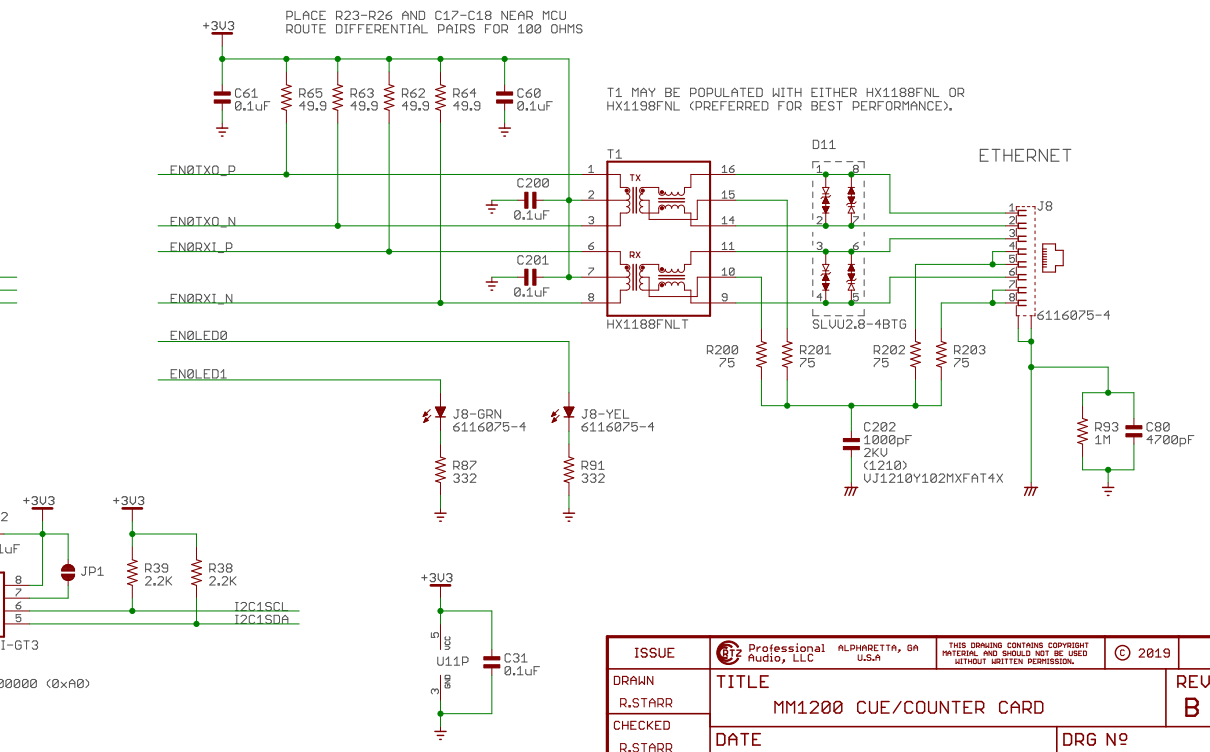
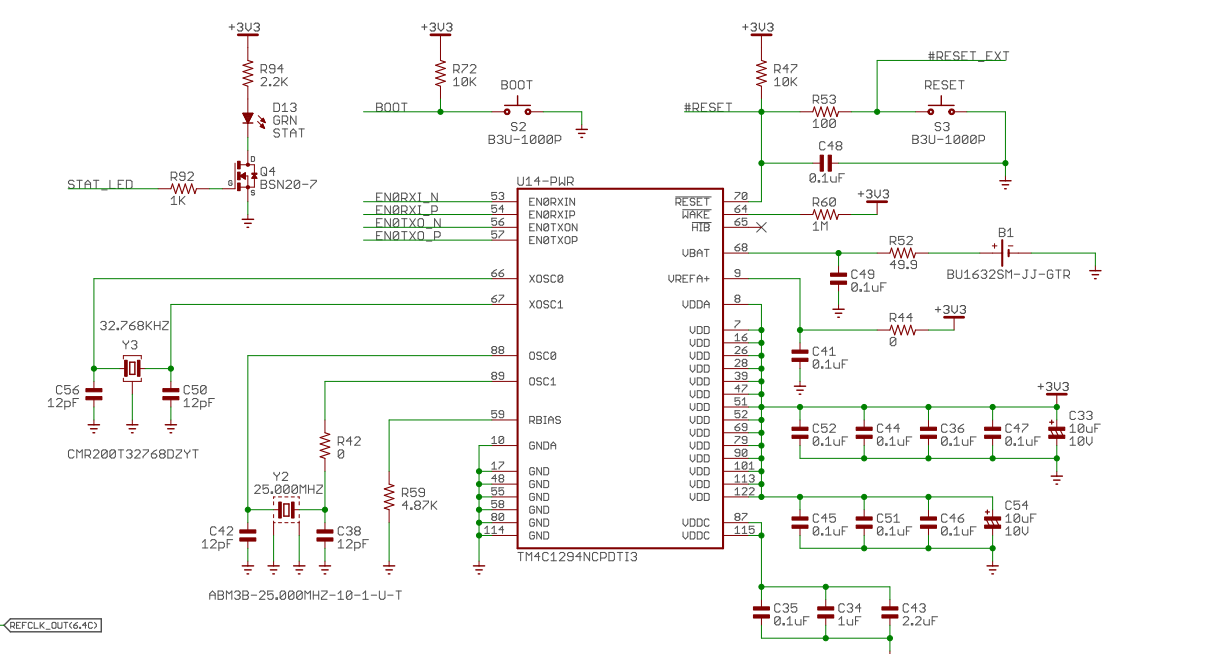
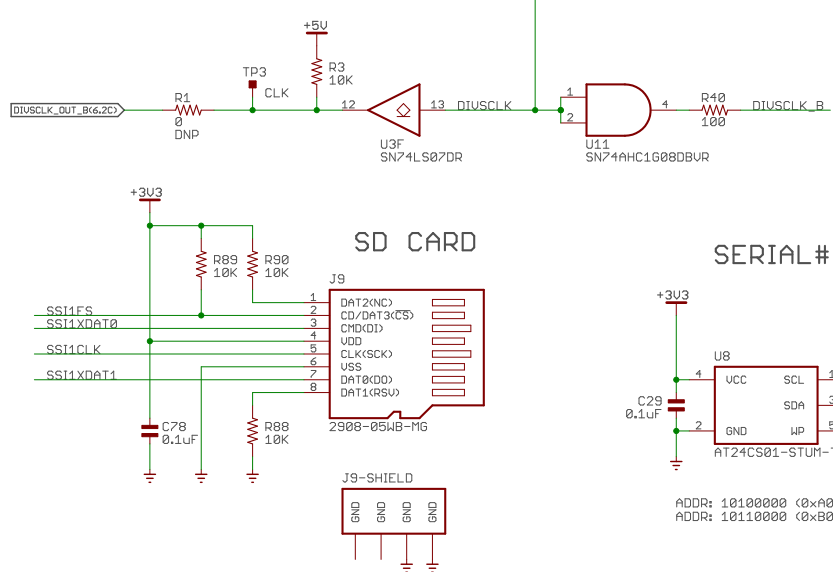
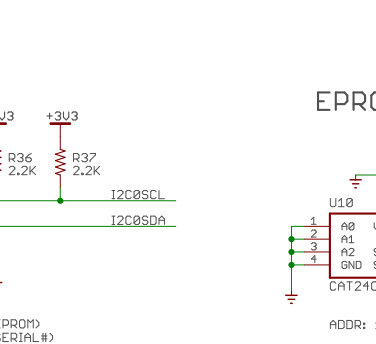
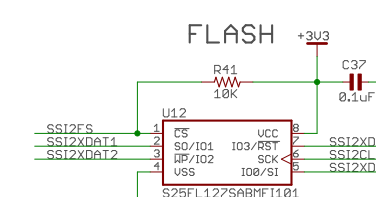
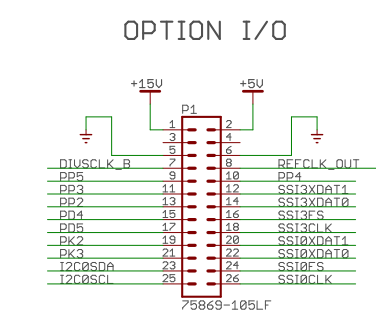
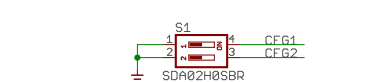
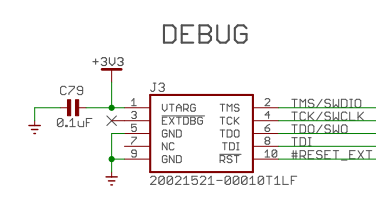
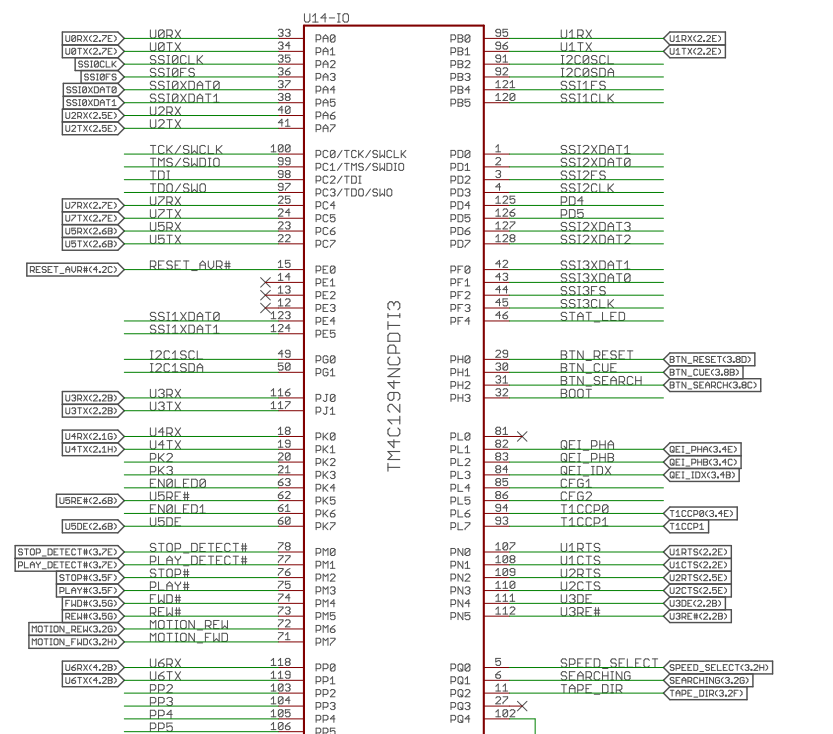


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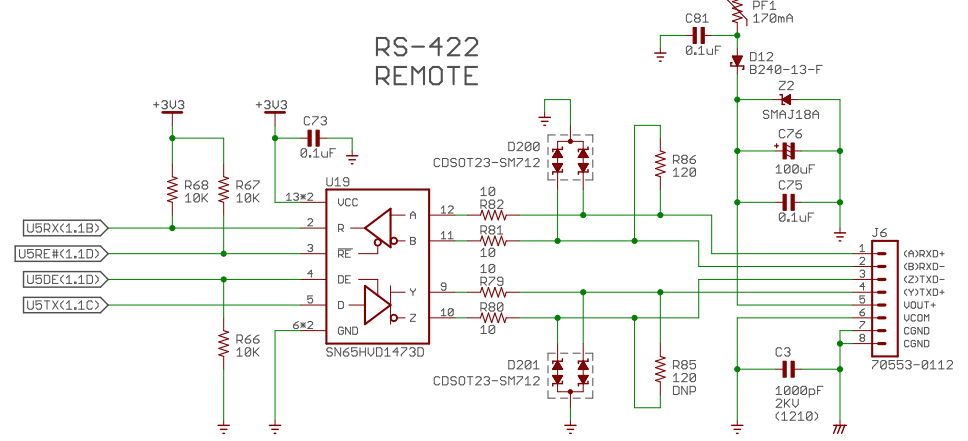
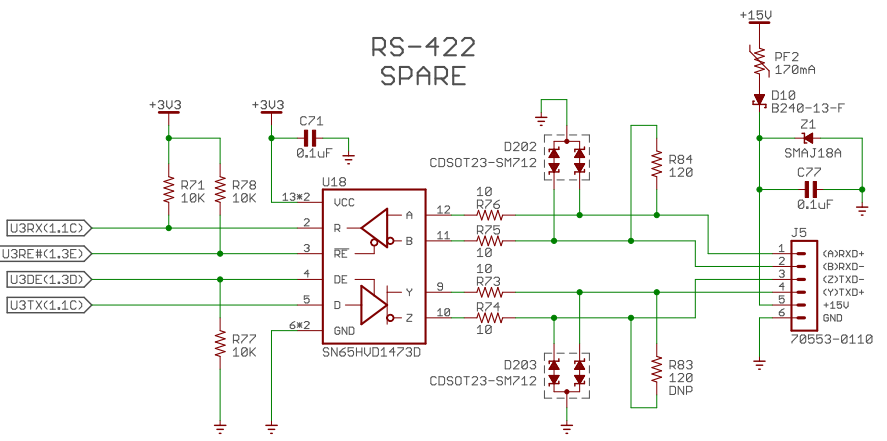
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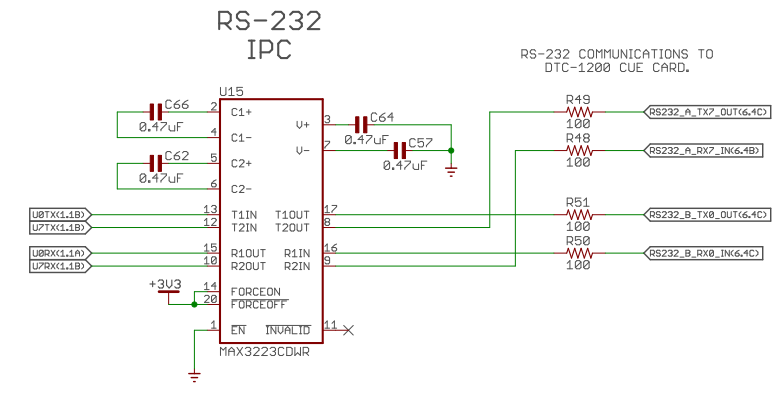
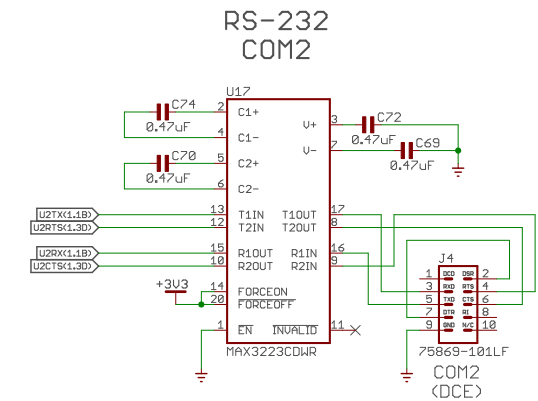
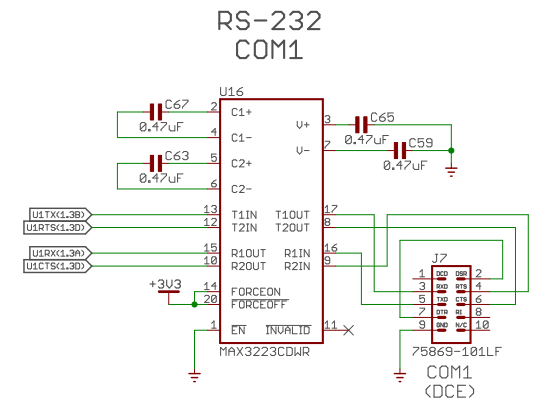
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| CHECKED | R.STARR                 | DATE                  | 4/11/2019 11:25 AM  | DRG No ED-2XXX.100 |
| DATE    | xx/xx/xx                | FILE:                 | STC-1200-B  | PAGE: 1/6          |

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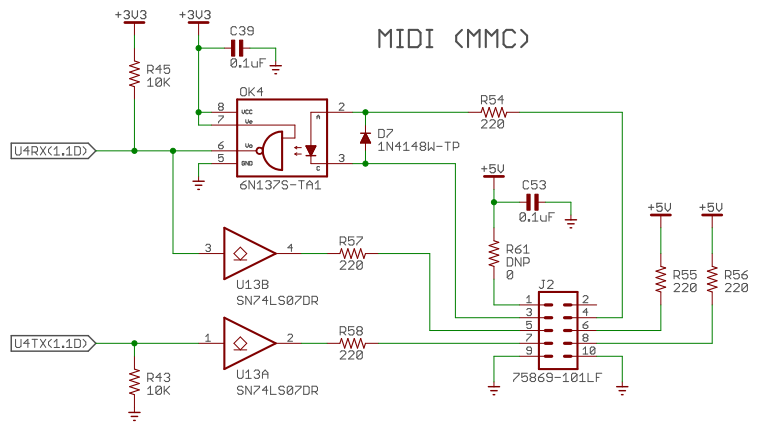
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- CONN HOUSING
- BOM-PART1 50-57-9408 QTY = 1
  - CRIMP PIN BOM-PART2 16-02-0097 QTY = 8
  - SHUNT JUMPER BOM-PART3 68786-102LF QTY = 4

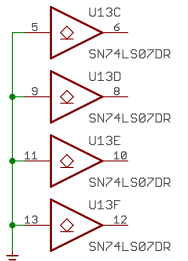


RS-232 COMMUNICATIONS TO DTC-1200 CUE CARD.



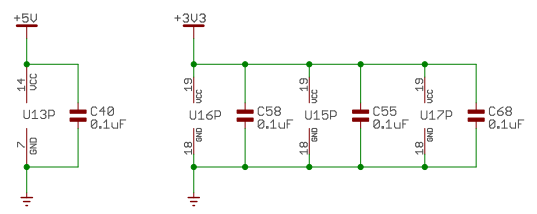
TO MIDI INTERFACE CONNECTOR PCB

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | +5V         |
| 2   | N/C         |
| 3   | MIDI_IN-    |
| 4   | MIDI_IN+    |
| 5   | MIDI_THRU-  |
| 6   | MIDI_THRU+  |
| 7   | MIDI_OUT-   |
| 8   | MIDI_OUT+   |
| 9   | GND         |
| 10  | GND         |



DB-9 IDC RIBBON CABLE CONNECTOR 8309-6000  
IDC RIBBON CABLE CONNECTOR 71600-110LF

| RS-232 (DCE) | DB9 | IDC |
|--------------|-----|-----|
| DCD (OUT)    | 1   | 1   |
| RXD (OUT)    | 2   | 3   |
| TXD (IN)     | 3   | 5   |
| DTR (IN)     | 4   | 7   |
| GND          | 5   | 9   |
| DSR (OUT)    | 6   | 2   |
| RTS (IN)     | 7   | 4   |
| CTS (OUT)    | 8   | 6   |
| RI (OUT)     | 9   | 8   |

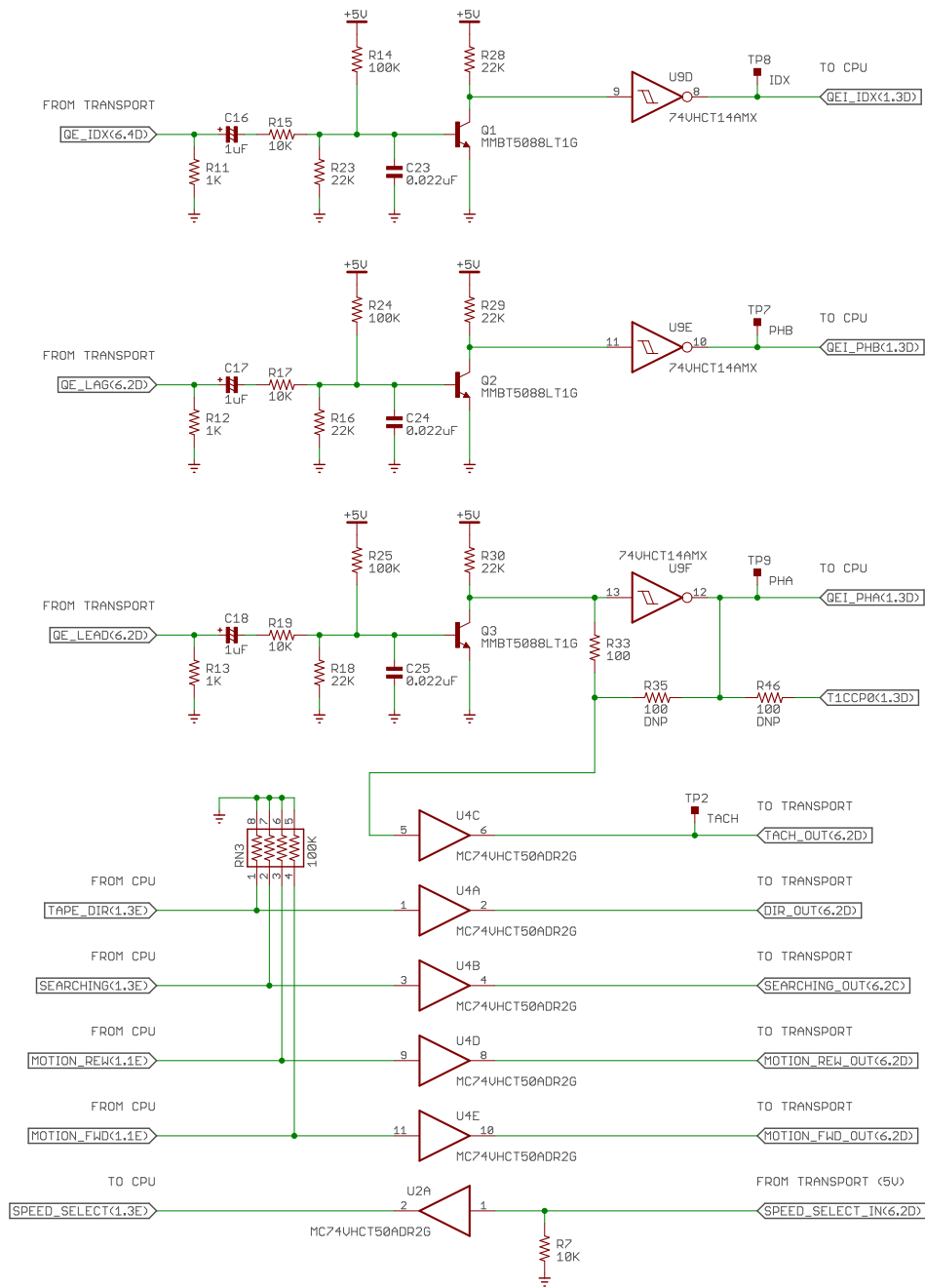


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| DATE    | xx/xx/xx                | FILE: STC-1200-B        | PAGE: 2/6   |        |

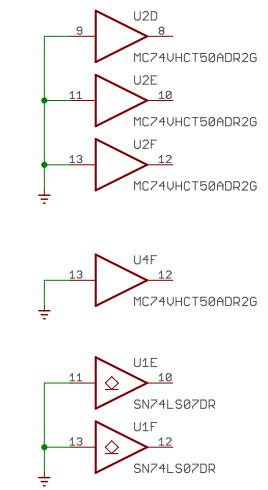
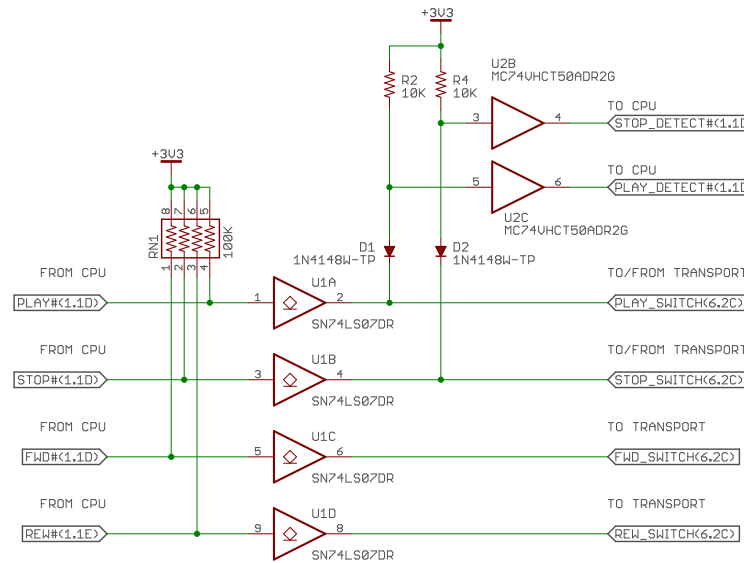
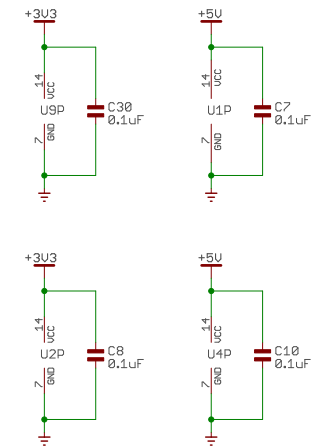
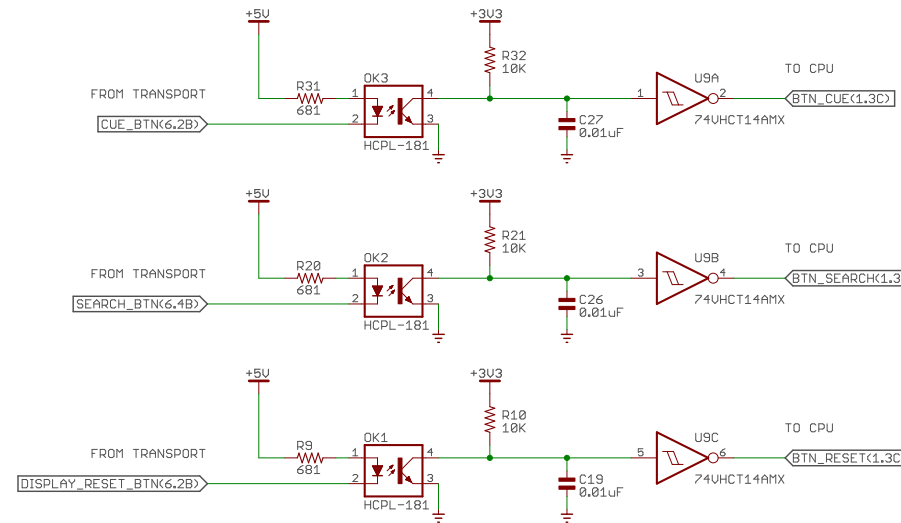
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### QUADRATURE INPUT BUFFER



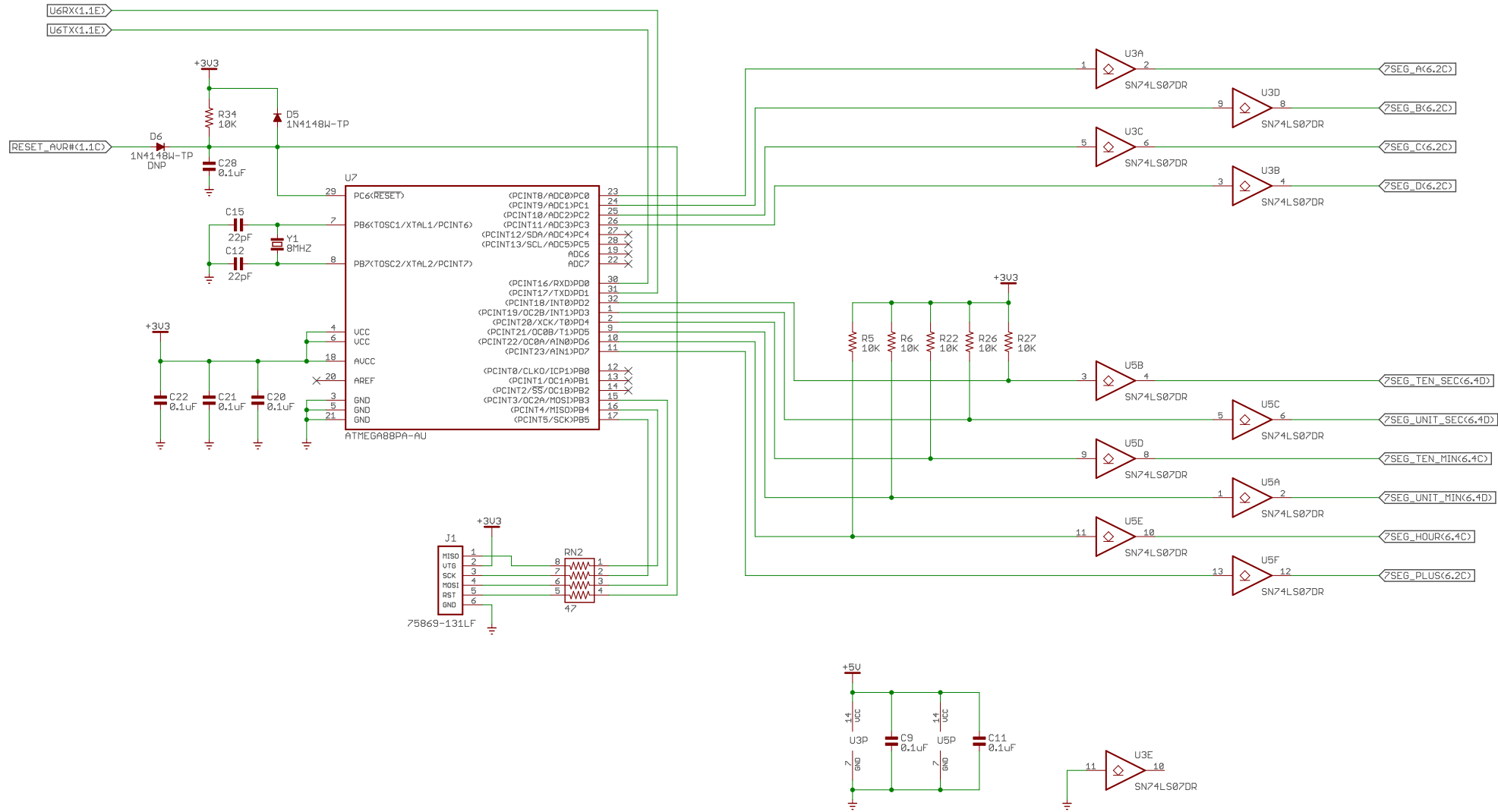
### CUE/SEARCH/RESET BUTTON INTERFACE



|         |                         |                       |   |        |
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A  
B  
C  
D  
E  
F  
G  
H

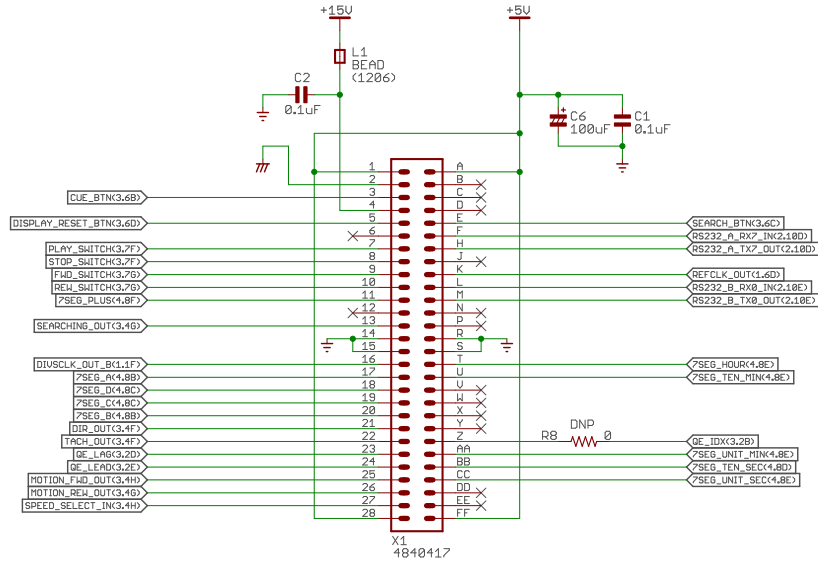
### REV-A DESIGN ERRORS

- 1) SIGNAL 'AUR\_RESET' FROM TIVA TO ATMEGA88 MUST BE CUT AS IT PREVENTS ISP PROGRAMMING FROM WORKING. THE TIVA HOLDS THIS EITHER HIGH OR LOW, BUT NEEDS TO BE FLOATING OPEN COLLECTOR SO ISP OR TIVA CAN PERFORM RESETS. MAYBE ADD SIGNAL DIODE HERE?
- 2) SEVEN SEGMENT BCD SIGNALS '7SEG\_B' AND '7SEG\_D' ARE SWAPPED IN SCHEMATIC. NEED TO SWAP PINS 24 AND 26 ON ATMEGA88 HANDLING IN SOFTWARE FOR NOW.
- 3) NEED TO INVERT SIGNAL 'TACH\_OUT' AT U4C SO PHASE IS SAME AS ORIGINAL AMPEX BOARD.

|                    |   |                         |   |           |
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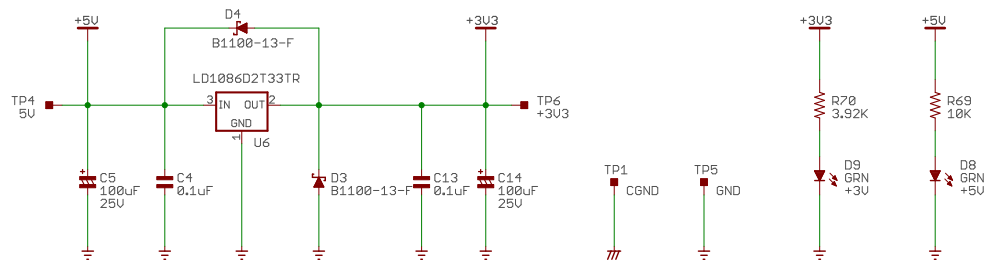
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### PCB 4840417 EDGE CARD SIGNALS

| PIN | DIR | DESCRIPTION                    | PIN | DIR | DESCRIPTION                   |
|-----|-----|--------------------------------|-----|-----|-------------------------------|
| 1   | PWR | +5V                            | A   | PWR | +5V                           |
| 2   | PWR | GND (<15V COMMON>)             | B   | --- | ---                           |
| 3   | INP | CUE BUTTON (0=CUE)             | C   | --- | ---                           |
| 4   | PWR | +15V                           | D   | --- | ---                           |
| 5   | INP | DISPLAY RESET BUTTON (0=RESET) | E   | INP | SEARCH BUTTON (0=SEARCH)      |
| 6   | --- | ---                            | F   | I/O | (RS-232 RX7 FROM DTC-1200)    |
| 7   | PU  | PLAY SWITCH (0=PLAY)           | H   | I/O | (RS-232 TX7 TO DTC-1200)      |
| 8   | PU  | STOP SWITCH (0=STOP)           | J   | --- | (RESERVED FOR FUTURE USE)     |
| 9   | PU  | FWD SWITCH (0=FFWD)            | K   | --- | (RESERVED FOR FUTURE USE)     |
| 10  | PU  | REW SWITCH (0=REW)             | L   | --- | (RS-232 RX0 FROM DTC-1200)    |
| 11  | PU  | 7-SEG PLUS SIGN (0=PLUS LED)   | M   | --- | (RS-232 TX0 TO DTC-1200)      |
| 12  | PU  | PLAY LAMP (0=LAMP ON)          | N   | --- | ---                           |
| 13  | OUT | SEARCHING (0=SEARCH)           | P   | --- | ---                           |
| 14  | PWR | GND (<5V COMMON>)              | R   | PWR | GND (<5V COMMON>)             |
| 15  | PWR | GND (<5V COMMON>)              | S   | PWR | GND (<5V COMMON>)             |
| 16  | OUT | CLOCK OUT (OPTION)             | T   | OUT | 7-SEG (0=HR)                  |
| 17  | OUT | 7-SEG BCD-A (0=2^0)            | U   | OUT | 7-SEG (0=TEN, MIN)            |
| 18  | OUT | 7-SEG BCD-D (1=2^3)            | V   | --- | ---                           |
| 19  | OUT | 7-SEG BCD-C (1=2^2)            | W   | --- | ---                           |
| 20  | OUT | 7-SEG BCD-B (1=2^1)            | X   | --- | ---                           |
| 21  | OUT | DIRECTION (1=FWD/0=REW)        | Y   | --- | ---                           |
| 22  | OUT | TACH OUT                       | Z   | --- | (RESERVED FOR FUTURE QEI USE) |
| 23  | INP | FROM QUAD ENCODER (LAG)        | AA  | OUT | 7-SEG (UNITS, MIN)            |
| 24  | INP | FROM QUAD ENCODER (LEAD)       | BB  | OUT | 7-SEG (TEN, SEC)              |
| 25  | OUT | MOTION SENSE OUT (0=FWD)       | CC  | OUT | 7-SEG (UNITS, SEC)            |
| 26  | OUT | MOTION SENSE OUT (0=REW)       | DD  | PU  | REW LAMP                      |
| 27  | INP | SPEED SELECT (1=HI-SPEED)      | EE  | PU  | FWD LAMP                      |
| 28  | PWR | +5V                            | FF  | PWR | +5V                           |



| UART  | UART PORT MAPPING             |
|-------|-------------------------------|
| UART0 | RS-232 TTY/CONSOLE/DEBUG PORT |
| UART1 | RS-232 SERIAL PORT COM1       |
| UART2 | RS-232 SERIAL PORT COM2       |
| UART3 | BLUE TOOTH MODULE             |
| UART4 | MIDI IN/OUT PORT              |
| UART5 | RS-422 TO DRC1200 REMOTE      |
| UART6 | IPC TO ATMEG88 DISPLAY MUX    |
| UART7 | IPC TO DTC-1200 CONTROLLER    |

| SSI  | SPI PORT MAPPING            |
|------|-----------------------------|
| SSI0 | SPI TO EXPANSION SLOT (NCO) |
| SSI1 | SD MEMORY CARD              |
| SSI2 | FLASH MEMORY S25FL127       |
| SSI3 | SPI EXPANSION PORT          |

| I2C  | I2C PORT MAPPING         |
|------|--------------------------|
| I2C0 | EPROM/ID MEMORY AT24CS01 |
| I2C1 | EPROM MEMORY CAT24C16    |



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