

# ALLEN & HEATH



## PA Series

1kW Powered & Unpowered Audio Consoles

## SERVICE INFORMATION

Publication AP5288

## Introduction

This publication provides technical information on servicing the Allen & Heath **PA Series** consoles. Included are system block diagram, internal layout drawing and circuit schematics with board layouts and spare parts lists. 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	<a href="http://www.allen-heath.com">www.allen-heath.com</a>	Product information Technical downloads Distribution contacts Company contacts
Technical support	<a href="mailto:support@allen-heath.com">support@allen-heath.com</a>	See web for local contact
Effects editor software	PA-FX Editor	Download from web site
<b>PA-CP</b> user guide	AP4956	Operating instructions Performance specification
<b>PA</b> user guide	AP5195	Operating instructions Performance specification

### PA Series Service Information

Issue status: pa\_series\_ap5288\_6.doc

Print date: 08 December 2004

Copyright © 2004 Allen & Heath. All rights reserved

# ALLEN&HEATH

Allen & Heath Limited

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 – PA-CP

- User maintenance:** There are no user serviceable parts inside. It should not be necessary for the user to remove the cover or access internal parts.
- Technology:** The **PA-CP** uses conventional thru-hole and SMT (surface mount) PCB technology. It has a built-in linear regulated power supply which should be serviced by suitably qualified personnel only.
- Operation:** To test the console make sure it is connected as described in the user guide. Check that the voltage setting marked on the rear panel is correct for the local mains supply.
- Fault finding:** For effective fault diagnosis trace the signal flow through the circuit path. Refer to the system block diagram. Replacement circuit assemblies are available from Allen & Heath.

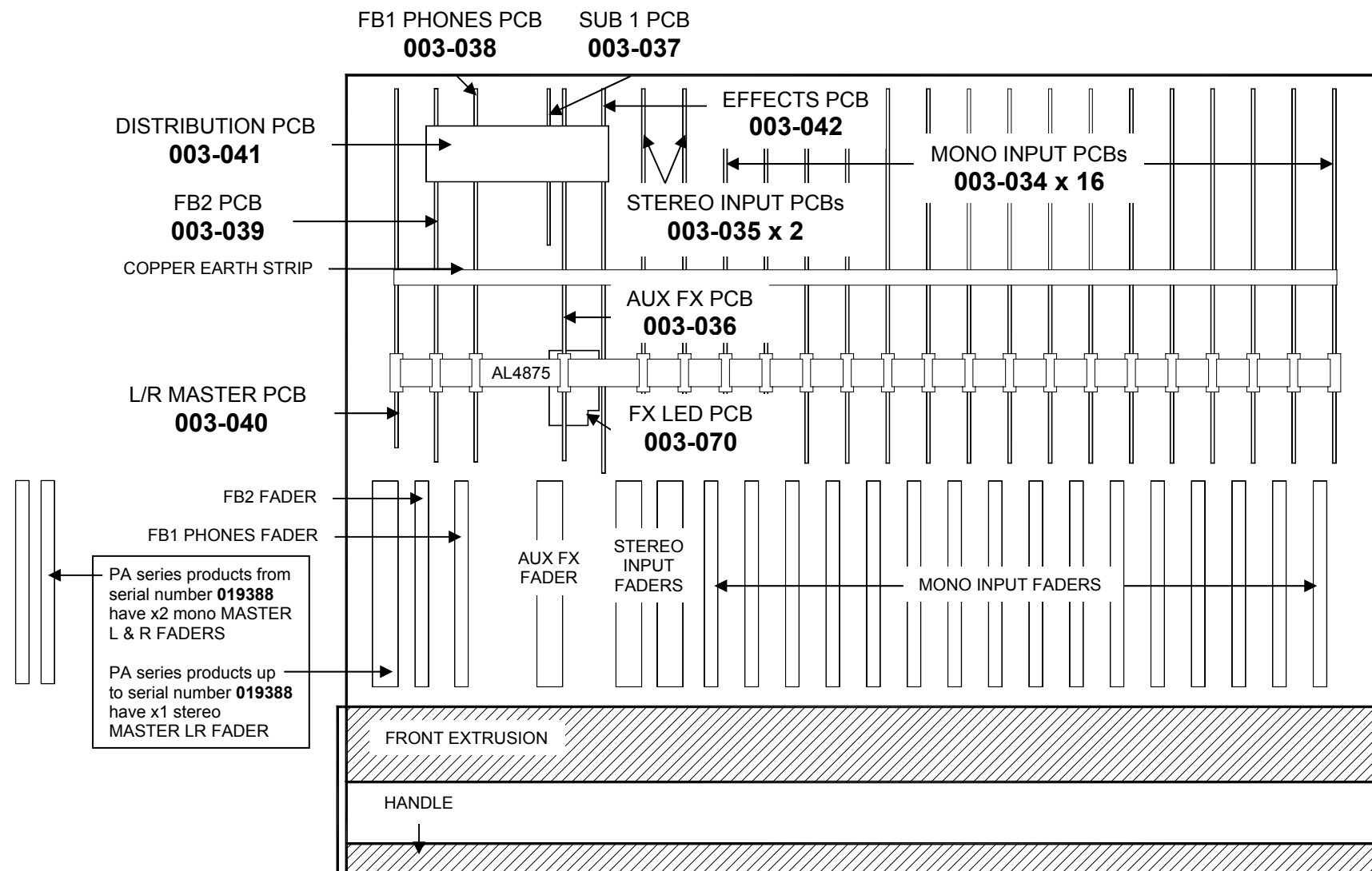
## Contents Log

Internal Layout drawing .....	pa_series_layout_3.pdf
Surface and Main Parts.....	pa_series_parts_4.pdf
PA-CP System Block Diagram.....	pa-cp_blockdiagram_2.pdf
PA System Block Diagram.....	pa_blockdiagram_2.pdf
PA-CP Mono Input Pcb.....	pa-cp_003-034_monoinput_1.1.pdf
PA Series Stereo Input PCB .....	pa_series_003-035_stereoinput_2.1.pdf
PA Series Aux / FX PCB.....	pa_series_003-036_auxfx_2.1.pdf
PA Series Sub 1 PCB.....	pa_series_003-037_sub1_1.1.pdf
PA Series FB1 / Phones PCB .....	pa_series_003-038_fb1phones_2.1.pdf
PA Series FB2 PCB.....	pa_series_003-039_fb2_1.1.pdf
PA-CP LR Master PCB .....	pa-cp_003-040_lrmaster_3.pdf
PA-CP Distribution PCB.....	pa-cp_003-041_distribution_2.pdf
PA Series Effects PCB .....	pa_series_003-042_effects_2.pdf
PA-CP Amplifier PCB .....	pa-cp_003-043_amplifier_4.pdf
PA-CP Power Supply PCB.....	pa-cp_003-069_linearpsu_3.2.pdf
PA-CP Power Supply PCB.....	pa-cp_003-069_linearpsu_3.3.pdf
PA Series FX LED PCB .....	pa_series_003-070_fxled_2.1.pdf
PA Mono Input PCB .....	pa_003-091_monoinput_1.2.pdf
PA LR Master PCB .....	pa_003-092_lrmaster_1.pdf
PA Distribution PCB .....	pa_003-093_distribution_1.pdf
PA Switched Mode Power Supply PCB .....	pa_003-094_smps_2.pdf
PA Switched Mode Power Supply PCB .....	pa_003-094_smps_4.pdf

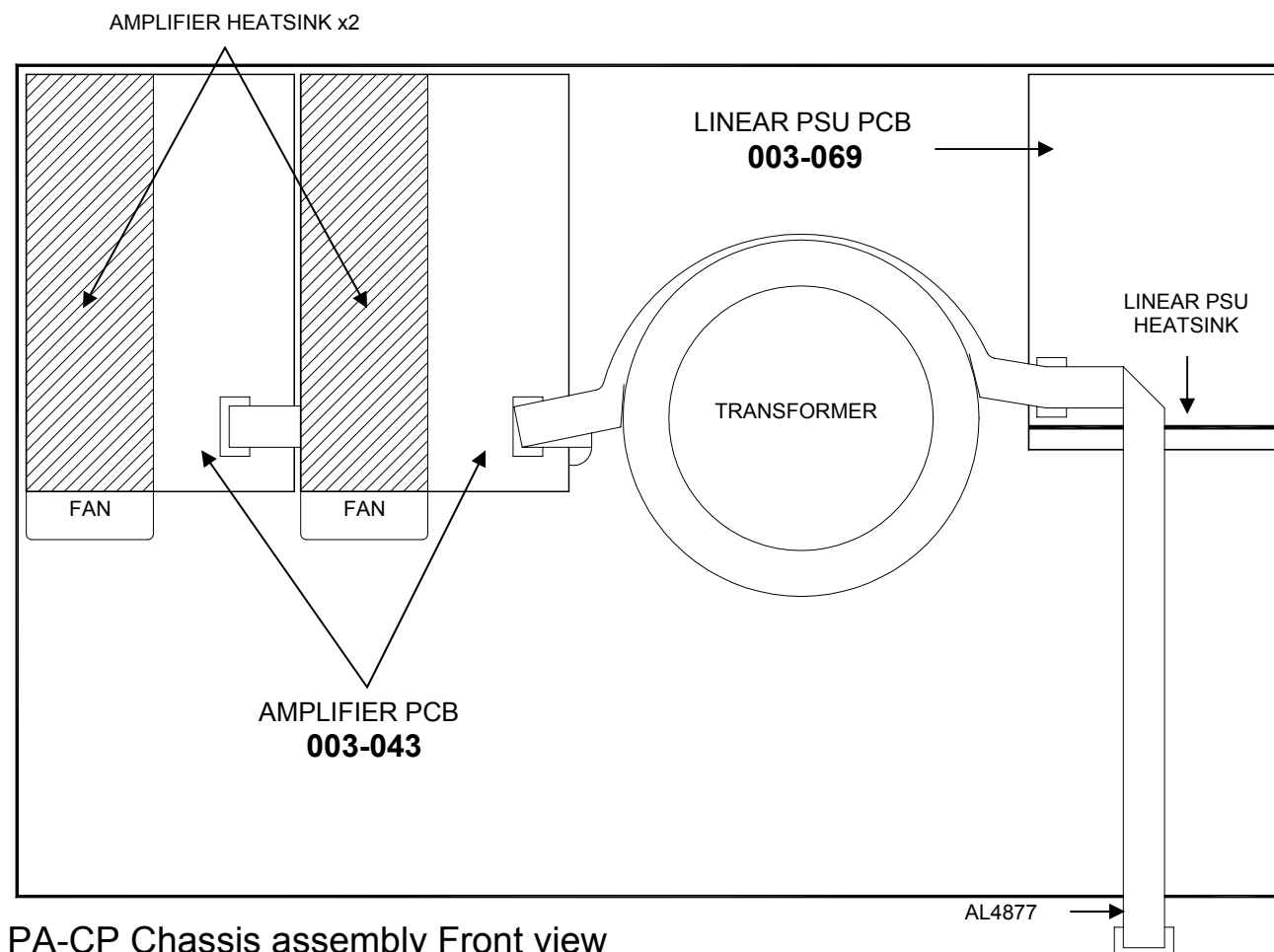
## **PA Series – Historical Change Log**

The following list identifies historical changes to the **PA Series**. The effective dates, serial numbers and related change note documentation are included for reference to help identify the correct issue circuit boards and components. 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.

<b>Assembly</b>	<b>Description</b>	<b>From Serial Number</b>	<b>Date</b>	<b>Change Note Number</b>
<b>Main</b>	Fader change to add extra master fader	<b>019388</b>	16/06/03	917
<b>003-094</b>	PA SMPSU PCB Minimum current increase for TL783	<b>018930</b>	23/09/03	949
<b>003-069</b>	PA-CP Linear PSU PCB +/- 15V rail fuse value changes	<b>018780</b>	23/09/03	950
<b>003-094</b>	PA SMPSU PCB post regulation added – up-issue to issue 4	-	13/11/03	966
<b>003-034</b>	PA CP Mono Input 48V 22R type change	-	25/02/04	990



PA-CP Front Panel assembly Front view (20ch. shown)

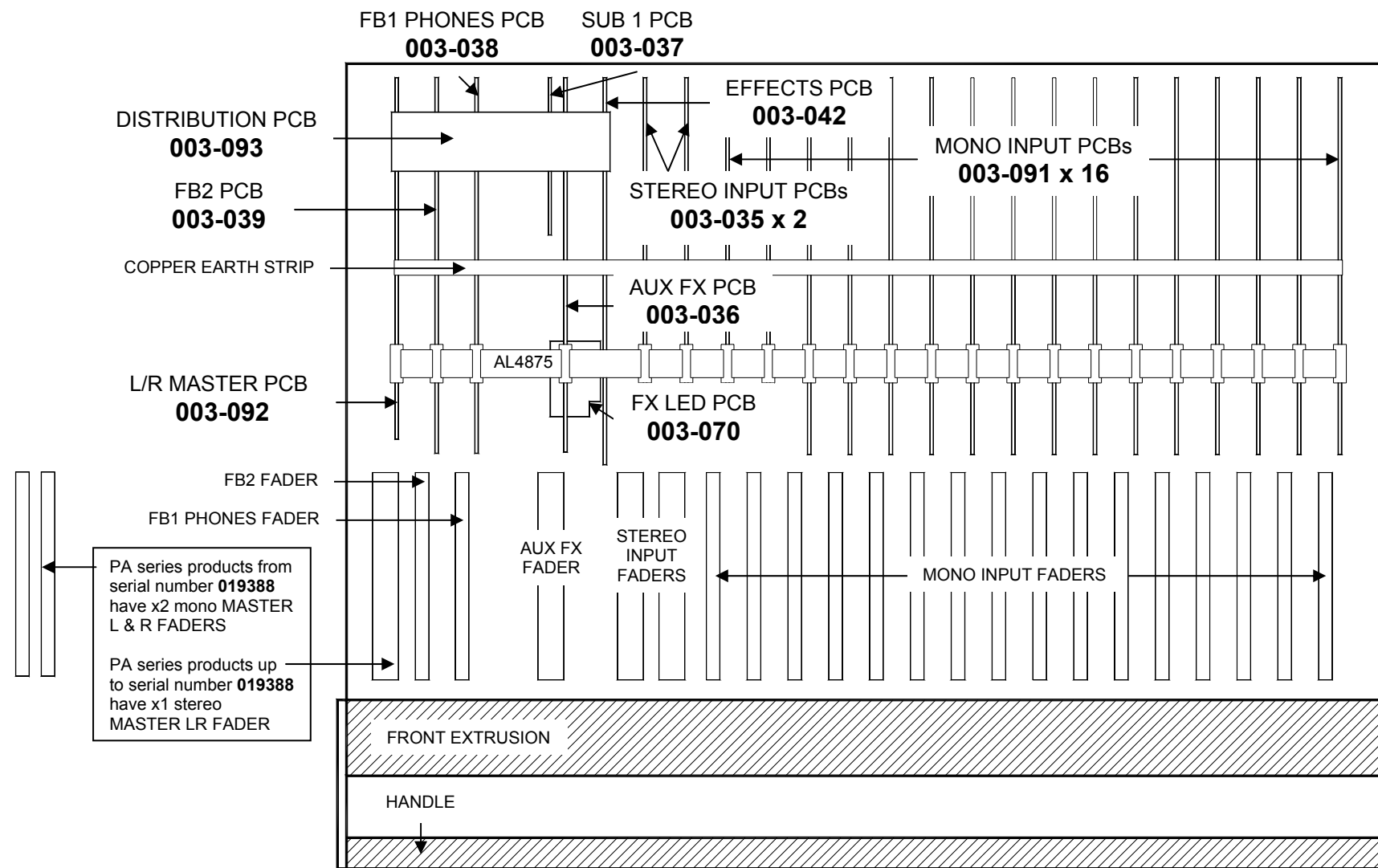


PA-CP Chassis assembly Front view

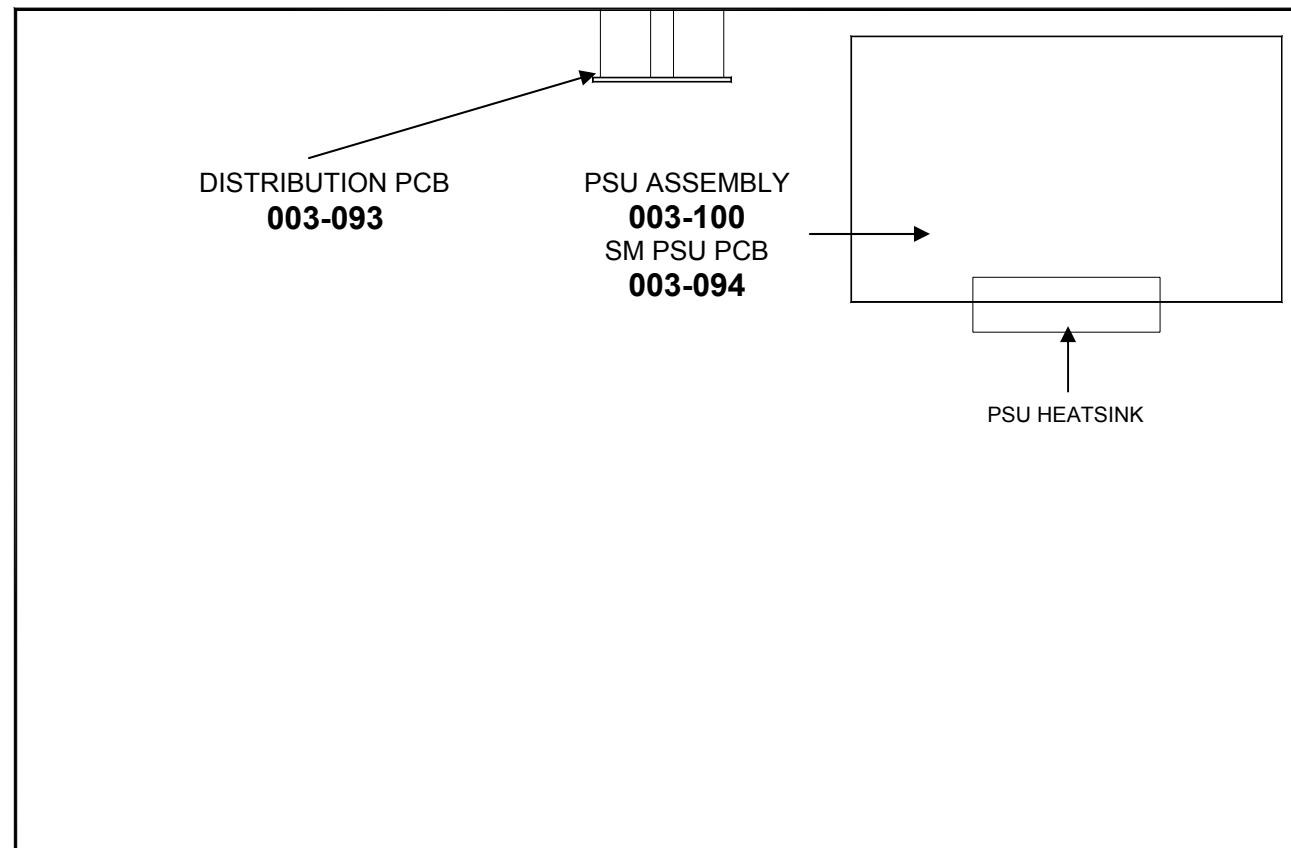
**PA-CP Powered version**

Product.....	PA12-CP/100
.....	PA12-CP/120
.....	PA12-CP/220
.....	PA12-CP/240
.....	PA20-CP/100
.....	PA20-CP/120
.....	PA20-CP/220
.....	PA20-CP/240
PA12-CP Pack Assembly .....	003-030
PA12-CP Main Assembly .....	003-031
PA12-CP Top Panel Assy. ....	003-032
PA12-CP Base Panel Assy. ....	003-033
PA12-CP Rack Ear Assy.....	003-071
PA20-CP Pack Assy.....	003-083
PA20-CP Main Assy.....	003-084
PA20-CP Top Panel Assy. ....	003-085
PA20-CP Base Panel Assy. ....	003-086

Mono Input PCB .....	003-034
Stereo Input PCB .....	003-035
Aux FX PCB .....	003-036
Sub 1 PCB.....	003-037
FB1 Phones PCB .....	003-038
FB2 PCB .....	003-039
Master L/R PCB .....	003-040
Distribution PCB .....	003-041
Effects PCB .....	003-042
Amplifier PCB .....	003-043
Linear PSU PCB.....	003-069
FX LED PCB .....	003-070



PA Front Panel assembly Front view (20ch. shown)



PA Chassis assembly Front view

**PA unpowered version**

Product .....	PA12/100
.....	PA12/120
.....	PA12/220
.....	PA12/240
.....	PA20/100
.....	PA20/120
.....	PA20/220
.....	PA20/240
.....	PA28/100
.....	PA28/120
.....	PA28/220
.....	PA28/240
PA12-CP Rack Ear Assy. ....	003-071
PA12 Top Panel Assy. ....	003-095
PA12 Base Panel Assy. ....	003-096
PA12 Pack Assembly ....	003-097
PA12 Main Assembly ....	003-098
PA PSU Assy. ....	003-100
PA20 Pack Assembly ....	003-101
PA20 Main Assy. ....	003-102
PA20 Base Panel Assy. ....	003-103
PA20 Top Panel Assy. ....	003-104
PA28 Pack Assembly ....	003-105
PA28 Main Assembly ....	003-106
PA28 Base Panel Assy. ....	003-107
PA28 Top Panel Assy. ....	003-108

Stereo Input PCB .....	003-035
Aux FX PCB .....	003-036
Sub 1 PCB.....	003-037
FB1 Phones PCB .....	003-038
FB2 PCB .....	003-039
Effects PCB .....	003-042
FX LED PCB .....	003-070
Mono Input PCB .....	003-091
Master L/R PCB .....	003-092
Distribution PCB .....	003-093
SM PSU PCB .....	003-094

# PA Series Surface Parts



9MM POT NUT **AB8050**

GREY-RED KNOB **AJ2074**  
14MM 5KRDx2 POT **AI8174**

GREY PUSH BUTTON **AJ2864**  
LATCHING SWITCH **AL0162**

GREY-L/BLUE KNOB **AJ2076**  
11MM 20KB C/D POT **AI8004**

GREY-GREEN KNOB **AJ2077**  
11MM 200KCx2 POT **AI8005**

11MM 20KB C/D POT **AI8004**

11MM 20KB C/D POT **AI8004**

11MM 20KB C/D POT **AI8004**

GREY-GREY KNOB **AJ2078**  
11MM 20KK POT **AI8003**

11MM 20KK POT **AI8003**

GREY-BLUE KNOB **AJ2075**  
11MM 20KK POT **AI8003**

GREY-YELLOW KNOB **AJ2079**  
11MM 20KK POT **AI8003**

GREY-BROWN KNOB **AJ2080**  
14MM 10KACx2 C/D POT **AI8008**

RED TOMBSTONE LED **AE4863**  
WHITE PUSH BUTTON **AJ2962**  
LATCHING SWITCH **AL0162**

RED LED **AE0086**  
PUSH BTN L/GREY ROUND **AJ3955**  
LATCHING SWITCH **AL0162**

M3x5 SCREW **AB4661**

WHITE-BLACK FADER KNOB **AJ8078**  
100MM 10KD FADER **AI8117**

14MM 20KKx2 POT **AI8007**

LATCHING SWITCH **AL0162**

14MM 20KKx2 POT **AI8007**

14MM 20KBx2 C/D POT **AI8006**

14MM 20KBx2 C/D POT **AI8006**

11MM 20KK POT **AI8003**

11MM 20KK POT **AI8003**

11MM 20KK POT **AI8003**

11MM 20KK POT **AI8003**

14MM 10KACx2 C/D POT **AI8008**

LATCHING SWITCH **AL0162**

LATCHING SWITCH **AL0162**

BLUE-BLACK FADER KNOB **AJ8081**  
100MM 10KDx2 FADER **AI8118**

14MM 20KKx2 POT **AI8007**

11MM 20KK POT **AI8003**

11MM 20KK POT **AI8003**

GREEN TOMBSTONE LED **AE4864**

MOMENTARY SWITCH **AL0374**

M3x5 SCREW **AB4661**

LATCHING SWITCH **AL0162**

LATCHING SWITCH **AL0162**

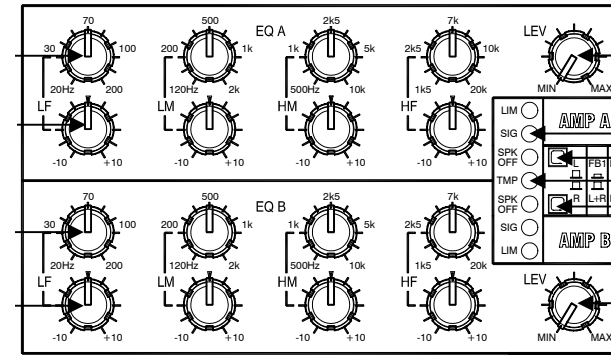
YELLOW-BLACK FADER KNOB **AJ8080**  
100MM 10KDx2 FADER **AI8118**

11MM 200KCx2 POT **AI8005**

11MM 20KB C/D POT **AI8004**

11MM 200KCx2 POT **AI8005**

11MM 20KB C/D POT **AI8004**



## PA12-CP CONSTANT POWER

12WAY LED BAR **AE2701**

4ABx5/16 SCREW **AB0059**

5MM RED LED **AE0001**

14MM 20KKx2 POT **AI8007**

LATCHING SWITCH **AL0162**

M3x5 SCREW **AB4661**

LATCHING SWITCH **AL0162**

LATCHING SWITCH **AL0162**

BLACK-WHITE FADER KNOB **AJ3503**  
100MM 10KD FADER **AI8117**

11MM 20KK POT **AI8003**

GREEN LED **AE0085**

LATCHING SWITCH **AL0162**

YELLOW LED **AE0084**

LATCHING SWITCH **AL0162**

11MM 20KK POT **AI8003**

BLUE LED **AE4041**

LATCHING SWITCH **AL0162**

11MM 20KK POT **AI8003**

LATCHING SWITCH **AL8065**

LATCHING SWITCH **AL8065**

14MM 20KKx2 POT **AI8007**

GREEN TOMBSTONE LED **AE4864**

LATCHING SWITCH **AL0162**

LATCHING SWITCH **AL0162**

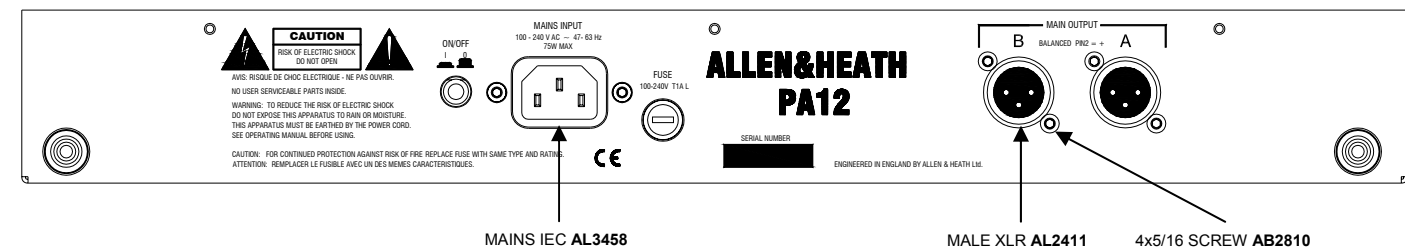
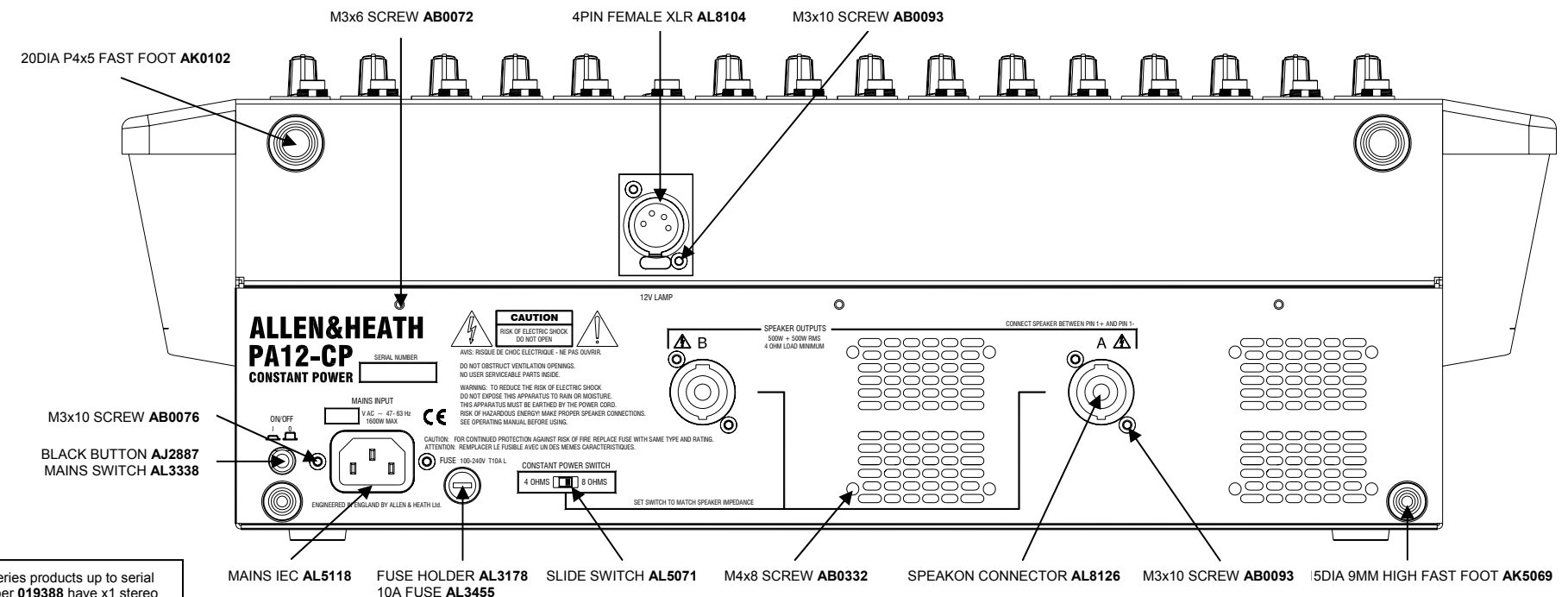
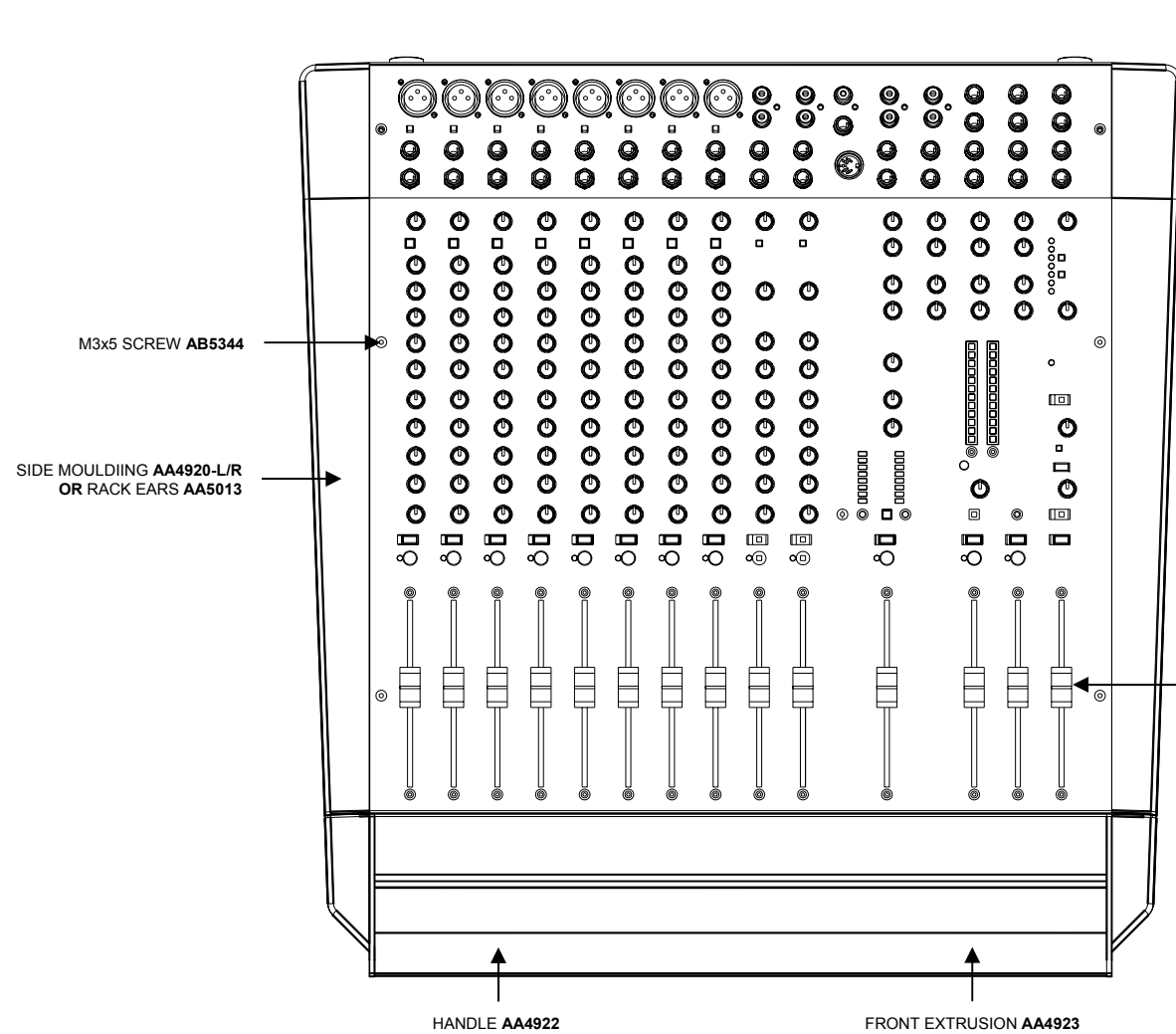
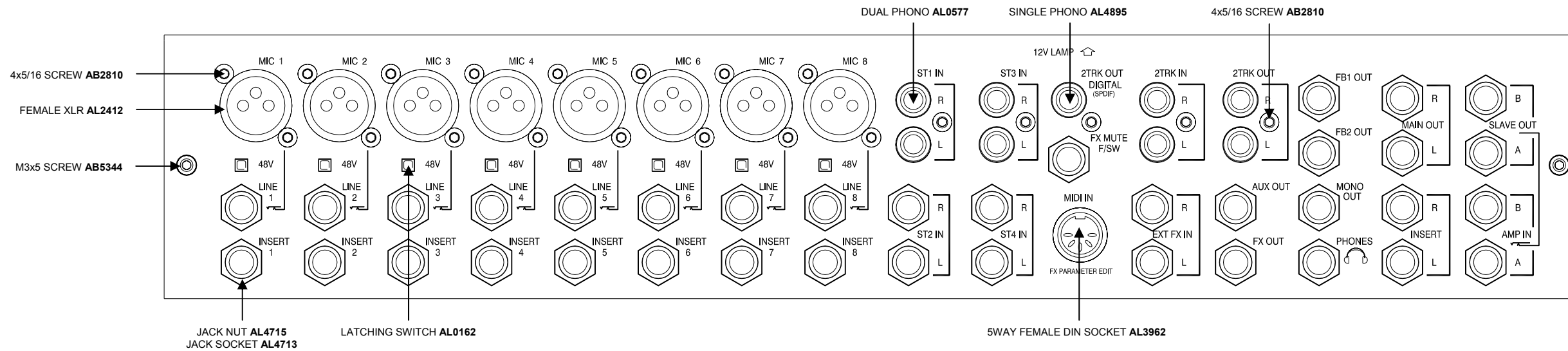
RED-BLACK FADER KNOB **AJ8079**  
100MM 10KDx2 FADER **AI8118**

RED-BLACK FADER KNOB **AJ8079**  
100MM 10KD FADER **AI8117**

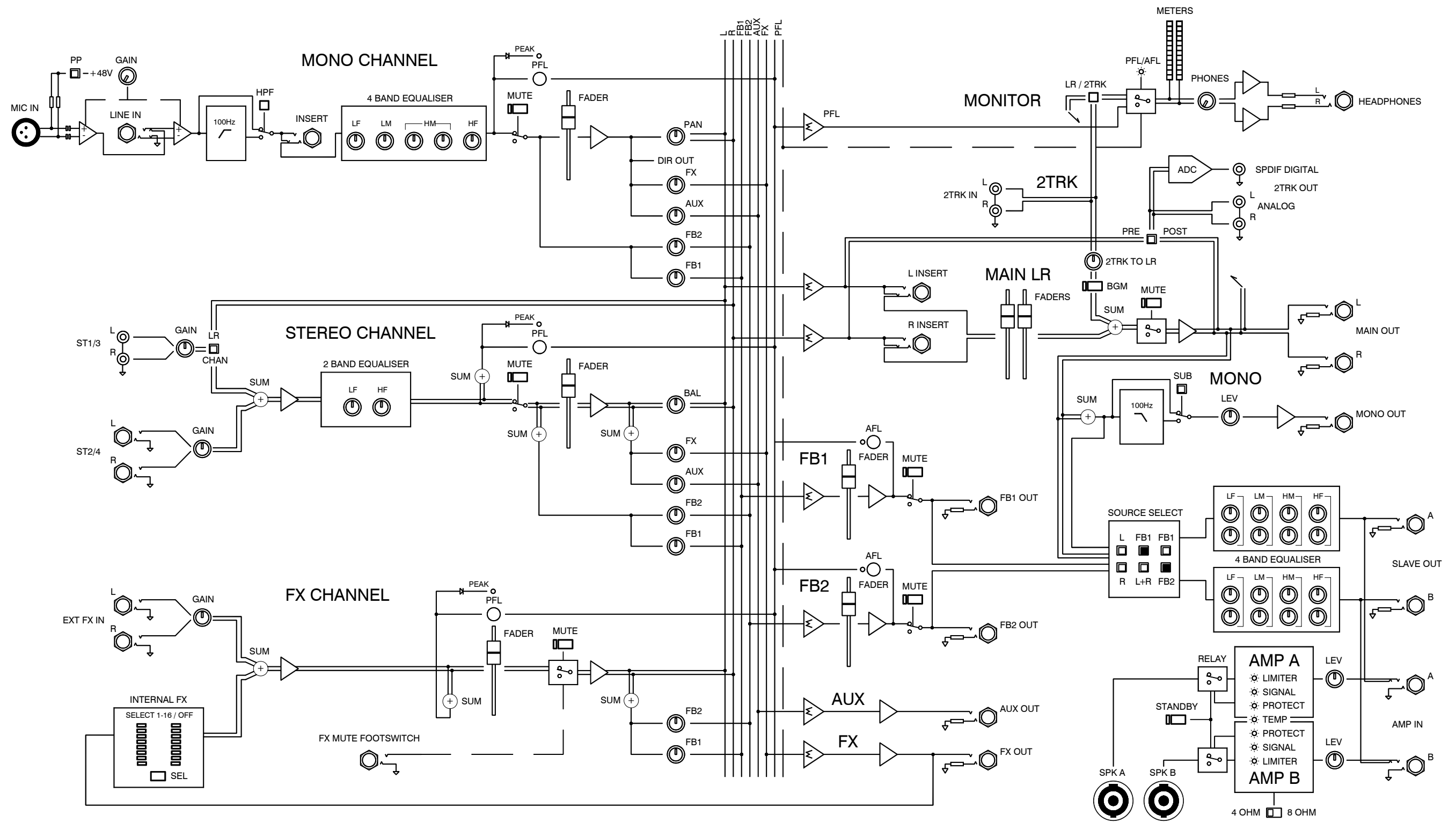
PA series products up to serial number **019388** have x1 stereo MASTER LR FADER  
PA series products from serial number **019388** have x2 mono MASTER L & R FADERS



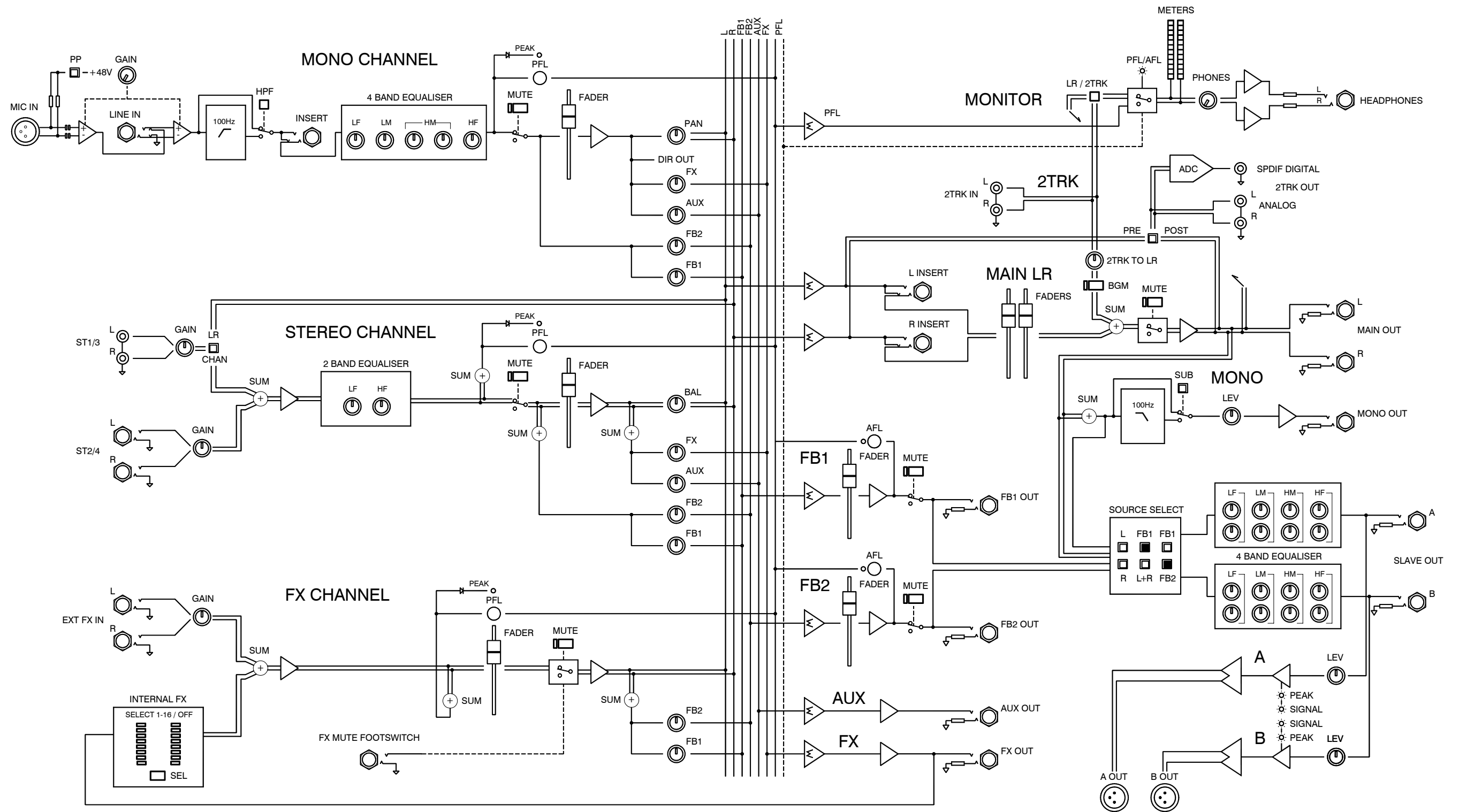
# PA Series Surface Parts

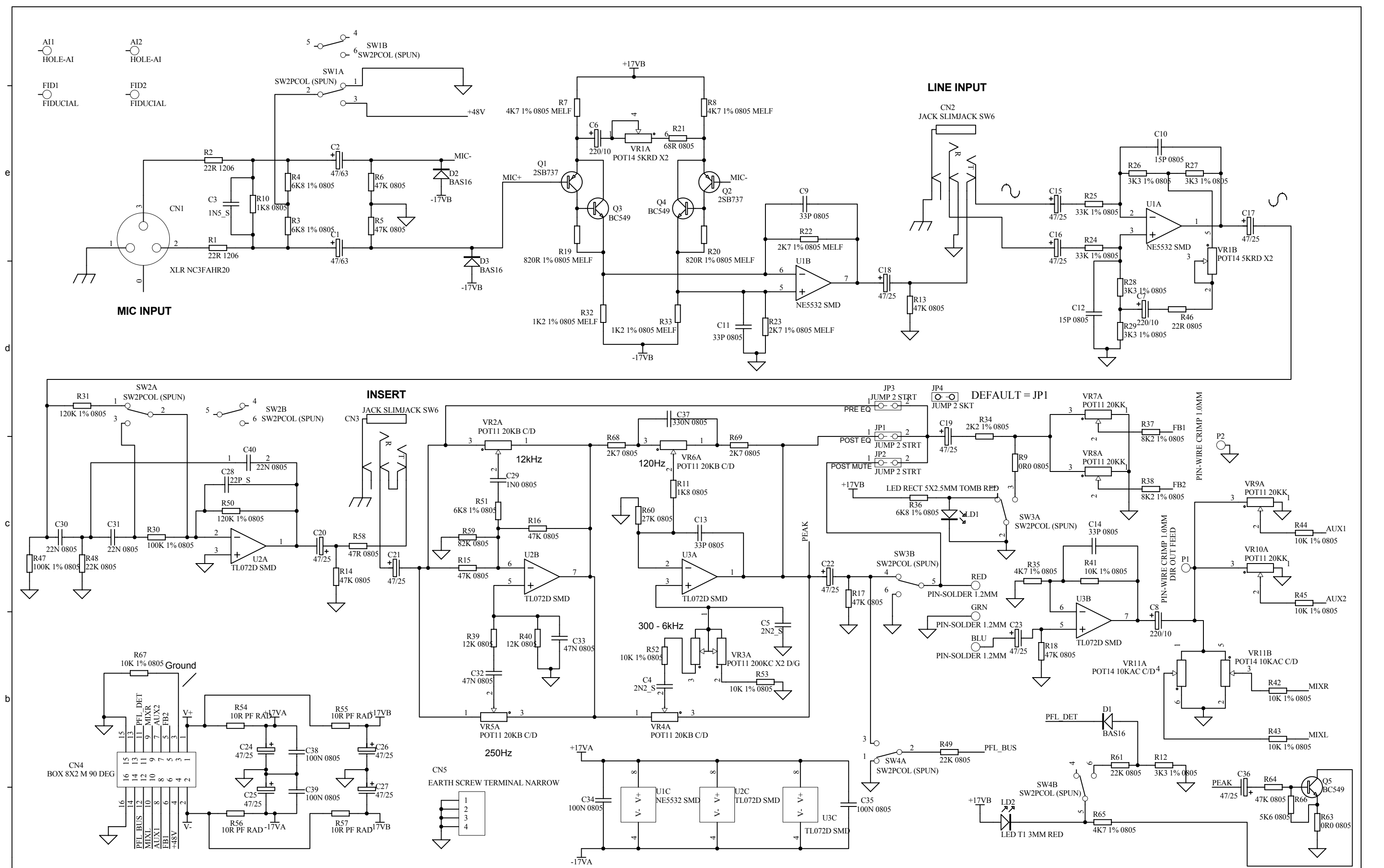


### PA-CP SERIES BLOCK DIAGRAM



### PA SERIES BLOCK DIAGRAM

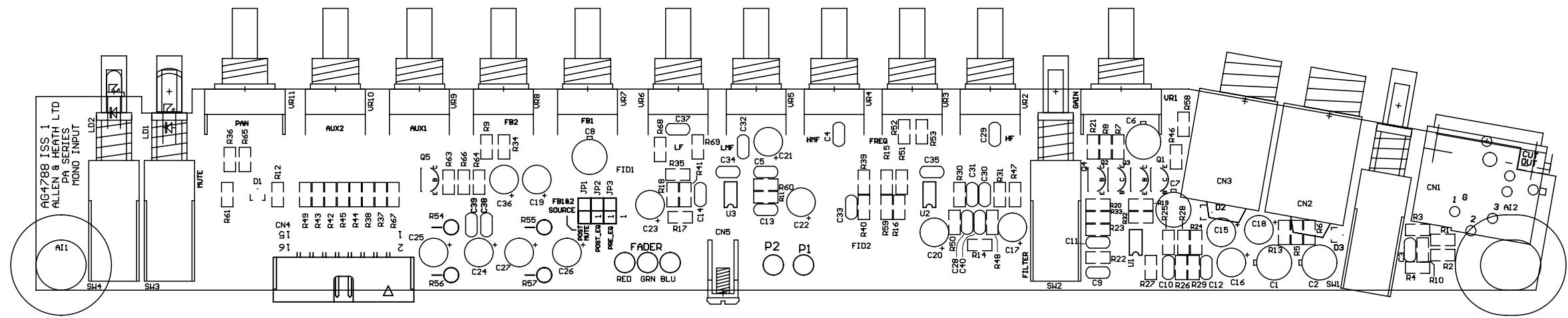




**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

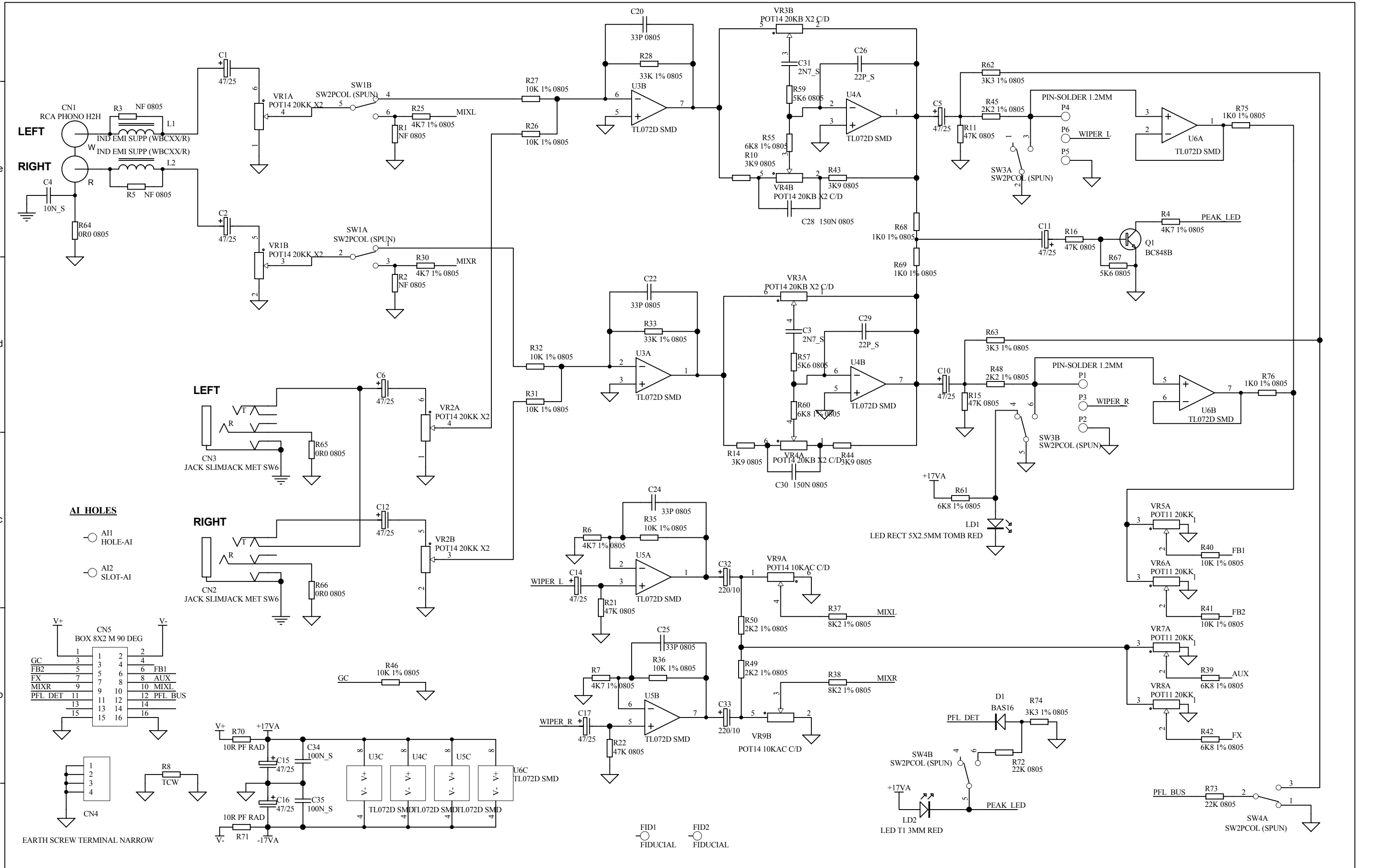
ISSUE	BY	DATE	VR1C	VR2B	VR3B	VR4B	VR5B	VR6B	VR7B	VR8B	VR9B	VR10B	VR11C
A	MG	25-02-02	POT14 SKRD X2	POT11 20KB C/D	200KC X2 D/G	POT11 20KB C/D	POT11 20KB C/D	POT11 20KB C/D	POT11 20K	POT11 20KK	POT11 20KK	POT11 20KK	POT14 10KAC C/D
B	MG	03-05-02	BRKT	BRKT	BRKT	BRKT	BRKT	BRKT	BRKT	BRKT	BRKT	BRKT	
C	MG	25-06-02											
1	MG	22-7-02											
1.1	MG	7-7-03											

TITLE: **PA SERIES MONO INPUT**  
 PAGE:  
 DRG No: **C4788** ISSUE: 1.1 SHEET: 1 OF 1



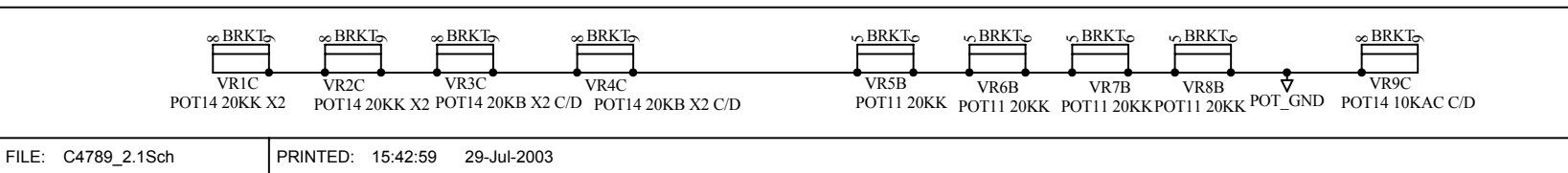
TOP OVERLAY

.GTO

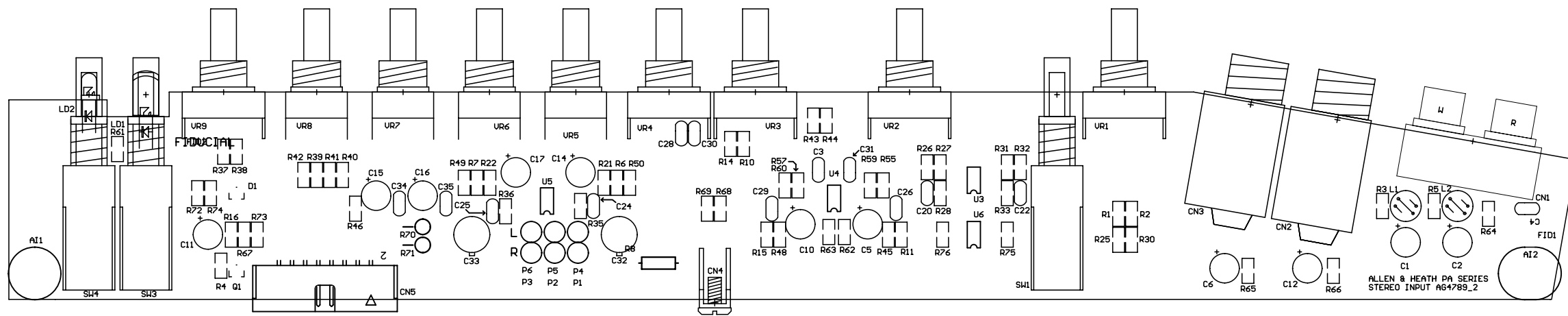


**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE
1	MG	23-07-02
2	AAT	25-09-02
2.1	MG	20-03-03

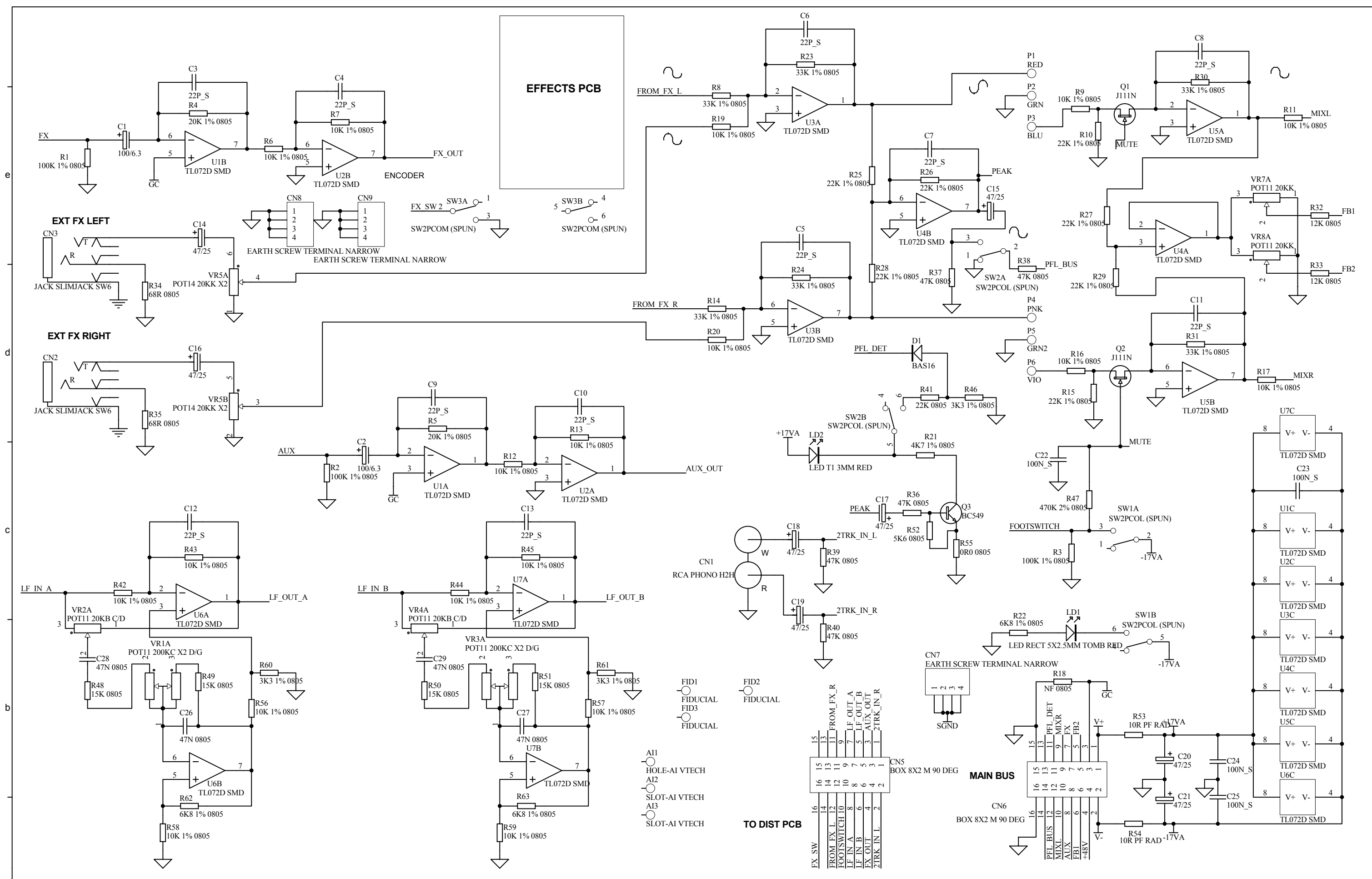


TITLE: PA SERIES STEREO INPUT CCT  
 PAGE:  
 DRG No: AG4789 ISSUE: 2.1 SHEET: 1 OF 1



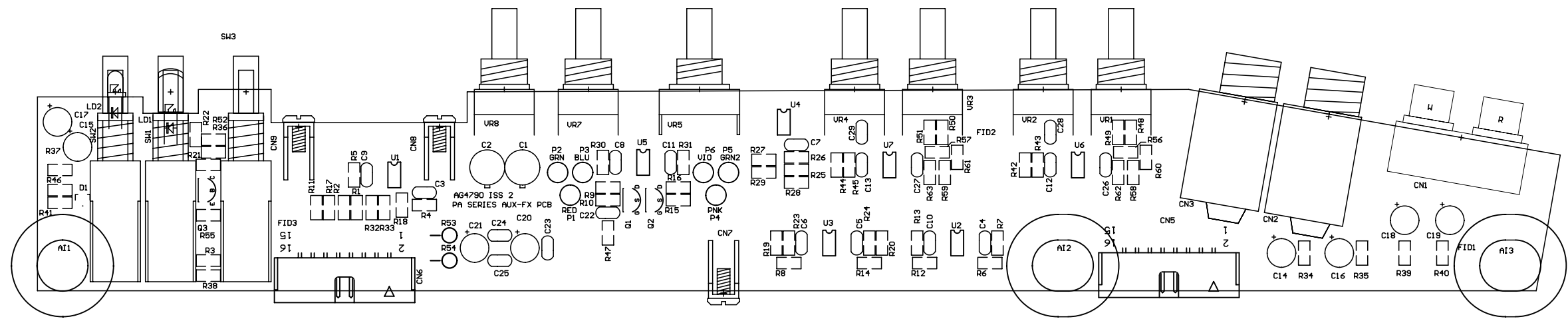
TOP OVERLAY

.GTO



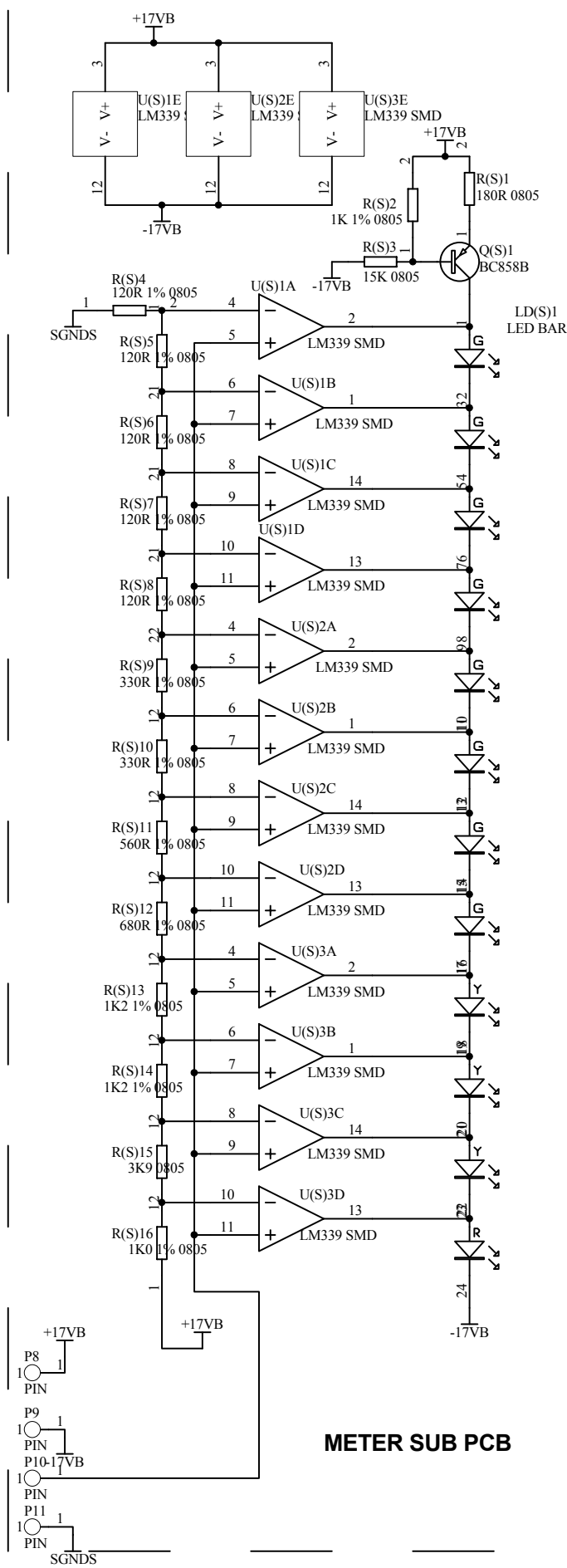
<b>ALLEN&amp;HEATH</b> Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE	VR1B POT11 200KC X2 D/G BRKT	VR2B POT11 20KB C/D BRKT	VR3B POT11 200KC X2 D/G BRKT	VR4B POT11 20KB C/D BRKT	VR5C POT14 20KK X2 BRKT	TITLE: PA SERIES AUX-FX PCB PAGE: DRG No: C4790 ISSUE: 2.1 SHEET: 1 OF 1
	A	B	1	2					
FILE: C4790_2.1.SCH	PRINTED: 09:14:03	27-Mar-2003							



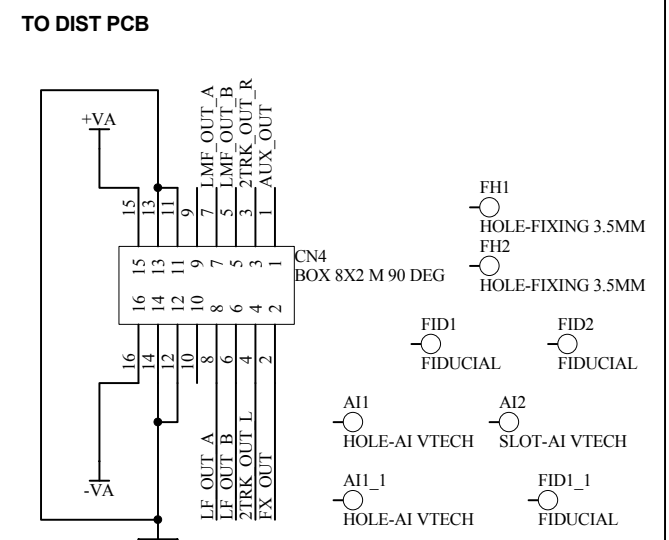
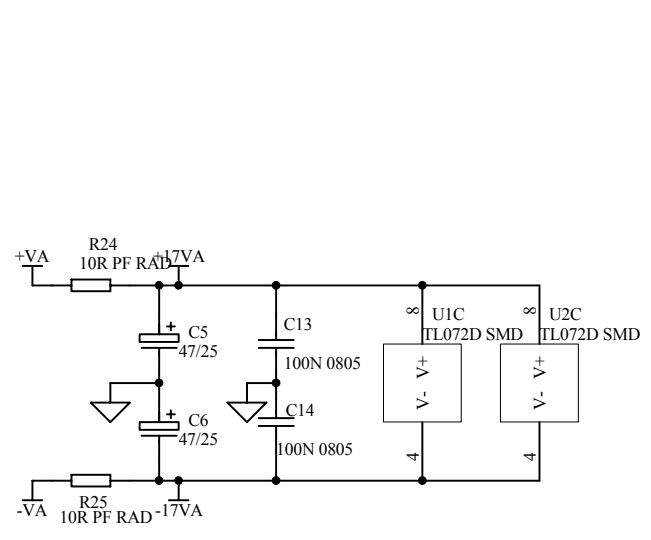
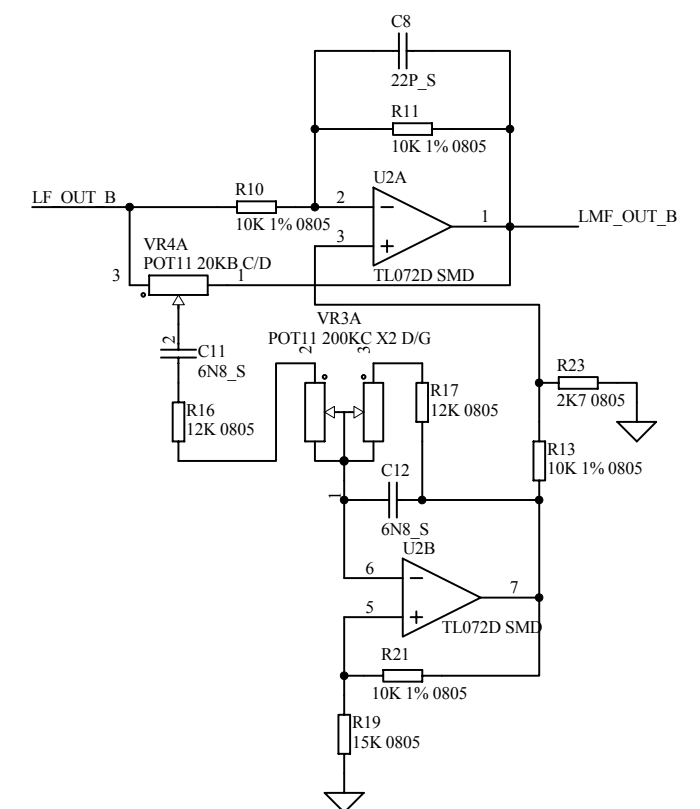
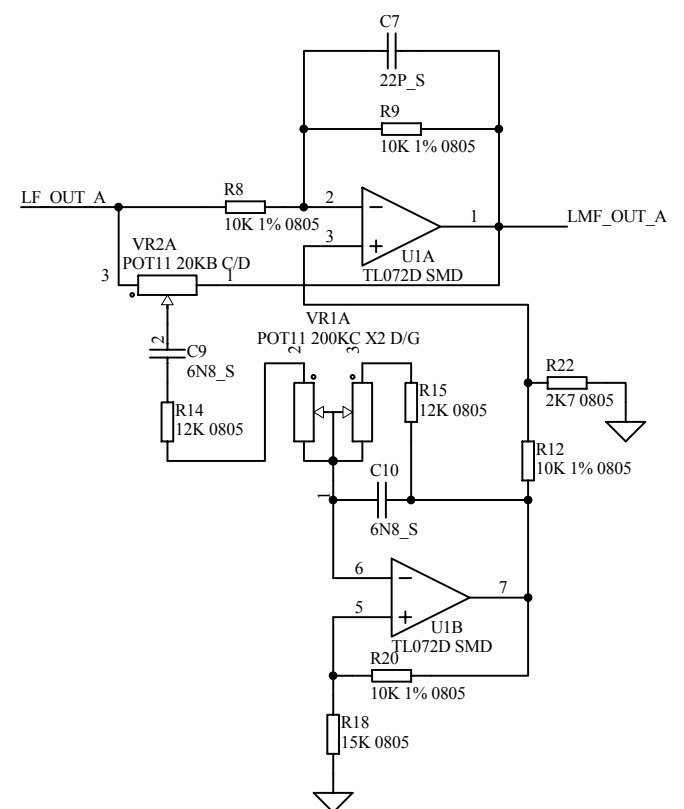
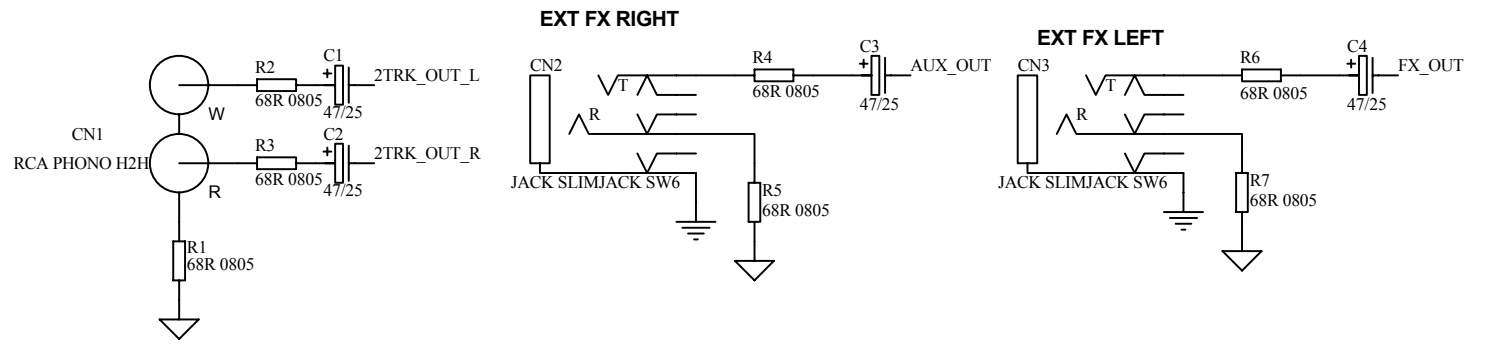


TOP OVERLAY

.GTO



METER SUB PCB

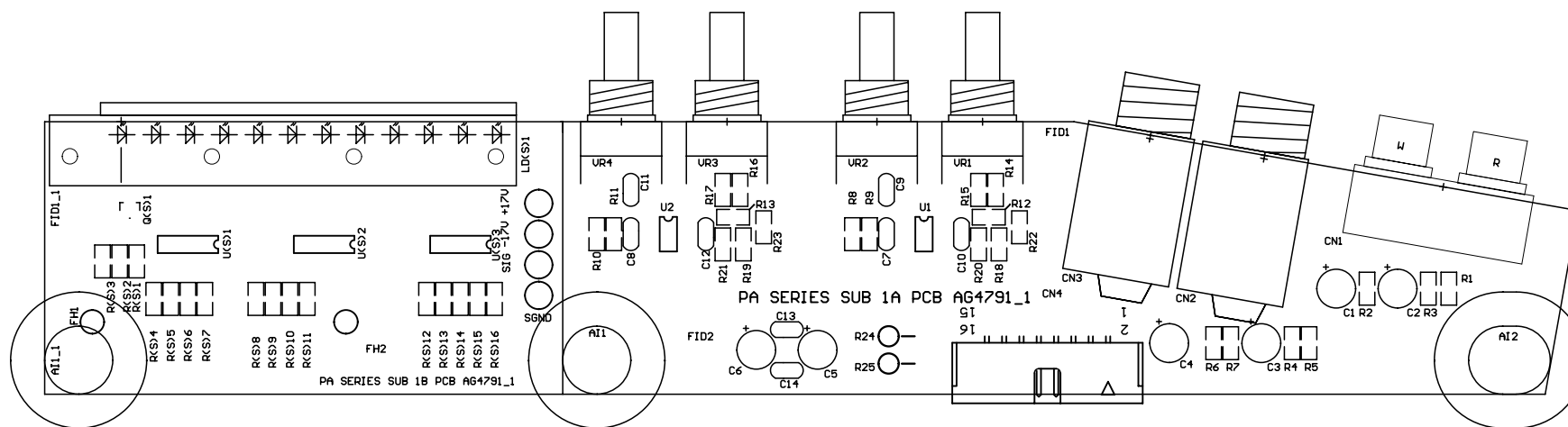


**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	VR1B	VR2B	VR3B	VR4B
A	MG	25-02-02	POT11 200KC X2 D/G	POT11 200KC X2 D/G	POT11 200KC X2 D/G	POT11 200KC X2 D/G
B	AAT	22-04-02	BRKT	BRKT	BRKT	BRKT
1	AAT	27-06-02				
1.1	MG	07-07-03				

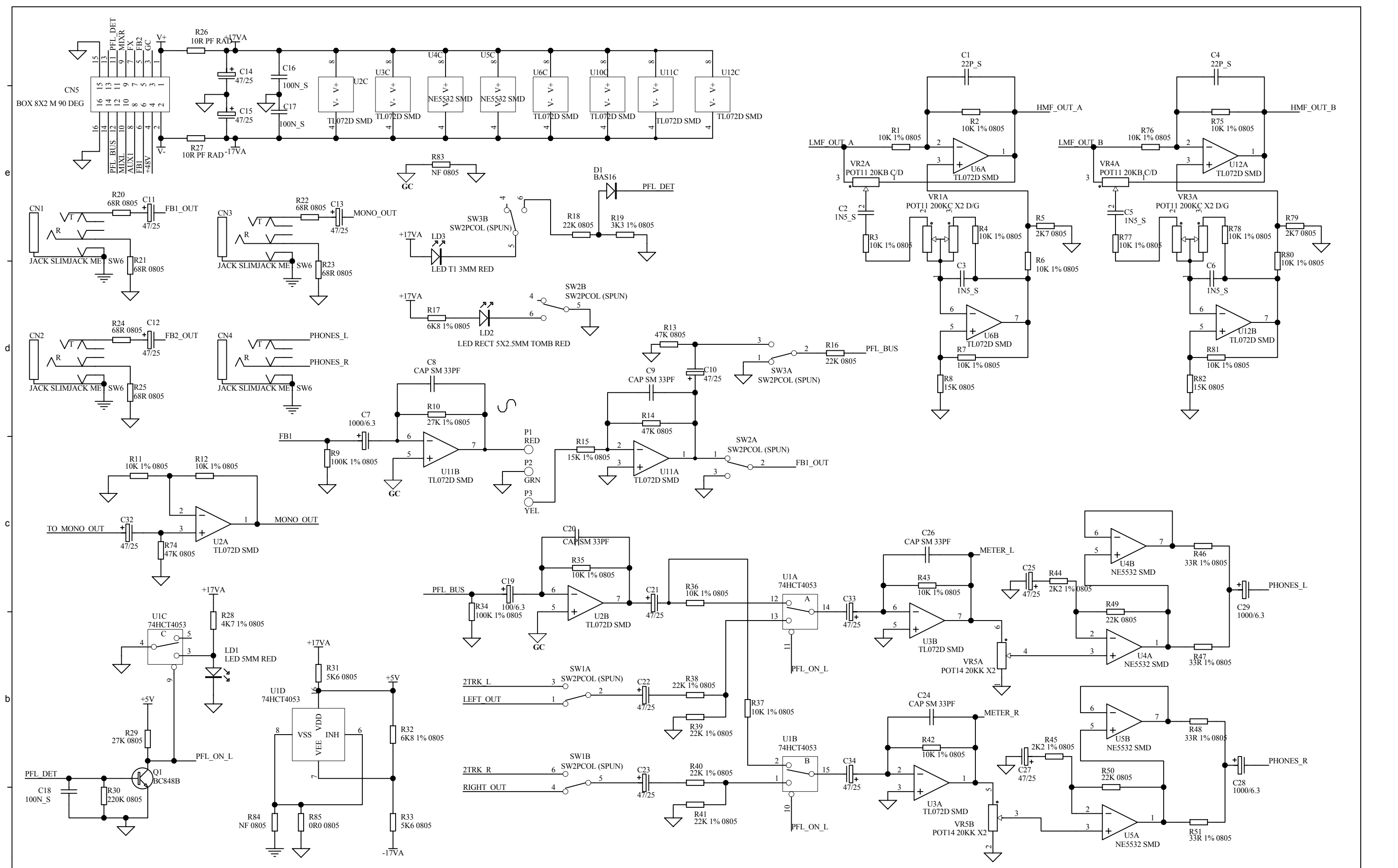
FILE: C4791\_1.1.SCH      PRINTED: 15:53:44      29-Jul-2003

TITLE: PA SERIES SUB 1 PCB  
 PAGE:  
 DRG No: C4791      ISSUE: 1.1      SHEET: 1 OF 1



TOP OVERLAY

.GTO

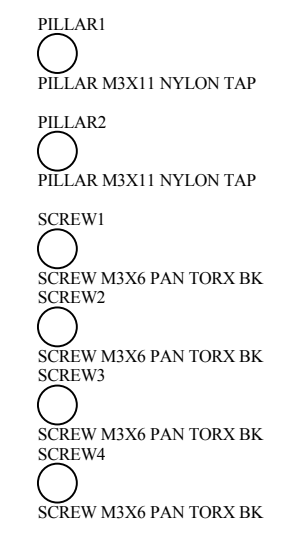
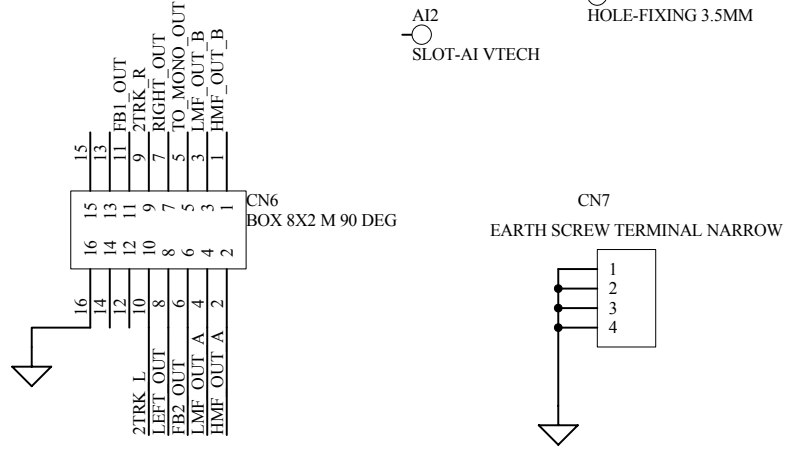
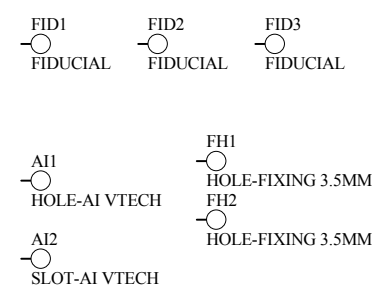
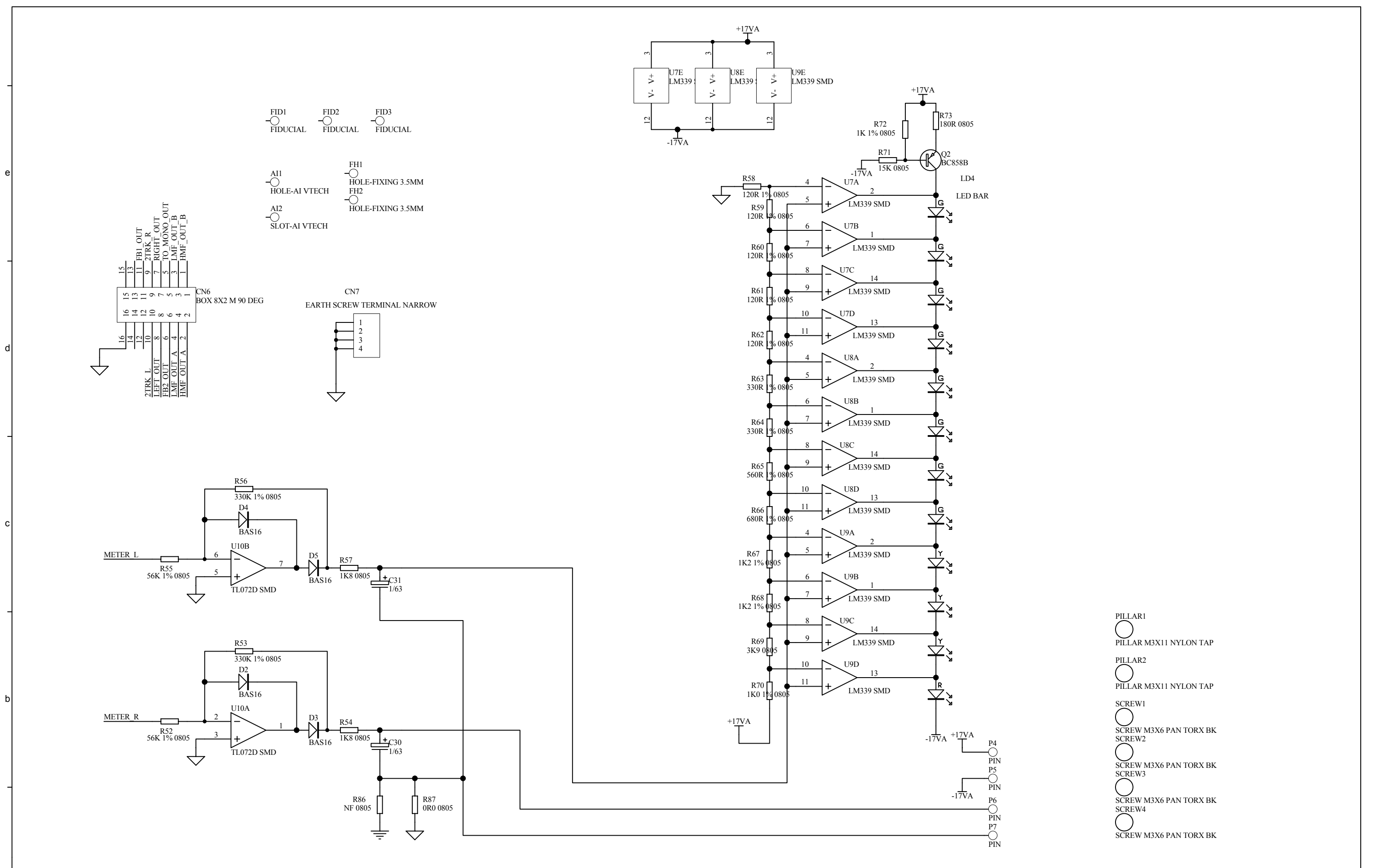


**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	VR1B	VR2B	VR3B	VR4B	VR5C
ORIGIN			POT11 200KC X2 D/G	POT11 20KB C/D	POT11 200KC X2 D/G	POT11 20KB C/D	POT14 20KK X2
A	JB	7/3/02					
B	JB	29/4/02					
C	AAT	01-05-02					
1	AAT	24-07-02					
2	MG	21-10-02					
2.1	MG	07-07-03					

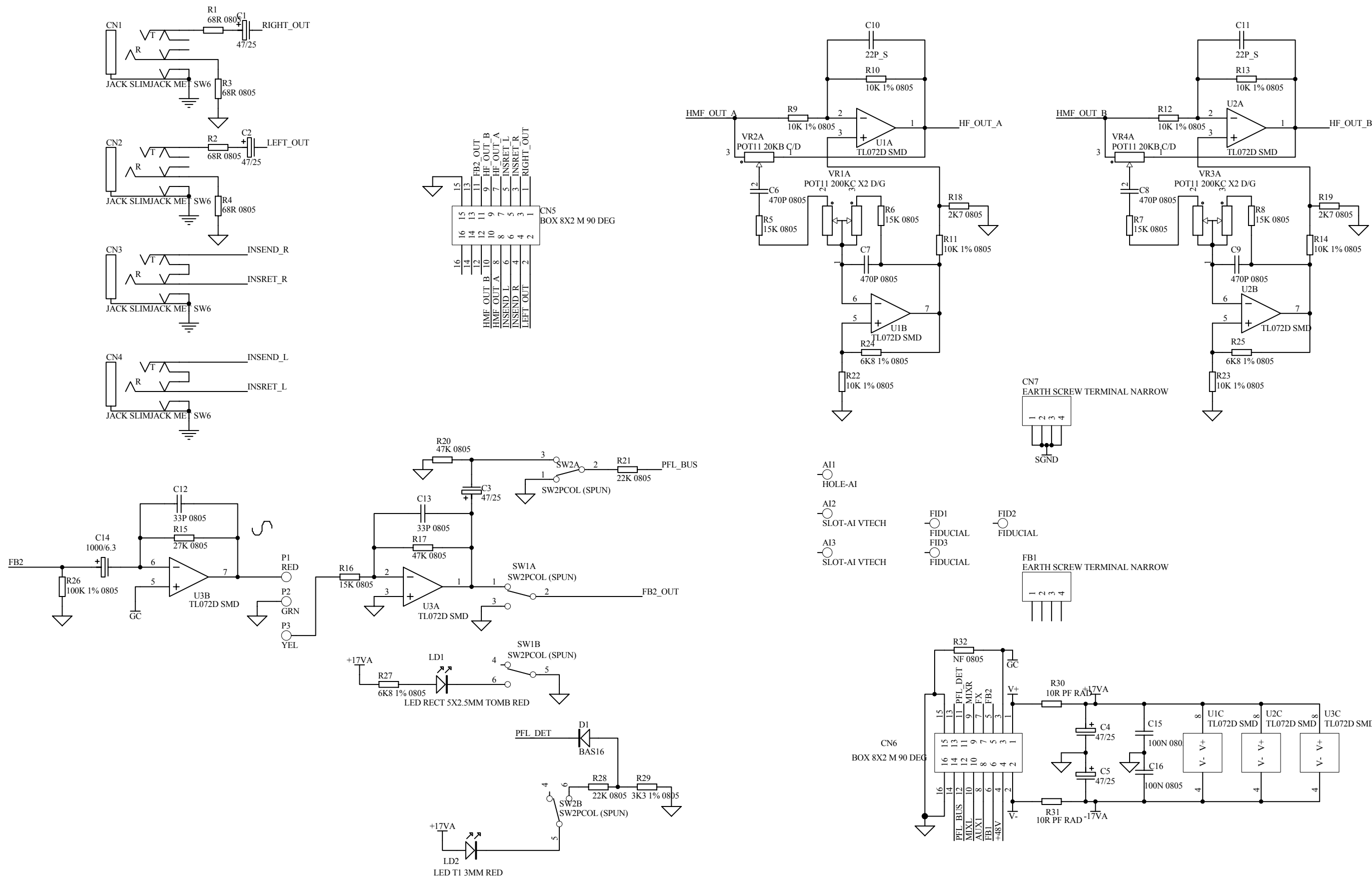
FILE: C4792\_2.1P1.Sch      PRINTED: 16:04:25 29-Jul-2003

TITLE: PA Series Foldback/Phones pcb  
 PAGE:  
 DRG No: C4792      ISSUE: 2.1      SHEET: 1 OF 2



<b>ALLEN&amp;HEATH</b> Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE	TITLE: PA Series Foldback/Phones pcb PAGE: DRG No: C4792 ISSUE: 2.1 SHEET: 2 OF 2
	ORIGIN			
	A	JB	7/3/02	
	B	JB	29/4/02	
	C	AAT	01-05-02	
	1	AAT	24-07-02	
	2	MG	21-10-02	
	2.1	MG	07-07-03	
	FILE: C4792_2.1P2.Sch		PRINTED: 16:04:25 29-Jul-2003	





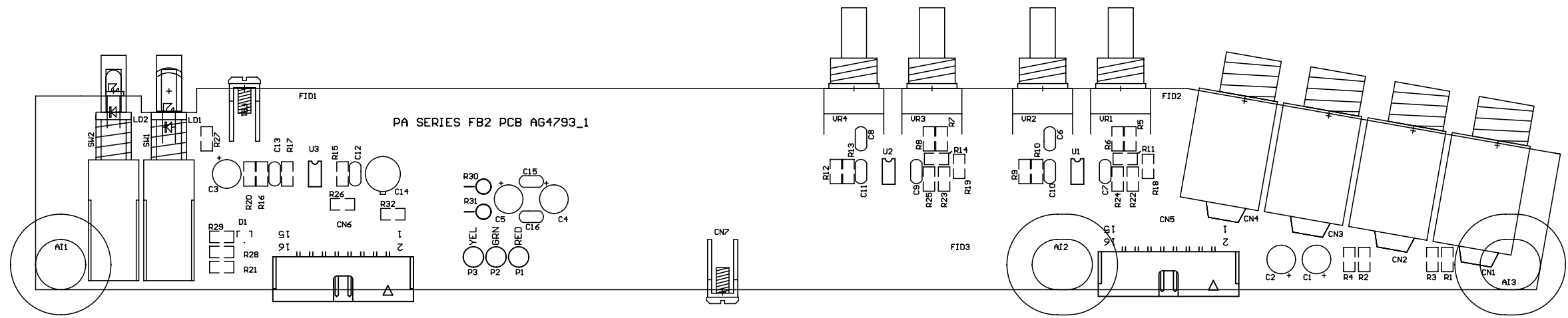
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE
A	JB	7/3/02
B	AAT	19-04-02
1	AAT	27-06-02
1.1	MG	7-7-03

VR1B	VR2B	VR3B	VR4B
POT11 200KC X2 D/G	POT11 20KB C/D	POT11 200KC X2 D/G	POT11 20KB C/D

FILE: C4793\_1.1.Sch      PRINTED: 16:16:38      29-Jul-2003

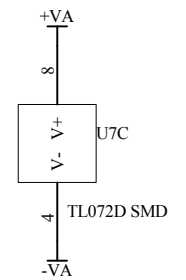
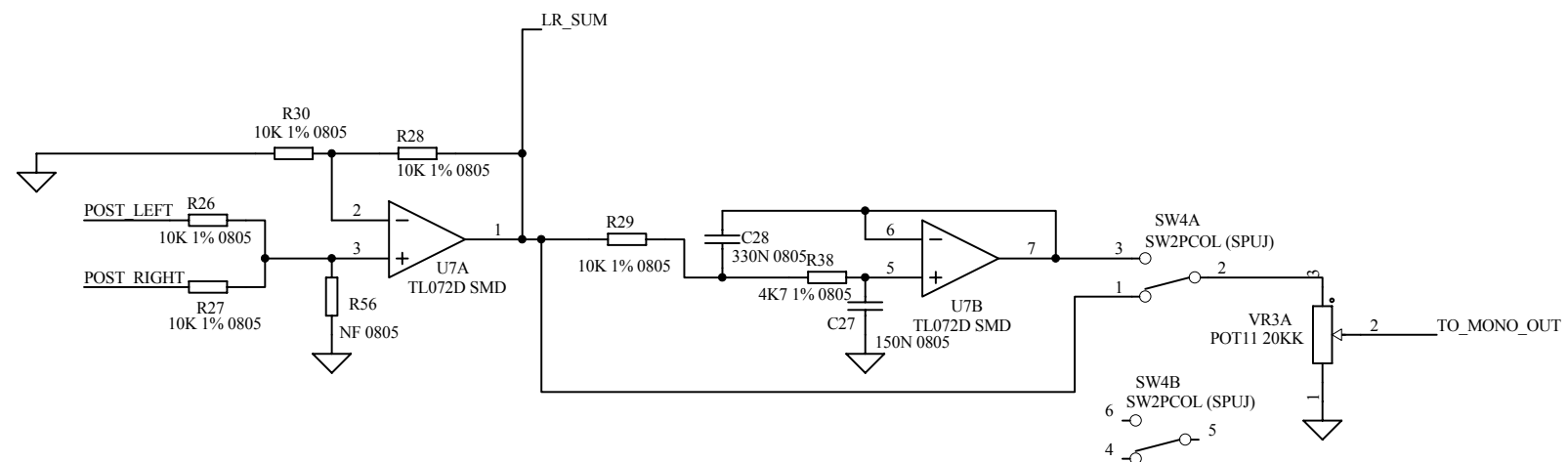
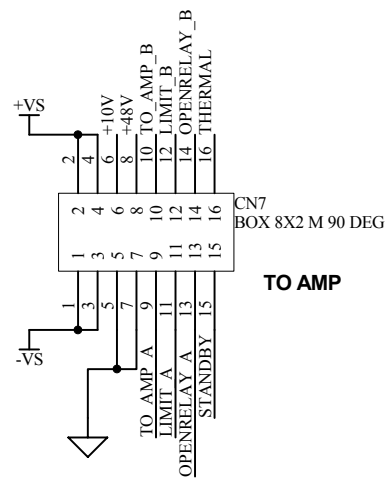
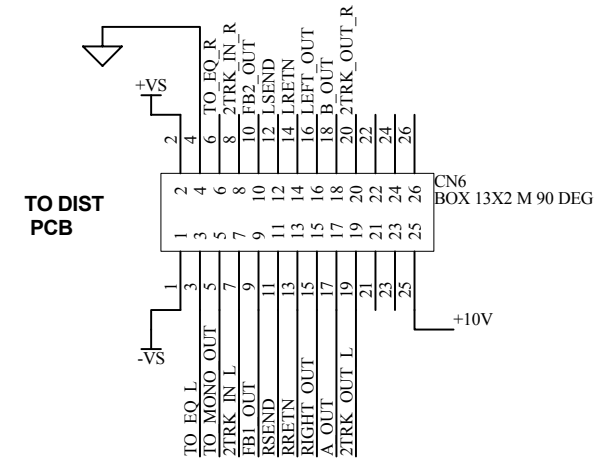
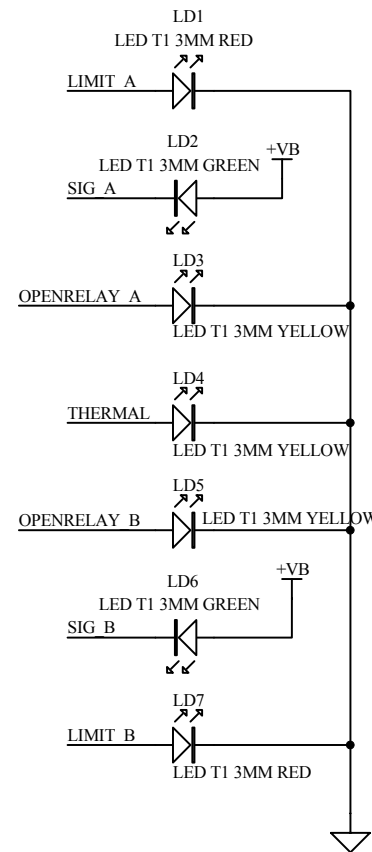
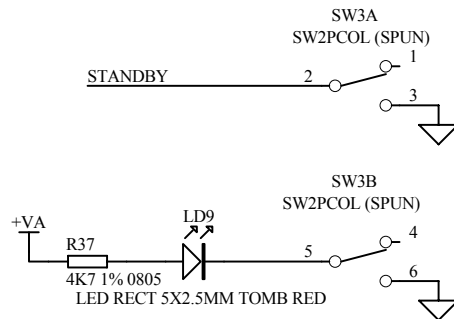
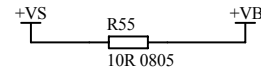
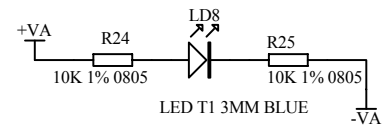
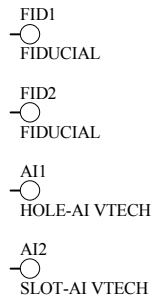
TITLE: PA SERIES FB2 PCB
PAGE:
DRG No: C4793      ISSUE: 1.1      SHEET: 1 OF 1



TOP OVERLAY

.GTO

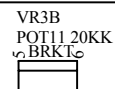




**ALLEN&HEATH**

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

ISSUE	BY	DATE
A	MG	04-03-02
B	MG	16-04-02
1	MG	23-07-02
2	MG	23-08-02
3	MG	16-09-02



FILE: 4794\_3P2.Sch

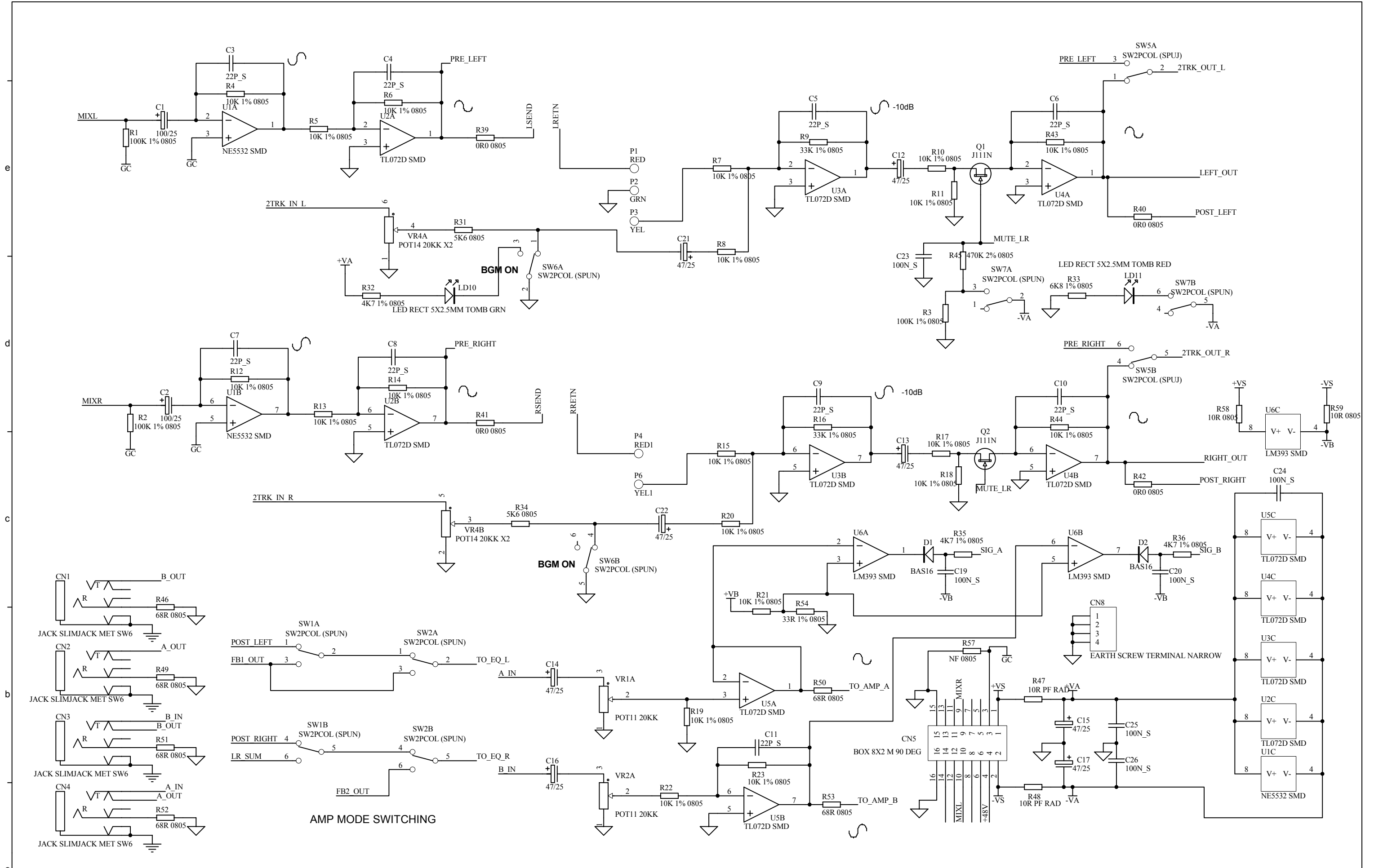
PRINTED: 11:19:03 27-Mar-2003

TITLE: PMIX MASTRLR

PAGE:

DRG No: AG4794 ISSUE: 3 SHEET: 2 OF 3

003-040/1



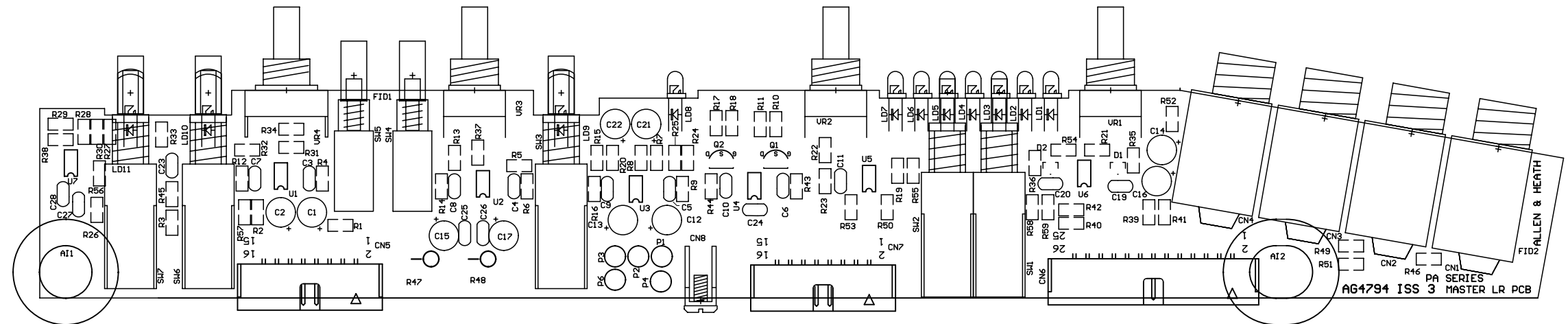
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE
A	MG	04-03-02
B	MG	16-04-02
1	MG	23-07-02
2	MG	23-08-02
3	MG	16-09-02

VR1B	VR2B	VR4C
POT11 20KK BRKT	POT11 20KK BRKT	POT14 20KK X2 BRKT

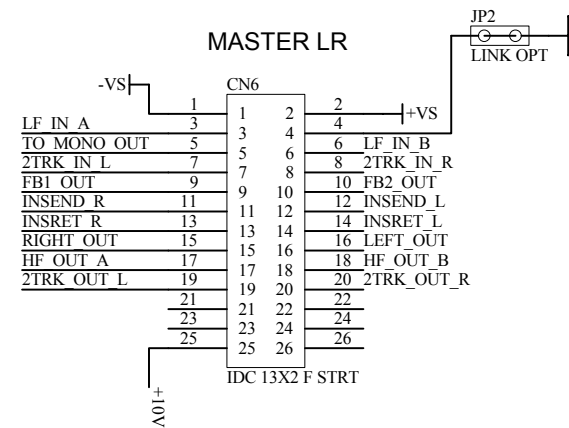
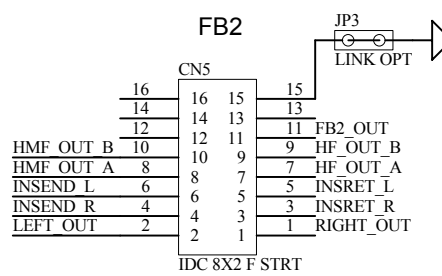
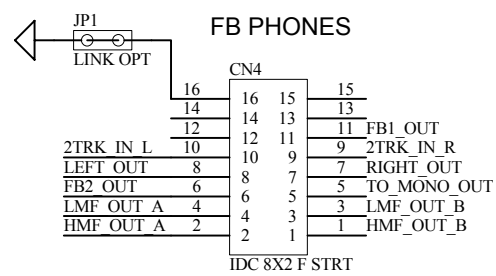
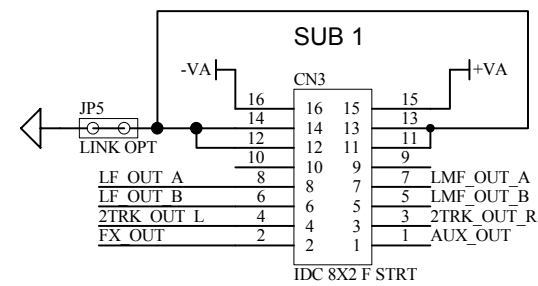
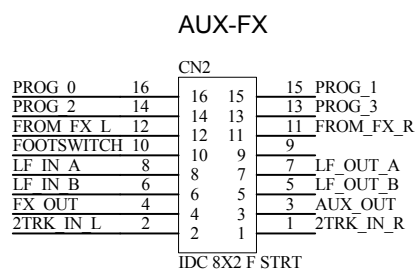
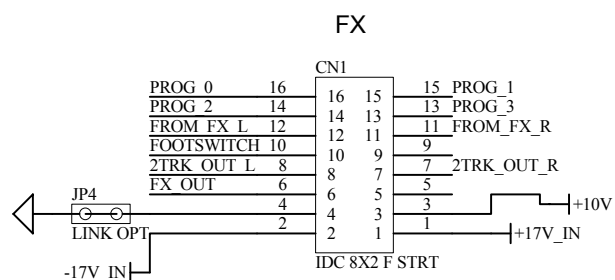
FILE: 4794\_3P1.Sch      PRINTED: 11:19:03      27-Mar-2003

TITLE: **PMIX MASTRLR**  
 PAGE:  
 DRG No: **AG4794**    ISSUE: **3**    SHEET: **3 OF 3**

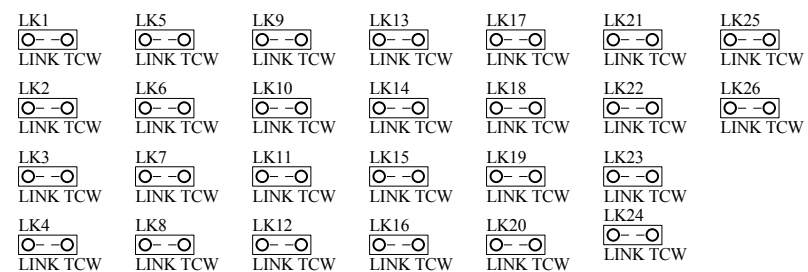


TOP OVERLAY

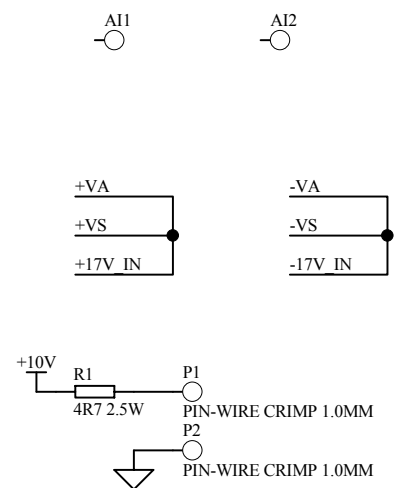
.GTO



**TCLINKS**



**AI HOLES**



**ALLEN&HEATH**

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

ISSUE	BY	DATE
A	JB	03/05/02
B1	AAT	28-06-02
1	JB	23-07-02
2	AAT	12-09-02

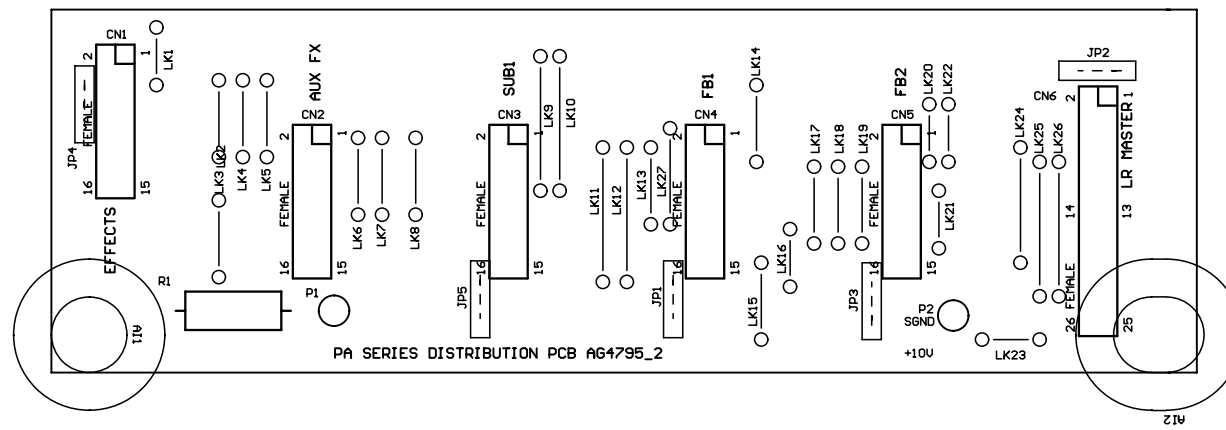
FILE: C4795\_2.Sch

PRINTED: 11:27:27 27-Mar-2003

TITLE: PA SERIES DISTRIBUTION  
PAGE: PCB

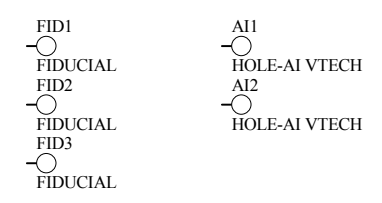
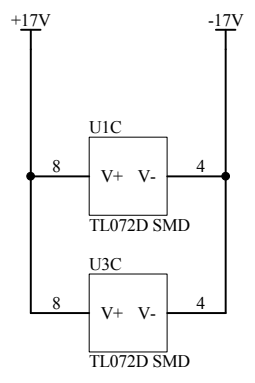
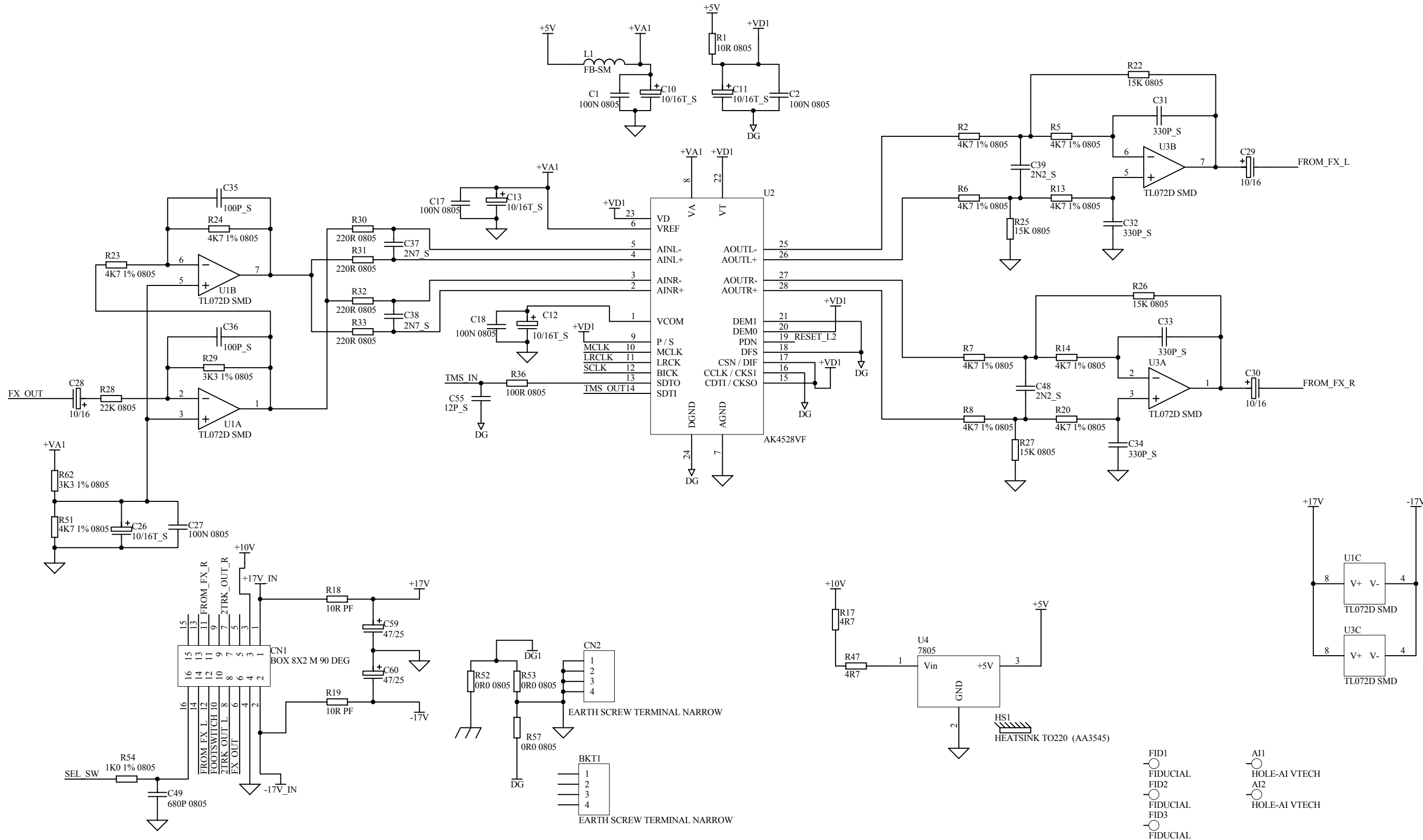
DRG No: C4795 ISSUE: 2 SHEET: 1 OF 1

003-041/1



TOP OVERLAY

.GTO

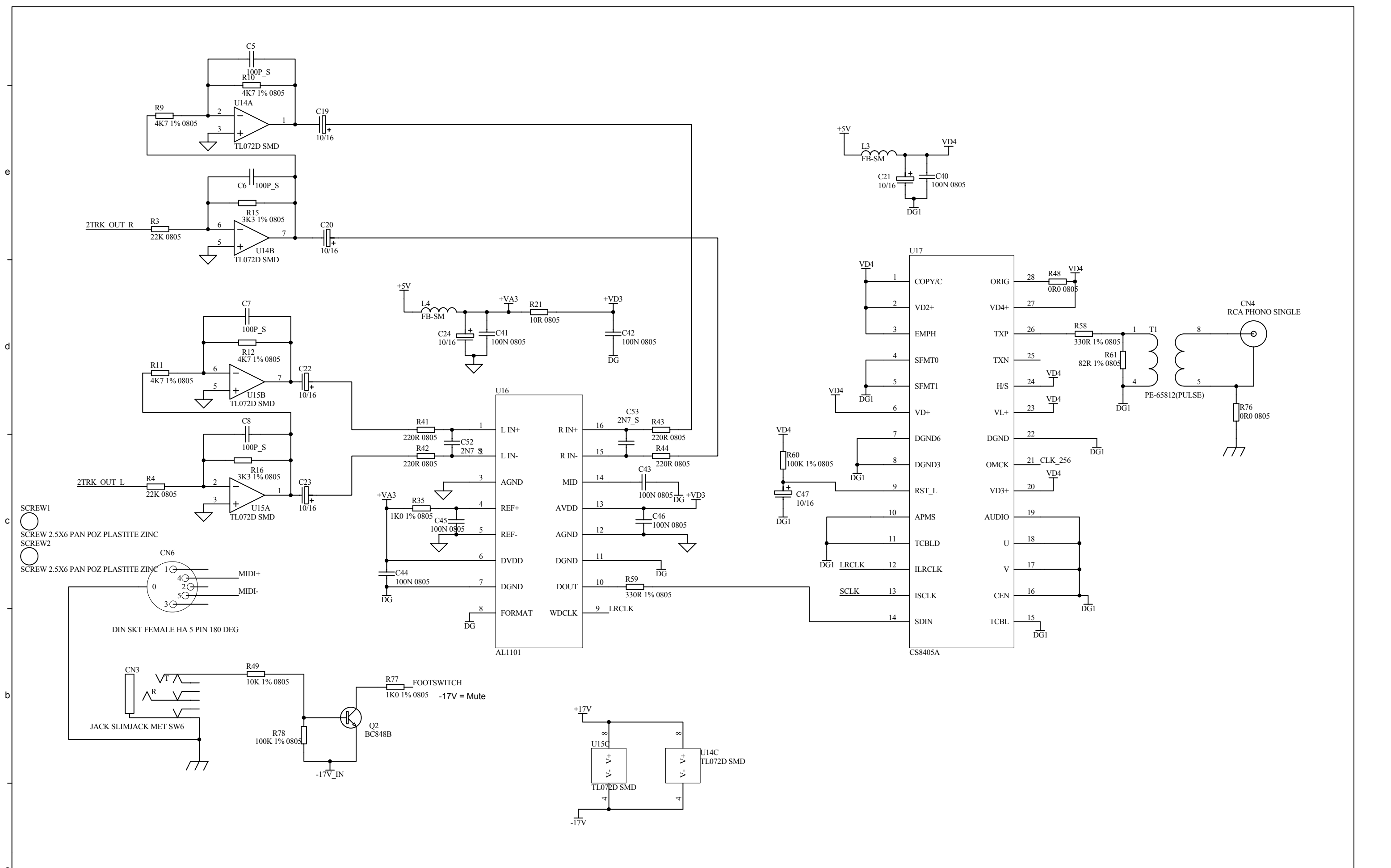


<b>ALLEN&amp;HEATH</b> Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE
	1	MG	26-7-02
	2	MG	8-10-02

FILE: C4796\_2P1.Sch    PRINTED: 11:40:17    27-Mar-2003

TITLE: PA SERIES EFFECTS PCB  
 PAGE:  
 DRG No: C4796    ISSUE: 2    SHEET: 1 OF 3





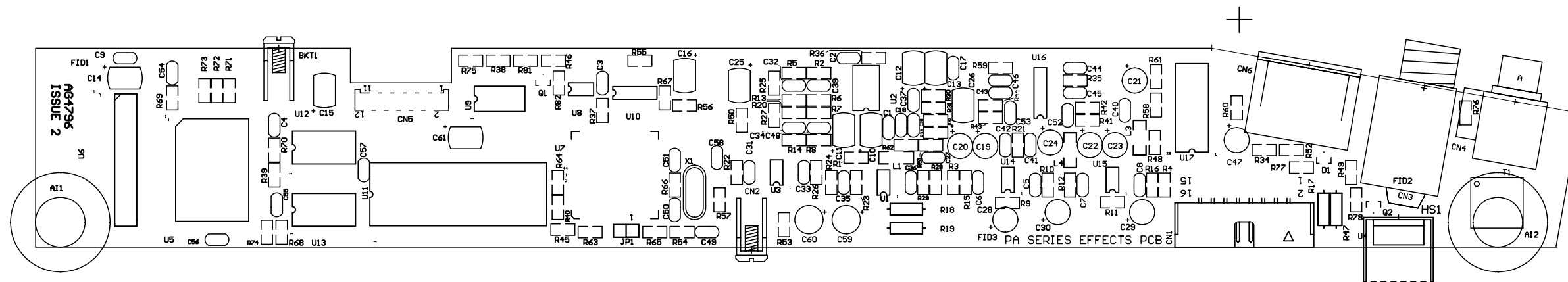
- SCREW1
- SCREW 2.5X6 PAN POZ PLASTITE ZINC
- SCREW2
- SCREW 2.5X6 PAN POZ PLASTITE ZINC

<b>ALLEN&amp;HEATH</b> Kernick Industrial Estate, Penryn, Cornwall, England. TR10 9LU Tel: +44 (0)8707 556250 Fax: +44 (0)8707 556251	ISSUE	BY	DATE
	1	MG	26-7-02
	2	MG	8-10-02

FILE: C4796\_2P3.Sch PRINTED: 11:40:18 27-Mar-2003

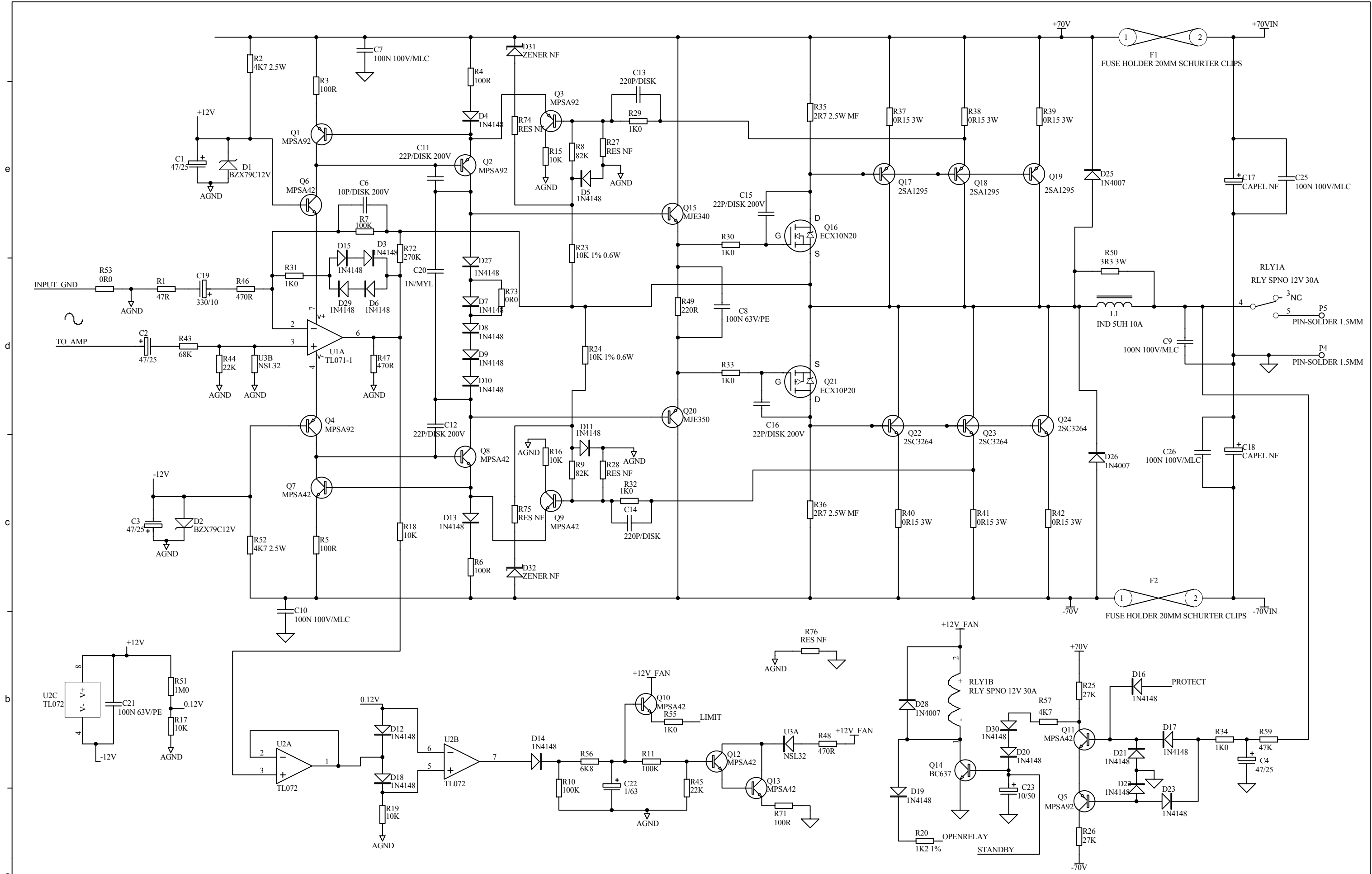
TITLE: PA SERIES EFFECTS PCB  
PAGE:  
DRG No: C4796 ISSUE: 2 SHEET: 3 OF 3





TOP OVERLAY

.GTO



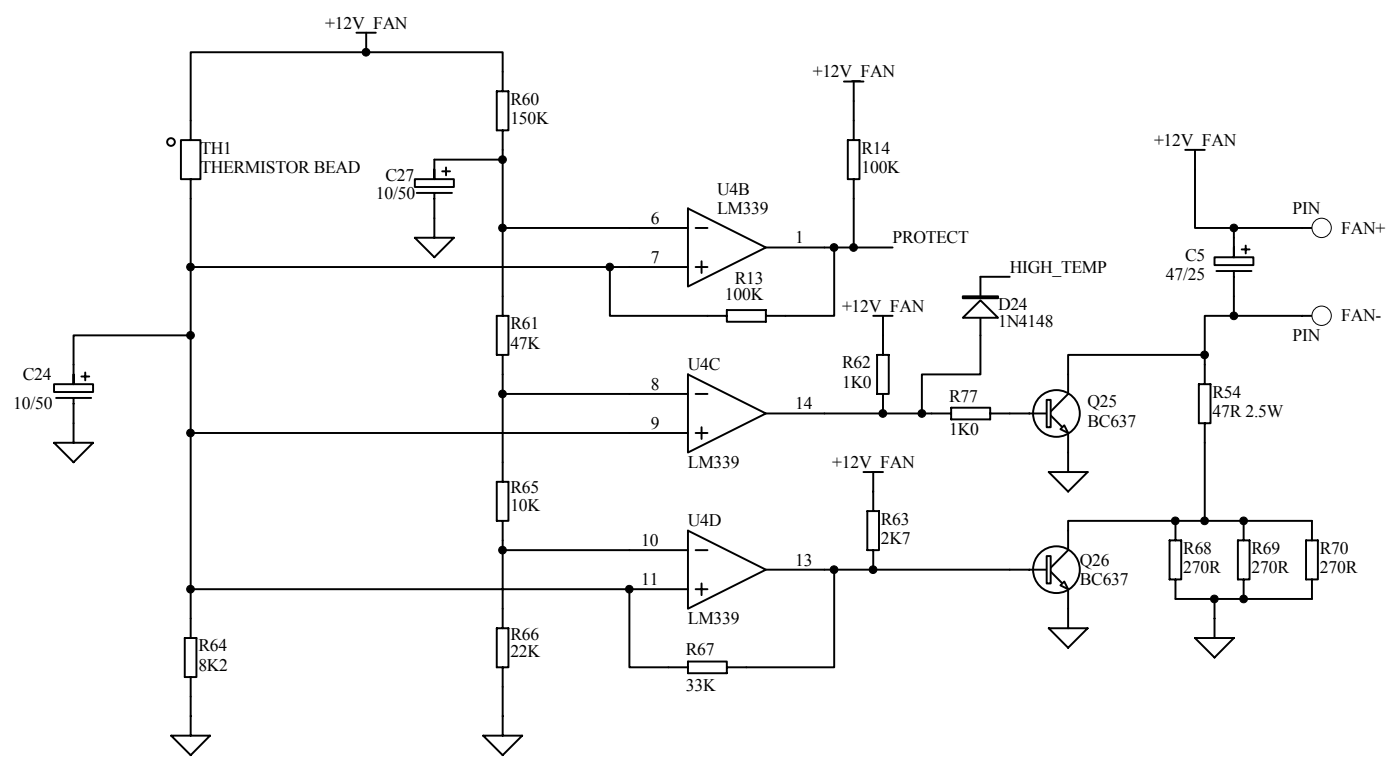
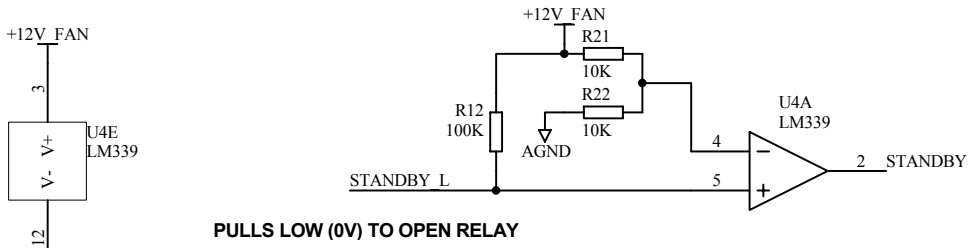
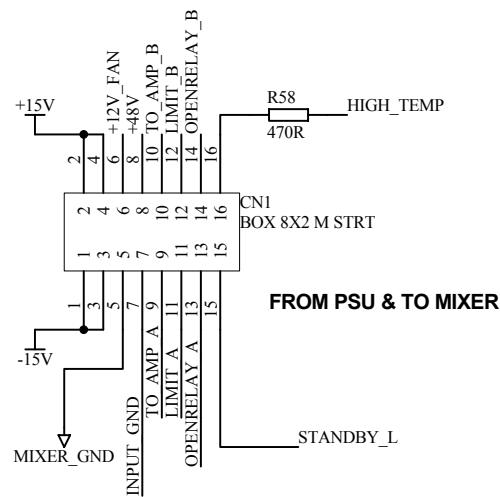
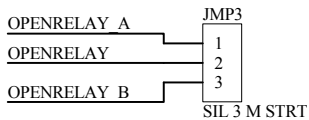
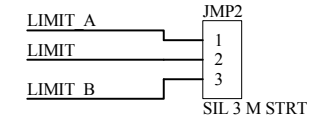
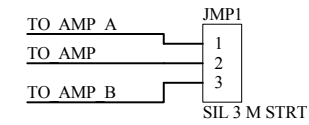
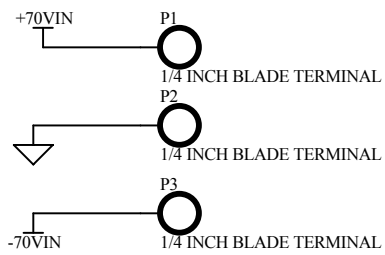
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE
A	MG	25-03-02
B	MG	25-04-02
2	MG	23-08-02
3	MG	12-09-02
4	MG	19-11-02

FILE: C4797\_4P1.Sch PRINTED: 11:52:48 27-Mar-2003

TITLE: CP1000 AMP A  
 PAGE:  
 DRG No: C4797 ISSUE: 4 SHEET: 2 OF 3

**WIRING FROM POWER SUPPLY**



- H1 HOLE-FIXING 3.5MM
- H2 HOLE-FIXING 3.5MM
- H3 HOLE-FIXING 3.5MM
- H4 HOLE-FIXING 3.5MM
- H5 HOLE-FIXING 3.5MM
- H6 HOLE-FIXING 3.5MM
- H7 HOLE-FIXING 3.5MM
- H8 HOLE-FIXING 3.5MM
- H9 HOLE-FIXING 3.5MM
- H10 HOLE-FIXING 3.5MM
- H11 HOLE-FIXING 3.5MM
- H12 Comment AI2
- H13 Comment AI3 HOLE-AI
- H14 HOLE-FIXING 3.5MM
- H15 HOLE-AI
- H16 HOLE-FIXING 3.5MM
- H18 HOLE-FIXING 3.5MM

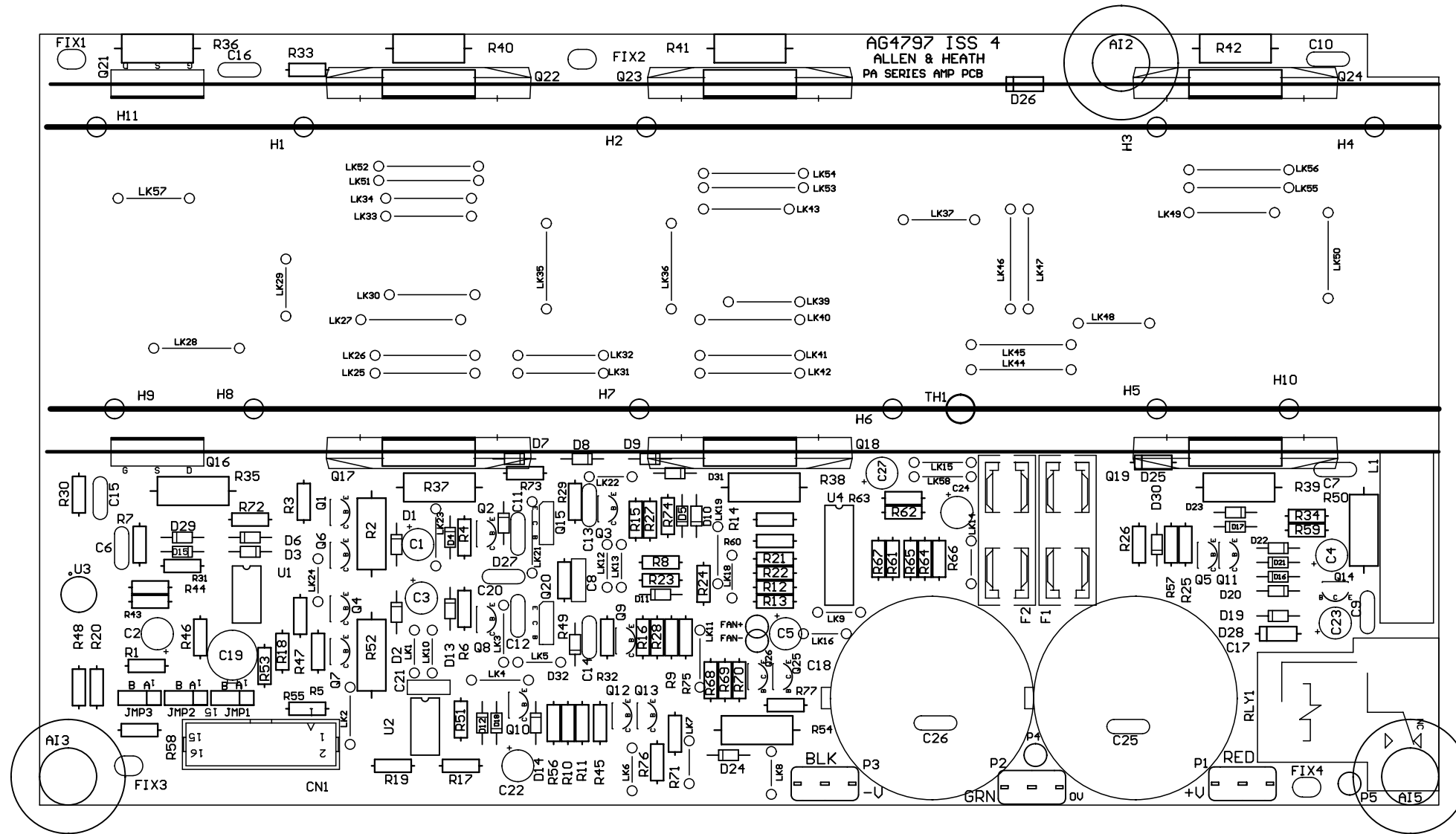
- LK1 LINK TCW
- LK2 LINK TCW
- LK3 LINK TCW
- LK4 LINK TCW
- LK5 LINK TCW
- LK6 LINK TCW
- LK7 LINK TCW
- LK8 LINK TCW
- LK9 LINK TCW
- LK10 LINK TCW
- LK11 LINK TCW
- LK12 LINK TCW
- LK13 LINK TCW
- LK14 LINK TCW
- LK15 LINK TCW
- LK16 LINK TCW
- LK17 LINK TCW
- LK18 LINK TCW
- LK19 LINK TCW
- LK20 LINK TCW
- LK21 LINK TCW
- LK22 LINK TCW
- LK23 LINK TCW
- LK24 LINK TCW
- LK25 LINK TCW
- LK26 LINK TCW
- LK27 LINK TCW
- LK28 LINK TCW
- LK29 LINK TCW
- LK30 LINK TCW
- LK31 LINK TCW
- LK32 LINK TCW
- LK33 LINK TCW
- LK34 LINK TCW
- LK35 LINK TCW
- LK36 LINK TCW
- LK37 LINK TCW
- LK38 LINK TCW
- LK39 LINK TCW
- LK40 LINK TCW
- LK41 LINK TCW
- LK42 LINK TCW
- LK43 LINK TCW
- LK44 LINK TCW
- LK45 LINK TCW
- LK46 LINK TCW
- LK47 LINK TCW
- LK48 LINK TCW
- LK49 LINK TCW
- LK50 LINK TCW
- LK51 LINK TCW
- LK52 LINK TCW
- LK53 LINK TCW
- LK54 LINK TCW
- LK55 LINK TCW
- LK56 LINK TCW
- LK57 LINK TCW
- LK58 LINK TCW

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

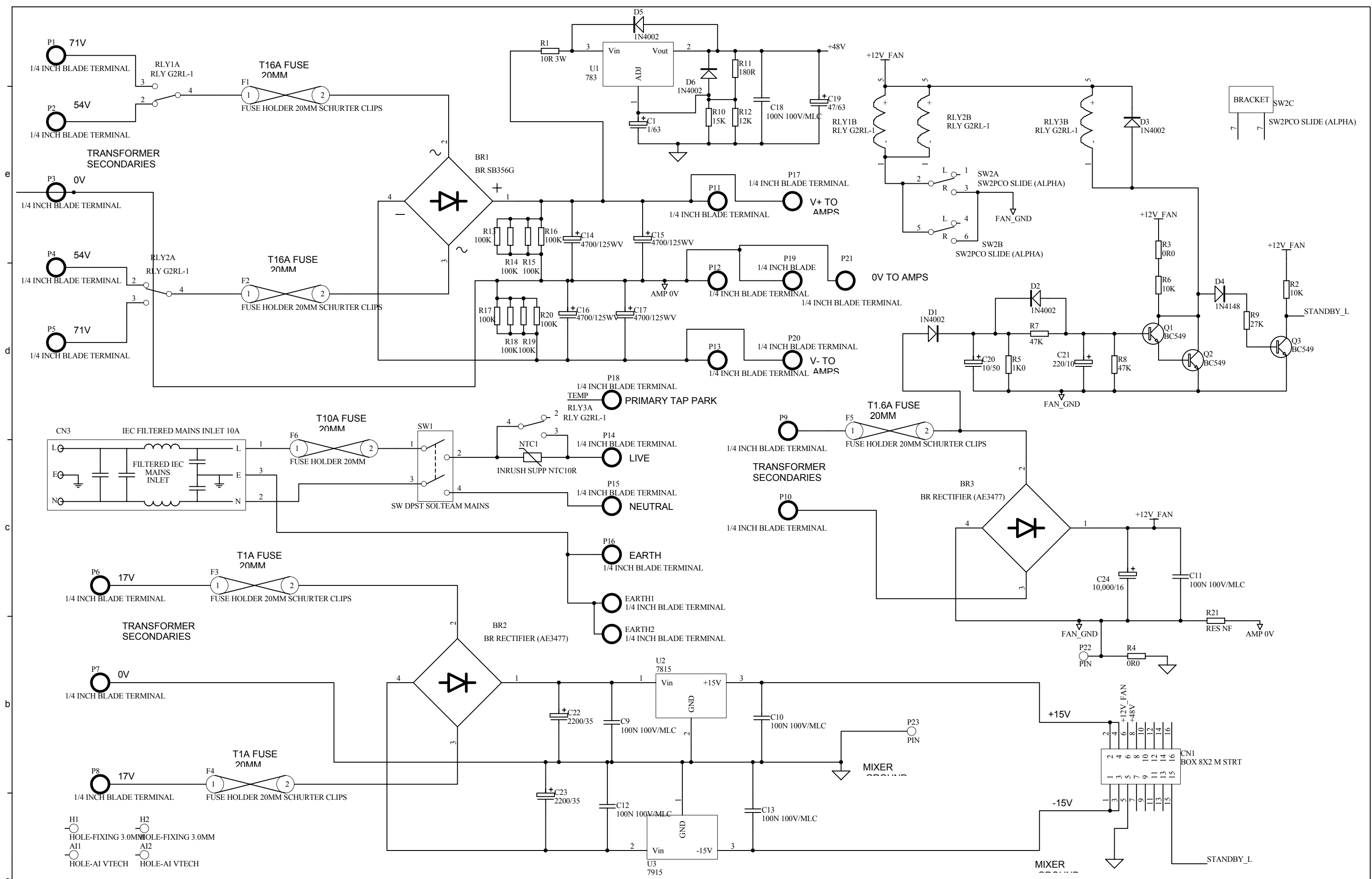
ISSUE	BY	DATE
A	MG	25-03-02
B	MG	25-04-02
2	MG	23-08-02
3	MG	12-09-02
4	MG	19-11-02

FILE: C4797\_4P2.Sch PRINTED: 11:52:48 27-Mar-2003

TITLE: CP1000 AMP A  
 PAGE:  
 DRG No: C4797 ISSUE: 4 SHEET: 3 OF 3



TOP OVERLAY .GTO



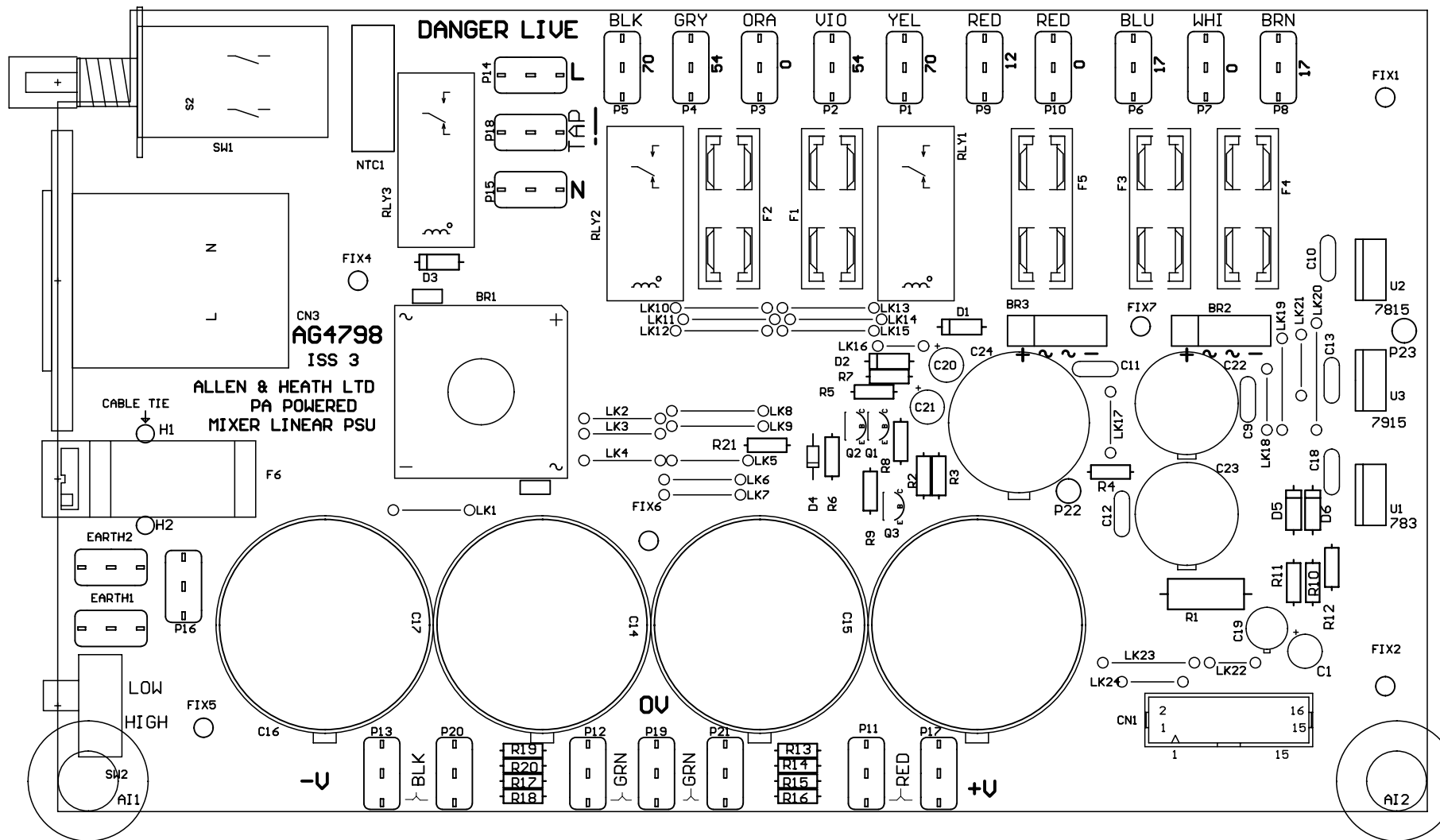
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE
1	MG	01-08-02
2	MG	12-08-02
3	MG	25-09-02
3.1	MG	24-10-02
3.2	MG	2-01-03

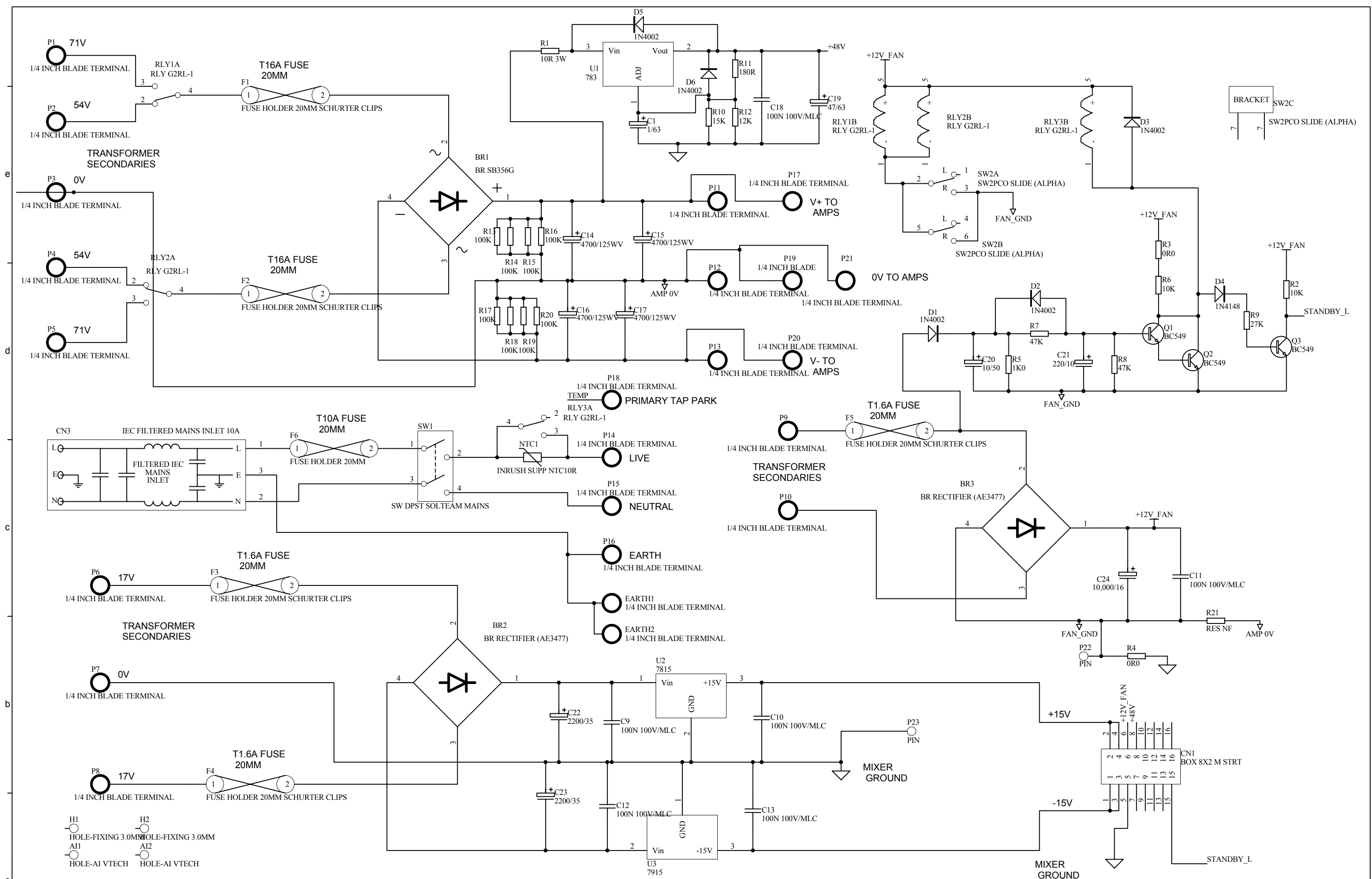
FIX1	FIX5	FIX7	LK1	LK3	LK5	LK7	LK9	LK11	LK13	LK15	LK17	LK19
HOLE-FIXING 3.2MM	HOLE-FIXING 3.2MM	HOLE-FIXING 3.2MM	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW
FIX2	FIX4	FIX6	LK2	LK4	LK6	LK8	LK10	LK12	LK14	LK16	LK18	LK20
HOLE-FIXING 3.2MM	HOLE-FIXING 3.2MM	HOLE-FIXING 3.2MM	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW
FILE: AG4798_3.2.Sch	PRINTED: 12:10:58	27-Mar-2003	LK21	LK22	LK23	LK24	LK25	LK26	LK27	LK28	LK29	LK30
			LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW

TITLE: PA SERIES POWERED MIXER  
 PAGE: Linear PSU pcb  
 DRG No: 4798 ISSUE: 3.2 SHEET: 1 OF 1

003-069/1



TOP OVERLAY .GTO



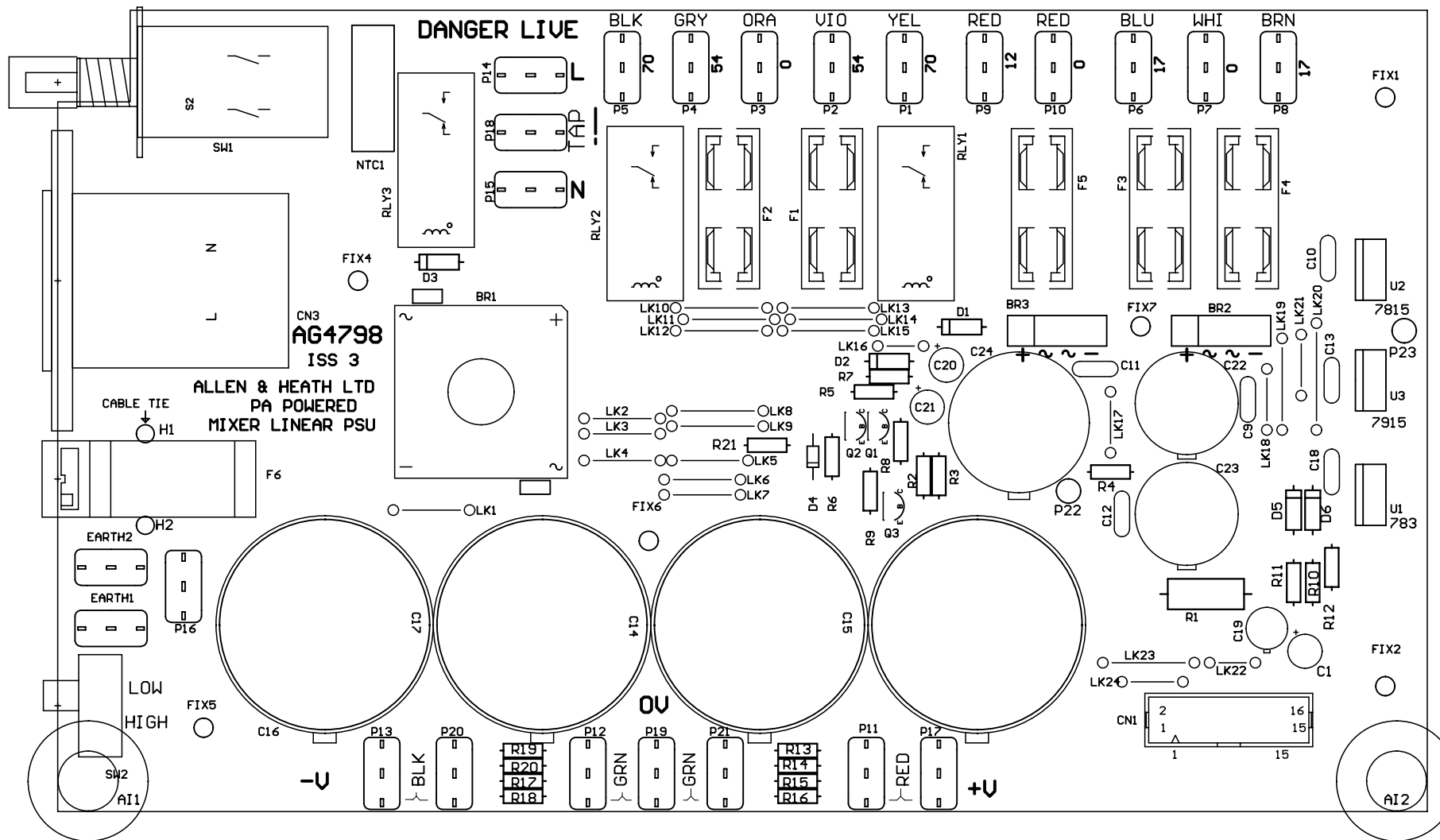
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE
1	MG	01-08-02
2	MG	12-08-02
3	MG	25-09-02
3.1	MG	24-10-02
3.2	MG	2-01-03
3.3	DWD	30-01-04

FIX1	FIX5	FIX7	LK1	LK3	LK5	LK7	LK9	LK11	LK13	LK15	LK17	LK19
HOLE-FIXING 3.2MM	HOLE-FIXING 3.2MM	HOLE-FIXING 3.2MM	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW
FIX2	FIX4	FIX6	LK2	LK4	LK6	LK8	LK10	LK12	LK14	LK16	LK18	LK20
HOLE-FIXING 3.2MM	HOLE-FIXING 3.2MM	HOLE-FIXING 3.2MM	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW
FILE: AG4798_3.3.Sch	PRINTED: 10:05:54	3-Feb-2004	LK21	LK22	LK23	LK24	LK25	LK26	LK27	LK28	LK29	LK30
			LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW	LINK TCW

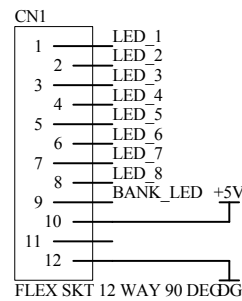
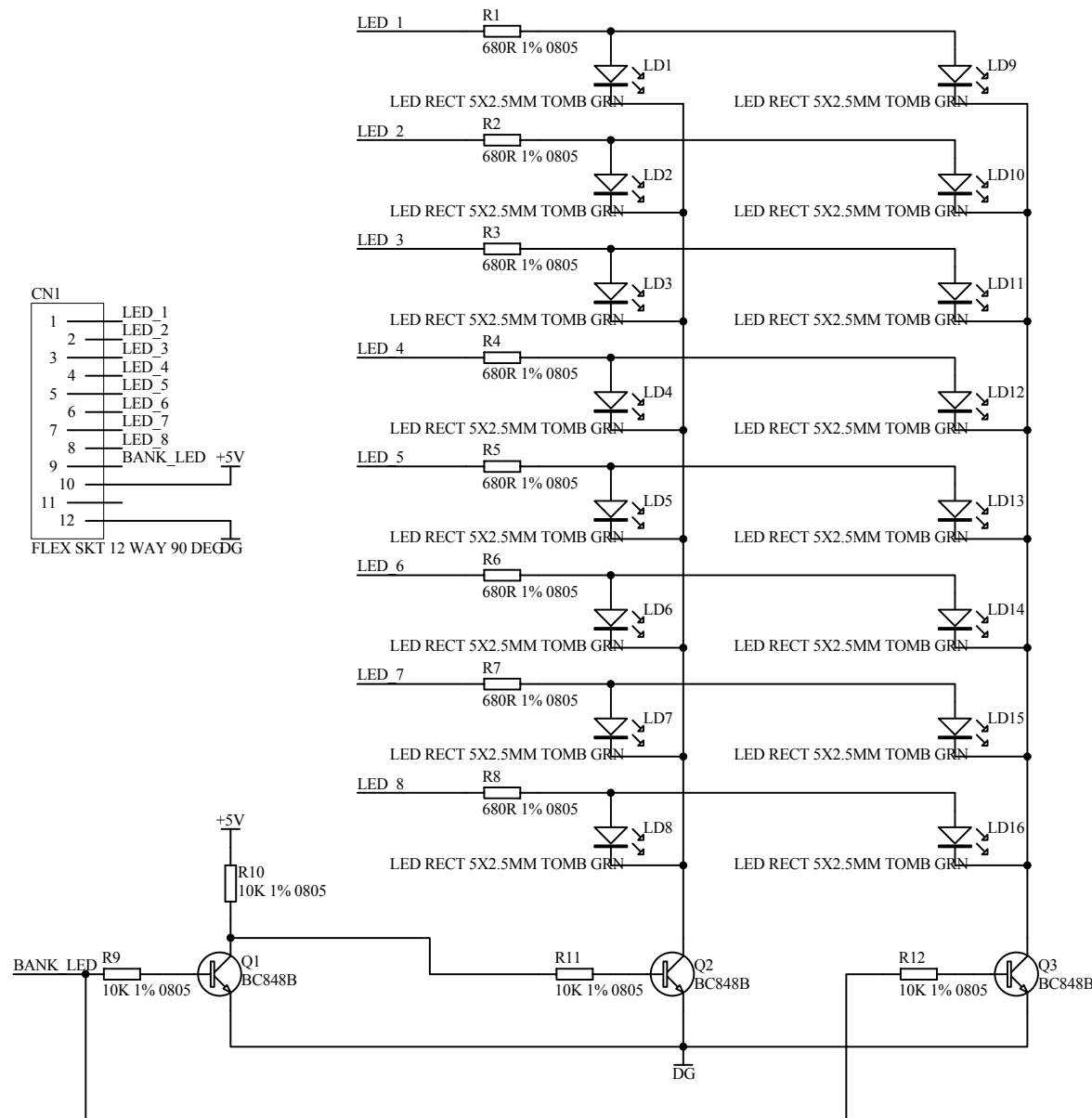
TITLE: PA SERIES POWERED MIXER  
 PAGE: Linear PSU pcb  
 DRG No: 4798 ISSUE: 3.3 SHEET: 1 OF 1

003-069/1



TOP OVERLAY .GTO





FH1  
HOLE-FIXING 3.5MM

FH2  
HOLE-FIXING 3.5MM

FH3  
HOLE-FIXING 3.5MM

C1  
NF CAP 0805

SCREW1  
SCREW M3X4 PAN TORX BK

SCREW2  
SCREW M3X4 PAN TORX BK

PILLAR1  
PILLAR M3X6 HEX BRASS

PILLAR2  
PILLAR M3X6 HEX BRASS

**ALLEN&HEATH**

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

ISSUE	BY	DATE
A	AAT	04-07-02
1	AAT	06-08-02
2	AAT	24-09-02
2.1	MG	28-07-03

FILE: C5054\_2.1.Sch

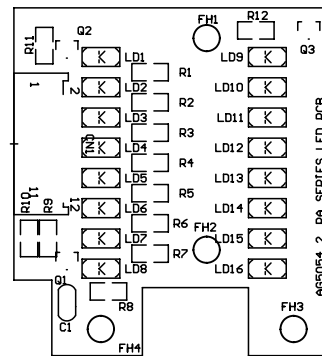
PRINTED: 16:22:01 29-Jul-2003

TITLE: PA SERIES LED PCB

PAGE:

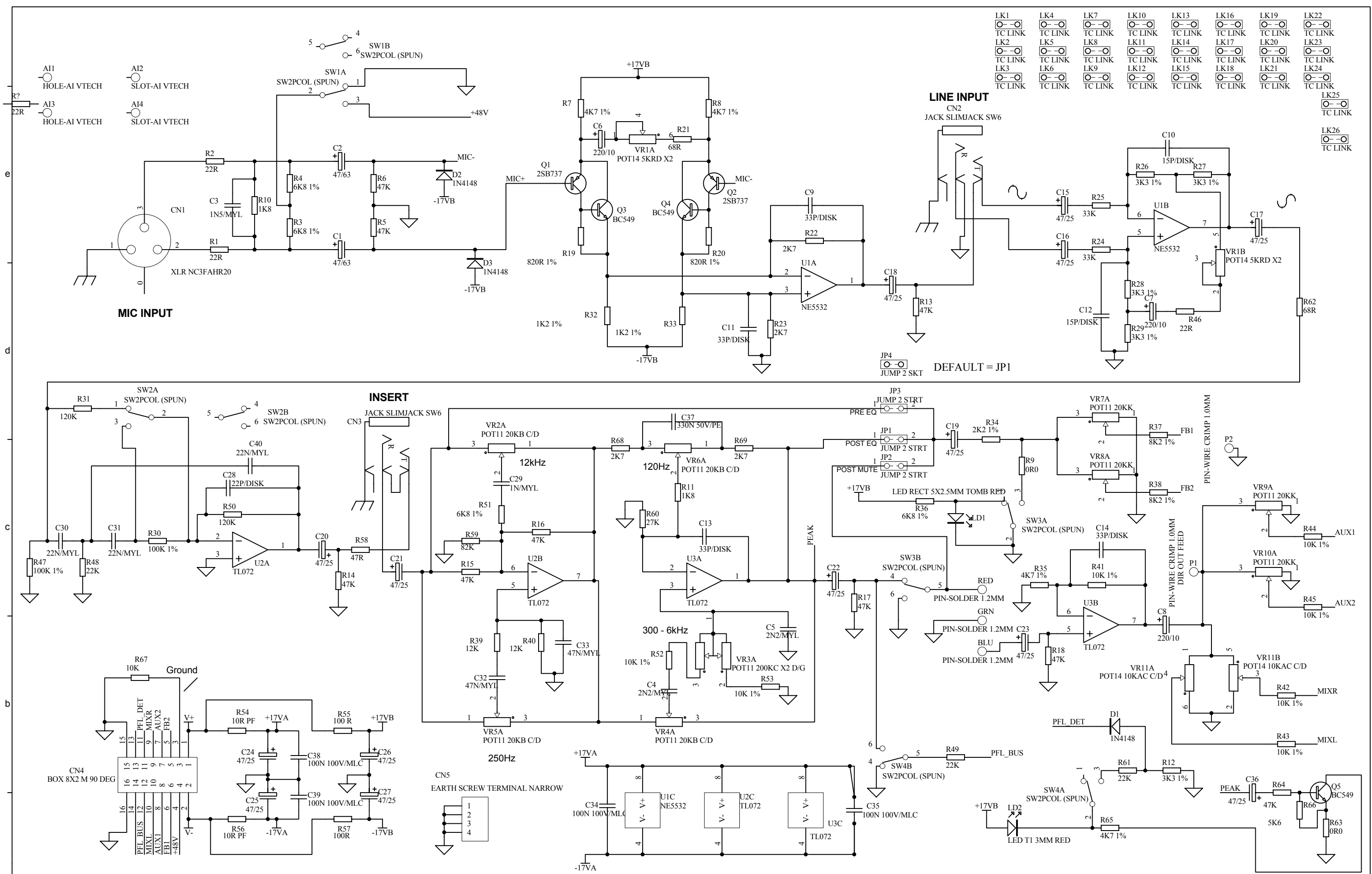
DRG No: C5054 ISSUE: 2.1 SHEET: 1 OF 1

003-070/1



TOP OVERLAY

.GTO



- LK1 TC LINK
- LK2 TC LINK
- LK3 TC LINK
- LK4 TC LINK
- LK5 TC LINK
- LK6 TC LINK
- LK7 TC LINK
- LK8 TC LINK
- LK9 TC LINK
- LK10 TC LINK
- LK11 TC LINK
- LK12 TC LINK
- LK13 TC LINK
- LK14 TC LINK
- LK15 TC LINK
- LK16 TC LINK
- LK17 TC LINK
- LK18 TC LINK
- LK19 TC LINK
- LK20 TC LINK
- LK21 TC LINK
- LK22 TC LINK
- LK23 TC LINK
- LK24 TC LINK
- LK25 TC LINK
- LK26 TC LINK

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

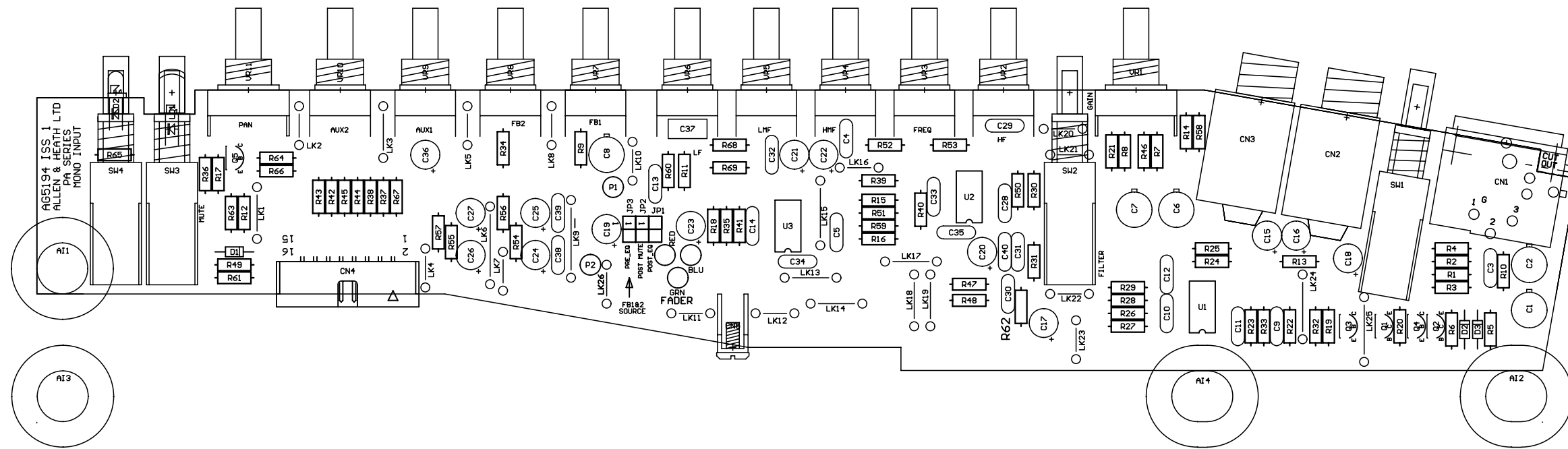
ISSUE	BY	DATE	CHK BY
A	AAT	28-11-02	
B	AAT	28-11-02	
1	AAT	14-02-03	
1.1	AAT	09-04-03	
1.2	MG	07-07-03	

VR1C	VR2B	VR3B	VR4B	VR5B	VR6B	VR7B	VR8B	VR9B	VR10B	VR11C
POT14 5KRD X2	POT11 20KB C/D	200KC X2 D/G	POT11 20KB C/D	POT11 20KB C/D	POT11 20KB C/D	POT11 20K	POT11 20KK	POT11 20KK	POT11 20KK	POT14 10KAC C/D

VTECH ECN18  
 FILE: C5194\_1.2.Sch

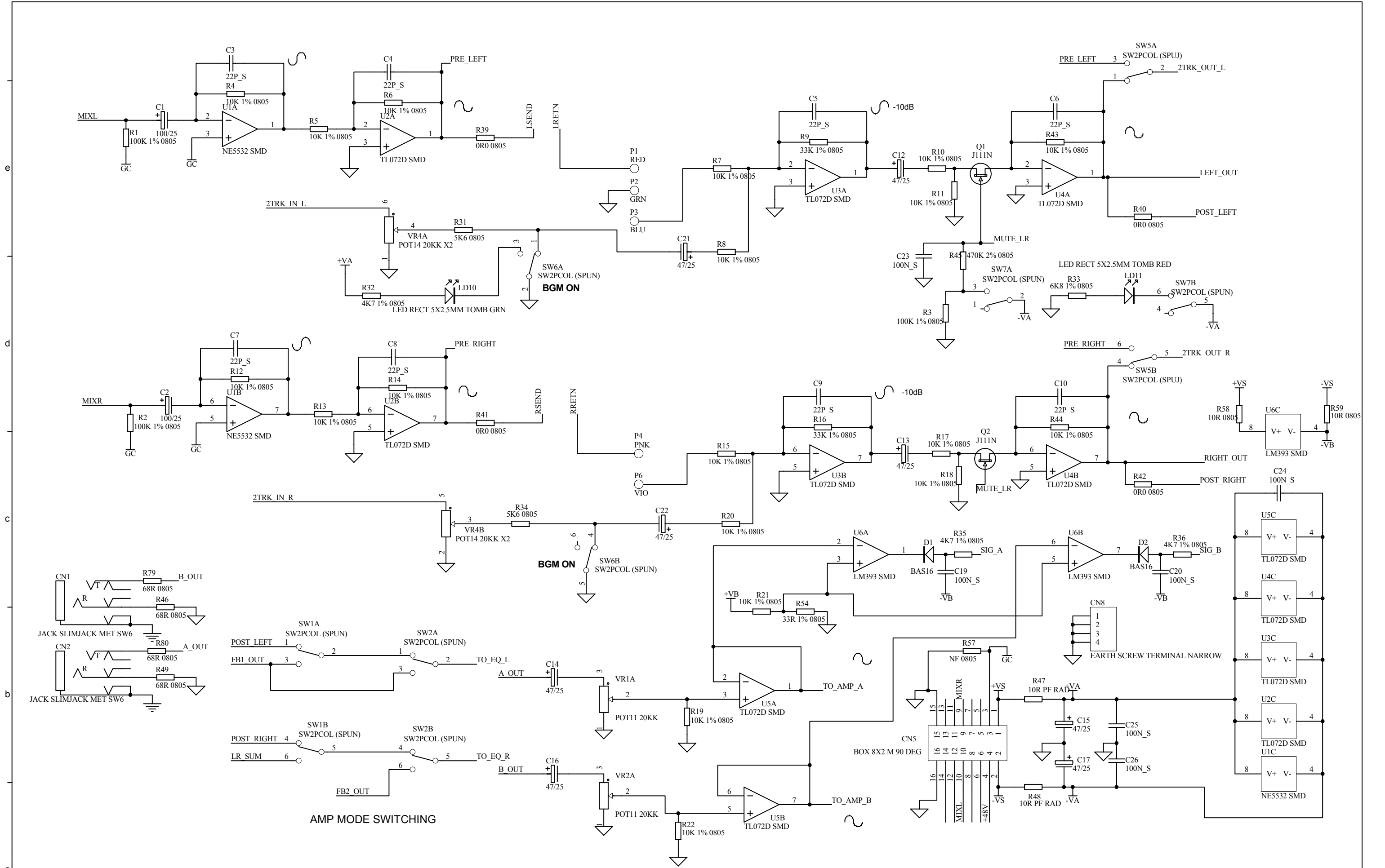
TITLE: **PA SERIES MONO INPUT**  
 PAGE:  
 DRG No: C5194 ISSUE: 1.2 SHEET: 1 OF 1  
 PRINTED: 15:30:45 4-Aug-2003

003-091/1



TOP OVERLAY

.GTO



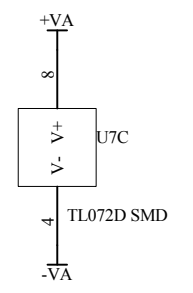
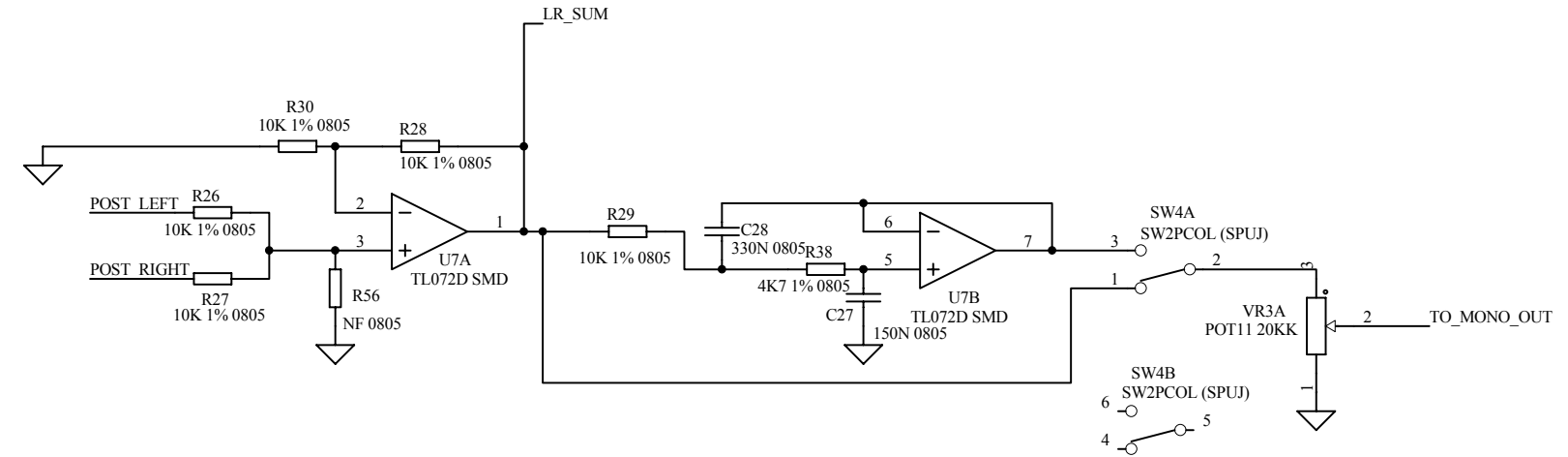
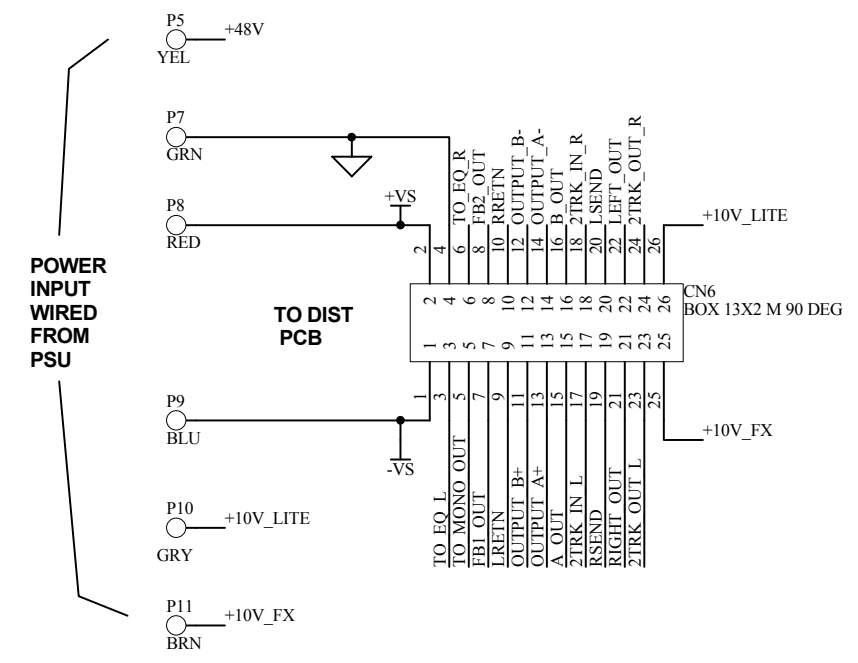
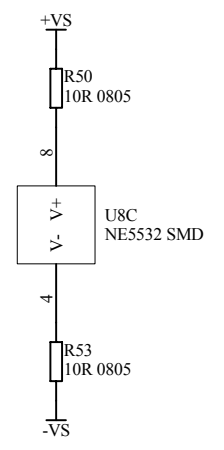
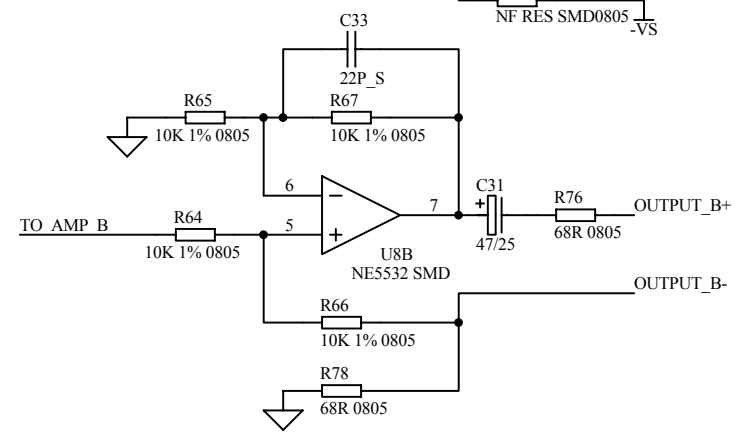
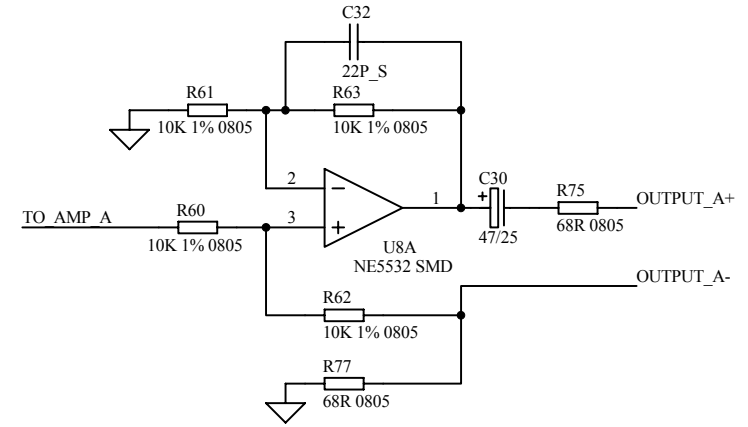
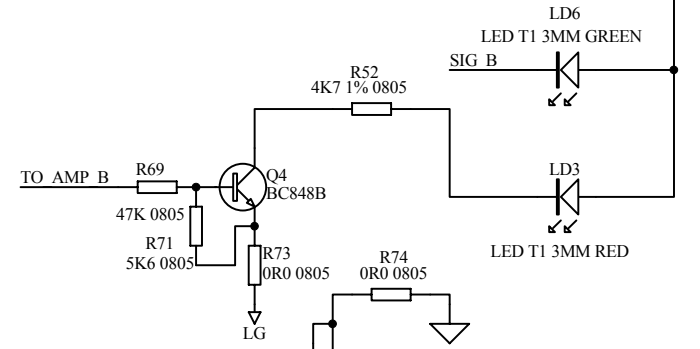
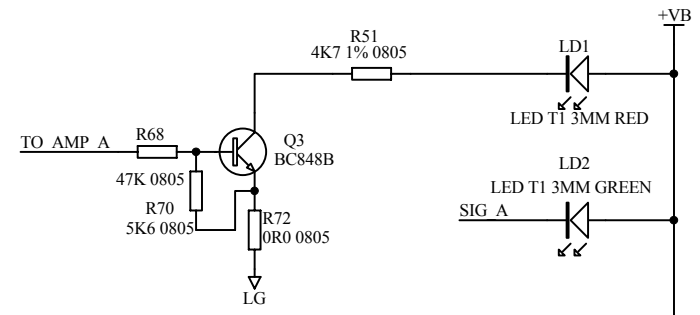
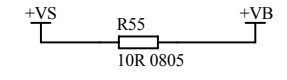
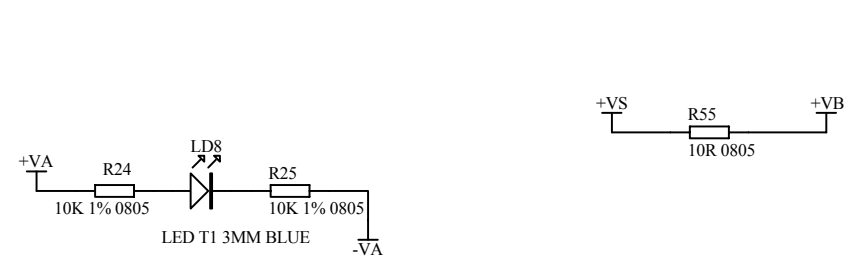
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	VR1B	VR2B	VR4C
A	MG	29-11-02	POT11 20KK BRKT	POT11 20KK BRKT	POT14 20KK X2 BRKT
1	MG	20-12-02			

FILE: 5192\_1P1.Sch      PRINTED: 16:49:09 29-Jul-2003

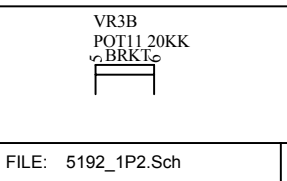
TITLE: PA (UNPOWERED) MASTER LR  
 PAGE:  
 DRG No: AG5192    ISSUE: 1    SHEET: 1 OF 2

- FID1  
FIDUCIAL
- FID2  
FIDUCIAL
- A11  
HOLE-A1 VTECH
- A12  
SLOT-A1 VTECH



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

ISSUE	BY	DATE
A 1	MG MG	29-11-02 20-12-02

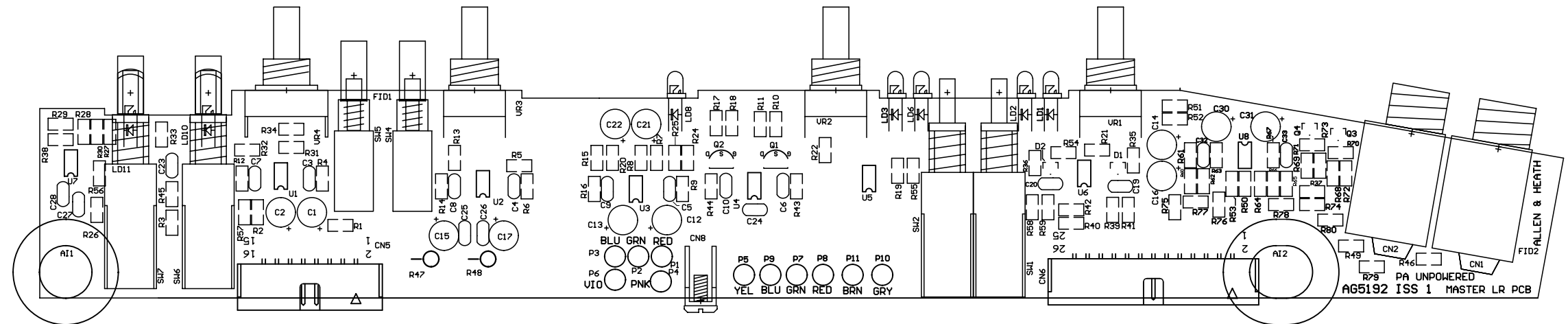


FILE: 5192\_1P2.Sch  
PRINTED: 16:49:10 29-Jul-2003

TITLE: PA (UNPOWERED) MASTER LR  
PAGE:  
DRG No: AG5192 ISSUE: 1 SHEET: 2 OF 2

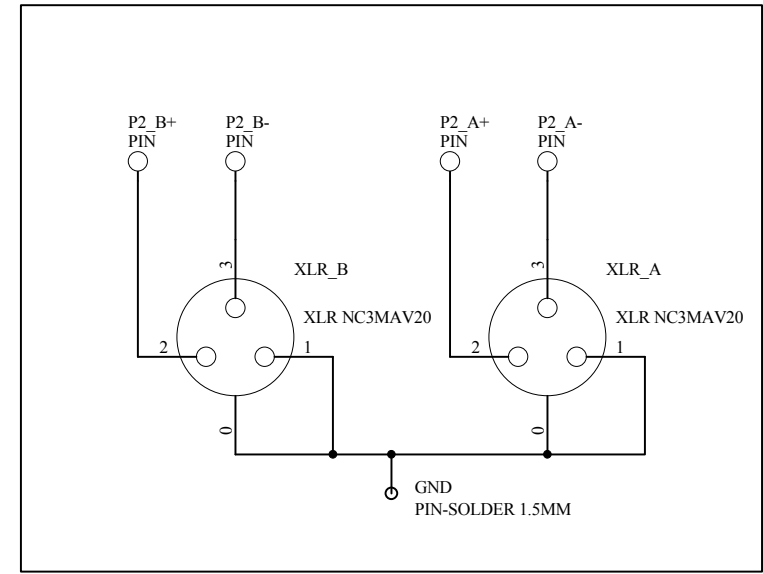
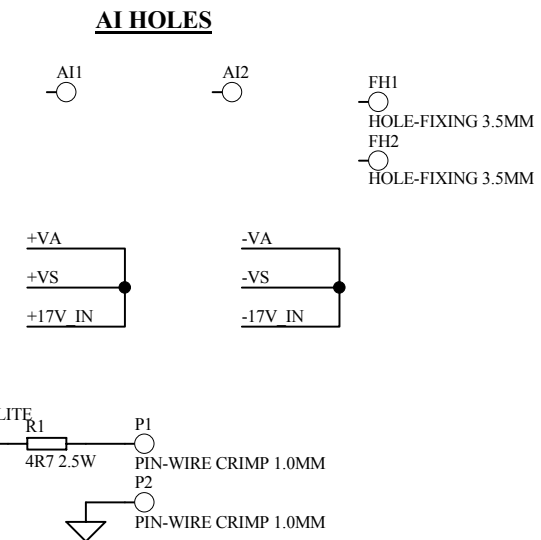
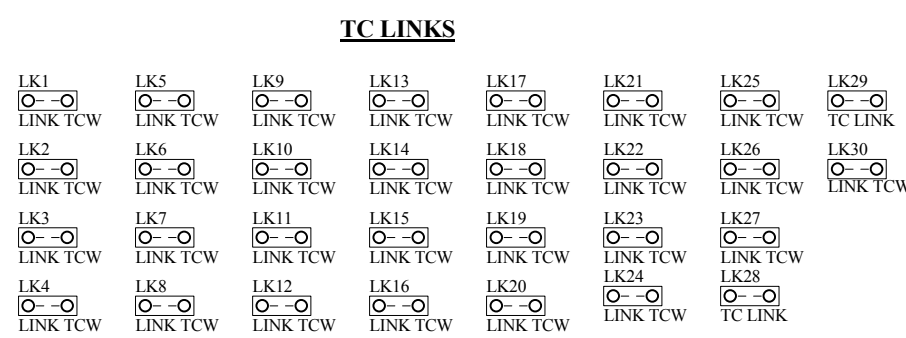
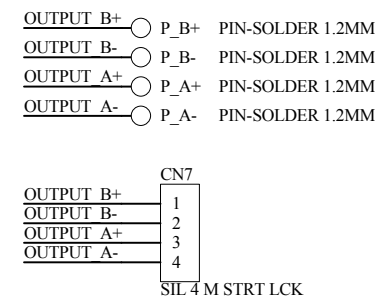
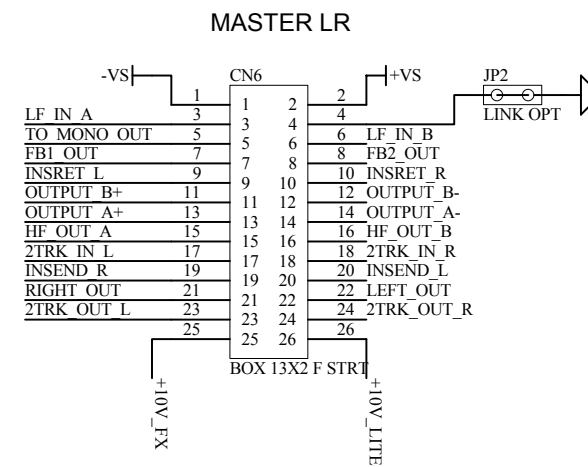
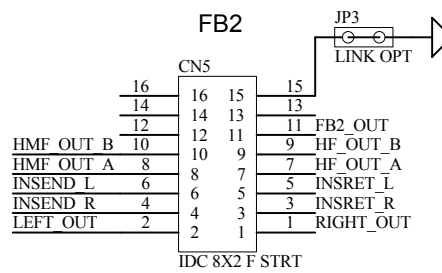
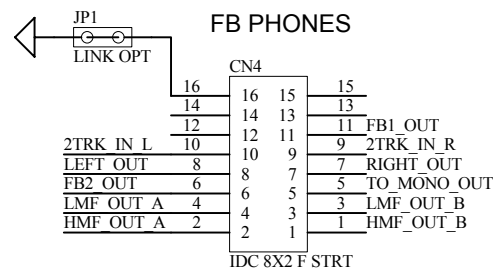
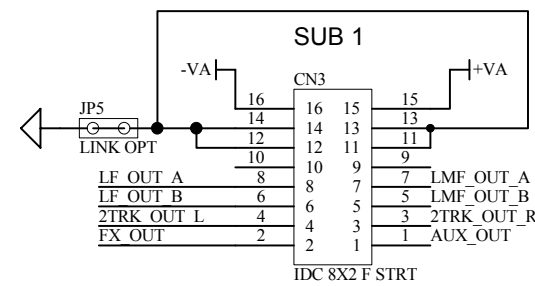
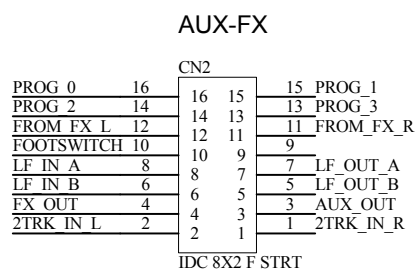
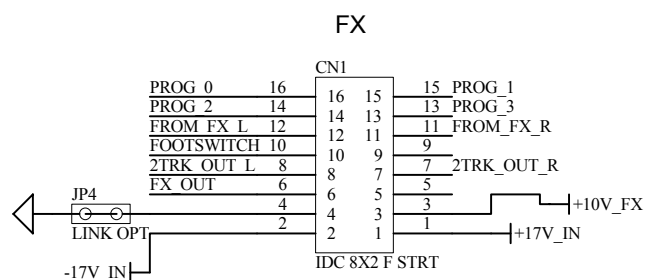
A MG 4-3-02 A  
B MG 16-4-02

003-092/2



TOP OVERLAY

.GTO



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

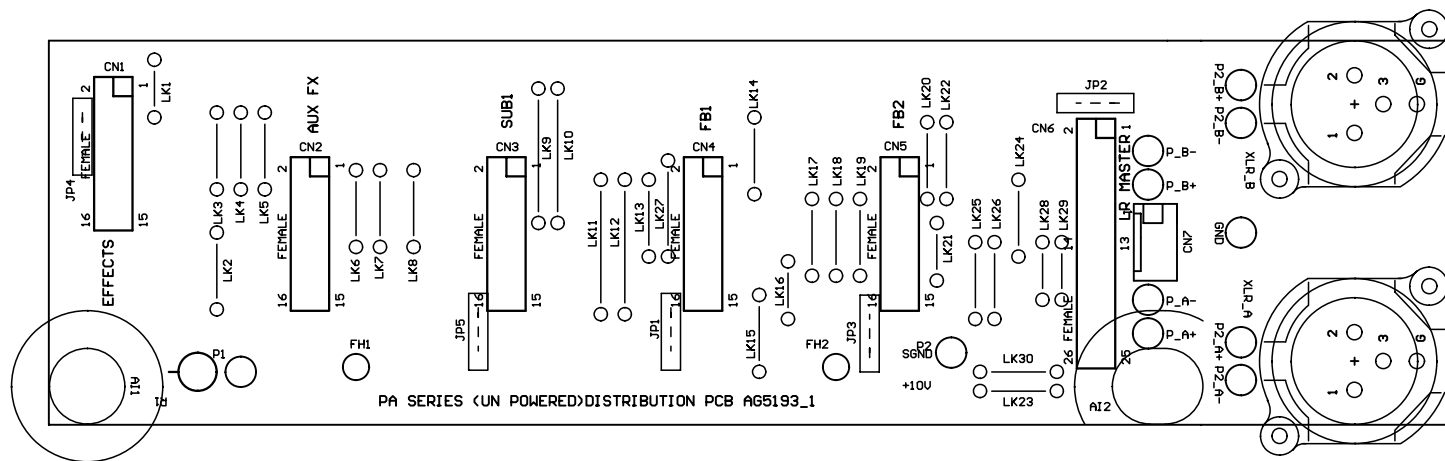
ISSUE	BY	DATE	CHK BY
A	MG AAT	03-12-02 14-02-03	XXX

FILE: C5193\_1.Sch

PRINTED: 16:55:19 29-Jul-2003

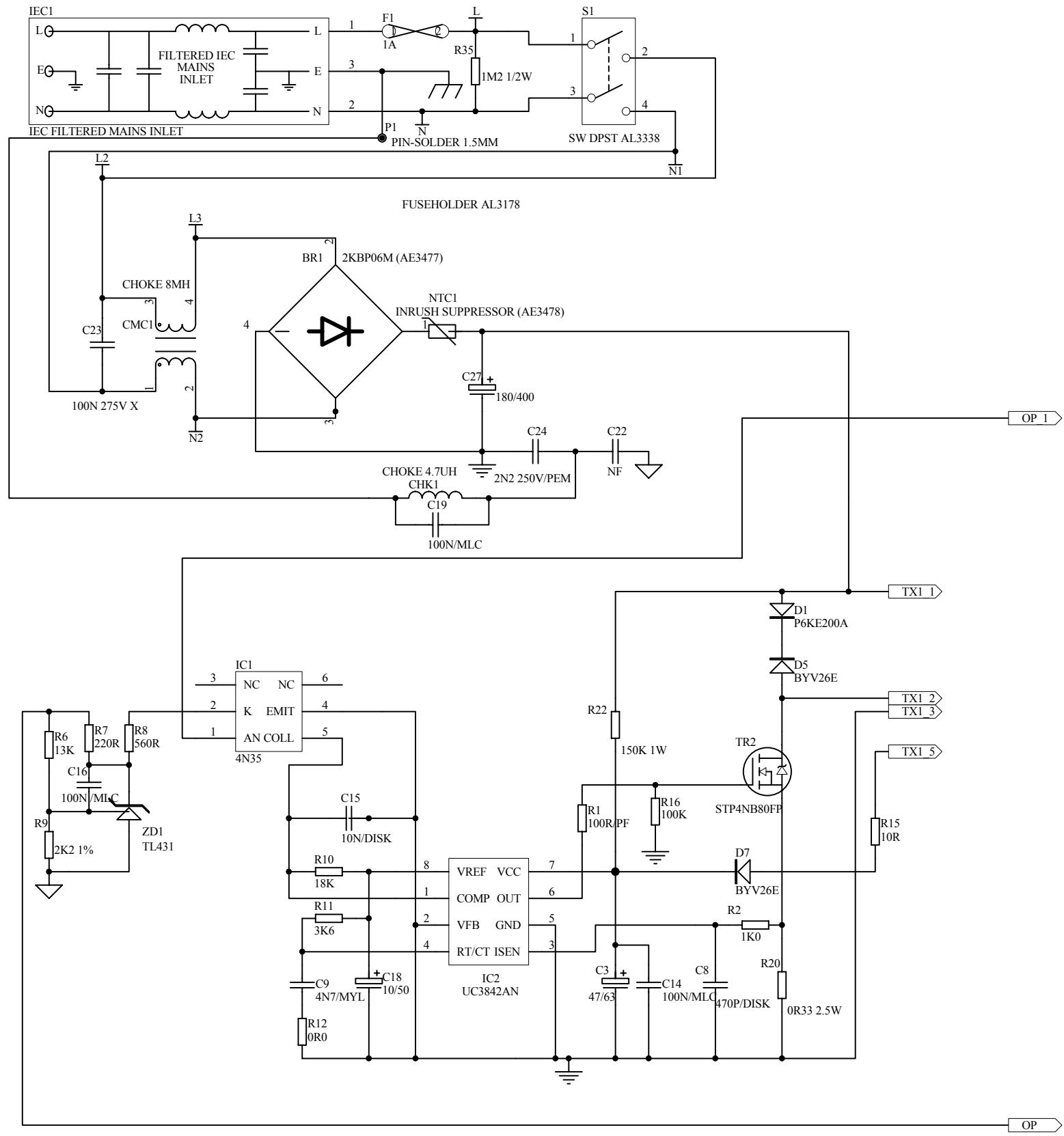
TITLE: PA Unpowered DISTRIBUTION  
 PAGE: PCB  
 DRG No: C5193 ISSUE: 1 SHEET: 1 OF 1





TOP OVERLAY

.GTO



- LK1
- LINK TCW
- LK2
- LINK TCW
- LK3
- LINK TCW
- LK4
- LINK TCW
- LK5
- LINK TCW
- LK6
- LINK TCW

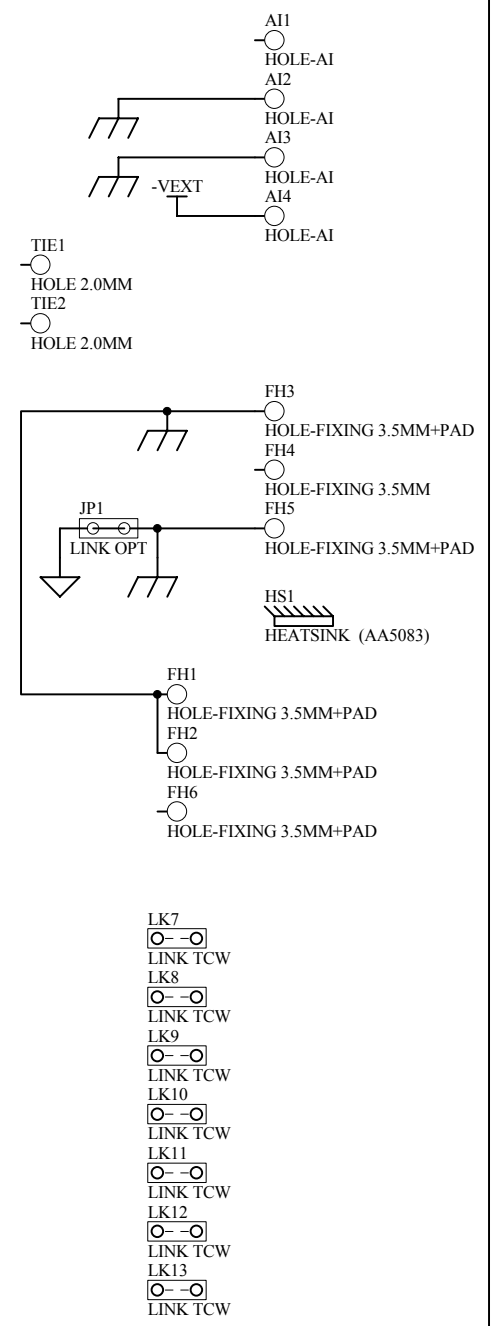
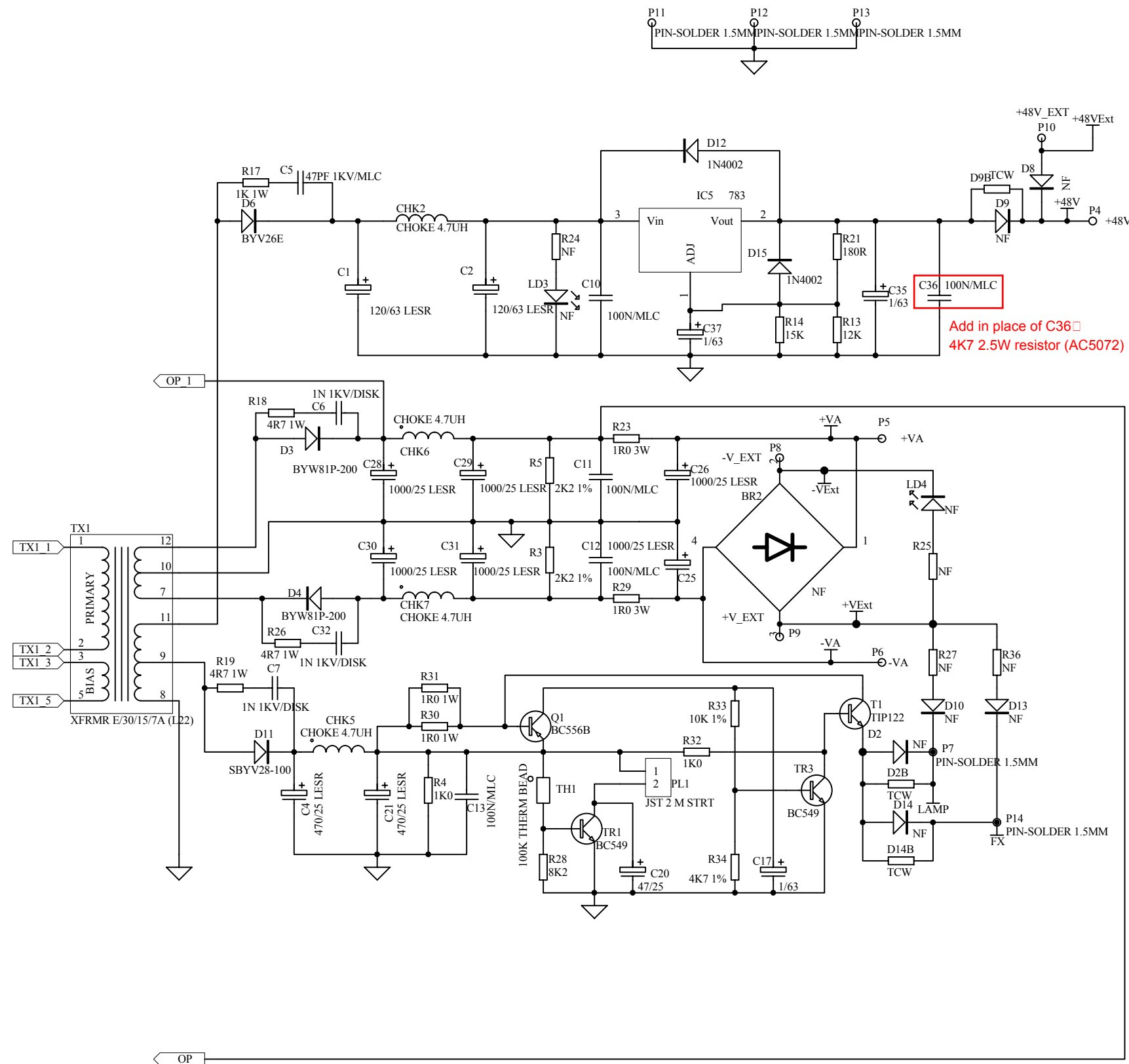
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	CHK BY
1	AAT	20-02-03	SRT
2	AAT	09-04-03	SRT

FILE: AG5044\_2P2.SCH

PRINTED: 09:26:10 30-Jul-2003

TITLE: PA SERIES UNPOWERED PSU  
 PAGE:  
 DRG No: AG5044 ISSUE: 2 SHEET: 2 OF 3



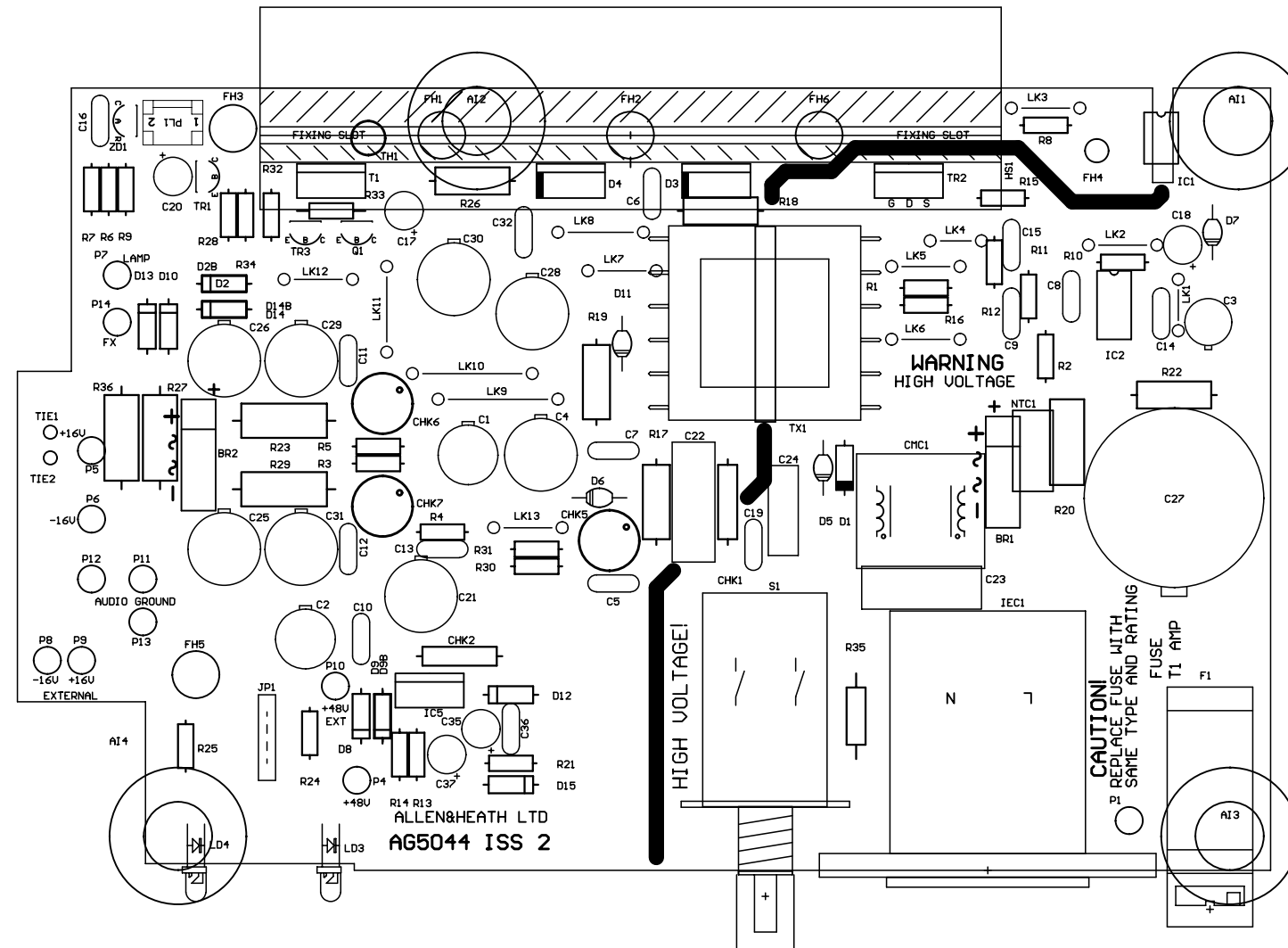
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	CHK BY
1	AAT	20-02-03	SRT
2	AAT	09-04-03	SRT

FILE: AG5044\_2P3.SCH

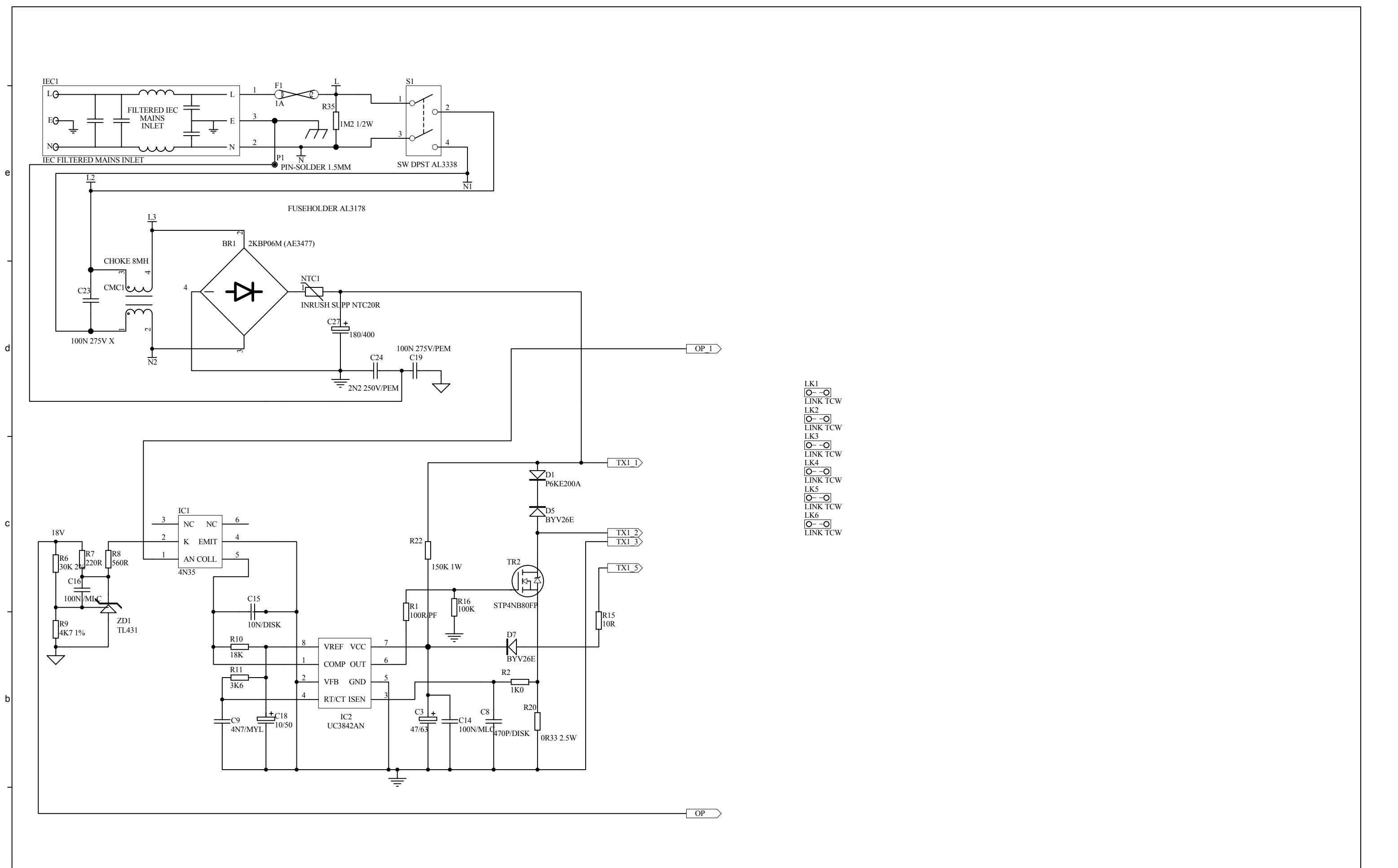
PRINTED: 09:26:10 30-Jul-2003

TITLE: PA SERIES UNPOWERED PSU  
 PAGE:  
 DRG No: AG5044 ISSUE: 2 SHEET: 3 OF 3



TOP OVERLAY

.GTO



- LK1
- LINK TCW
- LK2
- LINK TCW
- LK3
- LINK TCW
- LK4
- LINK TCW
- LK5
- LINK TCW
- LK6
- LINK TCW

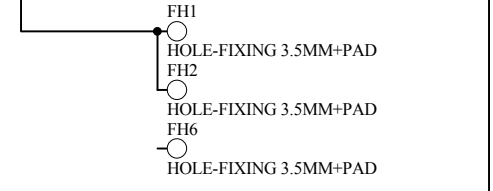
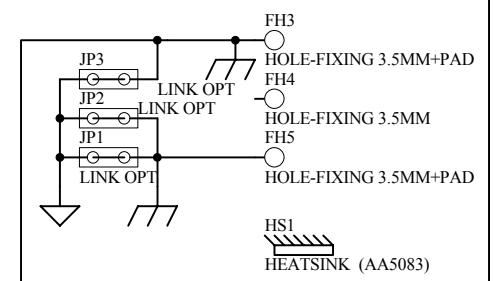
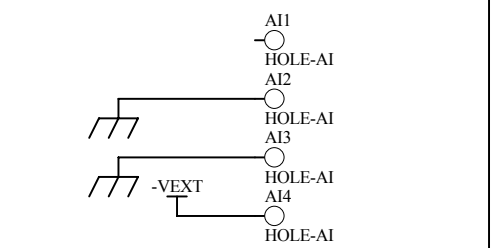
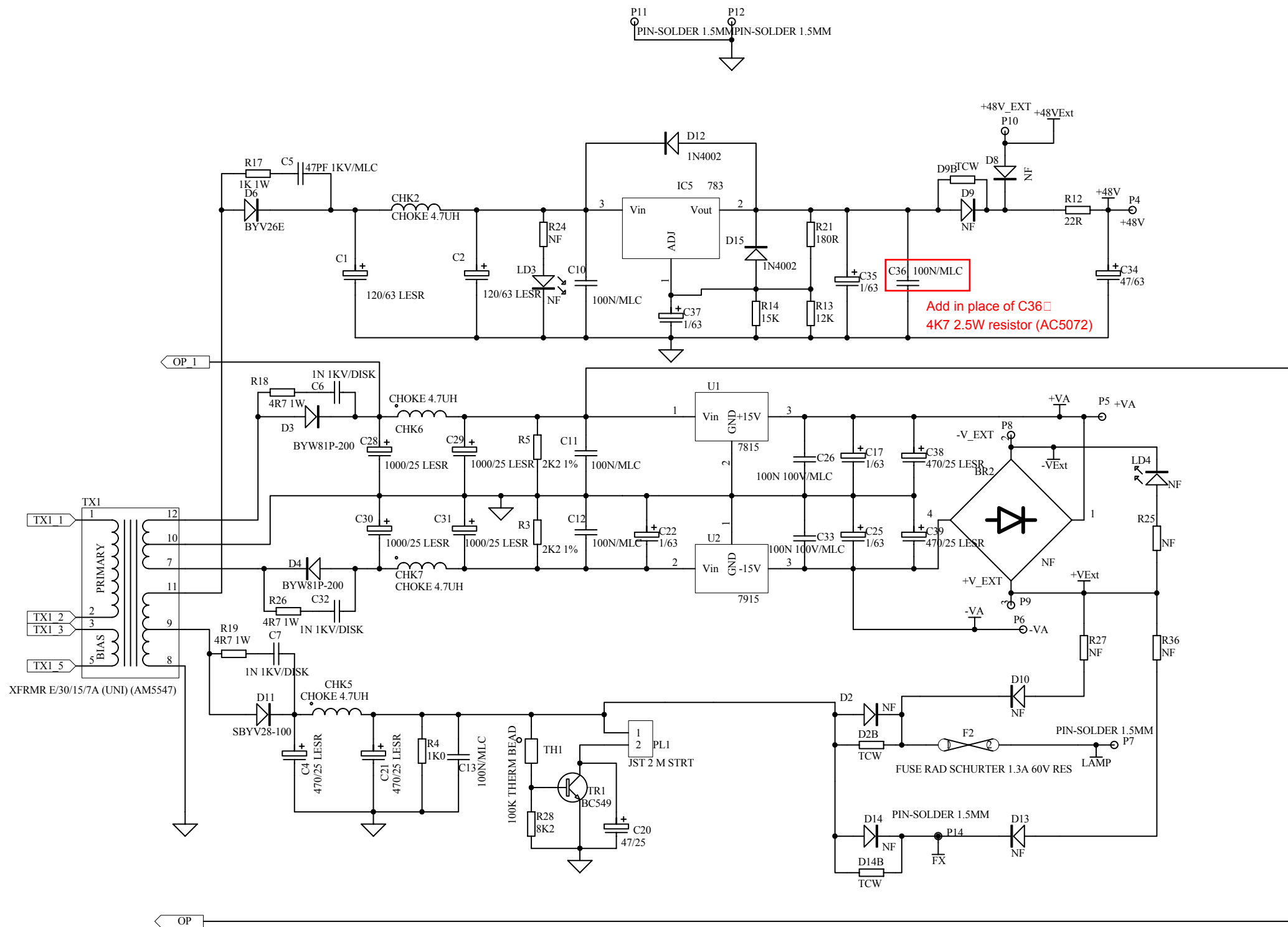
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	CHK BY
1	AAT	20-02-03	SRT
2	AAT	09-04-03	SRT
3	SRT	14-07-03	Text
4	SRT	10-11-03	Text

FILE: AG5044\_4P2.SCH

PRINTED: 15:19:09 30-Jan-2004

TITLE: PA SERIES UNPOWERED PSU  
 PAGE:  
 DRG No: AG5044 ISSUE: 4 SHEET: 2 OF 3



- LK7 LINK TCW
- LK8 LINK TCW
- LK9 LINK TCW
- LK10 LINK TCW
- LK11 LINK TCW
- LK12 LINK TCW
- LK13 LINK TCW
- LK14 LINK TCW

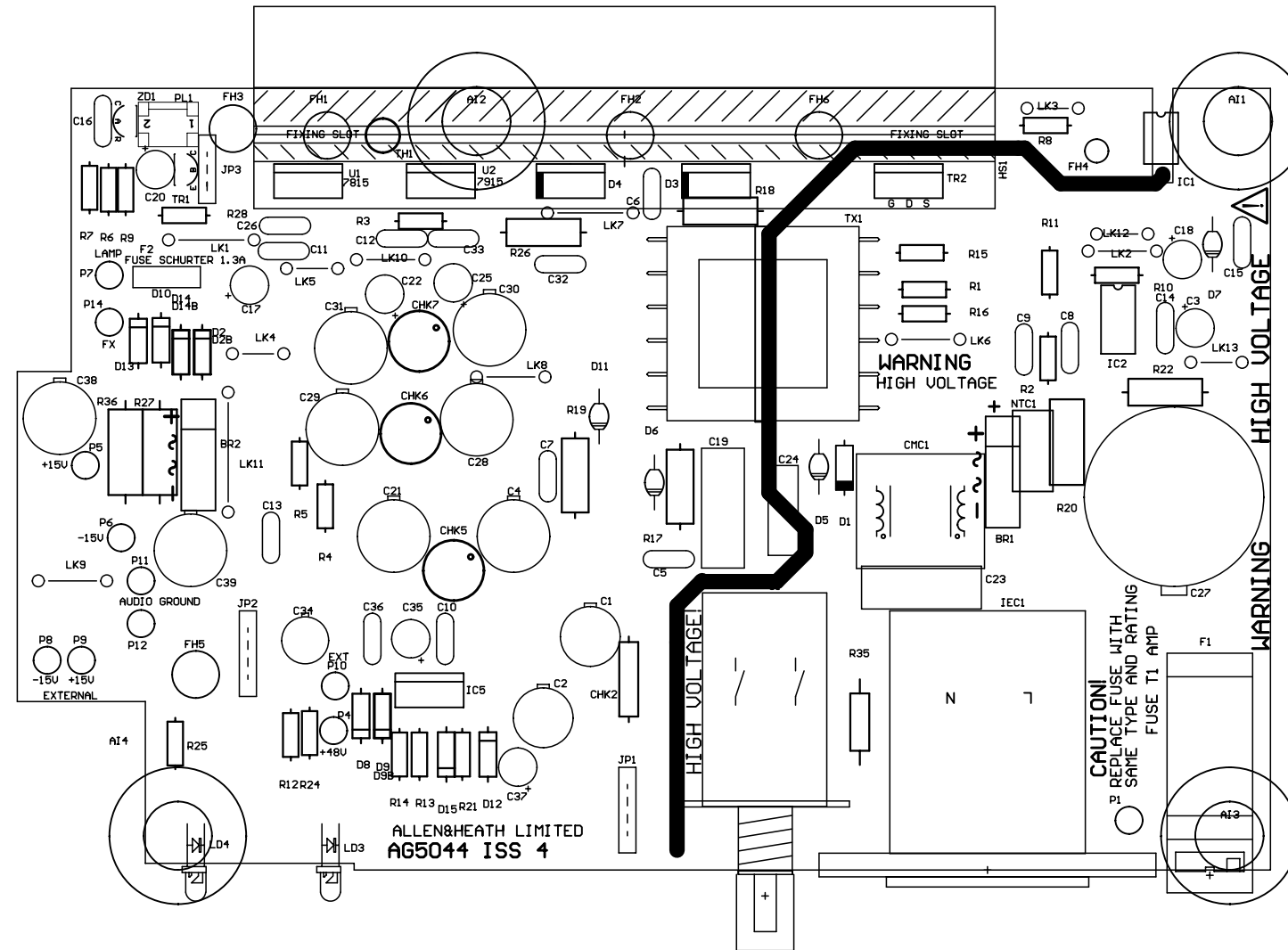
**ALLEN&HEATH**  
 Kernick Industrial Estate,  
 Penryn, Cornwall,  
 England. TR10 9LU  
 Tel: +44 (0)8707 556250  
 Fax: +44 (0)8707 556251

ISSUE	BY	DATE	CHK BY
1	AAT	20-02-03	SRT
2	AAT	09-04-03	SRT
3	SRT	14-07-03	Text
4	SRT	10-11-03	Text

FILE: AG5044\_4P3.SCH

PRINTED: 15:19:09 30-Jan-2004

TITLE: PA SERIES UNPOWERED PSU  
 PAGE:  
 DRG No: AG5044 ISSUE: 4 SHEET: 3 OF 3



TOP OVERLAY

.GTO