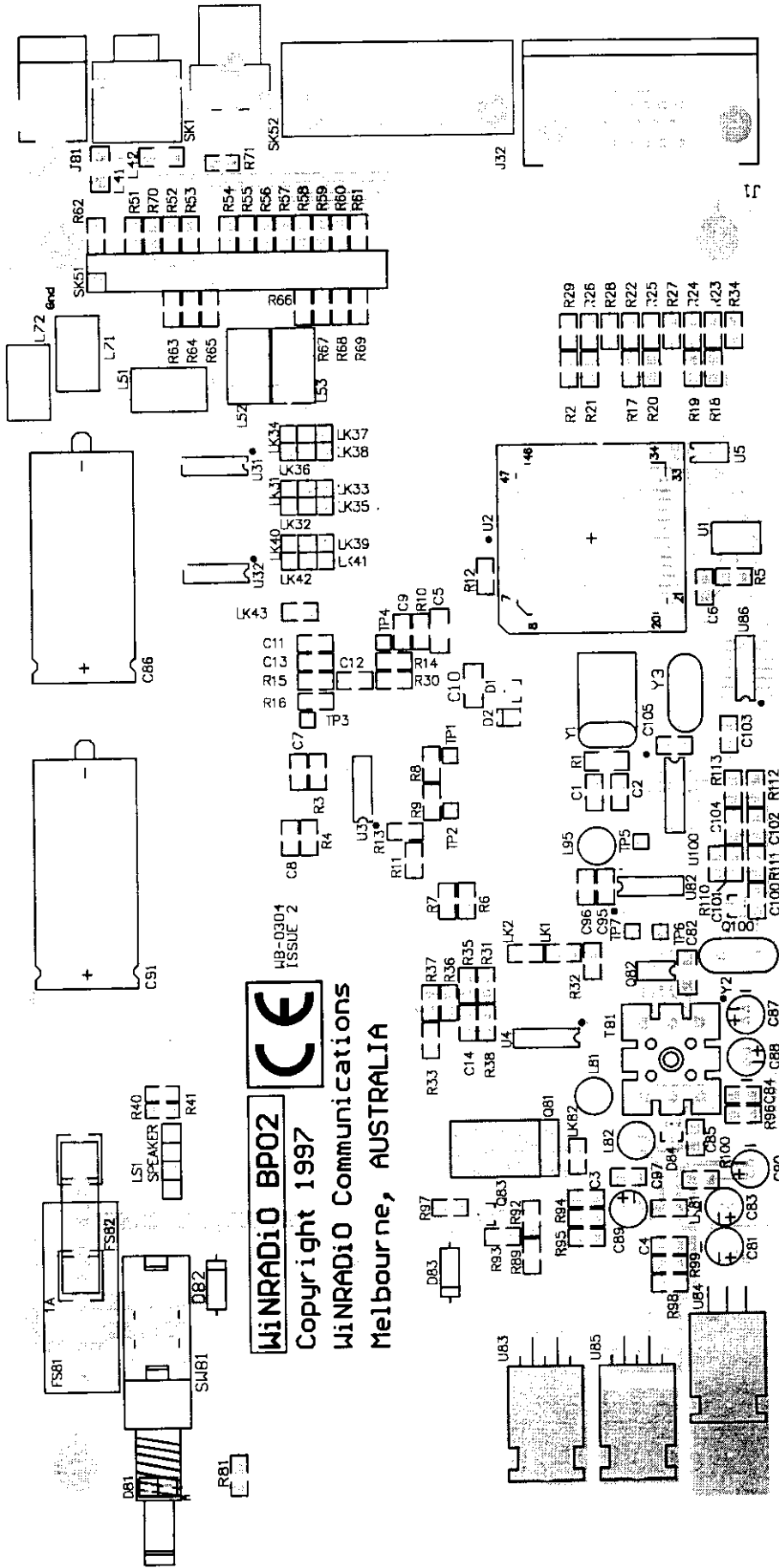


APPENDIX I

TEST SAMPLE CIRCUIT ASSEMBLY DIAGRAMS

Top Over Lay



WinRadio BP02

Copyright 1997

WinRadio Communications
Melbourne, AUSTRALIA

WB-0304
ISSUE 2

EXTERNAL BACKPLANE - TOP

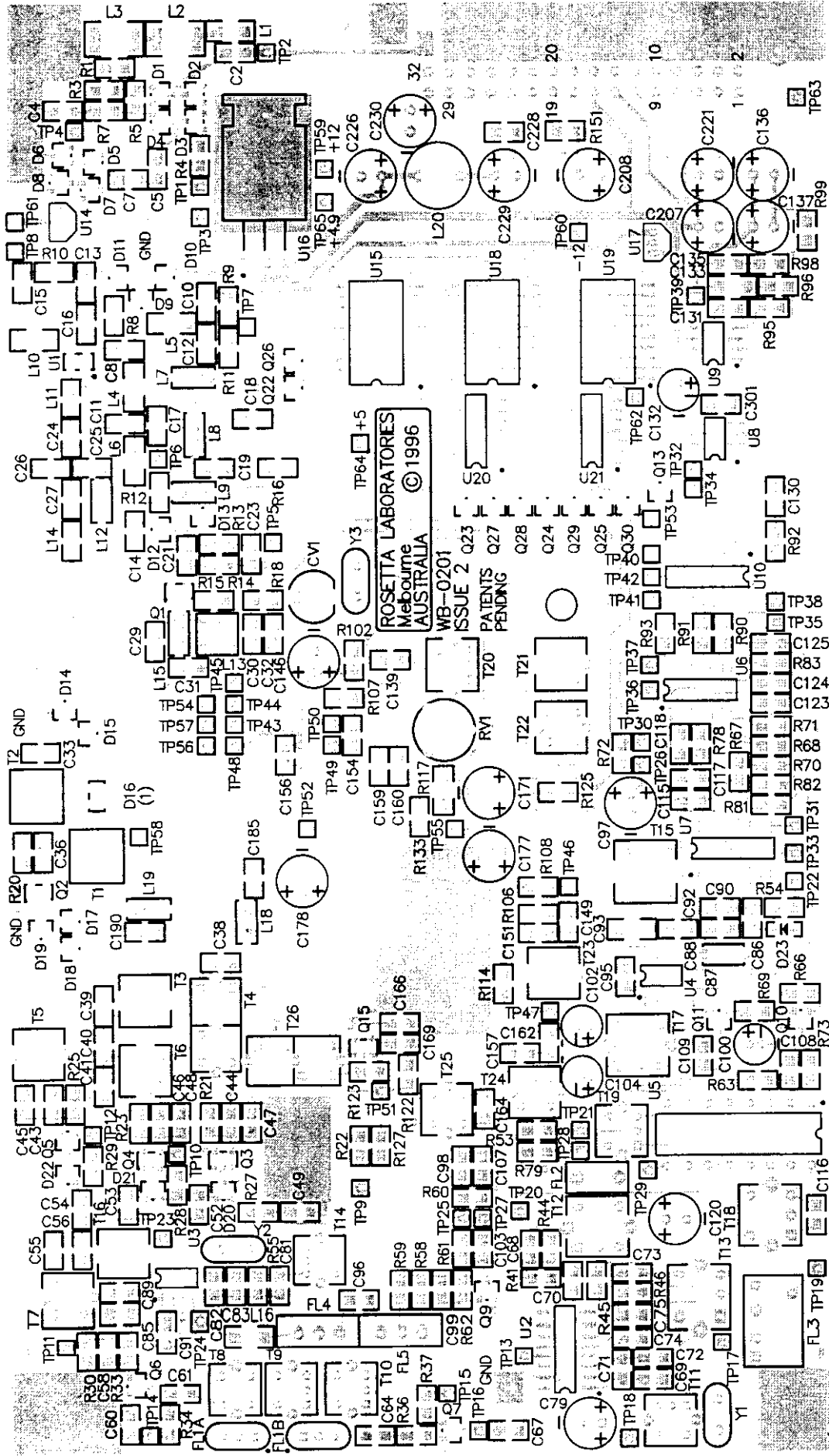
NR 1000e

FCC ID: HNL-WREXT

2 1000e7

EXTERNAL BACKPLANE - BOTTOM
WR1000e

FCC ID: HNL-WREXT



ROSETTA LABORATORIES
Melbourne
AUSTRALIA © 1996

WB-0201
ISSUE 2 Q23

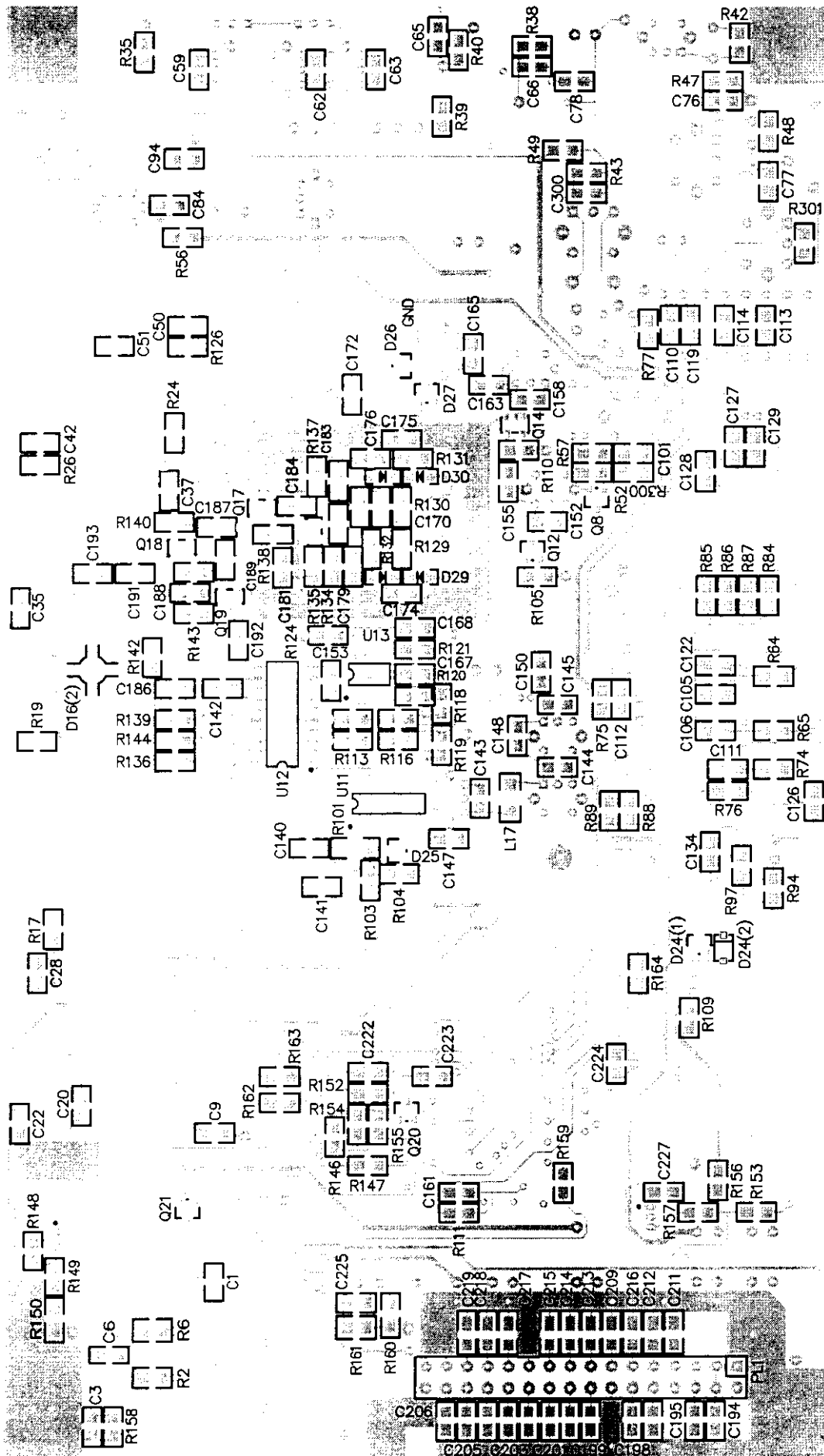
PATENTS
PENDING

RECEIVER BOARD - TOP

WR1000e

FCC ID: HNL-WREXT

2 1000e

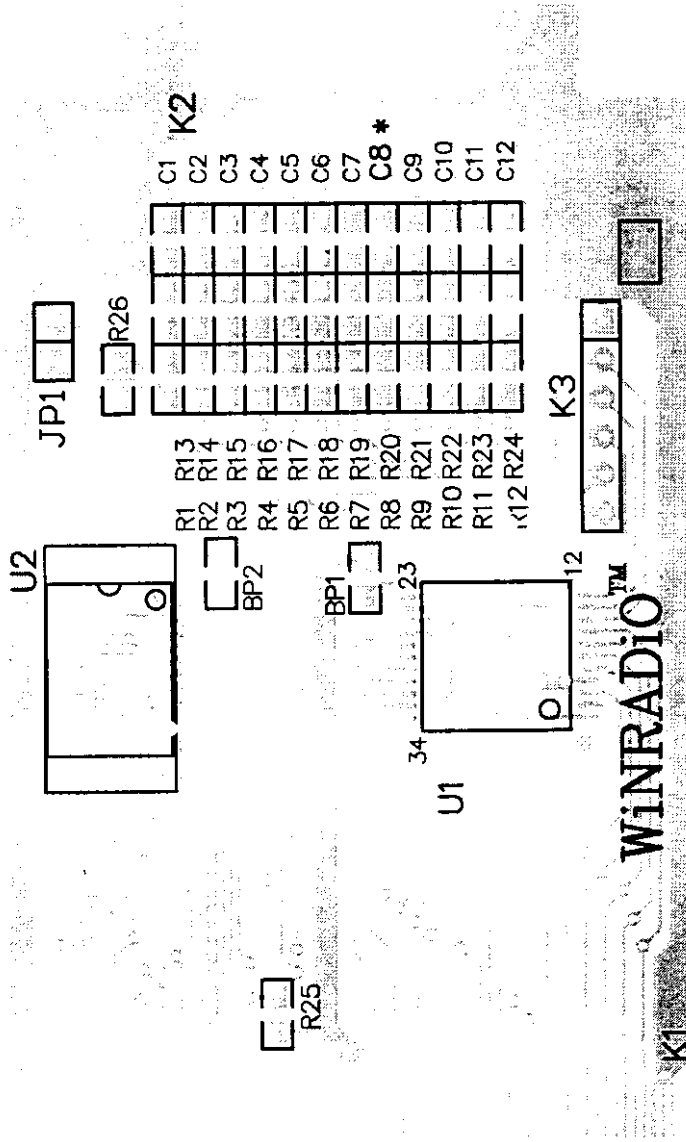


RECEIVER BOARD - BOTTOM

WR 1000e

FCC ID: ANL-WREXT

FCC ID: HNL-WREXT



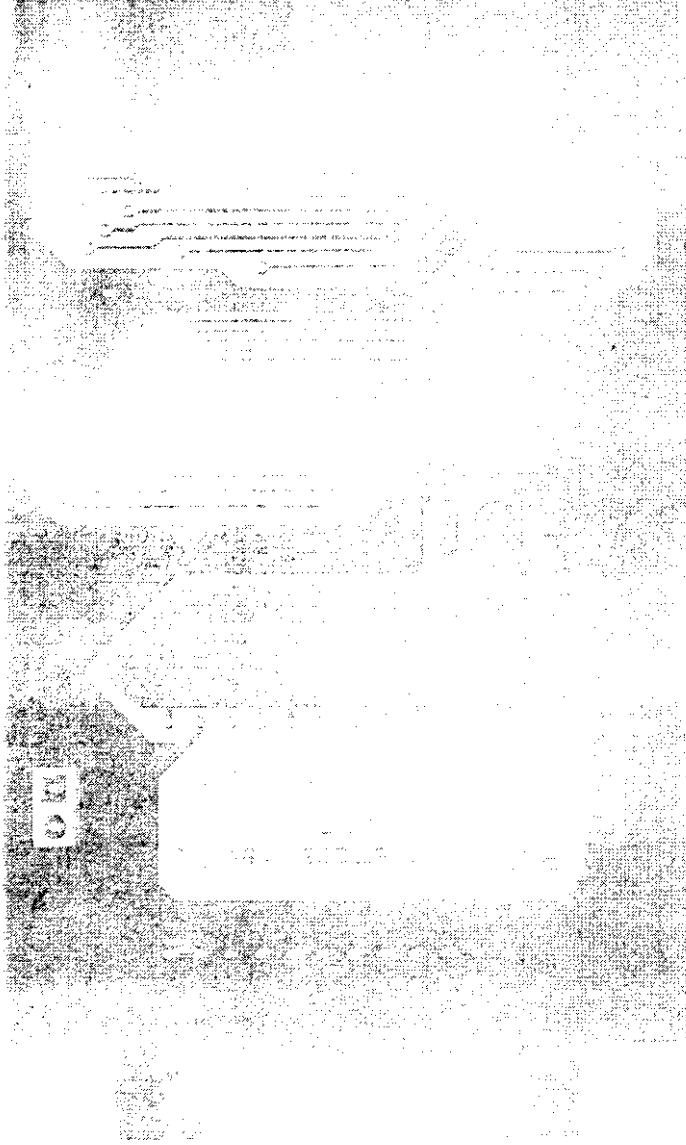
PCMCIA CARD - TOP

WR 1000e

FCC ID: HNL-WREXT

WR 1000e

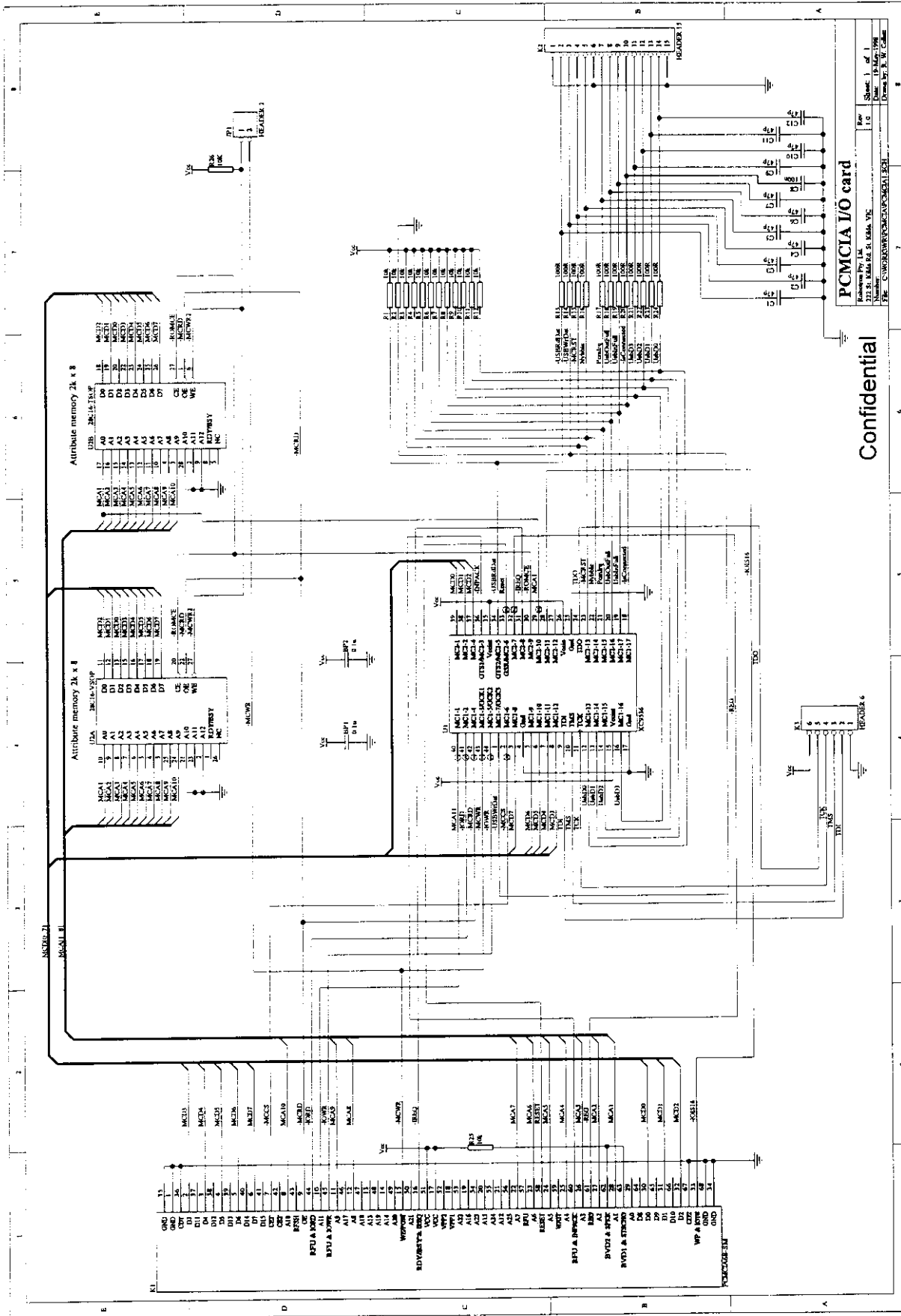
FCC ID: HNL-WREXT



PCMCIA CARD - BOTTOM

WR 1000e

(WR 1000e)



Confidential

PCMCIA I/O card

Revision: 1.0
 11/13/91, KMA, R. L. KMA, VCE
 Drawn by: R. W. Collier

WR 1000e

FCC ID: HNL-WR EXT

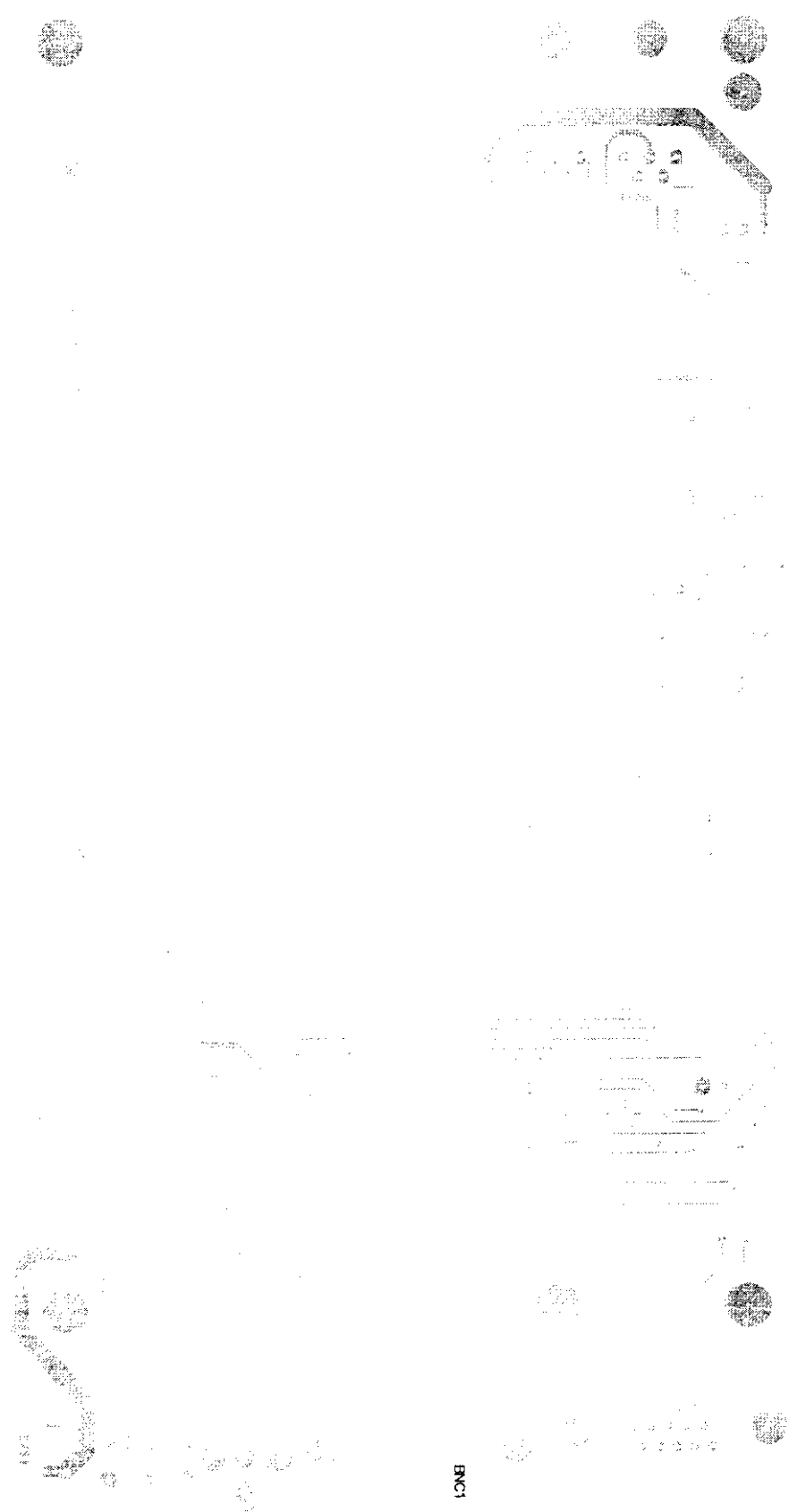
(WR 1000e)

WinRadio BP02
Copyright 1997
WinRadio Communications
Melbourne, AUSTRALIA

UB-0304
ISSUE 2

FCC ID: HNL-WREXT

(e)

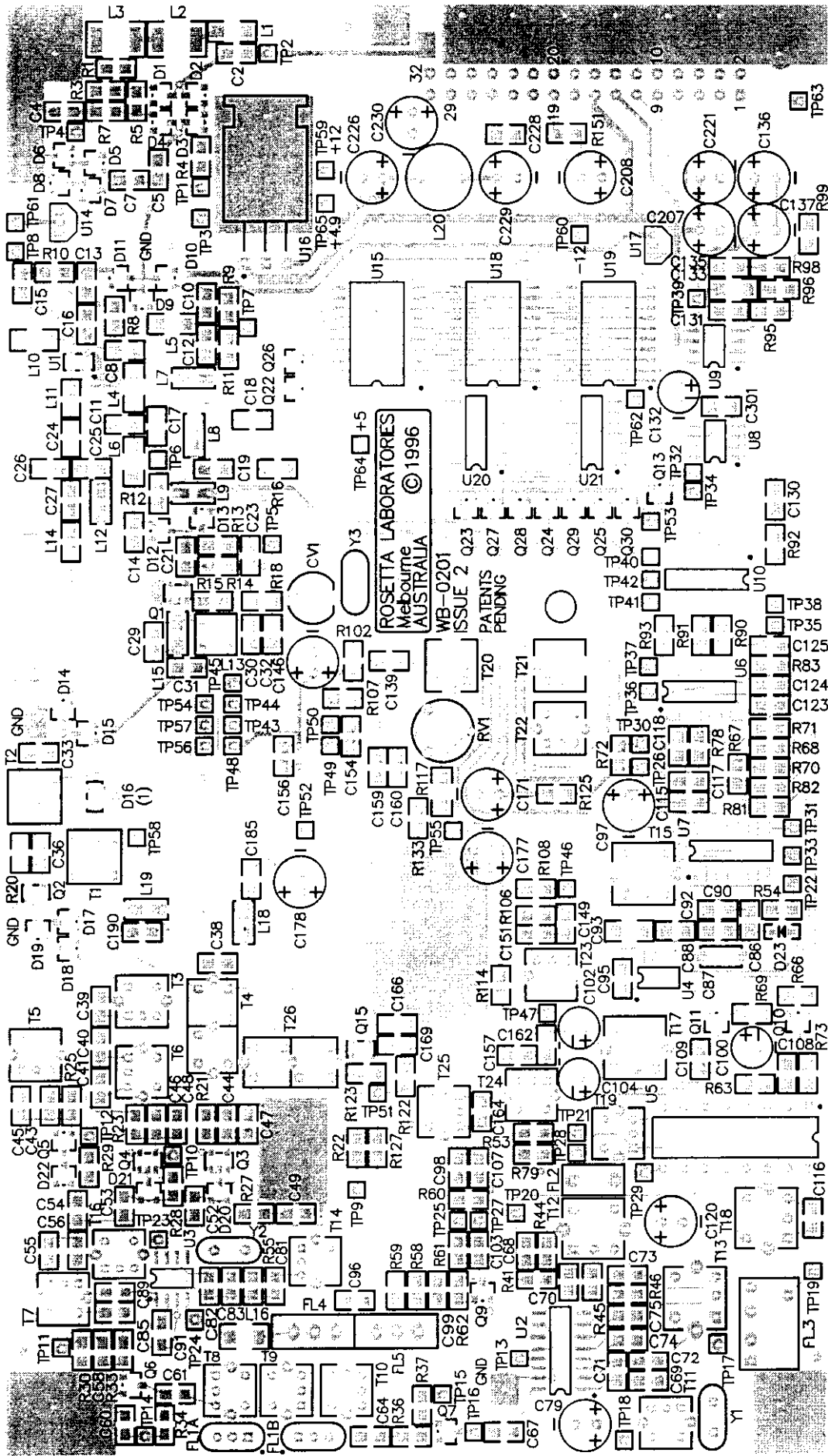


ENC1

EXTERNAL BACKPLANE - BOTTOM
WR 1500e

FCC ID: HNL-WREXT

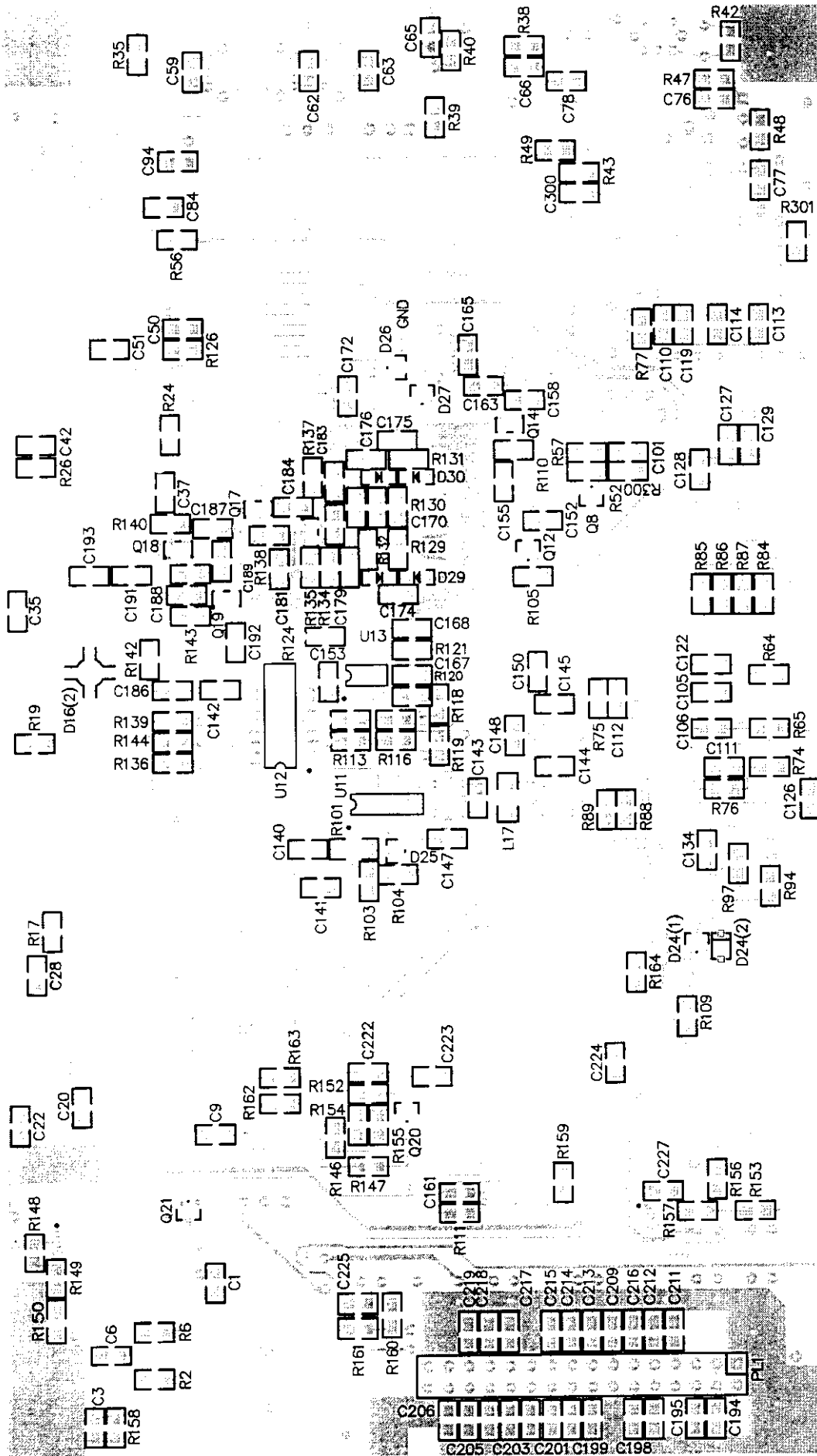
1500e)



RECEIVER BOARD - TOP

WR1500e

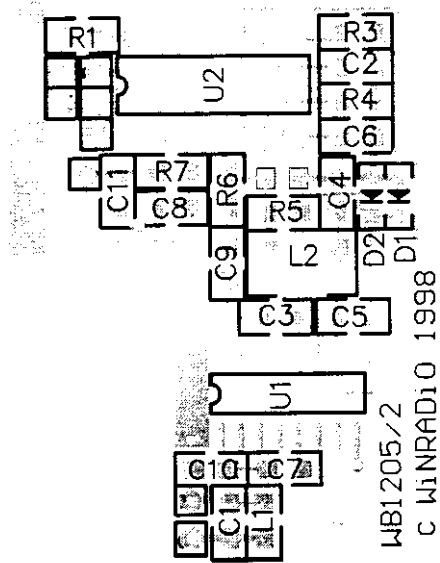
FCC ID: ANL-WREXT



RECEIVER BOARD - BOTTOM

WR1500e

FCC ID: ANL-WREXT



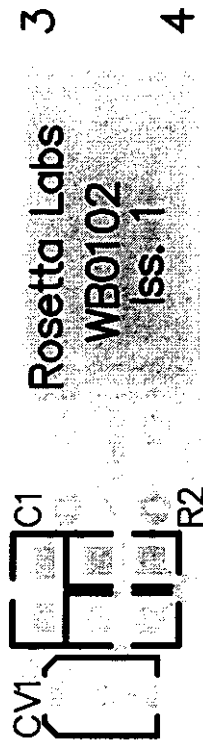
DIGITAL BFO - TOP

DIGITAL BFO - BOTTOM

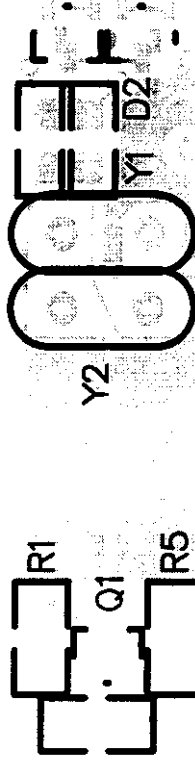
WR 1500e

FCC ID: HNL-WREXT

WR 1500e



CRYSTAL SWITCHER - TOP



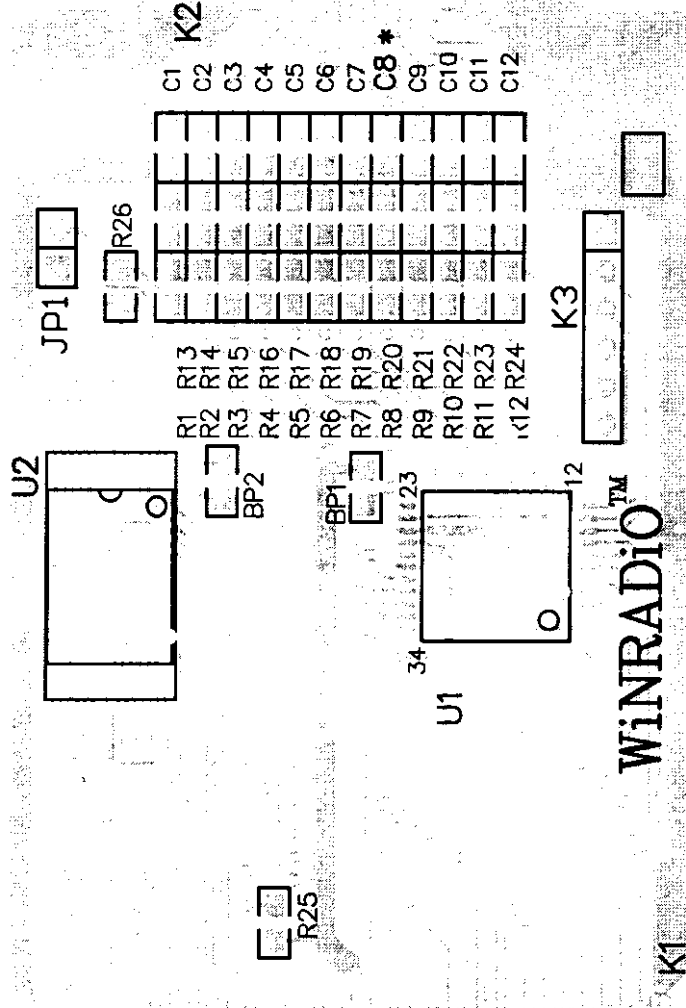
CRYSTAL SWITCHER - BOTTOM

WR1500e

FCC ID: HNL-WREXT

WR1500e

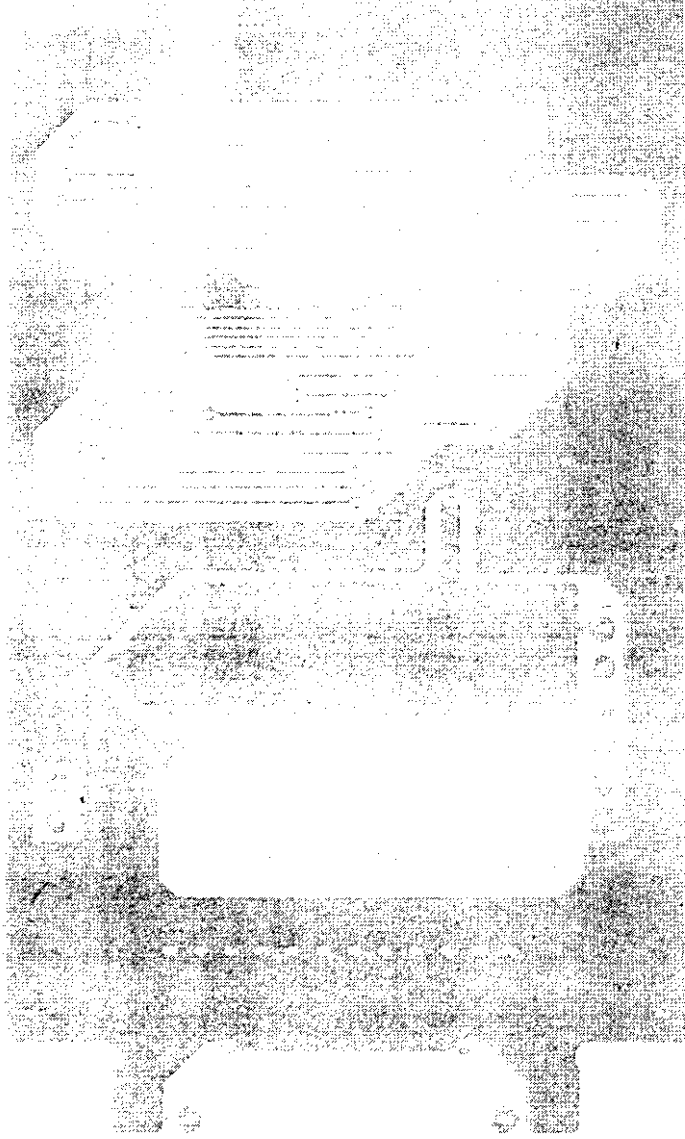
FCC ID: HNL-WREXT



PCMCIA CARD - TOP

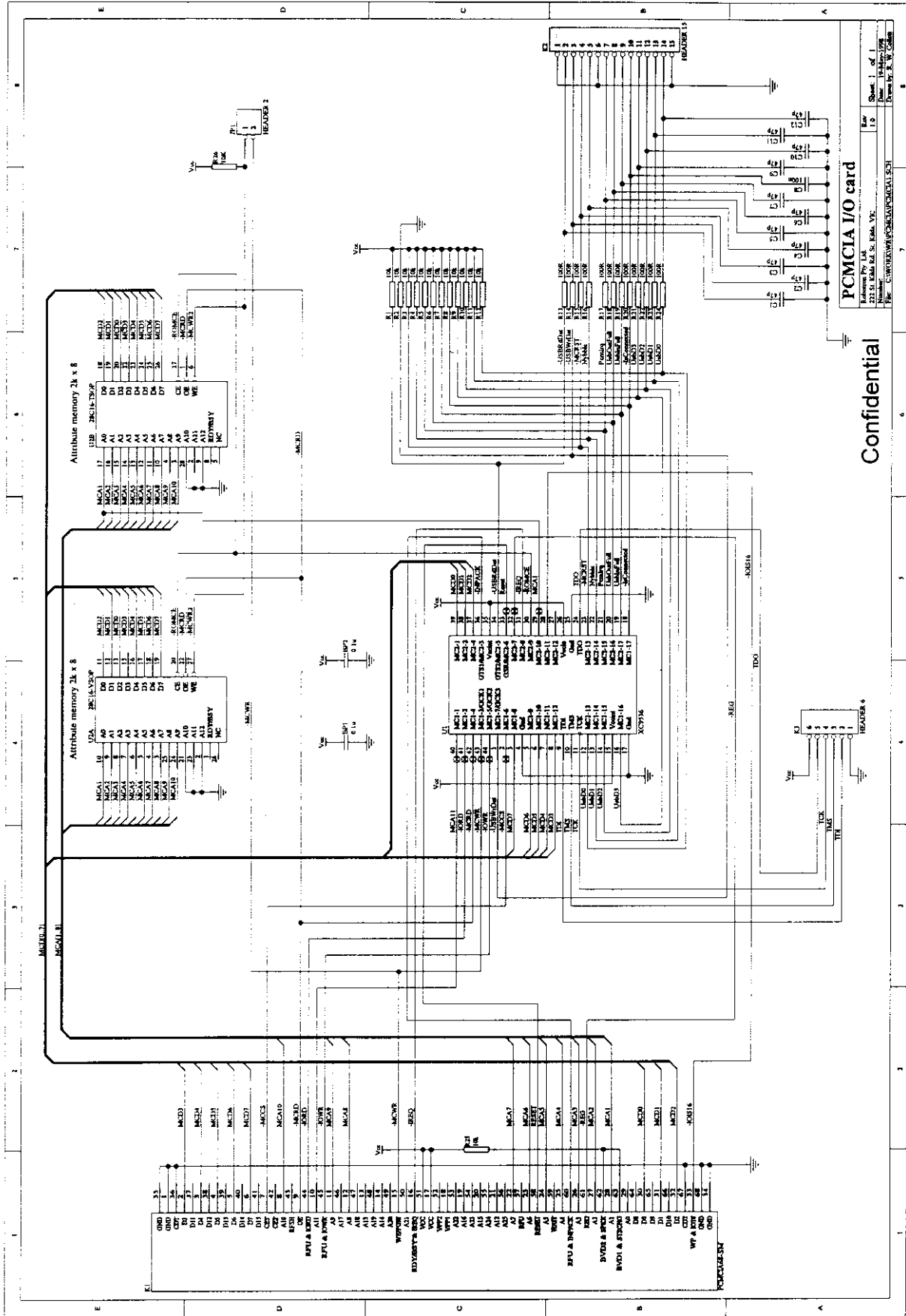
WR1500e

FCC ID: HNL-WREXT



PCMCIA CARD - BOTTOM
WR 1500e

(WR 1500e)



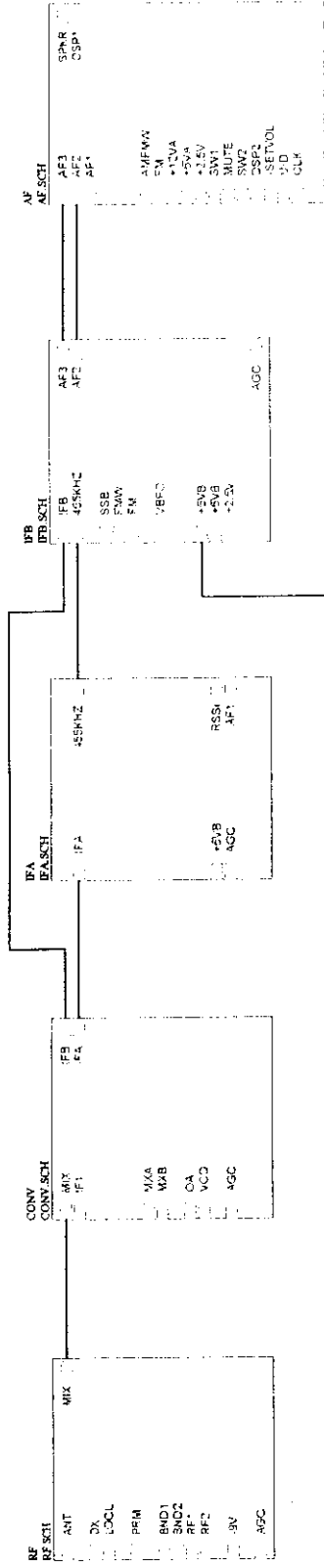
Confidential

PCMCIA I/O card

Revision: Rev. 1.0
 221 S. Main St. Suite 100
 San Jose, CA 95131
 Phone: 415.961.1000
 Fax: 415.961.1001
 E-mail: sales@wrl.com

WR 1500e
 FCC ID: ANL-WREXT

(WR 1500e)



- RTL
- AGC
 - RF2
 - BND1
 - SPKR
 - IF1
 - IF2
 - IF3
 - AF1
 - AF2
 - AF3
 - SPKR
 - CSP

- PLL
- SETPL
 - CLK
 - DATA
 - LD1
 - LD2
 - LD3
 - LD4
 - LD5
 - LD6
 - LD7
 - LD8
 - LD9
 - LD10
 - LD11
 - LD12
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 - LD97
 - LD98
 - LD99
 - LD100

- IFB
- IFB
 - 455KHZ
 - 455KHZ
 - AGC
 - VCO
 - Q

- IF
- IF1
 - IF2
 - IF3
 - AGC
 - VCO
 - Q

- CONV
- MIX
 - IF1
 - IF2
 - AGC
 - VCO
 - Q

- MIX
- ANT
 - DN
 - LOCAL
 - PREM
 - BND1
 - BND2
 - RF
 - AF2
 - AGC
 - VCO
 - Q

WR-1000e
FCC ID: INL-WREXT

WR-1000e

Receiver Laboratories Pty Ltd, 222 St Kilda Road, St Kilda, Victoria 3182, Australia

Title: RECEIVER CARD BLOCK DIAGRAM

Rev: A3

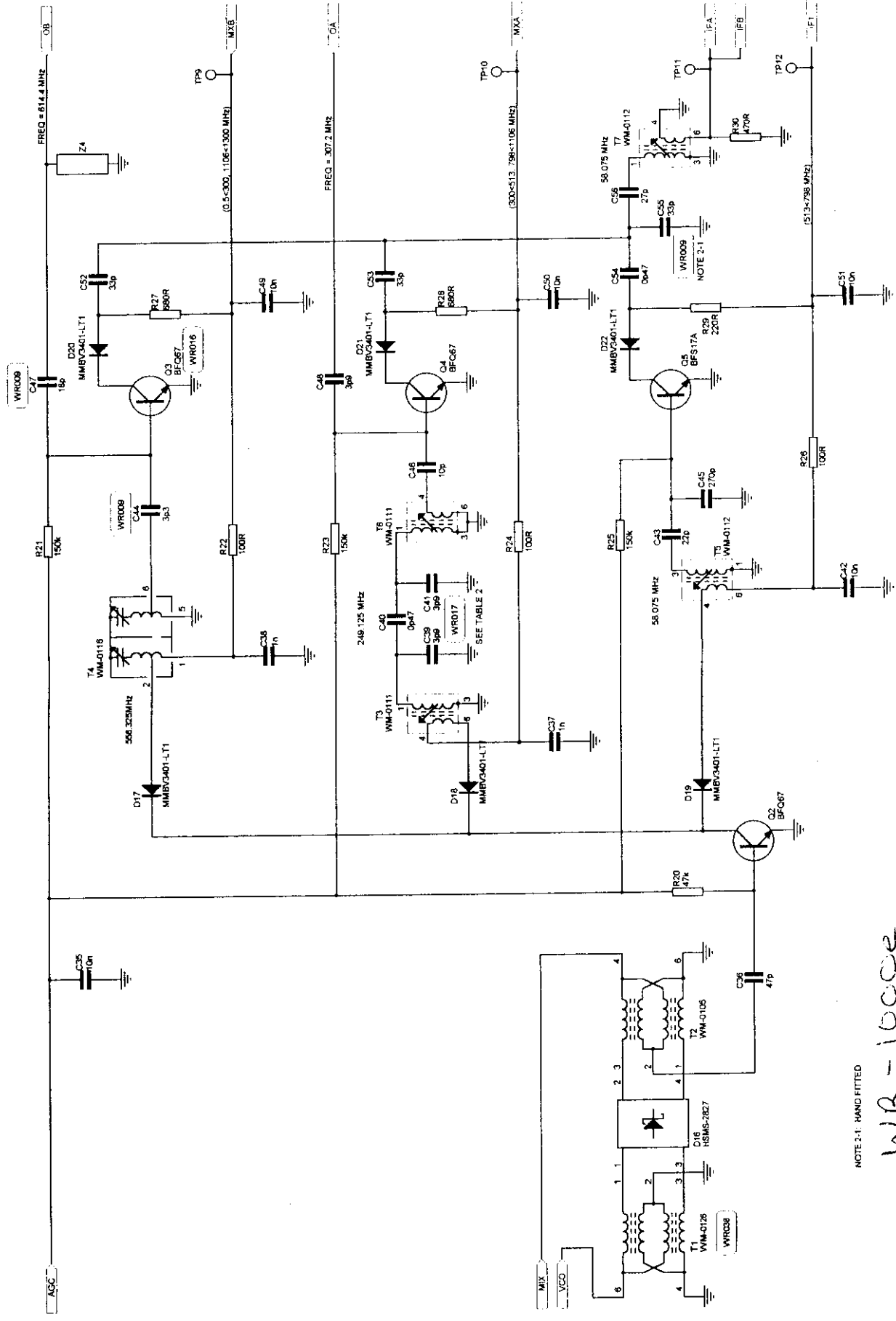
Number: WS-0301

Issue: 1

Date/Time: 11-May-1998 19:33:20

Sheet: 1 of 9

File: W:\PROJ\WR1000\CTWINRADIO.PRJ Drawn By: P. R. NESBITT



NOTE 2-1: HAND FITTED

WR-10002
FCC ID: HNL-WREXT

Gentle Laboratories Pty Ltd 277 St Kilda Road, St Kilda, Victoria 3182, Australia			
Title: FREQUENCY CONVERTOR			
Rev	4	Size	Number
1	4	3	4
2	3	2	3
3	2	1	2
4	1	0	1
5	0	0	0
6	0	0	0
7	0	0	0
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99	0	0	0
100	0	0	0

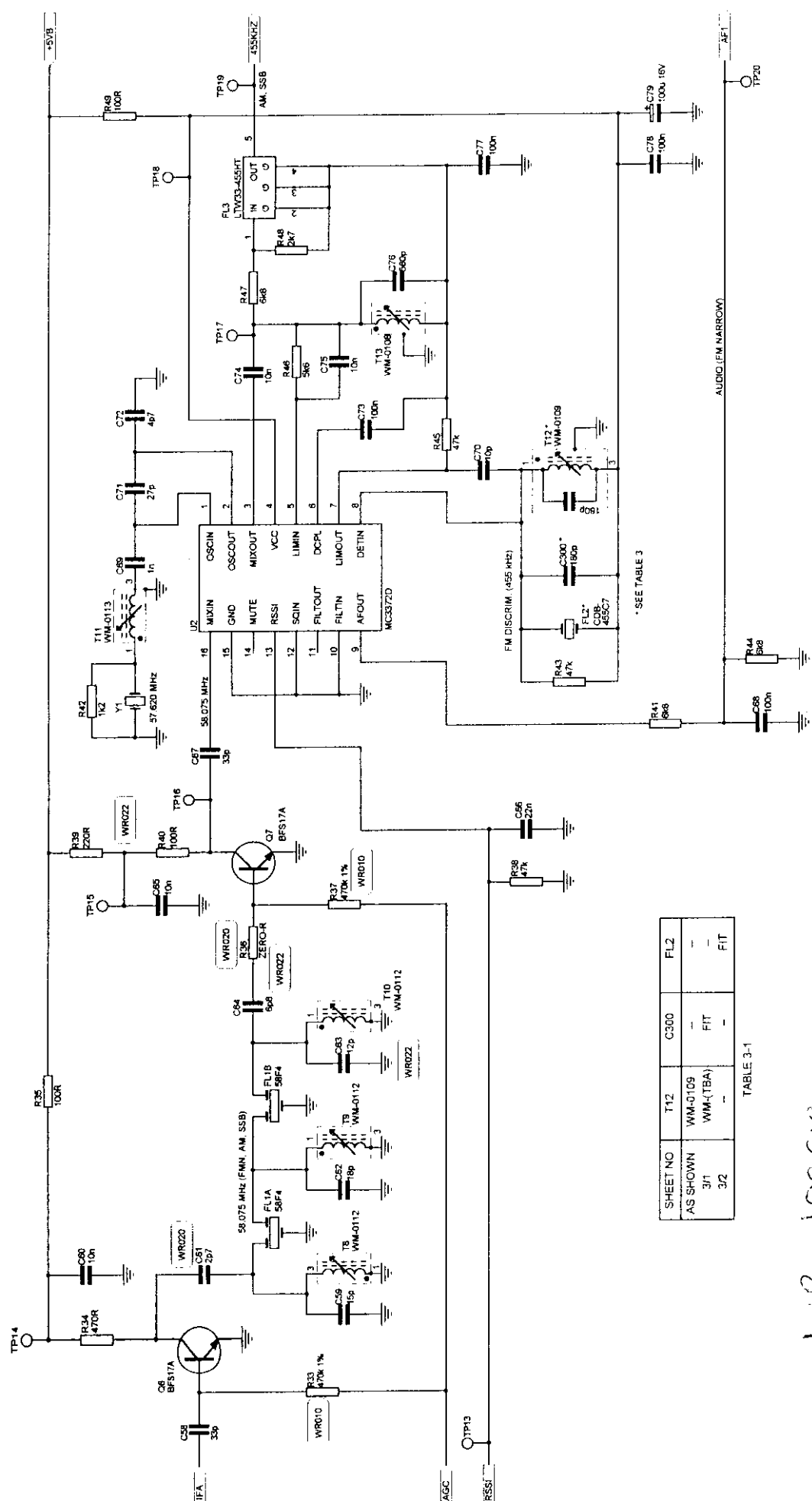
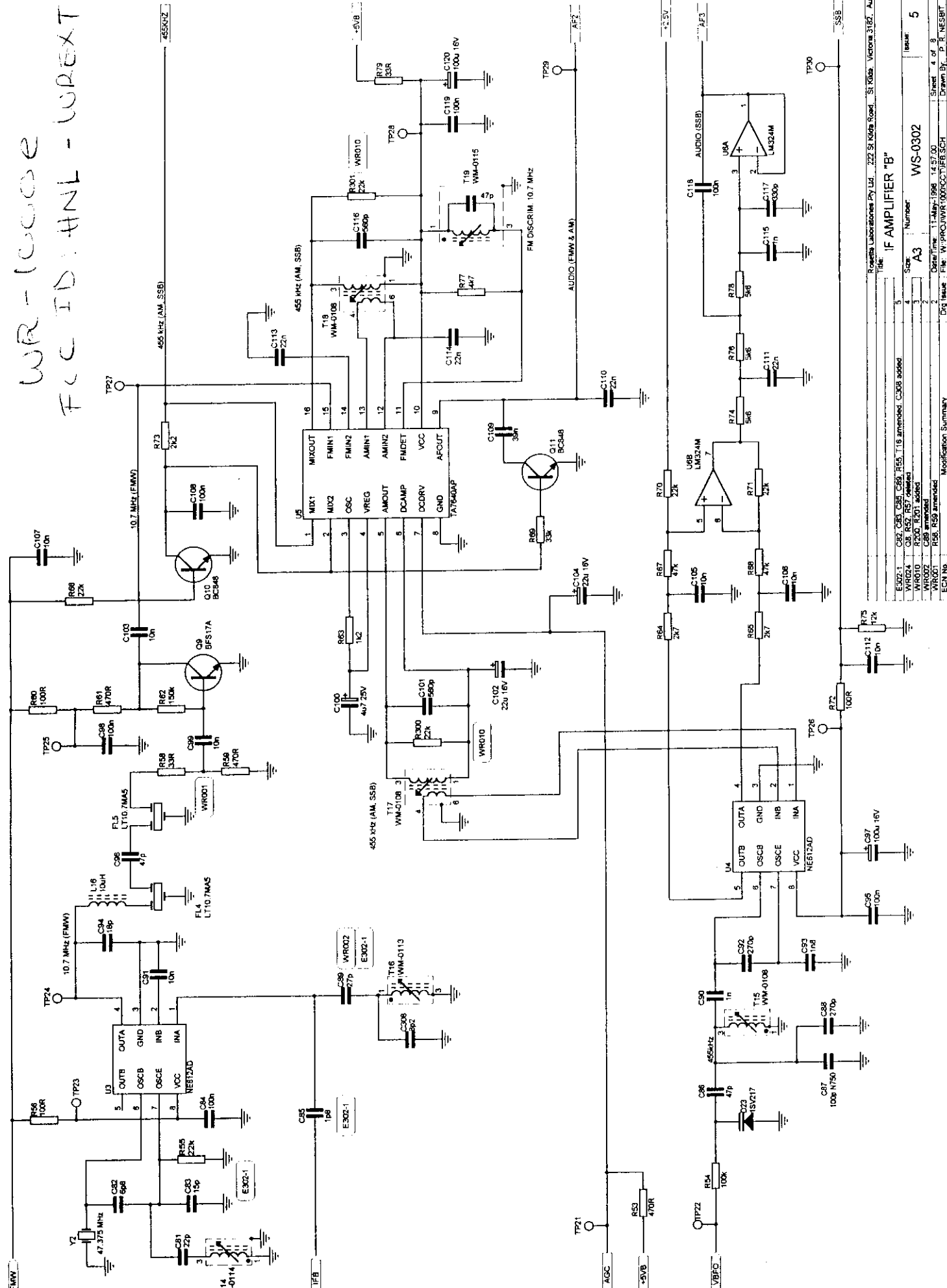


TABLE 3-1

SHEET NO	T12	C300	FL2
AS SHOWN	WM-0109	-	-
3/1	WM-(TBA)	FIT	-
3/2	-	-	FIT

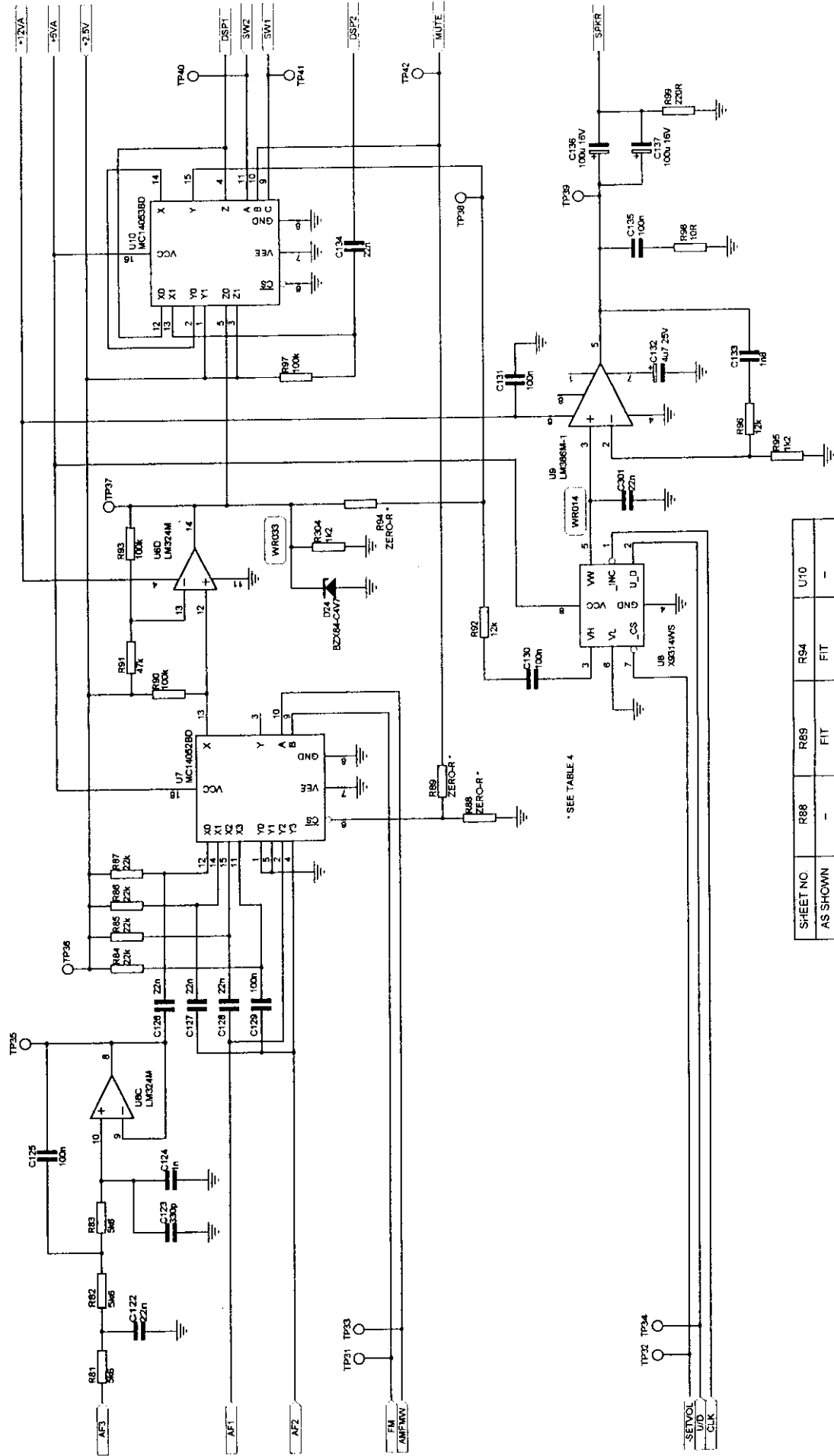
WR-10000
FCC ID: 4N1-WUREXT

[illegible]

1

[illegible]

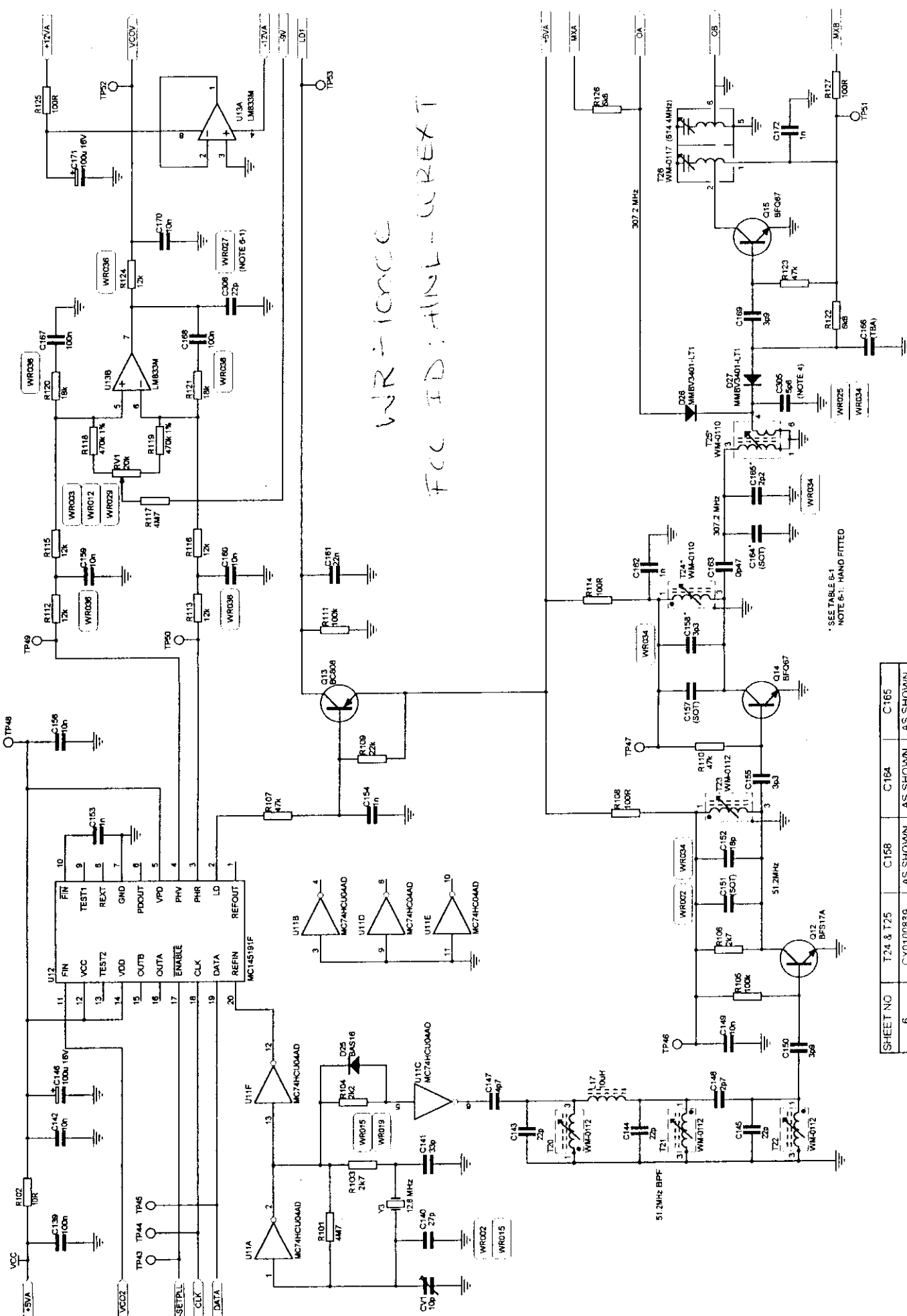
WLR-1000E
FCC ID: ANL-CUREXT



SHEET NO.	R88	R89	R94	U10
AS SHOWN	-	FIT	-	-
5/1	FIT	-	-	-

TABLE 5-1

Title: **AUDIO SELECTOR & AMPLIFIER**
 Date: 11/01/1998
 Drawn By: P. R. NESBITT
 Size: A3
 Number: WS-0302
 Sheet: 5 of 8
 Revision: 3



FCC ID: A1NL-UREXT

SHEET NO	T24 & T25	C158	C164	C165
6	CY010C839	AS SHOWN	AS SHOWN	AS SHOWN
6/1	SANWA 93220 (DPG 33/63)	4p7	0p47	4p7

TABLE 6-1

ECN	NO	DESCRIPTION	DATE	BY	CHK	APP
1	1	WR036 C160 C167 C168 R120 R121 R124 amended	11-May-1998	14.58.47		
2	2	WR034 C152 C159 C165 C305 amended				
3	3	WR035 C27 C305 C306 added				
4	4	WR039 R103 R104 amended				
5	5	WR032 C161 C162 C163 C164 R103 amended				
6	6	WR033 R117 R118 R119 R121 added				
7	7	WR032 C140 amended C151 deleted				

PLL & MULTIPLIER

WS-0302

A3

Size

Number

Issue

5

Sheet 6 of 8

Drawn By: P. R. NESBIT

File: W:\PROJ\WR1000\CTPLLSCH

Dwg Issue

11-May-1998

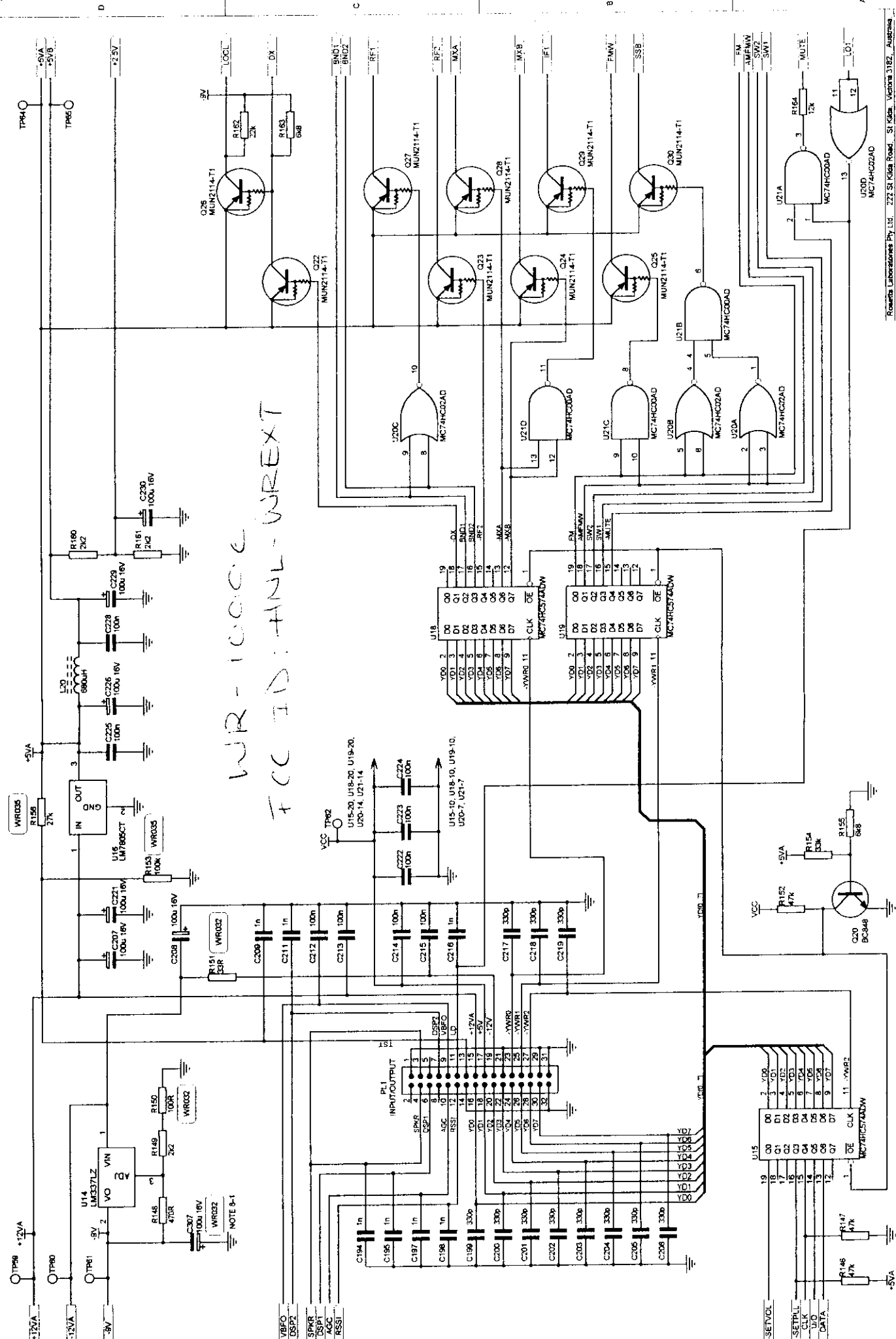
14.58.47

222 St Kilda Road, St Kilda, Victoria 3182, Australia

Rocelec Laboratories Pty Ltd

5

Title



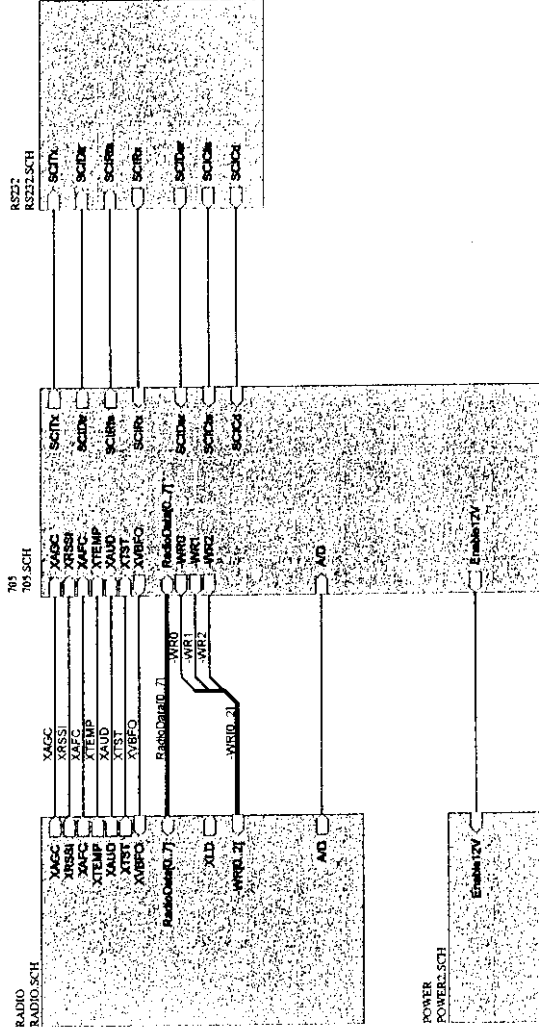
WR-1000C
FCC ID: ANL-WREXT

Roomba Laboratories Pty Ltd 222 St Kilda Road, St Kilda, Victoria 3182, Australia
Title: **INTERFACE & CONTROL**

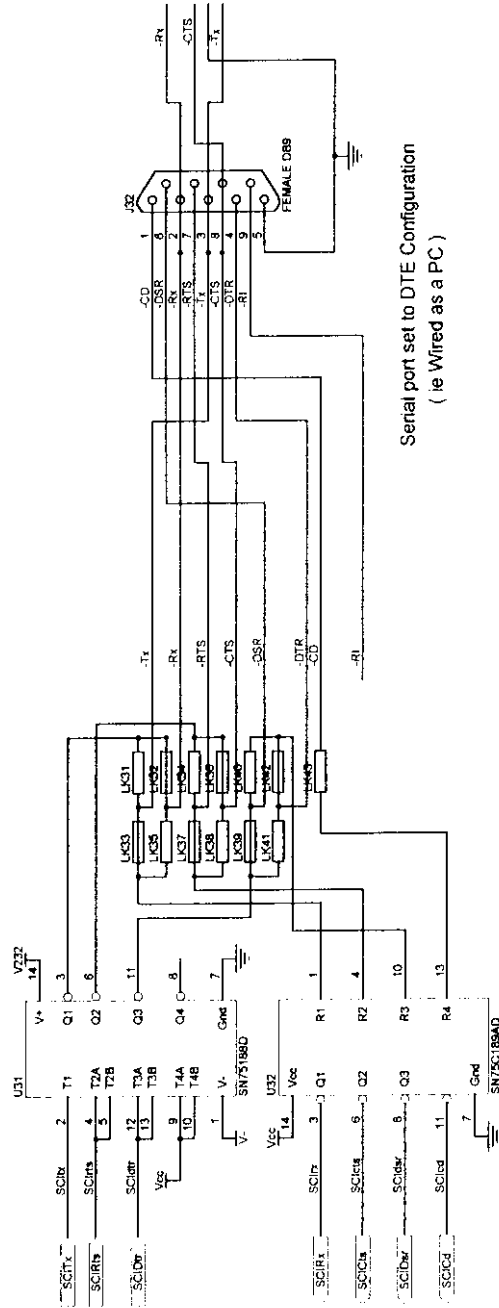
ECN No.	Modifications	Author	Issue
WR005	R153 fitted, R156 amended	WS-0302	2
WR002	R150, R151 amended, C307 added	Sheet 8 of 8	
	Modification Summary	Drawn By: P. R. HEBBIT	

NOTE 8-1 HAND FITTED

WR-100002
FCC ID: HNL-WREXT



WR-1000e
FCC ID: HNL-WREXT

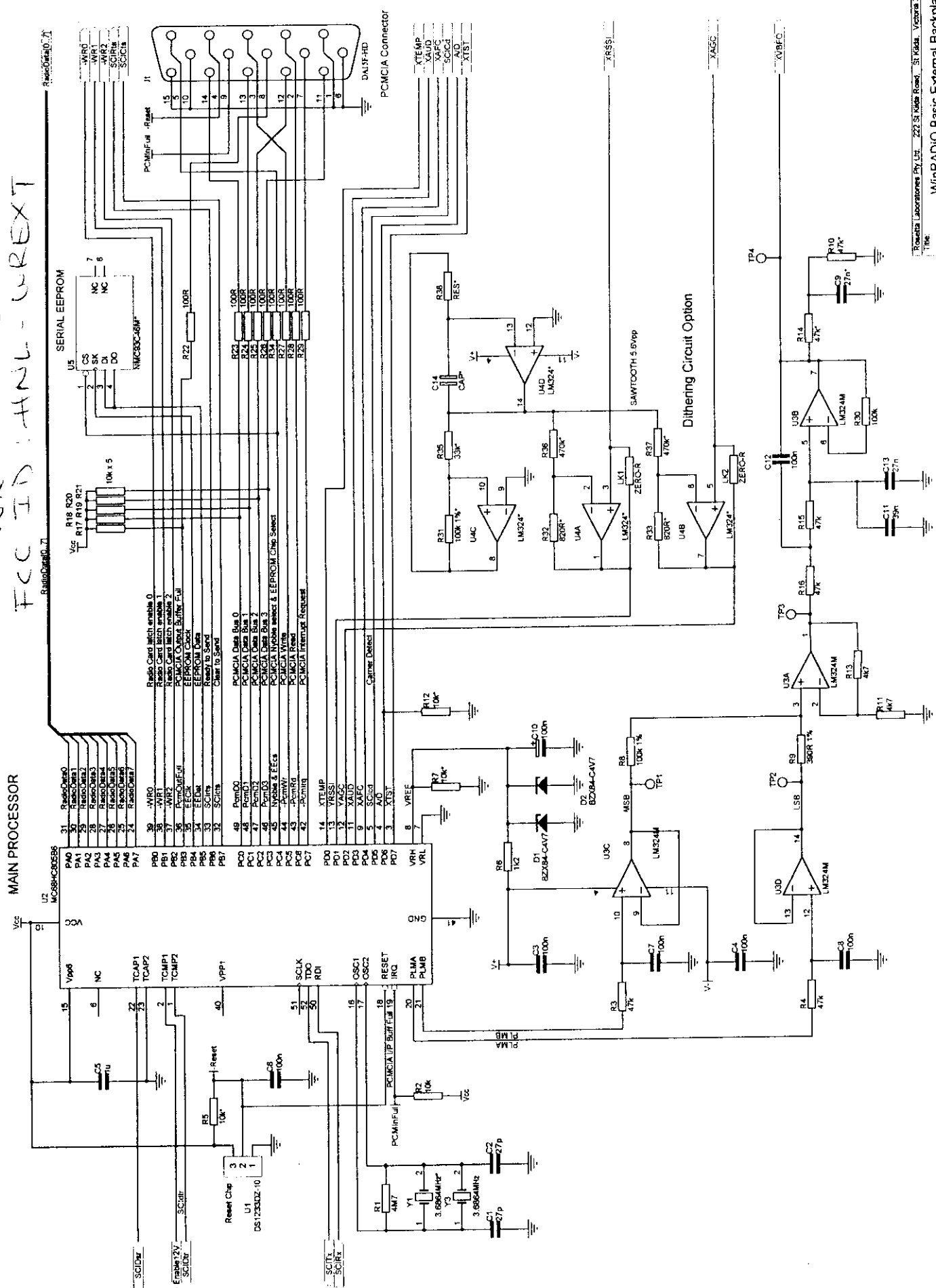


Serial port set to DTE Configuration
(ie Wired as a PC)

NOTE: LINKS ON THIS SHEET NOT FITTED FOR WR-1100

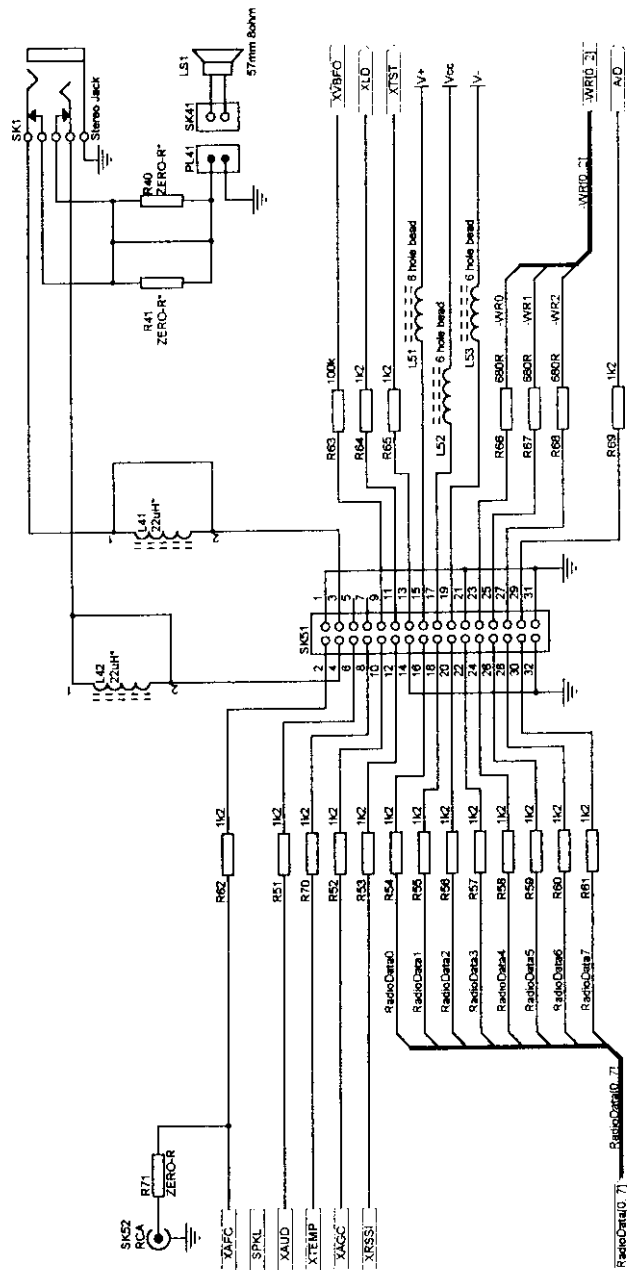
WR-1000C
FCC ID: ANL-WEXT

MAIN PROCESSOR



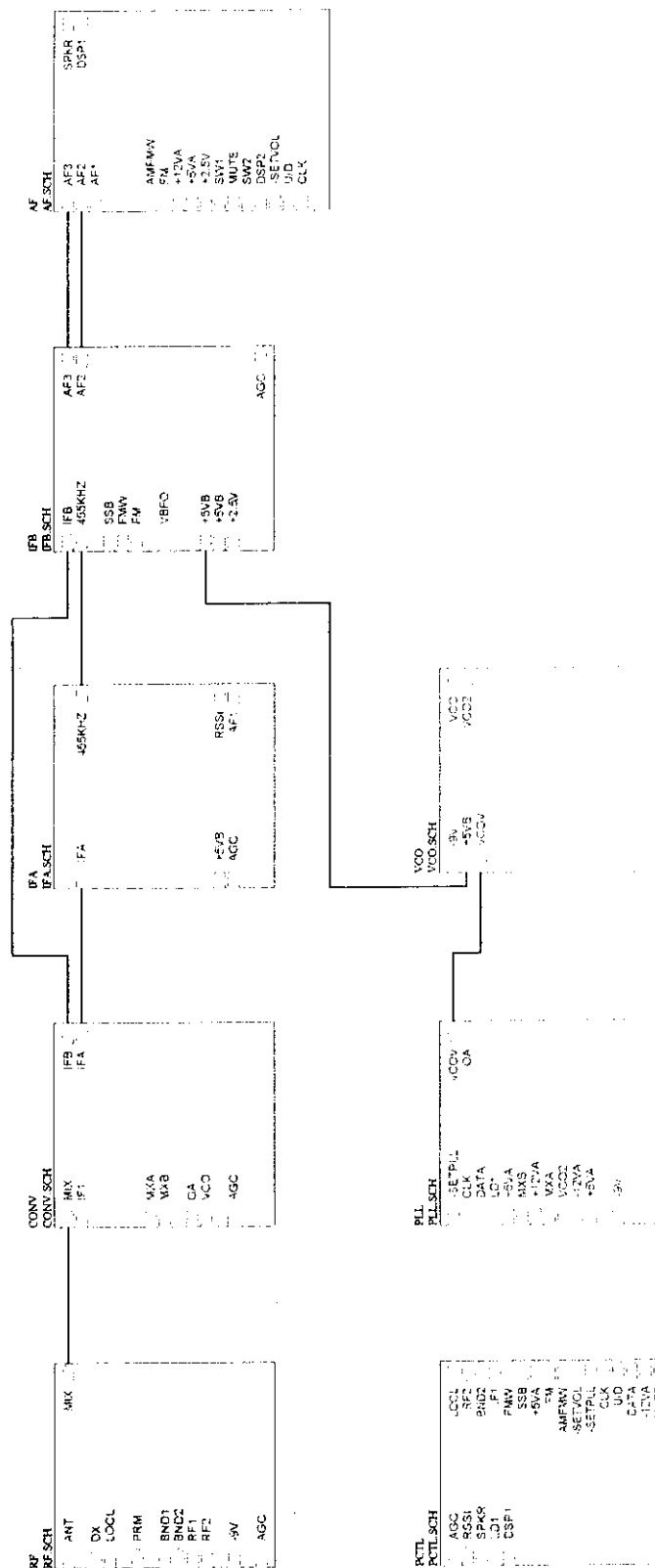
NOTE: ITEMS MARKED WITH AN ASTERISK NOT FITTED FOR WR-1100

WR-1000E
FCC ID: 4N1-WREXT



NOTE: ITEMS MARKED WITH AN ASTERISK NOT FITTED FOR WR-1100

Project: Laboratories Pty Ltd. 222 St Kilda Road, St Kilda, Victoria 3182, Australia	
Title: RCVR CARD SOCKET	
Size: A3	Number: WS-0304
Issue: 1	Sheet: 4 of 5
Date/Time: 11-MAY-1998 15:35:47	
File: WPROJ\BACK\EXT\G2\RADSO SCH	
Drawn By: E. W. C. RICHARDS	



UR-15502
FCC ID: #21-30REXT

WR-1500e

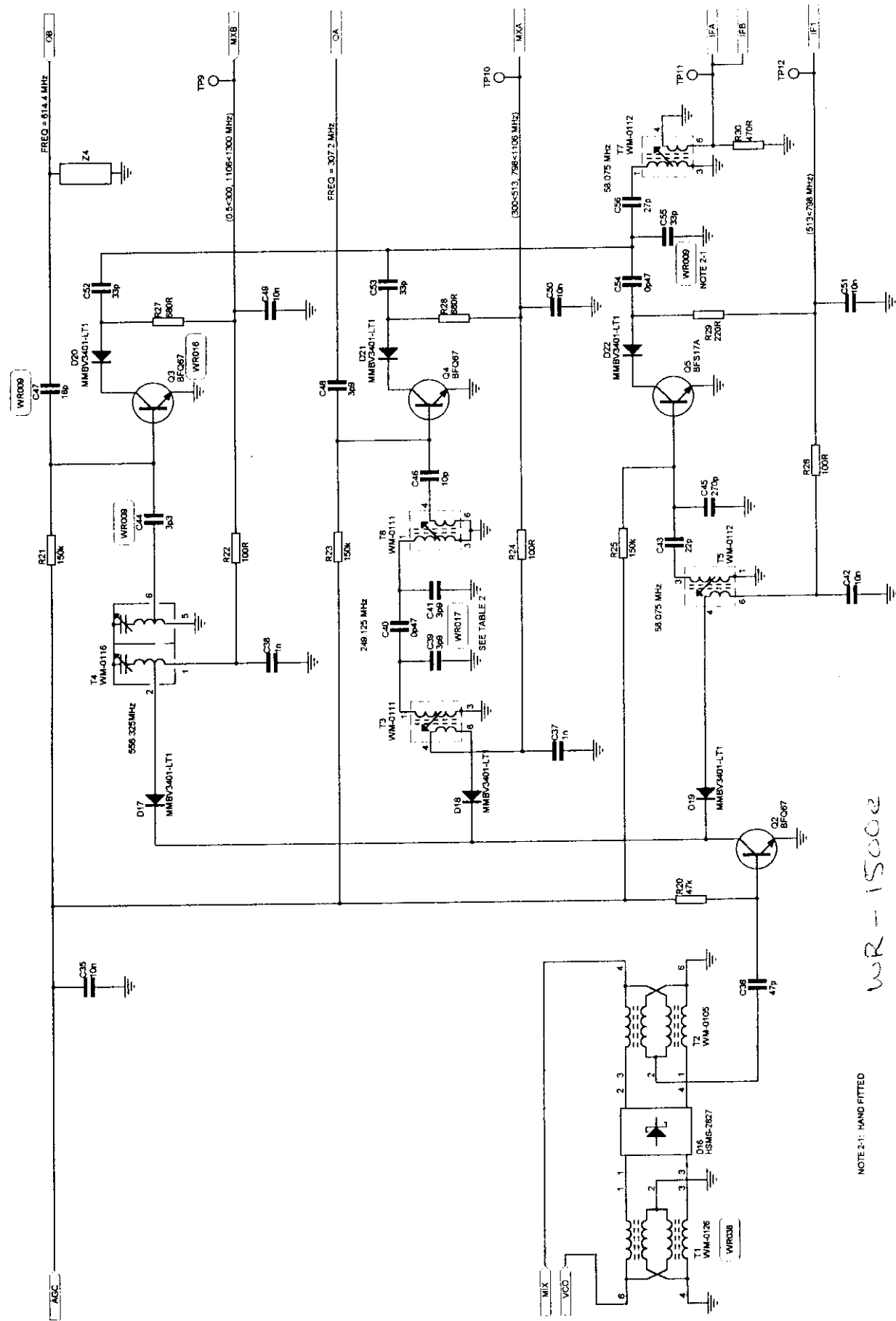
Rosetta Laboratories Pty Ltd, 222 St Kilda Road, St Kilda, Victoria 3182, Australia.

RECEIVER CARD BLOCK DIAGRAM

Size:	A2	Number:	WS-0301	Issue:	1
-------	----	---------	---------	--------	---

Date/Time:	11-May-1998	19:33:20	Sheet	1 of 9
File:	M:\0000\WATER\0000\CONTAMINATING.DAT			
Owner:	0 0 MESBIT			

Date/time: 11-May-1988 07:15:41 Page 4 of 9
File: MUDROO\WRP1000\CCTV\WINGATHIO.DBT
Camera No: 6 & NESAIT
Sheet 18 of 9



NOTE 2-1: HAND FITTED

WR-15002

FCC ID: HNL-WREXT

Title		Frequency Converter	
Rev	1	Rev	1
Rev	2	Rev	2
Rev	3	Rev	3
Rev	4	Rev	4
Rev	5	Rev	5
Rev	6	Rev	6
Rev	7	Rev	7
Rev	8	Rev	8
Rev	9	Rev	9
Rev	10	Rev	10
Rev	11	Rev	11
Rev	12	Rev	12
Rev	13	Rev	13
Rev	14	Rev	14
Rev	15	Rev	15
Rev	16	Rev	16
Rev	17	Rev	17
Rev	18	Rev	18
Rev	19	Rev	19
Rev	20	Rev	20
Rev	21	Rev	21
Rev	22	Rev	22
Rev	23	Rev	23
Rev	24	Rev	24
Rev	25	Rev	25
Rev	26	Rev	26
Rev	27	Rev	27
Rev	28	Rev	28
Rev	29	Rev	29
Rev	30	Rev	30
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Rev	92	Rev	92
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Rev	94	Rev	94
Rev	95	Rev	95
Rev	96	Rev	96
Rev	97	Rev	97
Rev	98	Rev	98
Rev	99	Rev	99
Rev	100	Rev	100

Revised Laboratories Pty Ltd, 222 St Kilda Road, St Kilda, Victoria 3182, Australia

Frequency Converter

WS-0302

11-May-1988 14:57:13

Drawn By: P. J. NESBIT

Checked By: P. J. NESBIT

Approved By: P. J. NESBIT

Rev 1: 11-May-1988 14:57:13

Rev 2: 11-May-1988 14:57:13

Rev 3: 11-May-1988 14:57:13

Rev 4: 11-May-1988 14:57:13

Rev 5: 11-May-1988 14:57:13

Rev 6: 11-May-1988 14:57:13

Rev 7: 11-May-1988 14:57:13

Rev 8: 11-May-1988 14:57:13

Rev 9: 11-May-1988 14:57:13

Rev 10: 11-May-1988 14:57:13

Rev 11: 11-May-1988 14:57:13

Rev 12: 11-May-1988 14:57:13

Rev 13: 11-May-1988 14:57:13

Rev 14: 11-May-1988 14:57:13

Rev 15: 11-May-1988 14:57:13

Rev 16: 11-May-1988 14:57:13

Rev 17: 11-May-1988 14:57:13

Rev 18: 11-May-1988 14:57:13

Rev 19: 11-May-1988 14:57:13

Rev 20: 11-May-1988 14:57:13

Rev 21: 11-May-1988 14:57:13

Rev 22: 11-May-1988 14:57:13

Rev 23: 11-May-1988 14:57:13

Rev 24: 11-May-1988 14:57:13

Rev 25: 11-May-1988 14:57:13

Rev 26: 11-May-1988 14:57:13

Rev 27: 11-May-1988 14:57:13

Rev 28: 11-May-1988 14:57:13

Rev 29: 11-May-1988 14:57:13

Rev 30: 11-May-1988 14:57:13

Rev 31: 11-May-1988 14:57:13

Rev 32: 11-May-1988 14:57:13

Rev 33: 11-May-1988 14:57:13

Rev 34: 11-May-1988 14:57:13

Rev 35: 11-May-1988 14:57:13

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Rev 37: 11-May-1988 14:57:13

Rev 38: 11-May-1988 14:57:13

Rev 39: 11-May-1988 14:57:13

Rev 40: 11-May-1988 14:57:13

Rev 41: 11-May-1988 14:57:13

Rev 42: 11-May-1988 14:57:13

Rev 43: 11-May-1988 14:57:13

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Rev 46: 11-May-1988 14:57:13

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Rev 51: 11-May-1988 14:57:13

Rev 52: 11-May-1988 14:57:13

Rev 53: 11-May-1988 14:57:13

Rev 54: 11-May-1988 14:57:13

Rev 55: 11-May-1988 14:57:13

Rev 56: 11-May-1988 14:57:13

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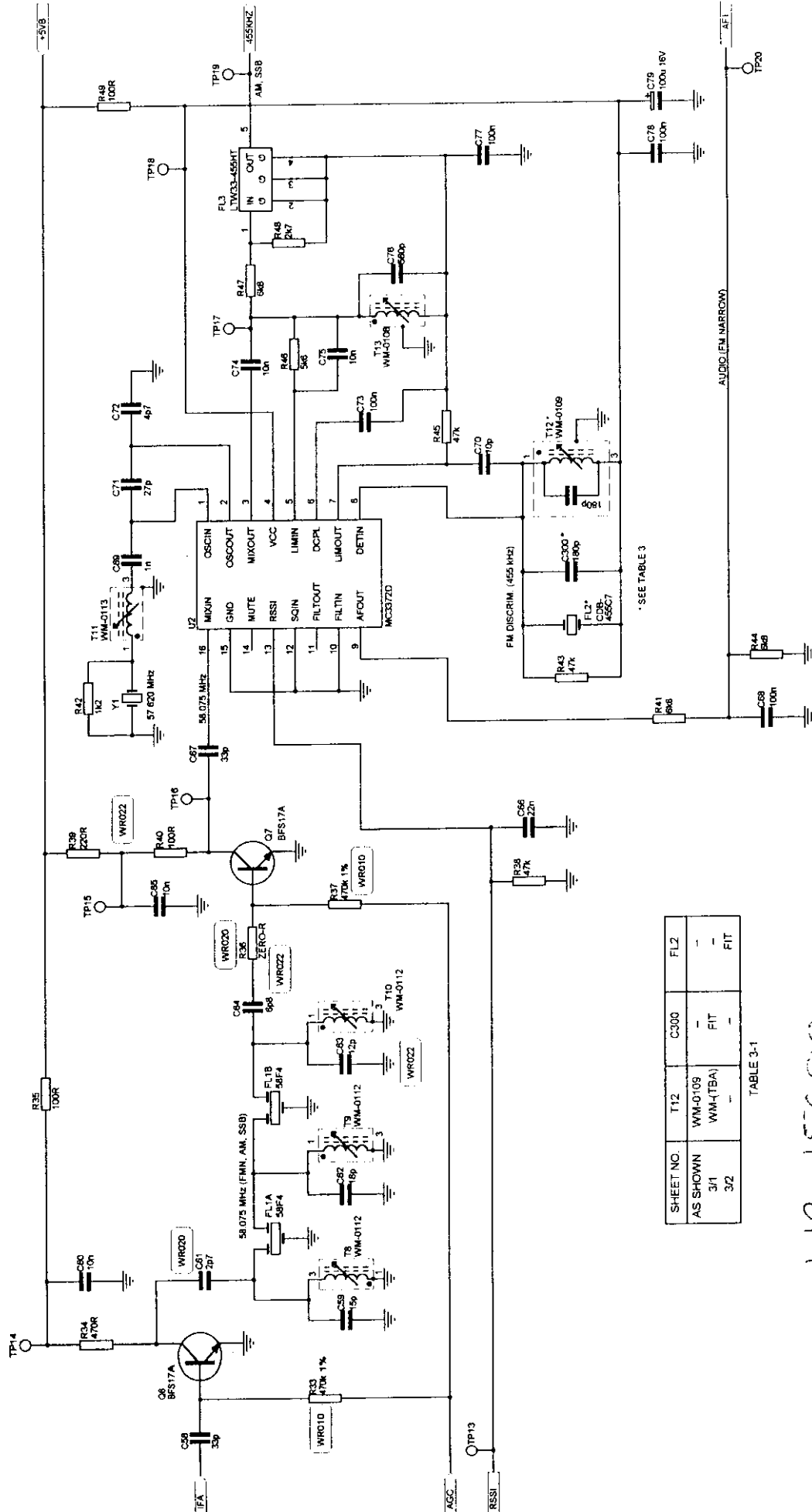


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3/2	-	-	FIT

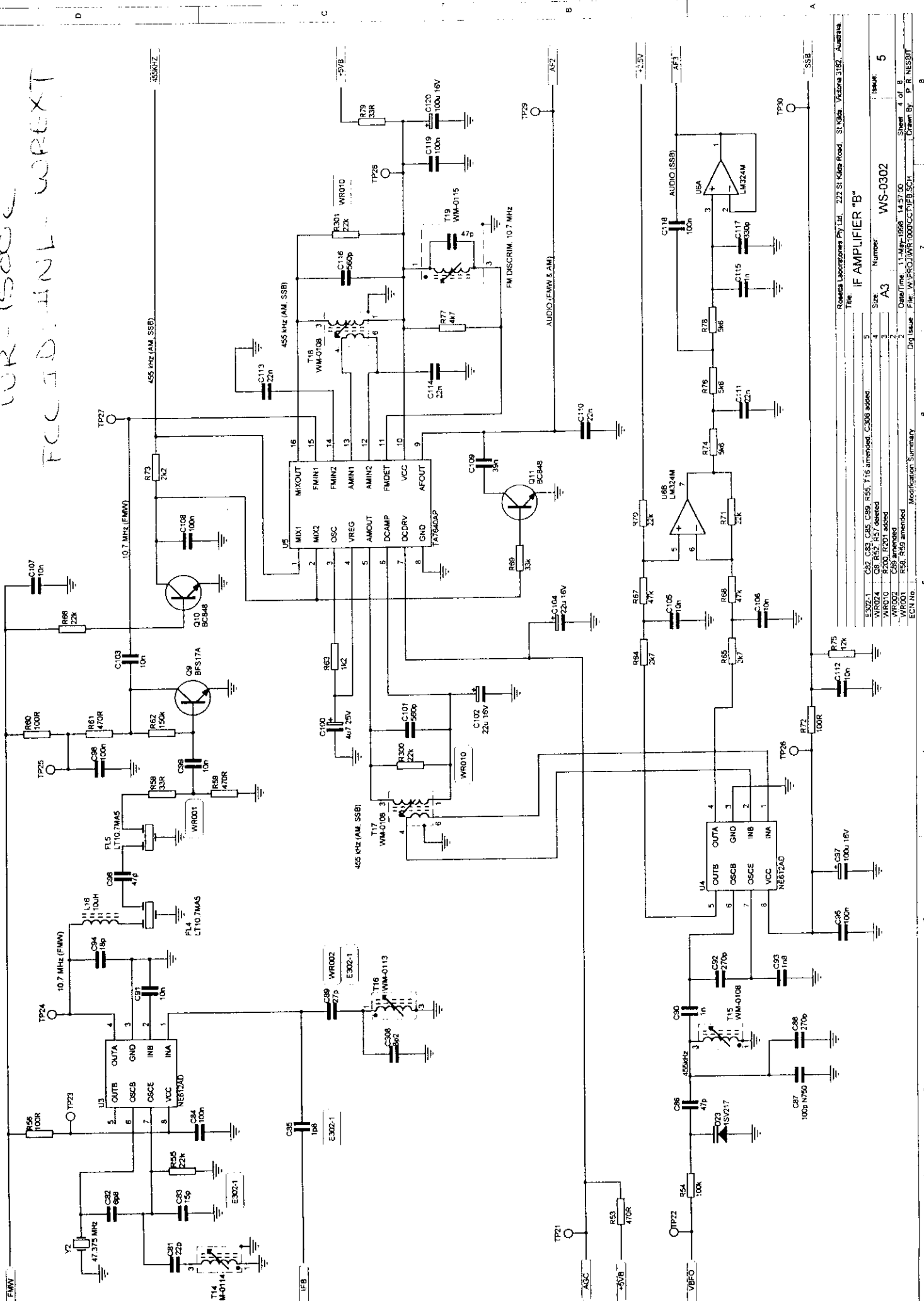
WR-1500e
FCC IS: 4NL-WREXT

Rostra Laboratories Pty Ltd, 222 St Kilda Road, St Kilda, Victoria 3182, Australia

Title: IF AMPLIFIER "A"

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1	1	11-May-1988	14:57:08	Sheet 3 of 8
2	2	11-May-1988	14:57:08	Sheet 3 of 8
3	3	11-May-1988	14:57:08	Sheet 3 of 8
4	4	11-May-1988	14:57:08	Sheet 3 of 8
5	5	11-May-1988	14:57:08	Sheet 3 of 8
6	6	11-May-1988	14:57:08	Sheet 3 of 8
7	7	11-May-1988	14:57:08	Sheet 3 of 8
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9	9	11-May-1988	14:57:08	Sheet 3 of 8
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95	95	11-May-1988	14:57:08	Sheet 3 of 8
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97	97	11-May-1988	14:57:08	Sheet 3 of 8
98	98	11-May-1988	14:57:08	Sheet 3 of 8
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100	100	11-May-1988	14:57:08	Sheet 3 of 8

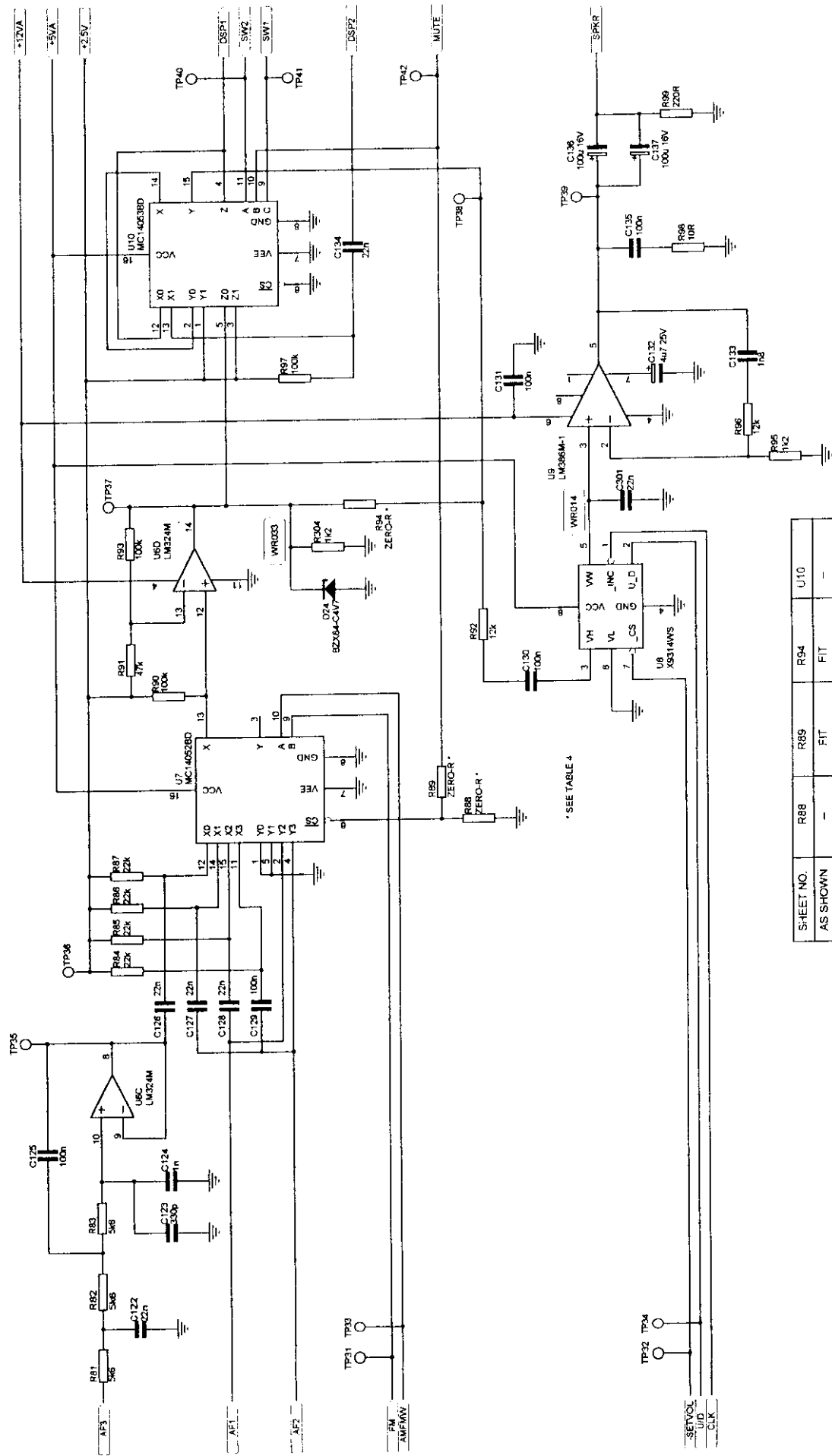
WR-1500C
FCC ID: INL-WREXT



Revision History		Title		File		Date		By	
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2	03	C32, C33, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100	2	03	03	03	03	03	03
3	04	C32, C33, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100	3	04	04	04	04	04	04
4	05	C32, C33, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100	4	05	05	05	05	05	05
5	06	C32, C33, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100	5	06	06	06	06	06	06

Revision History		Title		File		Date		By	
1	02	C32, C33, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100	1	02	02	02	02	02	02
2	03	C32, C33, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100	2	03	03	03	03	03	03
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4	05	C32, C33, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100	4	05	05	05	05	05	05
5	06	C32, C33, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100	5	06	06	06	06	06	06

WR-1500E
FCC ID: HNL-WREXT

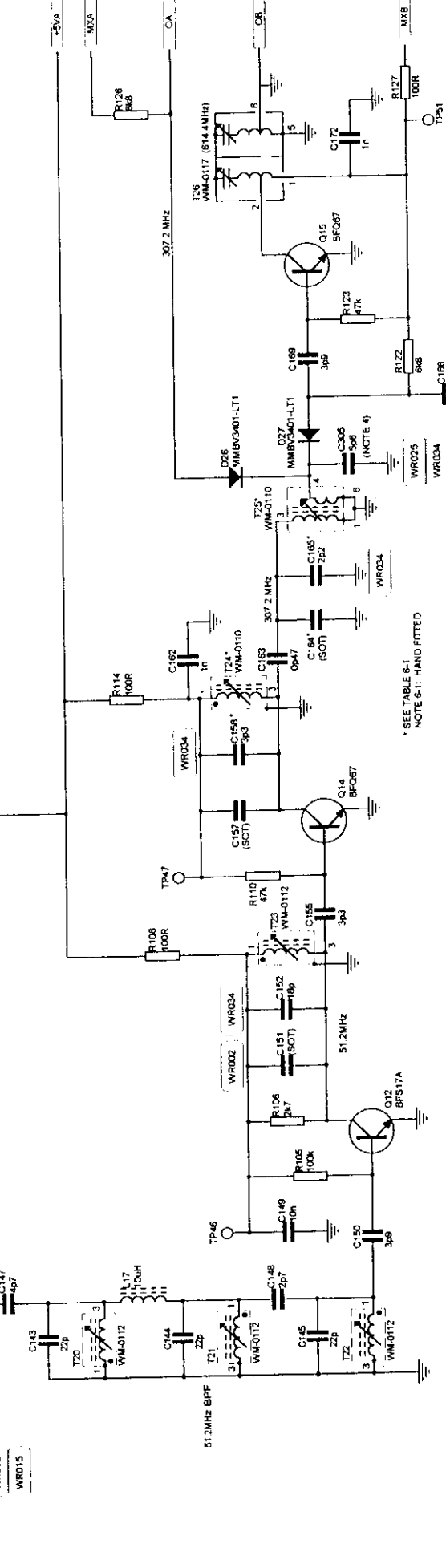
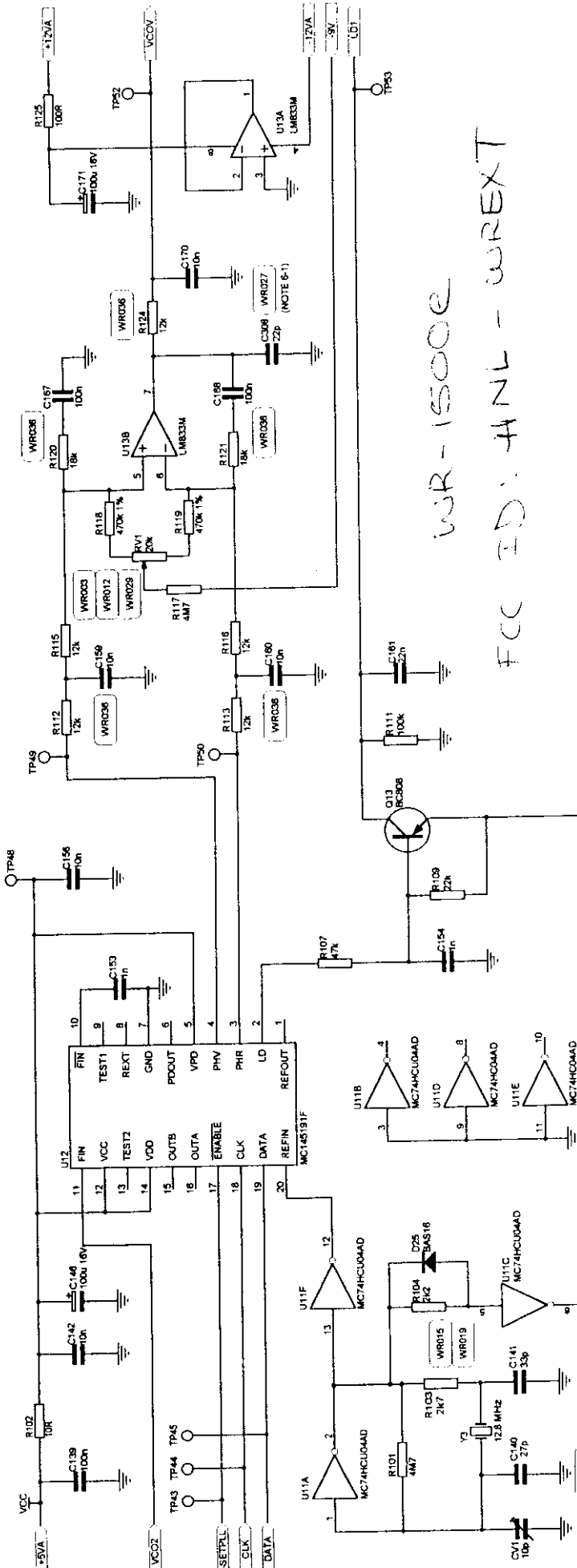


SHEET NO.	R88	R89	R94	U10
AS SHOWN	-	FIT	-	-
5/1	FIT	-	-	FIT

TABLE S-1

Rowlett Laboratories Pty Ltd., 220 St Kilda Road, St Kilda, Victoria 3182, Australia
Title: AUDIO SELECTOR & AMPLIFIER
Size: A3
Number: WS-0302
Issue: 3
Quantity: 11 May 1988 14 56 55
Sheet: 5 of 8
Date: 11 May 1988
Drawn By: P. R. NESBIT
File: W:\PROJ\WR100K\G1AF.SCH
Orig Team: P. R. NESBIT

Modification Summary
ECN No. 3
WR033 P004 added
WR014 C301 added
ECN No. 5



SHEET NO	T24 & T25	C158	C164	C165
6	CY0100839	AS SHOWN	AS SHOWN	AS SHOWN
6/1	SANWA 93220	407	0P47	4P7
	(DRG 93/6/3)			

TABLE 6-1

ECN No.	Rev	File	Mod	Sum	Issue	Sheet	of	9
WR008	C159, C160, C167, C168, R120, R121, R124 amended	5			WS-0302	11-May-1998	14	56 of 9
WR004	C152, C153, C155, C305 amended	5						
WR025, 027	C305, C306 added	4						
WR019	R103, R104 amended	4						
WR029	R11 amended	3						
WR012, 014	R118, R119, C140, R103 amended	3			A3			
WR003	R118, R119, C140, R103 amended	3						
WR005	C110 amended, C151 deleted	2						
Modification Summary								
0					7			8

5	7	8
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PL & MULTIPLIER

WS-0302

Issue

5

Rowdata Laboratories Pty Ltd

222 St Kilda Road

St Kilda

Victoria 3182

Australia

TABLE 6-1

PLL & MULTIPLIER

WS-0302

Number

5

Sheet 5 of 8

Drawn By: P. R. N. S. B. T.

Date: 11-May-1998 14:56:17

File: W:\PROJ\WR000\CPH\PLL SCH

Modifcation Summary

5

4

3

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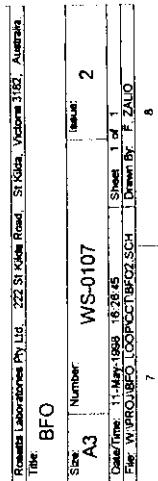
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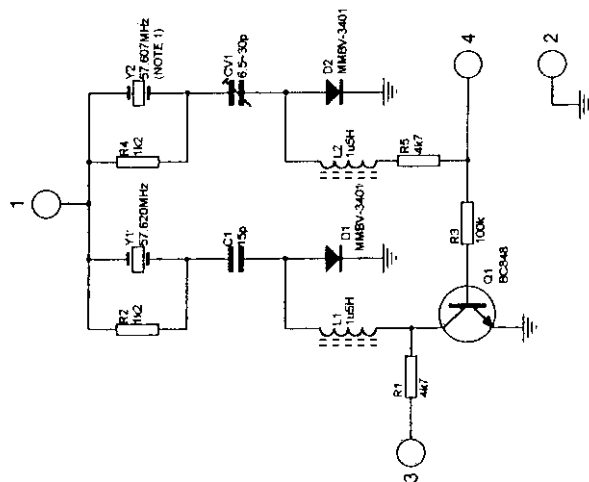
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13
FCC
A 17
L 27
BRET



25-23

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NOTE 1: THE FREQUENCY OF Y2 IS CALCULATED FROM:

$F \text{ (kHz)} = 57620 + C - W1 - W2$, WHERE:

W1 = DIFFERENCE BETWEEN CENTRE & LOWER EDGE OF FL1 (NOM. 10 kHz).

W2 = DIFFERENCE BETWEEN CENTRE & UPPER EDGE OF FL3 (NOM. 5 KHZ).

C = DESIRED BW OF FL1 & FL3 IN CASCADE (NOM. 2 KHZ).

WHEN MEASURING W1 & W2, NOTE THAT THE PASSBAND

OF FL1 & FL3 MAY NOT BE SYMMETRICAL ABOUT THE CENTRE FREQ.

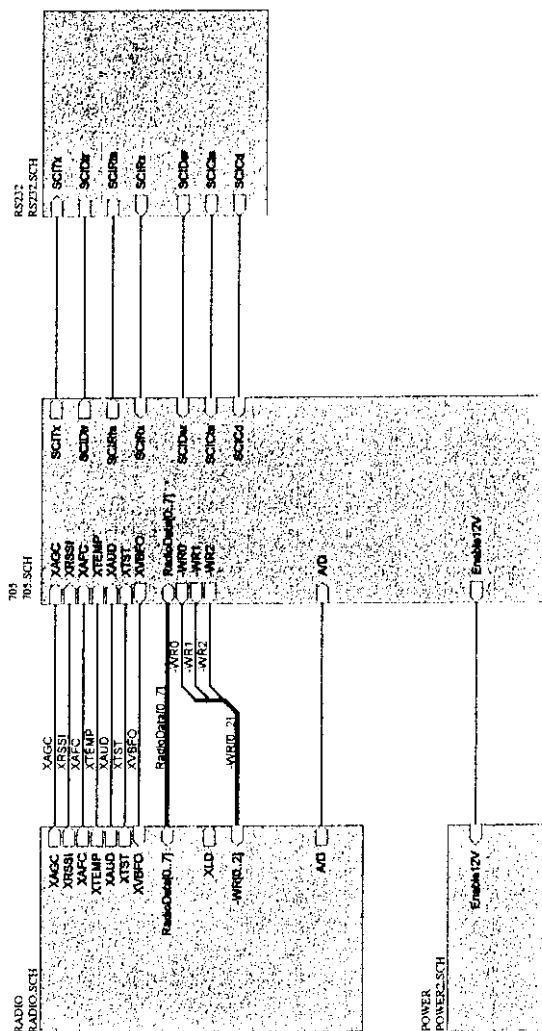
Title: Rosetta Laboratories Pty Ltd, 222 St Kilda Road, St Kilda, Victoria 3182, Australia.

CRYSTAL SWITCH

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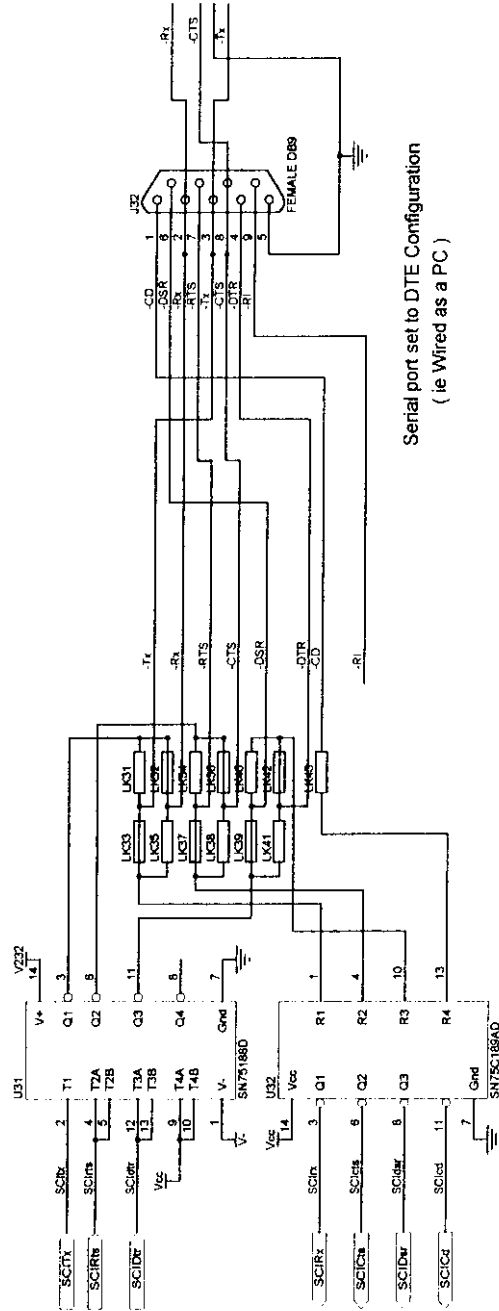
2R-1500

FILED IN: 72-3257



WR-1500e

FCC ID: HNL - WREXT



Serial port set to DTE Configuration
(ie Wired as a PC)

NOTE: LINKS ON THIS SHEET NOT FITTED FOR WR-1100

File: W:\PROJ\BACK EXT\CTRS22 SCH

Serial Communications

Size: A3 Number: WS-0304 Issue: 1

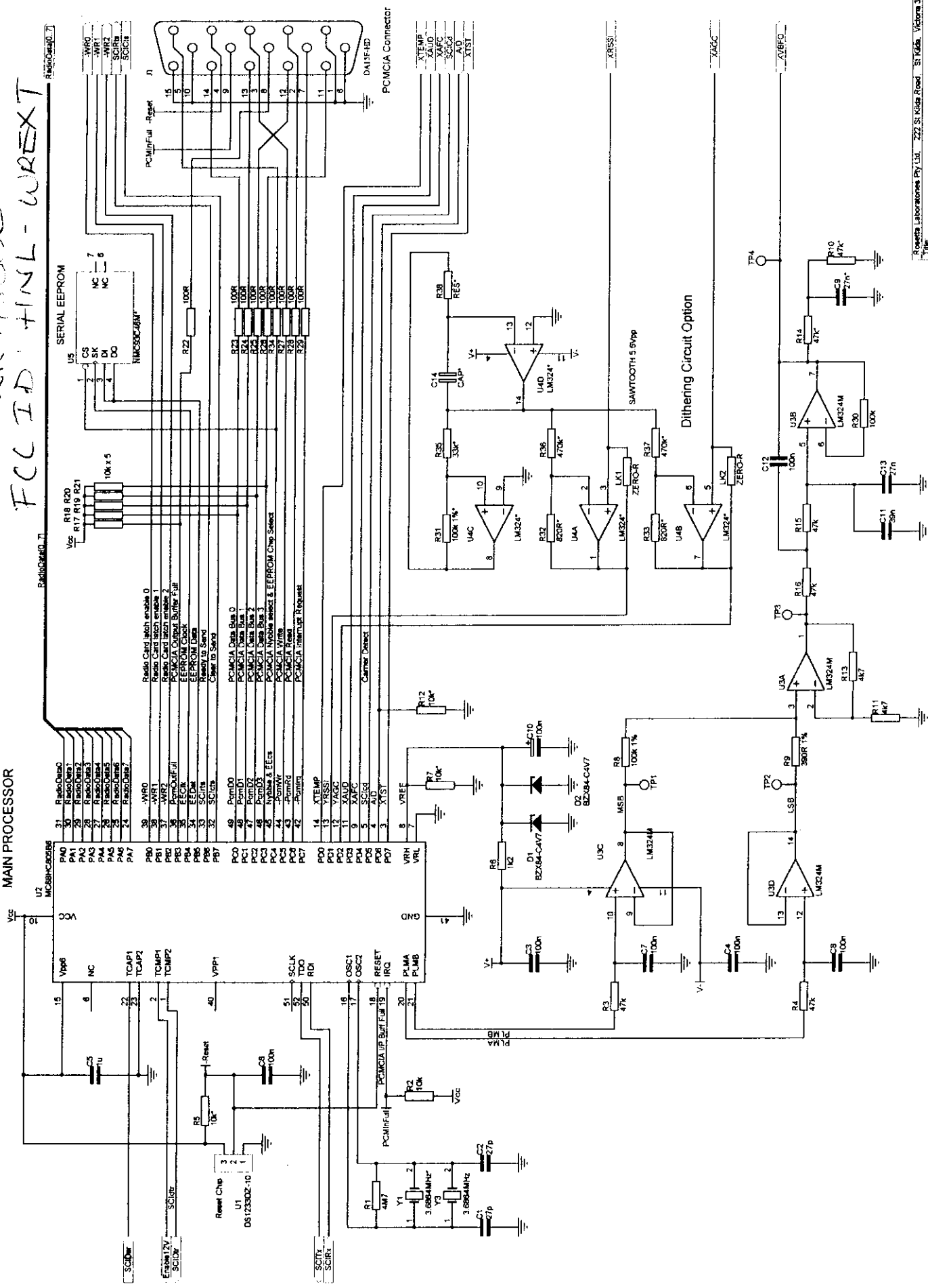
Date/Time: 11-May-1998 15:35:53 Sheet: 2 of 5

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7 8

WR-1500e
FCC ID: TNL-WREXT

MAIN PROCESSOR



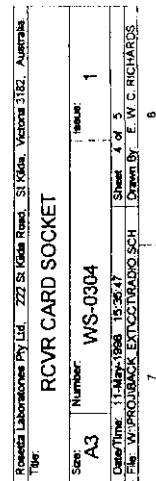
NOTE: ITEMS MARKED WITH AN ASTERISK NOT FITTED FOR WR-1100

WinRadio Basic External Backplane

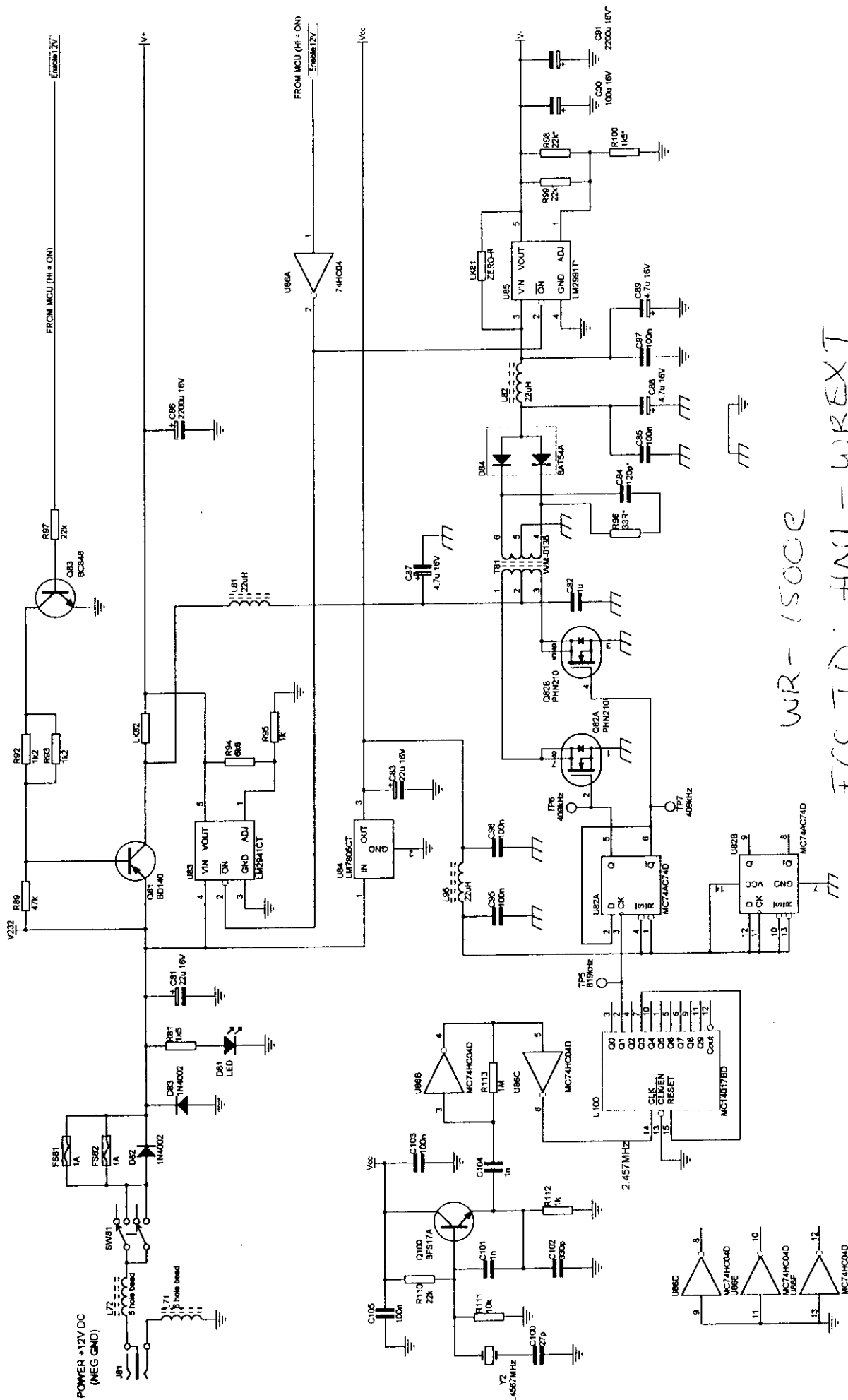
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Issue: 1

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NOTE. ITEMS MARKED WITH AN ASTERISK NOT FITTED FOR WR-1100



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WR-1500E
FCC ID: HNL-WREXT

NOTE: ITEMS MARKED WITH AN ASTERISK NOT FITTED FOR WR-1100

POWER SUPPLY			
Size	A3	Number	WS-0304
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File	W:\PROJ\BACK EXT\CC\POWER\2 SCH	Drawn By	E. W. C. RICHARDS

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