06-34-0031   | DIODE GEN PUR DUAL 120V        | 11 D1-3,D6,D8-14   |
| PCBA MAIN (non-programmed) | 09-06-7002   | TRANS MOSFET N-CHAN 60V 7R5    | 5 Q1-5   |
| PCBA MAIN (non-programmed) | 11-00-2000   | CRYSTAL 2.000MHz HC49 TH       | 1 X1   |
| PCBA MAIN (non-programmed) | 12-00-0317   | IC VREG ADJ 1.2-25V 1.5 AMP    | 1 U6   |
| PCBA MAIN (non-programmed) | 12-02-1088   | IC REG ADJ TO-220 TH LM1086    | 1 U1   |
| PCBA MAIN (non-programmed) | 12-02-7805   | IC REG +5v 1.5 Amp TH          | 1 U8   |
| PCBA MAIN (non-programmed) | 12-30-4880   | IC POWER-AMP 250mW TI          | 2 U10-11   |
| PCBA MAIN (non-programmed) | 12-54-0084   | IC OP AMP QUAD TL084CD SM      | 1 U12  |
| PCBA MAIN (non-programmed) | 12-64-0542   | IC CONVERTER A/D 8-BIT TLC542  | 1 U16  |
| PCBA MAIN (non-programmed) | 12-64-4528   | IC CONVERTER 24B 48/96KHz      | 1 U13  |
| PCBA MAIN (non-programmed) | 15-62-1004   | IC 74HCU04 UNBUFFERED HEX      | 1 U9   |
| PCBA MAIN (non-programmed) | 15-64-0541   | IC 74HCT 541 OCTAL BUF/DRIVER  | 1 U4   |
| PCBA MAIN (non-programmed) | 15-72-0001   | IC SRAM-256K x 8 TSOP32 SM     | 1 U5   |
| PCBA MAIN (non-programmed) | 15-78-0003   | IC FLASH 512K Bit (64Kx8) 70nS | 1 U3   |
| PCBA MAIN (non-programmed) | 15-86-6362   | IC DSP 24-BIT TQFP144 SM       | 1 U7   |
| PCBA MAIN (non-programmed) | 15-92-5809   | IC RESET 3.3V 5% ACTIVE-LOW    | 1 U2   |
| PCBA MAIN (non-programmed) | 21-20-1008   | HDR PCB MT SIL 8-PIN 1x8x .100 | 1 H4   |
| PCBA MAIN (non-programmed) | 21-20-2010   | HDR PCB MT DIL 10-PIN 2x5x100  | 1 H1   |
| PCBA MAIN (non-programmed) | 21-21-0040   | HDR PCB MT DIL 40-PIN 2x20x2mm | 1 H5   |
| PCBA MAIN (non-programmed) | 21-30-0011-1 | CAB RIBBON SIL 6-PIN           | 1 H3 on main to H2 on guitar in breakaway                                |
| PCBA MAIN (non-programmed) | 30-00-0607   | SCREW 6-32 x 7/16IN w/LK WASH  | 2 U1, U6   |
| PCBA MAIN (non-programmed) | 30-12-0632   | STANDOFF HEX .250 6-32 F-F 1IN | 2 U1,U6  |
| PCBA MAIN (non-programmed) | 30-15-0007   | INSULATOR XTAL 4.9mm C-C       | 1 INSTALL UNDER X1   |

|                            |              |                                |  |
|----------------------------|--------------|--------------------------------|--|
| PCBA MAIN (non-programmed) | 35-00-0220   | PCB MAIN REV.D SPIDER2 SERIES  | 1  |
| ASSY E/M CHASSIS SPIDER2   | 50-02-0221-1 | PCBA POWER AMP w/HEATSINK      | 1  |
| PCBA POWER AMP w/HEATSINK  | 30-00-0010   | SCREW 8-32 x 9/16 SKT-CAP      | 2 HEATSINK CLAMPS  |
| PCBA POWER AMP w/HEATSINK  | 30-00-0028   | SCREW 8-32 x 5/16" SHCS        | 1 SUPPORT BRACKET BR1                                    |
| PCBA POWER AMP w/HEATSINK  | 30-03-0002   | WASHER #8 .293 x.174x .040     | 3 (2) CLAMPS (1) SUPPORT BRKT                            |
| PCBA POWER AMP w/HEATSINK  | 30-06-0007   | NUT .344 HEX 8-32 STEEL ZINC   | 3 (2) CLAMPS (1) SUPPORT BRKT                            |
| PCBA POWER AMP w/HEATSINK  | 30-51-0059-3 | HEATSINK 4.0 IN LG AL ALY BLK  | 1 POWER AMP PCBA   |
| PCBA POWER AMP w/HEATSINK  | 30-51-0073   | CLAMP HEATSINK TO-220          | 2 HEATSINK - POWER AMPS                                  |
| PCBA POWER AMP w/HEATSINK  | 30-51-0105   | BRKT SUPPORT .565 x .530 x     | 1 BR1  |
| PCBA POWER AMP w/HEATSINK  | 30-63-0006   | PAD THERMAL 6mil 25mm x 30mm   | 2 HEATSINK - POWER AMP                                   |
| PCBA POWER AMP w/HEATSINK  | 50-02-0221   | PCBA POWER AMP SPIDER2         | 1  |
| PCBA POWER AMP SPIDER2     | 01-12-0000   | RES CARBON FILM 0R 1/4W 5% TH  | 1 JP1.   |
| PCBA POWER AMP SPIDER2     | 01-00-0103   | RES 10K 5% 0805                | 1 R14  |
| PCBA POWER AMP SPIDER2     | 01-23-02R2   | RES METAL OXIDE 2.2R 3W 5% TH  | 2 R5,R6.                          Added per ECO#0336302. |
| PCBA POWER AMP SPIDER2     | 01-22-0R47   | RES METAL OXIDE 0.47R 2W 5% TH | 4 R3-4,R7-8  |
| PCBA POWER AMP SPIDER2     | 01-24-1693   | RES 169K 1% 0805               | 2 R1,R9  |
| PCBA POWER AMP SPIDER2     | 01-60-0203   | RES NETWORK ISOLATED 20K       | 2 R2,R10   |
| PCBA POWER AMP SPIDER2     | 03-18-0336   | CAP ELEC 33uF 50V 20% RADIAL   | 2 C6,C16   |
| PCBA POWER AMP SPIDER2     | 03-18-1106   | CAP ELEC 10uF 50V 20% BI-POLAR | 2 C2,C12   |
| PCBA POWER AMP SPIDER2     | 03-22-0476   | CAP ELEC 47uF 100V 20% RADIAL  | 2 C8,C10   |
| PCBA POWER AMP SPIDER2     | 03-24-0564   | CAP MET-POLY 0.56uF 100VDC 5%  | 2 C7,C9.                          Added per ECO#0336302  |
| PCBA POWER AMP SPIDER2     | 03-52-0470   | CAP X7R 47pF 50V 20% 0805      | 2 C3,C13   |
| PCBA POWER AMP SPIDER2     | 03-52-0680   | CAP X7R 68pF 50V 20% 0805      | 2 C1,C11   |
| PCBA POWER AMP SPIDER2     | 03-52-1103   | CAP X7R 10nF 100V 10% 0805     | 4 C4-5,C14-15  |
| PCBA POWER AMP SPIDER2     | 12-30-7293   | IC POWER-AMP 100W TDA7293      | 2 U1-2   |
| PCBA POWER AMP SPIDER2     | 21-30-0011-2 | CAB RIBBON SIL 6-PIN           | 1 J2A on power amp to J2B on speaker out                 |
| PCBA POWER AMP SPIDER2     | 35-00-0221   | PCB POWER AMP REV.A SPIDER2    | 1 BREAKAWAY OF PWR SUPPLY                                |
| ASSY E/M CHASSIS SPIDER2   | 50-02-0222   | PCBA POWER SUPPLY SPIDER2      | 1  |
| PCBA POWER SUPPLY SPIDER2  | 01-12-0103   | RES CARBON FILM 10K 1/4W 5% TH | 1 R11  |
| PCBA POWER SUPPLY SPIDER2  | 01-12-0473   | RES CARBON FILM 47K 1/4W 5% TH | 1 R12  |
| PCBA POWER SUPPLY SPIDER2  | 01-20-0132   | RES METAL OXIDE 1.3K 1W 5% TH  | 1 R13  |
| PCBA POWER SUPPLY SPIDER2  | 03-00-0104   | CAP CER DISC 100nF 50V 20% TH  | 2 C27-28   |
| PCBA POWER SUPPLY SPIDER2  | 03-12-0688   | CAP ELEC 6800uF 16V 20% RADIAL | 1 C21  |
| PCBA POWER SUPPLY SPIDER2  | 03-18-0478   | CAP ELEC 4700uF 50V 20% SNAPIN | 2 C18-19   |
| PCBA POWER SUPPLY SPIDER2  | 03-36-0102   | CAP ESTR 1nF 100V 5% TH        | 2 C29-30   |
| PCBA POWER SUPPLY SPIDER2  | 03-41-0224   | CAP X-CAP 0.22uF 275VAC 20%    | 0 C17  |
| PCBA POWER SUPPLY SPIDER2  | 03-75-0102   | CAP Y-CAP 1nF 250VAC 20% TH    | 2 C22-23   |
| PCBA POWER SUPPLY SPIDER2  | 06-04-4002   | DIODE SMALL-SIGNAL 100V 30A    | 4 D2-3,D6,D9   |
| PCBA POWER SUPPLY SPIDER2  | 06-08-0820   | DIODE ZENER 8.2V 5% 500mW      | 1 D4   |
| PCBA POWER SUPPLY SPIDER2  | 06-16-0008   | DIODE BRIDGE-RECT 8A 600V      | 1 D1   |
| PCBA POWER SUPPLY SPIDER2  | 09-00-5401   | TRANS PNP SMALL-SIGNAL 2N5401  | 1 Q1   |
| PCBA POWER SUPPLY SPIDER2  | 11-10-2020   | CHOKE WIDE BAND 1-5 TURNS      | 2 L1-2   |
| PCBA POWER SUPPLY SPIDER2  | 21-20-1564   | HDR PCB MT SIL 4-PIN X .156    | 1 H6   |
| PCBA POWER SUPPLY SPIDER2  | 21-20-1565   | HDR PCB MT SIL 5-PIN X .156    | 1 H4   |

|                             |              |                               |  |
|-----------------------------|--------------|-------------------------------|--|
| PCBA POWER SUPPLY SPIDER2   | 21-20-3122   | HDR PCB MT SIL 2-PIN x 7.92mm | 1 H5   |
| PCBA POWER SUPPLY SPIDER2   | 21-20-3123   | HDR PCB MT SIL 3-PIN X 7.92mm | 2 H2-3   |
| PCBA POWER SUPPLY SPIDER2   | 21-30-0012-2 | CBL SIL 12-PIN 2.54 x 76.2mm  | 1 J1A on power supply PCB to J1B on power amp break-away |
| PCBA POWER SUPPLY SPIDER2   | 21-30-0021   | CAB DIL 10 PIN .100 PITCH 3.0 | 1 H1   |
| PCBA POWER SUPPLY SPIDER2   | 35-00-0222   | PCB POWER SUPPLY REV.A        | 1  |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0223   | PCBA HEADPHONE/RJ45 SPIDER2   | 1  |
| PCBA HEADPHONE/RJ45 SPIDER2 | 01-24-1000   | RES 100R 1% 0805              | 2 R16-17   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 03-10-0331   | CAP ELEC 330uF 10V 20% RADIAL | 2 C11,C13  |
| PCBA HEADPHONE/RJ45 SPIDER2 | 03-52-0102   | CAP X7R 1nF 50V 20% 0805      | 6 C1,C3-5,C9-10  |
| PCBA HEADPHONE/RJ45 SPIDER2 | 03-52-0104   | CAP X7R 0.1uF 50V 20% 0805    | 3 C6-8   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 06-34-0031   | DIODE GEN PUR DUAL 120V       | 2 D17-18   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 21-00-6616   | JACK 1/4" TRS 6-PIN PCB MT    | 1 J4   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 21-16-0045   | JACK RJ-45 8-PIN FEMALE       | 1 J3   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 30-18-3030   | CLIP GND PCB .30x.30x.07      | 2 GF2,GF15   |
| PCBA HEADPHONE/RJ45 SPIDER2 | 35-00-0223   | PCB HEADPHONE/RJ45 REV.A      | 1 BREAKAWAY OF USER INTERFACE PCBA                       |
| ASSY E/M CHASSIS SPIDER2    | 50-02-0224   | PCBA GUITAR INPUT SPIDER2     | 1  |
| PCBA GUITAR INPUT SPIDER2   | 01-24-1001   | RES 1.00K 1% 0805             | 2 R40-41   |
| PCBA GUITAR INPUT SPIDER2   | 01-24-1004   | RES 1.00M 1% 0805             | 0 R45  |
| PCBA GUITAR INPUT SPIDER2   | 01-24-1502   | RES 15.0K 1% 0805             | 1 R46  |
| PCBA GUITAR INPUT SPIDER2   | 01-24-2211   | RES 2.21K 1% 0805             | 1 R49  |
| PCBA GUITAR INPUT SPIDER2   | 01-24-3321   | RES 3.32K 1% 0805             | 1 R48  |
| PCBA GUITAR INPUT SPIDER2   | 03-24-0273   | CAP MET-POLY 27nF 50V 5% TH   | 1 C53  |
| PCBA GUITAR INPUT SPIDER2   | 03-52-0104   | CAP X7R 0.1uF 50V 20% 0805    | 1 C46  |
| PCBA GUITAR INPUT SPIDER2   | 03-52-0470   | CAP X7R 47pF 50V 20% 0805     | 1 C45  |
| PCBA GUITAR INPUT SPIDER2   | 03-52-0473   | CAP X7R 47nF 50V 20% 0805     | 2 C43,C51  |
| PCBA GUITAR INPUT SPIDER2   | 06-34-0031   | DIODE GEN PUR DUAL 120V       | 1 D5   |
| PCBA GUITAR INPUT SPIDER2   | 12-54-0072   | IC OP-AMP DUAL TL072CD SM     | 1 U14  |
| PCBA GUITAR INPUT SPIDER2   | 21-00-6616   | JACK 1/4" TRS 6-PIN PCB MT    | 1 J5   |
| PCBA GUITAR INPUT SPIDER2   | 30-18-3030   | CLIP GND PCB .30x.30x.07      | 1 GF1  |
| PCBA GUITAR INPUT SPIDER2   | 35-00-0224   | PCB GUITAR INPUT REV.D        | 1 BREAKAWAY OF MAIN PCBA                                 |

**Line 6 Bill of Materials Report**

Parent Item: 99-010-1415 (SPIDER 2 112 US)

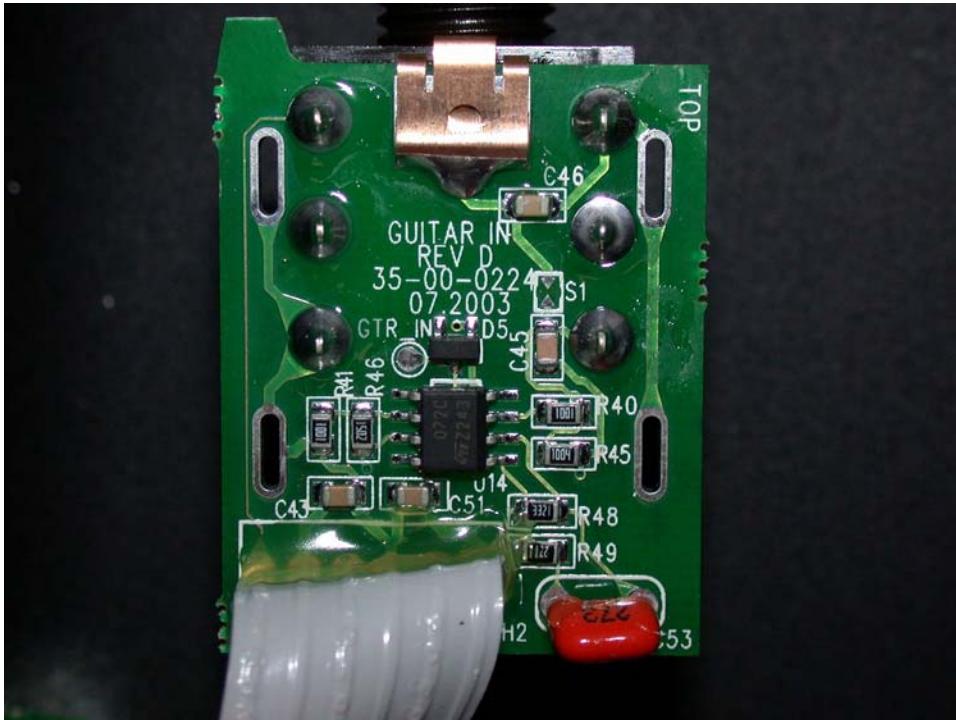
| item_desc_1                    | comp_item_no | comp_item_desc_1               | qty_1 reference_1                               |
|--------------------------------|--------------|--------------------------------|---|
| SPIDER 2 112 US                | 21-37-1160   | CABLE PWR UL/CSA SJT 8.2ft Blk | 1   |
| SPIDER 2 112 US                | 40-00-0018   | MANUAL USER SPIDER2 SERIES     | 1   |
| SPIDER 2 112 US                | 40-00-0046   | GUIDE POP-TOP SPIDER2-112      | 1 PACKOUT.                                      |
| SPIDER 2 112 US                | 40-03-2000   | CARD REGISTRATION UNIVERSAL    | 1 ADDED PER ECO#0326102.                        |
| SPIDER 2 112 US                | 40-10-0005   | FOAM CORNER PE-LAM 1.5pcf      | 4   |
| SPIDER 2 112 US                | 40-10-0065   | CARTON GIFT SPIDER2-112        | 1   |
| SPIDER 2 112 US                | 40-20-0010   | BAG PLASTIC 43"x38"x.004 CLEAR | 1   |
| SPIDER 2 112 US                | 40-20-0011   | BAG PLASTIC 10 x 16 2 mil      | 1   |
| SPIDER 2 112 US                | 40-25-0020   | LABEL INSPECTION QUALITY       | 1   |
| SPIDER 2 112 US                | 59-00-1405   | ASSY UNIT COMPLETE SPIDER2 112 | 1   |
| ASSY UNIT COMPLETE SPIDER2 112 | 11-20-1208   | SPEAKER 12" 8-OHM CELESTION    | 1 CABINET GRILL                                 |
| ASSY UNIT COMPLETE SPIDER2 112 | 30-00-0033   | SCREW 10-24 x7/8 TRUSS HD PHH  | 4 SPEAKERS                                      |
| ASSY UNIT COMPLETE SPIDER2 112 | 30-00-0048   | SCREW 10-32 x 1-IN OVAL CTSK   | 2 CABINET SIDES - CHASSIS                       |
| ASSY UNIT COMPLETE SPIDER2 112 | 30-00-1128   | SCREW 10-32 x 1-3/4 OVAL       | 4 CABINET TOP - CHASSIS                         |
| ASSY UNIT COMPLETE SPIDER2 112 | 30-03-0112   | WASHER FINISHING #10 FLANGED   | 6 CABINET TOP & SIDES - CHASSIS                 |
| ASSY UNIT COMPLETE SPIDER2 112 | 40-25-0100   | LABEL BAR CODE SERIAL NUMBER   | 1   |
| ASSY UNIT COMPLETE SPIDER2 112 | 50-03-0001   | ASSY CABINET SPIDER2           | 1   |
| ASSY CABINET SPIDER2           | 30-00-0812   | SCREW w/WAX 8 x 3/4 PTB        | 14  |
| ASSY CABINET SPIDER2           | 30-00-1024   | SCREW 10-24 x 1IN OVAL CTSK    | 2   |
| ASSY CABINET SPIDER2           | 30-00-8112   | SCR WOOD #8 x 1 1/2" OVAL SCTK | 3   |
| ASSY CABINET SPIDER2           | 30-03-0112   | WASHER FINISHING #10 FLANGED   | 3   |
| ASSY CABINET SPIDER2           | 30-06-1024   | NUT-T 10-24 X 5/16 STEEL       | 6   |
| ASSY CABINET SPIDER2           | 30-28-0002   | CORNER LEFT HI-DENSITY         | 1   |
| ASSY CABINET SPIDER2           | 30-28-0003   | CORNER RIGHT HI-DENSITY        | 1   |
| ASSY CABINET SPIDER2           | 30-28-0004   | CORNER BACK HI-DENSITY         | 6   |
| ASSY CABINET SPIDER2           | 30-33-0032   | CABINET PARTICLE BOARD 5/8IN   | 1   |
| ASSY CABINET SPIDER2           | 30-36-0005   | COVER VINYL TEXTURED BLACK     | 0.73  |
| ASSY CABINET SPIDER2           | 30-39-0006   | GRILL-CLOTH BLACK WEAVE        | 0.18  |
| ASSY CABINET SPIDER2           | 30-57-0580   | HANDLE/STRAP HEAVY DUTY BLACK  | 1   |
| ASSY CABINET SPIDER2           | 30-57-0581   | END CAPS, BLACK, TEXTURED FINI | 2   |
| ASSY UNIT COMPLETE SPIDER2 112 | 50-04-0001-1 | ASSY E/M CHASSIS SPIDER2 112   | 1   |
| ASSY E/M CHASSIS SPIDER2 112   | 11-30-0006   | XFMR 100/120VAC 50/60Hz 76mm   | 1 CHASSIS                                       |
| ASSY E/M CHASSIS SPIDER2 112   | 21-34-0037   | CAB ASSY 2 PIN 13.5 IN LG      | 1 POWER SUPPLY PCAB to SPEAKERS                 |
| ASSY E/M CHASSIS SPIDER2 112   | 21-34-0044-1 | CBL 18AWG 3PIN SIL .256 209.6  | 1 POWER SUPPLY to POWER SWITCH to AC RECEPTACLE |
| ASSY E/M CHASSIS SPIDER2 112   | 21-34-1015   | CBL FSTN .187-RCPT/.250-F FLAG | 1 C SWITCH to ac RECEPTACLE                     |
| ASSY E/M CHASSIS SPIDER2 112   | 24-19-4025   | FUSE 4A/125v                   | 1 AC RECEPTACLE FUSE HOLDER                     |
| ASSY E/M CHASSIS SPIDER2 112   | 24-21-0002   | ACTUATOR SWITCH SINGLE ROUND   | 5 M1-5 ON USER INTERFACE PCB                    |
| ASSY E/M CHASSIS SPIDER2 112   | 24-24-0606   | SWITCH POWER ROCKER 6A/250VAC  | 1 CHASSIS                                       |

|                              |              |                                |   |
|------------------------------|--------------|--------------------------------|---|
| ASSY E/M CHASSIS SPIDER2 112 | 30-00-0018   | SCREW SELF-TAP 6-32 x .75 PFZ  | 4 CHASSIS - HEATSINK                                    |
| ASSY E/M CHASSIS SPIDER2 112 | 30-00-0043   | SCREW 6-32 x 5/16 w/LK WASH    | 11 GND WIRE AND MAIN AND POWER SUPPLY PCBA'S to CHASSIS |
| ASSY E/M CHASSIS SPIDER2 112 | 30-00-1033   | SCREW 10-32 x 3/8IN SCH STL    | 4 F/P to CHASSIS  |
| ASSY E/M CHASSIS SPIDER2 112 | 30-00-6103   | NUT HEX M9-0.75 ZINC           | 10 F/P to CHASSIS - POTS                                |
| ASSY E/M CHASSIS SPIDER2 112 | 30-06-0832   | NUT .335 HEX 8-32 STL ZINC W/  | 4 TRANSFORMER - CHASSIS                                 |
| ASSY E/M CHASSIS SPIDER2 112 | 30-24-0003   | CABLE-TIE 4" CLEAR             | 4   |
| ASSY E/M CHASSIS SPIDER2 112 | 30-28-0112-1 | PANEL FRONT PLASTIC GREY       | 1 CHASSIS   |
| ASSY E/M CHASSIS SPIDER2 112 | 30-45-0007   | KNOB SPLINE .77DIA x .76 METAL | 10 FRONT PANEL - POTS                                   |
| ASSY E/M CHASSIS SPIDER2 112 | 30-51-0147   | CHASSIS 480 x 130 x 86.61mm    | 1   |
| ASSY E/M CHASSIS SPIDER2 112 | 30-63-0010   | FOAM w/ADHSV 26.5x 1/4x 1/16IN | 5 CHASSIS   |
| ASSY E/M CHASSIS SPIDER2 112 | 30-75-9600   | GROMMET RUBBER 7/16-D X        | 1 CHASSIS - SPEAKER WIRES                               |
| ASSY E/M CHASSIS SPIDER2 112 | 40-25-0015   | LABEL GROUND SYMBOL            | 1 CHASSIS - INSIDE BY GND WIRE                          |
| ASSY E/M CHASSIS SPIDER2 112 | 40-25-0018   | STICKER LINE6 LOGO OVAL        | 1 PLASTIC FRONT PANEL                                   |
| ASSY E/M CHASSIS SPIDER2 112 | 50-00-0001   | ASSY RECEPTACLE-A/C w/GND      | 1 CHASSIS - POWER SUPPLY PCBA                           |
| ASSY RECEPTACLE-A/C w/GND    | 21-14-0002   | JACK IEC w/FUSE MALE 3-PIN     | 1   |
| ASSY RECEPTACLE-A/C w/GND    | 21-34-1116   | Cable, Earthing                | 1 GROUND  |
| ASSY E/M CHASSIS SPIDER2 112 | 50-02-0217-1 | PCBA POWER AMP w/HEATSINK      | 1   |
| PCBA POWER AMP w/HEATSINK    | 30-00-0010   | SCREW 8-32 x 9/16 SKT-CAP      | 1 HEATSINK CLAMPS                                       |
| PCBA POWER AMP w/HEATSINK    | 30-00-0028   | SCREW 8-32 x 5/16" SHCS        | 1 SUPPORT BRACKET BR1                                   |
| PCBA POWER AMP w/HEATSINK    | 30-03-0002   | WASHER #8 .293 x.174x .040     | 2 (1)CLAMPS (1) SUPPORT BRK                             |
| PCBA POWER AMP w/HEATSINK    | 30-06-0007   | NUT .344 HEX 8-32 STEEL ZINC   | 2 (1)CLAMPS (1) SUPPORT BRK                             |
| PCBA POWER AMP w/HEATSINK    | 30-51-0059-5 | HEATSINK 2.0 IN LG AL ALY BLK  | 1 POWER AMP PCBA  |
| PCBA POWER AMP w/HEATSINK    | 30-51-0073   | CLAMP HEATSINK TO-220          | 1 HEATSINK - POWER AMPS                                 |
| PCBA POWER AMP w/HEATSINK    | 30-51-0105   | BRKT SUPPORT .565 x .530 x     | 1 BR1   |
| PCBA POWER AMP w/HEATSINK    | 30-63-0006   | PAD THERMAL 6mil 25mm x 30mm   | 1 HEATSINK - POWER AMP                                  |
| PCBA POWER AMP w/HEATSINK    | 50-02-0217   | PCBA POWER AMP SPIDER2         | 1   |
| PCBA POWER AMP SPIDER2       | 01-00-0103   | RES 10K 5% 0805                | 1 R14   |
| PCBA POWER AMP SPIDER2       | 01-23-02R2   | RES METAL OXIDE 2.2R 3W 5% TH  | 1 R6.      Added per ECO#0336302.                       |
| PCBA POWER AMP SPIDER2       | 01-22-0R47   | RES METAL OXIDE 0.47R 2W 5% TH | 2 R7-8  |
| PCBA POWER AMP SPIDER2       | 01-24-1693   | RES 169K 1% 0805               | 1 R9  |
| PCBA POWER AMP SPIDER2       | 01-60-0203   | RES NETWORK ISOLATED 20K       | 1 R10   |
| PCBA POWER AMP SPIDER2       | 03-18-0336   | CAP ELEC 33uF 50V 20% RADIAL   | 1 C16   |
| PCBA POWER AMP SPIDER2       | 03-18-1106   | CAP ELEC 10uF 50V 20% BI-POLAR | 1 C12   |
| PCBA POWER AMP SPIDER2       | 03-22-0476   | CAP ELEC 47uF 100V 20% RADIAL  | 2 C8,C10  |
| PCBA POWER AMP SPIDER2       | 03-24-0564   | CAP MET-POLY 0.56uF 100VDC 5%  | 1 C9.      Added per ECO#0336302.                       |
| PCBA POWER AMP SPIDER2       | 03-52-0470   | CAP X7R 47pF 50V 20% 0805      | 1 C13   |
| PCBA POWER AMP SPIDER2       | 03-52-0680   | CAP X7R 68pF 50V 20% 0805      | 1 C11   |
| PCBA POWER AMP SPIDER2       | 03-52-1103   | CAP X7R 10nF 100V 10% 0805     | 2 C14-15  |
| PCBA POWER AMP SPIDER2       | 12-30-7293   | IC POWER-AMP 100W TDA7293      | 1 U2  |
| PCBA POWER AMP SPIDER2       | 35-00-0217   | PCB POWER AMP REV.A SPIDER2    | 1 BREAKAWAY OF PWR SUPPLY                               |
| ASSY E/M CHASSIS SPIDER2 112 | 50-02-0219   | PCBA USER INTERFACE SPIDER2    | 1   |
| PCBA USER INTERFACE SPIDER2  | 01-12-0101   | RES CARBON FILM 100R 1/4W 5%   | 1 R15   |
| PCBA USER INTERFACE SPIDER2  | 01-12-0102   | RES CARBON FILM 1K 1/4W 5% TH  | 2 R12,R19   |

|                                |              |                                |  |
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| PCBA USER INTERFACE SPIDER2    | 01-12-0201   | RES CARBON FILM 200R 1/4W 5%   | 1 R14  |
| PCBA USER INTERFACE SPIDER2    | 01-12-0202   | RES CARBON FILM 2.0K 1/4W 5%   | 1 R11  |
| PCBA USER INTERFACE SPIDER2    | 01-12-0511   | RES CARBON FILM 510R 1/4W 5%   | 1 R13  |
| PCBA USER INTERFACE SPIDER2    | 01-48-6103   | POT MONO 10KB LINEAR TAPER     | 10 R1-10   |
| PCBA USER INTERFACE SPIDER2    | 03-00-0104   | CAP CER DISC 100nF 50V 20% TH  | 1 C12  |
| PCBA USER INTERFACE SPIDER2    | 18-06-0002   | LED RED/GRN 3-P COM CATH       | 16 D1-16   |
| PCBA USER INTERFACE SPIDER2    | 21-30-0012-1 | CBL SIL 10-PIN 2.54 x 76.2mm   | 1 H2 on user interface PCB to H3 on break-away PCB |
| PCBA USER INTERFACE SPIDER2    | 21-30-0022   | CAB DIL 40 PIN .100 PITCH 3.0  | 1 H1   |
| PCBA USER INTERFACE SPIDER2    | 24-31-1105   | SWITCH TACT 6mm SQ 4-PIN TH    | 5 SW1-5  |
| PCBA USER INTERFACE SPIDER2    | 30-15-0018   | SPACER LED .560 LG             | 16 D1-16   |
| PCBA USER INTERFACE SPIDER2    | 35-00-0219   | PCB USER INTERFACE REV.A       | 1  |
| ASSY E/M CHASSIS SPIDER2 112   | 50-02-0220-1 | PCBA MAIN SPIDER2-COMBO SERIES | 1  |
| PCBA MAIN SPIDER2-COMBO SERIES | 45-02-0011   | IC PROGRAMMED FLASH v1.00      | 1  |
| PCBA MAIN SPIDER2-COMBO SERIES | 50-02-0220   | PCBA MAIN (non-programmed)     | 1  |
| PCBA MAIN (non-programmed)     | 01-24-1000   | RES 100R 1% 0805               | 4 R12-13,R59,R71 R56 removed per ECO#321204.       |
| PCBA MAIN (non-programmed)     | 01-24-1001   | RES 1.00K 1% 0805              | 1 R1 added per ECO 0321204                         |
| PCBA MAIN (non-programmed)     | 01-24-1002   | RES 10.0K 1% 0805              | 14 R2-3,R14-15,R21-23,R28-29,R32-34,R68-69         |
| PCBA MAIN (non-programmed)     | 01-24-1003   | RES 100K 1% 0805               | 5 R36-37,R50-51,R66                                |
| PCBA MAIN (non-programmed)     | 01-24-10R0   | RES 10.0R 1% 0805              | 1 R70  |
| PCBA MAIN (non-programmed)     | 01-24-1300   | RES 130R 1% 0805               | 4 R5,R7,R9,R11                                     |
| PCBA MAIN (non-programmed)     | 01-24-1501   | RES 1.50K 1% 0805              | 1 R38  |
| PCBA MAIN (non-programmed)     | 01-24-1620   | RES 162R 1% 0805               | 2 R56,R72 r56 added per ECO 321204                 |
| PCBA MAIN (non-programmed)     | 01-24-2001   | RES 2.00K 1% 0805              | 1 R39  |
| PCBA MAIN (non-programmed)     | 01-24-22R1   | RES 22.1R 1% 0805              | 1 R55  |
| PCBA MAIN (non-programmed)     | 01-24-4750   | RES 475R 1% 0805               | 1 R64  |
| PCBA MAIN (non-programmed)     | 01-24-4751   | RES 4.75K 1% 0805              | 10 R16-17,R47,R57-58,R60-63,R65                    |
| PCBA MAIN (non-programmed)     | 01-24-4752   | RES 47.5K 1% 0805              | 2 R18,R24  |
| PCBA MAIN (non-programmed)     | 01-24-5110   | RES 511R 1% 0805               | 1 R35  |
| PCBA MAIN (non-programmed)     | 01-24-5R11   | RES 5.11R 1% 0805              | 4 R19,R53-54,R67                                   |
| PCBA MAIN (non-programmed)     | 01-24-6041   | RES 6.04K 1% 0805              | 4 R25,R27,R30-31                                   |
| PCBA MAIN (non-programmed)     | 01-24-75R0   | RES 75R 1% 0805                | 4 R4,R6,R8,R10                                     |
| PCBA MAIN (non-programmed)     | 01-24-9091   | RES 9.09K 1% 0805              | 2 R20,R26  |
| PCBA MAIN (non-programmed)     | 03-10-0107   | CAP ELEC 100uF 10V 20% RADIAL  | 1 C41  |
| PCBA MAIN (non-programmed)     | 03-10-6108   | CAP ELEC 1000uF 6.3V 20%       | 1 C20  |
| PCBA MAIN (non-programmed)     | 03-12-0476   | CAP ELEC 47uF 16V 20% RADIAL   | 1 C12  |
| PCBA MAIN (non-programmed)     | 03-12-1477   | CAP ELEC 470uF 16V 20% RADIAL  | 1 C31  |
| PCBA MAIN (non-programmed)     | 03-18-0105   | CAP ELEC 1uF 50V 20% RADIAL    | 4 C8,C15,C42,C44                                   |
| PCBA MAIN (non-programmed)     | 03-18-0106   | CAP ELEC 10uF 50V 20% RADIAL   | 11 C3,C5,C7,C14,C21-22,C38-40,C47,C77              |
| PCBA MAIN (non-programmed)     | 03-46-0332   | CAP X7R 3.3nF 50V 20% 1206     | 1 C58  |
| PCBA MAIN (non-programmed)     | 03-50-0220   | CAP NPO 22pF 50V 20% 0805      | 1 C63  |
| PCBA MAIN (non-programmed)     | 03-50-0470   | CAP NPO 47pF 50V 10% 0805      | 1 C64  |
| PCBA MAIN (non-programmed)     | 03-52-0102   | CAP X7R 1nF 50V 20% 0805       | 2 C32,C34  |
| PCBA MAIN (non-programmed)     | 03-52-0221   | CAP X7R 220pF 50V 20% 0805     | 4 C25,C28,C48-49                                   |

|                              |              |                                |  |
|------------------------------|--------------|--------------------------------|--|
| PCBA MAIN (non-programmed)   | 03-52-0391   | CAP X7R 390pF 50V 20% 0805     | 4 C26,C29-30,C36   |
| PCBA MAIN (non-programmed)   | 03-52-0473   | CAP X7R 47nF 50V 20% 0805      | 33 C1-2,C4,C9,C16-19,C23-24,C27,C33,C35,C37,C50,C54-57,C60-62,C65,C67-76 |
| PCBA MAIN (non-programmed)   | 06-23-0054   | DIODE SCHOTTKY DUAL 30V 200mA  | 1 D4   |
| PCBA MAIN (non-programmed)   | 06-28-8468   | DIODE ZENER 6.8V 5% 350mW      | 1 D7   |
| PCBA MAIN (non-programmed)   | 06-34-0031   | DIODE GEN PUR DUAL 120V        | 11 D1-3,D6,D8-14   |
| PCBA MAIN (non-programmed)   | 09-06-7002   | TRANS MOSFET N-CHAN 60V 7R5    | 5 Q1-5   |
| PCBA MAIN (non-programmed)   | 11-00-2000   | CRYSTAL 2.000MHz HC49 TH       | 1 X1   |
| PCBA MAIN (non-programmed)   | 12-00-0317   | IC VREG ADJ 1.2-25V 1.5 AMP    | 1 U6   |
| PCBA MAIN (non-programmed)   | 12-02-1088   | IC REG ADJ TO-220 TH LM1086    | 1 U1   |
| PCBA MAIN (non-programmed)   | 12-02-7805   | IC REG +5v 1.5 Amp TH          | 1 U8   |
| PCBA MAIN (non-programmed)   | 12-30-4880   | IC POWER-AMP 250mW TI          | 2 U10-11   |
| PCBA MAIN (non-programmed)   | 12-54-0084   | IC OP AMP QUAD TL084CD SM      | 1 U12  |
| PCBA MAIN (non-programmed)   | 12-64-0542   | IC CONVERTER A/D 8-BIT TLC542  | 1 U16  |
| PCBA MAIN (non-programmed)   | 12-64-4528   | IC CONVERTER 24B 48/96KHz      | 1 U13  |
| PCBA MAIN (non-programmed)   | 15-62-1004   | IC 74HCU04 UNBUFFERED HEX      | 1 U9   |
| PCBA MAIN (non-programmed)   | 15-64-0541   | IC 74HCT 541 OCTAL BUF/DRIVER  | 1 U4   |
| PCBA MAIN (non-programmed)   | 15-72-0001   | IC SRAM-256K x 8 TSOP32 SM     | 1 U5   |
| PCBA MAIN (non-programmed)   | 15-78-0003   | IC FLASH 512K Bit (64Kx8) 70nS | 1 U3   |
| PCBA MAIN (non-programmed)   | 15-86-6362   | IC DSP 24-BIT TQFP144 SM       | 1 U7   |
| PCBA MAIN (non-programmed)   | 15-92-5809   | IC RESET 3.3V 5% ACTIVE-LOW    | 1 U2   |
| PCBA MAIN (non-programmed)   | 21-20-1008   | HDR PCB MT SIL 8-PIN 1x8x .100 | 1 H4   |
| PCBA MAIN (non-programmed)   | 21-20-2010   | HDR PCB MT DIL 10-PIN 2x5x100  | 1 H1   |
| PCBA MAIN (non-programmed)   | 21-21-0040   | HDR PCB MT DIL 40-PIN 2x20x2mm | 1 H5   |
| PCBA MAIN (non-programmed)   | 21-30-0011-1 | CAB RIBBON SIL 6-PIN           | 1 H3 on main to H2 on guitar in breakaway                                |
| PCBA MAIN (non-programmed)   | 30-00-0607   | SCREW 6-32 x 7/16IN w/LK WASH  | 2 U1, U6   |
| PCBA MAIN (non-programmed)   | 30-12-0632   | STANDOFF HEX .250 6-32 F-F 1IN | 2 U1,U6  |
| PCBA MAIN (non-programmed)   | 30-15-0007   | INSULATOR XTAL 4.9mm C-C       | 1 INSTALL UNDER X1   |
| PCBA MAIN (non-programmed)   | 35-00-0220   | PCB MAIN REV.D SPIDER2 SERIES  | 1  |
| ASSY E/M CHASSIS SPIDER2 112 | 50-02-0222   | PCBA POWER SUPPLY SPIDER2      | 1  |
| PCBA POWER SUPPLY SPIDER2    | 01-12-0103   | RES CARBON FILM 10K 1/4W 5% TH | 1 R11  |
| PCBA POWER SUPPLY SPIDER2    | 01-12-0473   | RES CARBON FILM 47K 1/4W 5% TH | 1 R12  |
| PCBA POWER SUPPLY SPIDER2    | 01-20-0132   | RES METAL OXIDE 1.3K 1W 5% TH  | 1 R13  |
| PCBA POWER SUPPLY SPIDER2    | 03-00-0104   | CAP CER DISC 100nF 50V 20% TH  | 2 C27-28   |
| PCBA POWER SUPPLY SPIDER2    | 03-12-0688   | CAP ELEC 6800uF 16V 20% RADIAL | 1 C21  |
| PCBA POWER SUPPLY SPIDER2    | 03-18-0478   | CAP ELEC 4700uF 50V 20% SNAPIN | 2 C18-19   |
| PCBA POWER SUPPLY SPIDER2    | 03-36-0102   | CAP ESTR 1nF 100V 5% TH        | 2 C29-30   |
| PCBA POWER SUPPLY SPIDER2    | 03-41-0224   | CAP X-CAP 0.22uF 275VAC 20%    | 0 C17  |
| PCBA POWER SUPPLY SPIDER2    | 03-75-0102   | CAP Y-CAP 1nF 250VAC 20% TH    | 2 C22-23   |
| PCBA POWER SUPPLY SPIDER2    | 06-04-4002   | DIODE SMALL-SIGNAL 100V 30A    | 4 D2-3,D6,D9   |
| PCBA POWER SUPPLY SPIDER2    | 06-08-0820   | DIODE ZENER 8.2V 5% 500mW      | 1 D4   |
| PCBA POWER SUPPLY SPIDER2    | 06-16-0008   | DIODE BRIDGE-RECT 8A 600V      | 1 D1   |
| PCBA POWER SUPPLY SPIDER2    | 09-00-5401   | TRANS PNP SMALL-SIGNAL 2N5401  | 1 Q1   |
| PCBA POWER SUPPLY SPIDER2    | 11-10-2020   | CHOKE WIDE BAND 1-5 TURNS      | 2 L1-2   |

|                              |              |                               |  |
|------------------------------|--------------|-------------------------------|--|
| PCBA POWER SUPPLY SPIDER2    | 21-20-1564   | HDR PCB MT SIL 4-PIN X .156   | 1 H6   |
| PCBA POWER SUPPLY SPIDER2    | 21-20-1565   | HDR PCB MT SIL 5-PIN X .156   | 1 H4   |
| PCBA POWER SUPPLY SPIDER2    | 21-20-3122   | HDR PCB MT SIL 2-PIN x 7.92mm | 1 H5   |
| PCBA POWER SUPPLY SPIDER2    | 21-20-3123   | HDR PCB MT SIL 3-PIN X 7.92mm | 2 H2-3   |
| PCBA POWER SUPPLY SPIDER2    | 21-30-0012-2 | CBL SIL 12-PIN 2.54 x 76.2mm  | 1 J1A on power supply PCB to J1B on power amp break-away |
| PCBA POWER SUPPLY SPIDER2    | 21-30-0021   | CAB DIL 10 PIN .100 PITCH 3.0 | 1 H1   |
| PCBA POWER SUPPLY SPIDER2    | 35-00-0222   | PCB POWER SUPPLY REV.A        | 1  |
| ASSY E/M CHASSIS SPIDER2 112 | 50-02-0223   | PCBA HEADPHONE/RJ45 SPIDER2   | 1  |
| PCBA HEADPHONE/RJ45 SPIDER2  | 01-24-1000   | RES 100R 1% 0805              | 2 R16-17   |
| PCBA HEADPHONE/RJ45 SPIDER2  | 03-10-0331   | CAP ELEC 330uF 10V 20% RADIAL | 2 C11,C13  |
| PCBA HEADPHONE/RJ45 SPIDER2  | 03-52-0102   | CAP X7R 1nF 50V 20% 0805      | 6 C1,C3-5,C9-10  |
| PCBA HEADPHONE/RJ45 SPIDER2  | 03-52-0104   | CAP X7R 0.1uF 50V 20% 0805    | 3 C6-8   |
| PCBA HEADPHONE/RJ45 SPIDER2  | 06-34-0031   | DIODE GEN PUR DUAL 120V       | 2 D17-18   |
| PCBA HEADPHONE/RJ45 SPIDER2  | 21-00-6616   | JACK 1/4" TRS 6-PIN PCB MT    | 1 J4   |
| PCBA HEADPHONE/RJ45 SPIDER2  | 21-16-0045   | JACK RJ-45 8-PIN FEMALE       | 1 J3   |
| PCBA HEADPHONE/RJ45 SPIDER2  | 30-18-3030   | CLIP GND PCB .30x.30x.07      | 2 GF2,GF15   |
| PCBA HEADPHONE/RJ45 SPIDER2  | 35-00-0223   | PCB HEADPHONE/RJ45 REV.A      | 1 BREAKAWAY OF USER INTERFACE PCBA                       |
| ASSY E/M CHASSIS SPIDER2 112 | 50-02-0224   | PCBA GUITAR INPUT SPIDER2     | 1  |
| PCBA GUITAR INPUT SPIDER2    | 01-24-1001   | RES 1.00K 1% 0805             | 2 R40-41   |
| PCBA GUITAR INPUT SPIDER2    | 01-24-1004   | RES 1.00M 1% 0805             | 0 R45  |
| PCBA GUITAR INPUT SPIDER2    | 01-24-1502   | RES 15.0K 1% 0805             | 1 R46  |
| PCBA GUITAR INPUT SPIDER2    | 01-24-2211   | RES 2.21K 1% 0805             | 1 R49  |
| PCBA GUITAR INPUT SPIDER2    | 01-24-3321   | RES 3.32K 1% 0805             | 1 R48  |
| PCBA GUITAR INPUT SPIDER2    | 03-24-0273   | CAP MET-POLY 27nF 50V 5% TH   | 1 C53  |
| PCBA GUITAR INPUT SPIDER2    | 03-52-0104   | CAP X7R 0.1uF 50V 20% 0805    | 1 C46  |
| PCBA GUITAR INPUT SPIDER2    | 03-52-0470   | CAP X7R 47pF 50V 20% 0805     | 1 C45  |
| PCBA GUITAR INPUT SPIDER2    | 03-52-0473   | CAP X7R 47nF 50V 20% 0805     | 2 C43,C51  |
| PCBA GUITAR INPUT SPIDER2    | 06-34-0031   | DIODE GEN PUR DUAL 120V       | 1 D5   |
| PCBA GUITAR INPUT SPIDER2    | 12-54-0072   | IC OP-AMP DUAL TL072CD SM     | 1 U14  |
| PCBA GUITAR INPUT SPIDER2    | 21-00-6616   | JACK 1/4" TRS 6-PIN PCB MT    | 1 J5   |
| PCBA GUITAR INPUT SPIDER2    | 30-18-3030   | CLIP GND PCB .30x.30x.07      | 1 GF1  |
| PCBA GUITAR INPUT SPIDER2    | 35-00-0224   | PCB GUITAR INPUT REV.D        | 1 BREAKAWAY OF MAIN PCBA                                 |



*-The Spider II Guitar In PCBA-*

### **Guitar In PCBA (see page 1 of the schematic):**

#### **Analog signal consideration:**

An analog signal is input through jack J5, and is referenced to ground by R45, which establishes a 1Mega Ohm input impedance. Maximum input signal amplitude before clipping is about 5Vpp(0 to 200Hz).

The signal then passes to U14-A, where the signal is buffered, and also amplified by the pre-emphasis filter in the feedback loop (R48, R49 and C53). This single-pole pre-emphasis filter adds gain starting around 200Hz. Maximum gain is about 8dB at 20kHz.

The output of U14-A is the “low gain” analog signal and is sent to the Main PCBA (IN\_LEFT), and it is also sent to the input of U14-B.

U14-B increases the “low gain” signal by a gain of 16, and this resulting “high gain” signal is then sent to the main PCBA (IN\_RIGHT).

## **Digital signal consideration:**

The GUITAR\_SENSE' signal, which is sent to the main PCBA, indicates the presence of a jack plugged into J5. This signal is created by: J5 and the pull-up resistor R16 on the main PCBA. The signal is low if there is no jack, and high if a jack is plugged in.

## **EMI consideration:**

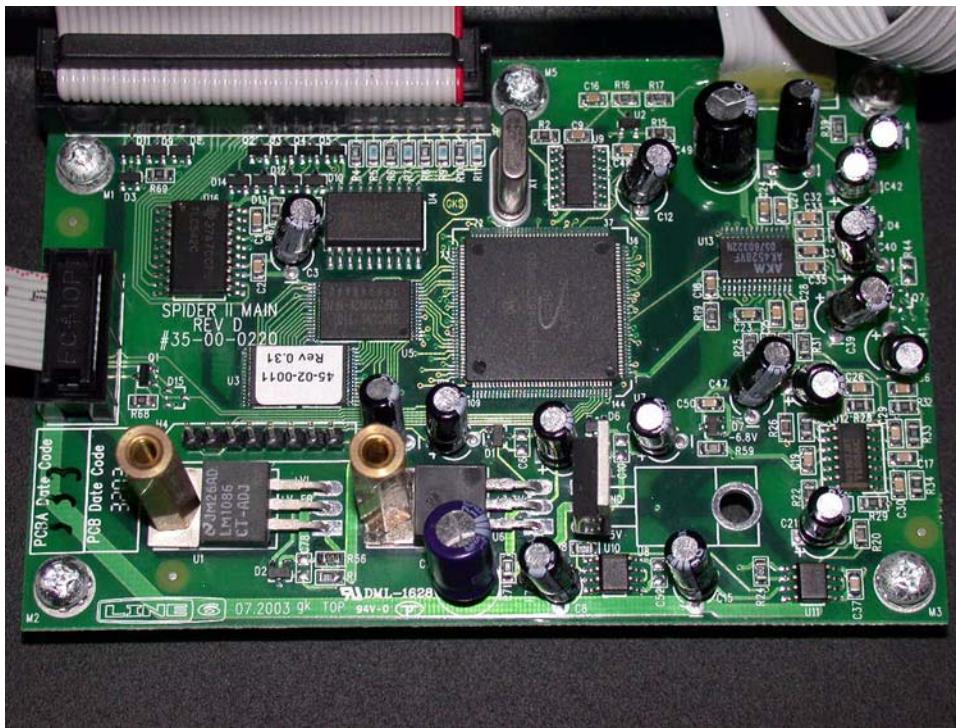
C45, C46 and GF1 help to shunt HF noise to the chassis and AGND' appropriately.

## **ESD consideration:**

S1, GF1 and C46 provide a low-impedance HF shunt to chassis ground for ESD.

D5 is a voltage clamp, and helps insure that ESD will not exceed the voltage rails of U14. R40 provides over-voltage current limiting for both D5 and U14.

## **Main PCBA**



**-The Spider II MAIN PCBA-**

## **Power supply:**

Power required by the Main, Guitar In, and User Interface PCBAs is provided by the local supply on the Main PCBA.

+VL and -VL (around +10.5VDC, -7VDC) arrive from the power supply PCBA via the cable connected to H1 on the Main PCBA.

There are four discrete supplies derived from +VL and -VL. They are: +V\_Fb (+9VDC), +5V, +3.3V and -6.8V. Please reference page 5 of the schematic.

$+V_{FB}$  is the source for the floorboard connection on the User Interface PCBA and also the +3.3V supply. It is mainly comprised of U1, an adjustable voltage regulator. The output of U1 is determined by the two resistors R1 and R56. D2 provides over-voltage and under-voltage protection, while C77 provides filtering.

+5V is produced by U8, a linear regulator. D6 provides over-voltage and under-voltage protection, while C14 provides filtering. The +5V supply is also further filtered by R54, R55 and C41 (schematic page 2) to provide +5VA, which is the positive source for the analog input circuitry. On the same page, R54, C24 and C20 provide a local analog supply for the codec, U13. On page 4 of the schematic, the +5V rail is also filtered by R67 and C1 to create +5V<sub>AD</sub>, which is the source for the A/D converter and the User Interface PCBA potentiometers.

+3.3V is produced by U6, an adjustable voltage regulator. The output of U6 is determined by the two resistors R71 and R72. D1 provides over-voltage and under-voltage protection, while C5 provides filtering.

-6.8V is the negative source for the analog input circuitry, and it is generated mainly by the voltage drop across D7, a zener diode. R59, C31, C47 and C50 provide filtering.

## **Analog signal consideration:**

(See page 2 of schematic)

### **Inputs to ADC:**

The “high gain” and “low gain” analog signals arrive from the Guitar In PCBA via the 6-conductor cable attached to location H3. The low gain signal IN\_LEFT is connected to the left input of codec U13 via R39 and C44, and the high gain signal IN\_RIGHT is connected to the right input of codec U13 via C42, R38, and R35. The series capacitors on each input are used as “DC blocking” capacitors since the analog inputs of U13 are biased to approximately  $\frac{1}{2}$  of its analog supply, or 2.5V. On the right channel “high gain” input to U13, a diode D4 is used to “clamp” the voltage to a safe level (-0.6V and +5VA+0.6V) since this channel is usually clipping with a nominal signal present at the input (R Ch. clipping starts around 0.31Vpp at input).

The resistors and capacitors (R50, R51, C39, C35 on LIN- and R37, R36, C40, C35 on RIN-) connected to the negative (-) inputs of U13 help ensure that each input is biased to  $\frac{1}{2}$  of the codecs supply (approximately +5VA).

The ADC of U13 converts the left and right analog signals into digital signals, which are then sent to the DSP (ADC\_DATA) for processing. Only one of the signals is chosen based on amplitude, before it is processed. The processing includes a digital de-emphasis filter to compliment the analog pre-emphasis filter.

### **Outputs of DAC:**

The codec receives the processed digital audio signal from the DSP at its serial data input (DAC\_DATA). The codec then converts the digital signal into analog signals, which are output on pins 25-28 of U13.

The analog outputs of codec U13 are differential, and have a DC bias of approximately  $\frac{1}{2}$  +5VA (about 2.5V). These differential analog signals are passed to U12-A and B, which is configured as a low-pass filter with gain of around 1.66. The frequency cutoff for the LPF is well above the audio pass-band. ( $f_c > 20\text{kHz}$ ) and is intended to reduce EMI. The resulting outputs of U12-A and B (+AUDIO\_L and +AUDIO\_R) are single-ended, and in-phase with the systems input. Since the power amplifier needs a differential signal (+/-AUDIO\_L/R) signals sent to power amplifier via H1 [page5]), and the headphone amplifier inputs require an inverted signal, amplifiers U12-C and D are configured to create the inverted audio output signals (-AUDIO\_L and -AUDIO\_R).

### **Headphone amplifiers:**

The -AUDIO signals go to the headphone amplifiers U10 and U11. Although these are stereo amplifiers, a single amplifier is used for each output channel. This is because a mono jack plugged into the headphone output could potentially cause both channels of the amplifier to thermally shut-down. Using separate amplifiers, the un-shorted amplifier(s) are unaffected by this condition. C21 and C22 are “DC-blocking” capacitors, since the inputs of each amplifier are biased to about 2.5V. R18, R20, R24, and R26 provide gain of 5.2 for each amplifier. C8 and C15 are bypass capacitors and filter the bias voltage for the inputs and outputs. The “DC blocking” capacitors for the headphone amplifiers are located on the User Interface PCBA.

### **Digital signal consideration:**

(See page 3 of the schematic)

The system reset is provided by U2, and is active low. All other peripheral reset and enable signals are provided by U7. The DSP U7 provides system control, input/output, and processing of the audio signals.

### **Clocks:**

The 2MHz system master clock is composed of the components connected to pin 55 (EXTAL) of U7. All other clocks are generated from the master clock within U7, using a PLL. The filter for the PLL is made up of the components connected to pins 45 and 46 of U7.

### **Codec clocks:**

The codec clocks are generated by U7. Since the system sampling frequency (fs) is 39.0625 kHz, this is the frequency of the LRCLK. BCLK is the bit clock and runs at a speed of 64fs, or 2.5MHz. Finally, the codec master clock, or MCLK, runs at 256fs, or 10MHz.

### **Memories:**

There are two memories (U3 and U5) connected to the DSP via the 18-bit address bus, and the 8-bit data bus respectively. The flash memory, U3 holds the system code, and is loaded into the DSP after U2 removes the master reset. The other memory, U5 is an SRAM, and is used for buffering processed audio signals.

**DSP interface to User Interface PCBA:** (See pages 3 &4 of schematic)

**FBV:** The floorboard signals are buffered through U9, the same buffer, which is used in the master clock oscillator. The signals are serial differential output and input.

Diodes D3,8,9,11 provide ESD/over-voltage protection for U7 and U9.

**LEDS:** The current source for the LED matrix on the UI PCBA is U4, a line driver which drives the LEDS with a 5VDC signal (~25%D.S.). Resistors R4-11 limit current to the LEDS. DSP port pins control the inputs of U4 directly with a refresh rate of around 10ms. The current sink for the LED matrix is the four individual MOSFETS Q2,3,4,5. Diodes D10,12,13,14 are used for ESD protection.

**ADC for UI:** U16 is an eleven channel ADC, which converts voltage levels for all potentiometers and button switches on the User Interface PCBA. This ADC is interfaced to the DSP via the SPI bus, and has a “read rate” of about one channel every 500us.

**JTAG:** The JTAG port of the DSP is available through the uninstalled H4 header. This connection is used for development and in-house software upgrades.

#### **Control/sense lines:**

**/MUTE:** Is the signal, which is used to mute the power amplifier, and is level-translated from 3.3V to +VL (around 7+V) by Q1 and R68.

**HP\_SENSE:** Is an active high signal, which indicates if a jack has been plugged into the headphone jack on the UI PCBA. The signal is generated by R65 and the HP jack.

**GUITAR\_SENSE:** See Guitar In PCBA above.

**MONO/STEREO:** Is a signal from the power amplifier indicating its configuration. A mono configuration is indicated by a “high” and a stereo configuration is indicated by a “low”.

## **Troubleshooting Guide – Spider II**

This section outlines some common problems that may be encountered when troubleshooting a Spider II.

1. The FLASH memory on the Spider II MAIN PCBA is updated with any setting changes (e.g. knob change, etc...) that occur at any time. It is not the same as the 7-second rule used on the POD XT and POD XT Pro. So if any settings are not being saved. Check for faulty soldering or components on the DSP's memory bus (which includes the DSP U7, the FLASH U3, and SRAM U5) especially the FLASH U3.
2. The board is powered up but the rest of the system is frozen (e.g. no LED's, no POTS or buttons work, no audio, etc). First, check that the crystal X1 is generating the 2MHz clock. This can be checked at U9 pin 6. Second, check for faulty soldering on the DSP's memory bus. Finally, check for faulty components on the DSP bus side or if possible check that the FLASH U3 is programmed.
3. The board powers up, the UI is displaying the correct items, the buttons and knobs work, but there is NO AUDIO. First, check the audio input circuitry and make sure audio makes it through the input op-amp U14 (on the guitar input PCBA) all the way to the CODEC U13 inputs. Second, make sure that the CODEC has the appropriate clocks driving it (See section CLOCK SYSTEM above). Third, check the audio path from the output of the CODEC to the power amp and the headphone circuitry. Fourth, check that the signal GUITAR\_SENSE is HIGH (HIGH means that a jack is plugged into the Spider II's guitar input.). If this signal is not HIGH then the guitar in jack J5 or the support circuitry for the sense line is faulty. If the system thinks that a plug is not plugged into the guitar jack it will automatically mute the audio. Fifth, the audio is correct all the way to the CODEC and the clocks are correct then it is possible that the DSP or an item on its bus is malfunctioning. At this point check for faulty soldering on the DSP or other items on its bus. Sixth, the audio is correct all the way to the power amp but no audio out of the power amp. Check that the mute circuitry for the power amp is functioning properly. Finally, the audio is correct all the way to the HEADPHONE amps but no audio out the headphone out. Check the headphone amp circuitry. Remember, there are two headphone amp IC's one for the left and one for the right output which go to the tip and ring respectively on the headphone output jack on the break-away. You may also want to check that the HP\_SENSE line on the MAIN PCBA is not LOW when the jack is plugged in.
4. The LED's work, but the POTS & BUTTONS do not. First, check if you can get into test mode by powering down and then power up while pressing the TAP TEMPO button. (If you are able to get into test mode you will see the Channel A and D LED's light up GREEN and the Channel B and C LED's light RED. If this happens run the POTS & BUTTON TEST by pressing the Channel B button and isolate the switch or pot that is not working). If you are not able to get into test mode check that the support circuitry for the switches is functioning properly and that the signal SW is getting from the ADC U16 on the MAIN PCB to the switch circuitry on the UI PCBA. Check that the ADC U16 on the MAIN PCB is getting the clocks and\or signals from the DSP.

5. The board seems to be working properly but the LED's do not work. First power down and then power up in test mode (Press and hold the TAP TEMPO button on power up, then press the Channel A button to run the LED Test). If the LED's fail in test mode check the LED\_COL[1:8] lines coming from the octal buffer driver U4 or the DSP and the LED\_ROW[1:4] lines coming from FET's Q2-5 or from the DSP.
6. The board is running but the RJ-45 interface to floorboard (FBX, FBV, FBC, etc.) does not work. Check for faulty soldering on the DSP, IC U9, etc... Also, check that signals from the DSP or IC U9 are getting to the HEADPHONE\_RJ45 breakaway PCBA along with the 9V supply rail +VFB.

Additional Tips:

- ❑ Use the proper speaker cable connector on the 212 (use the speaker output PCB connector H7 rather than the one on the power supply PCB) when putting the amp back together.
- ❑ Pay attention to the fact that there is a bi-polar electrolytic cap on the power amp (I don't believe we use these caps in any other product).
- ❑ Be careful to not twist too much the soldered ribbon cables (guitar input PCBA to main, RJ45 breakaway to UI, power supply to power amp, and on 212\HD power amp to speaker out PCB).
- ❑ Point at a convenient grounding point for scope (I.e. the +5V regulator heat sink tap)
- ❑ Clearly understand the different AC voltage wiring configurations.
- ❑ Be very careful to fully remove the head mounting screws before re-installing the head in the cabinet to avoid scratching the front panel paint.
- ❑ Make sure that the guitar input PCB index is in the metal work slot before tightening the jack's nut.