

ALLEN & HEATH



WARNING – HIGH VOLTAGES

Power Supply Unit (PSU) work should only be carried out by qualified personnel.

We recommend that you use an approved Allen & Heath service centre for all power supply work.

Please contact your local Allen & Heath distributor for more details.

<http://www.allen-heath.com/>

ALLEN & HEATH



 **XONE VF-1**

SERVICE INFORMATION

Publication AP6047

Introduction

This publication provides technical information on servicing the Allen & Heath **XONE VF-1** Analogue Filter unit. Included are internal layout drawings, block diagrams and circuit schematics with board layouts. Whilst we believe this information to be reliable we do not assume responsibility for inaccuracies. We also reserve the right to make changes in the interest of further product development.

Additional Resources

Allen & Heath web site	www.allen-heath.com	Product information Technical downloads Distribution contacts Company contacts
Technical support	support@allen-heath.com	See web for local contact
XONE VF-1 user guide	AP5917	Operating instructions Performance specification

XONE VF-1 Service Information

Issue status: **xonevf-1_ap6047_1.doc**

Print date: **07 December 2004**

Copyright © 2004 Allen & Heath. All rights reserved

ALLEN&HEATH

Manufactured in the United Kingdom by Allen & Heath

Kernick Industrial Estate, Penryn, Cornwall, TR10 9LU, UK

<http://www.allen-heath.com>



Servicing Precautions – General Notes

- Service personnel:** Service work should be carried out by technically qualified service personnel only. Mains power is dangerous and can kill. Do not attempt to work on a linear or switched mode power supply if you are not suitably qualified to do so. Do not attempt to repair surface mount circuit assemblies unless you are suitably qualified and have the necessary facilities to do so. Replacement circuit assemblies can be ordered.
- Service facilities:** Ensure a suitably sized work surface is available. Ensure this is clear of dirt, debris and obstructions which may damage the equipment surfaces. Ensure adequate lighting. Use the correct tools for the job and ensure they are in good working order. Ensure all workshop safety requirements are adhered to.
- Service information:** Check that you have all the information you need before starting the service job. Refer to the Allen & Heath web site or contact Allen & Heath technical support for details on the latest information. Full technical information can be downloaded from the web site Distributor Zone (password required).
- Mains power:** Connect the equipment to mains power only of the type described in the user guide and marked on the rear panel. The power source must provide a good ground connection. Ensure you always use an isolation transformer when working on any mains power supply unit.
- Mains cord and fuse:** Use the correct power cord as supplied with the equipment. Do not remove or tamper with the ground connection in the power cord. Heed the Important Mains Plug Wiring Instructions printed in the user guide if it is necessary to rewire the mains cord. Always replace the equipment mains fuse with the correct type and rating as described in the user guide and marked on the equipment panel.
- Opening the unit:** Switch off and remove the mains power cord before opening the equipment. Ensure all power supply covers and safety shields are in place before applying power with the unit open for diagnostic fault finding.
- Closing the unit:** Before finishing, check the quality and accuracy of the service work carried out. Remove any dirt or debris as this may cause equipment failure in the future. Ensure all assemblies, harnesses and connectors are correctly aligned and plugged in. Ensure that jumper settings and control configurations are correctly set according to the requirements of the customer.
- Testing the unit:** Before operating the equipment, read and adhere to the Important Safety Instructions printed in the user guide. Test that the service work has been successfully carried out.
- Shipping the unit:** Use adequate packing such as the original packaging or purpose designed flight case if you need to ship the unit. To avoid injury to yourself or damage to the equipment take care when lifting, moving or carrying the equipment.

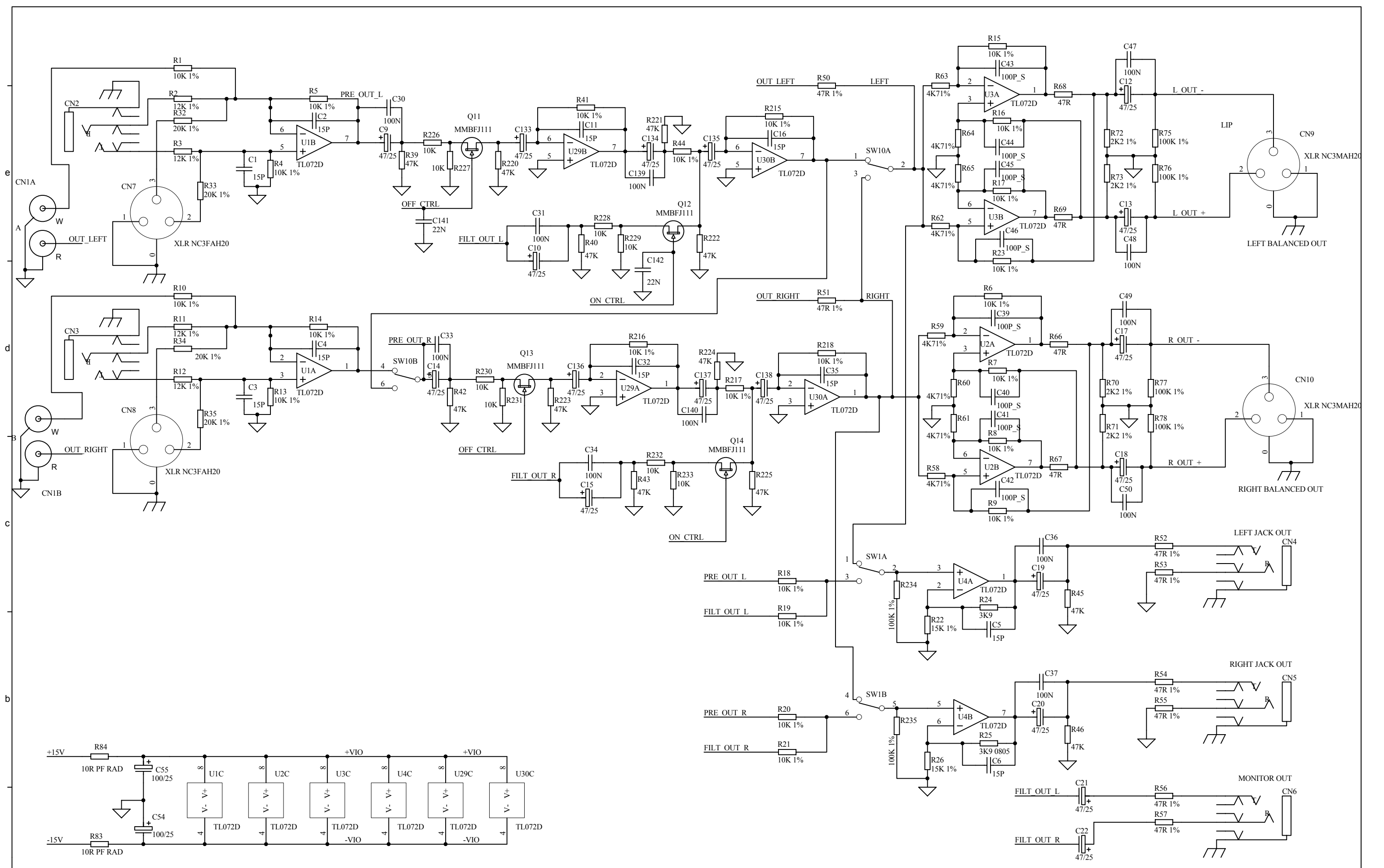


Servicing Notes – XONE VF-1

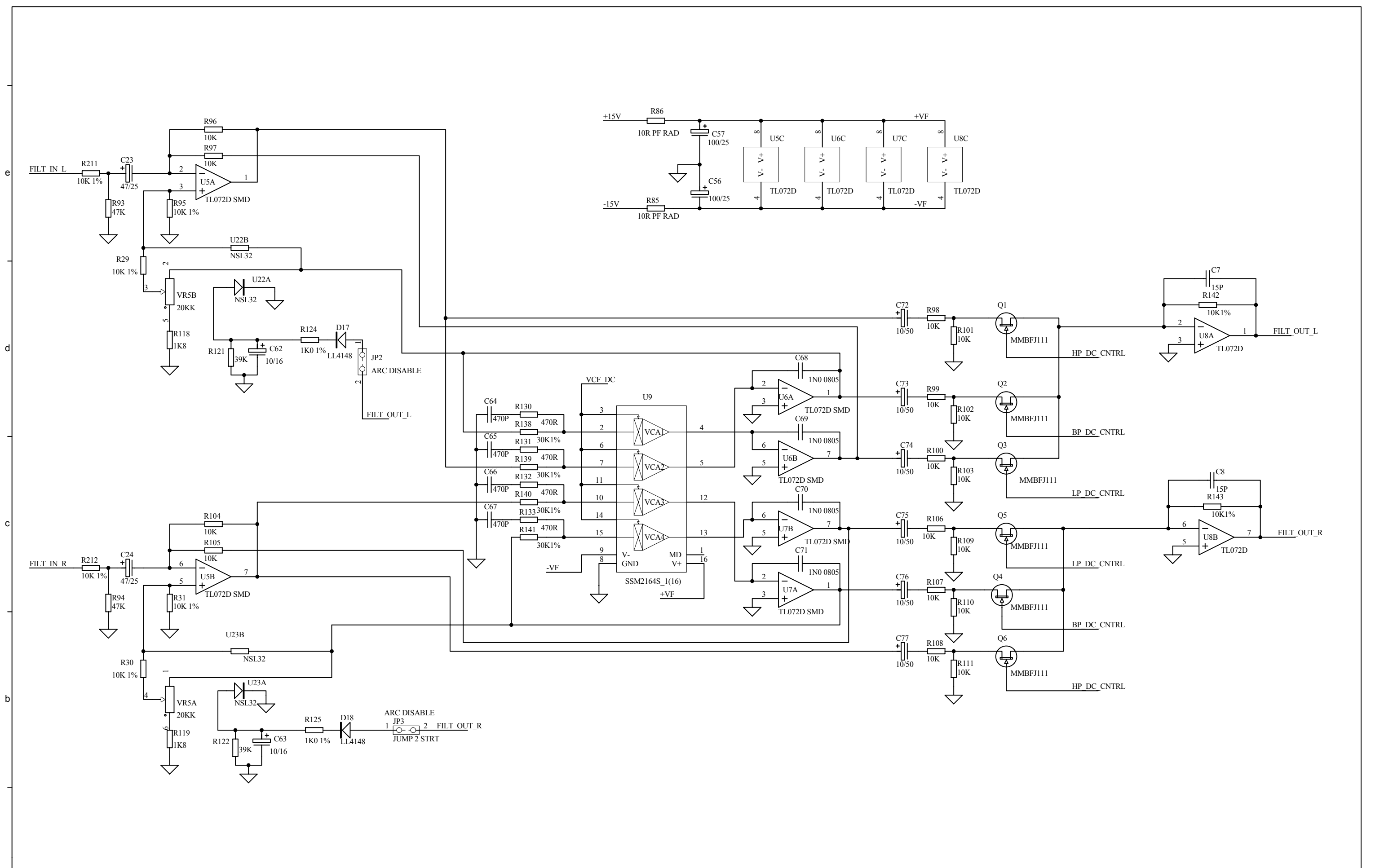
- User maintenance:** There are no user serviceable parts inside. Refer any service work to competent technical personnel only.
- Technology:** The XONE VF-1 uses SMT (surface mount) PCB technology. In certain cases it may be better to replace a faulty assembly rather than try to fix it without the appropriate tools and training. The power supply is a built-in universal mains input, switched mode circuit which should be serviced by suitably qualified personnel only.
- Operation:** The XONE VF-1 is an analogue filter unit. To ensure optimum performance and reliability it should be connected and operated as described in the user guide.
- Fault finding:** Refer to the system block diagram and circuit drawings to follow through the signal path during fault diagnosis. Replace suspected faulty components only with those specified by Allen & Heath. The use of lower grade alternatives may degrade the performance.

Contents Log

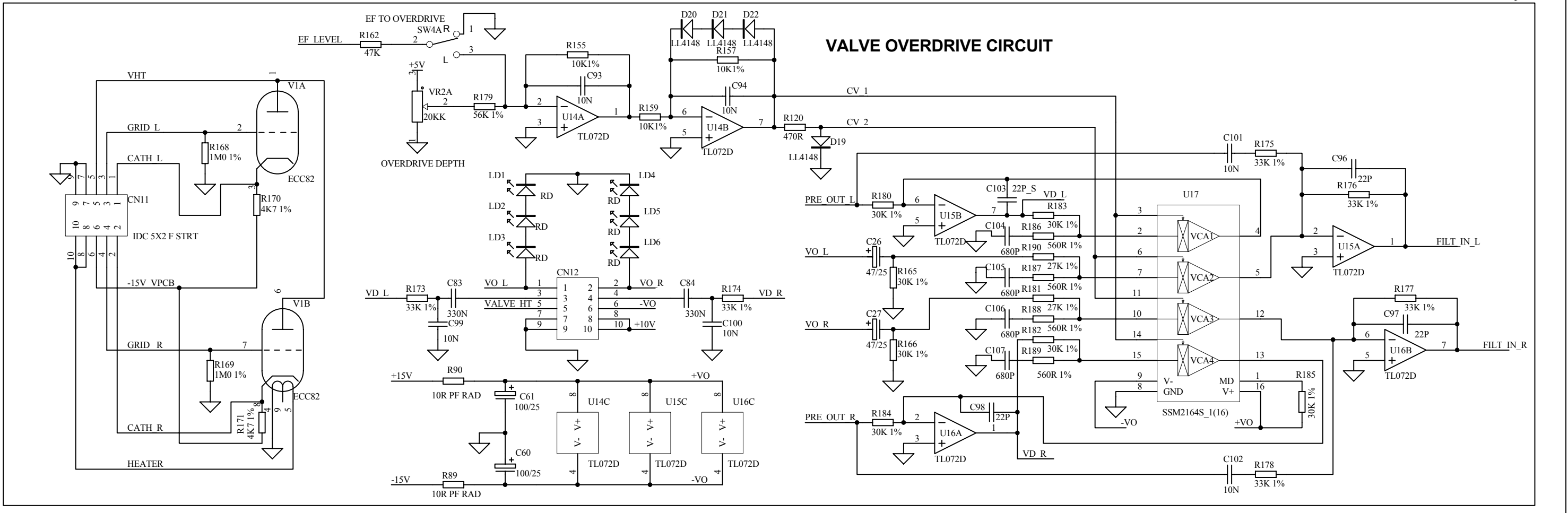
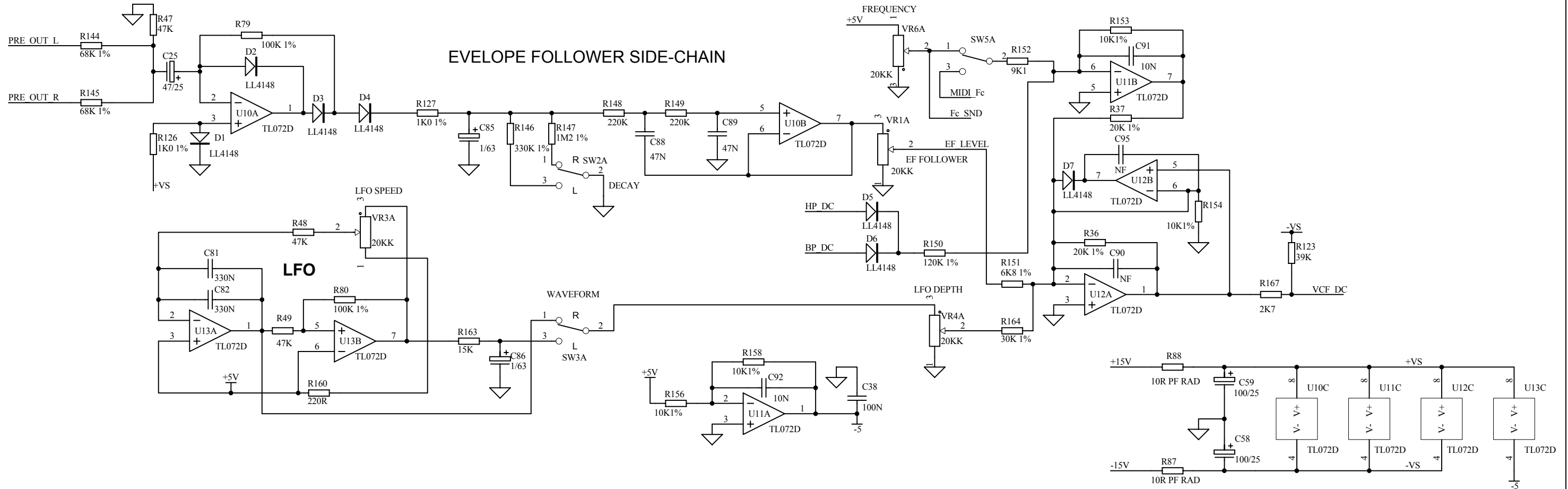
Internal Layout Drawing	xonevf-1_layout_1.pdf
Surface and Main Parts.....	xonevf-1_parts_1.pdf
System Block Diagram	xonevf-1_blockdiagram_1.pdf
Main PCB Assembly iss.1	xonevf-1_003-358_main_1.pdf
Main PCB Assembly iss.4.....	xonevf-1_003-358_main_4.pdf
RIAA Option PCB	xonevf-1_003-360_riaa_a.pdf
RIAA Option Fitting Instructions	xonevf-1_riaa_fitting_1.pdf



ALLEN&HEATH Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE	CHK BY	TITLE: XONE VF-1 MAIN PCB PAGE:
	1	ARJ	30-07-04		
FILE: AG5877_1 SHEET 1.Sch					PRINTED: 14:45:17 4-Nov-2004



ALLEN&HEATH Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE	CHK BY	VR5C BRKT 20KK	TITLE: XONE VF-1 MAIN PCB
	1	ARJ	30-07-04			FILE: AG5877_1 SHEET 2.Sch
					PRINTED: 14:45:18 4-Nov-2004	DRG No: C5877 ISSUE: 1 SHEET: 2 OF 5

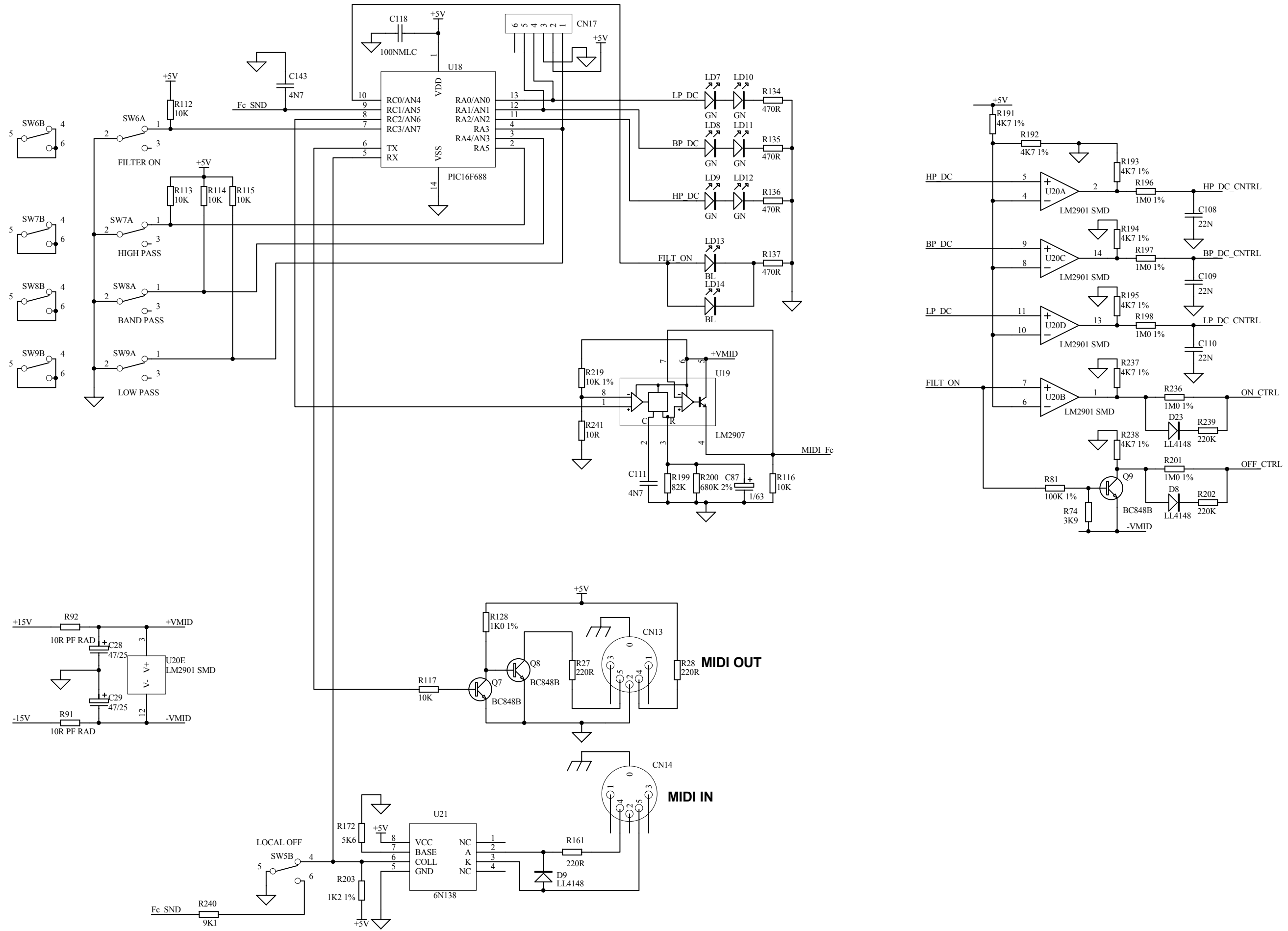


ALLEN&HEATH
 Kernick Industrial Estate,
 Penryn, Cornwall,
 England. TR10 9LU
 Tel: +44 (0)8707 556250
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	CHK BY
1	ARJ	30-07-04	

VR1B	VR2B	VR3B	VR4B	VR6B	SW2B	SW3B	SW4B
FILE: AG5877_1 SHEET 3.Sch							
PRINTED: 14:45:18 4-Nov-2004				DRG No: C5877 ISSUE: 1 SHEET: 3 OF 5			

TITLE: **XONE VF-1 MAIN PCB**
 PAGE:
 DRG No: C5877 ISSUE: 1 SHEET: 3 OF 5



ALLEN&HEATH Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE	CHK BY
	1	ARJ	30-07-04	

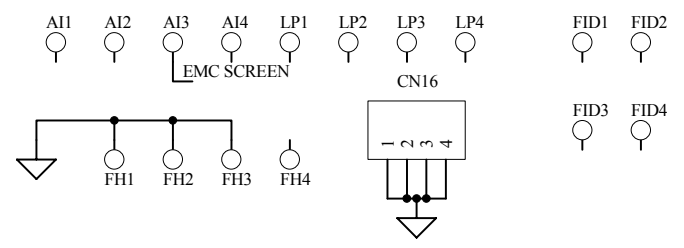
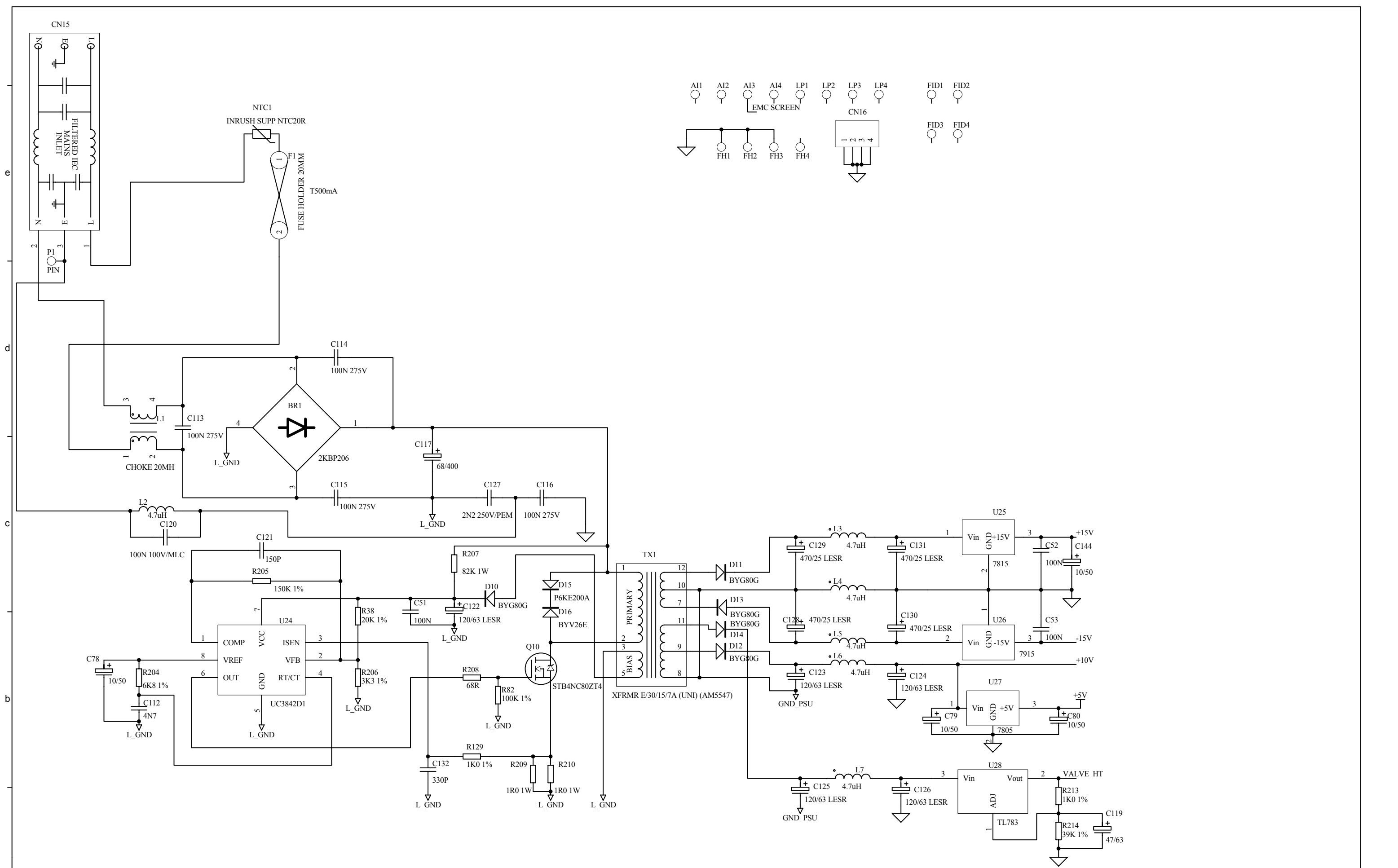
FILE: AG5877_1 SHEET 4.Sch

TITLE: XONE VF-1 MAIN PCB
PAGE:

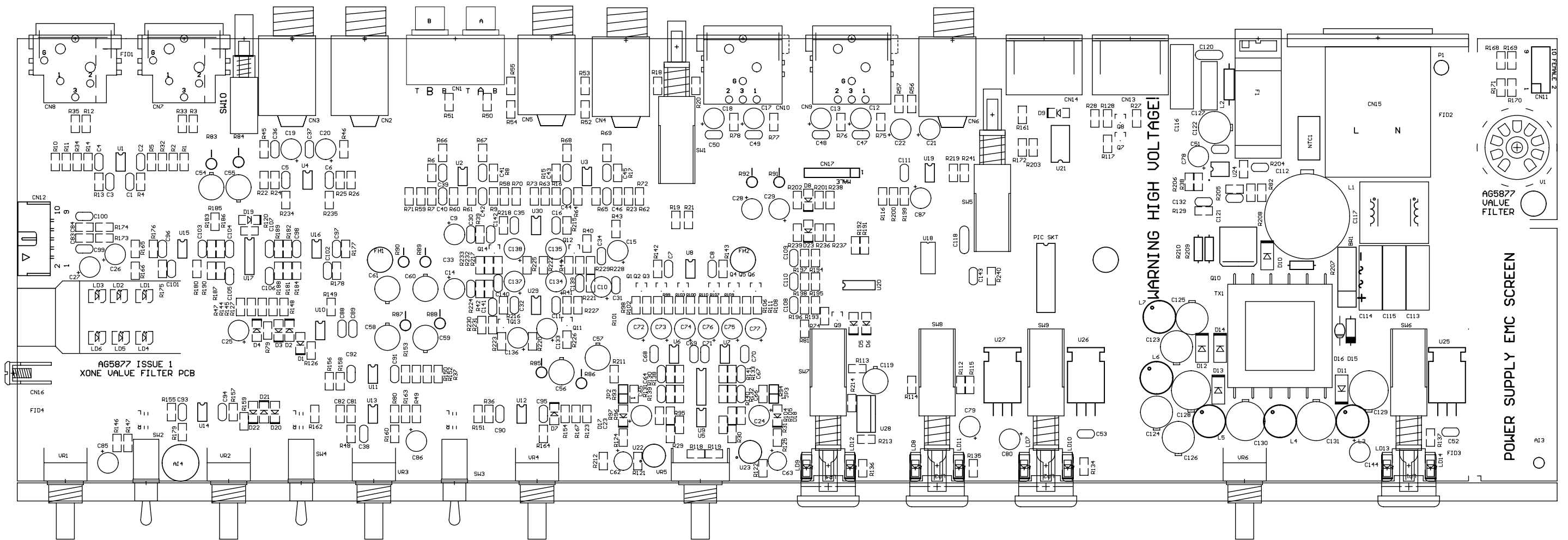
PRINTED: 14:45:19 4-Nov-2004

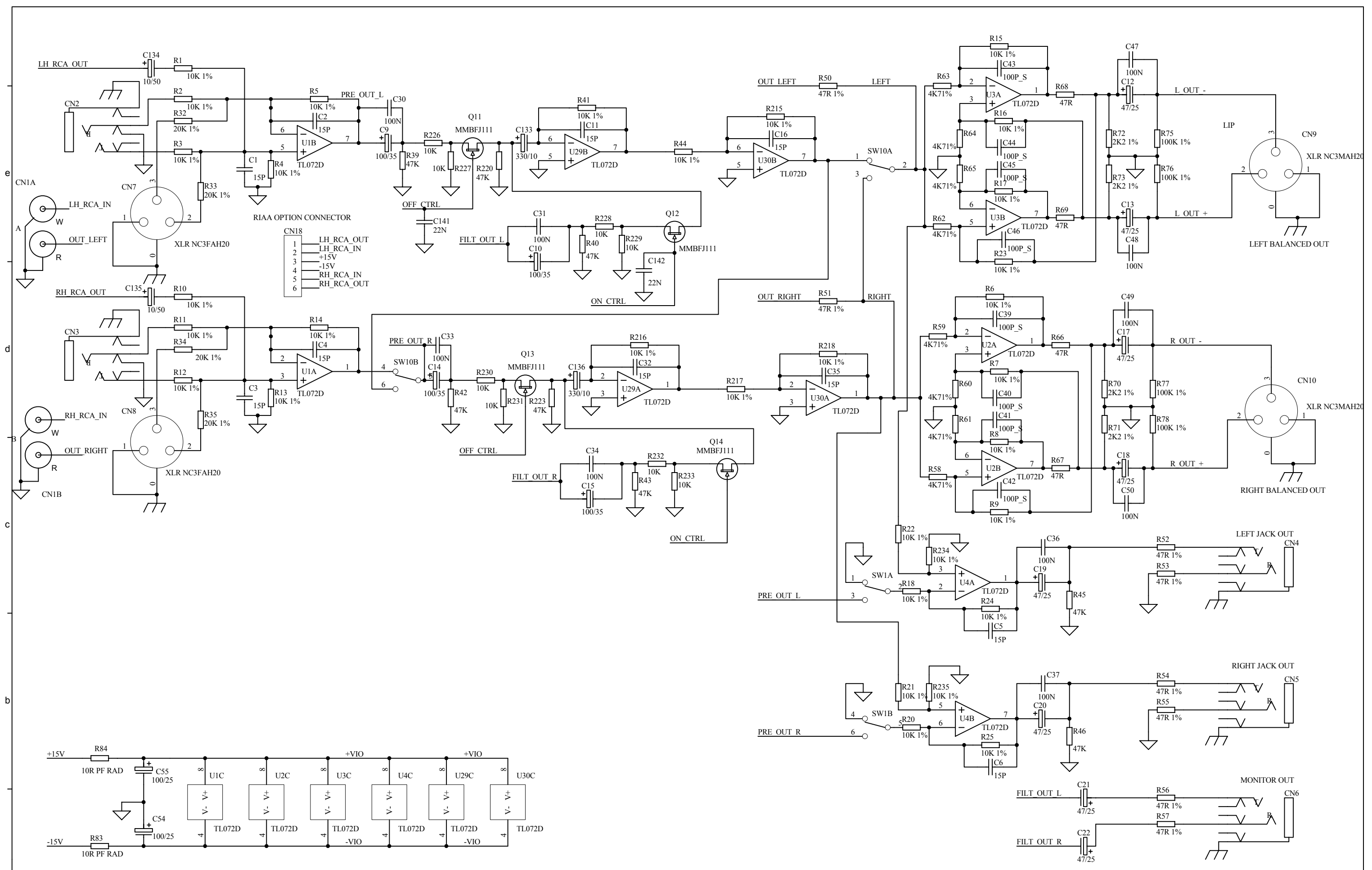
DRG No: C5877 ISSUE: 1 SHEET: 4 OF 5

003-358 iss.1

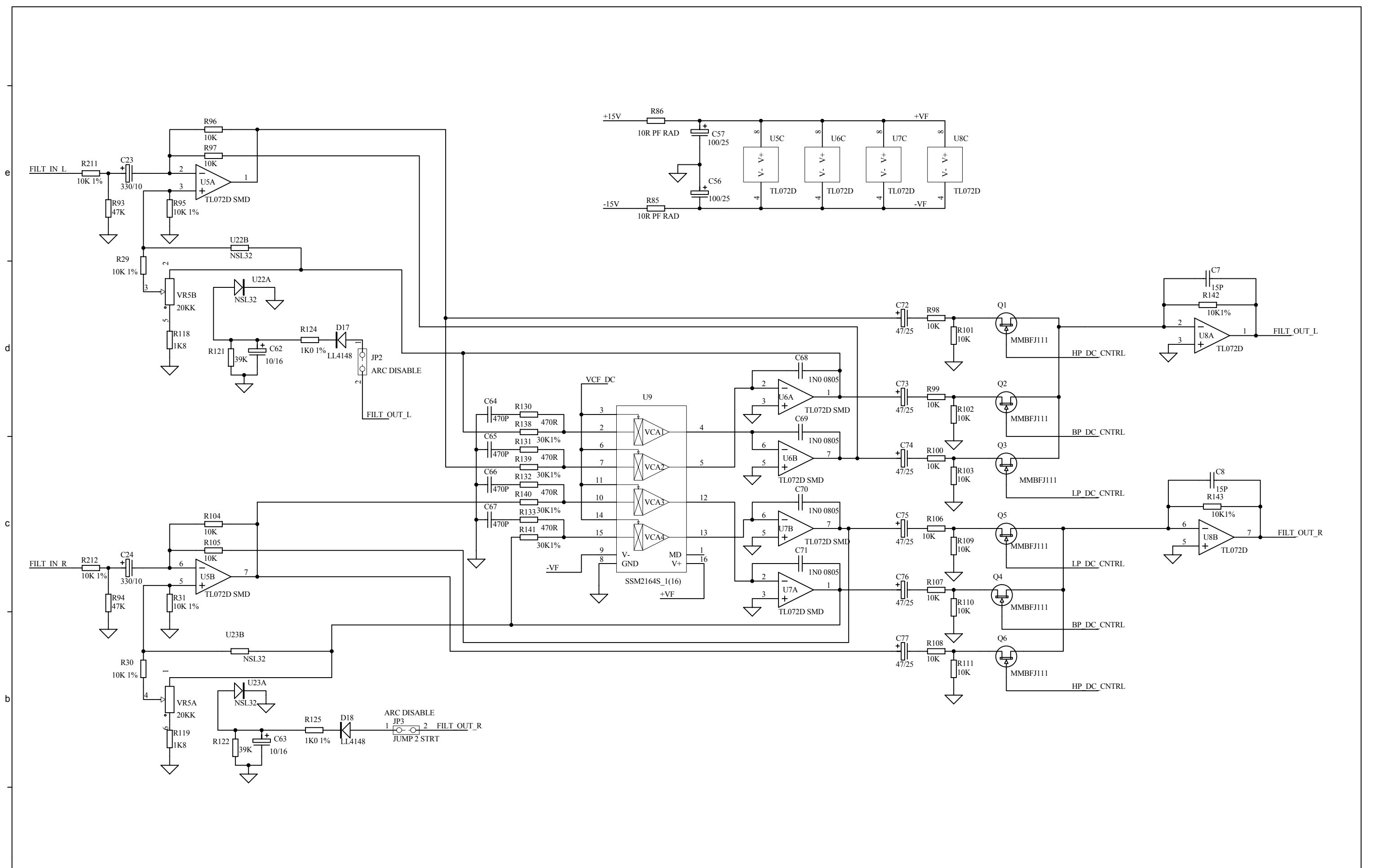


ALLEN&HEATH Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE	CHK BY	TITLE: XONE VF-1 MAIN PCB PAGE:	
	1	ARJ	30-07-04			DRG No: C5877 ISSUE: 1 SHEET: 5 OF 5
FILE: AG5877_1 SHEET 5.Sch					PRINTED: 14:45:19 4-Nov-2004	

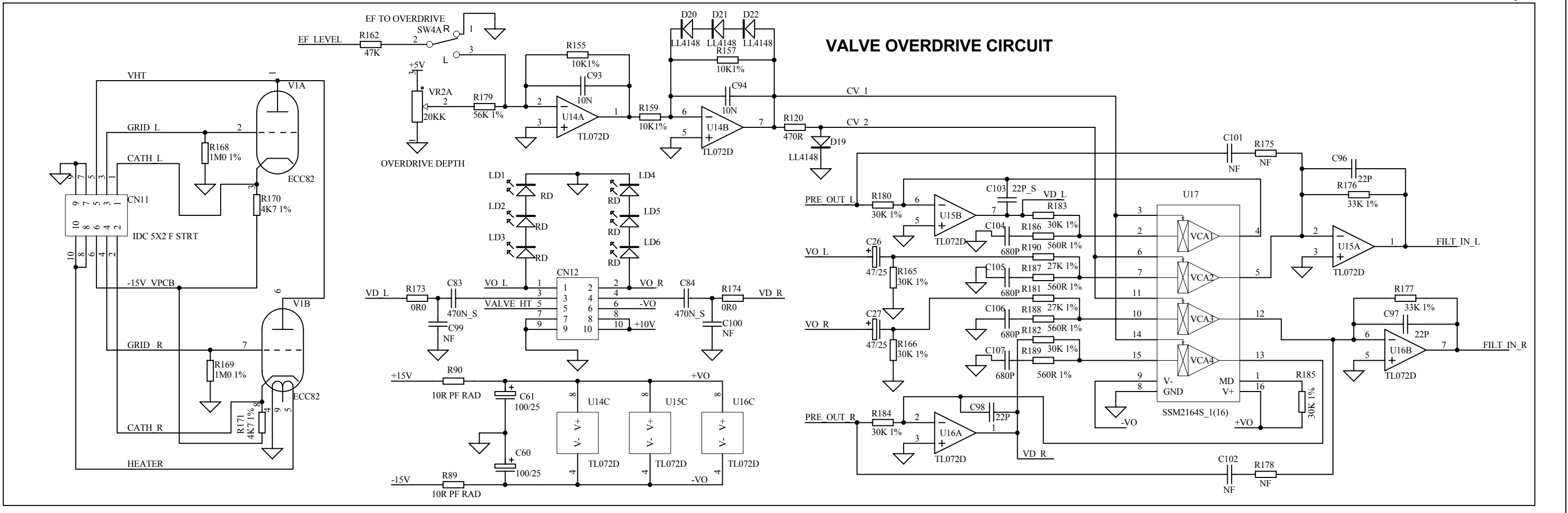
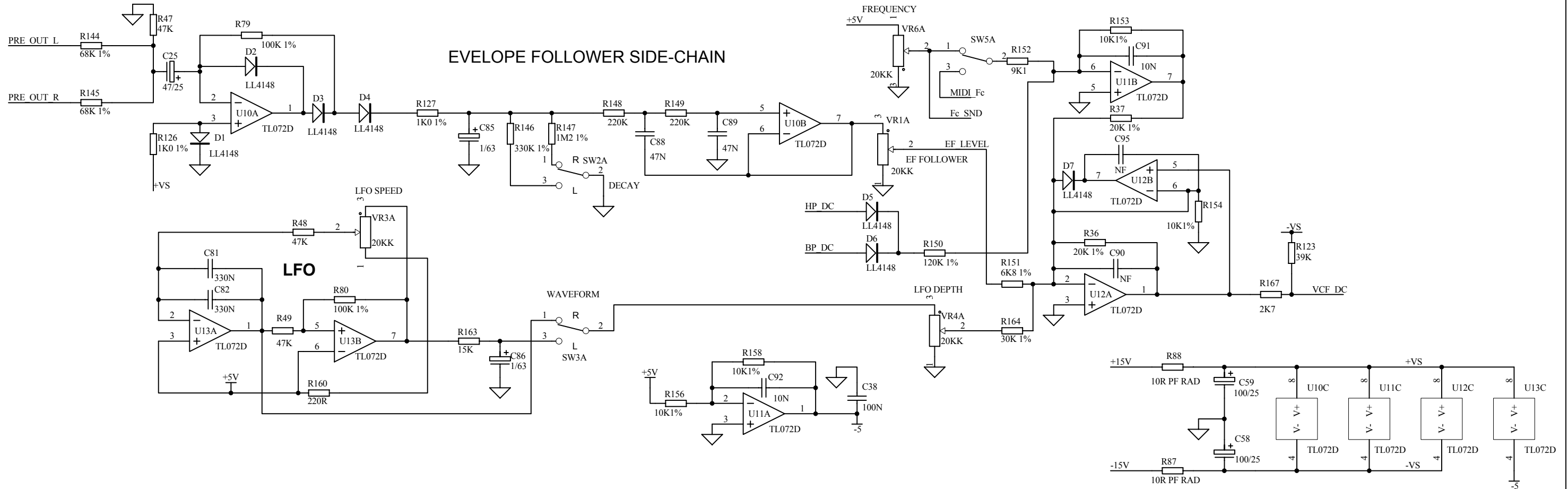




ALLEN&HEATH Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE	CHK BY	TITLE: XONE VF-1 MAIN PCB PAGE:
	1	ARJ	30-07-04		
	2	ARJ	17-08-04		ISSUE: 4
FILE: AG5877_4 SHEET 1.Sch				PRINTED: 11:50:14 2-Nov-2004	SHEET: 1 OF 5



ALLEN&HEATH Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE	CHK BY	VR5C 20KK	TITLE: XONE VF-1 MAIN PCB PAGE:
	1	ARJ	30-07-04			
	2	ARJ	17-08-04		ISSUE: 4	SHEET: 2 OF 5
FILE: AG5877_4 SHEET 2.Sch					PRINTED: 11:50:14 2-Nov-2004	



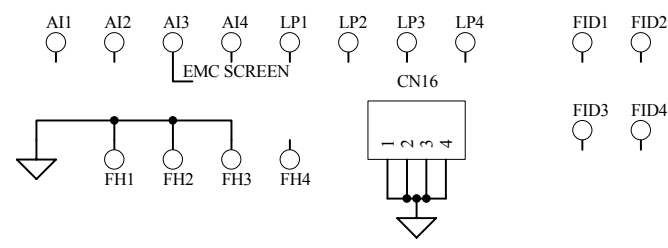
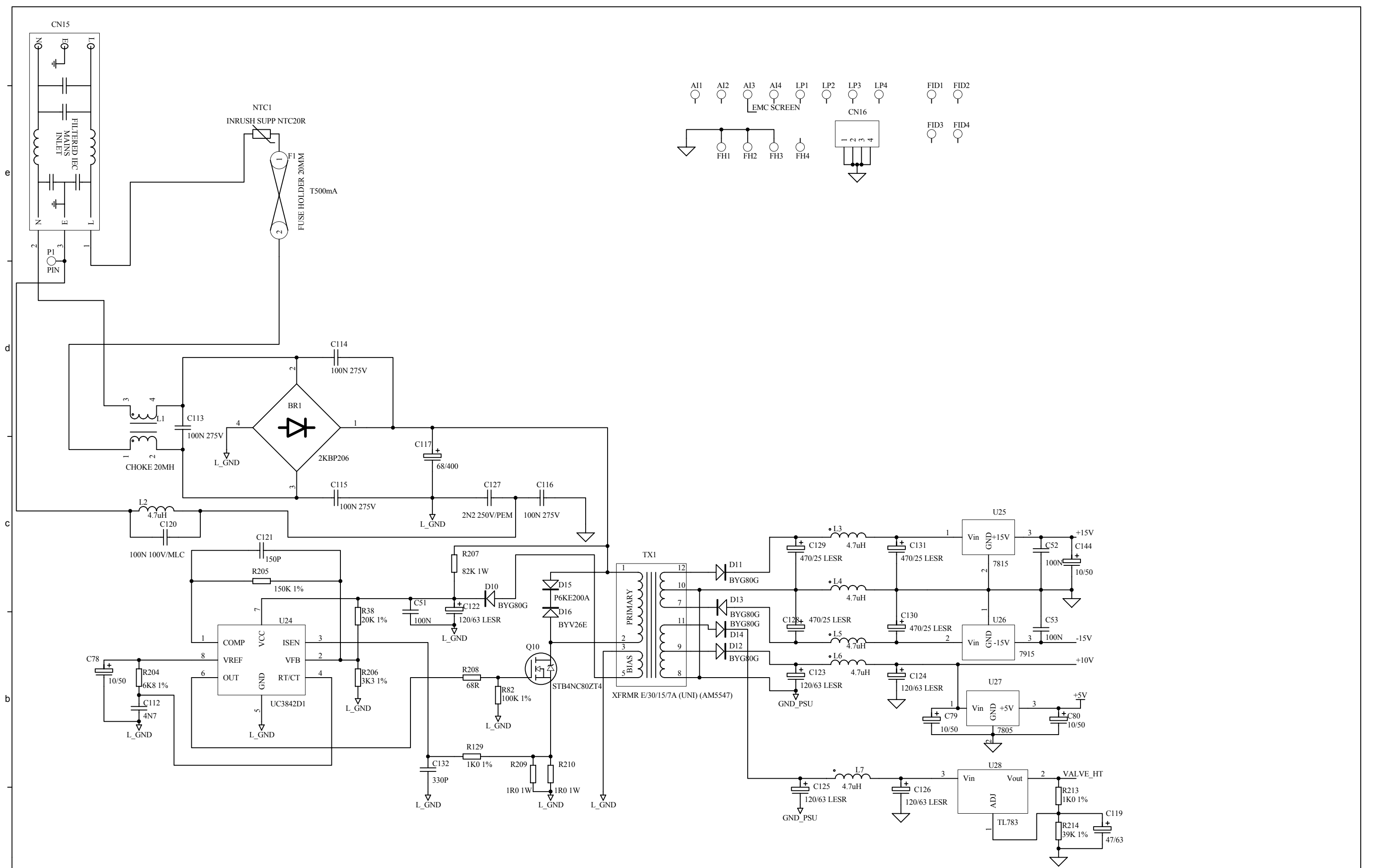
ALLEN&HEATH
 Kernick Industrial Estate,
 Penryn, Cornwall,
 England. TR10 9LU
 Tel: +44 (0)8707 556250
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	CHK BY
1	ARJ	30-07-04	
2	ARJ	17-08-04	

BRKT	VR1B	VR2B	VR3B	VR4B	VR6B	SW2B	SW3B	SW4B

FILE: AG5877_4 SHEET 3.Sch

TITLE: XONE VF-1 MAIN PCB
PAGE:
DRG No: C5877 ISSUE: 4 SHEET: 3 OF 5

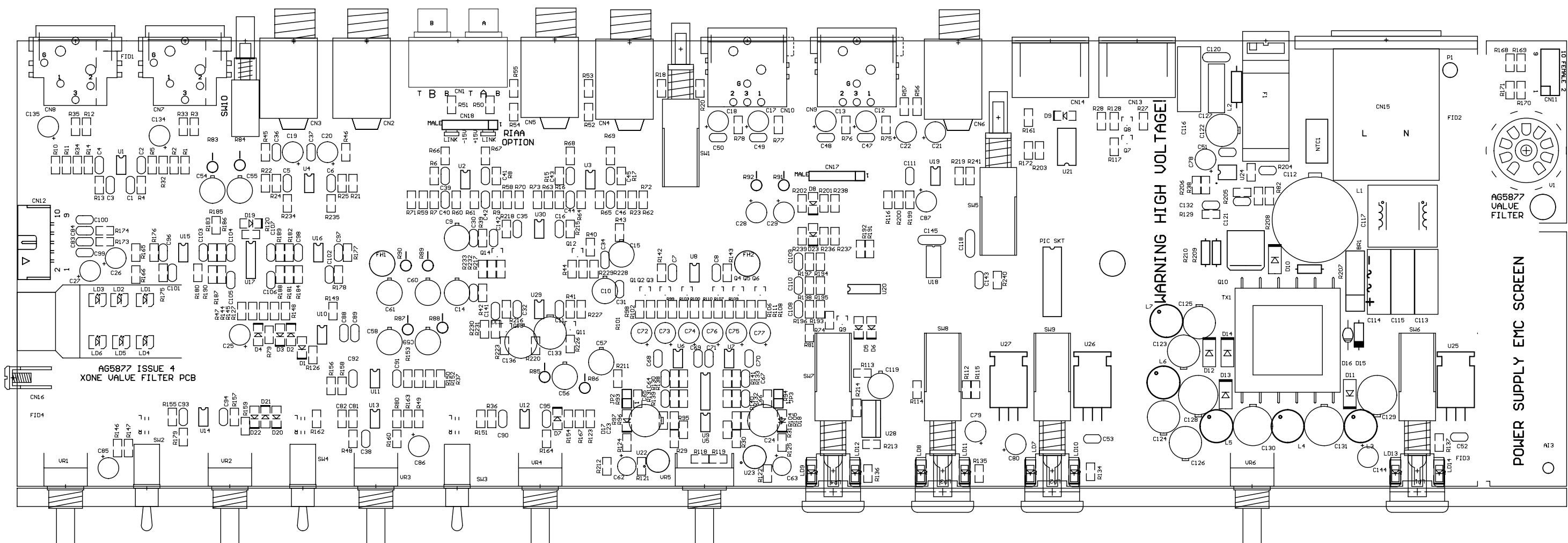


ALLEN&HEATH
 Kernick Industrial Estate,
 Penryn, Cornwall,
 England. TR10 9LU
 Tel: +44 (0)8707 556250
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	CHK BY
1	ARJ	30-07-04	
2	ARJ	17-08-04	

FILE: AG5877_4 SHEET 5.Sch
 PRINTED: 11:50:15 2-Nov-2004

TITLE: XONE VF-1 MAIN PCB
 PAGE:
 DRG No: C5877 ISSUE: 4 SHEET: 5 OF 5



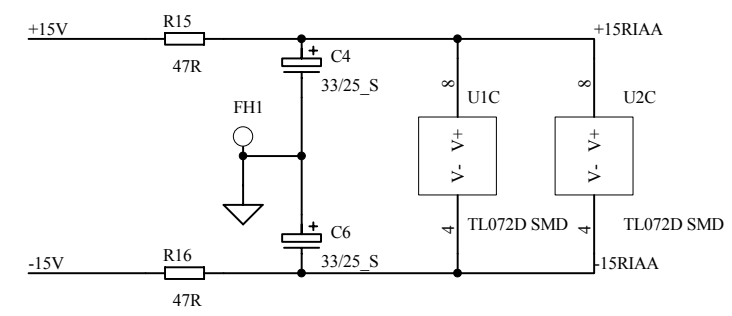
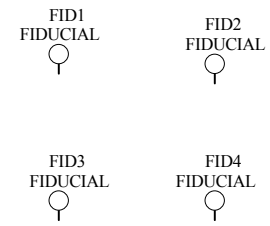
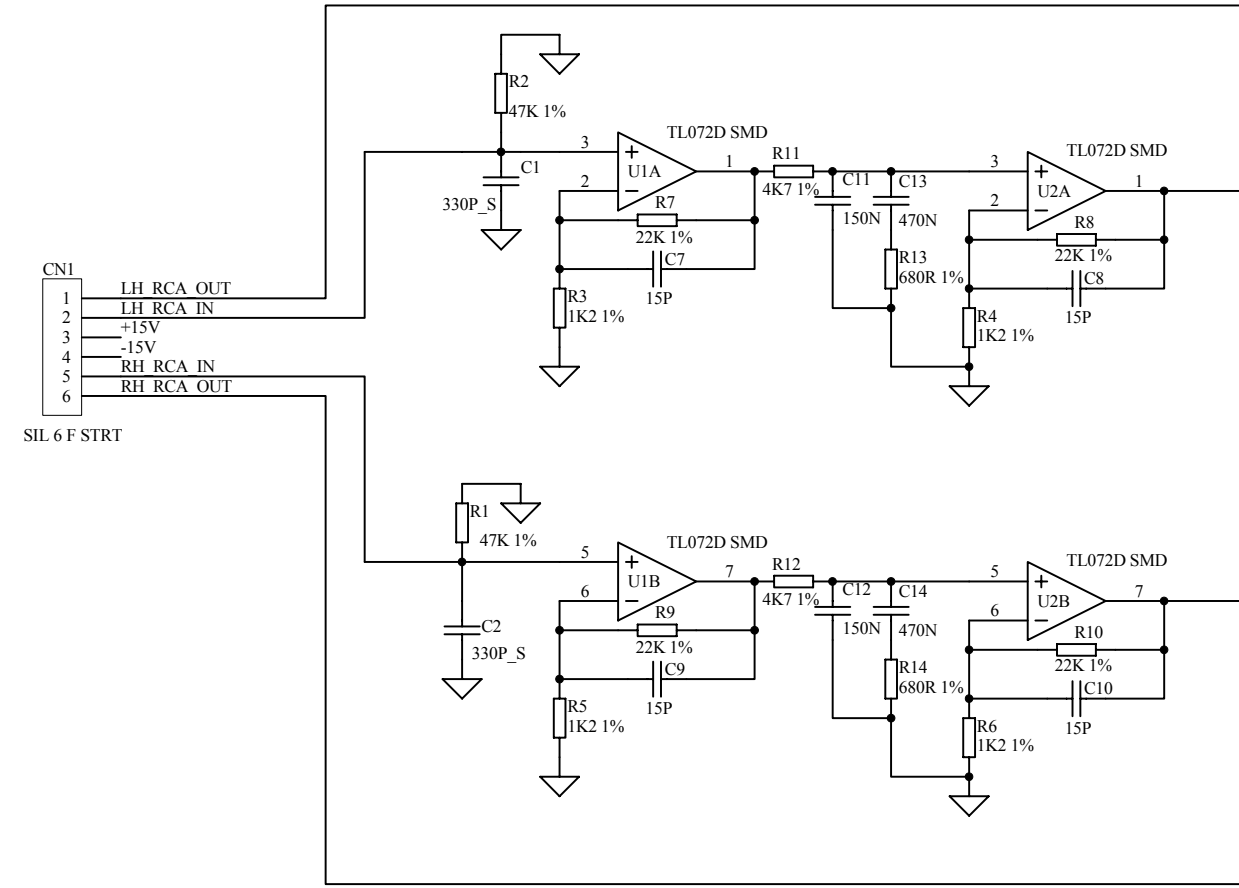
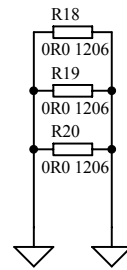
AG5877 ISSUE 4
XONE VALVE FILTER PCB

WARNING HIGH VOLTAGE!

POWER SUPPLY EMC SCREEN

AG5877
VALVE
FILTER

e
d
c
b
a



ALLEN&HEATH
 Kernick Industrial Estate,
 Penryn, Cornwall,
 England. TR10 9LU
 Tel: +44 (0)8707 556250
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	CHK BY

FILE: AG5936_A.Sch

PRINTED: 17:00:18 1-Nov-2004

TITLE: XONE VF-1 RIAA OPTION
 PAGE:
 DRG No: C5936 ISSUE: A SHEET: 1 OF 1

