

WE SIMPLY SOUND BETTER.

# **AVR 315 - AVR 317**

## **SERVICE MANUAL**

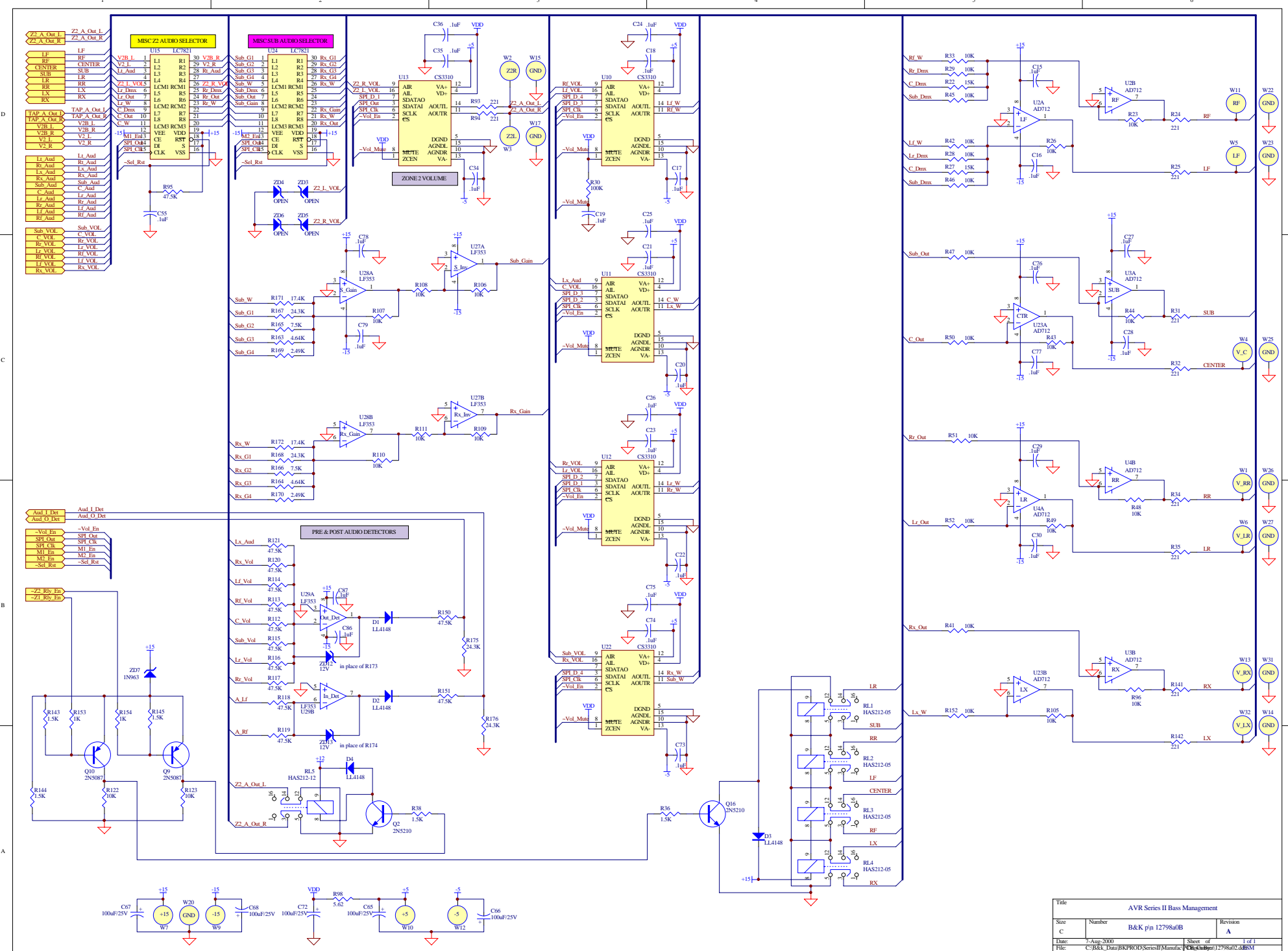
B&K COMPONENTS, LTD.  
2100 Old Union Road  
Buffalo, New York 14227-2725  
U.S.A.

**B & K**

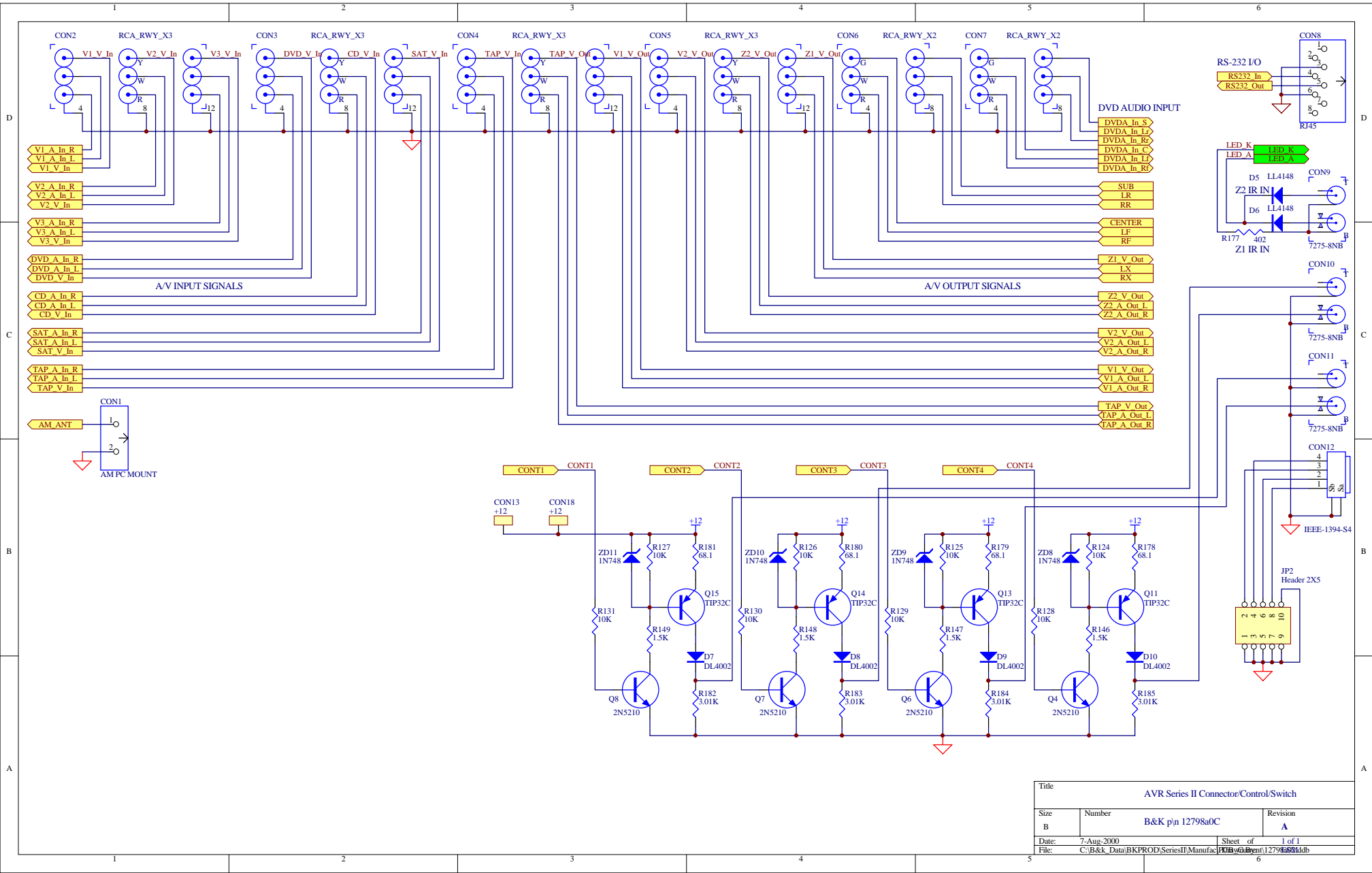
WE SIMPLY SOUND BETTER.

# **Schematics**

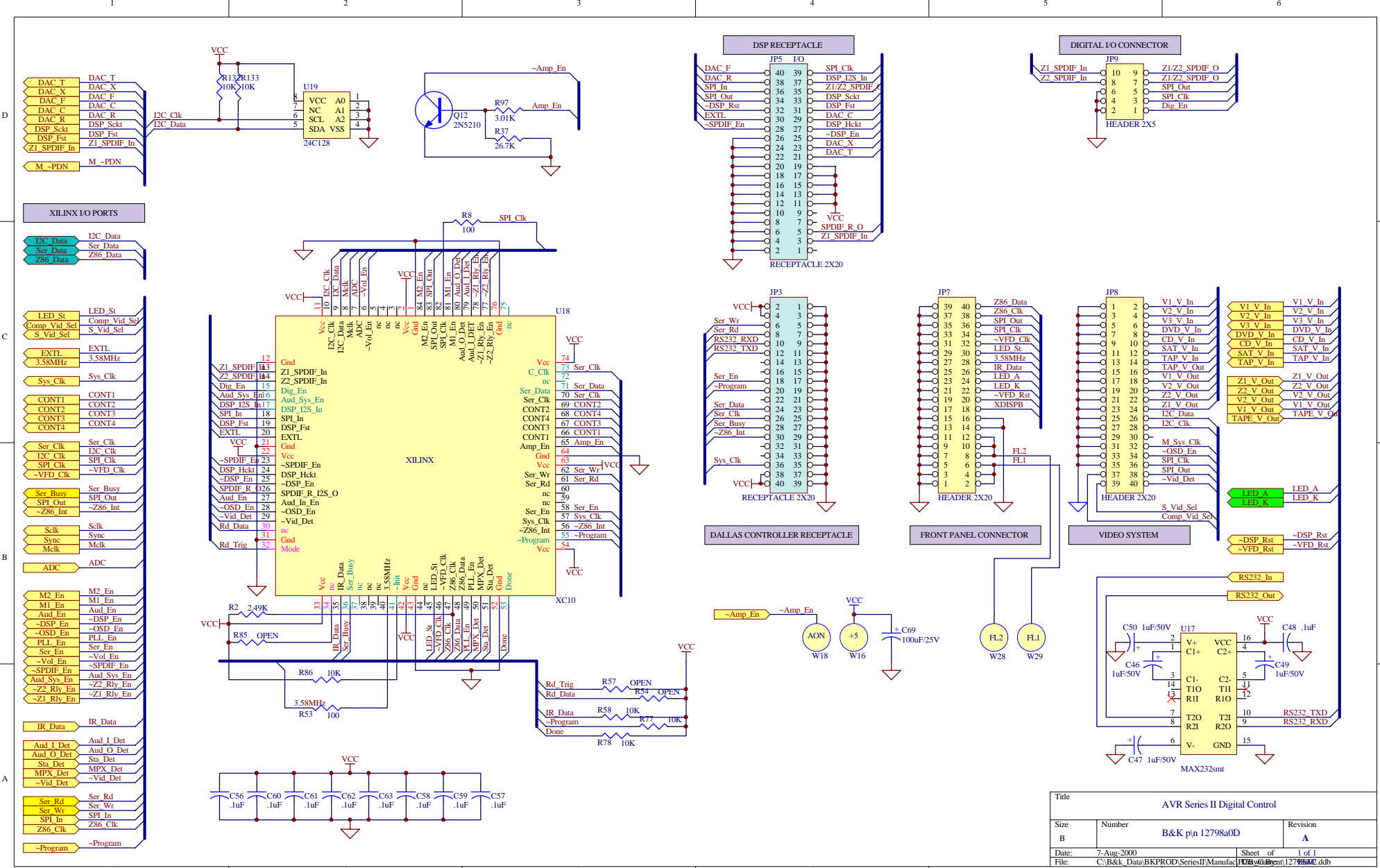
B&K COMPONENTS, LTD.  
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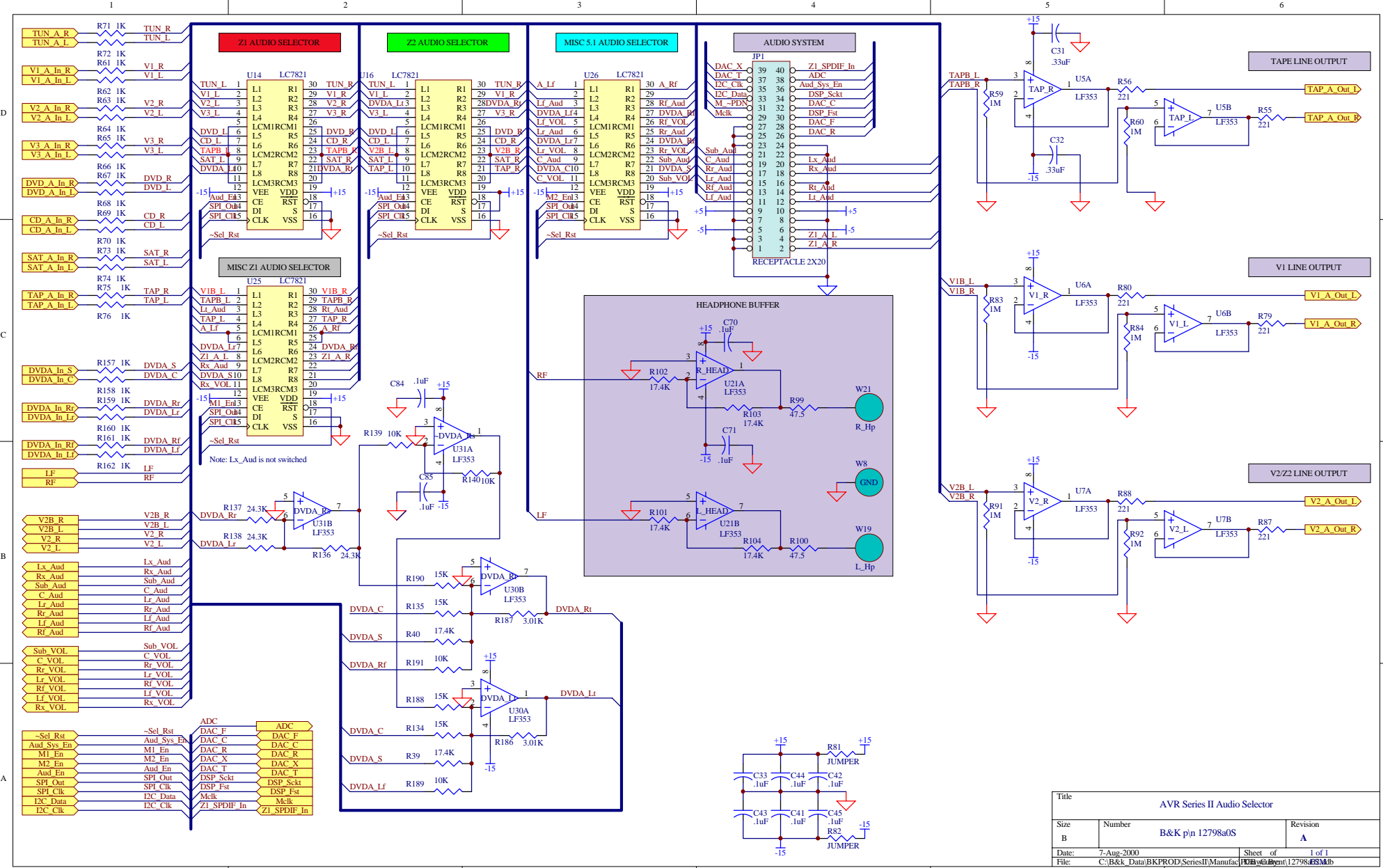
| Title                         |                                      |            |                  |
|-------------------------------|--------------------------------------|------------|------------------|
| AVR Series II Bass Management |                                      |            |                  |
| Size                          | Number                               | B&K p/n    | Revision         |
| C                             | 7-Aug-2000                           | 12798A0B   | A                |
| Date                          | 7-Aug-2000                           | Sheet of   | 1 of 1           |
| File                          | C:\B&K_Data\B&KPROD\SeriesII\Mam\dms | Printed on | 12/28/02 0:38:51 |



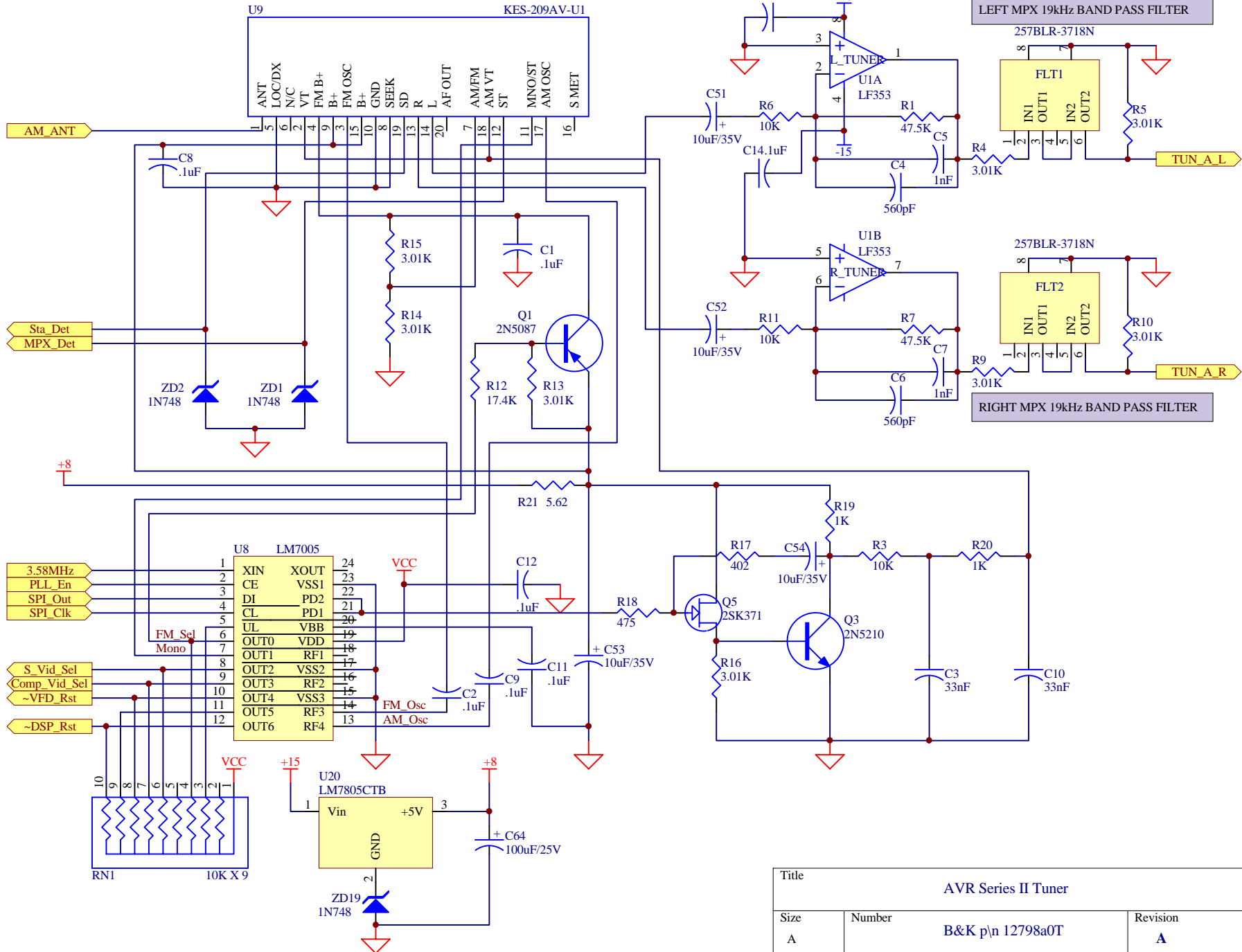
|       |   |                  |  |          |   |
|-------|---|------------------|--|----------|---|
| Title |   |                  | AVR Series II Connector/Control/Switch |          |   |
| Size  | Number  | B&K p/n 12798a0C |  | Revision | A |
| Date: | 7-Aug-2000  | Sheet of         | 1 of 1                                 |          |   |
| File: | C:\B&K_Data\BKPROD\SeriesII\Manufact\PCB\G1Element\12798a0C.ddb | PCB Element      | 12798a0C.ddb                           |          |   |



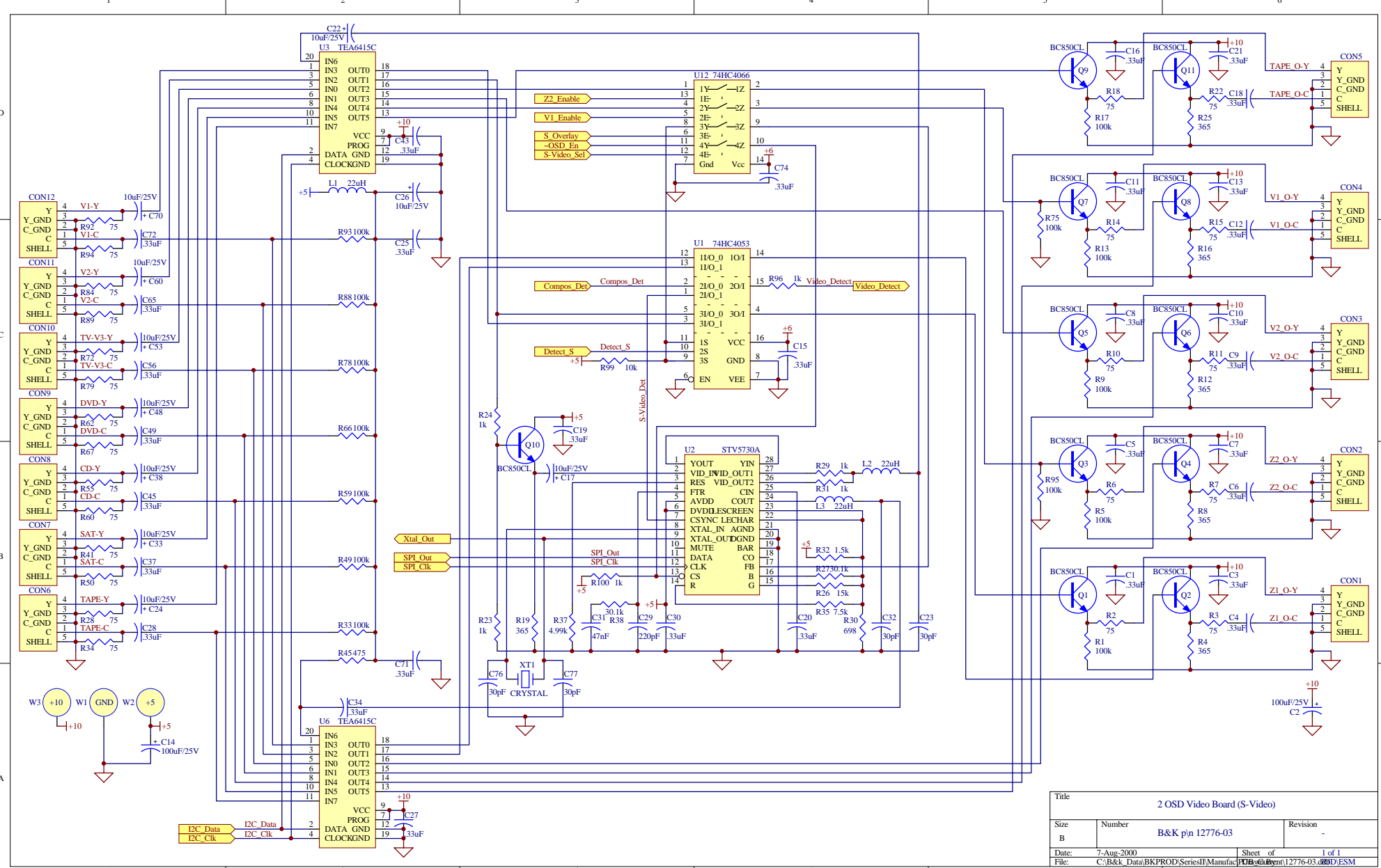
| Title                         |   |                  |          |
|-------------------------------|---|------------------|----------|
| AVR Series II Digital Control |   |                  |          |
| Size                          | Number  | B&K p/n 12798a0D | Revision |
| B                             |   |                  | A        |
| Date:                         | 7-Aug-2000  | Sheet of         | 1 of 1   |
| File:                         | C:\B&K_Data\BKPROD\SeriesII\Manufact\12798a0D.ddb | Printed by:      |          |



| Title                        |   |                  |              |
|------------------------------|---|------------------|--------------|
| AVR Series II Audio Selector |   |                  |              |
| Size                         | Number  | B&K p/n          | Revision     |
| B                            |   | B&K p/n 12798a0S | A            |
| Date:                        | 7-Aug-2000  | Sheet of         | 1 of 1       |
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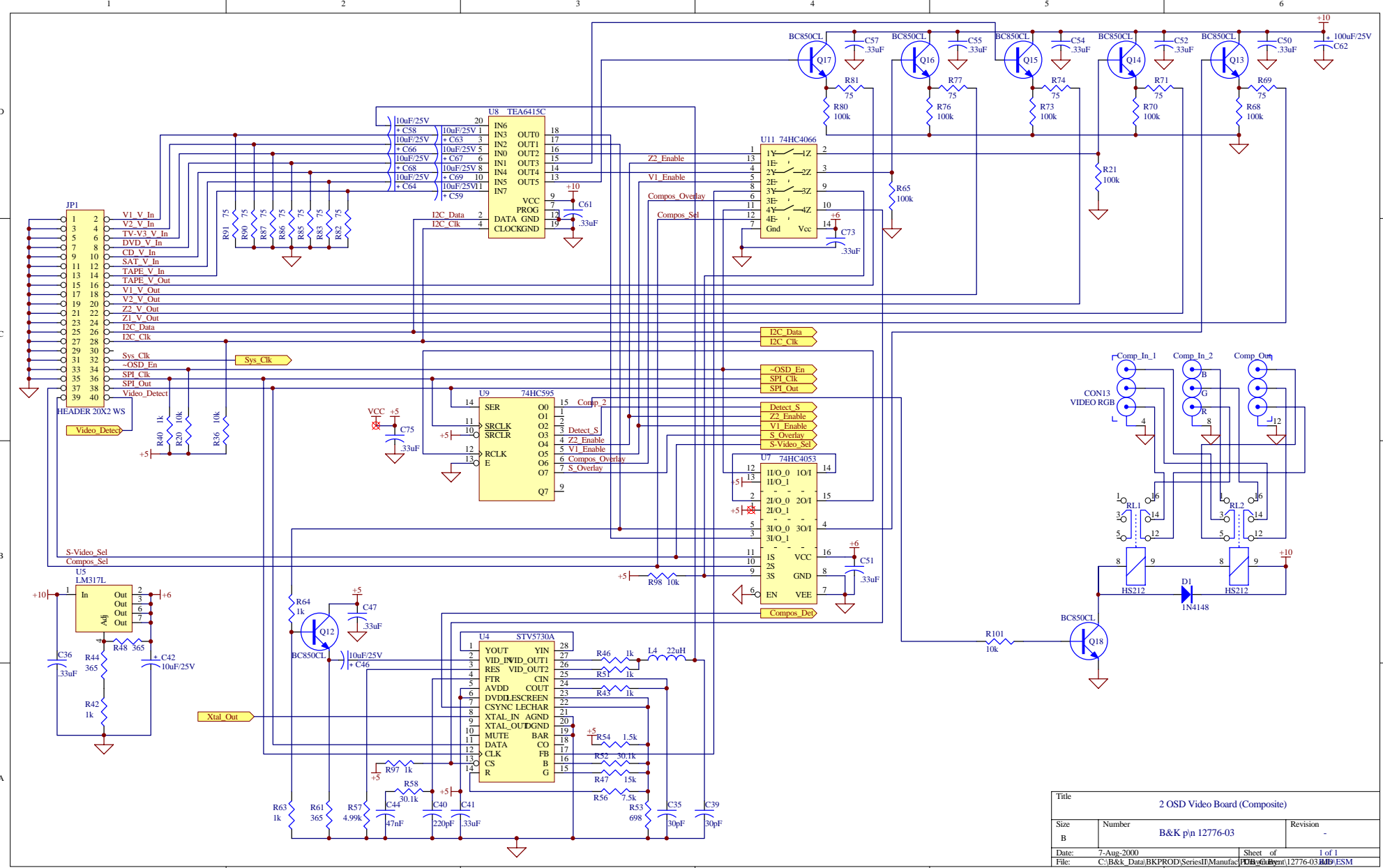


|       |  |          |                     |  |  |
|-------|--|----------|---------------------|--|--|
| Title |  |          | AVR Series II Tuner |  |  |
| Size  | Number   | Revision |                     |  |  |
| A     | B&K p/n 12798a0T   | A        |                     |  |  |
| Date: | 7-Aug-2000   | Sheet of | 1 of 1              |  |  |
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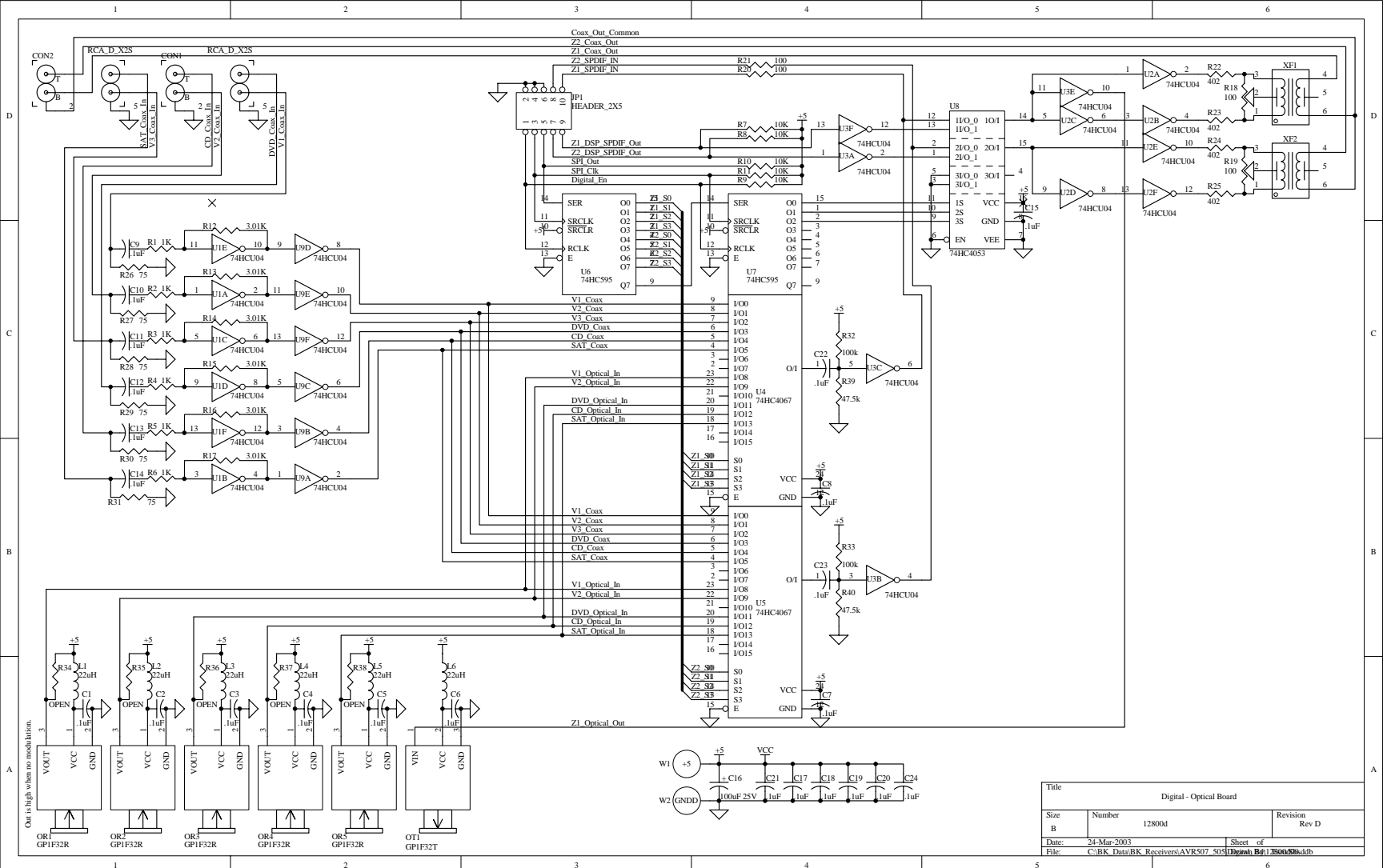


|                             |  |                  |          |
|-----------------------------|--|------------------|----------|
| Title                       |  |                  |          |
| 2 OSD Video Board (S-Video) |  |                  |          |
| Size                        | Number   | B&K p/n 12776-03 | Revision |
| B                           |  |                  | -        |
| Date:                       | 7-Aug-2000   | Sheet of         | 1 of 1   |
| File:                       | C:\B&K_Data\BKPROD\SeriesII\Manufact\PCB\Layout\12776-03.DBD | ESM              |          |

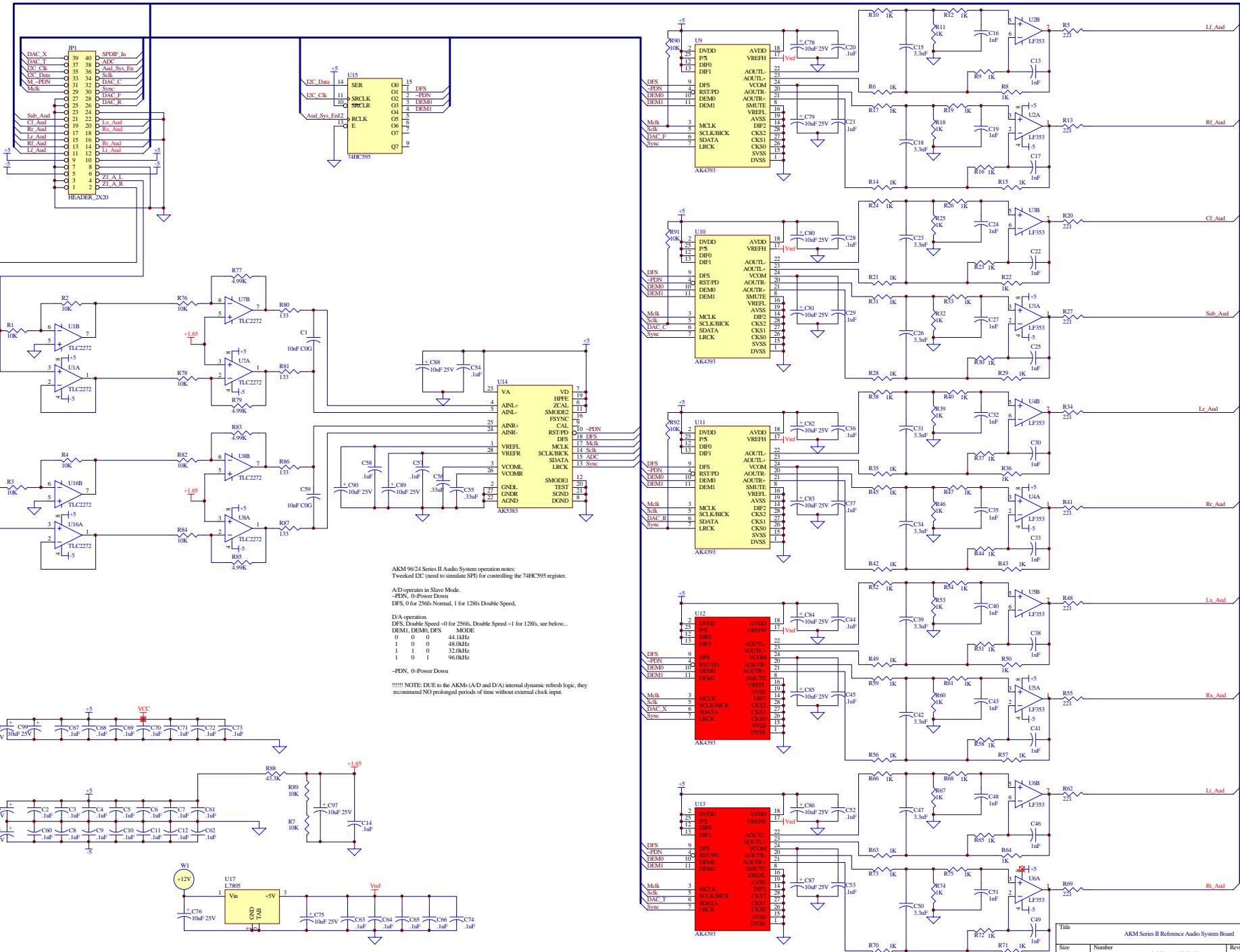




|       |  |                  |                               |          |   |
|-------|--|------------------|-------------------------------|----------|---|
| Title |  |                  | 2 OSD Video Board (Composite) |          |   |
| Size  | Number   | B&K p/n 12776-03 |                               | Revision | - |
| B     |  |                  |                               |          |   |
| Date: | 7-Aug-2000   | Sheet of         | 1 of 1                        |          |   |
| File: | C:\B&K_Data\BKPROD\SeriesII\Manufact\PCB\12776-03.BD | Drawn by:        | ESM                           |          |   |



| Title                   |   |          |
|-------------------------|---|----------|
| Digital - Optical Board |   |          |
| Size                    | Number  | Revision |
| B                       | 12800d  | Rev D    |
| Date:                   | 24-Mar-2003   | Sheet of |
| File:                   | C:\BK_Data\BK_Recievers\AVRS07_5051\Drawn_Brd\12800d00a.dtb |          |



AKM 9624 Series II Audio System operation notes:  
 Tweaked L2C (need to simulate SPI) for controlling the 74HC595 register.

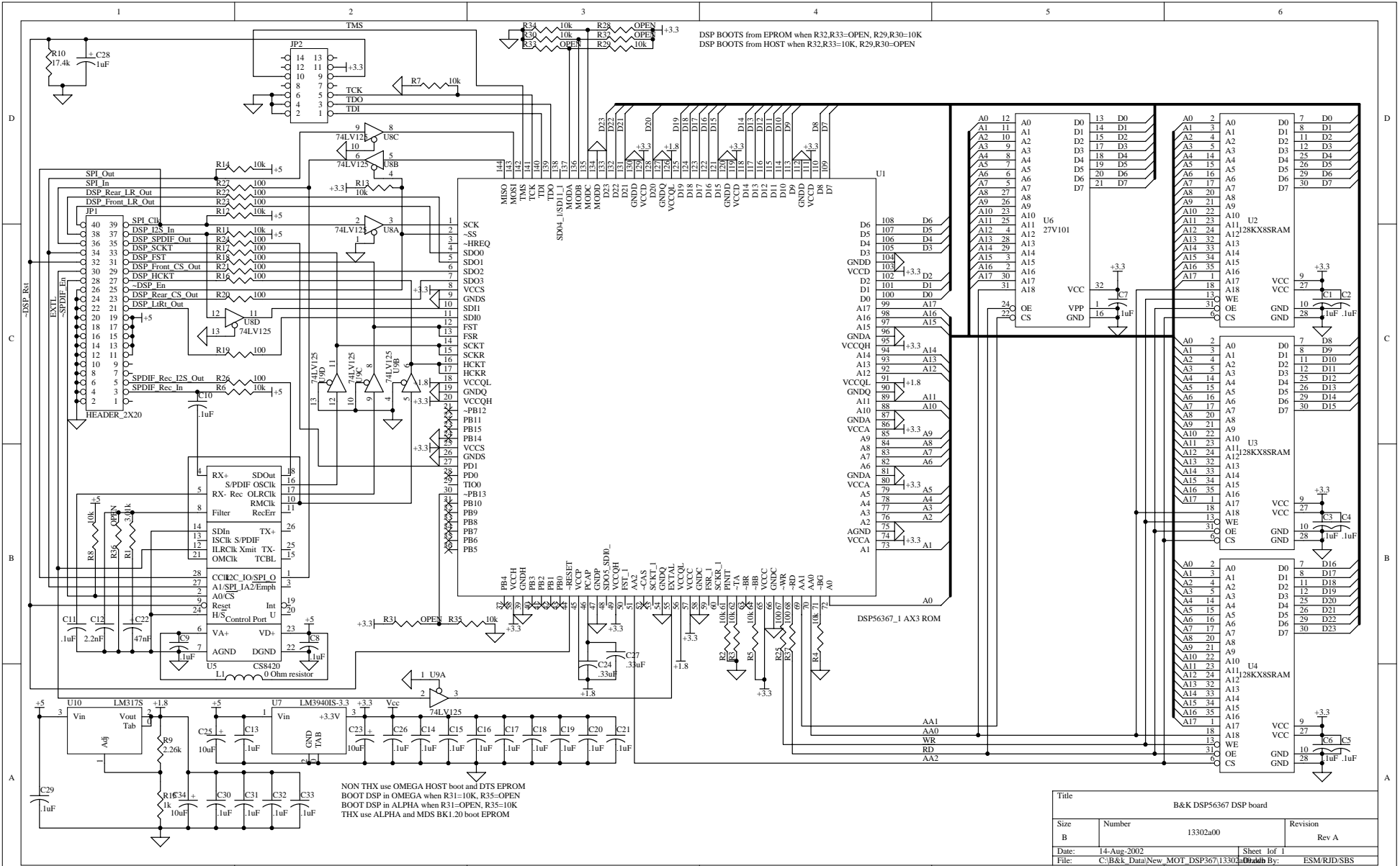
A/D operates in Slave Mode.  
 -PDN, 0=Power Down  
 DFS, 0 for 256fs Normal, 1 for 128fs Double Speed.

D/A operation.  
 DFS, Double Speed=0 for 256fs, Double Speed=1 for 128fs, see below...  
 DEM1, DEM0, DFS MODE  
 0 0 0 44.1kHz  
 1 0 0 48.0kHz  
 1 1 0 32.0kHz  
 1 0 1 96.0kHz

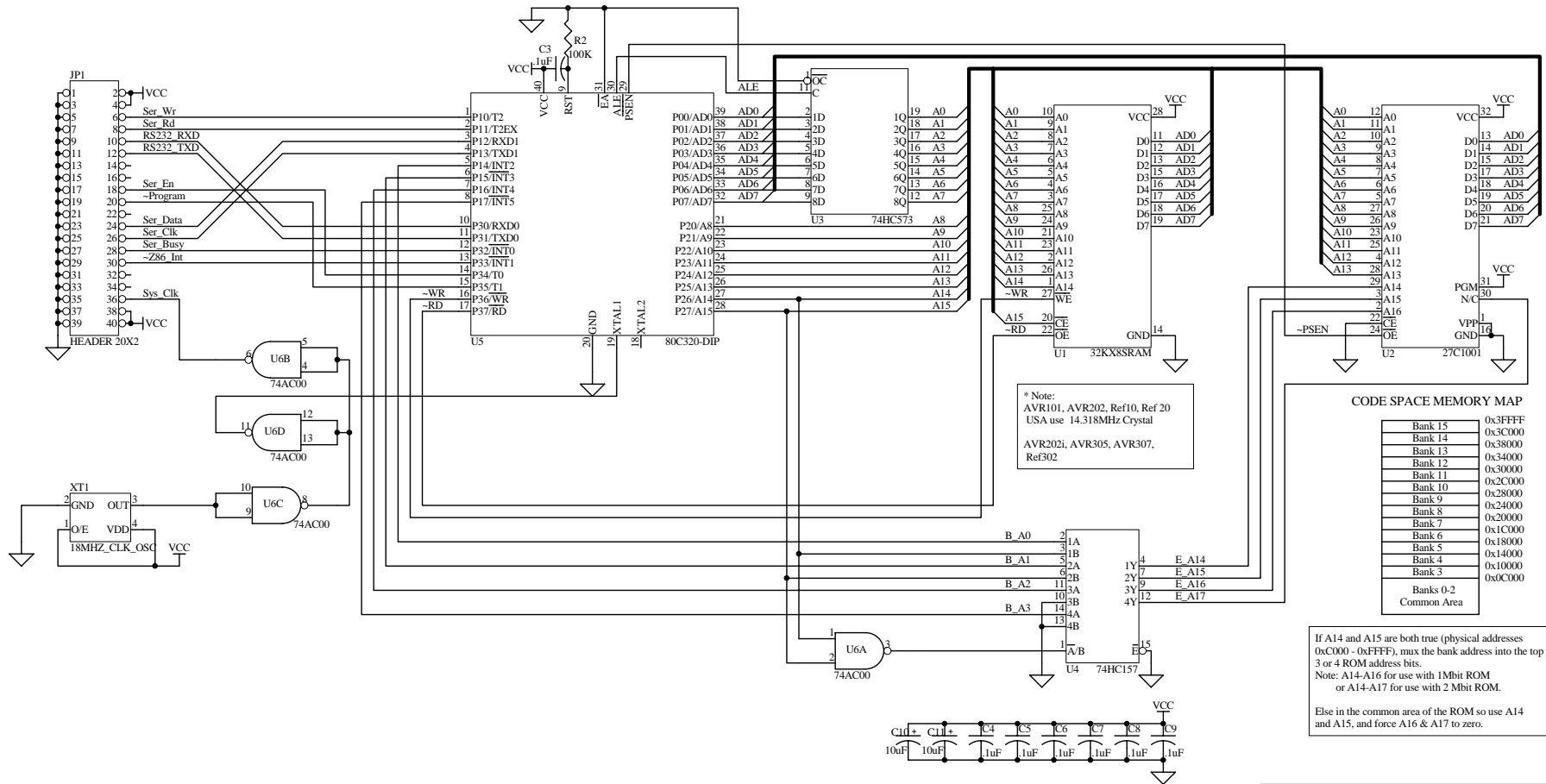
-PDN, 0=Power Down

!!!!!! NOTE: DUE to the AKMs (A/D and D/A) internal dynamic refresh logic, they recommend NO prolonged periods of time without external clock input.

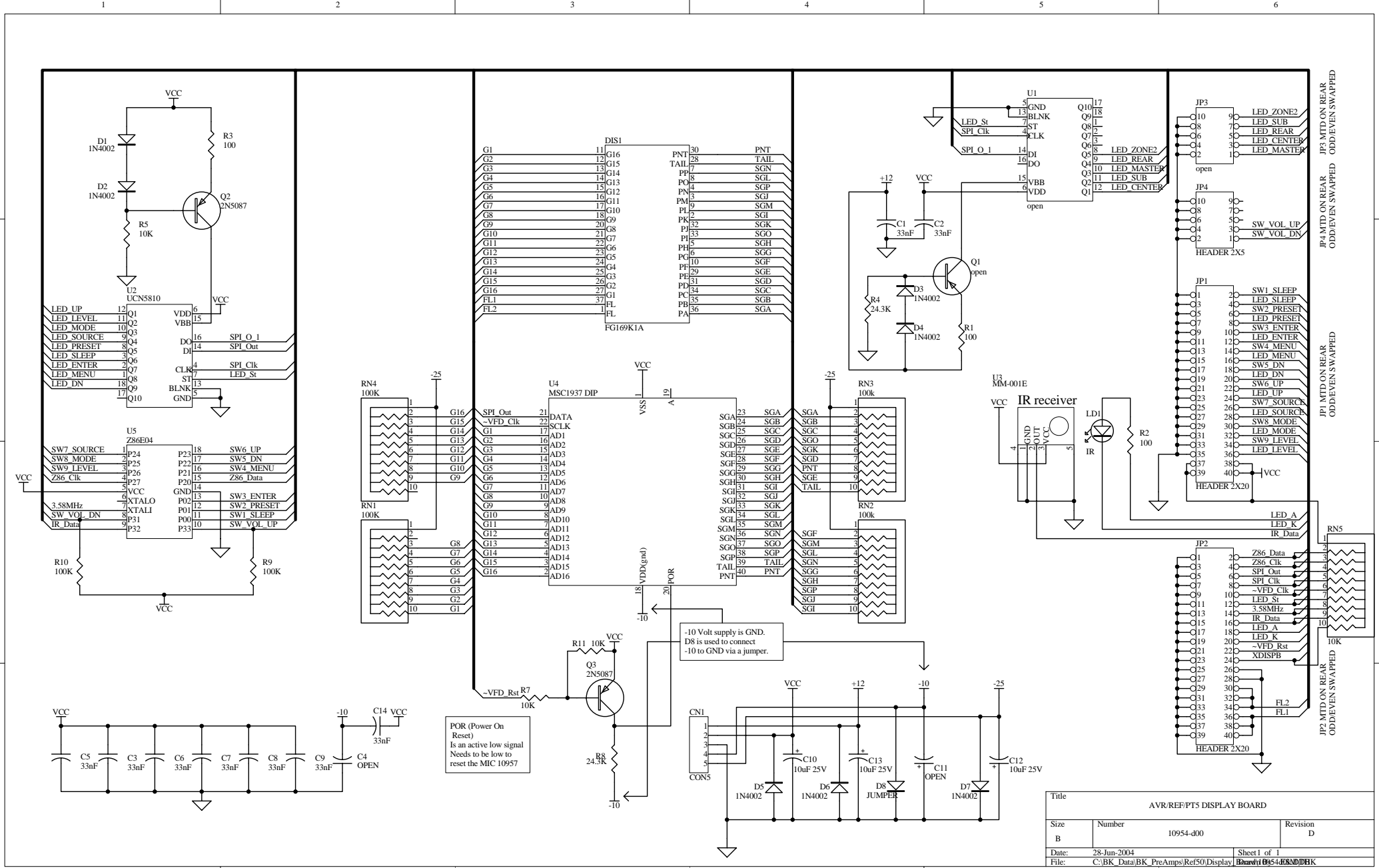
|  |                                   |                  |          |
|--|-----------------------------------|------------------|----------|
| Title                                      |                                   |                  |          |
| AKM Series II Reference Audio System Board |                                   |                  |          |
| Size                                       | Number                            | B&K pin 12797-00 | Revision |
| Date                                       | 7-Aug-2000                        |                  | A        |
| File:                                      | C:\B&K_Dsm\BKPProdSeriesII\Mamduc | Sheet 1 of       | 1        |
|  |                                   | Sheet 1 of       | 1        |
|  |                                   | Sheet 1 of       | 1        |



| Title                  |                                     |              |             |
|------------------------|-------------------------------------|--------------|-------------|
| B&K DSP56367 DSP board |                                     |              |             |
| Size                   | Number                              | 13302a00     | Revision    |
| B                      |                                     |              | Rev A       |
| Date:                  | 14-Aug-2002                         | Sheet 1 of 1 | Drawn By:   |
| File:                  | C:\B&K_Data\New_MOT_DSP367\13302a00 |              | ESM/RJD/SBS |



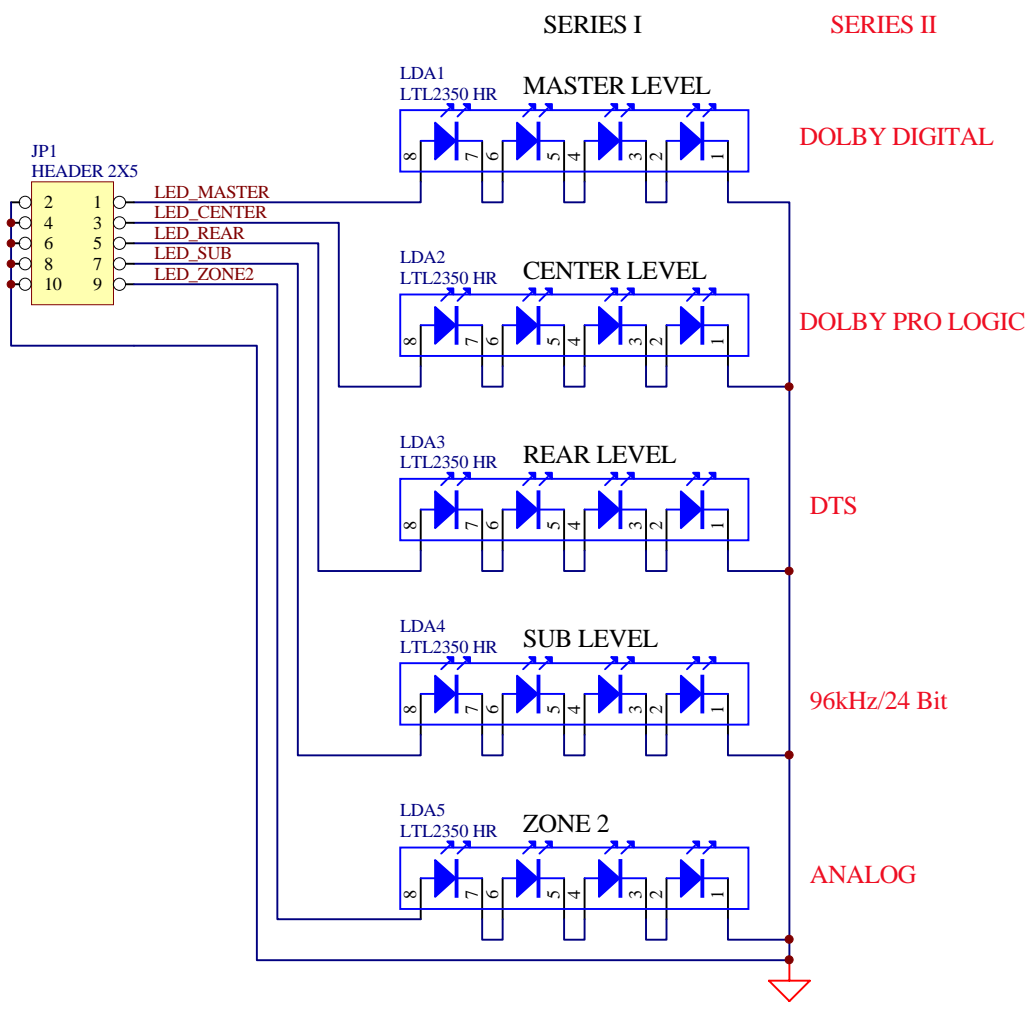
|  |  |                 |
|--|--|-----------------|
| Title                                      |  |                 |
| AVR/REF MICRO-CONTROLLER BOARD with RS-232 |  |                 |
| Size                                       | Number   | Revision        |
| B  | 12741600   | B               |
| Date:                                      | 28-Jun-2004  | Sheet of 1 of 1 |
| File:                                      | C:\BK_Data\BK_PreAmps\Ref50\Control\Board\B2741600.DDB | SBS/RJD/ESM     |



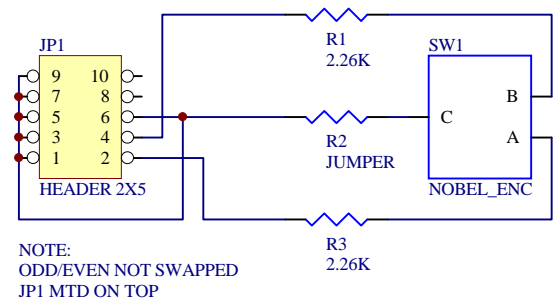
**POR (Power On Reset)**  
Is an active low signal  
Needs to be low to  
reset the MIC 10957

-10 Volt supply is GND.  
D8 is used to connect  
-10 to GND via a jumper.

|                           |  |              |  |
|---------------------------|--|--------------|--|
| Title                     |  |              |  |
| AVR/REF/PT5 DISPLAY BOARD |  |              |  |
| Size                      | Number   | Revision     |  |
| B                         | 10954-400  | D            |  |
| Date:                     | 28-Jun-2004  | Sheet 1 of 1 |  |
| File:                     | C:\BK_Data\BK_PreAmps\Ref50\Display Board\0954-400\BOM\BOM.DWG |              |  |

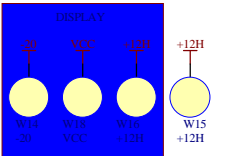
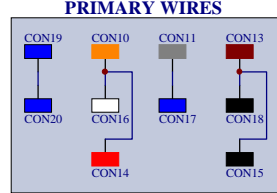
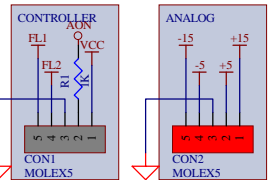
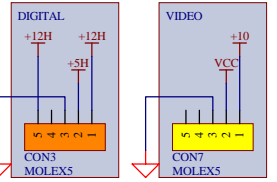
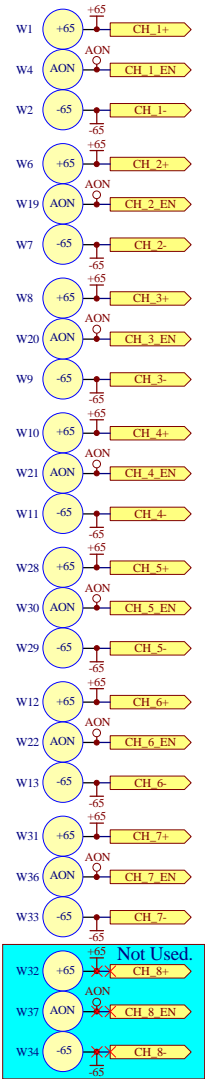
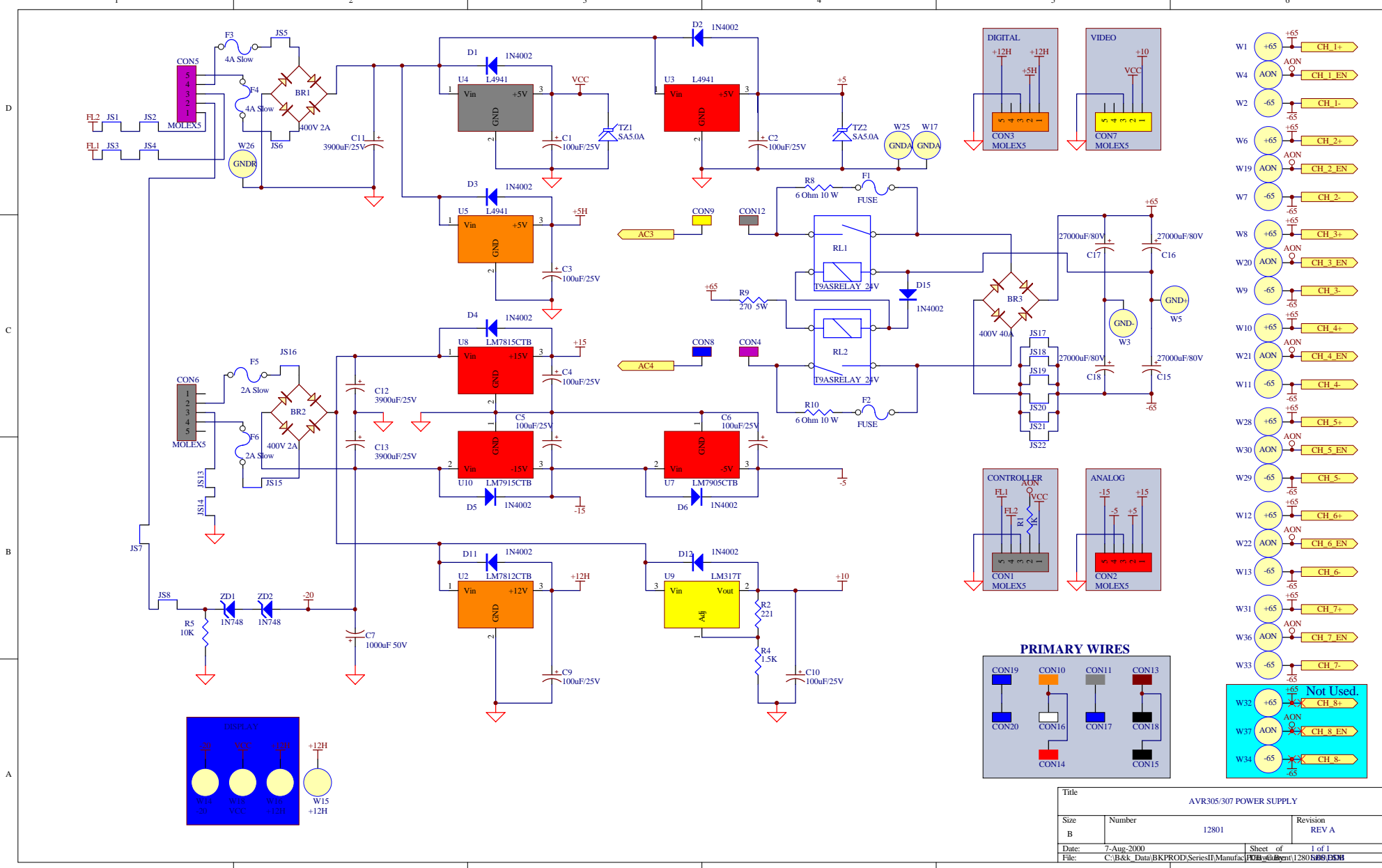


|  |   |              |
|--|---|--------------|
| Title                                      |   |              |
| AVP/AVR/AVP/REF VOLUME or STATUS LED BOARD |   |              |
| Size                                       | Number  | Revision     |
| A  |   | -            |
| Date:                                      | 7-Aug-2000  | Sheet 1 of 1 |
| File:                                      | C:\B&k_Data\BKPROD\SeriesII\Manufact\PCB\Gibgent\15051001.DDB |              |

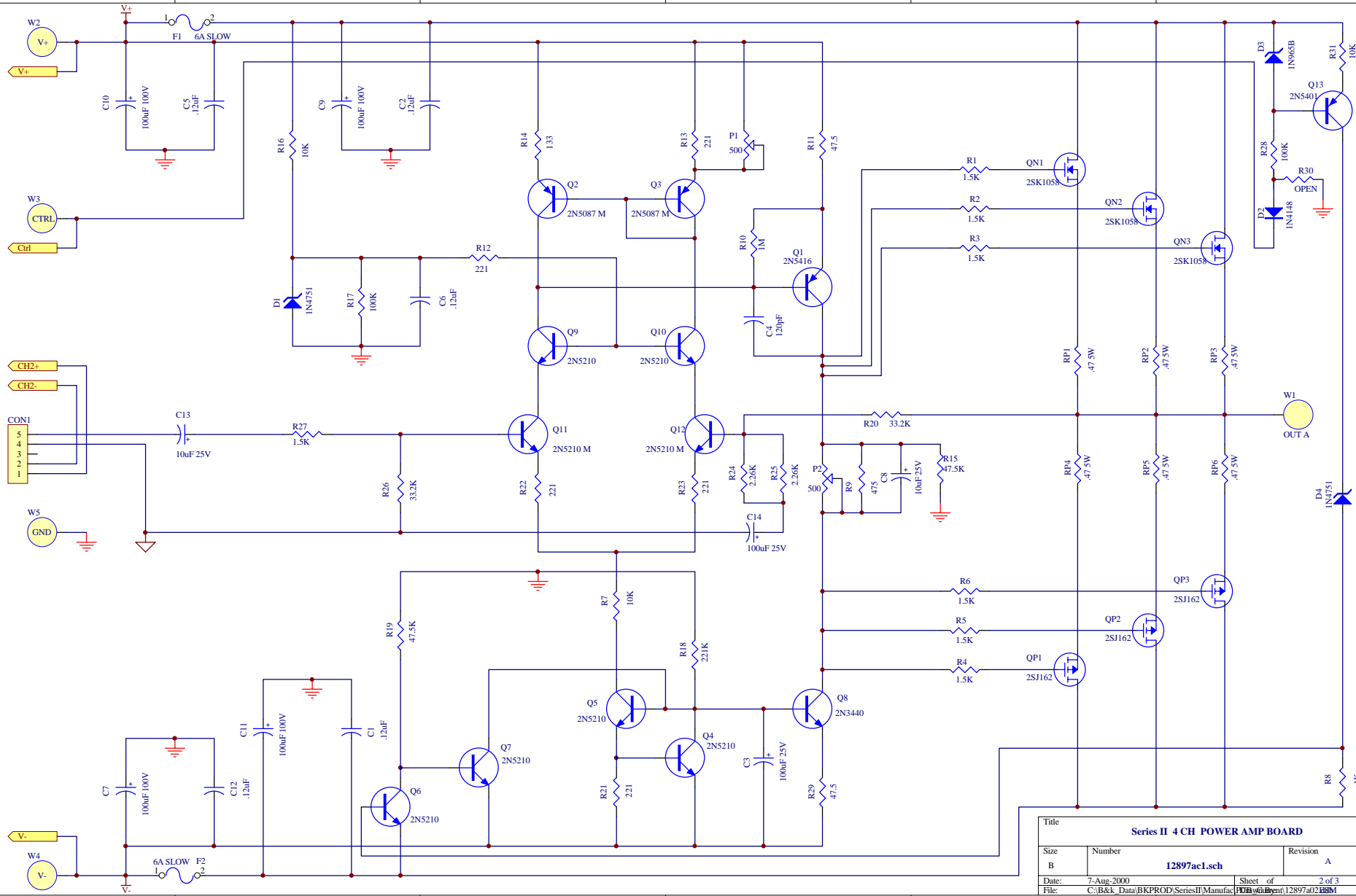


|                                     |  |              |
|-------------------------------------|--|--------------|
| Title                               |  |              |
| AVP/AVR/REF/TP ROTARY ENCODER BOARD |  |              |
| Size                                | Number   | Revision     |
| A                                   |  | A            |
| Date:                               | 7-Aug-2000   | Sheet 1 of 1 |
| File:                               | C:\B&k_Data\BKPROD\SeriesII\Manufact\HOB\Gibrent\1376a00.DDB |              |

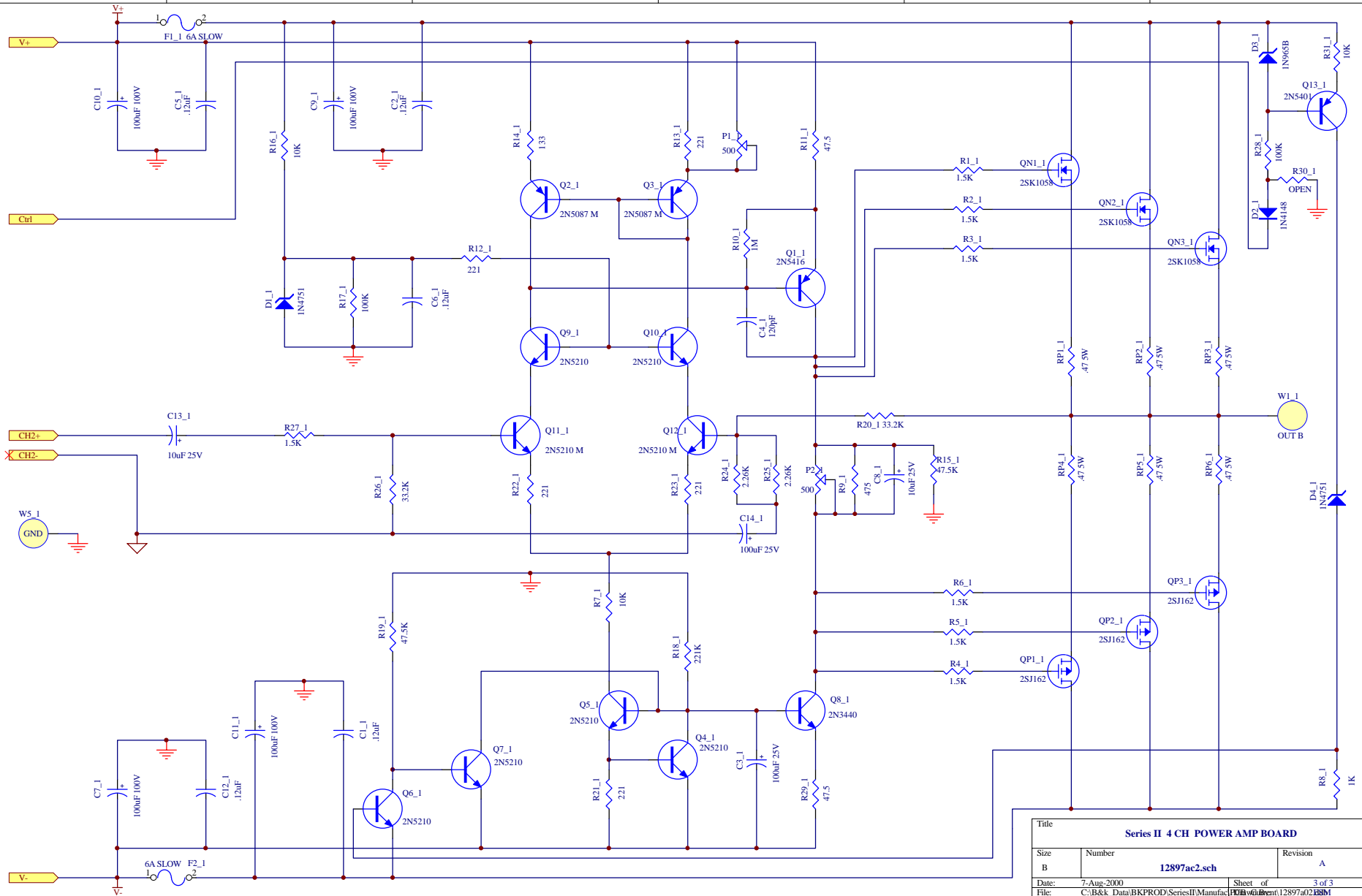




| Title                   |   |          |           |
|-------------------------|---|----------|-----------|
| AVR305:307 POWER SUPPLY |   |          |           |
| Size                    | Number  | Revision |           |
| B                       | 12801   | REV A    |           |
| Date:                   | 7-Aug-2000  | Sheet of | 1 of 1    |
| File:                   | C:\B&K_Data\BKPROD\SeriesI\Manufact\PCB\pcb\12801\12801.BDD | PCB      | 12801.BDD |



| Series II 4 CH POWER AMP BOARD |  |                 |
|--------------------------------|--|-----------------|
| Title                          | Series II 4 CH POWER AMP BOARD                     |                 |
| Size                           | Number   | Revision        |
| B                              | 12897ac1.sch                                       | A               |
| Date:                          | 7-Aug-2000   | Sheet of 2 of 3 |
| File:                          | C:\B&K_Data\BKPROD\SeriesII\Manufact\12897a0212897 | 12897a0212897   |



| Series II 4 CH POWER AMP BOARD |   |            |          |
|--------------------------------|---|------------|----------|
| Title                          | Number  | Revision   |          |
| B                              | 12897ac2.sch                                      | A          |          |
| Date:                          | 7-Aug-2000  | Sheet of   | 3 of 3   |
| File:                          | C:\B&K_Data\BKPROD\SeriesII\Manufact\12897ac2.sch | Printed at | 12897a02 |