"DISTEQ"

USER MANUAL

1.1 INTRODUCTION

The D & R Disteq is an extremely compact and easy to handle 19" rack mountable mixing console, which incorporates all the necessary facilities for recording, public address and discotheques.

The Disteq is the answer to all those situations where a versatile, "high quality" modular mixer is needed.

A choice of 2 modules is available. A mic/line module and a stereo line/phono module. The 19" rack frame can accept a maximum of 10 input modules.

To become familiar with all the facilities of the Disteq, we suggest you read this manual very carefully.
It will give you important information about the operation, installation and service of this high quality product.

D & R Electronica b.v.

2.0 CHANNEL

The Disteq channels are either mono or stereo. The front panel controls only differ in indications. We shall describe the mono and stereo channels separately.

2.1 Mic/line input channel

The channel can operate in either the microphone or line input mode. The microphone input is an electronically balanced, transformerless design. The input impedance is greater than 2k Ohms, which will not cause any loading effects (signal loss) on today's studio microphones.
The line level input has an input impedance greater than 10k Ohms, which is high enough to interface with all available peripheral equipment, keyboards and CD players.

2.2 Mic/line switch (a)

The line input is selected when this button is pushed down. The channel input is now connected to the unbalanced line input jack.
In the up-position of this switch, the balanced microphone amplifier is connected to the xlr input on the back of this module.

2.3 Mic/line gain (b)

The microphone input can be varied between -30dB and -74dB of gain with a good overload margin left.
The line input gain (the same control but with selected line input) can be varied between -30dB and +20dBu.
Both the mic and line amplifiers have their own input connectors. The mic input is a balanced xlr connector. The line input amp is unbalanced on a stereo jack.

2.4 Equalizer

The equalizer of the Disteq is a very musical and versatile section with three controls to span the entire audio spectrum.

2.5 High (c)

16dB of boost or cut is available at 10kHz, with a shelving curve, which means that when the desired amount of boost or cut is reached, all frequencies from 10K and above are boosted or cut the same.

2.6 Mid (d)

This control has a range of + and - 16dB with a "bell" curve. Having reached its maximum/minimum at its center frequency (1kHz) the amplitude response returns to zero on either side of that frequency.
A plot from that response shows a bell shape. The bandwidth of that bell curve is fixed at 1.5 octaves.

2.7 Low (e)

The low control has a shelving characteristic, just like the high control, 16dB of boost or cut is from 60Hz down.

3.0 AUXILIARY SECTION

There is one aux send control on each module. A second aux control is optional. This will be a concentric control on top of the already fitted control.

3.1 Aux sends (f)

The standard auxiliary send is normally set post-fader but can be changed to pre-fader by jumper settings.
There are two jumpers on the pcb, located between the pan-pot and the aux send.
Jumper B is for the pre/post setting of the standard aux send and jumper C for the pre/post setting of the optional concentric aux send.

The aux sends are designed to be post equalizer and post insert point.

4.0 THE PANPOT (g)

This control (with a 4.5 dB loss at its center point) pans the signal between the left and right master buss.

5.0 P.F.L. (h)

The p.f.l. switch (pre fader listen), enables you to listen to the channel signal before the fader without effecting the normal signal path to the master outputs.

6.0 CHANNEL FADER (i)

The channel fader has a slide length of 100 mm. and is manufactured to give an exceptionally smooth feel in operation.

7.0 CHANNEL IN/OUTPUTS

Located on the back of the console.

7.1 Microphone input (j)

This is the xlr input for balanced condensor or dynamic microphones. Pin 1 is earth, pin 2 is + inphase, and pin 3 is - out of phase .

7.2 Line input (k)

This is a 1/4" tip, ring sleeve jack, which is unbalanced. The tip is hot, while the ring and sleeve are wired to ground. This input has a sensitivity of -30dBu maximum to infinity. The input impedance is 10k Ohms. It will accept any line output of tape recorders, keyboards, CD players and so on.

7.3 Insert (l)

This is the channel insert (immediately before the channel fader).
The tip is the return, while the ring is the send, the sleeve is ground. In/Out level is 0 dBu.

8.0 STEREO INPUT CHANNEL

Basically there is not much difference between the mono and the stereo channel in controlling the sound. The mic input amp is replaced by a stereo phono input with R.I.A.A. equilization.
All the other electronics in the channel are doubled to achieve a full stereo output with a minimum of cross talk.
The panpot has changed into a balance control to justify incorrect balanced signals.

8.1 Phono/line (m)

The phono/line switch changes the sensitivity and frequency response of the stereo input channel. In the upper position the stereo channel can accept the signal from magnetic dynamic (m.d.) phono cartridges. The tip is wired to the left channel amps and the ring to the right channel amps. (v)
The phone amp has a built in correction amplifier which follows the standard R.I.A.A. frequency curve within 0.5 dB.
When the phono/line switch is pushed down, the other jack (w) can accept a stereo line signal. The tip is left and the ring is wired to the right channel. The input sensitivity is high to accept low levels from consumer products and musical instruments.

8.2 Gain (n)

The gain control of the stereo channel adjusts the incoming level of the phono cartridge or the stereo line input.

8.3 Equalizer (o, p, q)

The equilizer of the stereo channel has the same characteristics as the one designed in the mono channels. It consists of two shelving controls for high and low frequencies and a bell curve control for the mid frequencies.

8.4 Aux sends (r)

The aux send is factory set post fader, but pre fader settings are easy to accomplish by jumper change on the p.c.b. located between the aux send and the balance potentiometers. The stereo signals are combined into a mono signal for the aux master outputs.
A second aux send is also optional on this stereo channel by way of a concentric control on top of the already mounted standard aux send.

8.5 Balance (s)

This control is able to correct incorrect stereo balanced signals. It can even cancel one signal, either left or right.

8.6 Fader (u)

The stereo channel fader has a slide length of 100 mm. and is manufactured to give an exceptionally smooth feel in operation.
A "start switch" is optional and can be fitted when ordered in advance.

9.0 CHANNEL IN/OUTPUTS

These are located at the back of the console and are accessable through jack sockets.

9.1 Phono input (v)

This is a stereo input for phono cartridge of the magnetic dynamic type. Tip is left, ring is right and sleave is ground.

9.2 Line input (w)

The line input is a stereo jack socket accepting a quarter inch stereo plug. Tip is left and ring is right, sleeve is ground. If a mono signal has to be connected to the stereo channel, it is necessary to short circuit both tip and ring with each other.
Note: If a mono jack plug is inserted only the left channel will function.
The right channel path input is shorted to ground.

9.3 Remote (x)

The remote stereo jack connector is the optional, start/remote fader switch.
If a fader start switch is fitted, the tip of the stereo jack socket will short to ground when the fader is up.
The tip of the stereo jack socket will short to the ring when the fader is fully down.

10.0 MASTER MODULE

The master module of the Disteq contains all the electronics for the summing of the left/right signals, the aux signals and the control room monitoring as well as the power supply. The width of this module, 120 mm. is 4 times the width of the channel module.

10.1 Led bars (a)

The ledbars are peakreading instruments with attack and release times confirming worldstandards. The 0dB led lights when the output reaches +10dBu. This also conforms to studio standards. The peakreading ledbars are calibrated 6dB down from the output of the console. The ledbars will indicate all levels heard in the headphone/crm signal path.

10.2 Aux sends (b)

The aux sends (one is standard) controls the outgoing level to the aux outputs. Nominal level is +4dBu at 100 ohm output impedance.
A second aux master can be fitted on top of the already mounted aux send by way of a concentric control.

10.3 Aux returns (c)

The aux returns are line inputs for the mixing amps. All signals are fed to the mix amp and adjusted in level by the aux return controls.
The left control knob for the left output master and the right control knob for the right output master.

10.4 **Mono switch** (d)

The mono switch sums the left and right signals coming from the mix buss amps. The master outputs as well as the tape outputs are mono summed signals now. The position of the pan-pots and balance controls do not change the signal now.

10.5 **Pfl indicator** (e)

The pfl indicator lights whenever a pfl switch is activated on the channels. At the same time the crm (control room monitor) signal or headphone output is switched to accept signal from that channel or channels. If a pfl switch is activated from a mic/line channel, the signal will be mono. However, pushing a pfl switch on a stereo channel will allow you to hear that channel in full stereo.
The ledbars will follow the signal heard from the crm/headphone outputs.

10.6 **Faders** (f)

The same high quality 100 mm. faders used in the input channels are fitted in the master section.

10.7 **Crm/headphone output** (g, h)

This stereo output is a monitoring system to check all inputs and outputs of the mixer. The output is a quarter inch, tip, ring, sleeve jack. (tip is left, ring is right, and sleeve is ground).

The outputs are capable of driving amplifiers, equalizers, or headphones with an impedance of between 8 and 2000 ohms. 600 ohm headphones are advised for best results.

The signals heard through the headphones are the master output signals, however if you push a pfl switch on any channel, you will automatically hear that channel or channels. This can be mono or stereo, depending on what channel you activated the pfl switch.

10.8 **Power supply**

Housed in the master section, the power supply is a highly regulated circuit with a torroidal transformer to minimise hum pick-up.
A +18 volt phantome power supply is standard, (adequate for most condenser microphones), however we do have an optional 48 volt phantom power supply.

10.9 **Master in/outputs**

Located on the back of the master module, the master in/outs are quarter inch jack sockets.

Left/right outputs (i)

These outputs are unbalanced and have a nominal level of +4 dBu with an output impedance of 100 ohms. The tip is + out while the ring is connected to ground. A mono or stereo plug can be used.

Tape outputs (j)

The tape outputs are derived just ahead of the master faders so the signal is unaffected by adjustments of the master faders. The tape output level is 0dB with an impedance of 100 ohms. This output can also be used to drive lighting equipment in disco situations.

Aux send returns (k)

The aux return is a stereo jack socket. The tip goes to the left aux return control and the ring to the right aux return control.
Note: normally both the inputs are connected to ground when no plug is inserted. To avoid loss of signal both these inputs tip/ring have to be connected to a signal source.

A mono signal source **has to feed both tip and ring simultaneously** If only one signal is needed in the mixer outputs, keep one of the aux return controls closed.
A stereo signal source has to be connected to the tip for one channel and to the ring for the other.

WARNING
If a mono jack is used in the aux return jack, the left input will be 6dB less sensitive than normal.

Aux sends

The standard aux send is wired to the tip of the send jack. If a second aux send is ordered and fitted, the output is then wired to the ring of this jack. Output level is +4dBu at an impedance of 100 ohm.

11.0 PHANTOM POWERING (m)

The Disteq has a standard provision for +18 Volt phantom powering. This microphone (or D.I. box) powering can be switched on on the back of the console. +48 Volt phantom powering is available as an option. No indication is seen at the outside of the console, whether it's a 18 Volt or 48 Volt phantom powering. If in doubt let your dealer measure this.

Note: There is no damage to your microphones when applying 48 Volts instead of 18 Volts. Allways use balanced wiring for microphones.

11.1 Fuses (l)

The power supply is primarily fused between the power supply cable and the power supply transformer.
For 220 Volt use the value is; slow 3.15 Amp.
For 110 Volt use the value is; slow 6.30 Amp.

12.0 OPERATION

The Disteq is designed to be the perfect answer to all stereo output mixing situations. The console can accept a maximum of 10 input modules, these can be mono and/or stereo modules.

12.1 Standard control settings

Before you switch on the Disteq, check wether you have a 110 Volt version or a 220 Volt version. This has to match with your local voltage. Before you apply voltage to the Disteq put the switches and controls in the following settings:

Channels:

Input selectors	: Up/down dependant upon connected signal sources.
Gain controls	: Fully counter clockwise.
Equalizers	: 12 o'clock position.
Aux sends	: Fully counter clockwise.
Panpots/balance controls	: 12 o'clock position.
Faders	: Fully down.

Master section:

All controls	: Fully counter clockwise.
Faders	: Fully down.

12.2 Connectors

Before you apply power to the Disteq, you have to wire up your system first. To be helpfull in this work we will summarise all types of connectors with their associated wiring.
Be very careful in this wiring procedure. Use professional soldering equipment to achieve professional results. The quality of the solderjoints and their isolation is tremendously important for the reliability of the whole system.

Channels:

XLR inputs	level	: -74 dB to -30dBu.
	pin 1	: signal ground (shield)
	pin 2	: signal high (in phase, +)
	pin 3	: signal low(out of phase,-)
Line inputs	level	: -30 dB to infinity.
	tip	: signal high (in phase, +).
	ring	: signal ground.
	sleeve	: signal ground.
Inserts	level	: 0dBu (0.775 V)
(only mono mic channels)	tip	: return signal.
	ring	: send signal.
	sleeve	: ground.
Phono inputs	level	: 2 - 5 mV.
(stereo channels only)	tip	: left.
	ring	: right.
	sleeve	: ground.
Stereo line inputs	level	: -30 dB (24.5 mV) to infinity.
(stereo channels only)	tip	: left.
	ring	: right.
	sleeve	: ground.

Remote (stereo channels only)	level tip ring sleeve	: 24 Volt 500 mA max! : wiper. : Open contact. : Close to wiper with fader in up position.
Master outputs	level tip ring sleeve	: + 4dBu (1.23 Volt). : signal high (in phase, +). : ground. : ground.
Tape outputs	level tip ring sleeve	: 0dBu (0.775 V). : signal high (in phase, +). : ground. : ground.
Aux return	level tip ring sleeve	: -20dBu (77.5 mV) : left input. : right input. : ground.
Aux sends	level tip ring	: + 4dBu (1.23 Volt). : Aux 1 send. : Aux 2 send (optional)
Headphones	level	: + 4dBu (1.23 Volt)

INSTALLATION

Applying power:
Before switching on the power supply of the Disteq, check the main voltage of the supply by looking at the sticker on the back of the console. This should be 110 Volt for area's with voltages from 100 Volt to 120 Volt and 220 Volt for area's with voltages with 220 to 240 Volt.

Main voltages:
The main fuse should be 3.15 A, 20 mm. Slow blow for 220 Volt, and 6.3 A 20 mm. Slow blow for 110 Volts.

NOTE:
Do n o t replace the fuse with any other type, as this could become a safety hazard, and will void the warranty.

INTERFACE LEVELS

The Disteq is prepared for interfacing with almost all available equipment. See item connectors.
One point of attention has to be made concerning the C.R.M./headphones output. This output delivers a nominal +4dBu level, which is sometimes too high for power amps rated at 300 mV sensitivity for full outputs.
In those cases install an input attenuator at the power amps input to reduce this + 4dBu level by approximately 12dB.
Use a 2,2K series resistor and a 680 ohm shunt resistor across the amplifier inputs. This could also be useful for power amps connected to the main master outputs.

GENERAL WIRING PROCEDURES

To take full advantage of the excellent signal to noise ratio of the Disteq it is necessary to carefully read this part of the manual.
Hum, radio frequency interference, buzzes, and instability are often caused by improper wiring and inferior grounding systems. Sometimes the incoming mains ground is not adequate for studio and a separate technical ground has to be made for all the audio equipment. Your electricity supply company will give you all the details to avoid insufficient safety regulations.
There are some ground rules to be followed.
All signals in a studio are referenced to ground. This ground has to be clean and free of noise. A central point should be decided for the main ground point system and all grounds should be started from this point.
The way your electricity company has daisy chained the ground in your situation is unsuitable for your studio. The best way is to run a separate ground wire from each outlet to the system starpoint ground. This is the safety ground earth and screen reference for all your equipment.
A separate wire from all the equipment racks to the starpoint is nice to have in cases where the ground via main plugs is not satisfactory.
The starpoint should be located at the rear of the console or equipment rack.

All equipment has to be located as far as possible from the incoming mains distribution boxes.
Unbalanced equipment may need to be isolated from the rack to avoid ground loops.

SETTING UP THE INITIAL WIRING

First connect the power supply of the Disteq to the console. All faders must be down and the C.R.M. fully up.

a. Connect the power amps or headphones to the C.R.M. outputs and check for any hum buzz or interference. If this is allright proceed.
b. Now the inputs can be wired up. First the tape to the line inputs and check noise/hum with every connected channel. It will build up a little hiss.
   Carefully listen for noise/hum.
c. Connect stereo tape recorders, studio monitors and all signal processors, one at the time and keep checking that your system stays clean. If not, carefully check for a ground loop.

SHIELDING/EARTHING OF AUDIO EQUIPMENT

The shield of any audio connection should be connected at one end only. If not, ground loops and high frequency crosstalk will be the result. Connect the shield as a general rule to the signal source end. In high R.F.-area's, it is wise to ground the other end of shield via a 0.01 uf capacitor. This will be a short circuit at high frequencies but not at low frequencies.

Typical shielding situations:

Output	Input	Connect shield at
Unbalanced	Unbalanced	Source
Unbalanced	Balanced	Source
Unbalanced	Differential	Source
Balanced	Unbalanced	Destination
Balanced	Balanced	Source
Balanced	Differential	Destination
Differential	Unbalanced	Source
Differential	Balanced	Source
Differential	Differential	Source

Balanced means transformer balanced, while differential is electronically balanced. There are some cases which give better results in practise. Always connect one at the time and check.
Always use two cond. shielded audio cables and connect both conductors at both ends, the shielding at one end (except patch, cords, these shields are tied together in the console).
We know that this part is a difficult one but once properly installed and wired, the results will be clean and noise free.

TROUBLESHOOTING

It is essential to study the signal flow chart carefully. This will help to isolate problems in the Disteq.
By following the signal through in and output jacks it is possible to locate a fault. If a fault is located, inform your dealer or us and we will assist you by phone. If this will not help just return the channel or master to your dealer, or the factory and we will be happy to repair it within 24 hours.
Many faults can be found by logical thinking and replacing integrated circuits, which is very easy. They are all socketed.

WORKING WITH THE DISTEQ

After you have wired up the Disteq properly as described in earlier pages, it is time to switch on the unit.
All the control settings are as described under the heading "control settings". The ledbar will light up partly and fall down slowly untill only the "on" led is lit. Now your Disteq is ready to operate.

Push down the pfl button and adjust the gain control until the ledbars are reaching the zero dB position. Do this for every channel where a signal is connected. Now that all the basic adjustments are made, you can mix all the signals together.

Set the master faders fully open (Ødb position). Now bring up the channel faders with the right amount of level needed for the perfect mix. You can now adjust the equalization until the right coloration of the sound has been made. Please note that levels can increase if you boost the equalizers. Because of this, it may be necessary to go back and push pfl on each input and check the input gain as described before.

Optimum level in the channel is around Ødb, this means a headroom of more than 22db and a signal to noise ratio of more than 84db can be achieved.
If levels are too high in the channels, you are giving up headroom and improving signal to noise ratio. This is a trade off. On the other hand, too low of a level in the channel will increase the headroom and decrease the signal to noise ratio. When all your levels are set correctly, you will maintain the excellent signal to noise ratio the Disteq offers. This is the single most important thing in producing a clean, clear, and professional sound.

Aux sends/returns

The master aux send control has to be turned fully clockwise and the aux returns turned clockwise to a desired level. Now turn the aux send controls on the individual channels until you hear the effect level you require. You must depend on the input and output level of the connected ancillary equipment as well. If you ordered the optional second aux send, (which would be located on top of the excisting aux send) (concentric control) the return for that aux send would have to return to a channel switched to line input.

Pre/post settings

The aux controls are factory set by jumpers to the post position. On the mono channel, connector B (positioned under potentiometer P6) can be set pre/post by changing the jumper setting. Connector C sets the pre/post connection for the optional second aux send. On the stereo channel the pre/post aux jumper is under potentiometer P6. The optional second aux pre/post jumper is under the potentiometer P5.

Pan-pot/balance

These controls let you set the position of the signal in the stereo image. N o t e: The pan pot has an attenuation of -4.5db in the middle to achieve a good panning range between left and right. To make a proper level setup, you set the pan pot fully left or right, only then you can check the 0dB positions on the channel and master faders. On the stereo channel, the center position on the balance control is the calibrate position.

Ledbar

In order to achieve optimum results, we choose a peak-reading characteristic design. This means the meter is calibrated 6db down from the measured output.
The 6db down calibration is an international standard and is a good compromise between peak and average levels.

Headphones

The headphone output is a stereo jack (tip-left, ring-right), which is capable of driving 8 - 600 ohm headphones. The output normally gives the stereo master signal but as soon as a pfl button is activated this master signal is automatically switched to this activated pfl channel. This signal can be stereo or mono depending upon the chosen channel (mic/line or RIAA/line).

Mono

The mono switch enables you to separate the two outputs of your Disteq into two identical individually controllable outputs. Note these are now mono.

Outputs

Besides the normal left/right outputs with their +4dBu level there are also tape outputs. These tape outputs are not effected by the master faders and have a level of 0dB and are not in phase with the main outputs. These tape outs can also be used for driving lighting equipment.

Removing a module

Switch off the power supply first. Remove the numbered indication strip on top of the modules by unscrewing the 2 bolts on either side of this strip.
Now remove the two module retaining screws, which will allow to carefully withdraw the module from the console.
First move the module backwards and remove the flatcable connector. Now the module can be lifted out of the chassis. The same applies for the master module although there are more screws and more flatcable connectors.

PRODUCT SAFETY

The product you just unpacked is manufactured with safety in mind and it is double checked in the quality control department for reliability in its "high voltage section".

CAUTION

** Never open your equipment yourself, there are no users serviceable parts inside.
** Opening the unit sould be done only by a trained and qualified service technician, who is fully aware that it can be dangereous to service a mains powered unit.
** Always **G R O U N D** the unit.
** Only make use of the product in a way as is described in the manufacturers brochures and manuals, never use it for other purposes than intended by the manufacturer.
** Never use this equipment in an environment with high humidity or expose it to water.
** Do not use this equipment in the rain, snow, or equivalent type of weather.
** Check your mains cord regularly and see if it is in safe condition with properly connected mains plugs on one side and securely tightened in the equipment on the other side.
** Return your product yearly to your dealer to give it a safety check.
** The hazard of an electrical shock can be avoided by carefully following the above mentioned rules.

PLEASE CAREFULLY READ THE FOLLOWING INFORMATION

Especially in sound equipment on stage the following information is essential to know. An electrical shock is caused by voltage and current, actually it is the current that causes the shock. In practise the higher the voltage the higher the current will be and the higher the shock. But there is another thing to consider and it is resistance. When the resistance (in ohms) is high between two poles , the current will be low and visa versa.
All three of these; voltage, current, and resistance are important in determining the effect of an electrical shock. However, the severity of a shock is primarily determined by the amount of current flowing through a person.
A person can feel a shock because the muscles in a body respond to electrical current and because the heart is a muscle, it can be affected, when the current is high enough. Current can also be fatal when it causes the chest muscles to contract and cause you to stop breathing.
At what potential is current dangereous? Well the first feeling of current is a tingle at 0.001 amp of current. The current between 0.1 and 0.2 amp is fatal. Imagine that your home fuses of 20 amp can handle 200 times more current than is necessary to kill. How does resistance effect the shock a person feels? A typical resistance between one hand to the other in a "dry" condition could be well over 100.000 ohm. If you are playing on stage your body is perspiring profusely and your body resistance is lowered by more than 50%!.
This is a situation in which current can easily flow. Current will flow when there is a difference in ground potential between the housing of the mikes and the guitar/synth amps, which will be linked by your body on stage.

Imagine, a guitar in your hand and your lips close to the mike! A ground potential difference of above 10 Volts is not unusual. In improperly wired buildings it can possibly be as high as 240 Volts. Although removing the ground wire sometimes cures a systems hum, it will create a very hazardous situation for the performing musician.

ALWAYS GROUND all your equipment by the grounding pin in your mains plug. Hum loops should only be cured by proper wiring and isolation input/output transformers.
Replace fuses always with the same type and rating after the equipment has been turned off and unpluged. If the fuse blows again you have an equipment failure, do not use it again and return it to your dealer for repair.

DO NOT TOUCH a person being SHOCKED. You could also be shocked. Once removed from the stock, have someone send for medical help immediately.

ALWAYS KEEP THE ABOVE MENTIONED INFORMATION IN MIND WHEN USING ELECTRICALLY POWERED EQUIPMENT.

Summary

In this manual we have tried to give you an oversight of all the possibilities the Disteq offers you. If there are any questions left, do not hesitate to contact us or your dealer.

We wish you many years of enjoyable music.

D & R Electronica b.v.

D. de Rijk
president

"DISTEQ"

SERVICE MANUAL

Articlecode	Description	Quantity	Unit
10450088	Knop Fader SiFam zwart (1.2x8)	1.0000	st
10300090	Fader stereo 10kA (log) JngP	1.0000	st
10450095	Knop SiFam zwart Rad (top11mm)	1.0000	st
10450096	Knop SiFam zwart Rad (bot15mm)	1.0000	st
10450152	Deksel SiFam rood (11mm)	1.0000	st
10450153	Deksel SiFam zwart (11mm)	1.0000	st
10450184	Knop Druktoets vierkant zwart	2.0000	st
10450193	Knop SiFam zwart Dshaft (11mm)	5.0000	st
10450194	Deksel SiFam groen (11mm)	3.0000	st
10450195	Deksel SiFam grijs (11mm)	1.0000	st
10700613	Moer M 10 x 0.75 potmoer zwart	6.0000	st
10700615	Bout M 3 x 4 zwart	2.0000	st
10700684	Kartelring M 10 (buitenvertan)	1.0000	st
10100972	Front Disteq- 2c (stereo-chan)	1.0000	st
20850363	Print bestukt Disteq-2 (ster)	1.0000	st
10700787	Taptite M 3 x 6 zwart	2.0000	st
10700685	Kartelring M 10 potmeter dun	5.0000	st
10600436	Jack moer	3.0000	st

60880510 Disteq mono-kanaal

Articlecode	Description	Quantity	Unit
10450088	Knop Fader SiFam zwart (1.2x8)	1.0000	st
10450095	Knop SiFam zwart Rad (top11mm)	1.0000	st
10450096	Knop SiFam zwart Rad (bot15mm)	1.0000	st
10450152	Deksel SiFam rood (11mm)	1.0000	st
10450153	Deksel SiFam zwart (11mm)	1.0000	st
10450184	Knop Druktoets vierkant zwart	2.0000	st
10450193	Knop SiFam zwart Dshaft (11mm)	5.0000	st
10450194	Deksel SiFam groen (11mm)	3.0000	st
10450195	Deksel SiFam grijs (11mm)	1.0000	st
10600237	XLR chass fem 3p pl.zw hor p+s	1.0000	st
10700613	Moer M 10 x 0.75 potmoer zwart	6.0000	st
10700615	Bout M 3 x 4 zwart	2.0000	st
10700684	Kartelring M 10 (buitenvertan)	1.0000	st
20850362	Print bestukt Disteq-1 (mono)	1.0000	st
10100964	Front Disteq- 1c (mono-chan)	1.0000	st
10300089	Fader mono 10kA (log) JngP	1.0000	st
10700787	Taptite M 3 x 6 zwart	4.0000	st
10700685	Kartelring M 10 potmeter dun	5.0000	st
10600436	Jack moer	2.0000	st

B I L L O F M A T E R I A L
(OWNERS-MANUAL)
60880509 Disteq master

Articlecode	Description	Quantity	Unit
10450088	Knop Fader SiFam zwart (1.2x8)	2.0000	st
10300089	Fader mono 10kA (log) JngP	2.0000	st
10450095	Knop SiFam zwart Rad (top11mm)	1.0000	st
10450096	Knop SiFam zwart Rad (bot15mm)	1.0000	st
10450152	Deksel SiFam rood (11mm)	1.0000	st
10450153	Deksel SiFam zwart (11mm)	3.0000	st
10450184	Knop Druktoets vierkant zwart	2.0000	st
10450189	Knop Druktoets vierkant rood	1.0000	st
10450193	Knop SiFam zwart Dshaft (11mm)	2.0000	st
10600436	Jack moer	7.0000	st
10650371	Montagedraad 0.4 mm2 (rood)	25.0000	cm
10700778	Bout M 3 x 16 zwart	1.0000	st
10100214	Front Disteq- 4d (master)	1.0000	st
10700616	Bout M 3 x 10 zwart	1.0000	st
10250391	Led 5x2mm groen (SANKEN)	16.0000	st
10250392	Led 5x2mm rood (SANKEN)	7.0000	st
10600499	Netsnoer 2 aderig soldeer	1.0000	st
10950587	Ringkern 50VA 2x18/1x30	1.0000	st
10700610	Moer M 3	4.0000	st
10700613	Moer M 10 x 0.75 potmoer zwart	4.0000	st
10700615	Bout M 3 x 4 zwart	4.0000	st
10300999	Potm.12 2x 47kB con	1.0000	st
10700625	Kartelring M 3 (buitenvertan)	4.0000	st
10700641	Trekontlasting 11m rond haaks	1.0000	st
10990662	Zekeringhouder voorkap	1.0000	st
10700685	Kartelring M 10 potmeter dun	3.0000	st
10700684	Kartelring M 10 (buitenvertan)	1.0000	st
10300207	Potm.12 2x 22kB mt log	1.0000	st
10990693	Zekering 160mA slow 5 x 20mm	1.0000	st
20850766	Print bestukt Disteq-3 (mastr)	1.0000	st
20850769	Print bestukt Disteq-4 (mastr)	1.0000	st
20850773	Print bestukt Disteq-5 (mastr)	1.0000	st
10650378	Aardrail 0.8 mm	40.0000	dm
10700690	Platstaf 25 x 10 x 10mm	2.0000	st
10700667	Afstandsbus N6 M 3 x 20	1.0000	st
10700638	Afstandsbus M 3 x 10mm	1.0000	st
10700618	Bout M 3 x 25 zwart	2.0000	st
10700908	Bout M 5 x 50 tapbout blank	1.0000	st
10700910	Kartelring M 5 (buitenvertan)	1.0000	st
10700909	Moer M 5	1.0000	st
10700685	Kartelring M 10 potmeter dun	3.0000	st
10700673	Hoek ALU 20 x 15 x 2mm	1.0000	st
10300999	Potm.12 2x 47kB con	1.0000	st

B I L L O F M A T E R I A L
(OWNERS-MANUAL)

60880575 Disteq frame (10 modules)

Articlecode	Description	Quantity	Unit
10150959	Kast Disteq 19"/b	1.0000	st
10700656	Plakvoet bouton zwart (10x10)	4.0000	st
10650448	Bandkabel 20p (R 1.27)	115.0000	cm
10600470	Connector bandkabel female 20p	13.0000	st
10800923	Doos 300/Disteq	1.0000	st

mixing consoles

DISTEQ

Service Manual

D&R Electronica BV
Rijnkade 15 B
1382 GS Weesp
The Netherlands
Tel: ++31-2940-18014
Fax: ++31-2940-16987

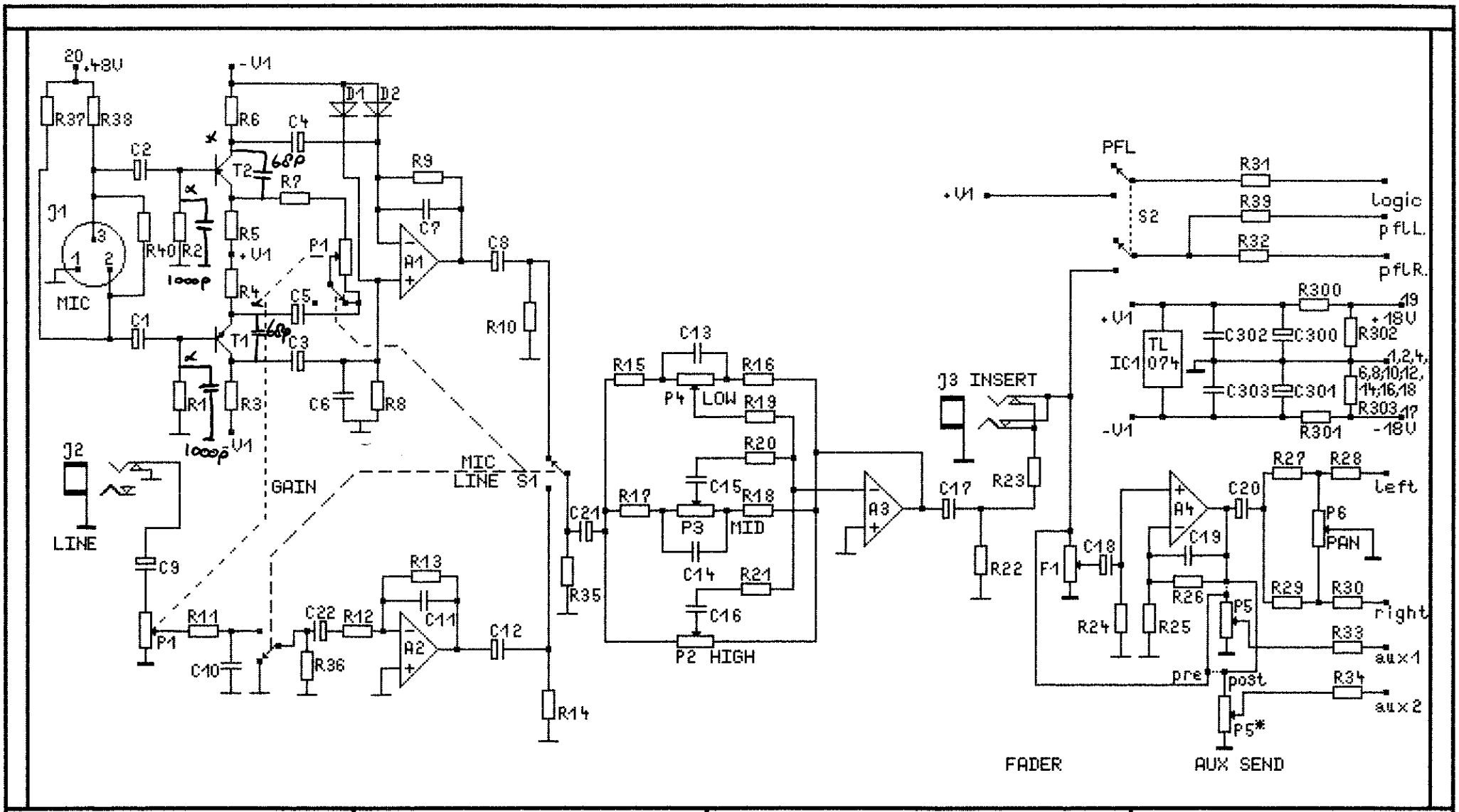
Rijnkade 15b
1382 GS WEESP
TLX. 19583 dr nl
TEL. 02940-19014
Electronica b.v. HOLLAND

Date : 11-12-87

R & D department

CONFIGURATION : DISTEQ CONNECTORS

	connector a
1	audio ground
2	audio ground
3	left
4	audio ground
5	right
6	audio ground
7	pfl right
8	audio ground
9	pfl left
10	audio ground
11	aux 1
12	audio ground
13	logic
14	audio ground
15	aux 2
16	audio ground
17	-V
18	audio ground
19	+V
20	+ 48 volt



TELEX: 18503 dr nl TELEPHONE: 02940-18014 RIJNKADE 15b 1382GS WEESP Electronica bv Holland	TITLE : DISTEQ MONO CHAN. PCB 1	THIS DRAWING REPLACES PREVIOUS ONES	NOTES : IC1=A1,A2,A3,A4 P5*+R34:optional for aux 2 aux1 optional post-fader wired aux2 optional pre-fader wired x By oscilation

PCB.REF.nr: 0569	INDEX	a		
DESIGN: D.de Rijk	MOD.BY.			
DATE : 03-08-1987	DATE			
SHEET 1 OF 5	CHECK 1			
	CHECK 2			
	DRAWN	P.Wilcke		

Rijnkade 130
1382 GS WEESP
TLX. 18503 dr nl
TEL. 02940-18814
Electronica b.v. HOLLAND

Date : 25-08-1987

R & D department

PARTLIST : DISTEQ MONOCHANNEL PCB-index : 1a

PartNr	Value	Notes	ArtNr
R1	4k7	5%	0737
R2	4k7	5%	0737
R3	4k7	5%mf	0801
R4	8k2	5%mf	0802
R5	8k2	5%mf	0802
R6	4k7	5%mf	0801
R7	22E	5%	0709
R8	86k6	1%	0803
R9	86k6	1%	0803
R10	47K	5%	0749
R11	1k2	5%	0730
R12	8k2	5%	0740
R13	82k	5%	0752
R14	47k	5%	0749
R15	15k	5%	0743
R16	15k	5%	0743
R17	4k7	5%	0737
R18	4k7	5%	0737
R19	47k	5%	0749
R20	10k	5%	0741
R21	10k	5%	0741
R22	47k	5%	0749
R23	100E	5%	0717
R24	100k	5%	0753
R25	10k	5%	0741
R26	22k	5%	0745
R27	10k	5%	0741
R28	47k	5%	0749
R29	10k	5%	0741
R30	47k	5%	0749
R31	47k	5%	0749
R32	10k	5%	0741
R33	47k	5%	0749
R34	47k	5%	0749
R35	47k	5%	0749
R36	47k	5%	0749
R37	6k81	1%	0846
R38	6k81	1%	0846
R39	10k	5%	0741
R40	2k2	5%	0733
R300	10E	5%	0705
R301	10E	5%	0705
R302	supply sym.	--	----
R303	supply sym.	--	----
C1	47/63	elco	0289
C2	47/63	elco	0289
C3	47/25	elco	0287
C4	47/25	elco	0287
C5	220/25	elco	0290

	C7	4p7	ker	0209
	C8	47/25	elco	0287
	C9	47/25	elco	0287
	C10	270p	ker	0230
	C11	4p7	ker	0209
	C12	47/25	elco	0287
	C13	0.022	poly	0256
	C14	3300p	poly	0249
	C15	8200p	poly	0252
	C16	1500p	poly	0247
	C17	47/25	elco	0287
	C18	47/25	elco	0287
	C19	22p	ker	0217
	C20	47/25	elco	0287
	C21	47/25	elco	0287
	C22	47/25	elco	0287
	C23	15p	ker	0215
	C300	220/25	elco	0290
	C301	220/25	elco	0290
	C302	0.1/63	ker	0241
	C303	0.1/63	ker	0241
	D1	1N4148	sgn	0342
	D2	1N4148	sgn	0342
	T1	BC560B	PNP	0327
	T2	BC560B	PNP	0327
	IC 1	TL074	bifet	0305
gain	P1	10kCB	12.5mm	0885
high	P2	100kA	12.5mm	0888
mid	P3	100kA	12.5mm	0888
low	P4	100KA	12.5mm	0888
aux1	P5	47kB	12.5mm	0887
aux1/2	P5* (optional)	47kBco	12.5mm	0999
pan	P6	10kA cn	12.5mm	0878
fader	F1	10kB	jungpng	0089
micline	S1	4x2 switch	ALPS	0401
pfl	S2	2x2 switch	ALPS	0400
	conn. A	20 pins	MLX557820	0456
	conn. B	3 pins shunt	----	----
	conn. C (optional)	3 pins shunt	----	----
mic	J1	Chass XLR plastic	X705	0237
line	J2	break jack	CLIFF	0432
insert	J3	break jack	CLIFF	0432

Rijnkade 15b
1382 GS WEESP
TLX. 18503 dr nl
TEL. 02940-18014

Electronica b.v. HOLLAND

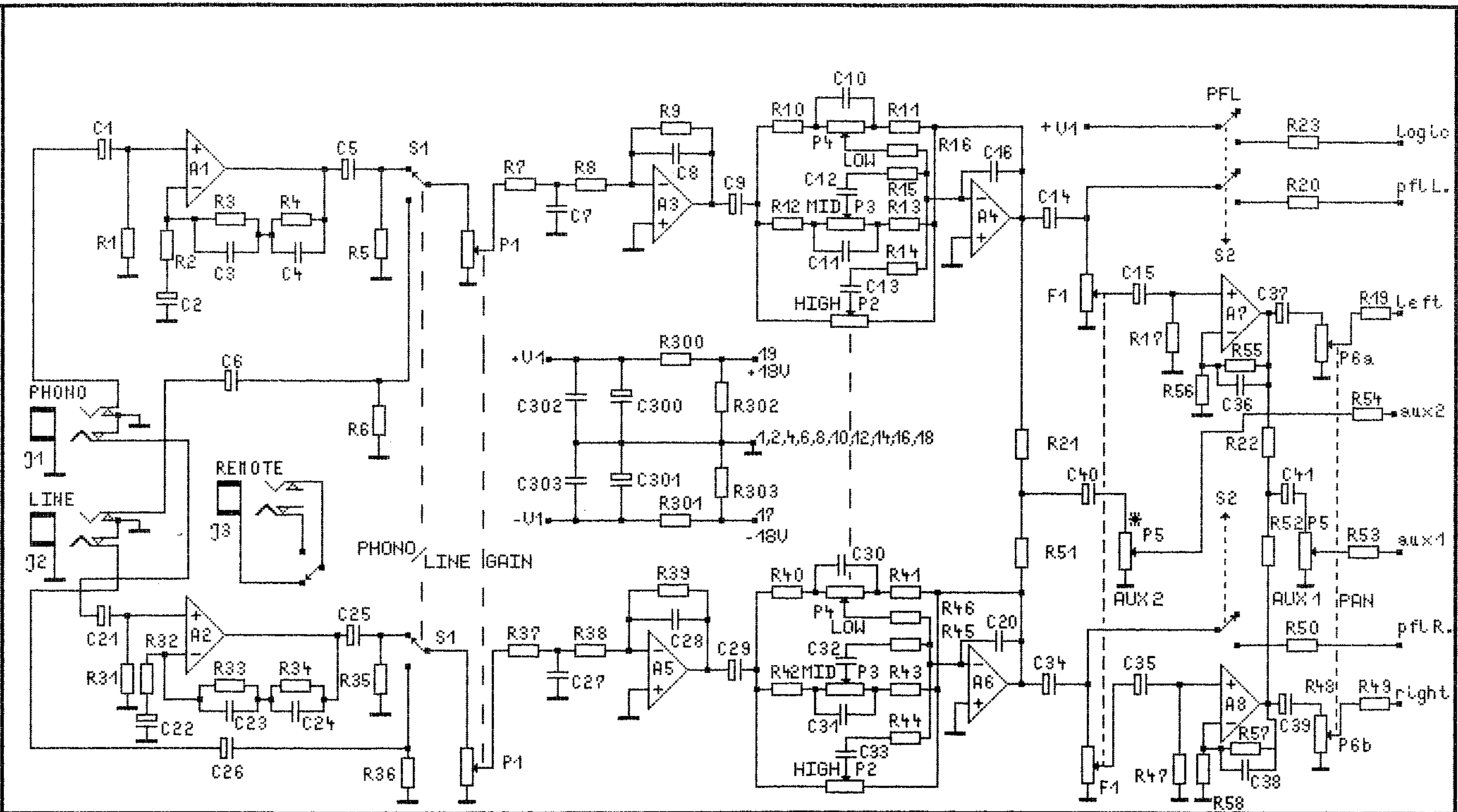
Date : 09-10-1989

R & D department

PARTLIST : DISTEQ MONOCHANNEL New Version PCB-index : 1a

PartNr	Value	Notes	ArtNr
R1	4k7	5%	0737
R2	4k7	5%	0737
R3	4k7	5%mf	0801
R4	8k2	5%mf	0802
R5	8k2	5%mf	0802
R6	4k7	5%mf	0801
R7	22E	5%	0709
R8	86k6	1%	0803
R9	86k6	1%	0803
R10	47K	5%	0749
R11	1k2	5%	0730
R12	8k2	5%	0740
R13	82k	5%	0752
R14	47k	5%	0749
R15	18k	5%	0744
R16	18k	5%	0744
R17	1k2	5%	0730
R18	1k2	5%	0730
R19	47k	5%	0749
R20	10k	5%	0741
R21	10k	5%	0741
R22	47k	5%	0749
R23	100E	5%	0717
R24	100k	5%	0753
R25	10k	5%	0741
R26	22k	5%	0745
R27	10k	5%	0741
R28	47k	5%	0749
R29	10k	5%	0741
R30	47k	5%	0749
R31	47k	5%	0749
R32	10k	5%	0741
R33	47k	5%	0749
R34	47k	5%	0749
R35	47k	5%	0749
R36	47k	5%	0749
R37	6k81	1%	0846
R38	6k81	1%	0846
R39	10k	5%	0741
R40	2k2	5%	0733
R300	10E	5%	0705
R301	10E	5%	0705
R302	supply sym.	--	----
R303	supply sym.	--	----
C1	47/63	elco	0289
C2	47/63	elco	0289
C3	47/25	elco	0287
C4	47/25	elco	0287
C5	220/25	elco	0290

	C6	4p7	ker	0209
	C7	4p7	ker	0209
	C8	47/25	elco	0287
	C9	47/25	elco	0287
	C10	270p	ker	0230
	C11	4p7	ker	0209
	C12	47/25	elco	0287
	C13	0.022	poly	0256
	C14	6800p	poly	0251
	C15	8200p	poly	0252
	C16	1500p	poly	0247
	C17	47/25	elco	0287
	C18	47/25	elco	0287
	C19	22p	ker	0217
	C20	47/25	elco	0287
	C21	47/25	elco	0287
	C22	47/25	elco	0287
	C23	15p	ker	0215
	C300	220/25	elco	0290
	C301	220/25	elco	0290
	C302	0.1/63	ker	0241
	C303	0.1/63	ker	0241
	D1	1N4148	sgn	0342
	D2	1N4148	sgn	0342
	T1	BC560B	PNP	0327
	T2	BC560B	PNP	0327
	IC 1	TL074	bifet	0305
gain	P1	10kCB	12.5mm	0885
high	P2	100kA	12.5mm	0888
mid	P3	100kA	12.5mm	0888
low	P4	100KA	12.5mm	0888
aux1	P5	47kB	12.5mm	0887
aux1/2	P5* (optional)	47kBco	12.5mm	0999
pan	P6	10kA cn	12.5mm	0878
fader	F1	10kB	jungpng	0089
micline	S1	4x2 switch	ALPS	0401
pfl	S2	2x2 switch	ALPS	0400
	conn. A	20 pins	MLX557820	0456
	conn. B	3 pins shunt	----	----
	conn. C (optional)	3 pins shunt	----	----
mic	J1	Chass XLR plastic	X705	0237
line	J2	break jack	CLIFF	0432
insert	J3	break jack	CLIFF	0432



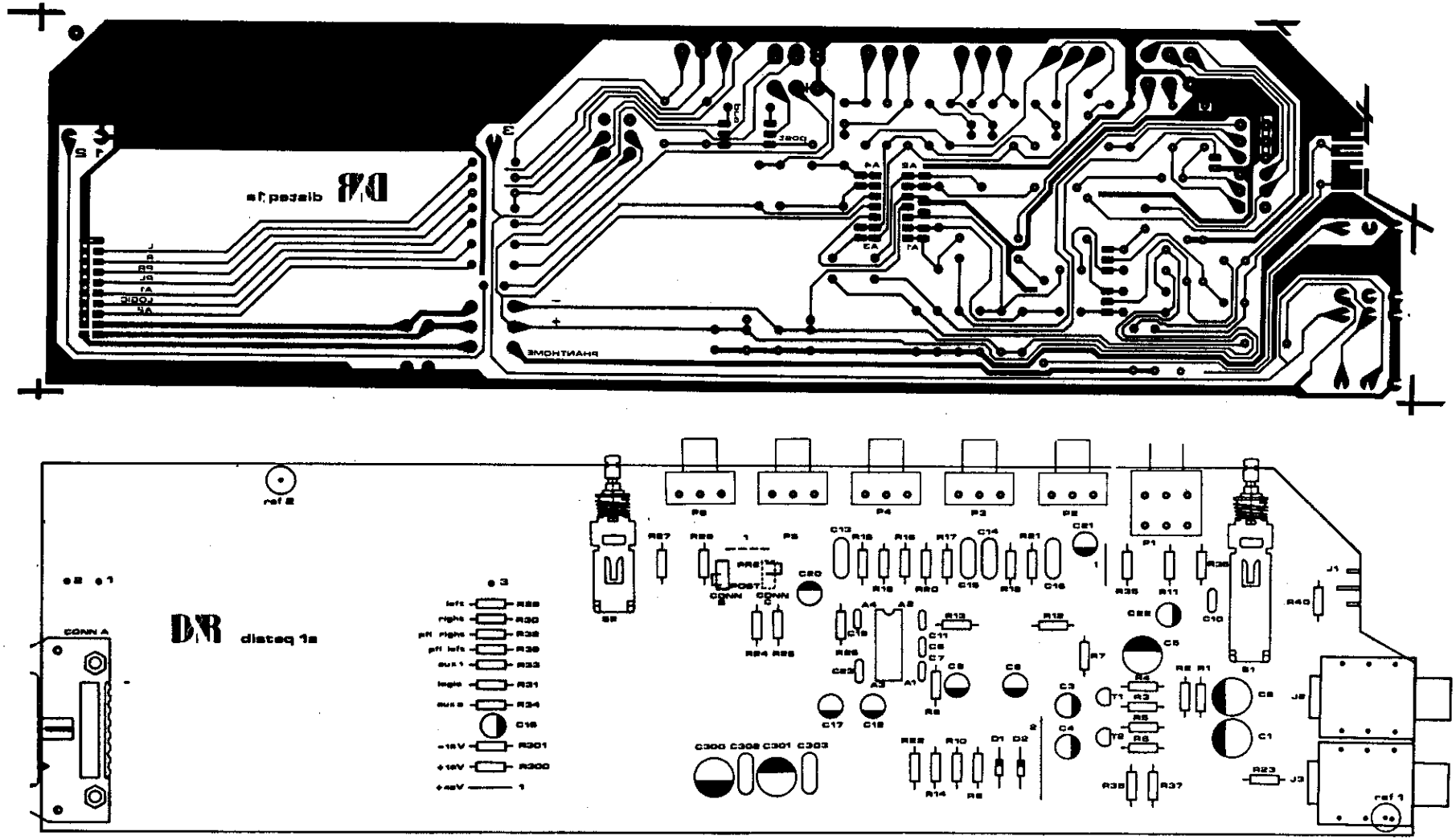
TELEX: 18503 dr nl TELEPHONE: 02940-18014 RIJNKADE 15b 1382GS WEESP Electronica bv Holland	TITLE : DISTEQ ST. CHAN. PCB 2
	PCB.REF.nr: 0671
	DESIGN: D.de Rijk
	DATE : 19-08-1987
	SHEET 2 OF 5

THIS DRAWING REPLACES PREVIOUS ONES

INDEX	a		
MOD.BY.			
DATE			
CHECK 1			
CHECK 2			
DRAWN	P.Willcke/J.A.van Hezik		

NOTES :

IC1 = A1, A2
IC2 = A3, A4, A5, A6
IC3 = A7, A8
P5*+R54: optional for aux 2
aux1 optional pre-fader wired
aux2 optional post-fader wired



D&R Electronica bv Holland
TELEX:
18503 dr nl
TELEPHONE:
02940-18014
RIJNKADE 15b
1382GS WEESP

TITLE :	DISTEQ MONO CHANNEL PCB 1
PCB.REF.nr:	
DESIGN :	
DATE :	
SHEET	OF

THIS DRAWING REPLACES PREVIOUS ONES

INDEX			
MOD.BY.			
DATE			
CHECK 1			
CHECK 2			
DRAWN			

NOTES :

Rijnkade 15b
1382 GS WEESP
TLX. 18503 dr nl
TEL. 02940-18014
Electronica b.v. HOLLAND

Date : 27-08-1987

R & D department

PARTLIST : DISTEQ STEREOCHANNEL PCB-index : 2a

PartNr	Value	Notes	ArtNr
R1	47k	5%	0749
R2	390E	5%	0724
R3	100k	5%	0753
R4	10k	5%	0741
R5	47k	5%	0749
R6	47k	5%	0749
R7	1k2	5%	0730
R8	8k2	5%	0740
R9	82k	5%	0752
R10	15k	5%	0743
R11	15k	5%	0743
R12	4k7	5%	0737
R13	4k7	5%	0737
R14	10k	5%	0741
R15	10k	5%	0741
R16	47k	5%	0749
R17	100k	5%	0753
R19	47k	5%	0749
R20	10k	5%	0741
R21	1k5	5%	0731
R22	1k5	5%	0731
R23	47k	5%	0749
R31	47k	5%	0749
R32	390E	5%	0724
R33	100k	5%	0753
R34	10k	5%	0741
R35	47k	5%	0749
R36	47k	5%	0749
R37	1k2	5%	0730
R38	8k2	5%	0740
R39	82k	5%	0752
R40	15k	5%	0743
R41	15k	5%	0743
R42	4k7	5%	0737
R43	4k7	5%	0737
R44	10k	5%	0741
R45	10k	5%	0741
R46	47k	5%	0749
R47	100k	5%	0753
R49	47k	5%	0749
R50	10k	5%	0741
R51	1k5	5%	0731
R52	1k5	5%	0731
R53	47k	5%	0749
R54	47k	5%	0749
R55	22k	5%	0745
R56	10k	5%	0741
R57	22k	5%	0745
R58	10k	5%	0741
R300	10E	5%	0705
R301	10E	5%	0705

	mono	supply sym.		
	C1	47/25	elco	0287
	C2	47/25	elco	0287
	C3	0.033	poly	0257
	C4	6800p	poly	0251
	C5	47/25	elco	0287
	C6	47/25	elco	0287
	C7	1000p	ker	0236
	C8	2p2	ker	0205
	C9	47/25	elco	0287
	C10	0.022	poly	0256
	C11	3300p	poly	0249
	C12	8200p	poly	0252
	C13	1500p	poly	0247
	C14	47/25	elco	0287
	C15	47/25	elco	0287
	C16	15p	ker	0215
	C20	15p	ker	0215
	C21	47/25	elco	0287
	C22	47/25	elco	0287
	C23	0.033	poly	0257
	C24	6800p	poly	0251
	C25	47/25	elco	0287
	C26	47/25	elco	0287
	C27	1000p	ker	0236
	C28	2p2	ker	0205
	C29	47/25	elco	0287
	C30	0.022	poly	0256
	C31	3300p	poly	0249
	C32	8200p	poly	0252
	C33	1500p	poly	0247
	C34	47/25	elco	0287
	C35	47/25	elco	0287
	C36	4p7	ker	0209
	C37	47/25	elco	0287
	C38	4p7	ker	0209
	C39	47/25	elco	0287
	C40	47/25	elco	0287
	C41	47/25	elco	0287
	C300	47/25	elco	0287
	C301	47/25	elco	0287
	C302	0.1/63	ker	0241
	C303	0.1/63	ker	0241
	A1,A2	NE5532	lowns	0307
	A3,A4,A5,A6	TL074	bifet	0305
	A7,A8	TL072	bifet	0304
gain	P1	22kBst	12.5mm	0886
high	P2	100kAst	12.5mm	0889
mid	P3	100kAst	12.5mm	0889
low	P4	100kAst	12.5mm	0889
aux1	P5	47kB	12.5mm	0887
aux1/2	P5* (optional)	47kBco	12.5mm	0999
bal	P6	10Kast cn	12.5mm	0892
fader	F1	10kBst	jungpng	0090
pho/li.	S1	2x2 switch	ALPS	0400
pfl	S2	4x2 switch	ALPS	0401
	conn. A	20 pins	MLX557820	0456
	conn. B	3 pins shunt	MLX7030	----
	conn. C (optional)	3 pins shunt	MLX7030	----
phono	J1	break jack	CLIFF	0432
line	J2	break jack	CLIFF	0432

Rijnkade 15b
1382 GS WEESP
TLX. 18503 dr nl
TEL. 02940-18014

Electronica b.v. HOLLAND

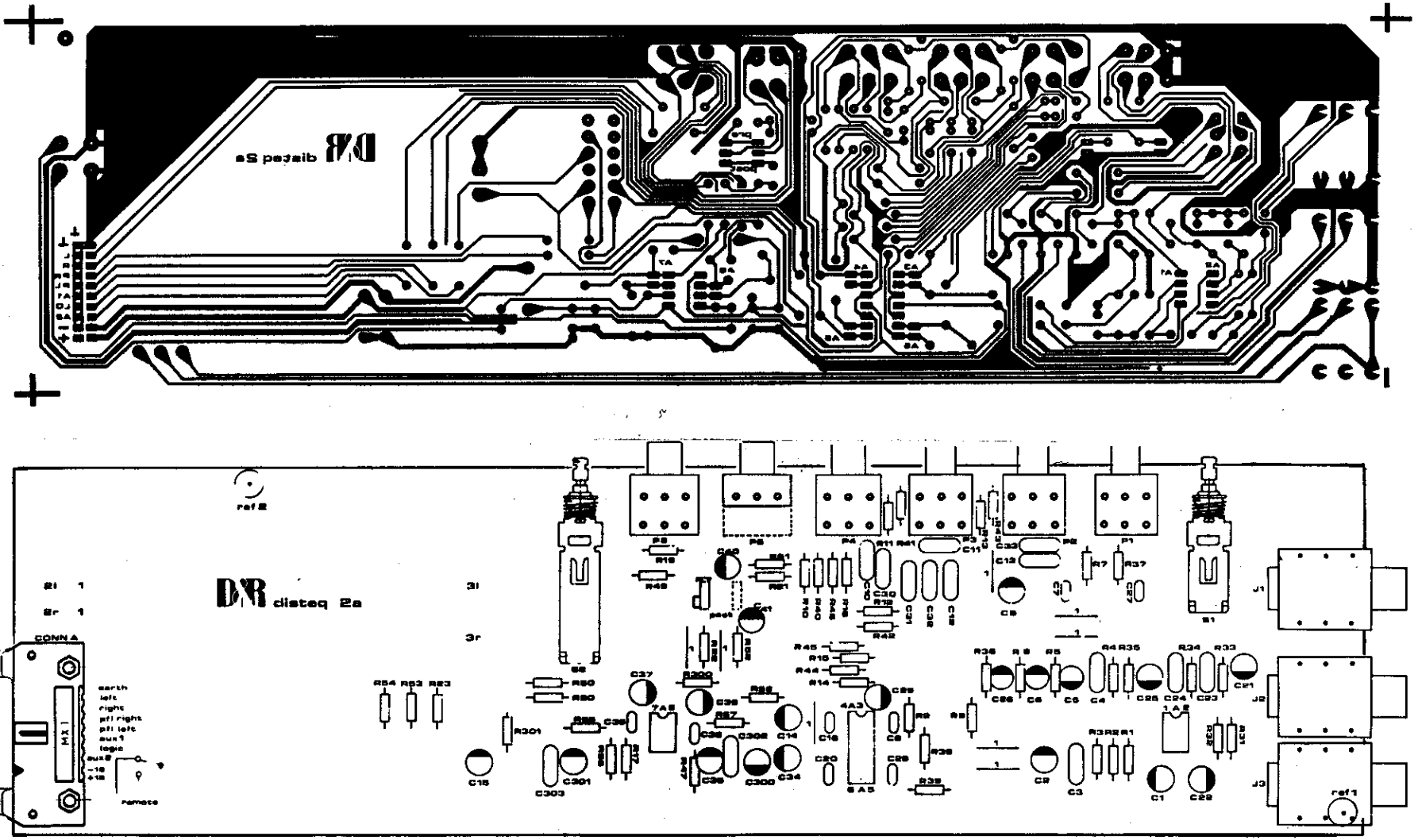
Date : 09-10-1989

R & D department

PARTLIST : DISTEQ STEREOCHANNEL New Version PCB-index : 2a

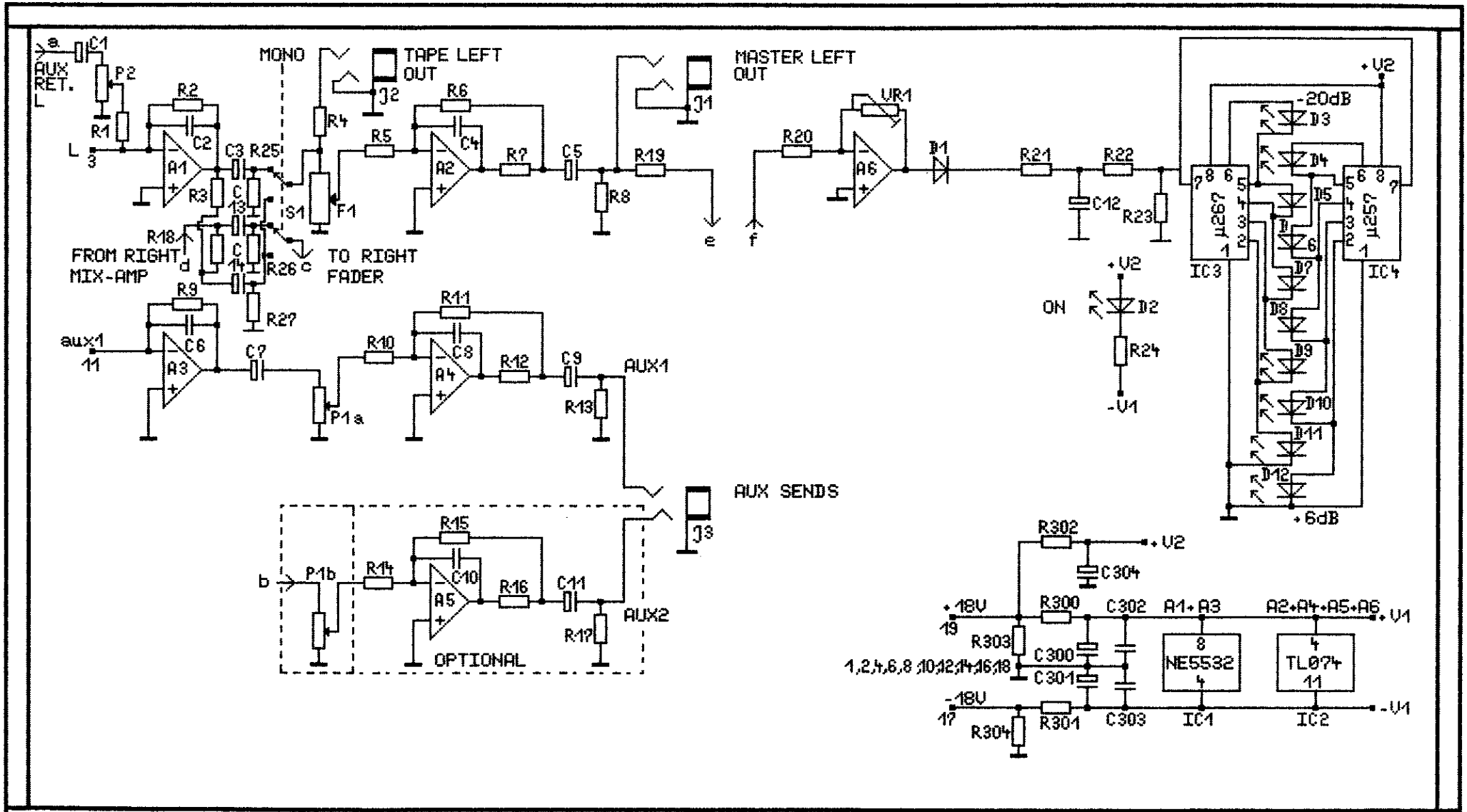
PartNr	Value	Notes	ArtNr
R1	47k	5%	0749
R2	390E	5%	0724
R3	100k	5%	0753
R4	10k	5%	0741
R5	47k	5%	0749
R6	47k	5%	0749
R7	1k2	5%	0730
R8	8k2	5%	0740
R9	82k	5%	0752
R10	18k	5%	0744
R11	18k	5%	0744
R12	1k2	5%	0730
R13	1k2	5%	0730
R14	10k	5%	0741
R15	10k	5%	0741
R16	47k	5%	0749
R17	100k	5%	0753
R19	47k	5%	0749
R20	10k	5%	0741
R21	1k5	5%	0731
R22	1k5	5%	0731
R23	47k	5%	0749
R31	47k	5%	0749
R32	390E	5%	0724
R33	100k	5%	0753
R34	10k	5%	0741
R35	47k	5%	0749
R36	47k	5%	0749
R37	1k2	5%	0730
R38	8k2	5%	0740
R39	82k	5%	0752
R40	18k	5%	0744
R41	18k	5%	0744
R42	1k2	5%	0730
R43	1k2	5%	0730
R44	10k	5%	0741
R45	10k	5%	0741
R46	47k	5%	0749
R47	100k	5%	0753
R49	47k	5%	0749
R50	10k	5%	0741
R51	1k5	5%	0731
R52	1k5	5%	0731
R53	47k	5%	0749
R54	47k	5%	0749
R55	22k	5%	0745
R56	10k	5%	0741
R57	22k	5%	0745
R58	10k	5%	0741
R300	10E	5%	0705
R301	10E	5%	0705

	R303	supply sym.		
	C1	47/25	elco	0287
	C2	47/25	elco	0287
	C3	0.033	poly	0257
	C4	6800p	poly	0251
	C5	47/25	elco	0287
	C6	47/25	elco	0287
	C7	1000p	ker	0236
	C8	2p2	ker	0205
	C9	47/25	elco	0287
	C10	0.022	poly	0256
	C11	6800p	poly	0251
	C12	8200p	poly	0252
	C13	1500p	poly	0247
	C14	47/25	elco	0287
	C15	47/25	elco	0287
	C16	15p	ker	0215
	C20	15p	ker	0215
	C21	47/25	elco	0287
	C22	47/25	elco	0287
	C23	0.033	poly	0257
	C24	6800p	poly	0251
	C25	47/25	elco	0287
	C26	47/25	elco	0287
	C27	1000p	ker	0236
	C28	2p2	ker	0205
	C29	47/25	elco	0287
	C30	0.022	poly	0256
	C31	6800p	poly	0251
	C32	8200p	poly	0252
	C33	1500p	poly	0247
	C34	47/25	elco	0287
	C35	47/25	elco	0287
	C36	4p7	ker	0209
	C37	47/25	elco	0287
	C38	4p7	ker	0209
	C39	47/25	elco	0287
	C40	47/25	elco	0287
	C41	47/25	elco	0287
	C300	47/25	elco	0287
	C301	47/25	elco	0287
	C302	0.1/63	ker	0241
	C303	0.1/63	ker	0241
	A1,A2	NE5532	lowns	0307
	A3,A4,A5,A6	TL074	bifet	0305
	A7,A8	TL072	bifet	0304
gain	P1	22kBst	12.5mm	0886
high	P2	100kAst	12.5mm	0889
mid	P3	100kAst	12.5mm	0889
low	P4	100kAst	12.5mm	0889
aux1	P5	47kB	12.5mm	0887
aux1/2	P5* (optional)	47kBco	12.5mm	0999
bal	P6	10Kast cn	12.5mm	0892
fader	F1	10kBst	jungnng	0890
pho/li.	S1	2x2 switch	ALPS	0400
pfl	S2	4x2 switch	ALPS	0401
	conn. A	20 pins	MLX557820	0456
	conn. B	3 pins shunt	MLX7030	----
	conn. C (optional)	3 pins shunt	MLX7030	----
phono	J1	break jack	CLIFF	0432
line	J2	break jack	CLIFF	0432



D&R Electronica bv Holland	TELEX: 18503 dr nl TELEPHONE: 02940-18014 RIJNKADE 15b 1382GS WEESP	TITLE : DISTEQ STEREO CHANNEL pcb 1	THIS DRAWING REPLACES PREVIOUS ONES
		PCB.REF.nr:	INDEX
		DESIGN :	MOD.BY.
		DATE :	DATE
		SHEET OF	CHECK 1
			CHECK 2
			DRAWN

NOTES :



TELEX: 18503 dr nl TELEPHONE: 02940-18014 RIJNKADE 15b 1382GS WEESP Electronica bv Holland	TITLE : DISTEQ-MASTER LEFT PCB 3	THIS DRAWING REPLACES PREVIOUS ONES	NOTES : a,b,c,d,e,f are interconn. between P.C.B.s' 3 and 4
	PCB.REF.nr: 0767	INDEX a	
	DESIGN : D.de Rijk	MOD.BY. J.deVries	
	DATE : 03-08-1987	DATE 03-08-87	
	SHEET 3 OF 5	CHECK 1	
		CHECK 2	
		DRAWN J.A.van Hezik	

1382 GS WEESP
TLX. 18503 dr nl
TEL. 02940-18014
Electronica b.v. HOLLAND

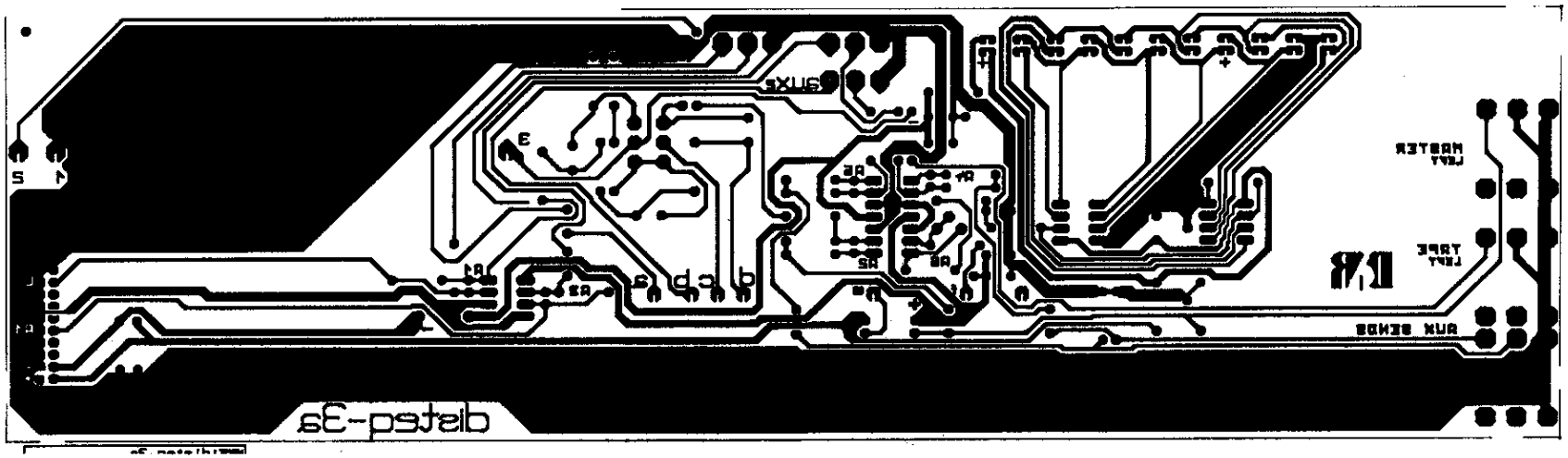
Date : 28/08/1987

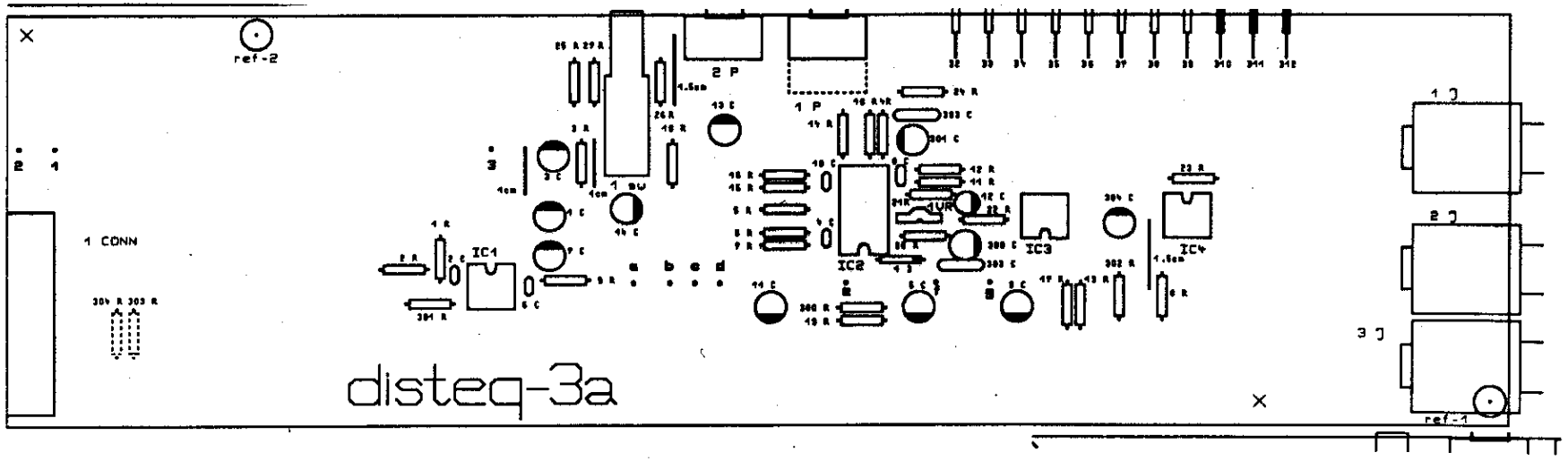
R & D department

PARTLIST : DISTEQ-3 LEFT MASTER PCB-index : 3a

PartNr	Value	Notes	ArtNr
R1	10k	5%	0741
R2	100k	5%	0753
R3	1k5	5%	0731
R4	100E	5%	0717
R5	47k	5%	0749
R6	75k0	1%	0870
R7	100E	5%	0717
R8	47k	5%	0749
R9	100k	5%	0753
R10	47k	5%	0749
R11	75k0	1%	0870
R12	100E	5%	0717
R13	47k	5%	0749
R14	47k	5%	0749
R15	75k0	1%	0870
R16	100E	5%	0717
R17	47k	5%	0749
R18	1k5	5%	0731
R19	100E	5%	0717
R20	8k2	5%	0740
R21	100E	5%	0717
R22	475k	1%	0876
R23	90k9	1%	0799
R24	2k2	5%	0733
R25	47k	5%	0749
R26	47k	5%	0749
R27	47k	5%	0749
R300	10E	5%	0705
R301	10E	5%	0705
R302	10E	5%	0705
R303	---	--	----
R304	---	--	----
C1	47/25	elco	0287
C2	3p9	ker	0208
C3	47/25	elco	0287
C4	10p	ker	0213
C5	47/25	elco	0287
C6	3p9	ker	0208
C7	47/25	elco	0287
C8	3p9	ker	0208
C9	47/25	elco	0287
C10	3p9	ker	0208
C11	47/25	elco	0287
C12	1.0/63	elco	0279
C13	47/25	elco	0287
C14	47/25	elco	0287
C300	47/25	elco	0287
C301	47/25	elco	0287
C302	0.1/63	ker	0241
C303	0.1/63	ker	0241

D1	1N-4148	sgn.diode	0342
D2	LED green	5x2 mm	0389
D3	LED green	5x2 mm	0389
D4	LED green	5x2 mm	0389
D5	LED green	5x2 mm	0389
D6	LED green	5x2 mm	0389
D7	LED green	5x2 mm	0389
D8	LED green	5x2 mm	0389
D9	LED green	5x2 mm	0389
D10	LED red	5x2 mm	0389
D11	LED red	5x2 mm	0390
D12	LED red	5x2 mm	0390
IC1	NE 5532	low-noise	0307
IC2	TL 074	biFET	0305
IC3	U 267	5-segm. leddriver	0312
IC4	U 257	5-segm. leddriver	0311
P1	47kB	12.5mm mono	0887
P2	22kB	12.5mm mono	0896
VR1	47k	mini trim	0147
J1	break-jack	CLIFF	0432
J2	break-jack	CLIFF	0432
J3	break-jack	CLIFF	0432
CONN1	20 pins header	MOLEX 5578	0465
S1	2x2 non shorting	ALPS	0400
F1	10kB	100mm JUNGPOONG	0089





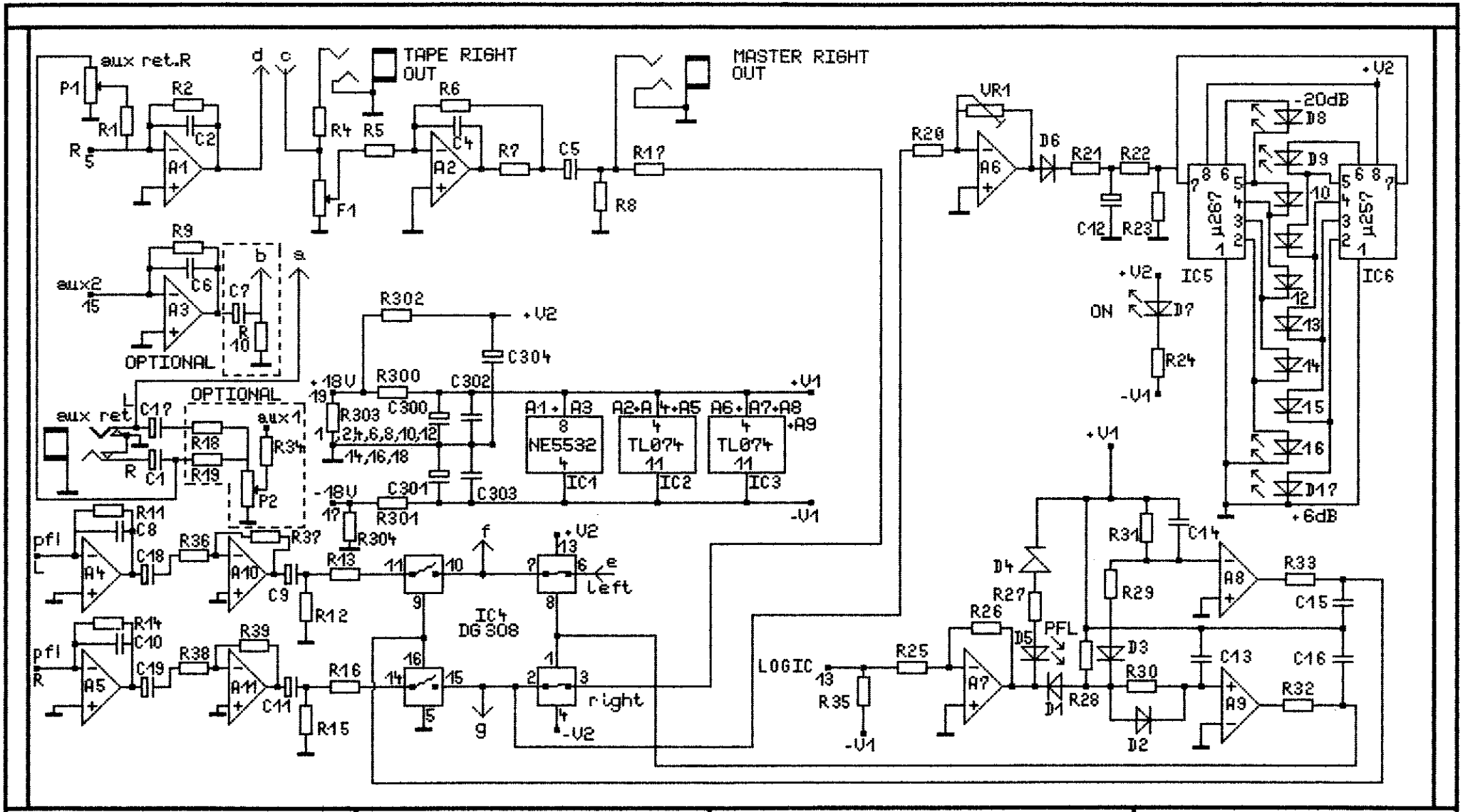
D&R
electronica bv Holland
TELEX:
18503 dr nl
TELEPHONE:
02940-18014
RIJNKADE 15b
1382GS WEESP

TITLE :	DISTEQ-MASTER PCB 3 LEFT
PCB.REF.nr:	
DESIGN :	
DATE :	
SHEET	OF

THIS DRAWING REPLACES PREVIOUS ONES

INDEX			
MOD.BY.			
DATE			
CHECK 1			
CHECK 2			
DRAWN			

NOTES :



D&R Electronica by Holland	TELEX: 18503 dr nl TELEPHONE: 02940-18014 RIJNKADE 15b 1382GS WEESP	TITLE : DISTEQ-MASTER RIGHT PCB 4
		PCB.REF.nr: 0778
		DESIGN: D.deRijk
		DATE : 29-08-1987
		SHEET 4 OF 5

THIS DRAWING REPLACES PREVIOUS ONES			
INDEX	a		
MOD.BY.	J.deVries		
DATE	29-08-87		
CHECK 1			
CHECK 2			
DRAWN	J.A.van Hezik / P.Wilcke		

NOTES :

a,b,c,d,e,f,g are interconn. between P.C.B.'s 3,4 and 5.

Rijnkade 15b
1382 GS WEESP
TLX. 18503 dr nl
TEL. 02940-18014
Electronica b.v. HOLLAND

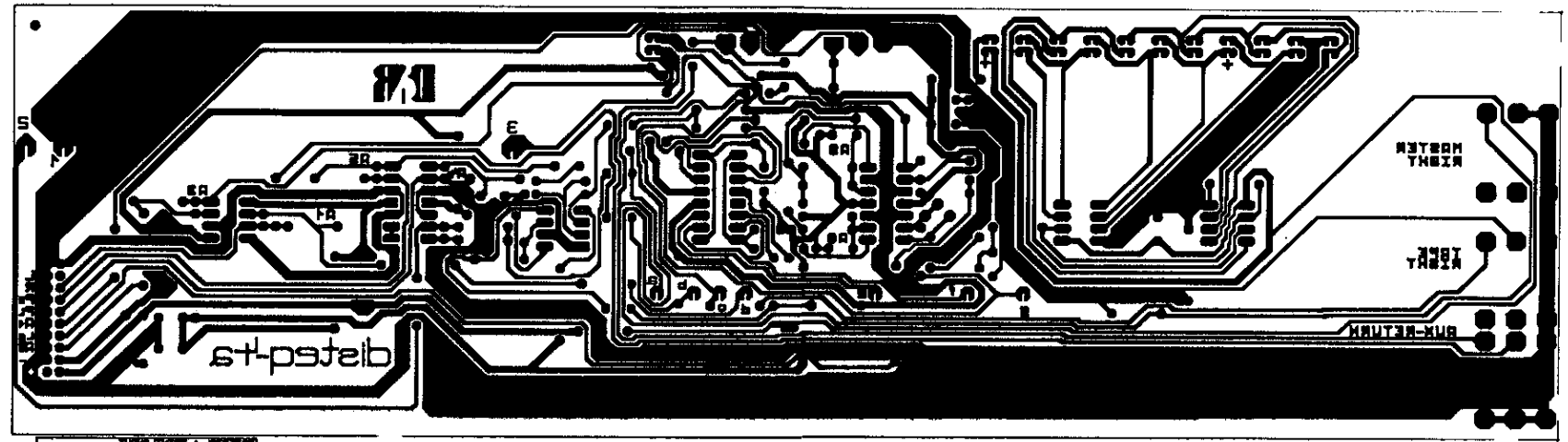
Date : 28/08/1987

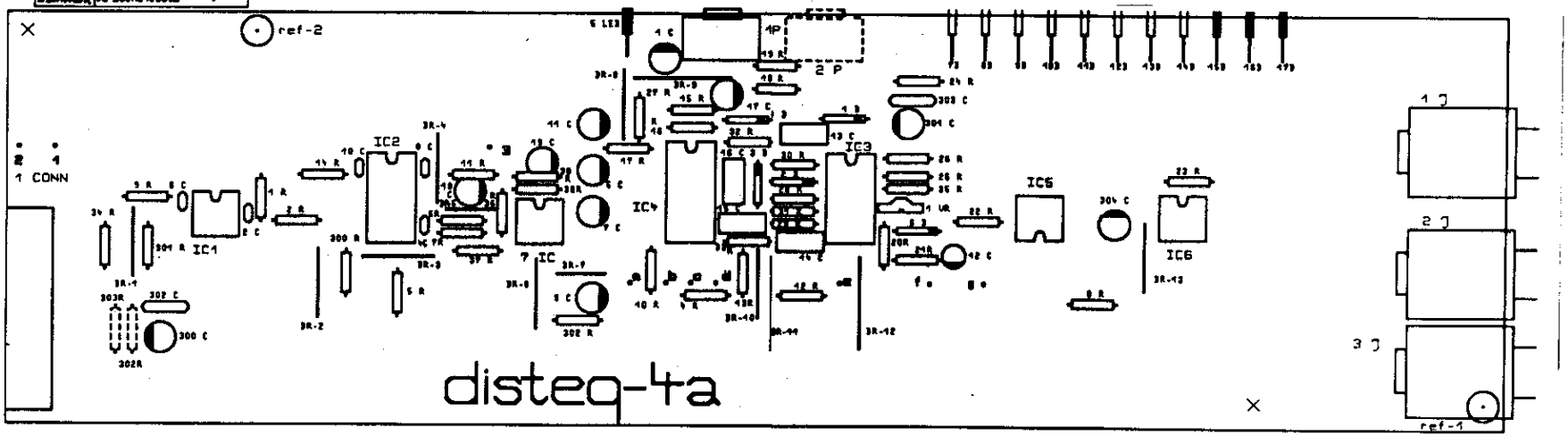
R & D department

PARTLIST : DISTEQ-4 RIGHT MASTER PCB-index : 4a

PartNr	Value	Notes	ArtNr
R1	10k	5%	0741
R2	100k	5%	0753
R3	---	---	----
R4	100E	5%	0717
R5	47k	5%	0749
R6	75k0	1%	0870
R7	100E	5%	0717
R8	47k	5%	0749
R9	100k	5%	0753
R10	47k	5%	0749
R11	15k8	1%	0853
R12	47k	5%	0749
R13	100E	5%	0717
R14	15k8	1%	0853
R15	47k	5%	0749
R16	100E	5%	0717
R17	100E	5%	0717
R18	2k2	5%	0733
R19	2k2	5%	0733
R20	8k2	5%	0740
R21	100E	5%	0717
R22	475k	1%	0876
R23	90k9	1%	0799
R24	2k2	5%	0733
R25	33E	5%	0711
R26	47k	5%	0749
R27	1k0	5%	0729
R28	10k	5%	0741
R29	10k	5%	0741
R30	68k	5%	0751
R31	100k	5%	0753
R32	1k0	5%	0729
R33	1k0	5%	0729
R34	22k	5%	0745
R35	100k	5%	0753
R36	10k	5%	0741
R37	10k	5%	0741
R38	10k	5%	0741
R39	10k	5%	0741
R300	10E	5%	0705
R301	10E	5%	0705
R302	10E	5%	0705
R303	---	--	----
R304	---	--	----
C1	47/25	elco	0287
C2	3p9	ker	0208
C3	----	----	----
C4	10p	ker	0213
C5	47/25	elco	0287
C6	3p9	ker	0208
C7	47/25	elco	0287
C8	22p	ker	0217
C9	47/25	elco	0287
C10	22p	ker	0217

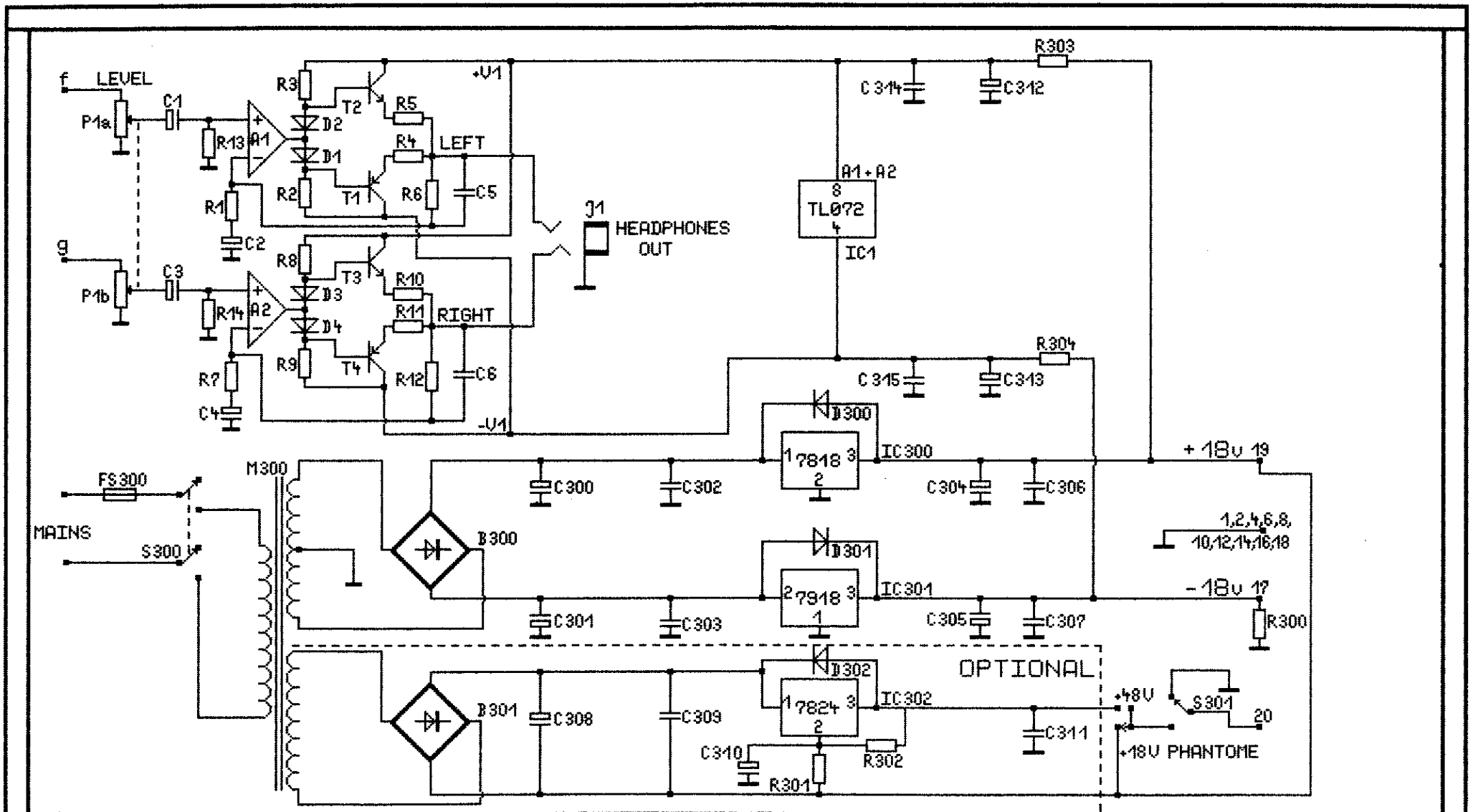
	C12	1.0/63	elco	0279
	C13	0.22	poly 2e/3e	0269
	C14	0.22	poly 2e/3e	0269
	C15	0.068	poly 2e/3e	0260
	C16	0.068	poly 2e/3e	0260
	C17	47/25	elco	0287
	C18	47/25	elco	0287
	C19	47/25	elco	0287
	C300	47/25	elco	0287
	C301	47/25	elco	0287
	C302	0.1/63	ker	0241
	C303	0.1/63	ker	0241
	C304	47/25	elco	0287
	D1	1N-4148	sgn.diode	0342
	D2	1N-4148	sgn.diode	0342
	D3	1N-4148	sgn.diode	0342
	D4	12 V 400mW	zener diode	0353
	D5	LED red	5x2 mm	0390
	D6	1N-4148	sgn.diode	0342
	D7	LED green	5x2 mm	0389
	D8	LED green	5x2 mm	0389
	D9	LED green	5x2 mm	0389
	D10	LED green	5x2 mm	0389
	D11	LED green	5x2 mm	0389
	D12	LED green	5x2 mm	0389
	D13	LED green	5x2 mm	0389
	D14	LED green	5x2 mm	0389
	D15	LED red	5x2 mm	0390
	D16	LED red	5x2 mm	0390
	D17	LED red	5x2 mm	0390
A1+A3	IC1	NE 5532	low-noise	0307
A2+A4+				
A5	IC2	TL 074	biFET	0305
A6-A9	IC3	TL 074	biFET	0305
a+b+c+d	IC4	DG 308	quad anal.switch	0354
	IC5	U 267	5-segm. leddriver	0312
	IC6	U 257	5-segm. leddriver	0311
A10+A11	IC7	TL 072	biFET	0304
	P1	22kB	12.5mm mono	0896
option.	P2	22kB	12.5mm mono	0896
	VR1	47k	mini trim	0147
	J1	break-jack	CLIFF	0432
	J2	break-jack	CLIFF	0432
	J3	break-jack	CLIFF	0432
	CONN1	20 pins header	MOLEX 5578	0465
	F1	10kB	100mm JUNGPOONG	0089





D&R Electronica bv Holland TELEX: 18503 dr nl TELEPHONE: 02940-18014 RIJNKADE 15b 1382GS WEESP	TITLE : DISTEQ-MASTER PCB 4 RIGHT	THIS DRAWING REPLACES PREVIOUS ONES	NOTES :
	PCB.REF.nr:	INDEX	
	DESIGN :	MOD.BY.	
	DATE :	DATE	
	SHEET OF	CHECK 1	
		CHECK 2	
		DRAWN	

27



D&R Electronica bv Holland	TELEX: 18503 dr nl TELEPHONE: 02940-18014 RIJNKADE 15b 1382GS WEESP	TITLE : DISTEQ POWERSP. HEADPHONES	THIS DRAWING REPLACES PREVIOUS ONES
		PCB.5	INDEX: a
		PCB.REF.nr: 0774	MOD.BY.: J.deVries
		DESIGN : D.de Rijk	DATE: 29-08-87
		DATE : 29-08-1987	CHECK 1:
		SHEET 5 OF 5	CHECK 2:
			DRAWN: J.A.v.Hezik

NOTES :

f,g are interconn. between P.C.B. 4 and 5.

TLX. 18503 dr nl
TEL. 02940-18014
Electronica b.v. HOLLAND

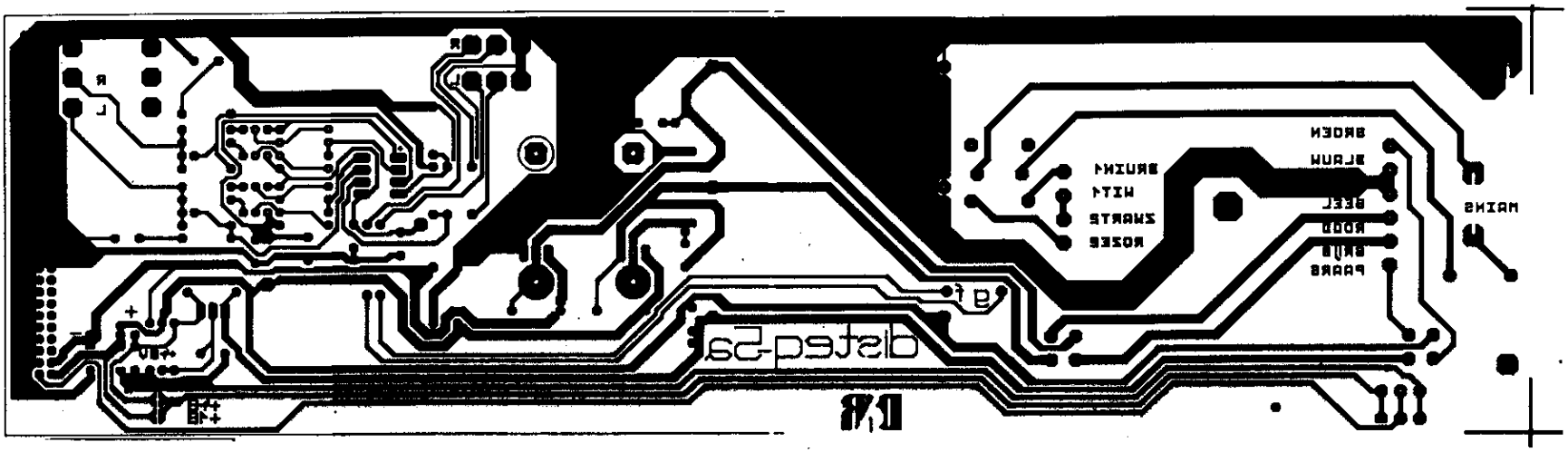
Date : 28/08/1987

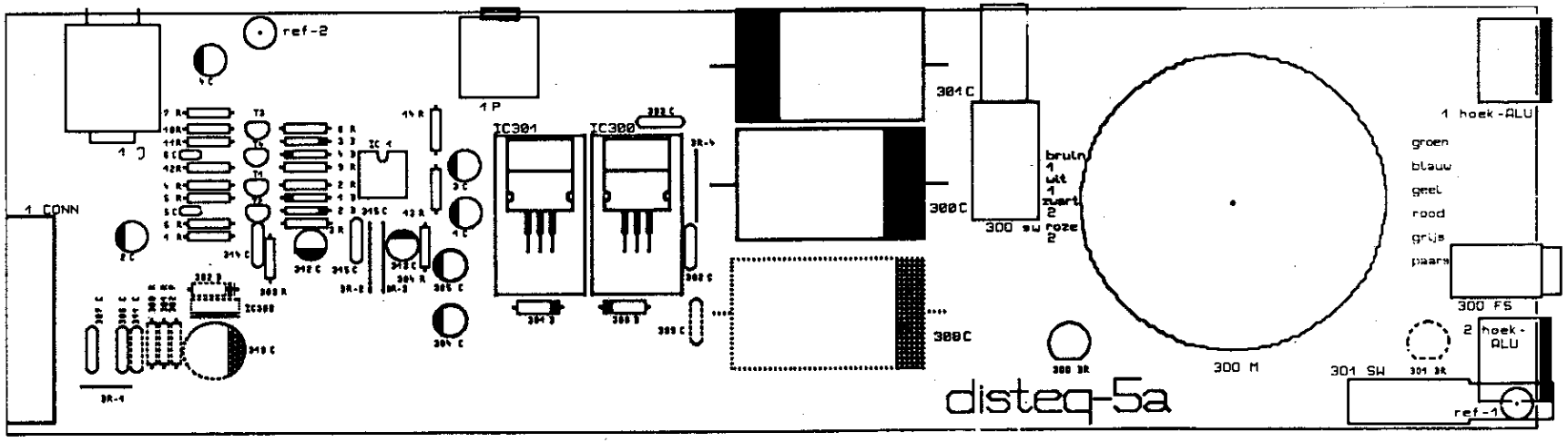
R & D department

PARTLIST : DISTEQ POWER SUPPLY+PHONES PCB-index : 5a

	PartNr	Value	Notes	ArtNr
	R1	1k	5%	0729
	R2	2k2	5%	0733
	R3	2k2	5%	0733
	R4	100E	5%	0717
	R5	100E	5%	0717
	R6	5k6	5%	0738
	R7	1k0	5%	0729
	R8	2k2	5%	0733
	R9	2k2	5%	0733
	R10	100E	5%	0717
	R11	100E	5%	0717
	R12	5k6	5%	0738
	R13	47k	5%	0749
	R14	47k	5%	0749
	R300	--	--	----
phantom	R301 (optional)	390E	5%	0724
phantom	R302 (optional)	3k9	5%	0736
	R303	10E	5%	0705
	R304	10E	5%	0705
	C1	47/25	elco	0287
	C2	47/25	elco	0287
	C3	47/25	elco	0287
	C4	47/25	elco	0287
	C5	10p	ker	0213
	C6	10p	ker	0213
	C300	4700/40	elco	0299
	C301	4700/40	elco	0299
	C302	0.1/63	ker	0241
	C303	0.1/63	ker	0241
	C304	100/25	elco	0292
	C305	100/25	elco	0292
	C306	0.1/63	ker	0241
	C307	0.1/63	ker	0241
phantom	C308 (optional)	2200/63	elco	0272
	C309	0.1/63	ker	0241
	C310	220/63	elco	0293
phantom	C311 (optional)	0.1/63	ker	0241
	C312	47/25	elco	0287
	C313	47/25	elco	0287
	C314	0.1/63	ker	0241
	C315	0.1/63	ker	0241
	D1	1N4148	sgn	0342
	D2	1N4148	sgn	0342
	D3	1N4148	sgn	0342
	D4	1N4148	sgn	0342
	D300	1N4003	rct	0343
	D301	1N4003	rct	0343
phantom	D302 (optional)	1N4003	rct	0343
	T1	BC327	PNP	0333
	T2	BC337	NPN	0332
	T3	BC337	NPN	0332

	IC1	TL072	bifet	0304
	IC300	7818 TO220	pos.reg.	0322
	IC301	7918 TO220	neg.reg.	0323
phantom	IC302 (optional)	7824 TO220	pos.reg.	0324
	B300	B80C1000	bridge rect.	0345
phantom	B301 (optional)	B80C1000	bridge rect.	0345
level	P1	22kBsp	12.5mm matched	0207
mains	S300	220V/2 x 2	printsw.	0406
phant.	S301	2x2 non shorting	ALPS	0400
	FS300	160mA slow	fuse + holder	0675 +0693
	M300	1C275 18V	ringk.	0587
	conn. 1	20 pins	MLX557820	0456
phones	J1	BREAK jack	CLIFF	0433





D&R Electronica bv Holland TELEX: 18503 dr nl TELEPHONE: 02940-18014 RIJNKADE 15b 1382GS WEESP	TITLE : DISTEQ POWERSUPPLY & HEADPHONES PCB 5	THIS DRAWING REPLACES PREVIOUS ONES	NOTES :
	PCB.REF.nr:	INDEX	
	DESIGN :	MOD.BY.	
	DATE :	DATE	
	SHEET OF	CHECK 1	
		CHECK 2	
		DRAWN	