

Note on the modified TPC cold electronics inside the LAPD dewar

As used in Long-Bo 1 of the 9 preamp cards inside the cryostat, the CMB-16 cards, has been modified to include an ASIC preamp chip from BNL. This ASIC chip is mounted on a mezzanine card that is attached to a partially populated CMB-16 card.

Figure 1 shows the schematic of the modified CMB-16 card. Also attached is the schematic of the fraction of an ASIC motherboard used as a mezzanine over the modified CMB-16 card.

The power supply current ratings, the wire gauges, and all fuse amperages for this modified preamp card are exactly the same as are used with the 8 unmodified preamp cards.

There have been no changes to any of the power supply current ratings, the wire gauges, or fuse amperages since this DAQ system was reviewed in May 2011 and then used with the Bo cryostat in PAB.

Cold Mother Board 16 Channel

Partially populated and modified for use with ASIC mezzanine card

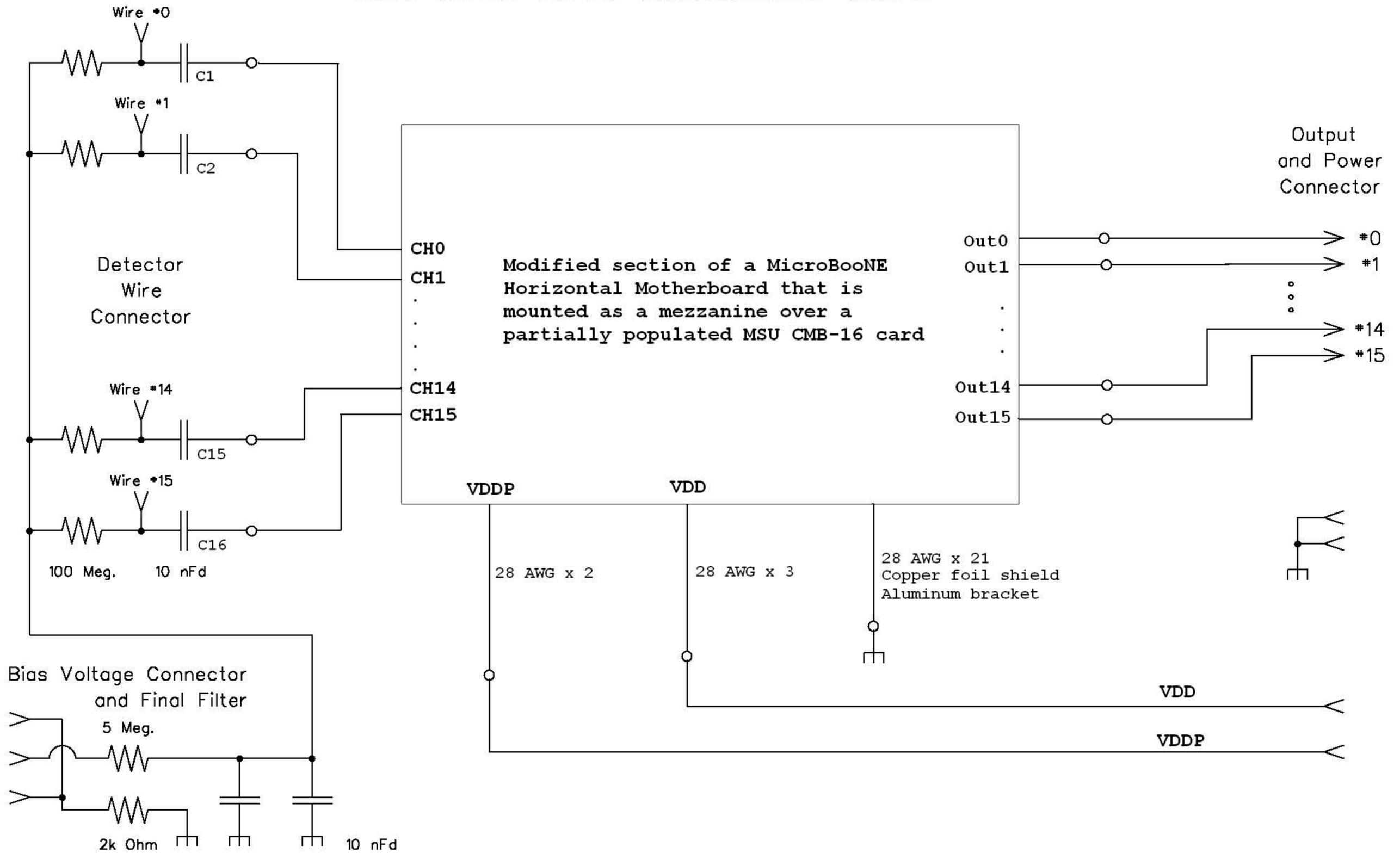
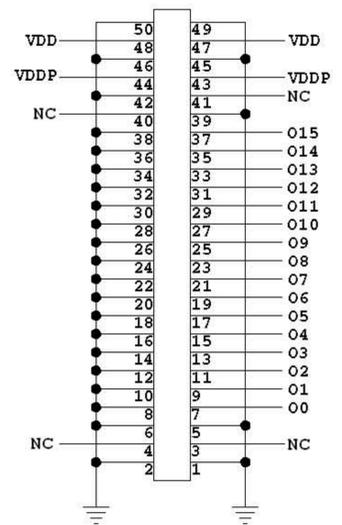
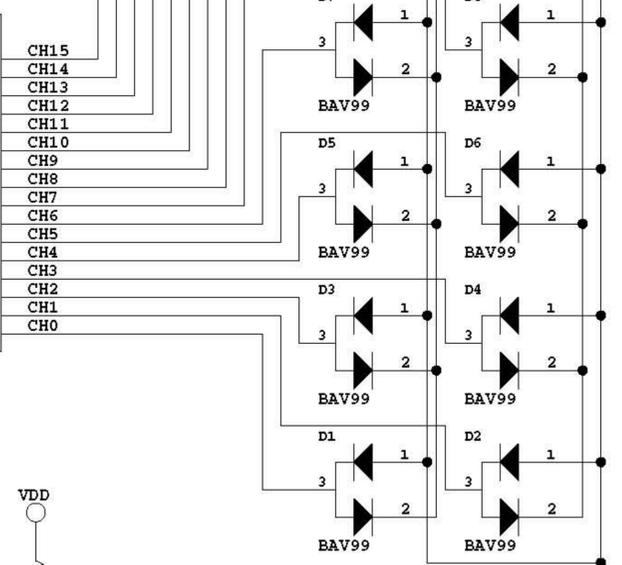


Figure 1. Modified CMB-16 card for use with ASIC mezzanine card

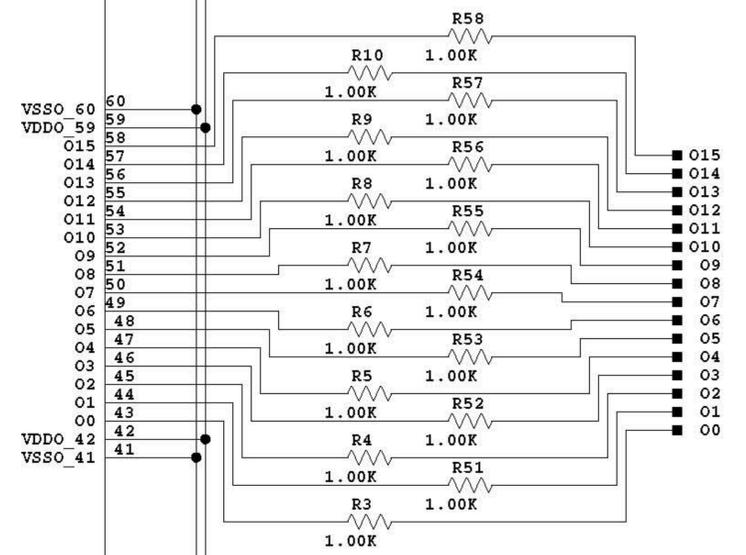
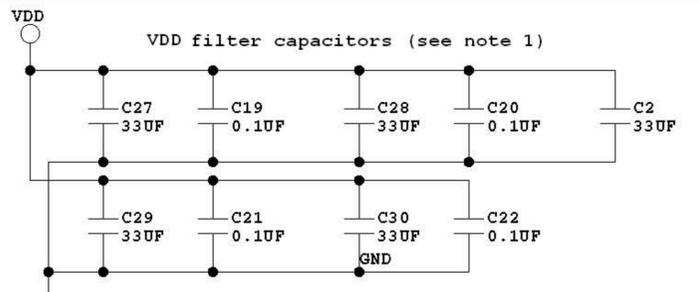
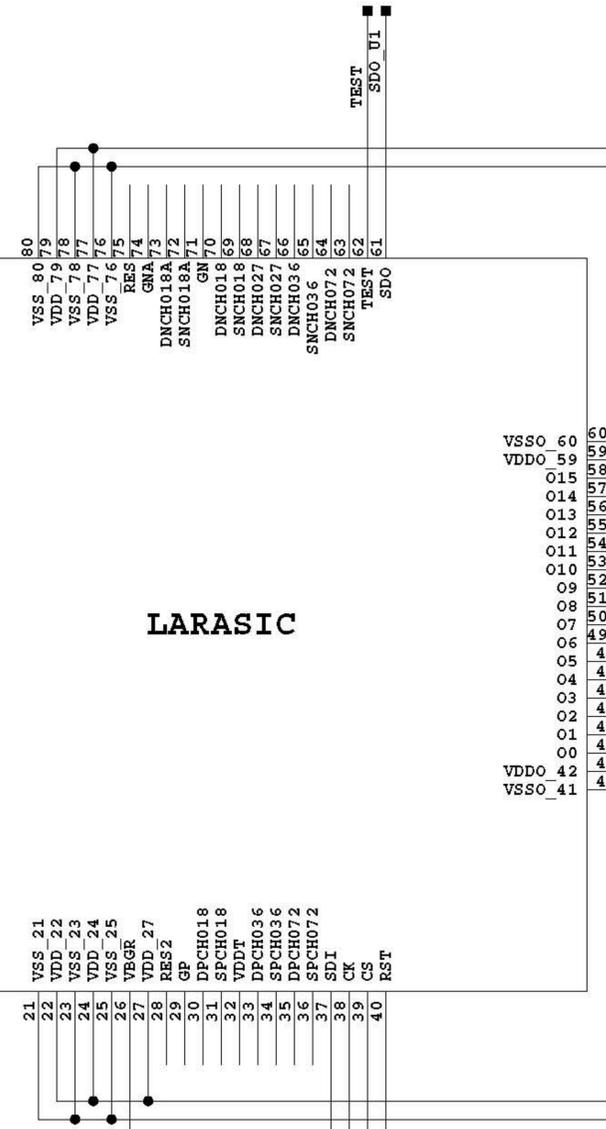
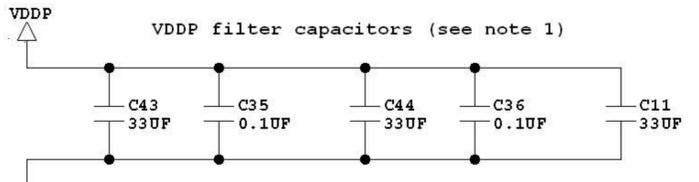
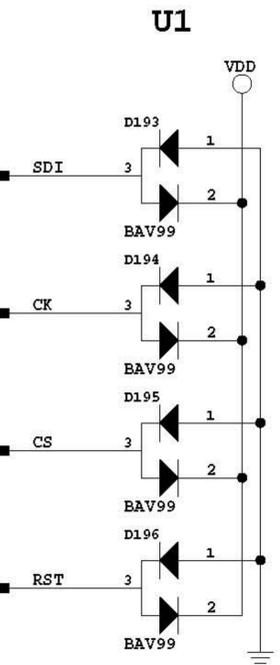
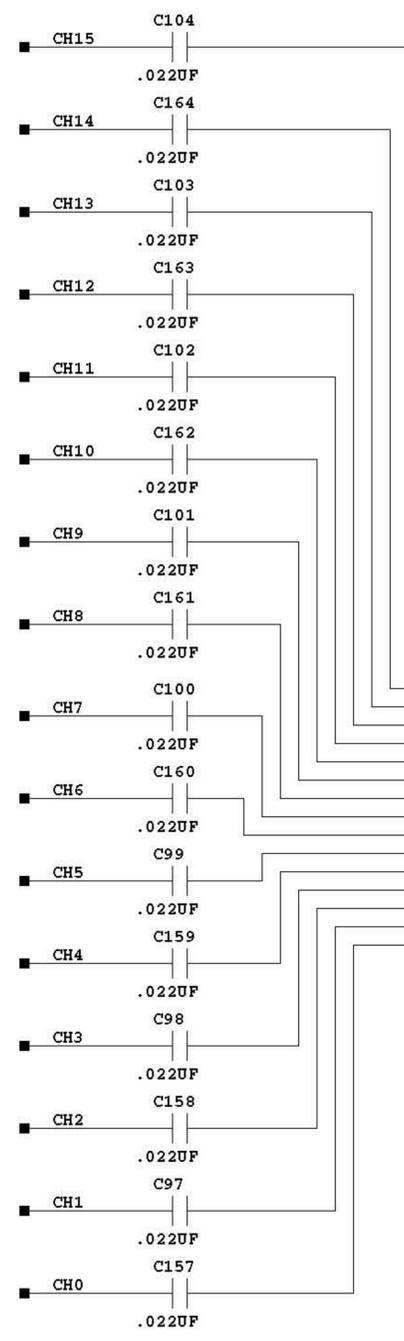
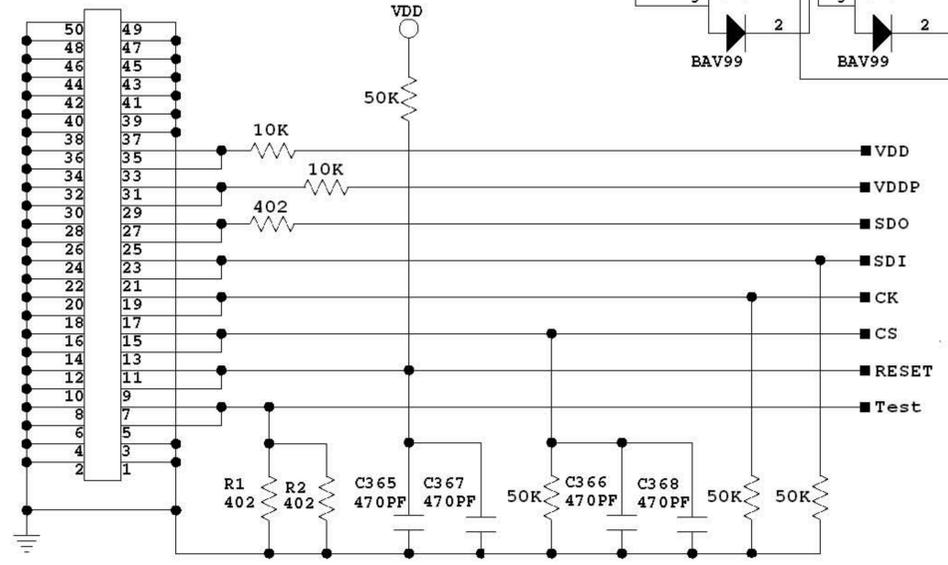
Ribbon cable connector
Connection to Modified
WRP-16 card



Connected to C1 through C16
respectively on the CMB-16
motherboard



Ribbon cable connector
Connection to ASIC
Control Box located on
side of WRP-16 rack



Note 1: The VDDP and VDD filter capacitors are installed in all four ASIC positions.
Note 2: This modified board has locations for four ASIC chips. Only one position is populated.
Note 3: This schematic is modified from the original one drawn by Hucheng Chen at BNL. It is specific for the modified Horizontal Mother Board used in the Long-Bo TPC at Fermilab

COMPANY			
Michigan State University			
TITLE			
Modified section of a MicroBooNE Horizontal Motherboard Attached to a mezzanine over an MSU CMB-16 card			
SIZE	B	REV	SHEET 1 OF 1
DRAWN	Dean Shooltz	DATE	Nov. 20, 2012