

REVISION HISTORY				
SCH REV	PCB REV	ECO NO.	DATE	COMMENT
P1	P1		5/18/98	REV P1 STARTED
P2	P2		10/20/98	REV P2 CHANGES
1.0	1.0		11/19/98	REV 1.0 CHANGES
1.1	1.1		1/19/99	REV 1.1 CHANGES
1.1.1	1.1	8330	1/28/99	CORRECTED P/N FOR BR2
1.2	1.2		2/9/99	ADDED D15
1.2.1	1.2	8445	3/23/99	CHANGED U4 AND U40 TO PROGRAMMED PARTS
1.3	1.3	8455	4/7/99	U11 WAS 74HC04, ADDED C96
1.4	1.4	8659	7/28/99	DELETED C67 AND R80, ADDED R179 AND C97
1.5	1.5	8814	10/11/99	MOVED R179 AND R82 ON PCB, NO SCHEMATIC CHANGE

Copyright (c) 1994–1999 High End Systems, Inc. All rights reserved worldwide.

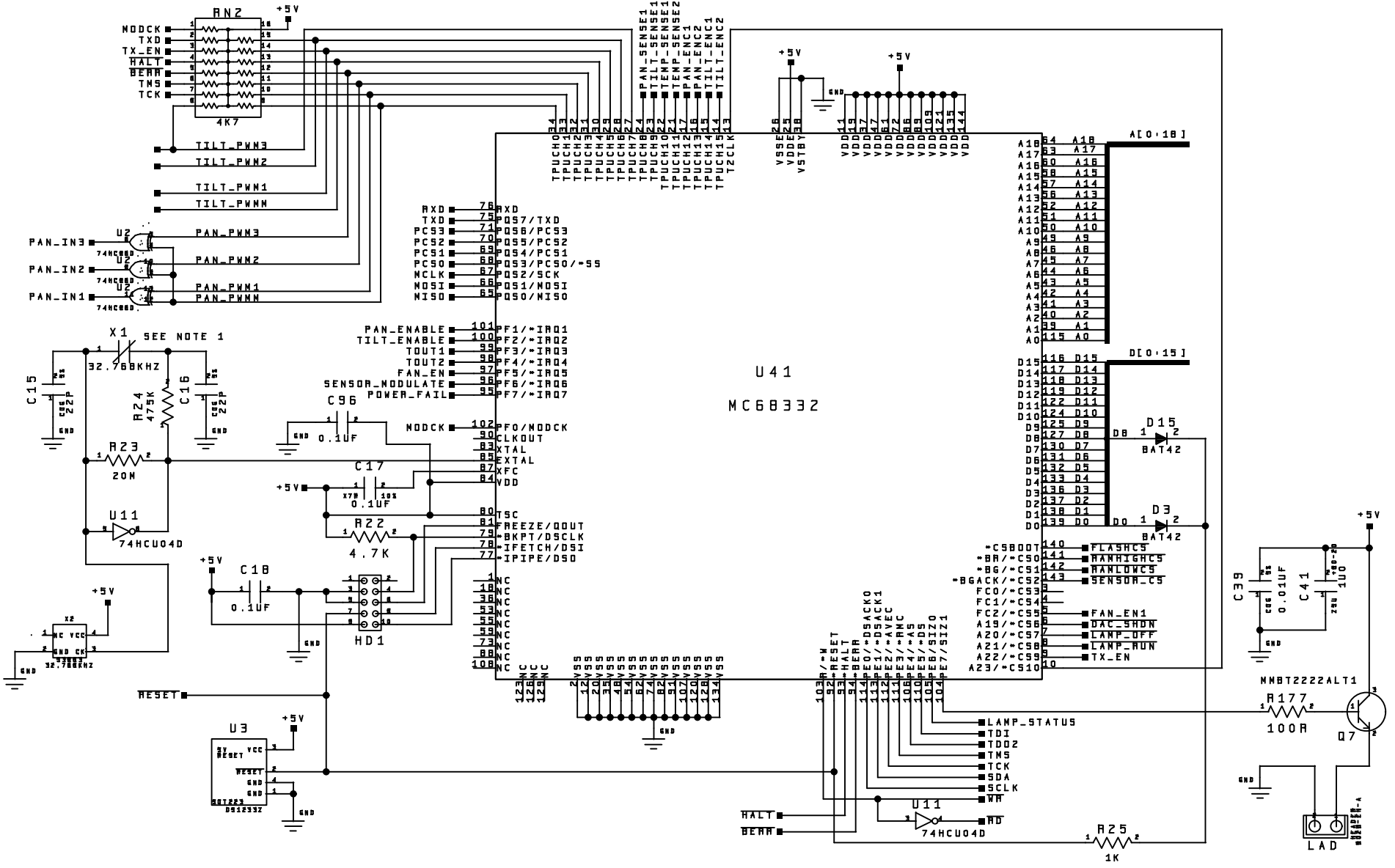
Lightwave Research, the Lightwave Research logo, High End Systems and the High End Systems logo are registered trademarks of High End Systems, Inc. Trademarks and trade names of others may be used in this document to refer to either such other entities or to their products. High End Systems Inc. disclaims any proprietary interest or connection to such marks or entities.

NOTES :

UNLESS OTHERWISE SPECIFIED:

1. ALL RESISTOR VALUES ARE IN OHMS
2. ALL RESISTORS ARE 1/8 WATT 5% OR BETTER
3. CAPACITOR VALUES ARE IN PICO FARADS
4. ALL NON POLARIZED CAPACITORS ARE 50V OR BETTER  
VALUES BELOW 470pF ARE NPO/COG TYPE 5%  
VALUES 470pF TO 1000pF ARE X7R 10%  
VALUES ABOVE 1000pF ARE Z5U +/- 20 %
5. ALL POLARIZED CAPACITORS ARE 20% OR BETTER
6. ALL DIODES ARE 1N4148.

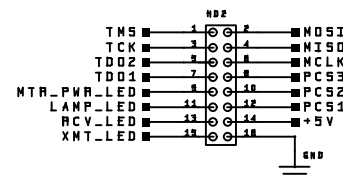
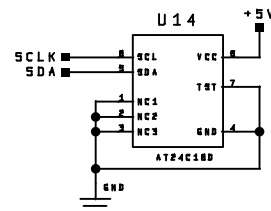
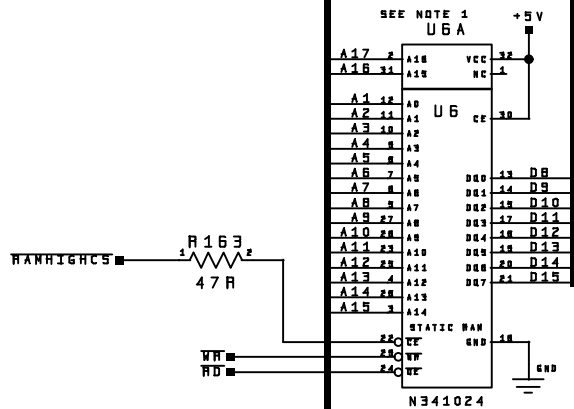
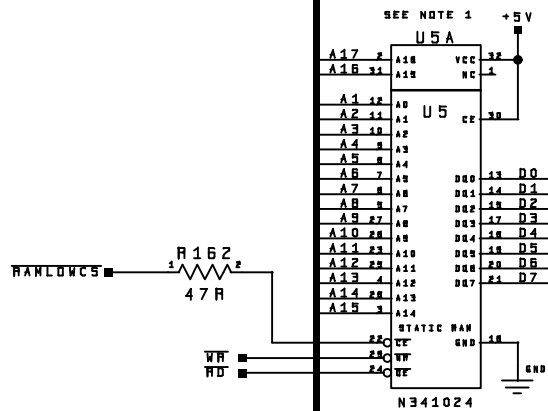
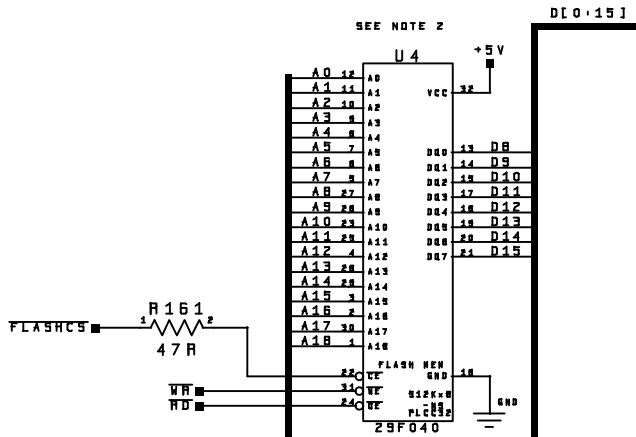
HIGH END SYSTEMS INC.			
Title:		STUDIO 250	
Function:		COVER SHEET	9615
Drawing No.	REV.	Designed:	
99030096	1.5	TOM GRIMES	
Drawn:		Approved:	
TOM GRIMES			
Date:	Size:	Page:	of:
10-21-1999-12:46	A2	1	12



NOTES:  
 1. STUFF X2 OR X1, R23, R24, C15, C16. DO NOT STUFF BOTH.  
 2. THE CIRCUITS FOR PAN AND TILT HAVE BEEN SWAPPED. SIGNALS LABELED 'PAN-XXX' ARE BEING USED TO CONTROL THE TILT MOTOR AND VICE VERSA.

HIGH END SYSTEMS INC.			
Title:		ME42 LOGIC BOARD CPU	
Function:		THE BRAINS OF THE LIGHT	
Drawing No.	REV.	Size	Date
99030096	1.5	B	10-11-1999-15-48
Page 2		of 12	





NOTES :

- U5A & U6A ARE 128Kx8 32 PIN DEVICES. U5 & U6 ARE 32Kx8 28 PIN DEVICES. EITHER DEVICE MAY BE USED. SYMBOL FOR 32 PIN DEVICE SHOWN. 28 PIN DEVICE DOES NOT USE PINS 1,2,31,32.
- U4 MAY BE EITHER A 512Kx8 OR 128Kx8. 128Kx8 DEVICE DOES NOT USE PINS 1 AND 30.

HIGH END SYSTEMS INC.

Title: ME42 LOGIC BOARD  
MEMORY



Function: REMEMBER THINGS

Drawing No.  
99030096

REV.  
1.5

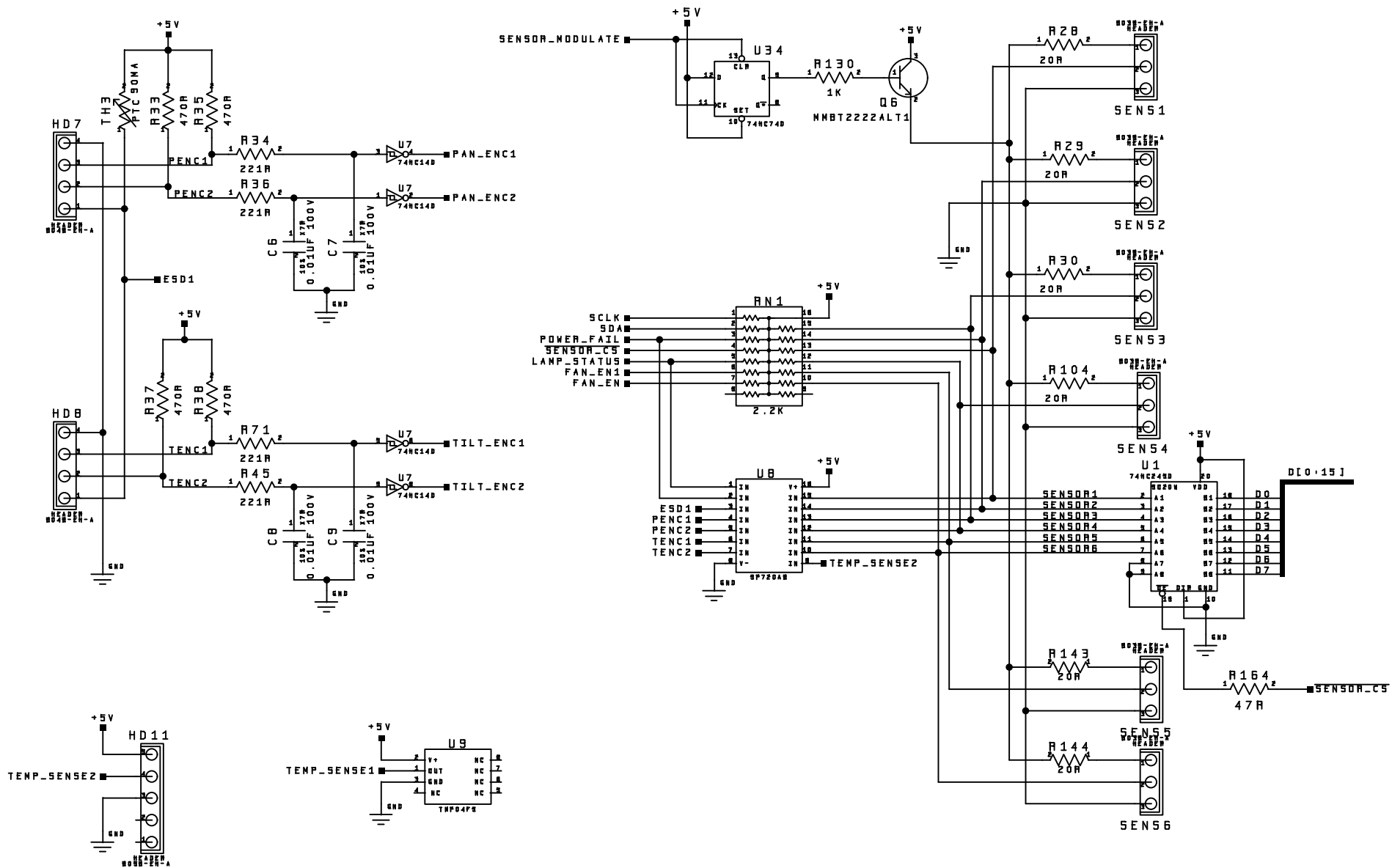
Size B

Date 10-11-1999-15-48

Page 3 of 12

A[0.18]

D[0.15]

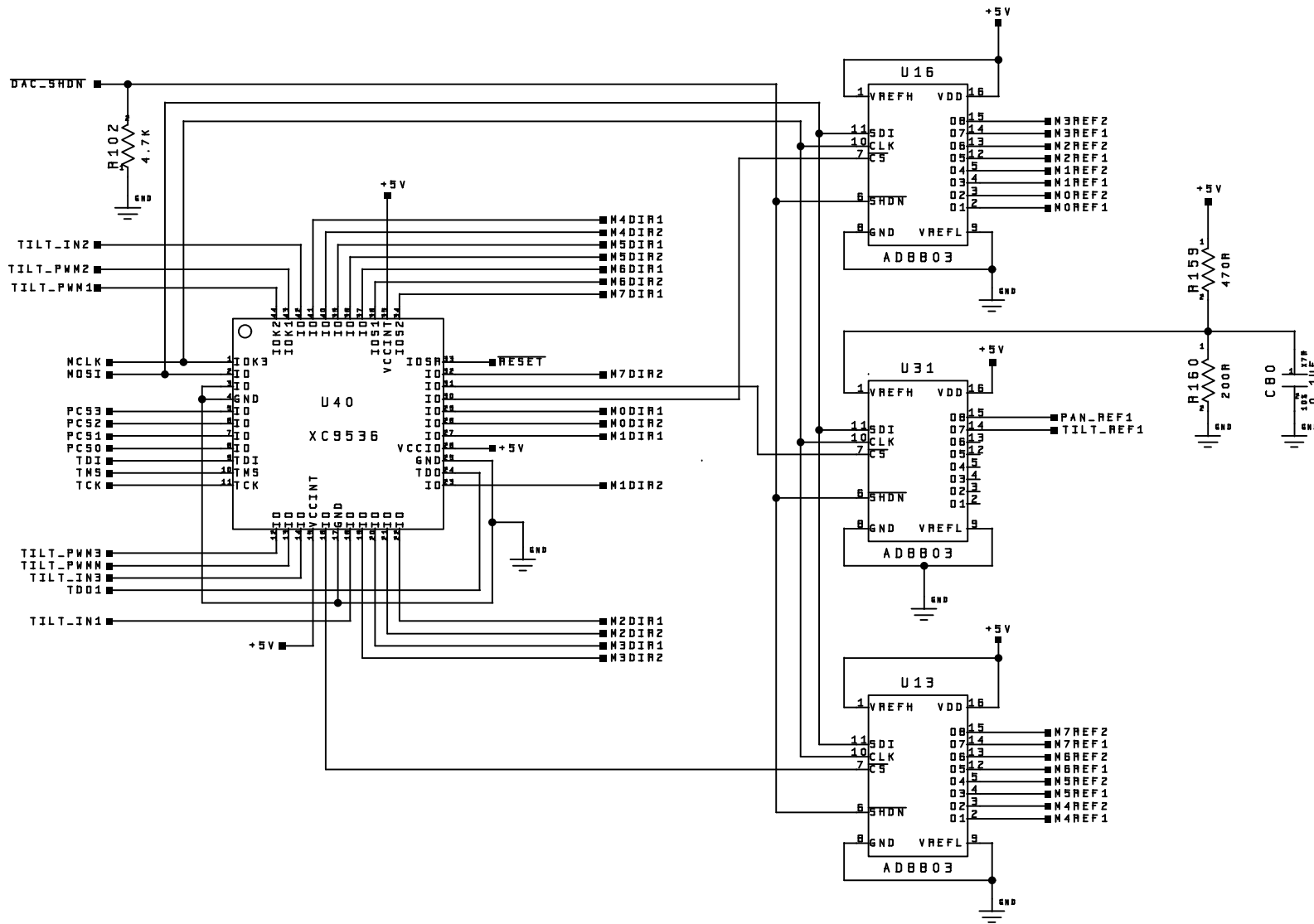



# HIGH END SYSTEMS INC.

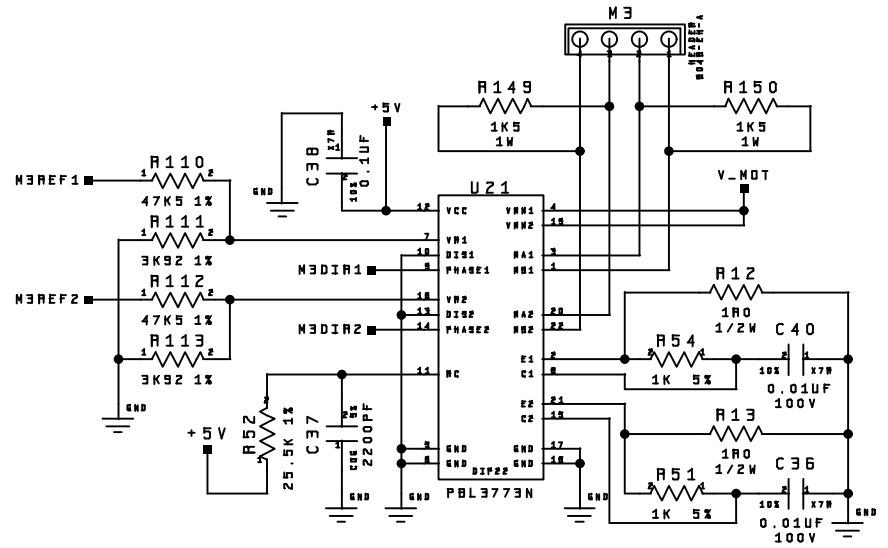
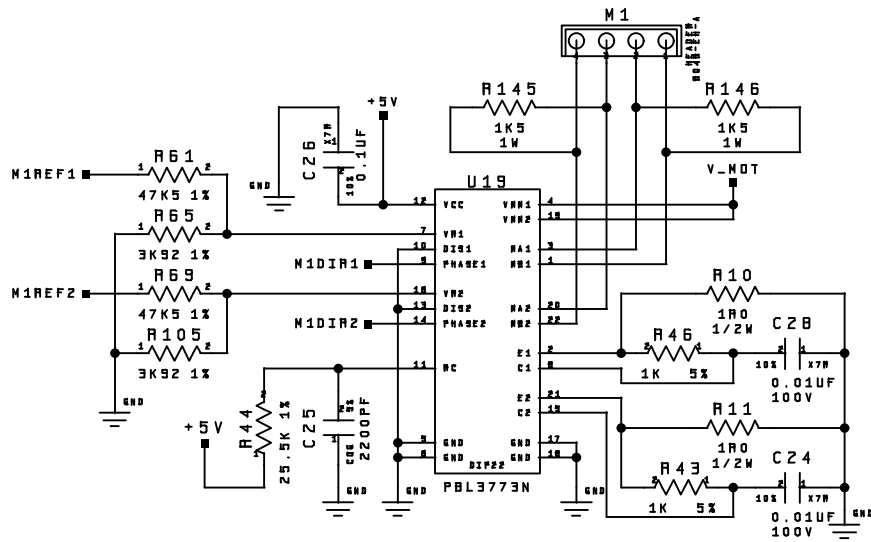
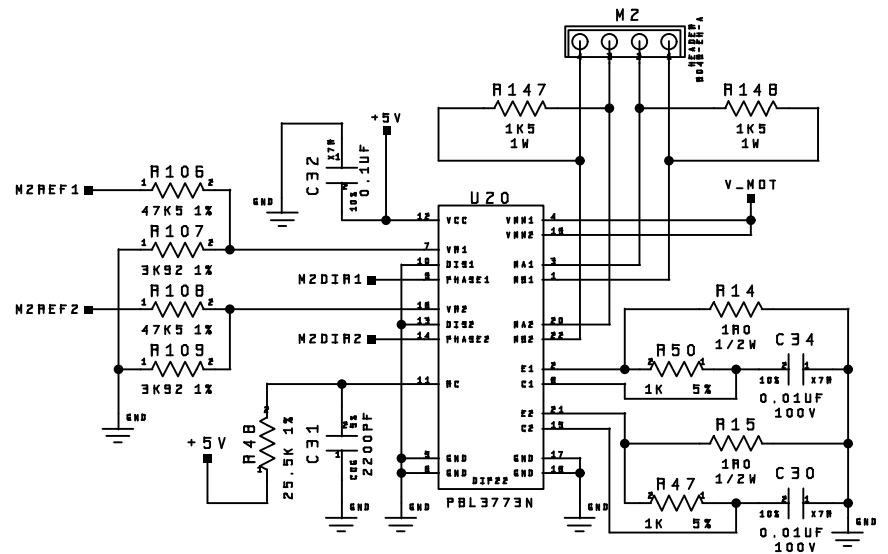
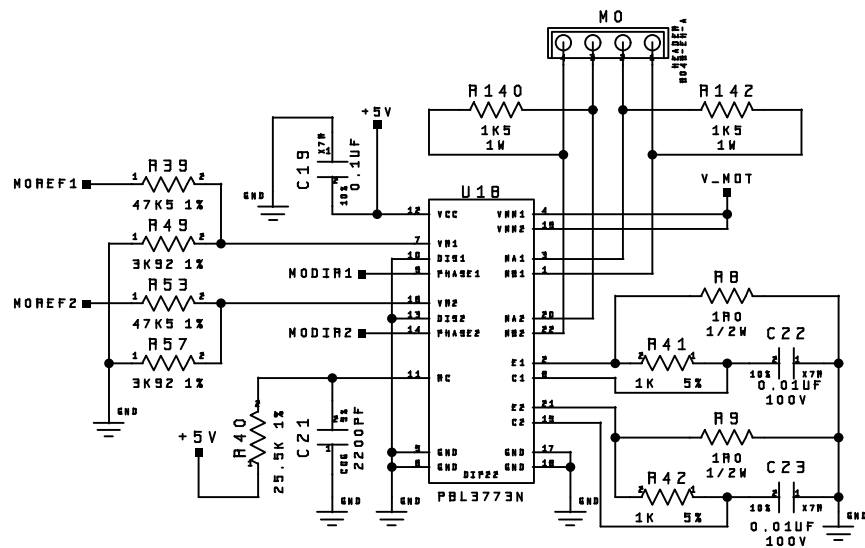
Title: ME42 LOGIC BOARD  
 SENSORS, ENCODERS, THERMOMETERS  
 Function:




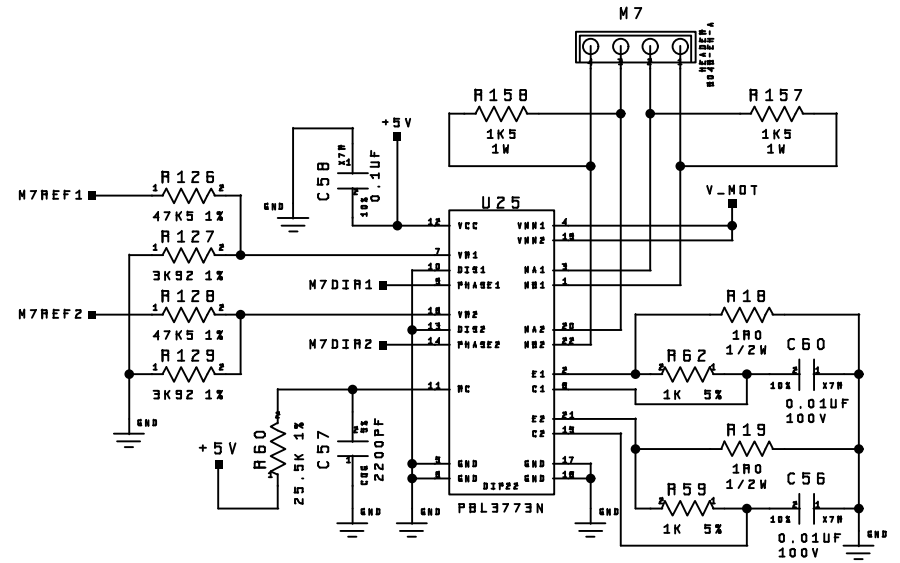
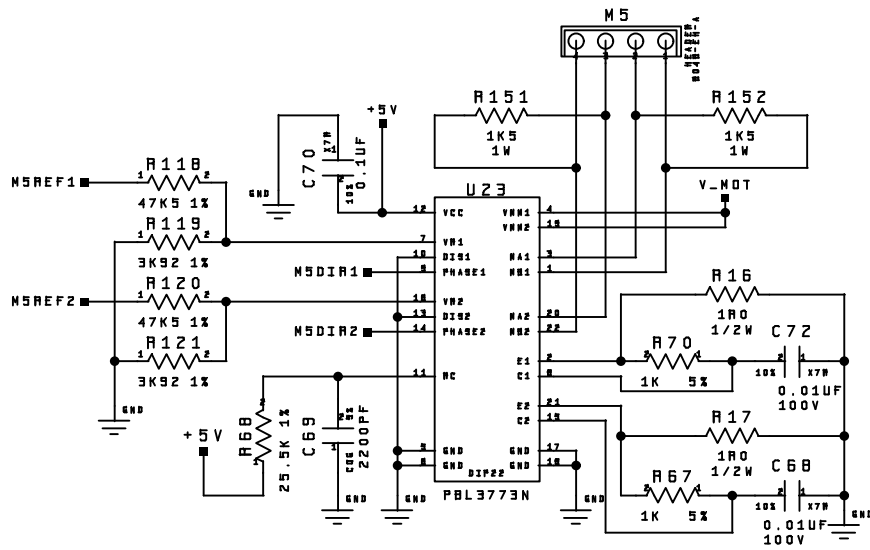
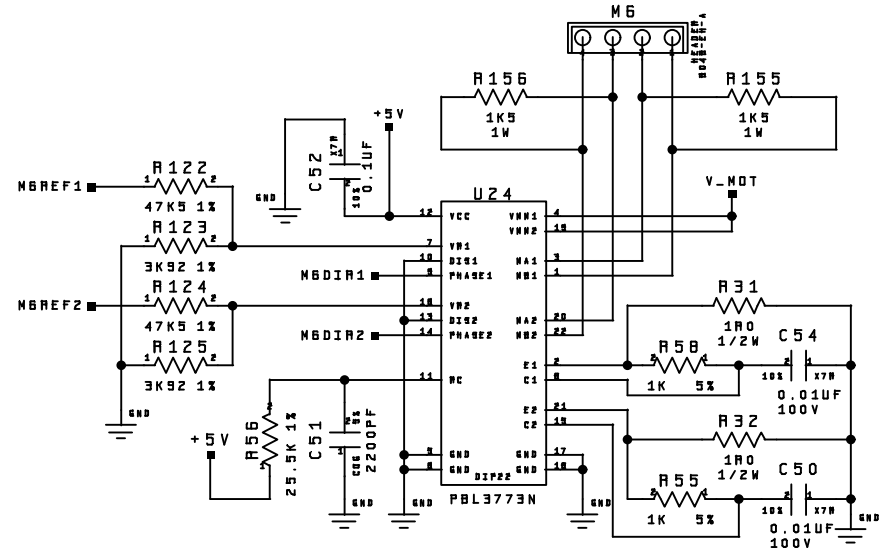
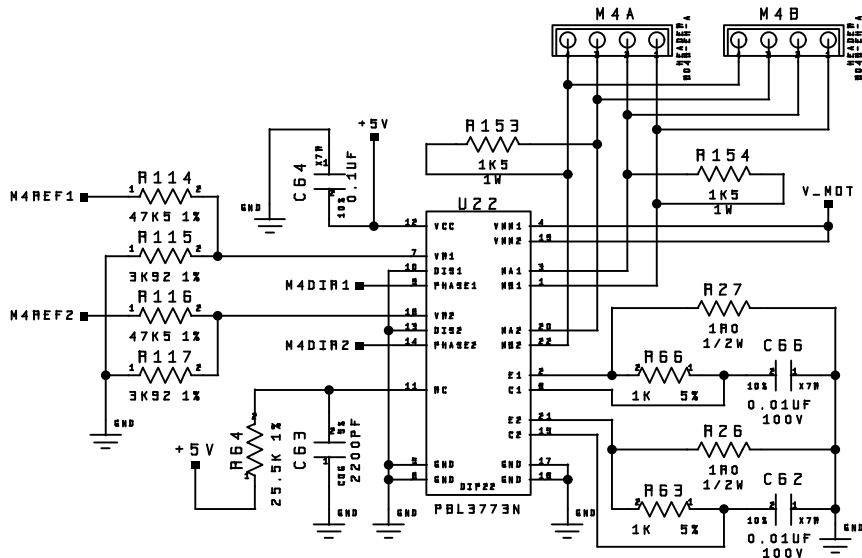
Drawing No. 99030096	REV. 1.5	Size B	Date 10-11-1999-15.48
			Page 4 of 12



<b>HIGH END SYSTEMS INC.</b>			
Title: ME42 LOGIC BOARD			
MOTOR CONTROL			
Function: VOLTAGE REFERENCE AND DIRECTION CONTROL			
Drawing No.	REV.	Size	Date
99030096	1.5	B	10-11-1999-15.49
		Page 5	of 12



HIGH END SYSTEMS INC.			
Title: ME42 LOGIC BOARD			
Function: M0, M1, M2 & M3			
Drawing No.	REV.	Date	10-11-1999-15-49
99030096	1.5	Size B	Page 6 of 12



HIGH END SYSTEMS INC.

Title: ME42 LOGIC BOARD  
MOTOR DRIVERS



Function: M4, M5, M6 & M7

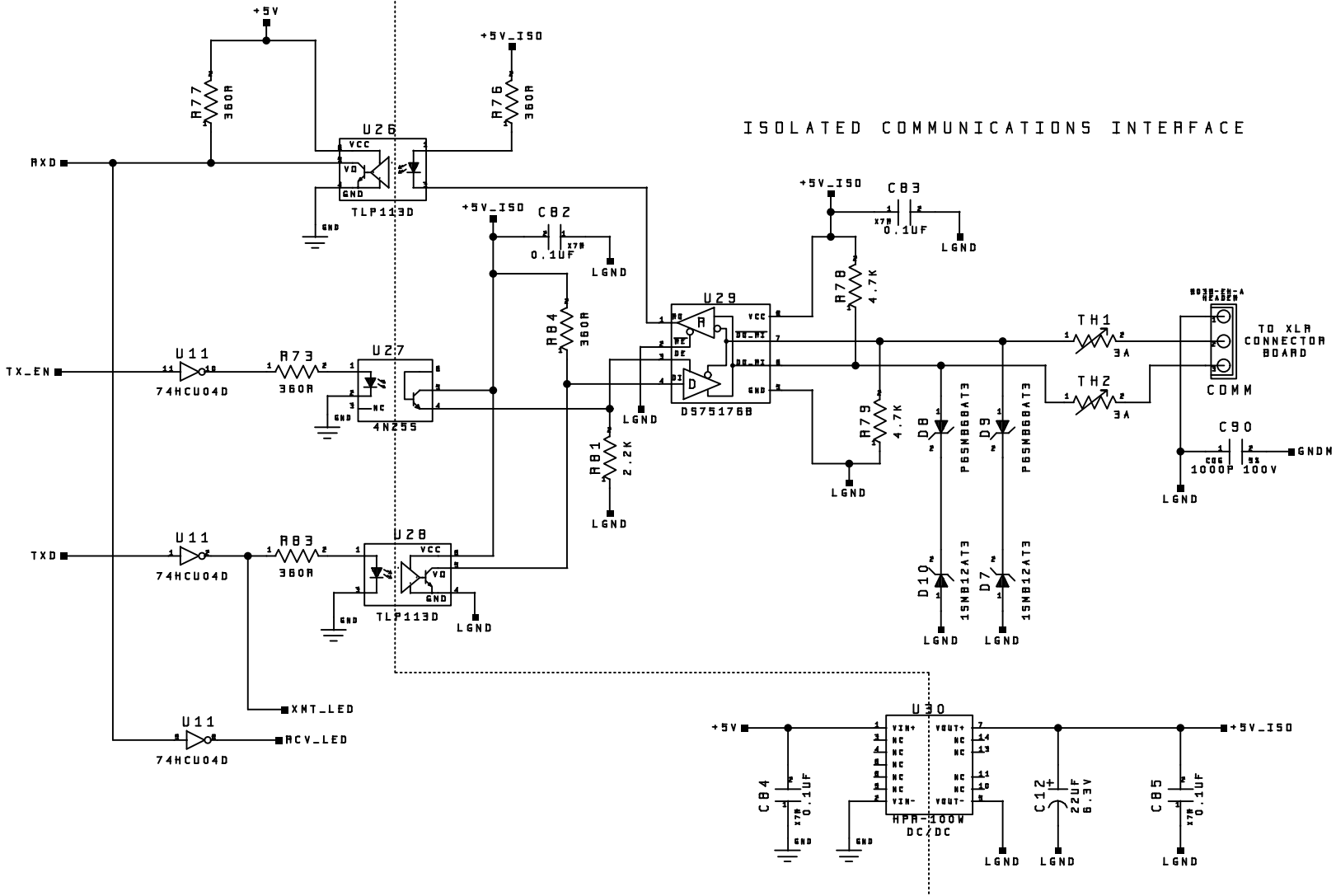
Drawing No.  
99030096

REV.  
1.5


Size B

Date 10-11-1999-15.49

Page 7 of 12

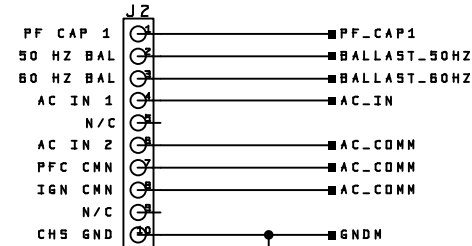
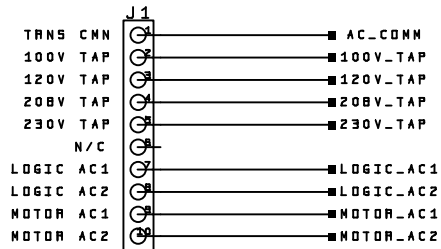


ISOLATED COMMUNICATIONS INTERFACE

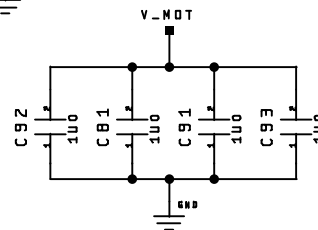
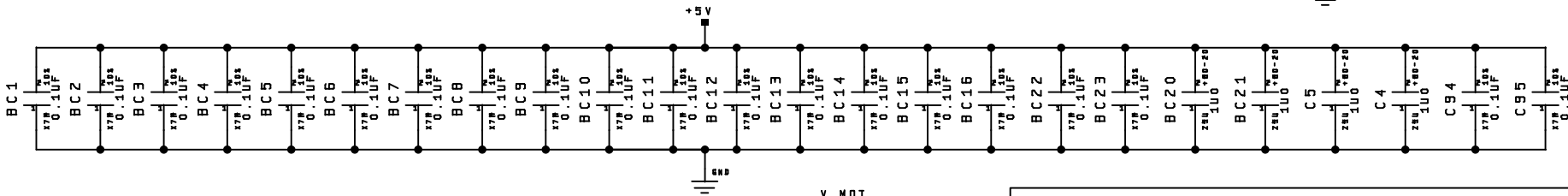
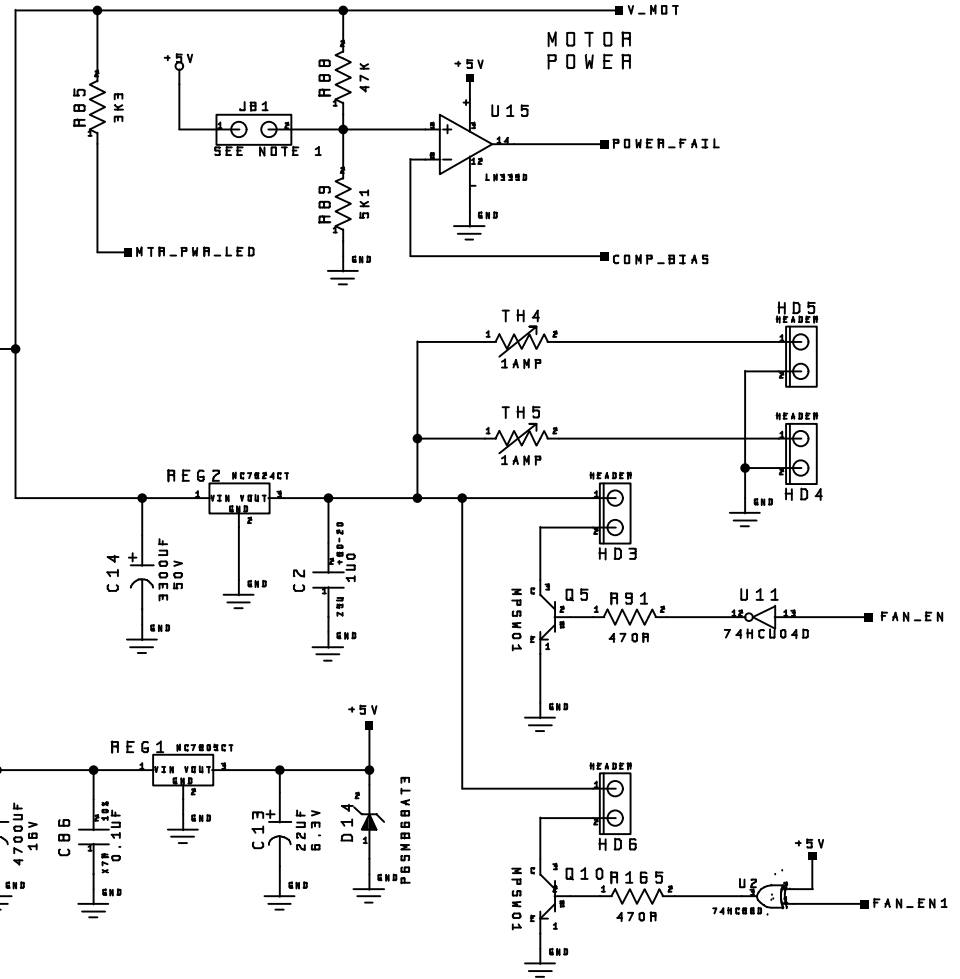
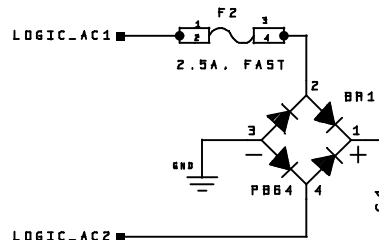
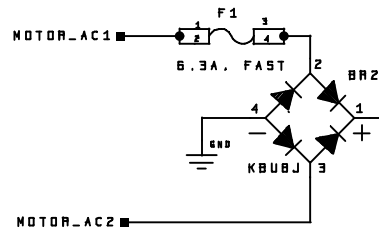
HIGH END SYSTEMS INC.			
Title: ME42 LOGIC BOARD ISOLATED POWER AND COMMUNICATION			
Function: TALK TO THE WORLD			
Drawing No. 99030096	REV. 1.5	Size B	Date 10-11-1999-15.49 Page 8 of 12



HIGH VOLTAGE



LOW VOLTAGE



NOTES:

1. HD6 TO BE USED FOR QC AND TROUBLESHOOTING PURPOSES ONLY. IN NORMAL OPERATION NO JUMPER IS TO BE INSTALLED AT HD6.

HIGH END SYSTEMS INC.

Title: ME42 LOGIC BOARD  
MOTOR AND LOGIC POWER SUPPLY



Function: MAKE THINGS GO

Drawing No. 99030096

REV. 1.5

Size B

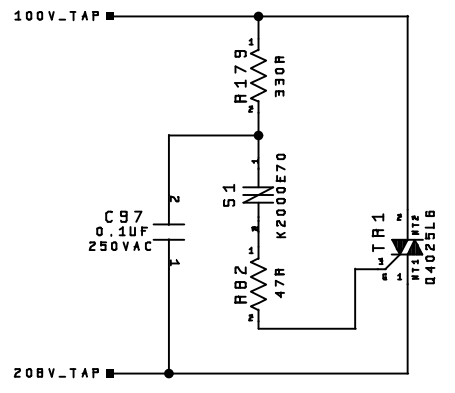
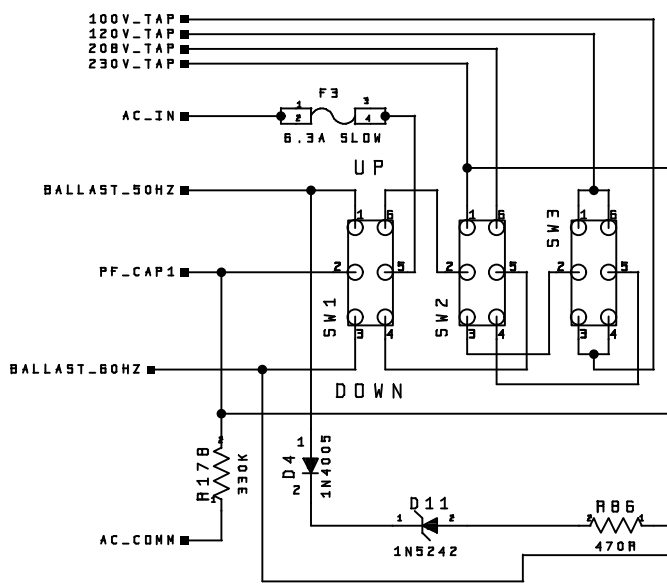
Date 10-11-1999-15.49

Page 9 of 12

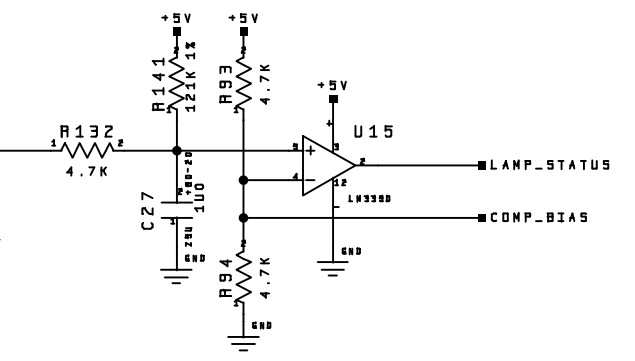
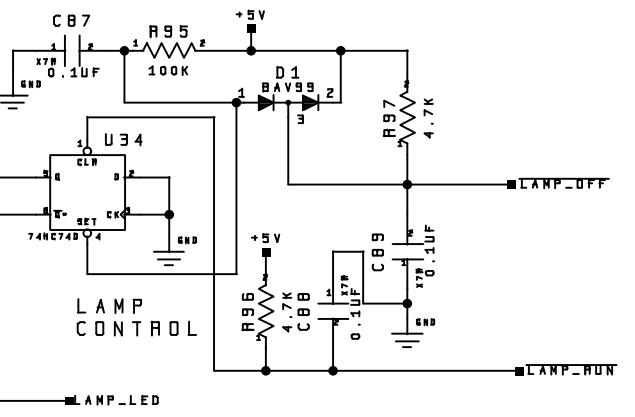
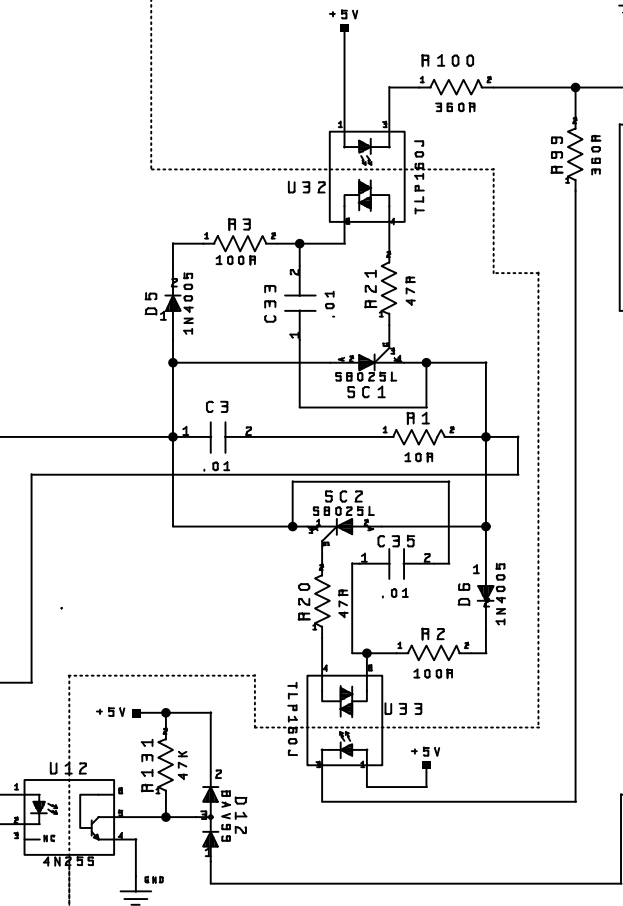
AC VOLTAGE SELECT  
 FREQUENCY UPPER VOLTAGE LOWER VOLTAGE  
 SW1 RANGE SW2 RANGE SW3

UP	50Hz	230V	120V	UP
		LOWER VOLT RANGE	100V	
DOWN	60Hz	208V	120V	UP
		LOWER VOLT RANGE	100V	

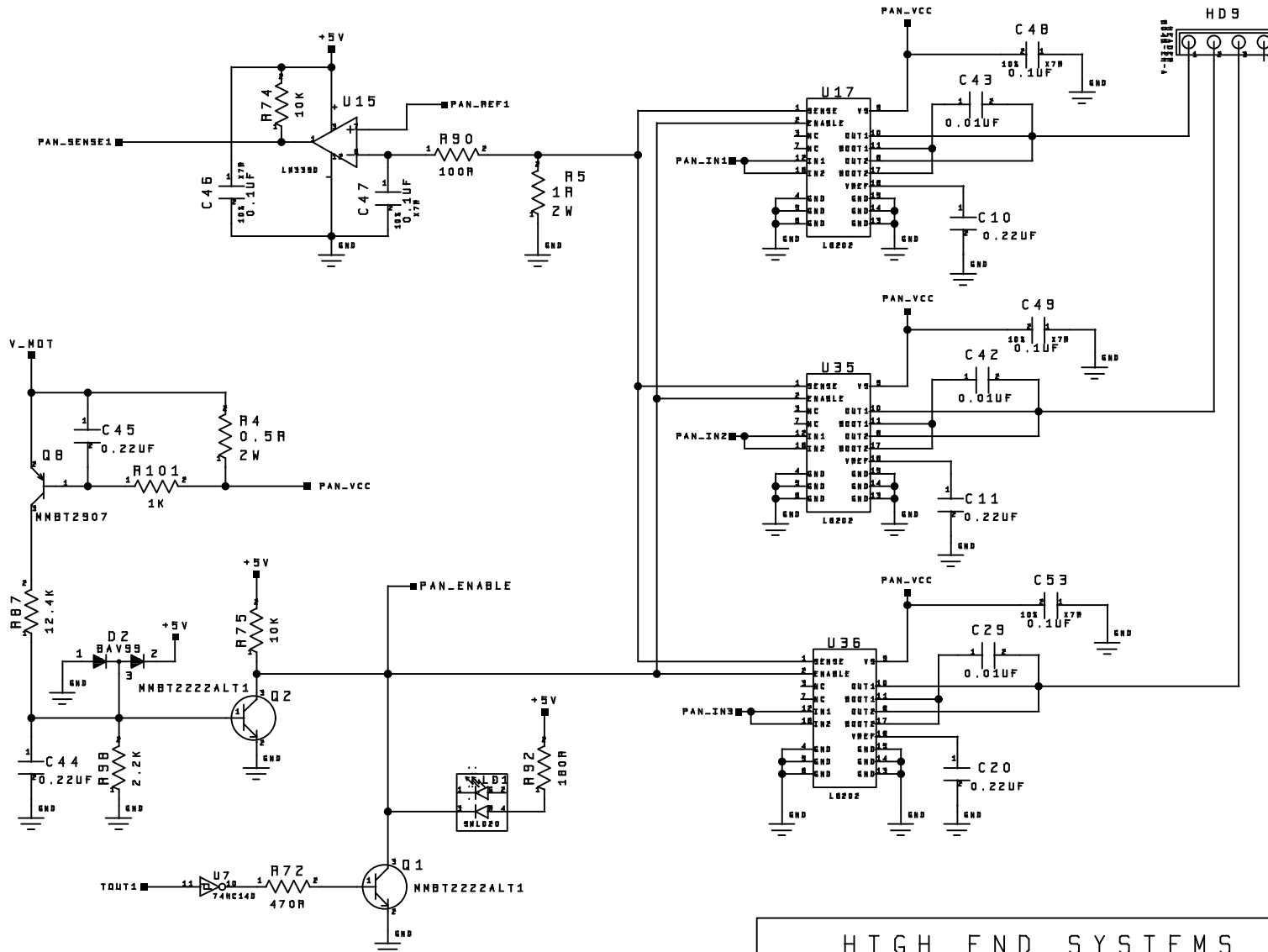
HIGH VOLTAGE LOW VOLTAGE



HIGH VOLTAGE LOW VOLTAGE




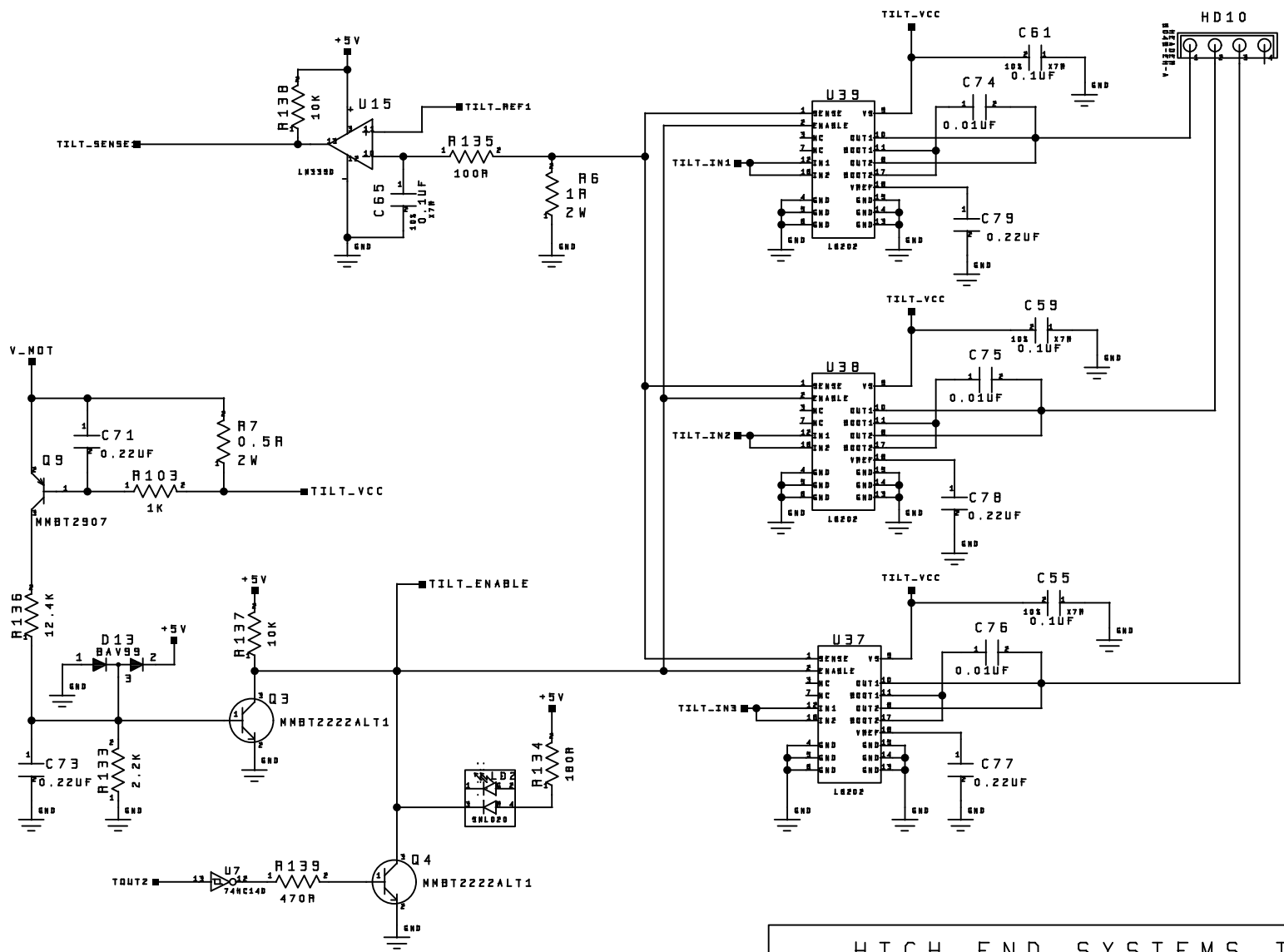
HIGH END SYSTEMS INC.			
Title: ME42 LOGIC BOARD			
LAMP CONTROL			
Function: LAMP ON/OFF AND RUN SENSING			
Drawing No.	REV.	Size	Date
99030096	1.5	B	10-11-1999-15-50
			Page 10 of 12



NOTE:


1. THE CIRCUITS FOR PAN AND TILT HAVE BEEN SWAPPED.  
 SIGNALS LABELED 'PAN-XXX' ARE BEING USED TO CONTROL  
 THE TILT MOTOR.

HIGH END SYSTEMS INC.			
Title: ME42 LOGIC BOARD PAN CONTROL			
Function:			
Drawing No. 99030096	REV. 1.5	Size B	Date 10-11-1999-15:50 Page 11 of 12



NOTE:

1. THE CIRCUITS FOR PAN AND TILT HAVE BEEN SWAPPED. SIGNALS LABELED 'TILT\_XXX' ARE BEING USED TO CONTROL THE PAN MOTOR.

HIGH END SYSTEMS INC.			
Title: ME42 LOGIC BOARD			
TILT CONTROL			
Function:			
Drawing No.	REV.	Size	Date
99030096	1.5	B	10-11-1999-15.50
			Page 12 of 12