

THERAMINI

3C3P

REV. D

- 2. CPU
- 3. Memory
- 4. Misc I/O
- 5. Data Conversion
- 6. FRONT PANEL
- 7. Graphic LCD
- 8. STIM WAVEFORM DSP
- 9. Boot Load & Clocks
- 10. DACs
- 11. Filters
- 12. Output Amps
- 13. Output Isolation & Monitoring
- 14. ULTRASOUND FREQUENCY SYNTH
- 15. RF Deck I/O
- 16. POWER SUPPLY

BOARD ID: TBD

CPU
cpu331.sch

FRONT PANEL I/O
fpanel.sch

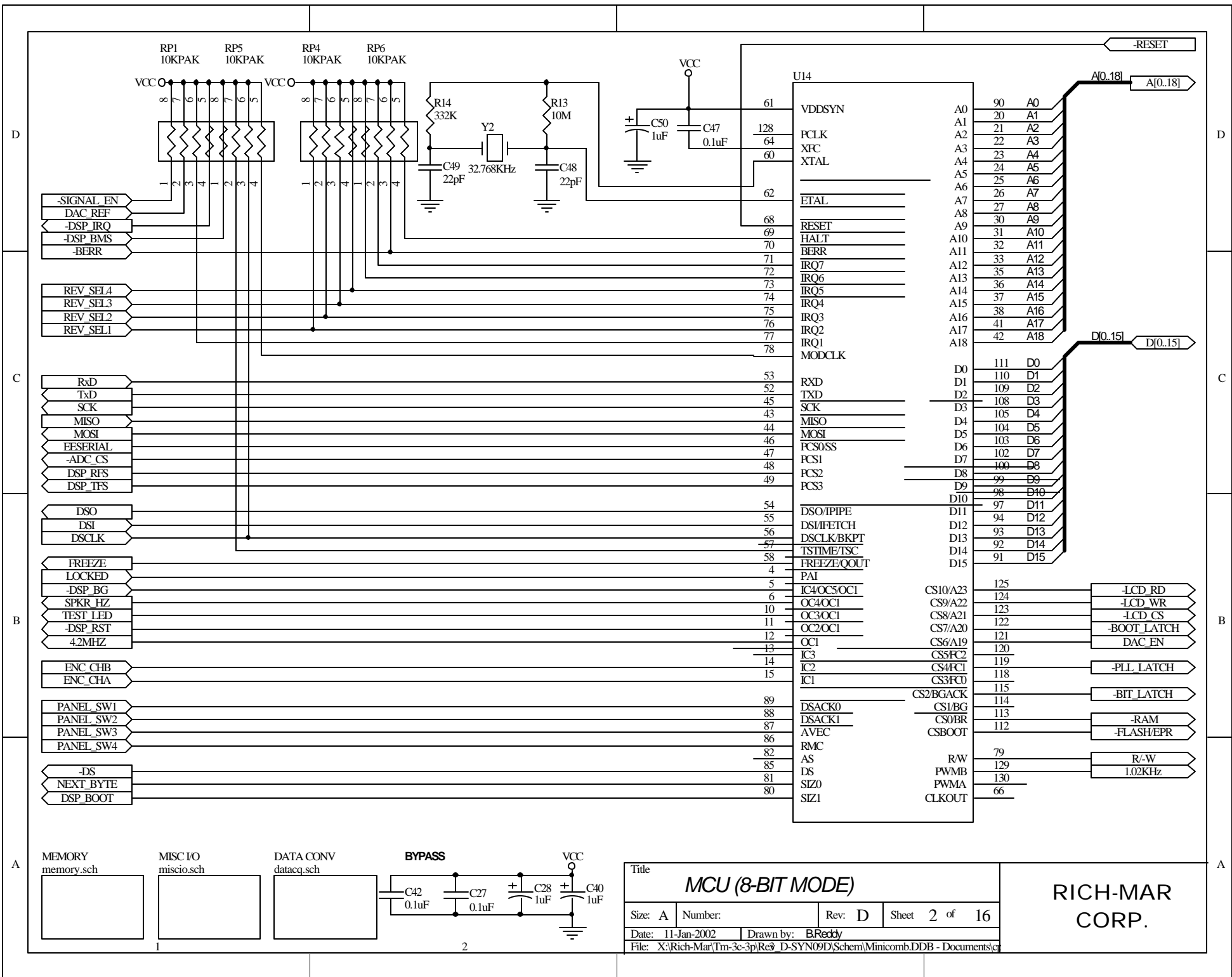
DSP
dsp.sch

FREQ SYNTH
pll.sch

POWER SUPPLY
pwr.sch

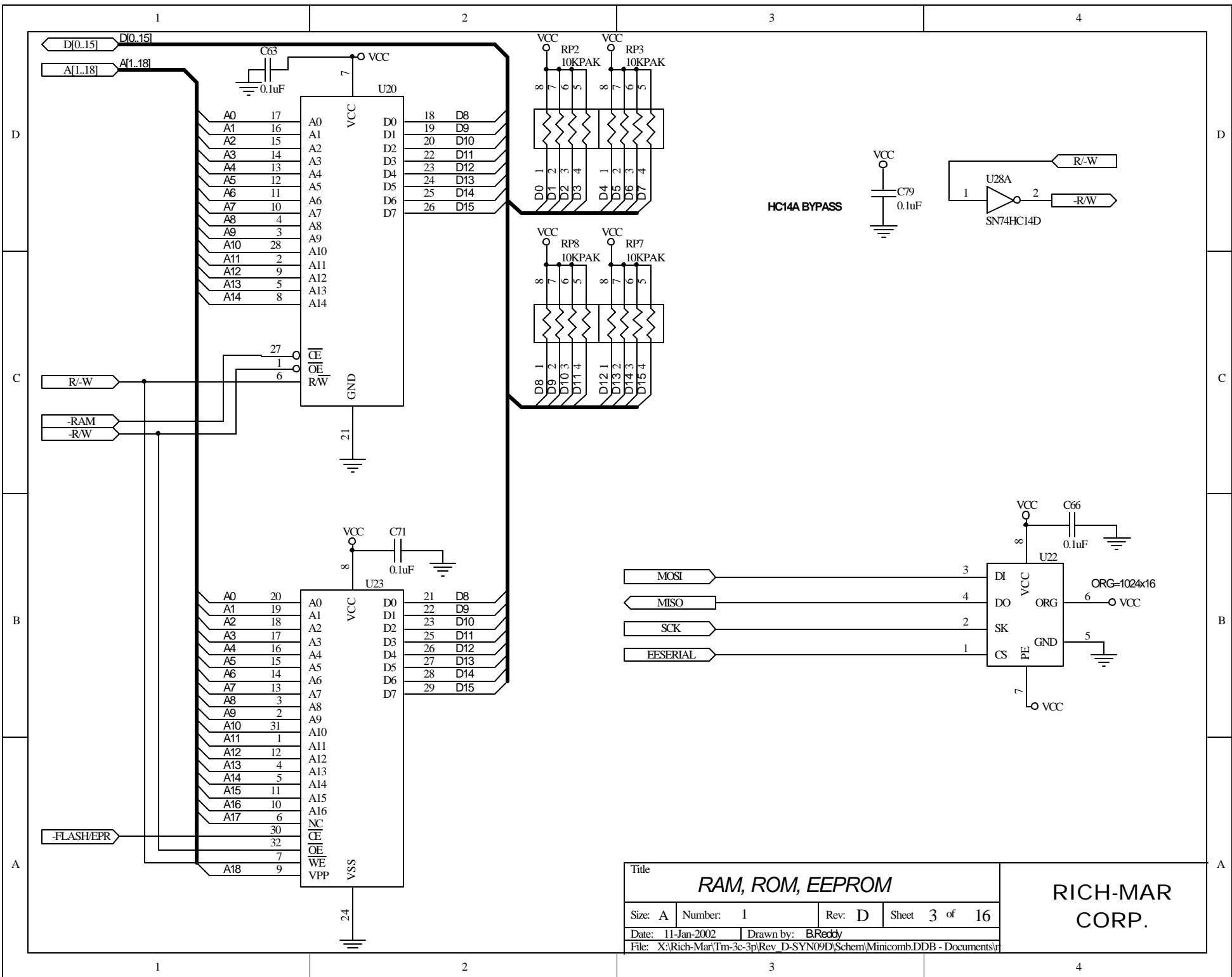
Title THERAMINI COMBO			
Size: A	Number:	Rev: D	Sheet 1 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Rev_D\SYN09D\Schem\Minicomb.DDB - Documents\M			

**RICH-MAR
CORP.**



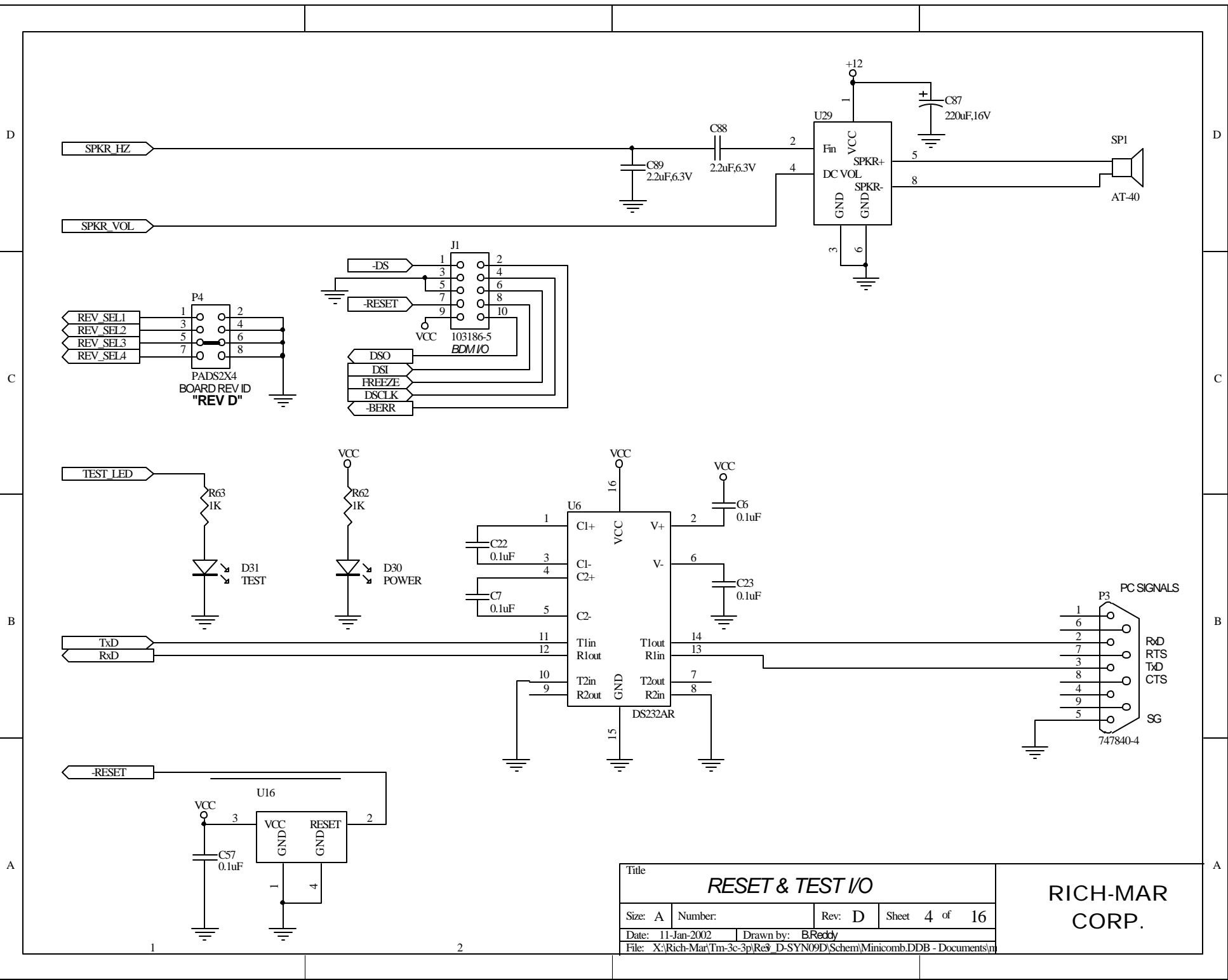
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MCU (8-BIT MODE)			
Size: A	Number:	Rev: D	Sheet 2 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Re9_D-SYN09D\Schem\Minicomb.DDB - Documents\c			

**RICH-MAR
CORP.**



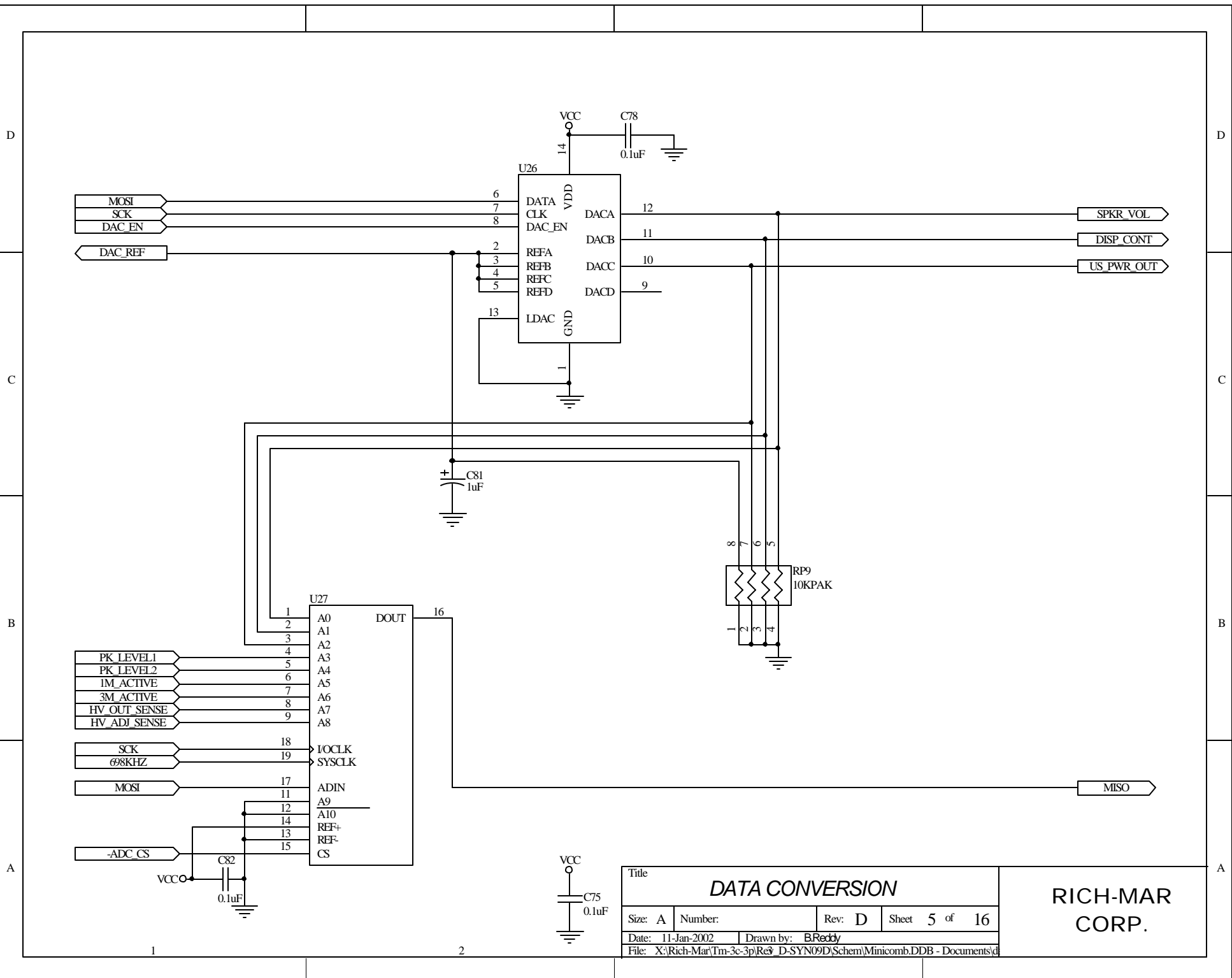
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RAM, ROM, EEPROM			
Size: A	Number: 1	Rev: D	Sheet 3 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Rev_D-SYN09D\Schem\Mimicomb.DDB - Documents\			

**RICH-MAR
CORP.**



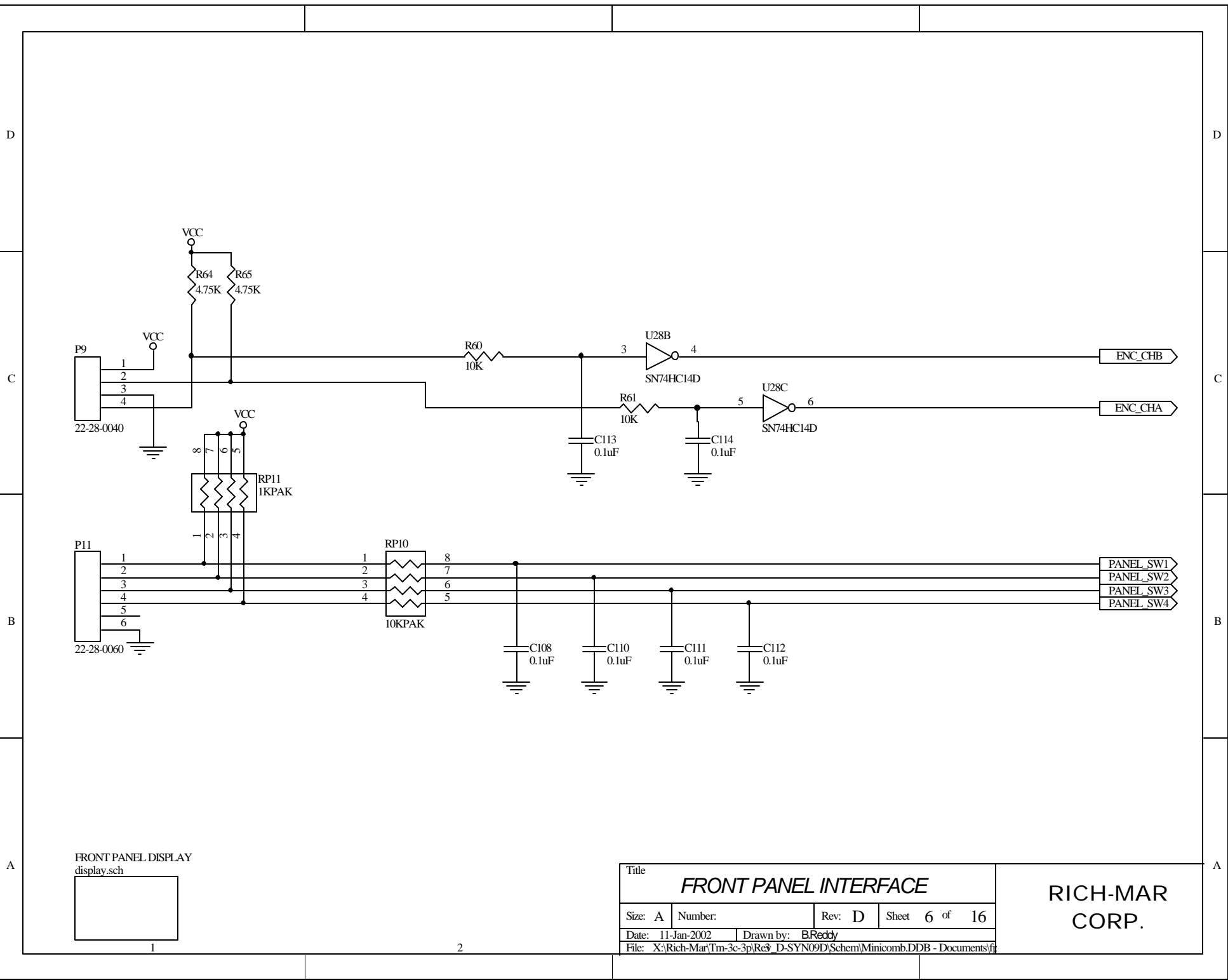
Title			
RESET & TEST I/O			
Size: A	Number:	Rev: D	Sheet 4 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Rev_D-SYN09D\Schem\Minicomb.DDB - Documents\m			

**RICH-MAR
CORP.**

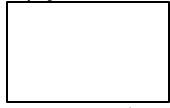


Title			
DATA CONVERSION			
Size: A	Number:	Rev: D	Sheet 5 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Re9_D-SYN09D\Schem\Minicomb.DDB - Documents\d			

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FRONT PANEL DISPLAY
display.sch

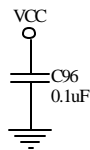
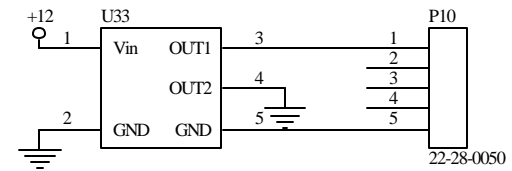
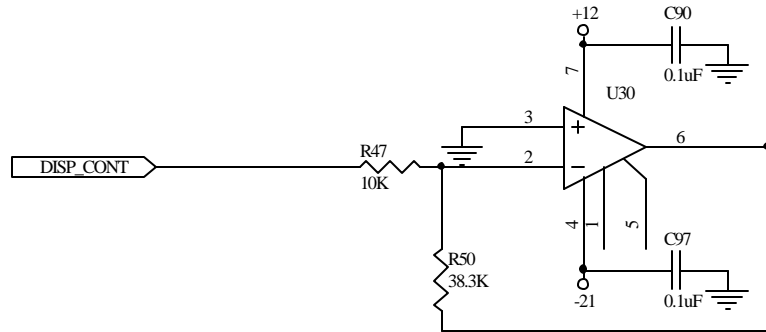
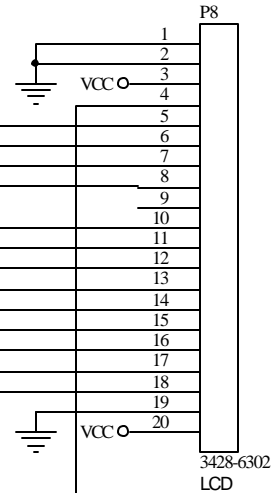
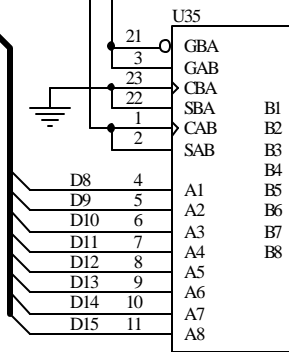
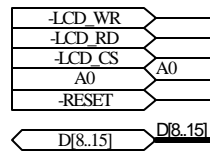


1

2

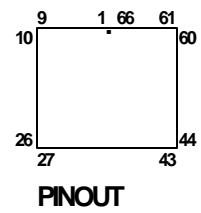
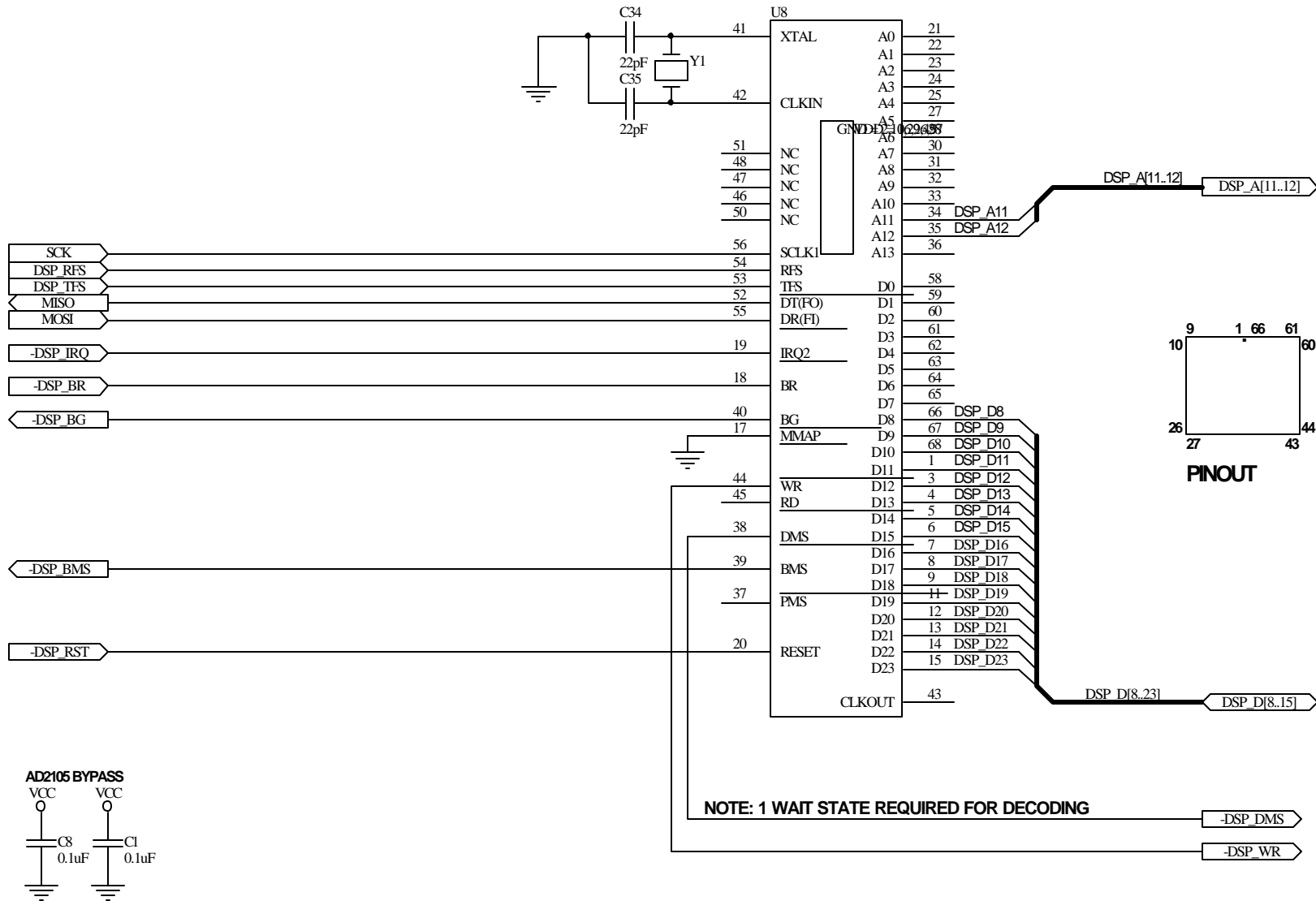
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FRONT PANEL INTERFACE			
Size: A	Number:	Rev: D	Sheet 6 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Re3_D-SYN09D\Schem\Minicomb.DDB - Documents\fi			

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Title			
FRONT PANEL DISPLAY			
Size: A	Number:	Rev: D	Sheet 7 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Rev_D-SYN09D\Schem\Minicomb.DDB - Documents\d			

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NOTE: 1 WAIT STATE REQUIRED FOR DECODING

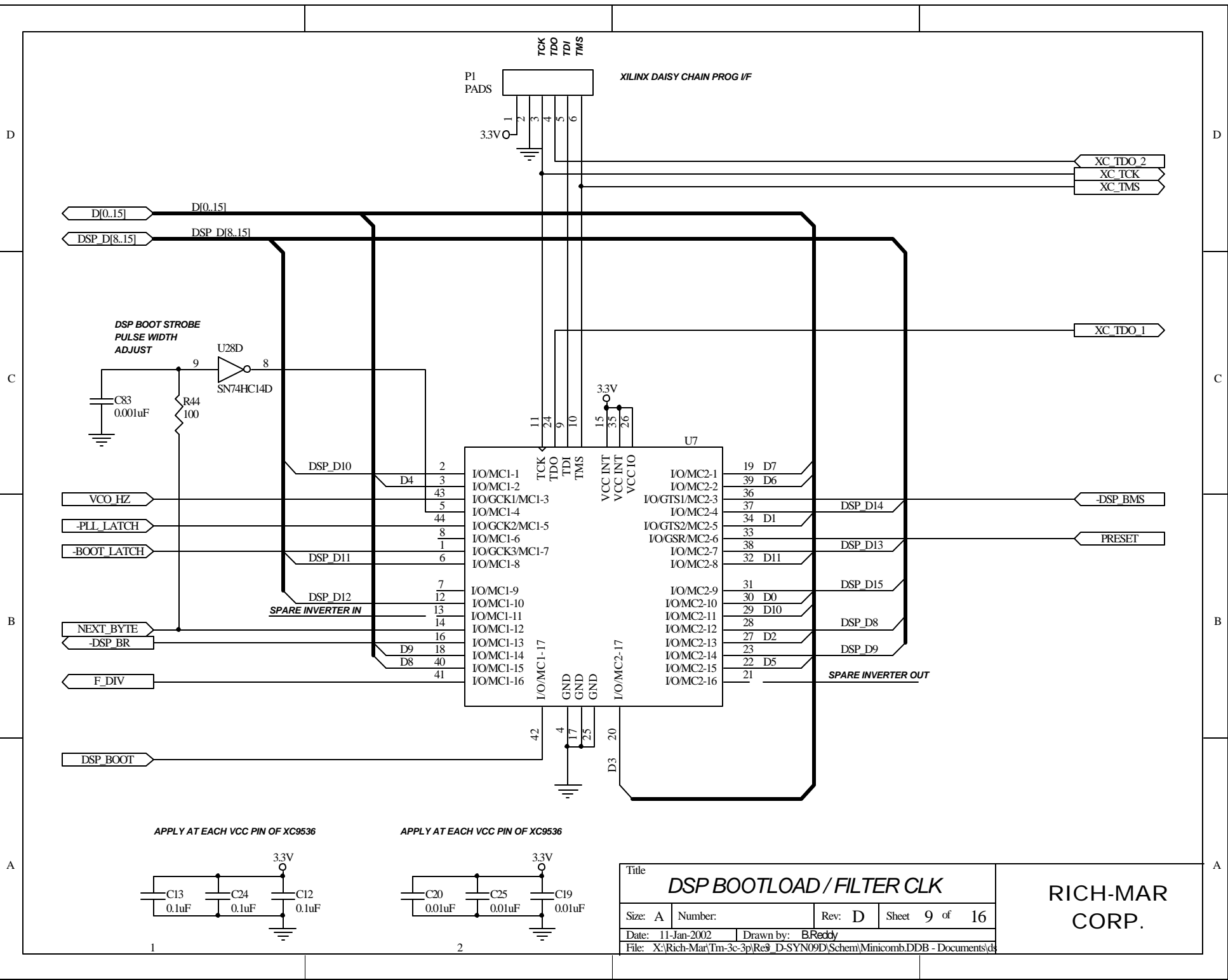
-DSP_DMS

-DSP_WR

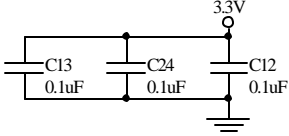


Title			
AD2105 DSP			
Size: A	Number:	Rev: D	Sheet 8 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Res_D-SYN09D\Schem\Minicomb.DDB - Documents\d			

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CORP.**

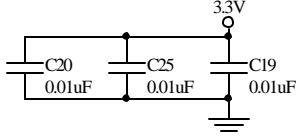


APPLY AT EACH VCC PIN OF XC9536



1

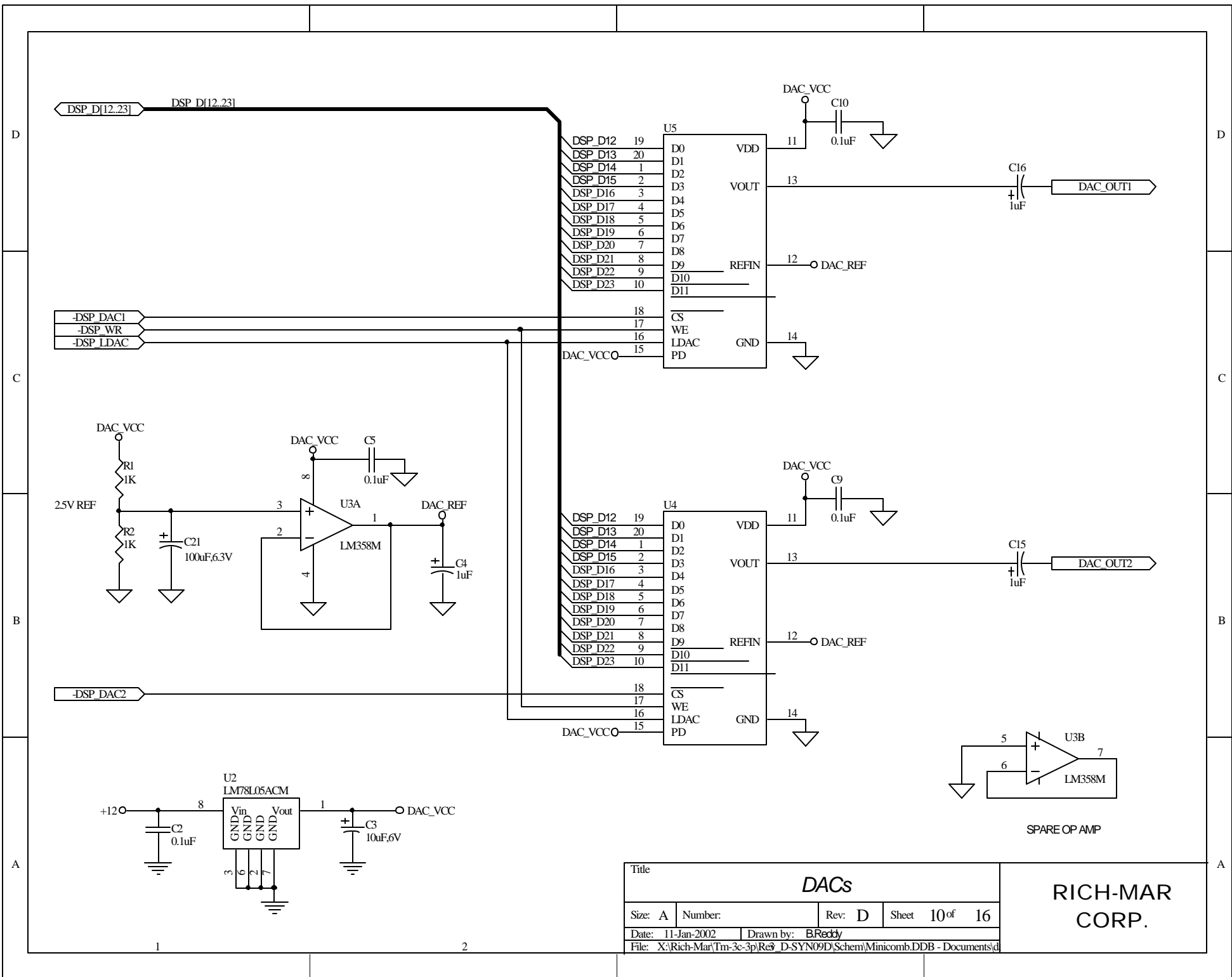
APPLY AT EACH VCC PIN OF XC9536



2

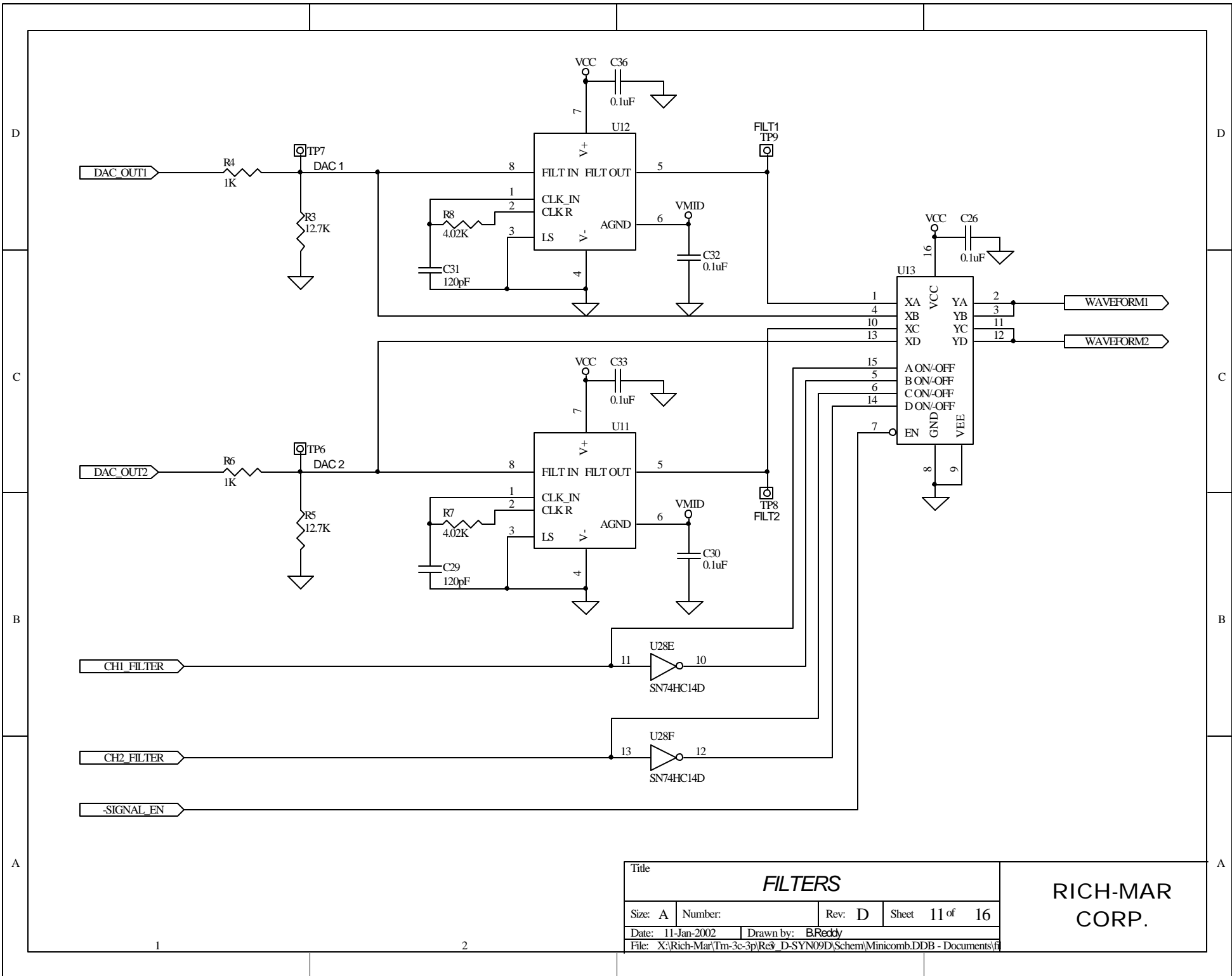
Title			
DSP BOOTLOAD / FILTER CLK			
Size: A	Number:	Rev: D	Sheet 9 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Re9_D-SYN09D\Schem\Minicomb.DDB - Documents\d			

**RICH-MAR
CORP.**



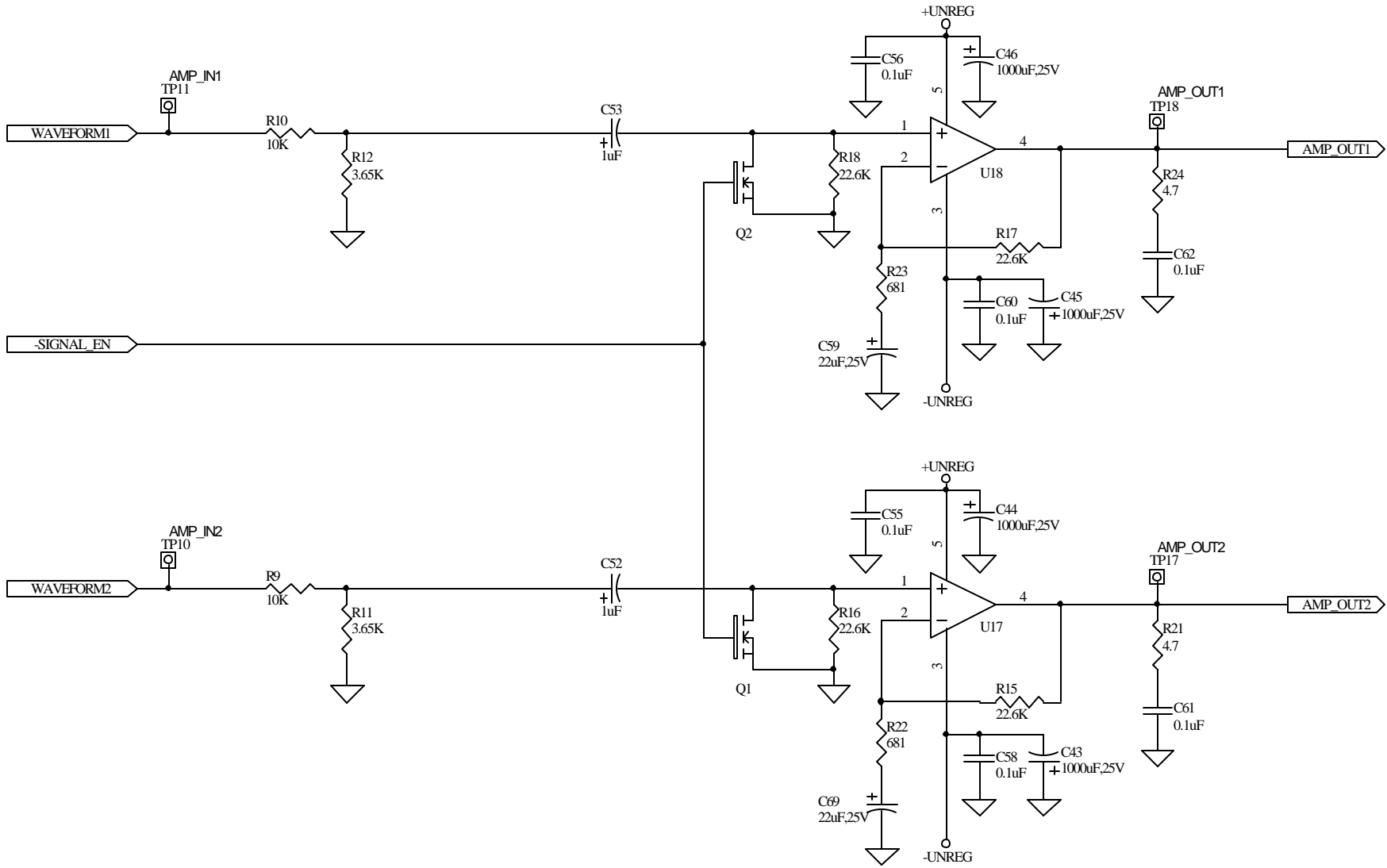
Title			
DACs			
Size: A	Number:	Rev: D	Sheet 10 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Re9_D-SYN09D\Schem\Minicomb.DDB - Documents\d			

**RICH-MAR
CORP.**



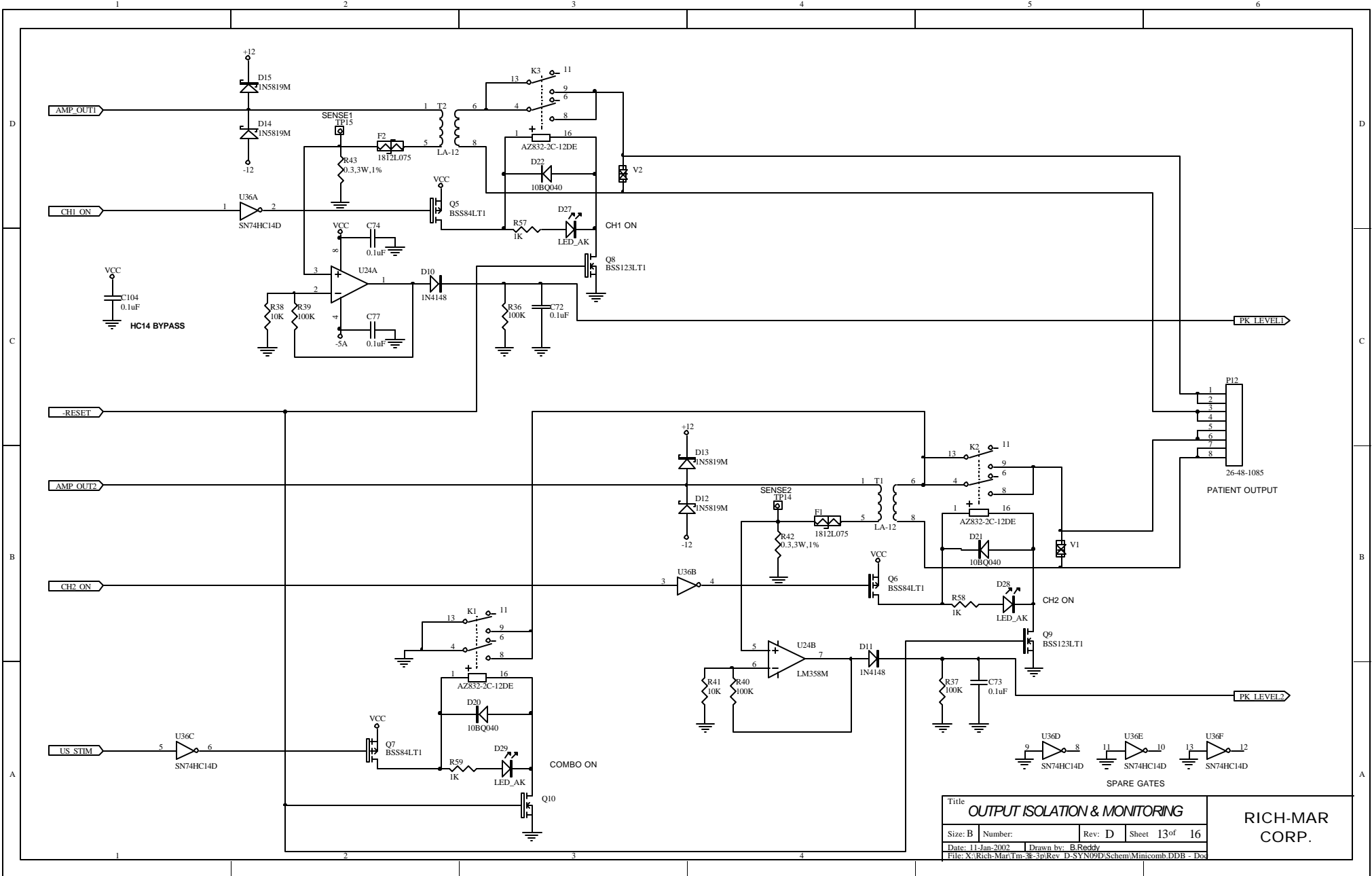
Title			
FILTERS			
Size: A	Number:	Rev: D	Sheet 11 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Re\ D-SYN09D\Schem\Minicomb.DDB - Documents\fi			

**RICH-MAR
CORP.**



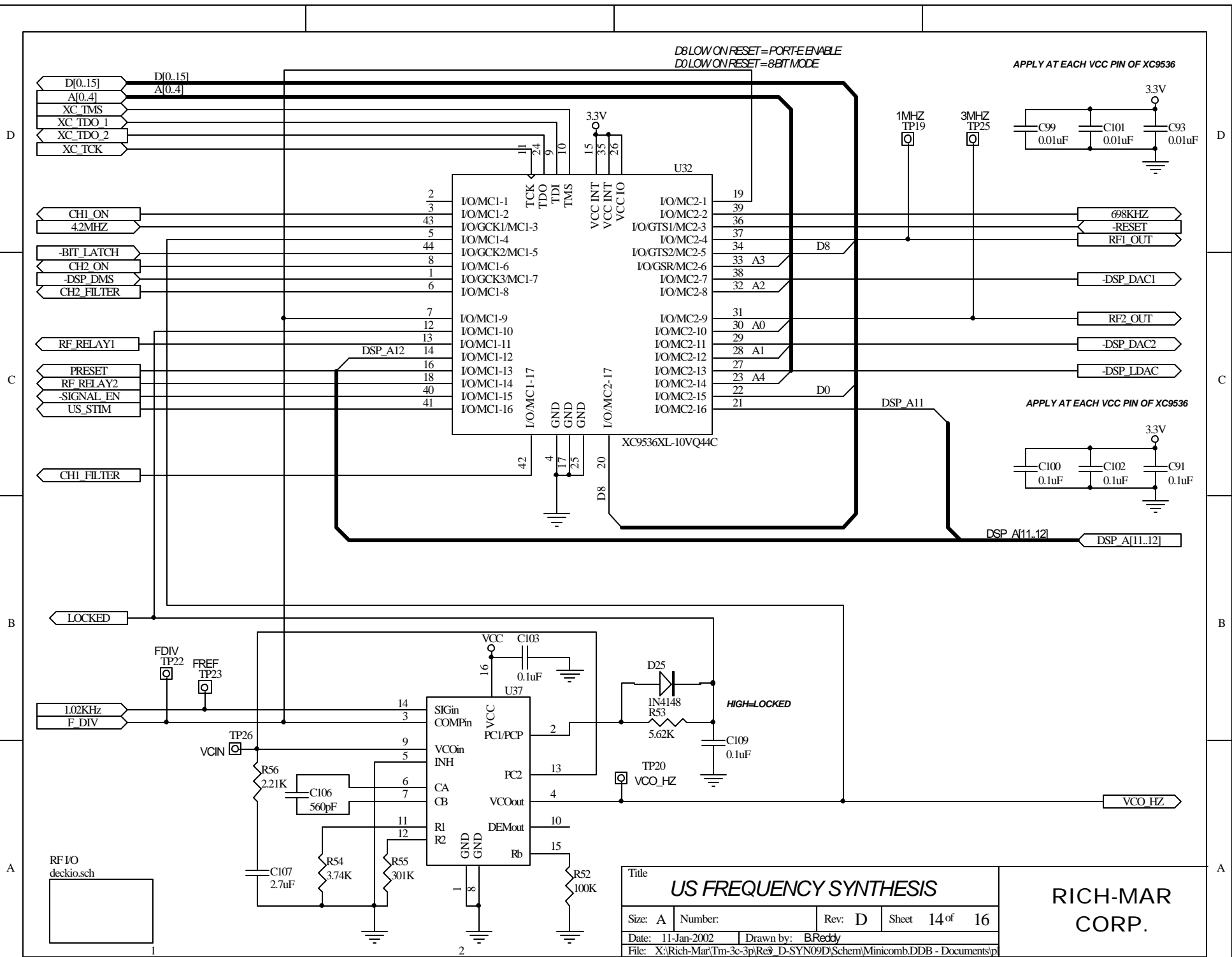
Title			
OUTPUT AMPS			
Size: A	Number:	Rev: D	Sheet 12 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Rev_D-SYN09D\Schem\Minicomb.DDB - Documents\at			

**RICH-MAR
CORP.**



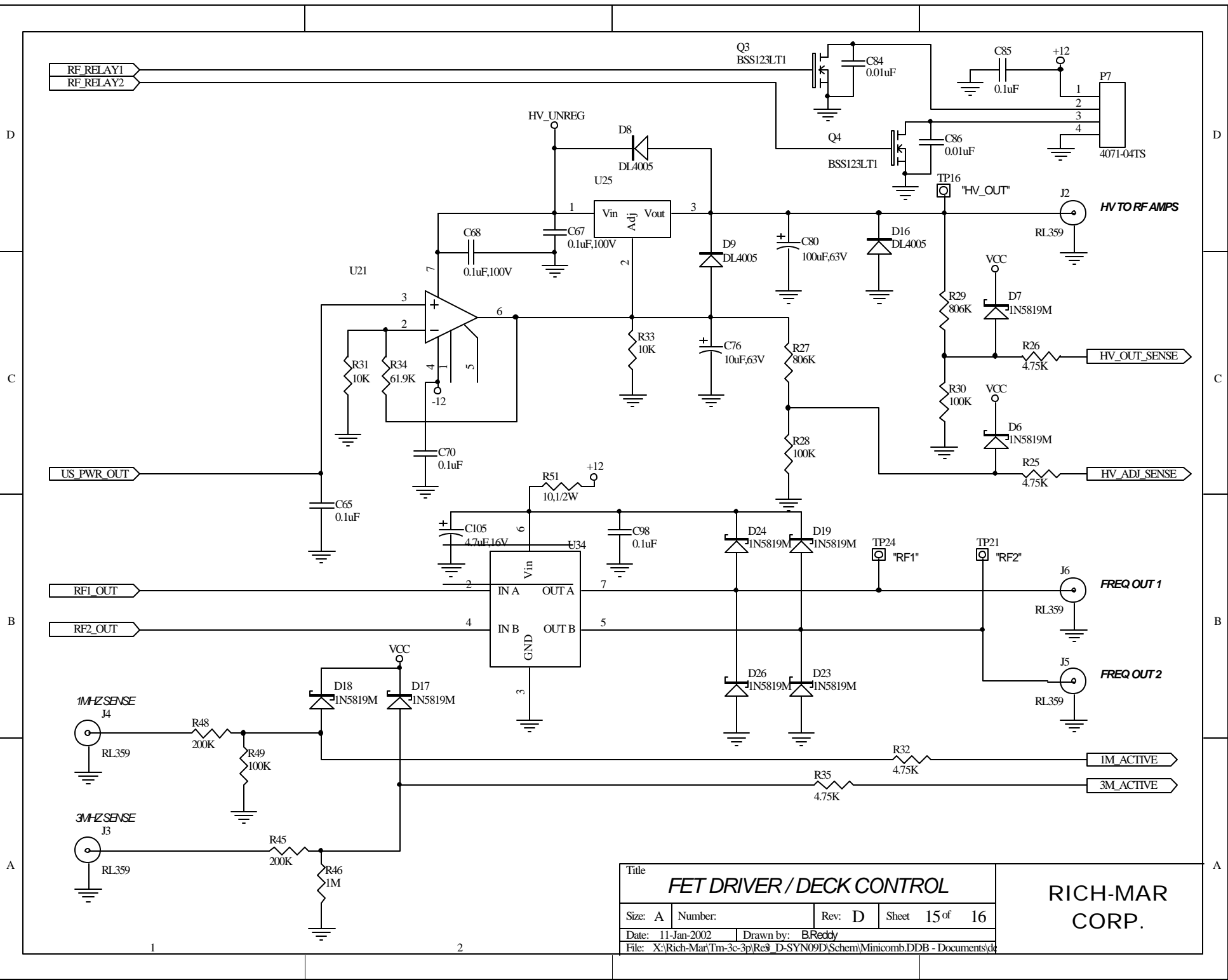
Title OUTPUT ISOLATION & MONITORING			
Size: B	Number:	Rev: D	Sheet 13 of 16
Date: 11-Jan-2002 Drawn by: B.Reddy			
File: X:\Rich-Mar\Tm-8-3p\Rev_D.SYN\91D\Schem\Mimcomb.DDB - Dos			

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Title US FREQUENCY SYNTHESIS			
Size: A	Number:	Rev: D	Sheet 14 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Re9_D-SYN09D\Schem\Minicomb.DDB - Documents\p			

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CORP.**



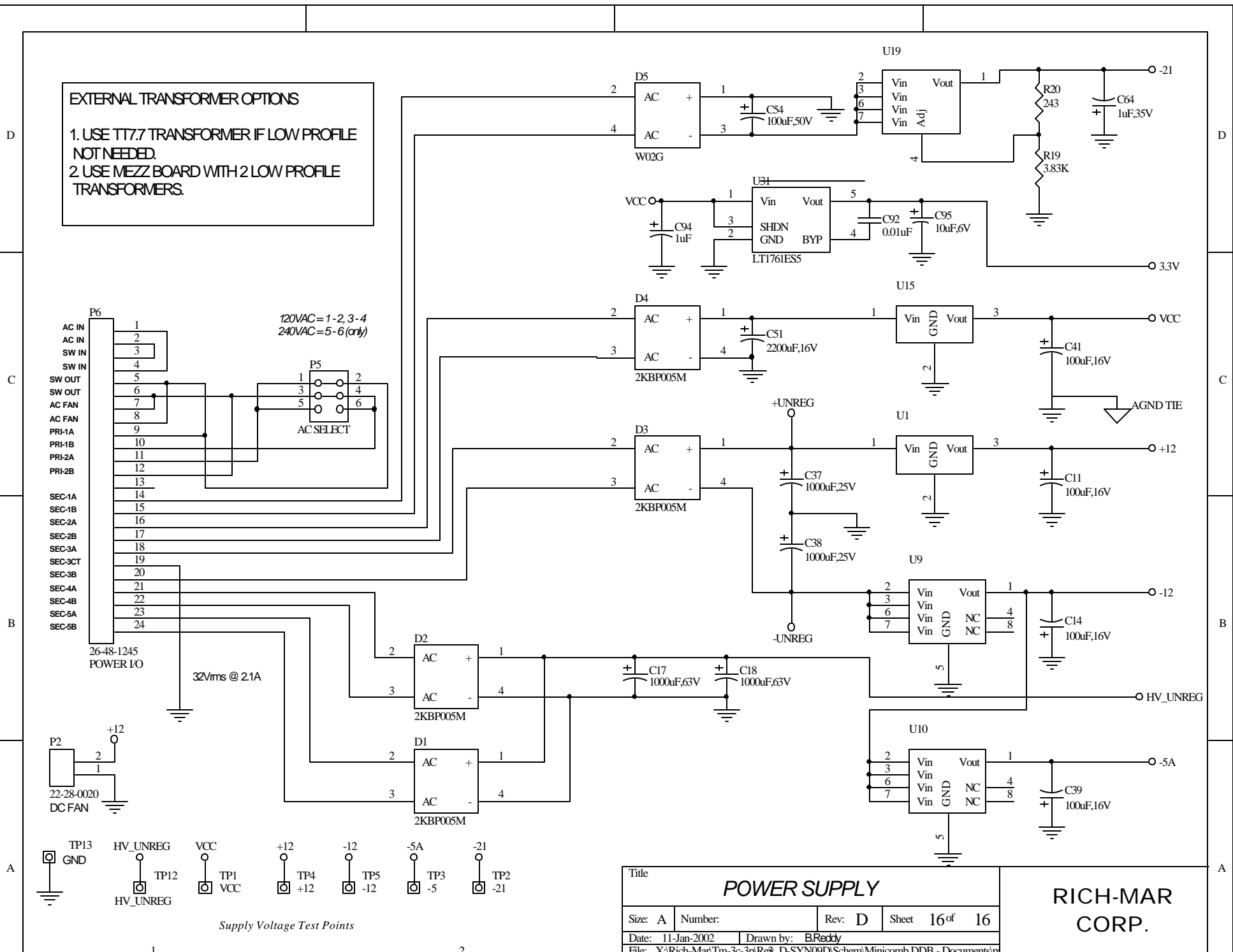
Title			
FET DRIVER / DECK CONTROL			
Size: A	Number:	Rev: D	Sheet 15 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Re9_D-SYN09D\Schem\Minicomb.DDB - Documents\dc			

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CORP.**

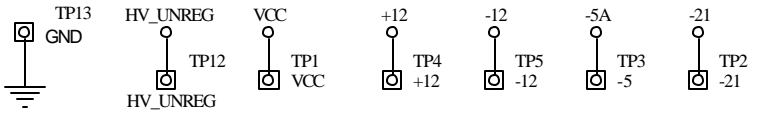
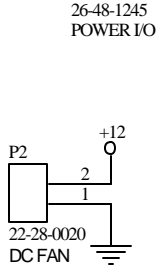
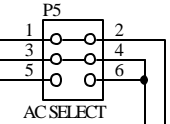
EXTERNAL TRANSFORMER OPTIONS

1. USE TT7.7 TRANSFORMER IF LOW PROFILE NOT NEEDED.
2. USE MEZZ BOARD WITH 2 LOW PROFILE TRANSFORMERS.

120VAC = 1-2, 3-4
240VAC = 5-6 (only)



- AC IN 1
- AC IN 2
- SW IN 3
- SW IN 4
- SW OUT 5
- SW OUT 6
- AC FAN 7
- AC FAN 8
- PRI-1A 9
- PRI-1B 10
- PRI-2A 11
- PRI-2B 12
- SEC-1A 14
- SEC-1B 15
- SEC-2A 16
- SEC-2B 17
- SEC-3A 18
- SEC-3CT 19
- SEC-3B 20
- SEC-4A 21
- SEC-4B 22
- SEC-5A 23
- SEC-5B 24



Supply Voltage Test Points

Title			
POWER SUPPLY			
Size: A	Number:	Rev: D	Sheet 16 of 16
Date: 11-Jan-2002	Drawn by: B.Reddy		
File: X:\Rich-Mar\Tm-3c-3p\Re9_D-SYN09D\Schem\Minicomb.DDB - Documents\p			

**RICH-MAR
CORP.**