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IRT Eurocard

Types AAA-3130

Stereo Audio Distribution Amplifier

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Instruction Book

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This instruction book applies to units later than S/N 9801000.

General Description

The IRT AAA-3130 is a high performance audio distribution amplifier. Its features allow standardisation on one ADA type to perform many functions with consequent overall cost savings.

The AAA-3130 can be used for either mono or stereo signals. Inputs and outputs are balanced connector types, which can be wired for unbalanced operation, if needed, for duplicating applications.

Front panel access is provided for the gain adjustment of Left and Right channels from zero output to the maximum of the selected gain range.

LED's on the front panel indicate the presence of audio on each channel and balanced output jacks are provided for front panel monitoring.

Optional plug in sub-boards may be fitted to suit special applications:

AAO-3130: FACTS stereo oscillator module. Left continuous & right interrupted with remote ADA/oscillator control switching.

CAA-3130: Remote select Stereo/L+R/L-mono/R-mono and L-phase reversal control module.

CAA-3132: Remote L&R gain, balance, stereo/mono and phase control module.

Applications:

- **Stereo signal duplication and distribution.**
- **Level matching and balancing.**
- **Stereo/mono switching.**
- **Inline tone generation.**

Standard features:

- **Selectable stereo or mono mode.**
- **Balanced inputs and outputs**
- **Front panel monitoring jacks.**
- **LED audio activity indicators.**
- **Front panel gain adjustments.**
- **Optional remote control.**
- **Optional in line stereo tone generator.**
- **Selectable gain ranges: +6 dB, +12 dB & +18 dB.**
- **Maximum output level +24 dBu.**
- **Extended bandwidth option for ACS or timecode.**

Technical Specifications
IRT Eurocard module
Type AAA-3130

Inputs: Left/Mono and Right

Type	Tranformerless, balanced, bridging.
Impedance	> 10 kΩ.
Maximum input level	+24 dBu (6 dB gain mode)
Input CMR	> 55 dB 20 Hz to 20 kHz

Outputs:

Main: (Located on rear assembly.)

Type	Transformerless, balanced.
Number	10 (10 mono or 5 L and 5 R).
Impedance	< 40 Ω.
Maximum output level	+24 dBu into 600 Ω.
Maximum output loading	10 x 600 Ω or up to 26 High Z.
DC on output	< ±20 mV.

Monitoring: (Located on front panel.)

Type	Transformerless, balanced.
Number	2 (L and R) 3.5 mm.
Impedance	< 70 Ω.
Maximum output level	+24 dBu into 600 Ω.
Minimum output load	1 kΩ.
DC on output	< ±20 mV.

Indicators:

Audio activity	2 front panel LED's set for +4 dBu @ 1 KHz. (user adjustable).

Performance:

Gain		Internally linked to a maximum gain of +6, +12 or +18 dB.
Frequency response		+ 0/- 0.3 dB for 20 Hz to 20 kHz.
Harmonic distortion		< 0.005% 20 Hz to 20 KHz at +20 dBm.
Noise		-110 dB, Ref. +24 dBm 20 to 20 kHz.
Crosstalk;	Left/right	-75 dB, 20 Hz to 20 kHz.
	Amplifier/amplifier	-80 dB, 20 Hz to 20 kHz.

Power Requirements: 28 Vac CT (14-0-14) or ± 16 Vdc.

Power consumption <5 VA.

Connectors: 3130 (standard) Phoenix plugable screw block.

Other:

Temperature range		0 - 50° C ambient.
Mechanical		Suitable for mounting in IRT 19" rack chassis with input, output and power connections on the rear panel.
Finish:	Front panel	Grey, black lettering & red IRT logo.
	Rear assembly	Detachable silk-screened PCB with direct mount connectors to Eurocard and external signals.
Dimensions		6 HP x 3 U x 220 mm IRT Eurocard.

Supplied accessories: ZAA-3130 rear connector assembly with Phoenix plugable compression screw terminals.
Matching connectors for audio inputs & outputs supplied.

Due to our policy of continuing development, these specifications are subject to change without notice.

Internal Adjustments

Factory settings:

The following adjustable resistors are factory set and should not be adjusted unless a component has been changed. They are not 'operational' controls. Before adjusting any of these controls allow time for the AAA-3130 to reach temperature stability.

RV 1 "Left' Common Mode Rejection.
Adjusted to reduce input common mode signals to a minimum at the output of the AAA-3130.

RV 2 "Right' Common Mode Rejection.
Adjusted to reduce input common mode signals to a minimum at the output of the AAA-3130.

User settings:

Audio activity indicators:
RV 5 "Left & Right" Level detector threshold.

RV 5 is located on the reverse side of the main PCB. To access this control it is necessary to remove the shield plate from the DA. After adjustment, the shield plate must be replaced to preserve the inter-module crosstalk noise characteristics.

Note that RV5 sets the threshold level for both channels.

Detector threshold point is measured at the output of the DA.
This setting may be adjusted to a value consistent with normal operating level.
Factory setting is +4 dBu @ 1 KHz.

Maximum gain:

Left channel	LK 8 set as designated on PCB overlay for +6, 12 or 18 dB max.
Right channel	LK 7 set as designated on PCB overlay for +6, 12 or 18 dB max.

See also *Configuration* and *Installation* sections following.

Configuration

The AAA-3130 may be configured for several modes of operation including remote control and conversion to a multi output oscillator with the addition of sub-modules. This is achieved by various link settings as outlined below. The AAA-3130 is normally delivered set for stereo operation, 6 dB maximum gain on both channels and no sub modules fitted.

Configuration Summary:

1.	Sub-modules:	No sub-module	LK 1 & LK 2 soldered on board.
		Any sub-module	Cut LK 1 & LK 2 on board.
		CAA-3130	Set to stereo mode as below.
		CAA-3132	Set to stereo mode as below.
		AAO-3130	Set to stereo mode as below. LK 7 & LK 8 are inoperative.
2.	Stereo/mono:	Stereo	LK 3 & LK 6 installed. LK 4 not installed.
		Mono L Input	LK 3, LK 4 & LK 5 installed. LK 6 not installed.
			LK 8 sets maximum gain. Gain adjust is only by RV 3 L gain.
			LK 7 and RV 4 are inoperative.
		Mono R Input	LK 3, LK 5, & LK 6 installed. LK 4 not installed
			LK 7 sets maximum gain. Gain adjust is only by RV 4 R gain.
			LK 8 and RV 3 are inoperative.

Installation

Operational Safety:

WARNING

Operation of electronic equipment involves the use of voltages and currents that may be dangerous to human life. Note that under certain conditions dangerous potentials may exist in some circuits when power controls are in the **OFF** position.
Maintenance personnel should observe all safety regulations.

Do not make any adjustments inside equipment with power **ON** unless proper precautions are observed. All internal adjustments should only be made by suitably qualified personnel. All operational adjustments are available externally without the need for removing covers or use of extender cards.

Pre-installation:

Handling:

This equipment may contain or be connected to static sensitive devices and proper static free handling precautions should be observed.

Where individual circuit cards are stored, they should be placed in antistatic bags. Proper antistatic procedures should be followed when inserting or removing cards from these bags.

Power:

AC mains supply: Ensure that operating voltage of unit and local supply voltage match and that correct rating fuse is installed for local supply.

DC supply: Ensure that the correct polarity is observed and that DC supply voltage is maintained within the operating range specified.

Earthing:

The earth path is dependent on the type of frame selected. In every case particular care should be taken to ensure that the frame is connected to earth for safety reasons. See frame manual for details.

Signal earth: For safety reasons a connection is made between signal earth and chassis earth. No attempt should be made to break this connection.

Installation in frame or chassis:

See details in separate manual for selected frame type.

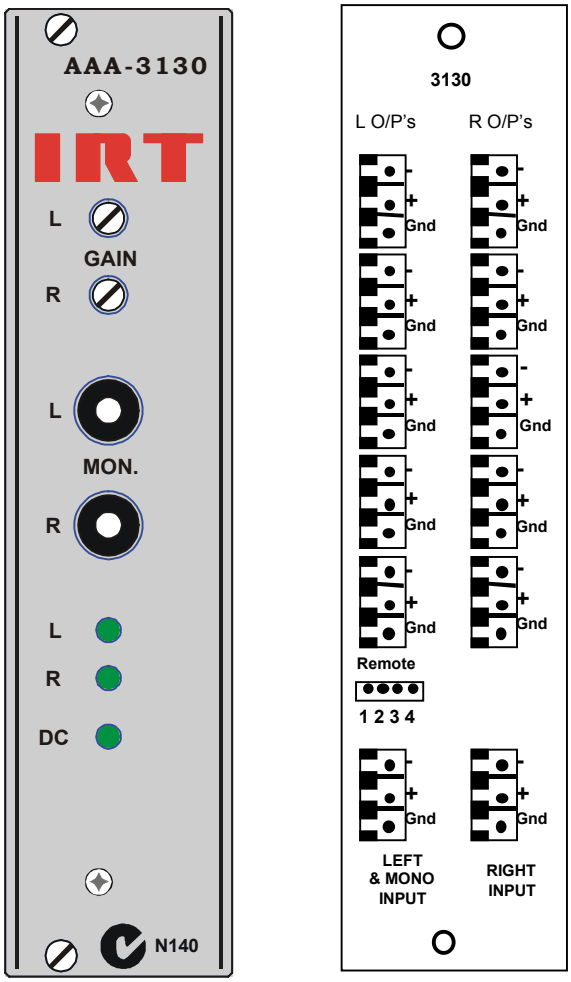
Audio Connections:
For mono operation it is usual to connect the input audio cable to the Left input pins. For stereo connect the Left input cable to the Left input and the Right input audio cable to the Right input.

The input and output connectors are 3 way balanced Phoenix connectors.

Where an unbalanced connection is required, the signal may be connected between either the + input and GND or the – input and GND. On the **input only** the unused input pin should be connected directly to GND. **Do not** ground the unused output pin, as this will damage the amplifier.

Front & rear panel connector diagrams

The following front panel and rear assembly drawings are not to scale and are intended to show relative positions of connectors, indicators and controls only.



IRT Eurocard Sub-module

Type AAO-3130

General Description

The AAO-3130 Four frequency switched stereo oscillator sub-module converts the supporting main module audio distribution amplifier into a multi output reference stereo oscillator for test or alignment purposes. Right channel can be set-up for either pulsed (interrupted every second) or continuous operation. This configuration conforms to the recommended practice of FACTS (Federation of Australian Commercial Television Stations) for channel identification.

Provision is made to remotely switch the frequency to a fixed 40 Hz, 400 Hz, 1 kHz or 10 kHz tone.

Technical Specifications
IRT Eurocard Sub-module
Type AAO-3130

Control input:

Remote switch component		Single pole 4 position or equivalent (Not supplied)
Connections:		On rear assembly of main module
		4 pin female polarised IDC # 1300-104
Pin	1	GND
	2	Relay 1 control
	3	Relay 2 control
	4	Relay 3 control (Oscillator On)

Performance:

(See main module specifications for other specifications)

Distortion	< 0.01% at + 8 dBm.
Frequency	Remote selectable to: 40 Hz, 400 Hz, 1 kHz or 10 kHz.

Power requirements:

	± 12 Vdc from main module
Power consumption	See main module specifications

Other:

Temperature range	0 - 50° C ambient
Dimensions	65 mm x 48 mm
Standard accessories	Matching connector for control input type: 1300-104
Optional accessories	Instruction manual.

Circuit Description

The circuit comprises of a low distortion Wein bridge oscillator, an astable multivibrator and a voltage controlled switch with a remote control facility to select the operating frequency.

The oscillator output is passively split with one output fed directly to the left output.

The other output is fed via an FET which is gated on and off by a square wave oscillator to provide an output which is alternatively on and off. This if fed to the right output.

The gating frequency may be trimmed by adjusting potentiometer RV 1 which sets the frequency of the astable multivibrator U 2.

The normal input circuitry of the distribution amplifier is bypassed when the oscillator is switched in by relay RL3.

Control of frequency is by way of grounding contacts, which activate relays, RL1 and RL2, on the sub-board to select the correct time constants in the circuit. These are arranged so that four commonly used frequencies may be obtained using only two control relays operated over a three-wire circuit.

The circuit does not contain a latch for the remote input and the external contact must therefore be maintained for as long as the selected frequency is required.

In the absence of any remote input both relays will turn off and the oscillator will default to 400 Hz.

RL3 must be switched on for the oscillator output to be switched to the main board outputs. With RL3 switched off, the main board functions as a normal audio distribution amplifier.

Configuration

Before installing the AAO-3130, on the main board, AAA-3130, cut the on board links LK1 and LK2. Ensure the main board is set for stereo operation as outlined in AAA-3130 the main module section.

For pulsed tone on right channel, on AAO-3130 sub-board, set link settings to LK1 closed and LK2 open. For continuous tone on right channel, on AAO-3130 sub-board, set link settings to LK1 open and LK2 closed. Left channel always remains as a continuous tone.

Installation

Module

To install the sub-module onto the main module first ensure that the proper mode of operation has been selected on both the main and sub-modules.

Then remove straps LK 1 and LK 2 on the main module.

Hold the sub-module so that the legends on the sub-board and the legends on the main module have the same orientation.

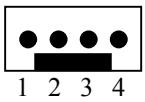
Place the sub-module over the connector pins of the main module. The 16 pins fit into 16 holes in the sub-module. Push the sub-board down until it rests on the orange insulation of the pins.

Operation

Remote control of frequency

To switch in the oscillator, relay RL3 must be switched on. This is done by connecting pins 1 and 4 on the 4 pin header on the rear connector of the main module's rear connector unit.

The frequency of the oscillator may be set using pins 2 and 3 connected to pin 1 of the remote connector on the rear assembly of the main module. If no connection is made the oscillator will default to 400 Hz operation.



As the remote switches and wiring carry the full relay current it is important that the losses in the external wiring be kept to a minimum.

Refer to Drawing 804213 for modes of operation.

Frequency	Connect to Pin 1 (GND)
40 Hz	2
400 Hz	Default N/C
1 kHz	2 & 3
10 kHz	3

IRT Eurocard Sub-board

Type CAA-3130

General Description

The CAA-3130 can remotely switch between mono and stereo modes or reverse the phase of the left channel in stereo mode. Links on the board allow a choice of either a -3 dB or -6 dB mono mix (Only one mode is possible at any time).

1. Normal stereo operation.
2. Reverse phase of left channel
3. Switch left channel input to mono output.
4. Mix left and right channels to mono output with selectable 3 dB or 6 dB cut in signal level.

Technical Specifications
IRT Eurocard Sub-module
Type CAA-3130

Control input:

Remote gain component		(Not supplied)
Connections:		On rear assembly of main module
		3 pin female polarised IDC # 1300-103-426
Pin	1	GND
	2	Relay 1 control
	3	Relay 2 control

Performance:

(See main module specifications for other specifications)

Operation modes	Remote selectable: (Only one mode is possible at any time) Stereo (normal) Invert left channel phase Mono output from left input Mix of stereo input to mono output
Frequency Response	+0 / -0.5 dB 20 Hz to 20 KHz.
Distortion	< 0.1% at +20 dBm.
Noise	-100 dB wrt +24 dBm.
Attenuation mono mix mode	-3 dB or -6 dB selectable by links.

Power requirements:

	± 12 Vdc from main module
Power consumption	See main module specifications

Other:

Temperature range	0 - 50° C ambient
Dimensions	65 mm x 48 mm
Standard accessories	Matching connector for control input type: 1300-103-426
Optional accessories	Instruction manual.

Circuit Description

The CAA-3130 is comprised of a single operational amplifier in series with the left channel audio whose gain is determined by four relays which determine the path and thereby the amplitude of the signals in the circuit.

With no relays activated the amplifier functions as a voltage follower and has no effect on the phase or gain of either channel.

When RL 1 is activated the input to U 1 is switched from the non-inverting to the inverting input resulting in a phase reversal of the left channel signal.

When RL 2 is activated the right channel output is switched from the right input to the left output and both left and right channels receive the signal from the left channel input of the main module. In this mode the right channel input of the main module is disconnected from the circuit and gain control link LK 7 on the main board will have no effect.

When both RL 1 & RL 2 are activated simultaneously the right output signal is derived from the left output as described above.
However in this case the right and left input signals are also switched to the inverting input of U 1 and summed via resistors R 1, R 3, R 5 & R 6 which determine the gain of the resultant mono mix.

Links LK 1 & LK 2 are provided to bypass resistors R 3 & R 6 respectively.

> Both links should either be installed or removed. Operation with only one link installed will result in the gain of the two channels not being matched under some circumstances.

With the links installed the gain is unity for each signal with an overall result of +6 dB for the resultant mix.
With LK 1 & LK 2 removed the input signal from each channel is attenuated and the overall gain for each signal is reduced to 0.71 resulting in a +3 dB mix.

Note that if the links are removed for the +3 dB mix option, that operation of RL 1 on its own to provide phase reversal of the left channel will also result in a 1.5 dB attenuation of the left channel when the phase is reversed.

Configuration

The main module must first be configured to accept the sub-module. This is achieved by various link settings as outlined in the main module manual.

The main module is normally delivered set for stereo operation and no sub-modules fitted.
Before installing the CAA-3130 check that the main module is set to stereo mode as detailed in main module instruction manual.

Installation

Module

To install the sub-module onto the main module first ensure that the proper mode of operation has been selected on both the main and sub-modules.

Then remove straps LK 1 and LK 2 on the main module.

Hold the sub-module so that the legends on the sub-board and the legends on the main module have the same orientation.

Place the sub-module over the connector pins of the main module. The 16 pins fit into 16 holes in the sub-module. Push the sub-board down until it rests on the orange insulation of the pins.

Remote control

CAA-3130 can be remotely switched to provide one of the following modes of operation (Only one mode is possible at any time).

1. Normal stereo operation.
2. Reverse phase of left channel
3. Switch left channel input to mono output.
4. Mix left and right channels to mono output with selectable 3 dB or 6 dB cut in signal level.

To configure these options see Drawing 803013.

To control the operation mode a switch should be wired between the pins marked Remote "1", "2" and "3" on the RB-733 rear assembly.
Pin connections are:

Pin 1	common ground
Pin 2	relay 1 control
Pin 3	relay 2 control

The CAA-3130 is supplied with two links LK 1 & LK 2 bridging resistors R3 and R6 respectively.
This configuration sets the gain to -6 dB in stereo to mono mix mode.
To change attenuation in this mode to -3 dB remove links LK 1 & LK 2.

IRT Eurocard Sub-board
Type CAA-3132

General Description

This plug-in option for selected IRT audio distribution amplifiers can be configured to provide any two of the following modes of operation:

- STEREO FADE over 75 dB range
- STEREO TRIM of 6 dB
- CROSS FADE over 75 dB or 6 dB range
- MIX L+R & FADE both by up to 75 dB.

Only two modes of operation are possible at the same time.

Technical Specifications
IRT Eurocard Sub-module
Type CAA-3132

Control input:

Remote gain component		10 KΩ potentiometer (Not supplied) One required for each of the two functions.
Connections:		On rear assembly of main module 4 pin female polarised IDC # 1300-104-426
Pin	1	CCW connection of the potentiometers (GND)
	2	Rotor for first gain element
	3	CW connection of the potentiometers (1 KΩ in series with + 12 Vdc)
	4	Rotor for second gain element.

Performance:

(See main module specifications for other specifications)

Frequency Response	+0 / -0.5 dB 20 Hz to 20 KHz.
Harmonic Distortion	< 0.1% 20 Hz to 20 KHz at +20 dBm.
Noise	-94 dB, Ref. +24 dBm 20 Hz to 20 KHz.
Attenuation	> 75 dB.(Measurement for stereo fade mode)

Power requirements:

	± 12 Vdc from main module
Power consumption	See main module specifications

Other:

Temperature range	0 - 50° C ambient
Dimensions	65 mm x 48 mm
Standard accessories	Matching connector for control input type: 1300-104-426
Optional accessories	Instruction manual.

Circuit Description

The circuit uses a TDA1074A variable gain control IC to perform the configured function. Configuration is by means of resistors that determine the function as shown on diagram 804141.

As received from the factory the first element is set to Stereo Trim and the second element to Stereo Balance.

The input control circuits are isolated from the signal path and use DC controls which are filtered by the combinations of R 2, C 1 & R4, C7 to provide immunity to noise, either in the external wiring or in the operation of the external potentiometers.
The operating range is determined by the type of cable used and the degree of noise in the environment.

For best results over long distances a low loss screened cable should be used and the route carefully chosen to avoid proximity to high level noise sources.
For short distances flat IDC ribbon cable will suffice.

Configuration

The main module must first be configured to accept the sub-module. This is achieved by various link settings as outlined in the main module manual.

The main module is normally delivered set for stereo operation and no sub-modules fitted. Before installing the CAA-3132 set the main module to stereo mode as detailed in main module instruction manual.

The CAA-3132 can be configured to provide any two of the following modes of operation:-

1. Stereo Fade — Up to 75 dB attenuation on both channels simultaneously.
2. Trim — As above, but range limited to 6 dB.
3. Cross Fade — Fade down left, fade up right/ fade down right, fade up left. Up to 75 dB range.
4. Balance — As above but range limited to 6 dB.
5. Mix L+R & Fade — Add left to right and fade both by up to 75 dB.

To configure these options see Drawing 804141.

Installation

Module

To install the sub-module onto the main module, first ensure that the proper mode of operation has been selected on both the main and sub-modules.

Then remove straps LK 1 and LK 2 on the main module.

Hold the sub-module so that the legends on the sub-board and the legends on the main module have the same orientation.

Place the sub-module over the connector pins of the main module. The 16 pins fit into 16 holes in the sub-module. Push the sub-board down until it rests on the orange insulation of the pins.

Remote control

To control the two gain elements two remote 100 KΩ variable resistor should be wired between the pins of J3 on the main module rear assembly marked Remote “1”, “2” and “3”, for the first element and “1”, “4” and “3” for the second element.

Connect
Pin 1 to the bottom of both potentiometers (CCW connection)
Pin 2 to the slider of the second element potentiometer (rotor connection) (Trim)
Pin 3 to the top (CW connection).
Pin 4 to the slider of the first element potentiometer (rotor connection) (Balance)

Maintenance & storage

Maintenance:

No regular maintenance is required.

Care however should be taken to ensure that all connectors are kept clean and free from contamination of any kind. This is especially important in fibre optic equipment where cleanliness of optical connections is critical to performance.

Storage:

If the equipment is not to be used for an extended period, it is recommended the whole unit be placed in a sealed plastic bag to prevent dust contamination. In areas of high humidity a suitably sized bag of silica gel should be included to deter corrosion.

Where individual circuit cards are stored, they should be placed in antistatic bags. Proper antistatic procedures should be followed when inserting or removing cards from these bags.

Warranty & Service

Equipment is covered by a limited warranty period of three years from date of first delivery unless contrary conditions apply under a particular contract of supply. For situations when "**No Fault Found**" for repairs, a minimum charge of 1 hour's labour, at IRT's current labour charge rate, will apply, whether the equipment is within the warranty period or not.

Equipment warranty is limited to faults attributable to defects in original design or manufacture. Warranty on components shall be extended by IRT only to the extent obtainable from the component supplier.

Equipment return:

Before arranging service, ensure that the fault is in the unit to be serviced and not in associated equipment. If possible, confirm this by substitution.

Before returning equipment contact should be made with IRT or your local agent to determine whether the equipment can be serviced in the field or should be returned for repair.

The equipment should be properly packed for return observing antistatic procedures.

The following information should accompany the unit to be returned:

1. A fault report should be included indicating the nature of the fault
2. The operating conditions under which the fault initially occurred.
3. Any additional information, which may be of assistance in fault location and remedy.
4. A contact name and telephone and fax numbers.
5. Details of payment method for items not covered by warranty.
6. Full return address.
7. For situations when "**No Fault Found**" for repairs, a minimum charge of 1 hour's labour will apply, whether the equipment is within the warranty period or not. Contact IRT for current hourly rate.

Please note that all freight charges are the responsibility of the customer.

The equipment should be returned **to the agent who originally supplied the equipment** or, where this is not possible, to IRT direct as follows.

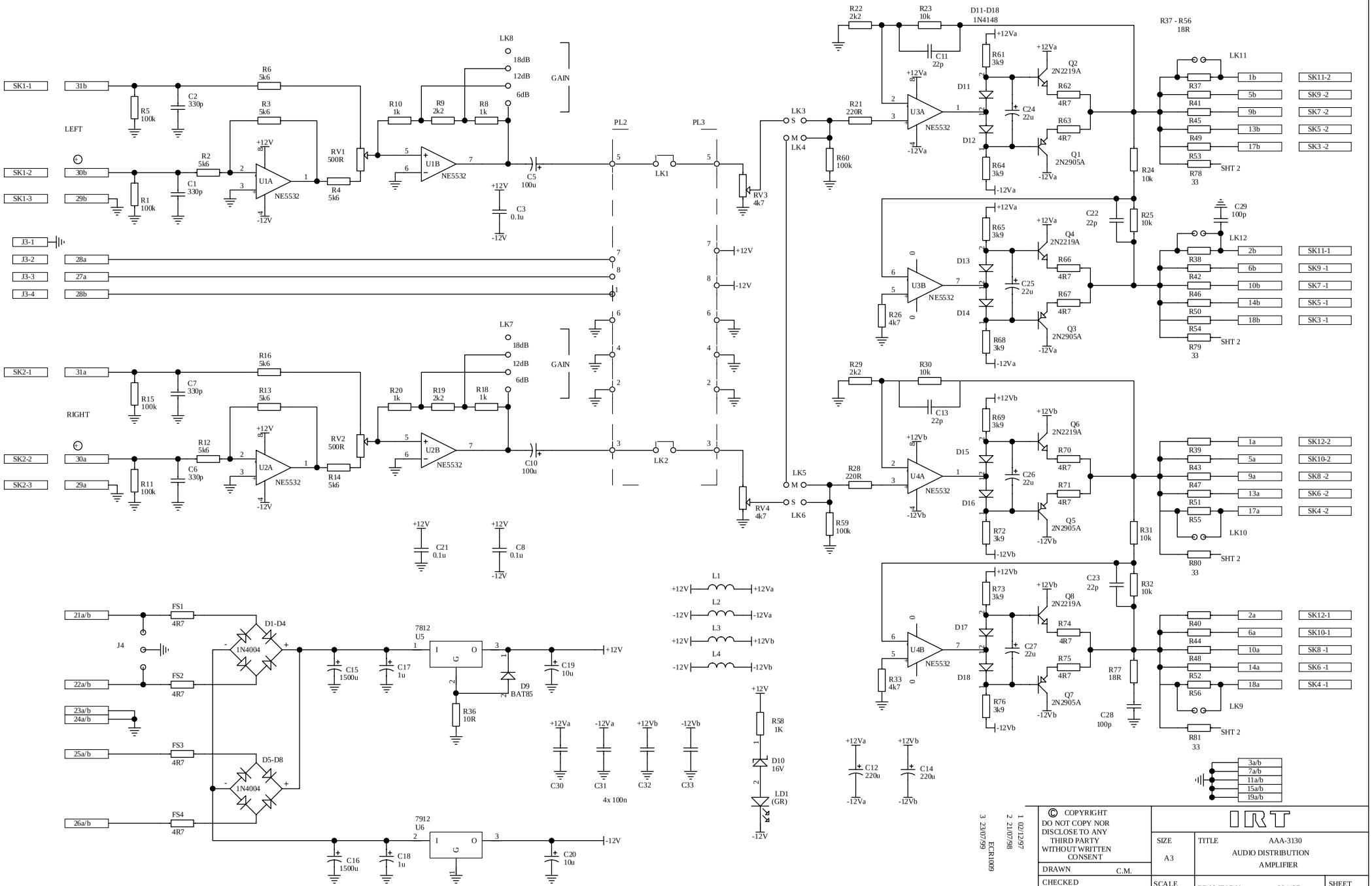
Equipment Service
IRT Electronics Pty Ltd
26 Hotham Parade
ARTARMON
N.S.W. 2064
AUSTRALIA

Phone: 61 2 9439 3744 Fax: 61 2 9439 7439
Email: service@irtelectronics.com

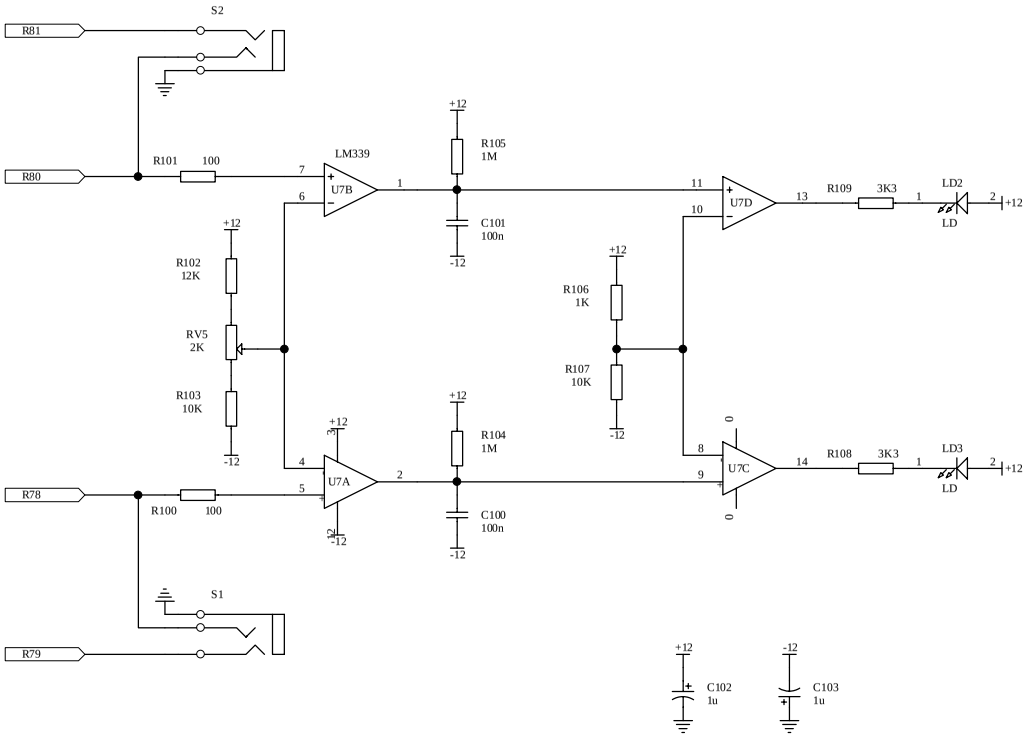
Drawing index

Unless otherwise specified all references on diagrams to AA-604 or AA-704 refer equally to the AAA-3130.

Drawing #	Sheet #	Description
804137	1	AAA-3130 stereo audio distribution amplifier main circuit schematic
804137	2	AAA-3130 stereo audio distribution amplifier audio monitoring circuit schematic
804213		AAO-3130 Switched frequency stereo oscillator sub-board
804388		CAA-3130 Remote control sub-board
804141		CAA-3132 Remote control sub-board



NOTE : WHEN USING ZAA-3130M SHORT THE FOLLOWING RESISTORS = R37,38,55,56
: FOR PCB ISS3 SHORT LINKS 9 TO 11



1 02/12/97

DRAWN C.M.
CHECKED
ENG. APP.
CONTRACT No.

IRT

SIZE A3

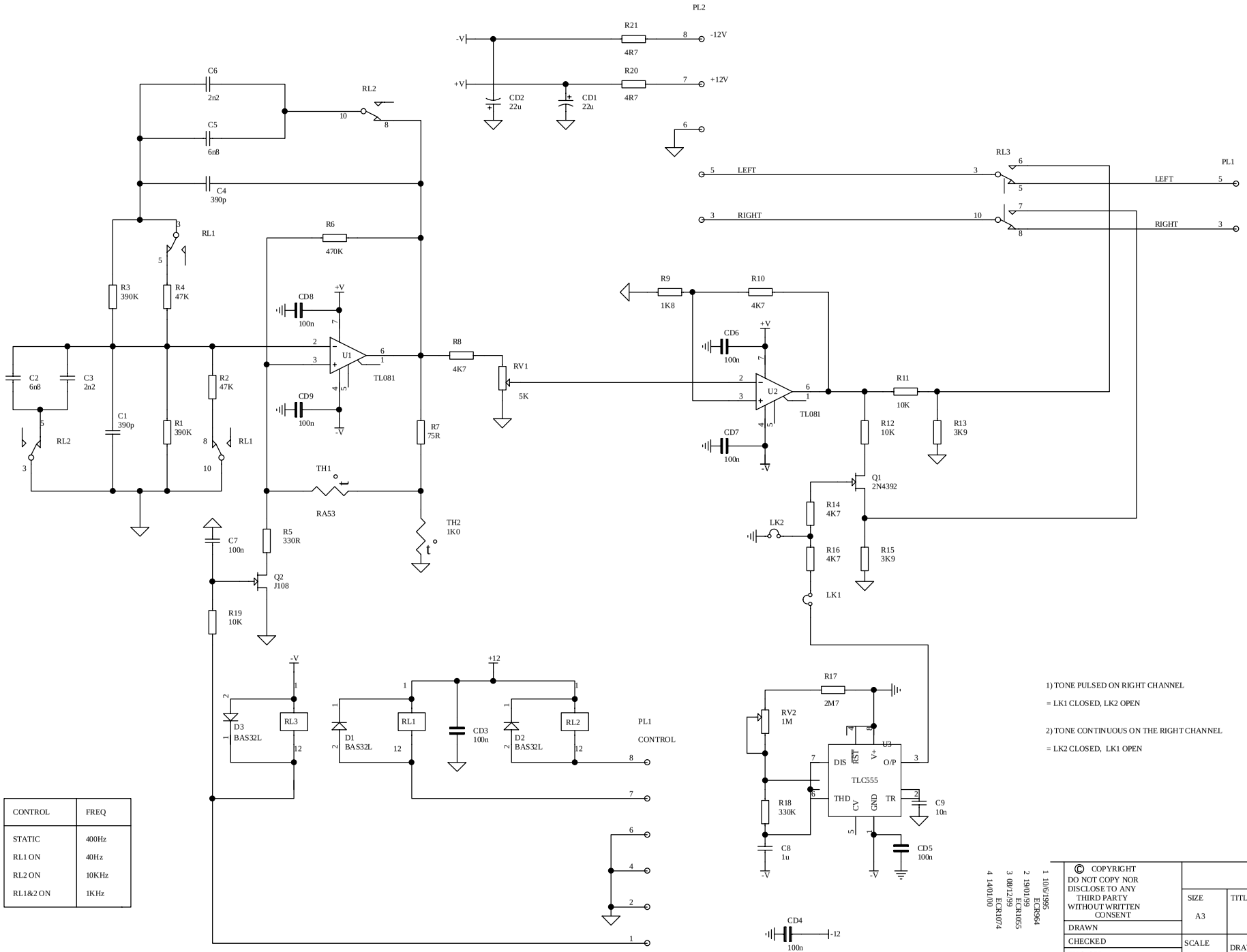
TITLE AAA-3130
AUDIO DISTRIBUTION
AMPLIFIER

SCALE

DRAWING No. 804137

SHEET 2 OF 2

IRT Electronics Pty. Ltd.
ARTARMON NSW AUSTRALIA 2064



CONTROL	FREQ
STATIC	400Hz
RL1 ON	40Hz
RL2 ON	10KHz
RL1&2 ON	1KHz

1) TONE PULSED ON RIGHT CHANNEL

= LK1 CLOSED, LK2 OPEN

2) TONE CONTINUOUS ON THE RIGHT CHANNEL

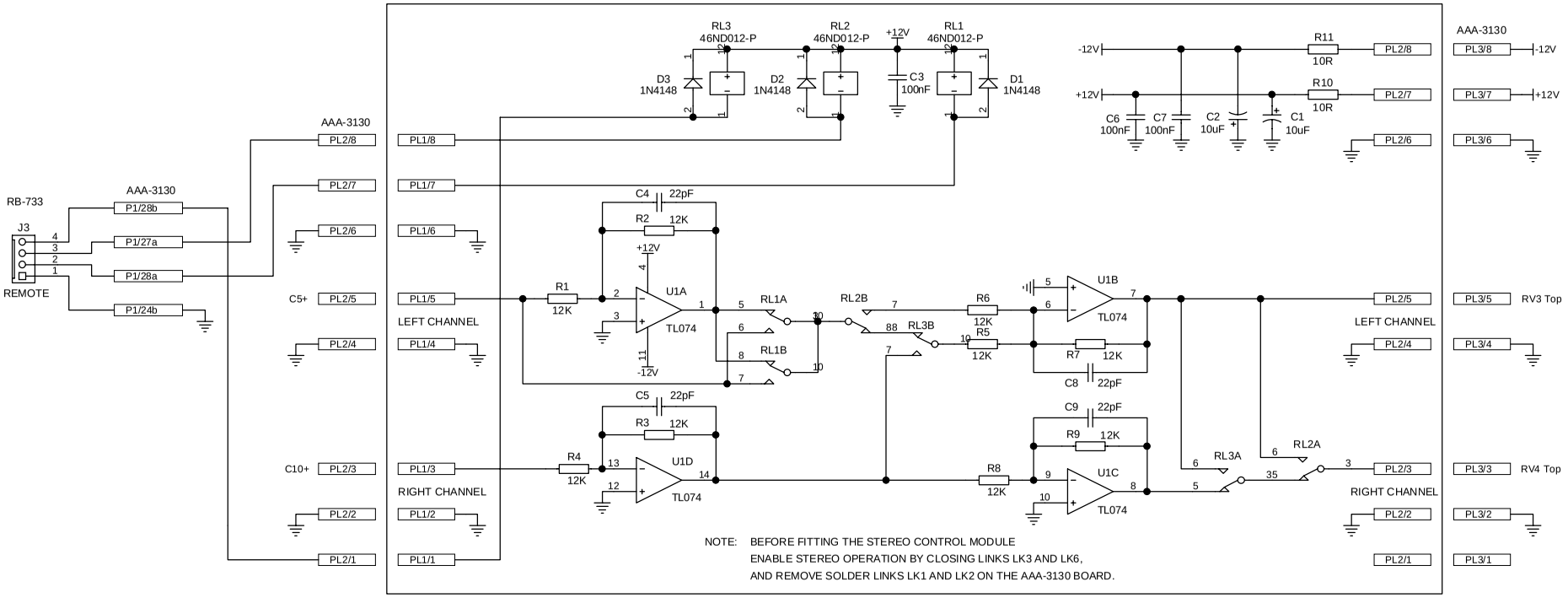
= LK2 CLOSED, LK1 OPEN

1	10/6/1995 ECR964
2	19/01/99 ECR1055
3	08/12/99 ECR1074
4	14/01/00

PC804214

IRT

SIZE A3	TITLE AAO-3130 STEREO OSCILLATOR	
DRAWN		
CHECKED	SCALE	DRAWING No. 804213
ENG. APP.		SHEET 1 OF 1
CONTRACT No.	IRT Electronics Pty. Ltd. ARTARMON NSW AUSTRALIA 2064	



NOTE: BEFORE FITTING THE STEREO CONTROL MODULE
ENABLE STEREO OPERATION BY CLOSING LINKS LK3 AND LK6,
AND REMOVE SOLDER LINKS LK1 AND LK2 ON THE AAA-3130 BOARD.

NO CONNECTION	STATIC	STEREO OPERATION
J3/1 - J3/2	RL1 ON	LEFT CHANNEL PHASE INVERT
J3/1 - J3/3	RL2 ON	LEFT CHANNEL MONO
J3/1 - J3/4	RL3 ON	RIGHT CHANNEL MONO
J3/1 - J3/3 and J3/4	RL2+RL3 ON	STEREO TO MONO MIX
J3/1 - J3/2 + J3/3 + J3/4	RL1+RL2+RL3 ON	STEREO TO MONO MIX WITH 'L' PHASE REVERSAL

PCB 804389

1 02-02-2000

DRAWN K.N.
CHECKED
ENG. APP.
Revision: 1
Date: 1-Feb-2001

IRT

SIZE A3

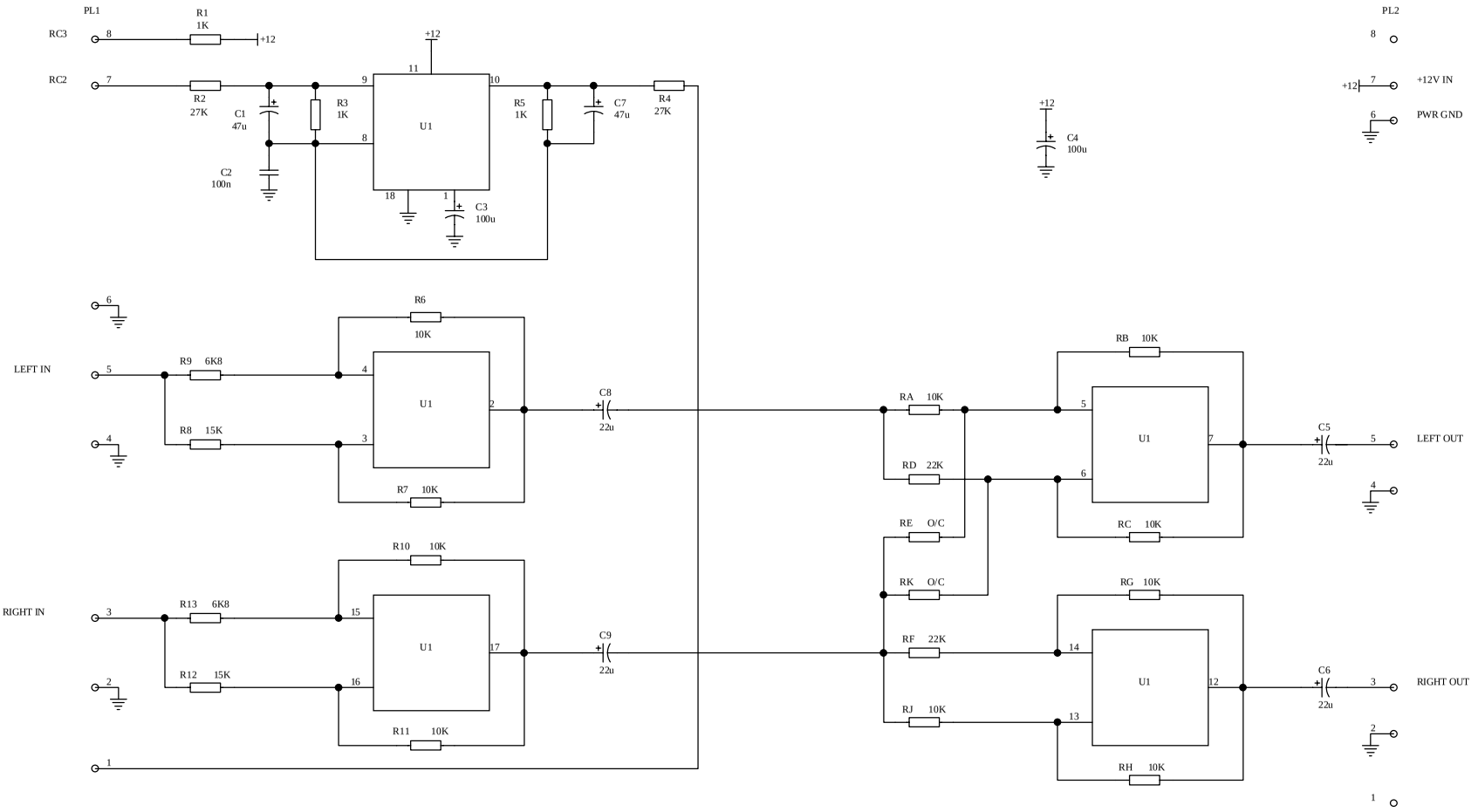
Title CAA-3130
STEREO CONTROL MODULE

SCALE N.T.S.

Drawing No. 804388

Sheet 1 of 1

IRT Electronics Pty. Ltd.
ARTARMON NSW AUSTRALIA 2064



	RA	RC	RD	RE	RF	RH	RJ	RK
STEREO FADE	10K	SC	OC	OC	10K	SC	OC	OC
CROSS FADE	10K	10K	OC	OC	10K	10K	10K	10K
AUDIO OVER	10K	10K	33K	OC	10K	10K	10K	10K
MIX L+R + FADE	6K8	SC	OC	6K8	10K	10K	10K	OC
TRIM	10K	10K	22K	OC	10K	10K	22K	OC
BALANCE	10K	10K	22K	OC	22K	10K	10K	OC

NOTE: RB & RG ARE ALWAYS 10K

1 05/11/97

IRT

DRAWN	SIZE A3	TITLE CAA-3132 REMOTE CONTROL SUB-BOARD
CHECKED	SCALE	DRAWING No. 804141
ENG. APP.		SHEET 1 OF 1
CONTRACT No.	IRT Electronics Pty. Ltd. ARTARMON NSW AUSTRALIA 2064	