LIGO

California Institute of Technology
Massachusetts Institute of Technology

Document Change Notice (DCN)

DCN No. E021115-00-C

Sheet 1 of 4

DOCUMENT No. (DOC-REV-GP.ID)	TITLE	NEW REV
D000347 -B	Gain Slider Problem Fix	B1
D990694 -00		A1
D000086 -02		A3

CHANGE DESCRIPTION (FROM/TO):

Mode Cleaner Servo (D000347 -B)

(1). Cut the trace on connector P1 pins 9B and 10B
(2). Connect U_add1 regulator pin1 and the one side of the C_add1(1uF) capacitor to the test point TP26
(3). Connect U_add1 regulator pin3 and the one side of the C_add2 (1uF) capacitor to the test point TP29
(4). Connect U_add1 regulator pin2 to the ground.
(5). After the changes on the board mark the front panel as Rev B1.

LSC Whitening Filter (D990694-00)

(1). Cut the trace on connector P1 pins 9B and 10B
(2). Connect U_add1 regulator pin1 and the one side of the C_add1(1uF) capacitor to the test point TP13.
(3). Connect U_add1 regulator pin3 and the one side of the C_add2 (1uF) capacitor to the test point TP12.
(4). Connect U_add1 regulator pin2 to the ground.
(5). After the changes on the board mark the front panel as Rev A1.

REASON FOR CHANGE: Gain value changes were occurring due to improper voltage reference for the ADCs.

ACTION: **x Incorporate Change** ☐ **Attach DCN to Drawings** ☐ **Other Action (specify):**

DISPOSITION OF HARDWARE (IDENTIFY SERIAL NUMBERS)
☐ **No hardware was affected (record change only):**
X List S/Ns which comply already: S/N 103, 104, 105, 106, 108, 109
☐ **List S/Ns to be reworked/scrapped:**
X List S/N's to be built with this change: ALL
X List S/Ns to be retested per this change: ALL
☐

DCN DISTRIBUTION

Barish	**Coles**	**Coyne**
Lazzarini	**Lindquist**	**Sanders**
Shoemaker	**Stapfer**	**Tyler**
Weiss	**Whitcomb**	**Matherny**
Raab		

SAFETY, COST, SCHEDULE, REQUIREMENTS IMPACT? **-X- NO** ☐ **YES (If YES, enter CR (CCB) or TCP (TRB) #)**

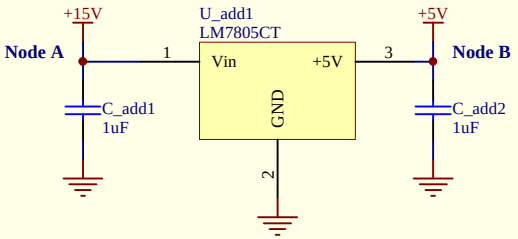
APPROVALS:	DATE	OTHER APPROVALS (SPECIFY)	DATE
ORIGINATOR: Mohana Mageswaran	12-12-02		
TASK LEADER: Rich Abbott	12-12-02		
GROUP LEADER: Dennis Coyne Dennis Coyne			
DCC RELEASE: ? Linda Turner Linda Turner			

CHANGE DESCRIPTION (FROM/TO):

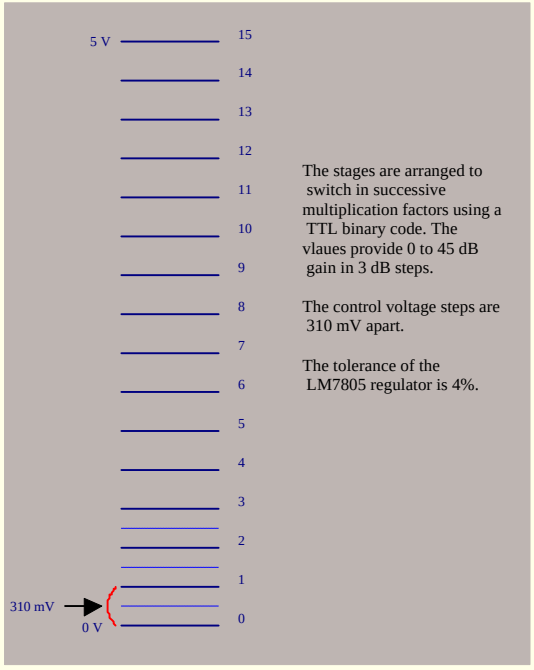
Common Mode Servo (D000086-02)

(1). Cut the trace on connector P1 pins 9B and 10B
(2). Connect U_add1 regulator pin1 and the one side of the C_add1(1uF) capacitor to the testpoint TP2
(3). Connect U_add1 regulator pin3 and the one side of the C_add2 (1uF) capacitor to the testpoint TP6
(4). Connect U_add1 regulator pin2 to the ground.
(5). After the changes on the board mark the front panel as Rev A3.

Note: Please see the attached schematic



Note 1



The stages are arranged to switch in successive multiplication factors using a TTL binary code. The vlaues provide 0 to 45 dB gain in 3 dB steps.

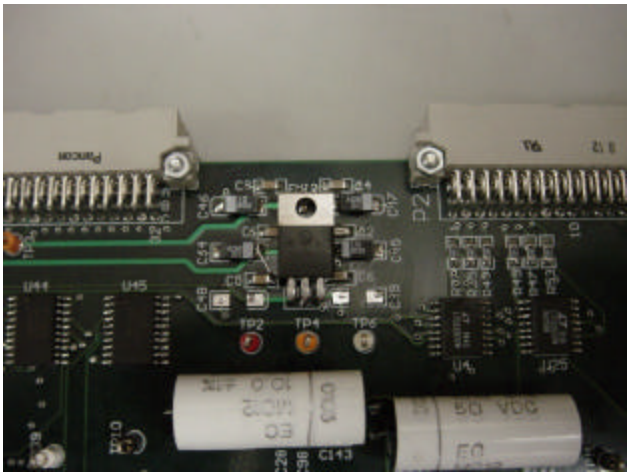
The control voltage steps are 310 mV apart.

The tolerance of the LM7805 regulator is 4%.

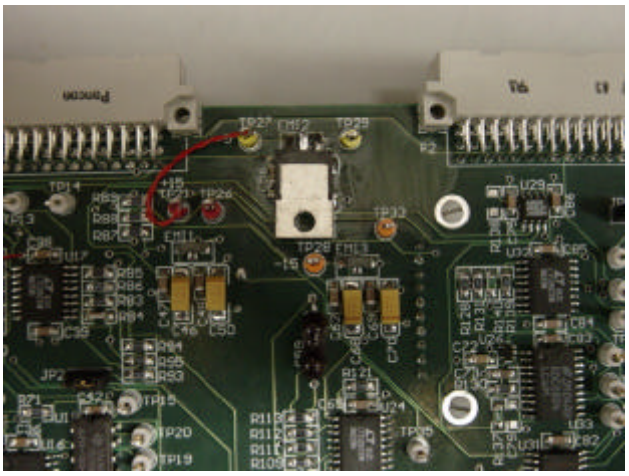
Note 2

Mode Cleaner Servo 5V supply current is 34 mA
Common Mode Servo 5V supply current is 50 mA
LSC Whitening Board 5V supply current is 80 mA

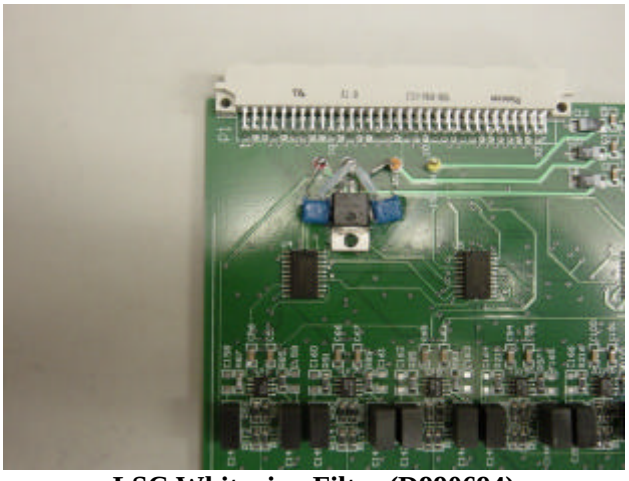
Title: **Voltage regulation for the Gain Sliders**		
Size: A	Number:	Revision:
Date: 11-Dec-2002		Sheet of
File: D:\MyFiles\fixes\regulator1.Sch		Drawn By:



Common Mode Servo (D000086)



Mode Cleaner Servo Board (D000347)



LSC Whitening Filter (D990694)