"8000 SERIES"

USER MANUAL

INTRODUCTION

The D&R 8000 series distinguishes itself from other inline systems in various ways. Firstly its very favourable price/quality requires some explanation.
Due to the great demand for a modular console construction from our customers we have decided to produce a semi-modular system.

By semi-modular system we mean that it is possible to remove the single in/output channels individual from the console after having disconnected the flatcable connector from the printed circuit boards. Disconnecting the Molex flatcable connectors from the P.C. board can only be done after having removed the bottom plate from the console, which is very easy.
The master section and led bars are also modular as are the in/output channels.
Further reductions in price are achieved, without affecting quality, by inhouse manufacture of the patchbay, thus eliminating the need for expensive bought in products. At the same time the inline system eliminates many double functions.

The final design as described in this folder, is the result of months of discussion with trendsetting studios in Holland and through research into the behaviour of electronic circuits, which often led to innovatory developments.

Design Highlights

Whenever necessary F.E.T.-switching is employed giving practically unmeasurably low distortion and a shut off in excess of 90 dB's at 10 kHz. This can be achieved by the correct configurations of N channel junction, field effect transistors. F.E.T.-switching has distinct advantages over mechanical relay switching in that there are no moving parts to wear, all switching is accomplished within a solid block of silicon which as far as is known has no mechanism of detoriation.

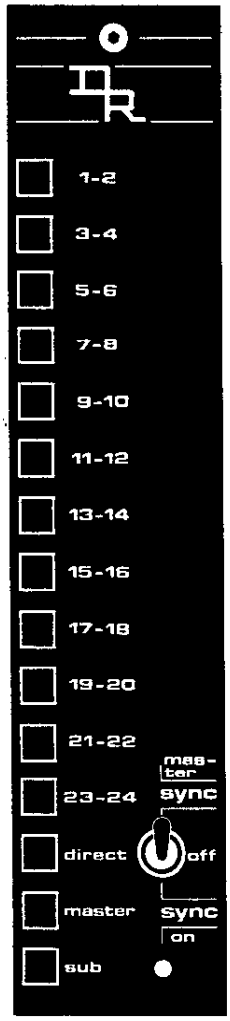
Another innovation is the completely symmetrical microphone amplifier which by its discrete transistors and novel design, produces a balanced microphone amplifier section with a signal to noise ratio which approaches the theoretical minimum and a slewrate which ensures transparent and uncoloured reproduction. A completely new approach to limiting of above audio range frequencies, through passive filtering (in place of the standard active filtering) gives this console an incredible transparency through its absence of transient distortion. By critically damping every integrated circuit at 40 kHz square-waves we achieved complete elimination of overshoot and/or ringing and slewing.
As has been mentioned, the subaudio frequency drop is only achieved by passive filtering. This way of designing the electronics in a recording console contributes to a superb transparency throughout the audio range.
The electronics are performed by the well known TL 070 series Bi-F.E.T. integrated circuits from Texas Instruments which are low noise and very fast op amps with a slew-rate of 13 V/μs. Beside these famous TL series we also use the Signetics NE 5534 AN which is an industrial standard in low noise console design.
These 2 types of op amps are responsible along with discrete transistors for the active circuits in the console.
The passive components are all of a high quality standard.
The pushbutton switches have fork contacts and are selfcleaning in operation.
A new earthing system also contributes to a very stable design with extremely good signal to noise ratio, especially in the mixing buss amps.

Power supply

The power supply is housed in a 19" rackmounting case with three fully independent and protected power supplies. Beside this, every channel board has its own stabilizers on card eliminating the possibility of crosstalk between channels.

Before going on to a more detailed description of all the functions and facilities of the 8000 series a short run down of its possibilities. Although this will be by no means comprehensive.

- 24 low noise multitrack summing amps.
- Simultaneous routing to master, mix down buss, direct output and multitrack summing amps.
- Centralized sync switching.
- One button subgrouping without patching.
- Phantom powering, switchable per channel.
- Extremely low noise, electronically balanced, mic amps, outperforming every transformer balanced mic amp.
- Click free phase reverse and active 25 dB pad.
- Special law on mic gain pots for a smooth control range.
- 4 band parametric e.q. of novel design without interacting controls.
- HIGH pass filter from 20 Hz to 1 kHz fully adjustable, and 12 dB per octave.
- 8 aux sends pre post switchable and selectable from channel and monitoring.
- "One channel dubbing" with full monitoring for engineer and musician.
- A minimum of 24 effect returns incorporated.
- Monitor mute and p.f.l.
- Channel mute and p.f.l.
- Solo in place system with master mode switching.
- 2 Programmed muting systems.
- 100 m.m. carbon track audiolog faders (conductive plastic optional).
- 12 segment ledbargraph peak meter per channel.
- 2 insertion points per in/out channel.
- Master section with trimmable left/right outputs, as well as p.f.l./a.f.l. trimming.
- Selection from 6 stereo sources.
- Control Room Monitor.
- A stereo cue system fed by 8 aux sends with complete controlability of stereo balance and level via the control room monitor.
- A high quality function generator with fixed frequencies for tape level adjustements.
- 8 Master aux sends with possibility for audible and visual control.
- Ledbargraphs for aux master sends and two cue systems as an optional extra.
- Comprehensive control room monitor section with alternative monitor loudspeaker switching, dim switch, mono switch and separate left right muting.
- Separate studio monitoring which can be fed from the C.R.M. or the cue 1 system.
- Extensive talkback facilities with built in electret mic and individual selection to slate, STM, cue 1, cue 2 and patchbay (where desired patching connections are made).
- Separate communications system switchable via the a.f.l./p.f.l. system.
- Phase meter standard.
- Internal patchbay with all in-outputs plus 24 external equipment in-outputs.
- All connections via multipin plugs, male plugs being delivered in advance of the console.



DESCRIPTION OF CONSOLE CONFIGURATION

Routing

The 12 upper push button routing switches facilitate signal routing from the channel fader and pan-pot to busses to one or more multitrack summing amplifiers, for example switch 1-2 connects the signal to the busses of multitrack track summing amp 1 and/or 2 depending upon the associated panpot position. It is also possible to route the signal simultaneously to other tracks. If it is not necessary to route more signals to a multitrack buss then it is best to make use of the "Direct" switch which routes the signal direct, post channel fader, to the multitrack recorder, without first going through the summing amplifiers.

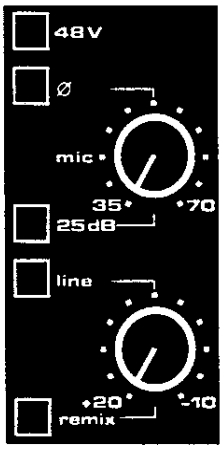
The master routing switch sees to it that the signal appears on the left-right buss via the channel to busses pan-pot, a situation that mostly occurs in the remix mode. It is still possible at the same time to make subgroups via the other 12 routing switches.

The last pushbutton switch facilitates the creation of a subgroup master fader for all signals routed to the channel concerned. This, however, means that this channel can no longer be used as an input channel. The monitor section is unaffected.

Sync

The toggle switch in the uppermost section handles the sync switching of the multitrack recorder. In the position "sync-on" the monitor section in the channel is switched from the input to the output of the multitrack machine. In the position "Master sync" this only happens after activating of the sync in the master section. This provision simplifies the simultaneous switching of more than one track.

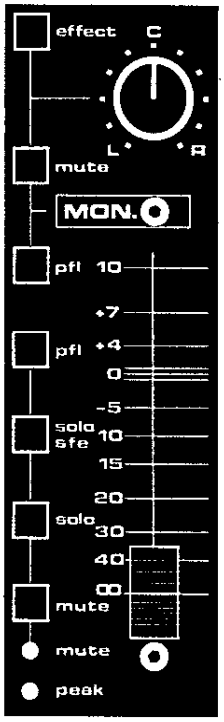
Mic

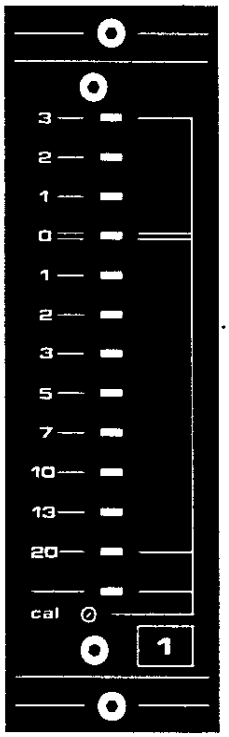


Under the routing section are the input circuit controls and switches. The first being the, per channel, switchable 48 volt phantom power supply. Thereunder is the phase reverse switch which only affects the microphone signal. Following this comes the mic gain control which has a range of 35 dB which can be extended by the active 25 dB "pad". Thereby allowing for more subtle adjustment without degrading the signal to noise ratio. Through the high input impedance of the microphone pre-amp (4 kOhm) it is possible, without any problems to feed in a line signal with the "pad" switched in. You have then the possibility of a symmetrical line input with phase reverse switching.

Line

Under the mic gain is the combined line/remix attenuator with a range of, from −10 dBu to +20 dBu. The remix switch has priority over the mic-line switch, situated above. The connectors of the mic & line inputs are on the patch panel, from where, via a break contact, the mic only continues through to the multipin connector at the rear of the console, for use with multicables going to the studio floor. The remix input is connected to the breakcontact of the multitrack input and therefore not available at the patch panel.





Peak Indicator

The peak indicator is wired directly after the e.q.-section and responds to positive as well as negative wave forms. The comparator switching ensures a clearly visible warning, in the form of a led, if the signal exceeds the +18 dBu level (this is 4 dB below clipping). The release time gives an indication of the amplitude of the excess.

Fader

The standard channel fader is a carbon track Preh fader. Duncan/Penny Giles conductive plastic faders are available as an option.

Ledbargraph

The 13 segment ledbargraph is a peak reading instrument with adjustable release (on the p.c.b.) which can be set to your requirements. The level calibration is adjustable from the front. The ledbar reads all signals appearing before the insertion point of the monitor/effect section. Therefore all signals that are audible via the monitor p.f.l./a.f.l. This could be: the multitrack input, the multitrack sync output, the multitrack remix, or the effects input. It is also possible to use the monitor section as an effect return without having to decouple the ledbar from the multitrack replay (remix) output. You do not patch into the effect input but into the monitor insertion input with your effect return. The ledbar continues now to register the recorder.

With this description of the functioning in the in-output channel we have tried to give you some insight into the possibilities offered by the 8000 series. Because all the in-outputs are brought to the patch panel there are further possibilities in addition to those described above.

Patchbay

Uppermost are the electronically balanced mic inputs. On the tip and ring of the jack sockets are the imputs to the mic amplifiers. The break contacts of these jacks are wired to the multipin for the studio floor.

The Channel Line Inputs

These are unbalanced inputs and have an input impedance of 10 kOhms. Following this there are the channel insertion sends and the channel insertion returns.

The Multitrack Feeds

These are the outputs of the multitrack summing amps which are wired to the break points of the multitrack inputs. Connections to the multitrack are made by multipin sockets on the rear of the console. The break contacts of the multitrack output jacks are wired to the remix inputs of the in-output channels. Situated hereunder are the effect inputs, the monitor insertion sends and the monitor insertion returns. The last two rows of sockets are intended for the connection of external equipment in and outputs for which a multipin connector is also provided.

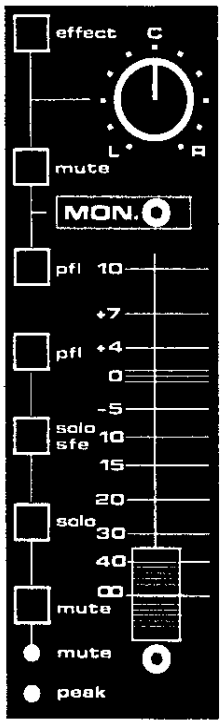
The in-output channels 25 and above have no multitrack in-output connection.

Pan-Pots

Under the aux sends are the pan-pots of the channel section and the monitor section. Both pots are of the log-antilog type with a −3 dB attenuation in the centre. The channel to busses pan-pot is the one associated with the channel fader and is operational on multitrack mixbusses 1-24 and master left-right. By pressing the "direct" switch the pan-pot is by-passed in the channel concerned. However, the pan-pot remains active in the left-right masters and other multitrack summing amps. The monitor pan-pot is associated with the left-right master busses but only if the adjacent mute switch is inoperative. It is imperative to mute any monitor section that is not in use. This is in order to maintain the excellent signal to noise ratio of the master summing amps. By muting an unused monitor section not only is the signal muted but the section is also removed from the master mix busses, maintaining good signal to noise ratio.

Effect

The switch "Effect" makes it possible to use the monitor sections as effect returns. In this manner you have control over as many effect returns as the console has channels. The effect inputs are on the patchpanel. Besides the above discussed mute switch, the monitor/effects section possesses also a p.f.l. switch. The monitor fader is a carbon track fader with a 58 mm travel. There is 10 dB of gain available after the fader.



P.F.L. (Channel)

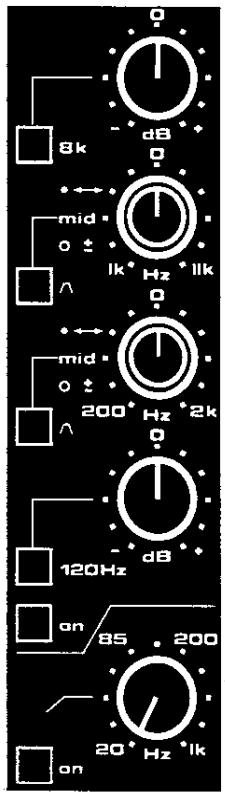
The p.f.l. is wired immediately after the channel insertion point and before the channel fader. The p.f.l. circuit is not interrupted by the "solo in place" system or the mute switch.

"Solo In Place"

The Solo in Place system is a valuable tool for the simplification of the work of the engineer. The system is actually a centrally operated muting system. As opposed to an a.f.l. system (after fader listening). The Solo in Place system leaves the effect returns unaffected, whereby it is a simple matter to make a comparison between the original and the effect signal. The system also offers the possibility, by means of one switch, to monitor a subgroup. But before going any further a short explanation about the working is in order:
By pressing of, for example, the solo switch in channel 1, the channels 2-24/32 will be muted and the mute leds will light up. Now only channel 1 remains audible (of course all monitor effects sections in use are not muted). In order to allow other channels to remain unaffected and thus still audible, you have only to press the "solo safe" switch in the channel concerned, whereby these channels as the channel in which the solo switch was activated will not be muted. Every muting is indicated by a led.

Mute

The mute switch has priority over the solo in place system even when a solo safe button is activated. The Mute function is accomplished by means of F.E.T. switching.



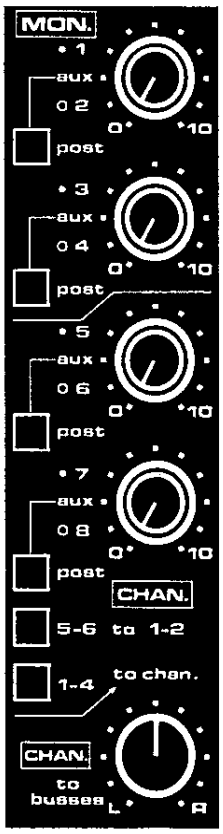
Equalizers

The equalizer stands out by virtue of its simple design yet innumerable possibilities. It is of a parametric 4 band design which spans the whole audio spectrum. The high shelves at 2 clickfree −3 dB turnover points at 8 kHz and 12 kHz. From experience these frequencies have been chosen as the most practicable. The maximum lift and cut is ± 16 dB. This being linearly spread over the potentiometer range.

The two equalizers are parametric. The high mid range, from 1 kHz to 11 kHz with a choice of two bandwidths. The low mid control ranges from 200 Hz to 2 kHz and likewise a choice of two bandwidths. These bandwidths also having been chosen from practical experience. The lift and cut range is (plus and minus) ± 16 dB. The bass control is again a shelving control as opposed to the bell curves of the midrage equalizers. The turnover points are at 60 Hz and 120 Hz. The lift and cut range is also ± 16 dB.
The choice of value and turnover points in this equalizer will pleasantly surprise you. In the eventuality of still further equalization being necessary there follows an insertionpoint which gives the possibility of further equalization. The whole e.q. section is by-passable with a clickfree switch.

High Pass Filter

The continuously variable high passfilter is switched immediately before the equalizer. The range extended from 20 Hz to 1 kHz which makes a very precise setting of the turnoverpoint. It was a deliberate decision not to choose a greater range or steeper slope than 12 dB per octave. This filter is also by-passable.



Aux

The 8000 series offers in total 8 individual aux sends which easily allows for the most extensive remix sessions. Nevertheless the electrical switching circuits require some explanation.
A priority in this design was that, as well as the input channels, the monitor section should be able to make use of the aux sends. This is realized as follows: Aux 1-4 are connected to the monitor fader each pair being pre-post switched. Aux 5-8 are connected to the channel fader and are likewise pre-post switchable, per pair.

5-6 to 1-2

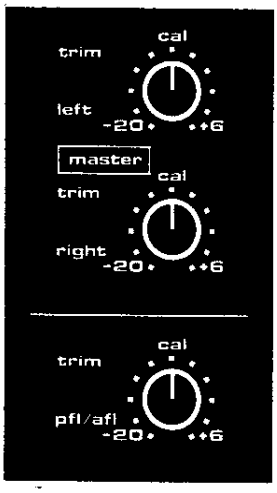
When dubbing it is necessary to allow the musician to hear himself as well as the sync signal (which comes from aux 5-6 fed from the channel fader (the mic input signal) to the mix busses of aux 1-2. In this way the musician hears the signal from the monitor section (through Aux 1-2) as well as the input signal from the channel section.

1-4 Channel

Through the switch 1-4 to channel all 8 aux sends are available to you in the remix mode. This is achieved by switching the 4 monitor aux send to the channel fader.

Patchbay Master Section

On the patchbay are the insertion sends and returns and outputs of the left/right and the 8 Aux masters. There are two mono feeds for the 6 stereo machines.
The inputs of the stereo machines are parallelled and connected via break contacts to the stereo master outputs. Which makes simultaneous recording on several machines an easy matter.
Making 1 to 1 copies is done by patching.
The outputs of these stereo machines are wired to the monitor source selectors stereo 1 to 6. The patchbay has outputs from the CRM and insertion points of the internal oscillator.
The 2 Cue system outputs are wired to the studio lines 1, 2, 3 and 4, the STM outputs to lines 5-6. These studio lines are wired to a multipin on the back of the console which has to be wired to the studio floor for Foldback purposes. Unused lines are 7-10 intended for any connection you like to the studio. There are 4 spare jacks which can be custom wired. The extension Talkback output can also be found in the Master section of the patchbay.

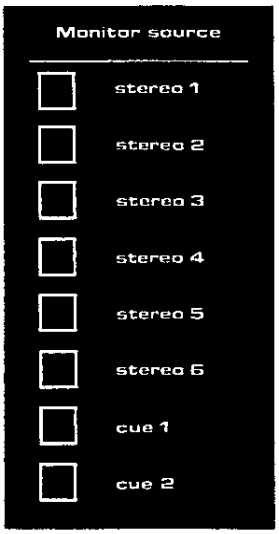


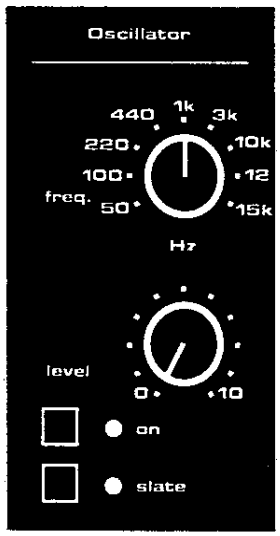
Master Section

The following describes from above to below the use and function of the master controls. First and foremost are the Master Trim Pots which offer the possibility of correcting an over, as well as under modulated mix. An optimum headroom can only be expected in the position "Cal". Turning down the trim pot gives an improvement in the signal to noise ratio in the master mix amps, but a reduction in headroom in the post channel monitor fader amps. Turning them up to 6 dB gives a reduction in the signal to noise ratio and an increase in the headroom in the post fader amps. Use this control, therefore, only when necessary.

The P.F.L./A.F.L. Trimpot

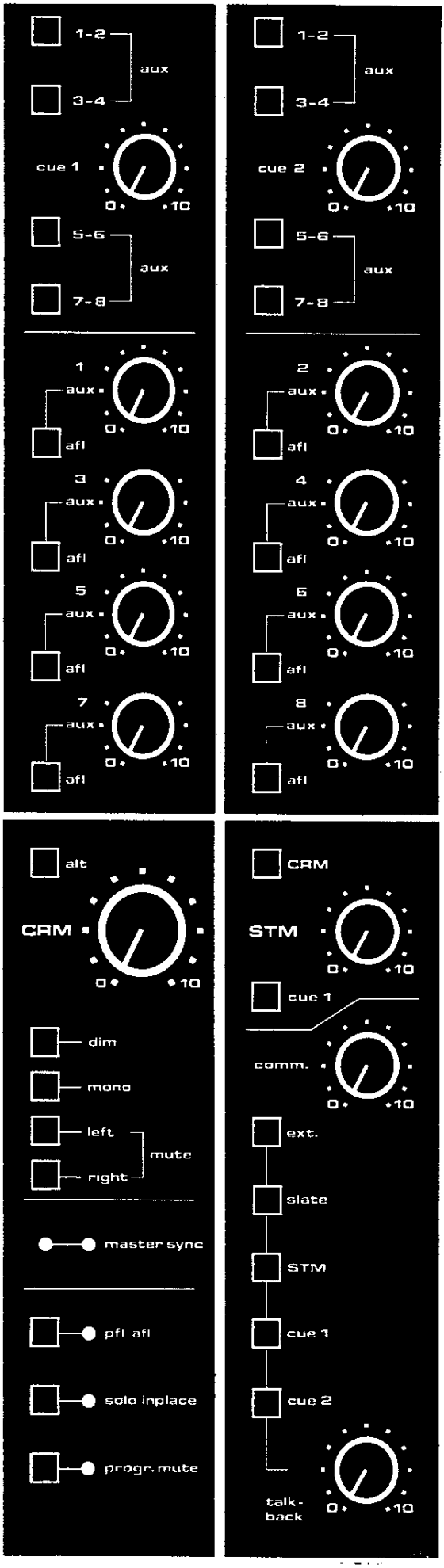
This allows for adjustements of the audible level of the signal coming from one of the p.f.l./a.f.l. switches. Only the "cal"-position gives a calibrated indication on the master ledbargraphs and in the control room monitor loudspeakers.





Monitor Source

This row of push button switches makes it possible to select from a choice of 6 stereo sources instead of the master mixdown. Besides the monitor select switches are the controles of the high quality function generator. It was decided to use fixed frequencies because of the recognizability of these. The frequencies are: 50 Hz, 100 Hz, 220 Hz, 440 Hz, 1 kHz, 3 kHz, 10 kHz, 12 kHz and 15 kHz. The amplitude is variable from 0 to +4 dBu.
The "On" pushbutton speaks for itself. The "Slate" switch produces an oscillator signal on all multitrack summing amplifiers and the master line outputs. This is for frequency and cueing checkups. The monitoring is dimmed 20 dB at the same moment.



Cue

The cue 1 system is identical with the cue 2 system. They are intended as foldback for the musicians. If one of the four Aux switches is not activated the master stereo mix comes automatically in the cue systems. This is useful in order to quickly obtain a foldback mix and for playing back previously recorded tracks.
It is possible to start with the control room monitor mix and then, if necessary, to switch over to a previously set up cue mix of Aux 1 and 2 for example.
The cue systems are offered with the optional extra of 4 ledbargraph meters.

Aux Masters

The Aux masters with their a.f.l. switches control the total outgoing level of the Aux sends. Also for these, as optional extras 8 ledbargraph meters are available.

C.R.M.

C.R.M. stands for Control Room Monitor and regulates the level of all the signals that go to the control monitors. The C.R.M. is surrounded by various push-button switches. Firstly "Alt" which stands for alternative. It is possible with this switch to bring in another monitor system in the case of one being connected. The "Dim" switch attenuates the monitor system by 20 dB. The mono switch makes stereo mono comparison possible, without altering levels. The mute switches ensure complete disconnection of the monitor speakers. It is also possible to disconnect only one of the speakers.

S.T.M.

S.T.M. stands for Studio Monitor. This is a monitor system for the studio as are the 2 cue systems. The 8000 series offer the choice of 3 separate and independant monitor systems. The studio monitor, to which most loudspeaker pairs are connected can be fed from the C.R.M. or the Cue 1 system. It is an easy matter to playback recordings by pushing in the C.R.M. switch. The Cue 1 switch gives the cue mix through the studio monitors as foldback for large groups such as choirs.

Communications

The communications system is simple yet effective. The 8000 series allows for use of an extra mic input which via the communication switch and associated volume control can be monitored on the a.f.l./p.f.l. system. This is the great advantage that, irrespective of microphones possibly connected in the studio, communication is always available with the studio.

Talkback

The talkback system is quite extensive as we at D&R find good communication is an absolute necessity for the success of a recording session. Thus it is possible to communicate from the studio to the control room at all times and in all stages of a session. It is also possible to speak from the control room to the studio via all outgoing lines. Any combination of the above is also possible. General communication via the studio monitors, selective communication via the cue systems, (as well as an extra talkback destination "Extension") are possible.

The "Slate" switch offers the possibility , simply, to put information on tape. By use of the talkback switch the C.R.M. is attenuated by 20 dB. There is a high quality, built-in electret microphone for talkback purposes. A high pass filter improves the audibility and clarity.

Miscellaneous

Remaining in the master section are the central status switches of various functions. Firstly the master sync. This switch with its associated led activates the sync inputs in any channel where the sync switch is in the master sync position. It is possible, if desired, to control the recording "relay" from the multitrack or to allow the multitrack recorder to activate the sync switching. This sort of coupling simplifies the dubbing considerably and makes it a "One Button Drop In".

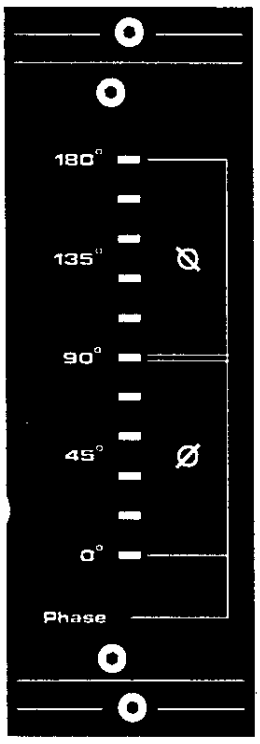
The p.f.l./a.f.l. leds indicate only that somewhere in the system a p.f.l./a.f.l. switch is activated.

Solo In Place

The solo in place switch with the associated led indicator brings the solo in place system into circuit. If this switch is not activated, the solo in place system does not work.
It is also essential that this system is switched off in the remix mode to prevent influencing the master mix, this as opposed to the a.f.l./p.f.l. where this is not the case. This centralized offswitching has yet another advantage, this being, that the solo in place system is actually a muting system. It is now possible through previously activated solo and solo safe switches to create a central muting system from specific channels in the remix where otherwise many hands or perhaps noise gates would be necessary.

Programmed Mute

This switch (when pushed) is in fact only a switch that cancels the mute function in the channel. It is now no longer possible to mute in the channel. The central led is now lit up. This apparently strange situation gives you the possibility, as with the solo in place switch, to perform programmed mutings in many channels simultaneously. Consider the case of an intro by one instrument on a 24 track mix.



Master

The stereo master signal is adjusted by the stereo master fader and its level is visible on the master led bars. Parallel with these meters, which indicate everything audible on the control room monitors, the Phase correlation ledbar is wired. This precision instrument indicates the exact phase relationship between 2 given signals. A Phase shift of 90° or less is acceptable for mono compatability but above this (out of green into red) is unacceptable. The phase meter registers a correct reading between −40 dBu and +20 dBu. When presented with a signal below −40 dBu it switches itself off, so avoiding any incorrect reading.

The Controls lay-out together with the block diagram will explain most functions and facilities of the mixer. A short run-down of all recording monitor and mix-down modes will give full insight in the almost limitless flexibility of the D&R 8000 series in-line consoles.

A. Single source on single track-Recording

The microphone or line signal will, after passing through the patchbay, enter the in-output channel, where the mic-line pushbutton will determine the input mode.
Separate gain controls for the microphone and line/remix signals are provided with additional 25 dB "pad" and phase reverse switching for the mic signals. If necessary, the 48 volt phantom powering can be switched on. First the signal will pass the high-pass filter which can be switched in and out. After passing the high pass filter it enters the equalizer section which also can be by-passed. Directly after the equalizer the signal level is monitored by the peak led indicator situated just above the channel fader. At this particular point ancillary equipment can be inserted on the patchbay in the jacks called channel insert sends/returns.
The p.f.l. switch monitors after the insertion point, but before the mute switch.
Directly after the mute switch (above the mute led) is the long travel channel fader. This fader sends the signal, via the pan-pot to busses, to the master.
In case of single track recording it is better to by-pass the pan-pot by activating the direct switch then the signal goes directly to the multitrack machine.
Now there are two ways of monitoring the signal, directly from the channel by pushing the master routing switch, this leaves the monitor section free for other purposes. The other way is to use the monitor fader and its associated pan-pot which leads directly to the master mix busses, if the monitor mute is not activated. Again it is an absolute necessity to mute every unused monitor channel in order to achieve the best signal to noise ratio in the master mix busses.
When no effect switch is activated the Ledbargraph meter will read the signal going to the multitrack. It is advised to use the Aux sends 1-4 as Foldback and effect sends because these sends will also be fed when the sync switch is activated in the sync replay mode for replay of recorded signals. Aux 5-8 can be used only as Foldback sends because these sends will not be fed from the multitrack in the sync mode so there is no signal going to the effect units in the sync mode.

B. Multiple sources on one or two track-Recording

When more than one microphone or line signal has to be recorded on a single track or on two tracks for stereo, a submix facility will be required.
On the 8000 series this can be done without patching and with a maximum ease of operation.
The microphone or line signals will be processed as described under A except that no direct switch is activated but one of the routing switches. If you push, for example, routing switch 1-2 in channel 1, the signal will, depending upon the position of the channel pan-pot, go to track 1 and/or 2. This can be done in all the channels where a signal has to be recorded on track 1 and/or 2. In this way you can record other signals on other tracks or on more than 2 tracks at once.

Sub

Imagine you have 12 channels in a perfect balance routed to track 1 and 2 and the need arises to attenuate this mix.
By pushing the sub switch in the in/output channel, to which you have routed, the channel fader becomes a sub master.
The input section of that particular channel is now switched off.
You are losing an input channel, not the monitor section. If you don't want to loose input channel 1 and 2 rearrange the routing from all the channels and activate in those in/output channels the sub switches together with routing switches 1 and 2 and in these channels you have now your sub master faders before going to the multitrack. The patchbay will also give possibilities to make subgroups.
Monitoring can be done individually in the in/output channels or in the subgroup channel, both with the monitor fader. This will give the advantage of a switched Aux section.
If this is not important monitoring can be done directly on the monitor mix busses by switching in the master routing switch in the submaster channels. This configuration will leave all the monitor sections free for effect returns.

Sync

The sync replay is done simply by activating the sync switch to its sync-on position. In the master sync position sync replay will only occur after pushing the master sync switch. The monitor faders handle the sync replay signals.

C. Overdub

When a small part of an already recorded track has to be re-recorded, several complications arise, due to the fact that the track has to be replayed in the sync mode before and after the part to be re-recorded for monitor and cue purpose, while during the re-recording the channel should function as for normal recording as described under A.
When the recorder gives the input signal on its output (when not in the sync or replay mode), the following simple set-up is preferred:
Process the microphone or line signal as under A, but put the channel in the sync-mode. Now the engineer can listen to the sync signl coming from the machine which tells him at which moment he will go into overdub and as soon as the multitrack goes into the record mode he hears the musician playing or singing.
When a particular part of the music is re-recorded the multitrack is put into the sync-mode again and its signal will come automatically in the monitors.
If the engineer would like to hear the musician also before and after the dubbing he only has to push the master routing switch, now the musician's signal is permanently routed to the master mix buss. It is only what he prefers to do.
On the other hand the musician himself has to hear the sync signal as a guide as to where to start dubbing. The engineer has to give him foldback from Aux 1 and 2. The new incoming signal in the channel which is the new signal to be recorded can be given to the musician via Aux 5 and 6 but only after activating the switch 5-6 to 1-2.

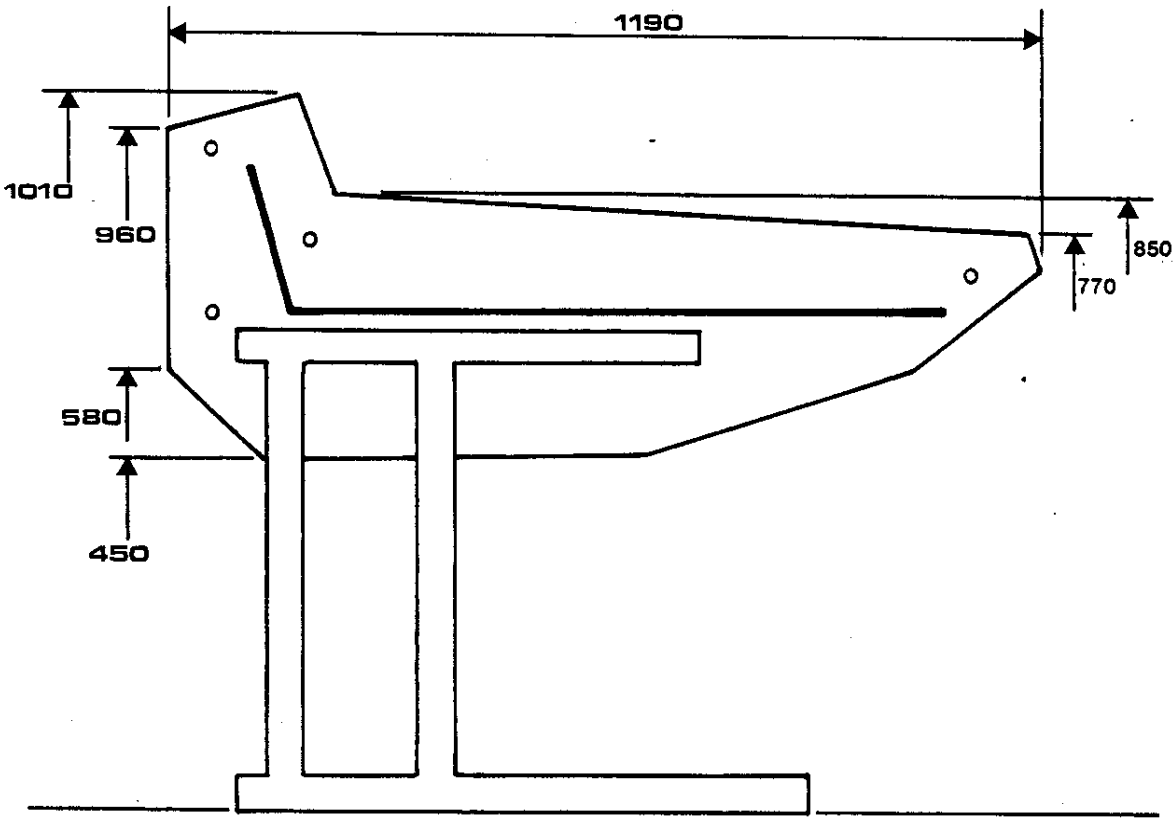
This switch will send the incoming signal on Aux 5-6 (fed from the channel) to Aux mix busses 1 and 2. The musician now has complete control on what he plays/sings and also on everything coming from tape.
Remember this all happens in 1 channel so there is no need in the 8000 series to make a complex new set up for dubbing, only rearranging a few switches.

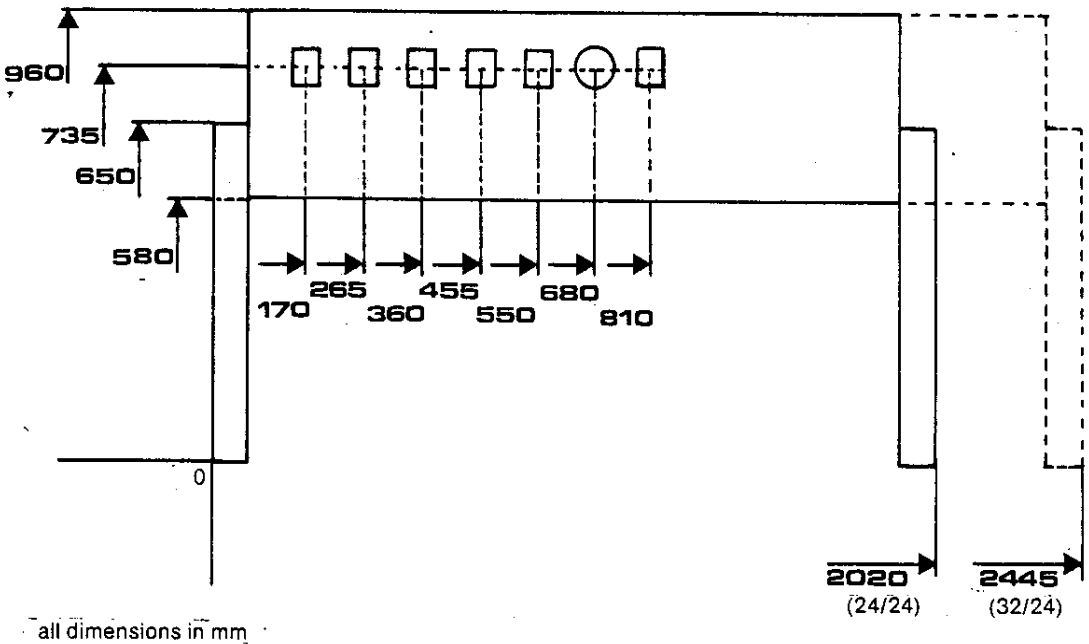
D. Remix

When all tracks have been recorded to full satisfaction, the final end-mix will have to be made. All the remix switches have to be activated and, in the routing section, the master switches as well as the 1-4 to channel switch.
This is a basic set up for 8-16-24 tracks into 2: Make sure that the mute switch in the unused monitor section is activated for optimum signal to noise in the master mix busses.
You now have in every channel 8 Aux sends and a monitor section as effect return. This means in a 24/24 board 24 effect returns or in an other way a console with 48 line inputs. Sufficient for any remix imaginable.
If you need for instance a stereo subgroup fader for channel 1-8, switch off the master routing switches and activate routing switches 1-2 (any other switch is possible) in channels 1-8. Monitoring and overall level control of this new stereo subgroup is done by the monitor faders from channel 1-2. This way of subgrouping will not alter any balance, it only gives you extra premaster subfaders.
By following the signal flow in the block diagram the aforementioned situations shall become much clearer to you.

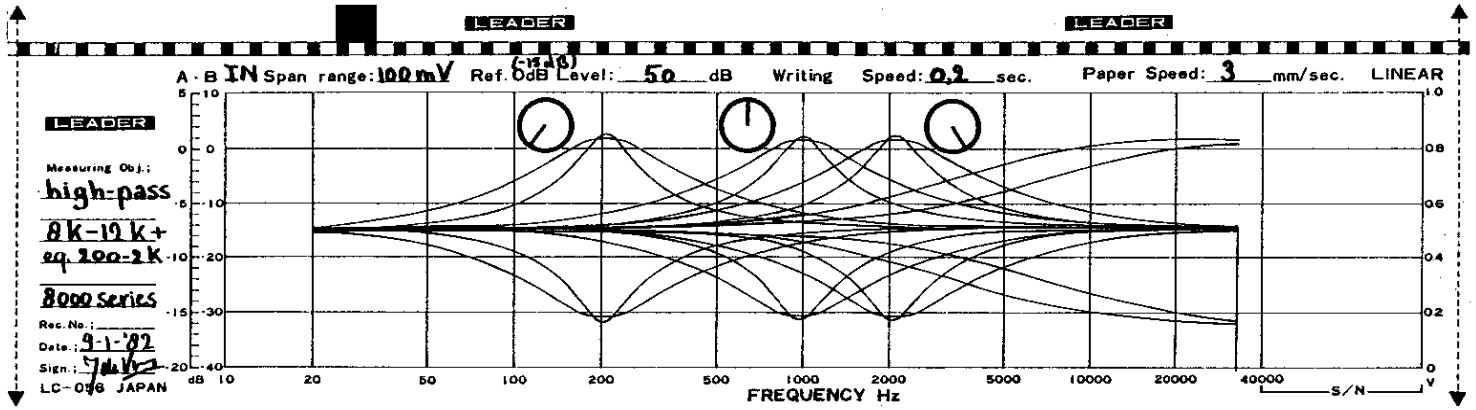
It should now be apparent that the D&R 8000 series in-line consoles represent the "State of the Art" in modern console design.
The description of a comprehensive console such as the D&R 8000 series never can reveal all facilities and ease of operation. If you have any further queries we shall be pleased to give you a comprehensive demonstration or a full list of all studios world-wide who operate a D&R 8000 series console. Just ask any of the engineers using one of these consoles and he will be even more enthusiastic than we are.
Word of mouth has not without reason been our major sales force.

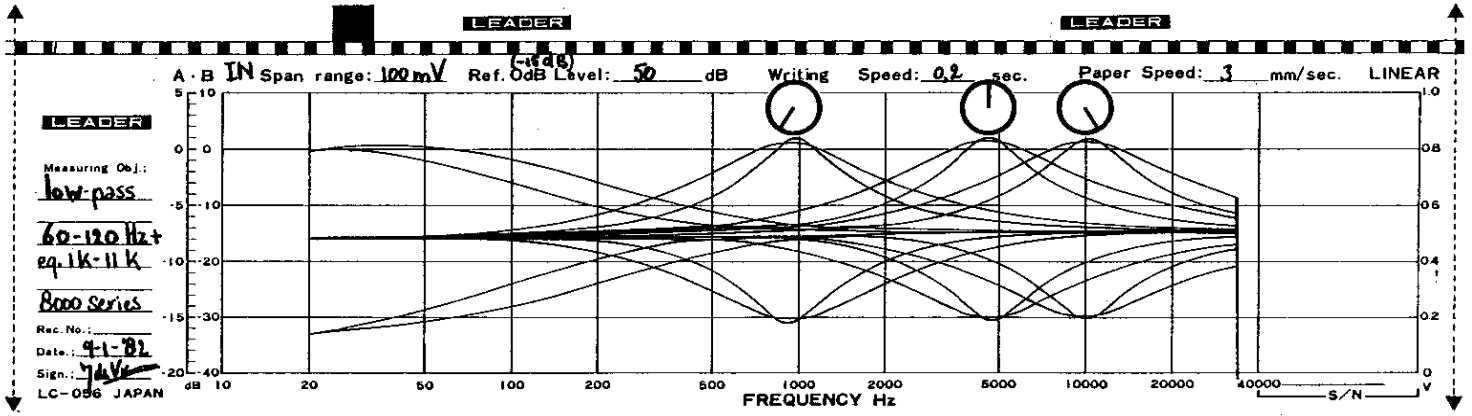
Dimensions

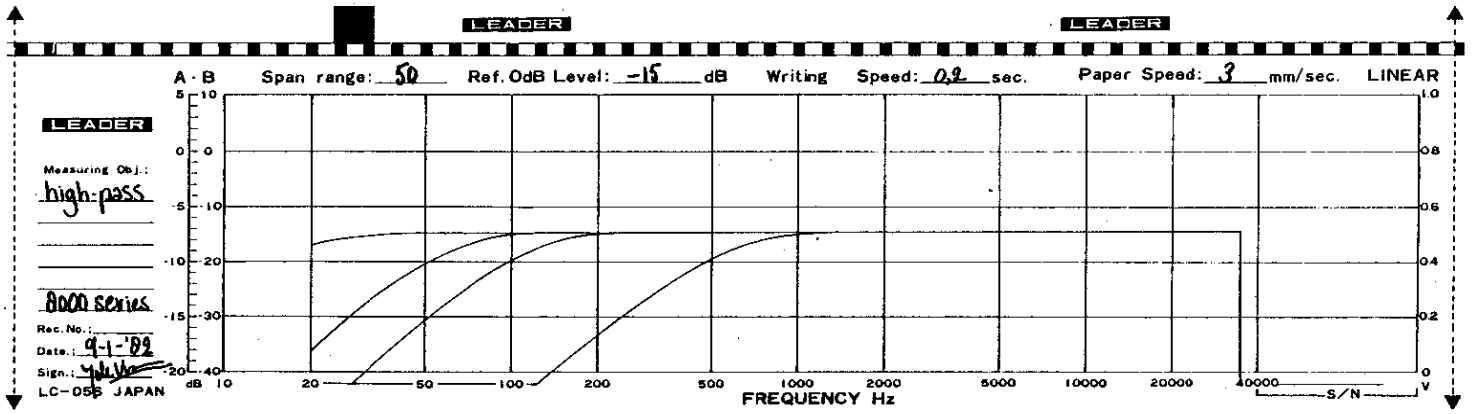




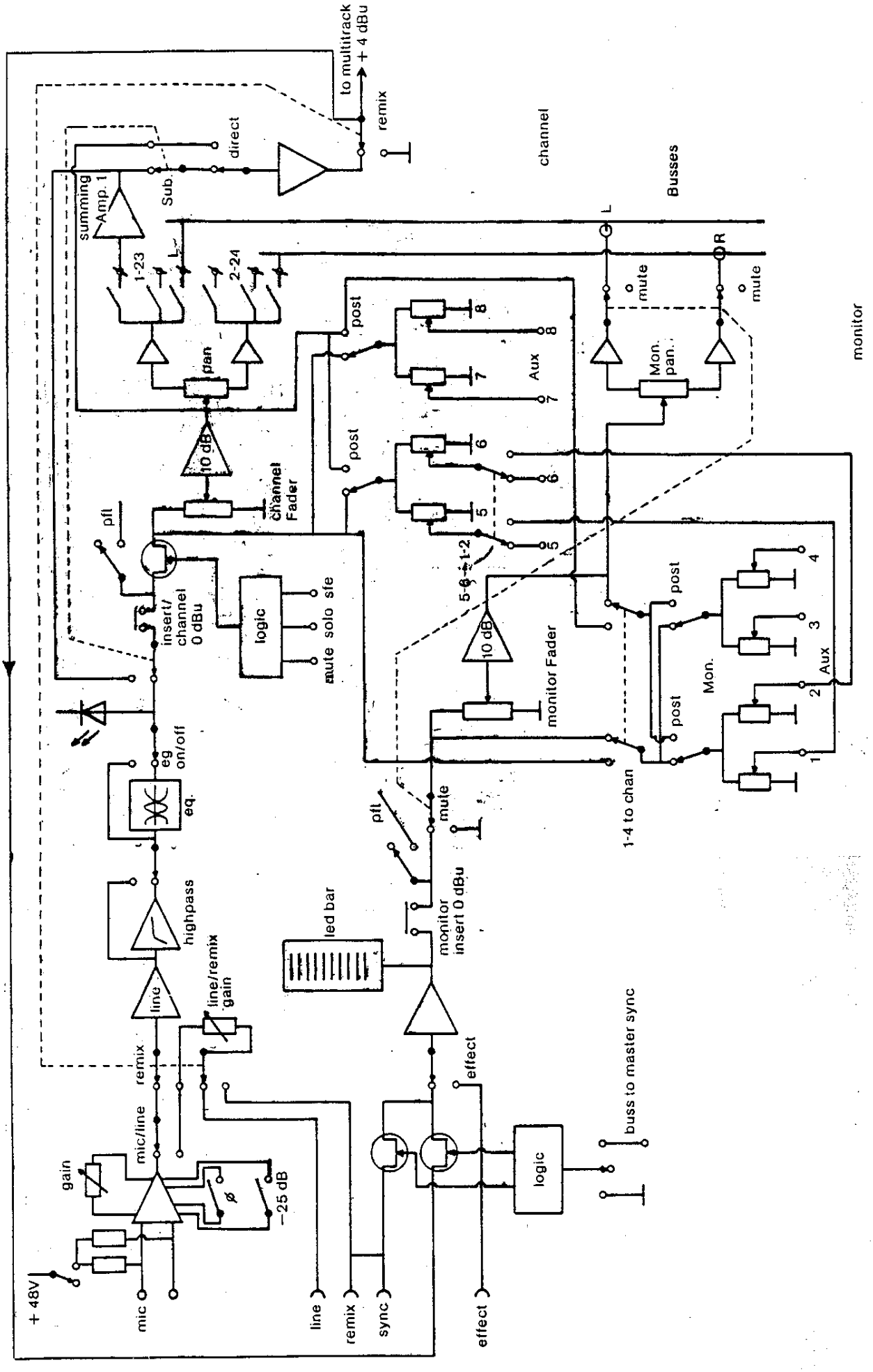
all dimensions in mm

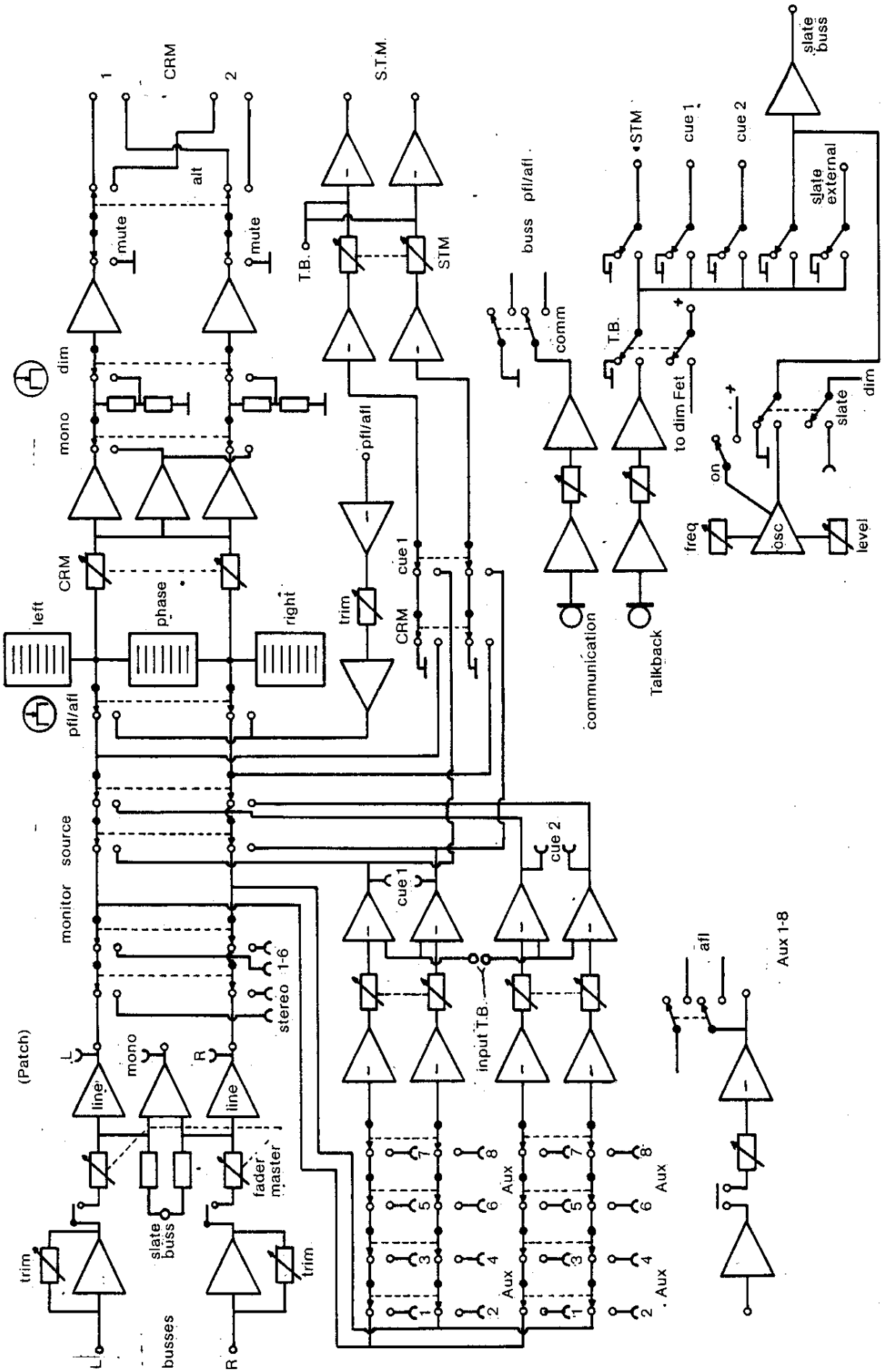

LEADER
LEADER
A · B IN Span range: 100 mV Ref. 0dB Level: 50 dB Writing Speed: 0.2 sec. Paper Speed: 3 mm/sec. LINEAR
LEADER
Measuring Obj.:
high-pass
8K-19K+
eq. 200-2K
8000 Series
Rec. No.:
Date.: 9-1-'82
Sign.:
LC-056 JAPAN
FREQUENCY Hz
S/N


LEADER
LEADER
A · B IN Span range: 100 mV Ref. 0dB Level: 50 dB Writing Speed: 0.2 sec. Paper Speed: 3 mm/sec. LINEAR
LEADER
Measuring Obj.:
low-pass
60-120 Hz+
eq. 1K-11K
8000 Series
Rec. No.:
Date.: 9-1-'82
Sign.:
LC-056 JAPAN
FREQUENCY Hz
S/N


LEADER
LEADER
A · B Span range: 50 Ref. 0dB Level: -15 dB Writing Speed: 0.2 sec. Paper Speed: 3 mm/sec. LINEAR
LEADER
Measuring Obj.:
high-pass
8000 series
Rec. No.:
Date.: 9-1-'82
Sign.:
LC-056 JAPAN
FREQUENCY Hz
S/N

In/output channel 8000 series




1
CRM
2
alt
mute
mute
dim
mono
CRM
left
phase
right
pfl/afl
monitor source
(Patch)
L
mono
R
line
line
trim
slate buss
fader master
trim
busses
L
R
stereo 1-6
S.T.M.
T.B.
STM
pfl/afl
trim
cue 1
CRM
buss pfl/afl
comm
communication
STM
cue 1
cue 2
slate buss
slate external
T.B.
to dim Fet
Talkback
dim
slate
on
freq
osc
level
cue 1
cue 2
input T.B.
Aux
Aux
Aux
Aux
afl
Aux 1-8

SPECIFICATIONS

Notes: Nominal operating level throughout the console is 0 dBu (o. 775 v) — Nominal output level is + 4 dBu.

Microphone Preamplifier

electronically balanced R.F. suppressed.
input impedance 4k4 ohm
gain +70 dB to +10 dB (35 dB variable gain with 25 dB "pad")
headroom +22 dB. Max input +12.5 dB.
noise −127 dB (A weighting)

frequency response referred to 0 dB at 1 kHz
−0.5 dB at 20 Hz 0.5 dB at 40 kHz −3dB at 110 kHz
Harmonic distortion

with −20 dBu input 0 dBu output	with −20 dBu input +20 dBu output
0.0084% at 50 Hz	0.0086% at 50 Hz
0.0081% at 1 kHz	0.006 % at 1 kHz
0.0075% at 10 kHz	0.018 % at 10 kHz

Line/Remix Amplifier

input impedance 18 kohm
gain from −10 dBu to infinity
headroom 22 dB
Equivalent input noise
−96.5 dB (20—20.000 Hz)
frequency response referred to
0 dB at 1 kHz
−0.5 dB at 8 Hz
−0.5 dB at 140 kHz
−3 dB at 400 kHz

Harmonic distortion

0 dBu output	+20 dBu output
0.0074% at 50 Hz	0.0074% at 50 Hz
0.0024% at 1 kHz	0.0016% at 1 kHz
0.0058% at 10 kHz	0.0048% at 10 kHz

Equalizer Section

±16 dB at 8 kHz and 12 kHz
±16 dB from 1 kHz to 11 kHz with Q factor 1.5 and 2.5
±16 dB from 200 Hz to 2 kHz with Q factor 1.5 and 3
±16 dB at 60 Hz and 120 Hz
high pass from 20 Hz to 1 kHz
slope 12 dB per octave

distortion all filters unity gain	all filters + 16 dB
0.0074% at 50 Hz	0.0017% at 50 Hz
0.0062% at 1 kHz	0.008 % at 1 kHz
0.013 % at 10 kHz	0.0016% at 10 kHz

Overall Performance

sync/effect input impedance 10 kOhm
sync sens. +4 dBu effect sens. 0 dBu
Output impedance 100 ohm on all outputs
max output +22 dB into 1 kOhm and above

Record Mode

Test condition; One channel, assigned to its same numbered groupbuss output, microphone input loaded with a 150 ohm source, mic preamp set for 30 dB gain group output +4 dBu
frequency response referred to 0 dB at 1kHz −0.5 dB at 20 Hz and 20 kHz

distortion	noise
0.017 % at 50 Hz	−82 dBu below +4 dBu output (20—20.000 Hz)
0.0094% at 1 kHz	
0.052 % at 10 kHz	

Mix Mode

frequency response
−0.5 dB at 17 Hz
from line inputs to stereo mix buss outputs
ref to 0 dB at 1 kHz
−0.5 dB at 40 kHz
−3 dB at 135 kHz
distortion no more than 0.009% at 1kHz
headroom +22 dB, output amp +18 dB

noise −84 dB below +4 dBu (20—20.000 Hz) measured at the stereo buss outputs with stereo master fader at max. all channel faders at full attenuation panpots at their center positions
−83 dB below +4 dBu (20—20.000 Hz) with one channel fader at unity gain

---

Crosstalk

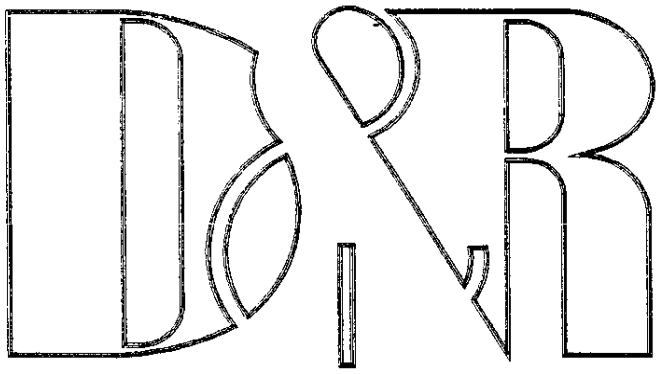
Record mode
Direct Assign between two channels both at 30 dB gain +4 dBu out of channel 1, 150 ohm source on channel 2 input.

Crosstalk on channel 2 (referred to +4 dBu)
100 Hz better than −88 dB
1 kHz better than −90 dB
10 kHz better than −79 dB

Mix Mode

Channel 1 is fed with +4 dBu, fader at unity panned to left. Stereo master fader at maximum.
Channel 2 is terminated with a 20 ohm source.
Fader at unity, panned to right stereo master.

Crosstalk on right master output.
100 Hz better than −77 dB
1 kHz better than −70 dB
10 kHz better than −62 dB

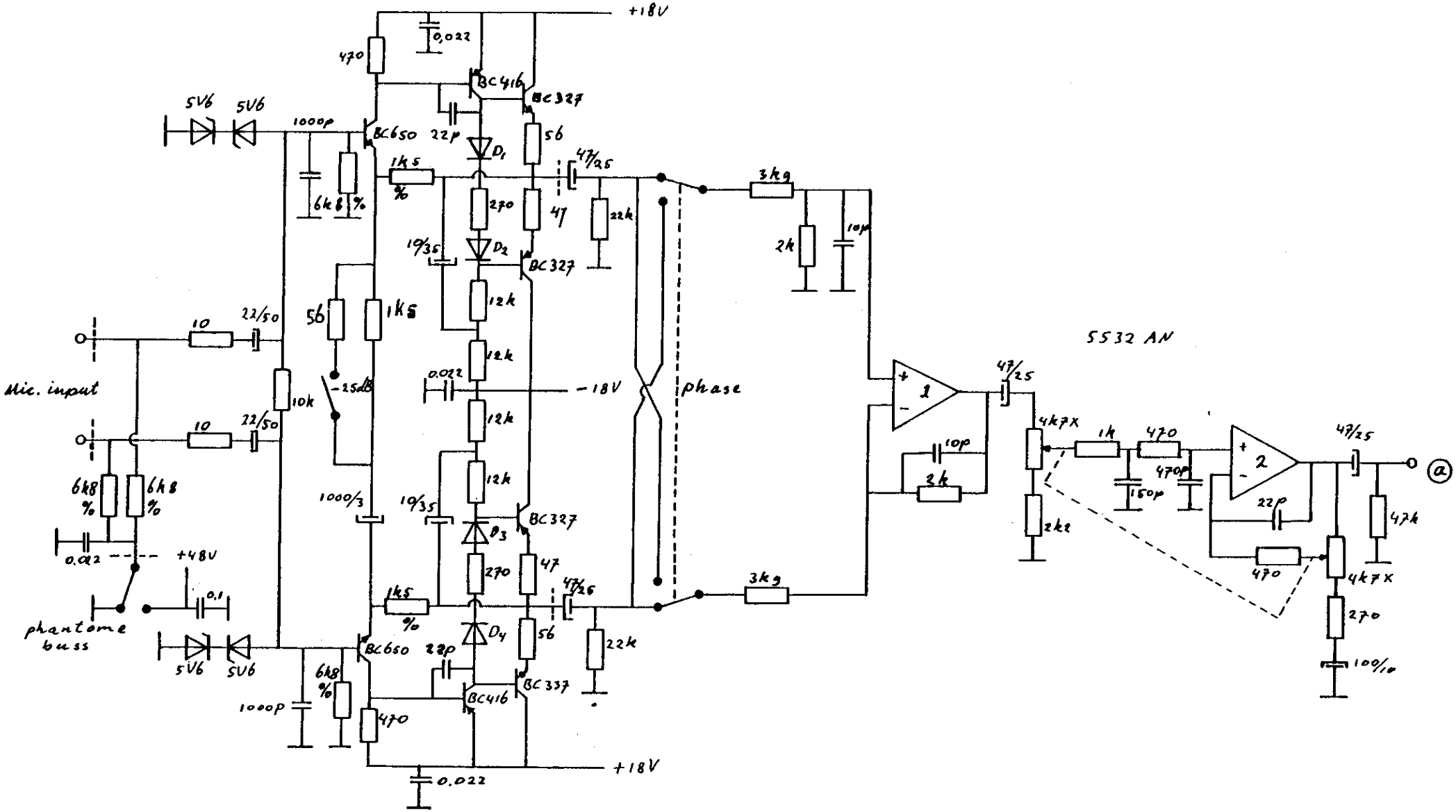


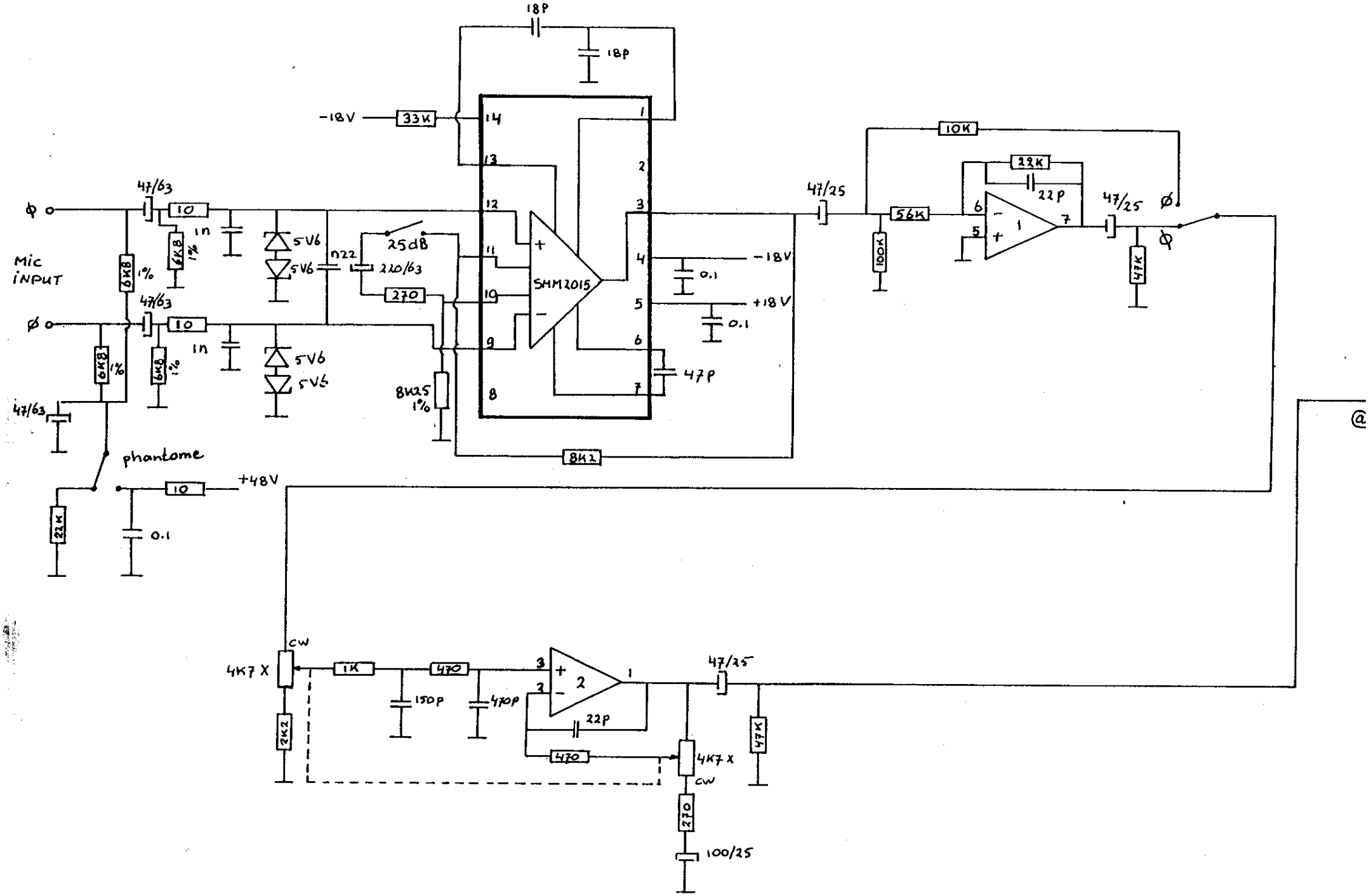
8000

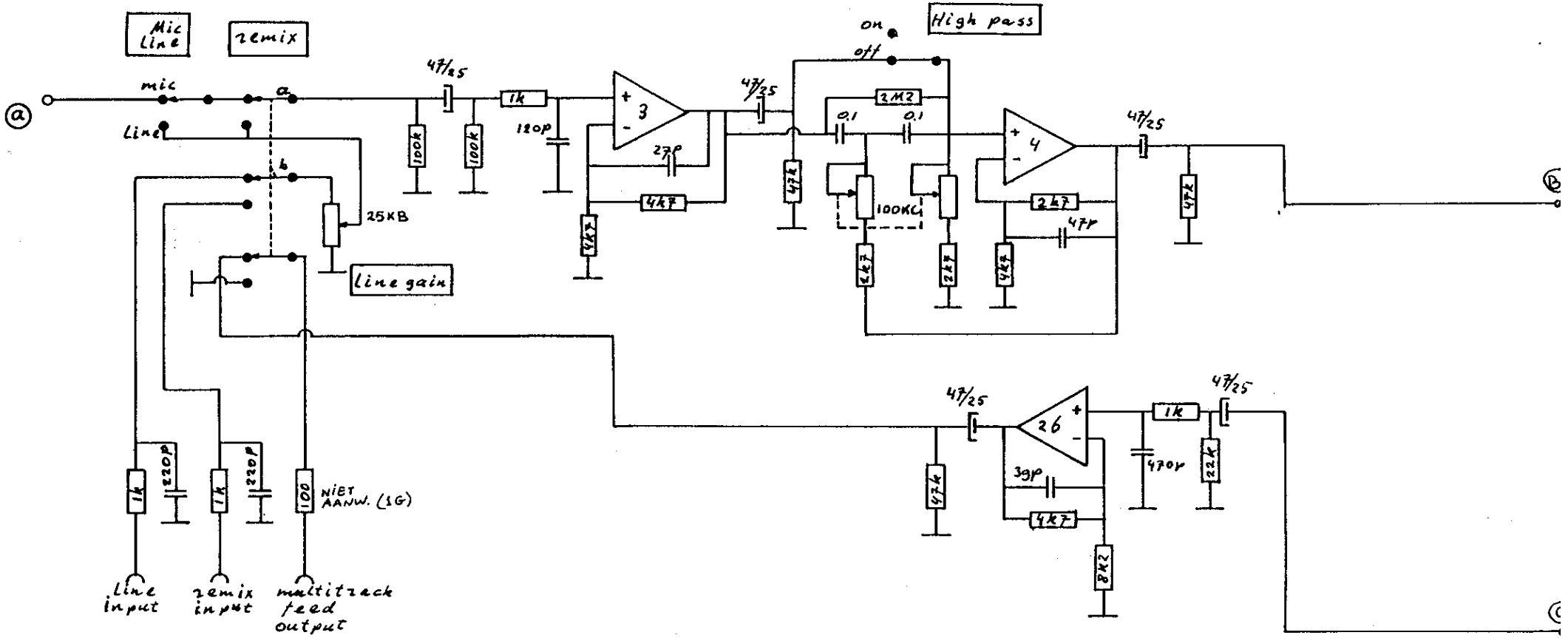
Service Manual

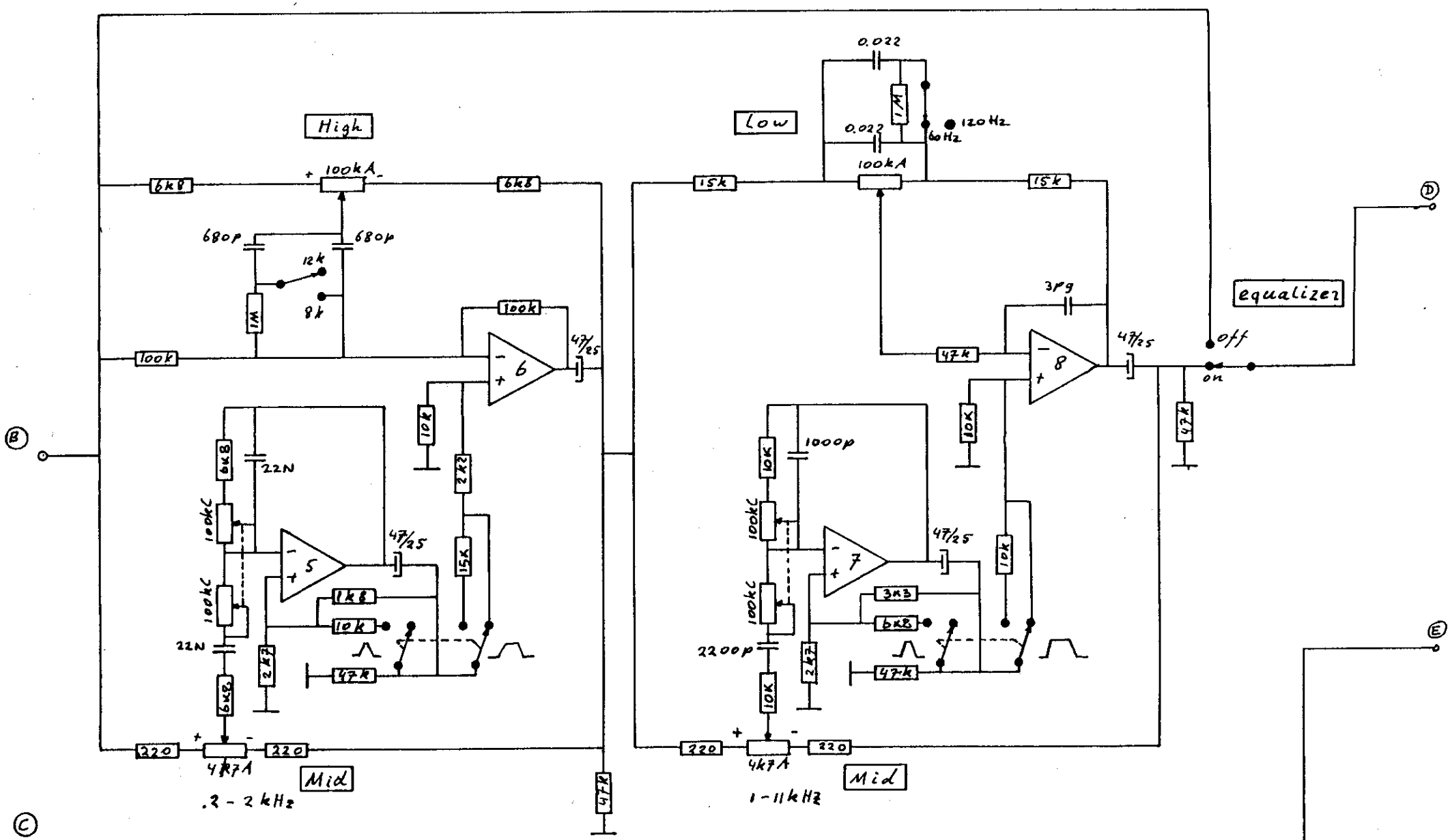
D&R Electronica BV
Rijnkade 15-B
1382 GS Weesp
The Netherlands
Tel: ++31 2940 18014
Fax: ++31 2940 16987

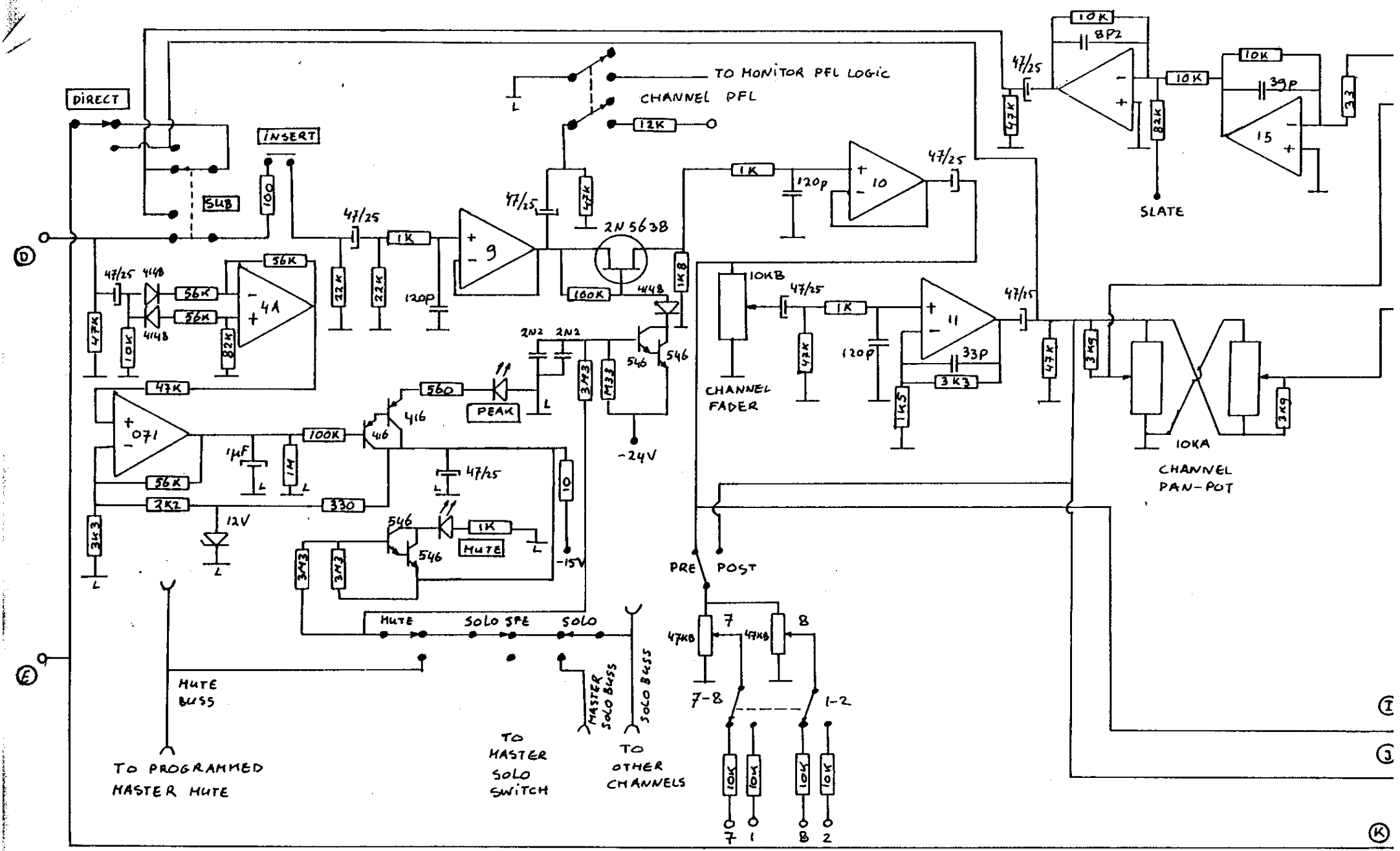
Mic Amp


+18V
0,022
470
BC416
BC327
5V6
5V6
1000p
BC650
22p
D1
56
1k5
%
47/25
6k8
%
270
47
22k
3k9
10/35
D2
BC327
2k
10µ
12k
56
1k5
10
22/50
12k
0.022
-18V
phase
Mic. input
10k
-25dB
10
22/50
12k
12k
6k8
%
6k8
%
1000/3
10/35
BC327
D3
0.022
+48V
270
47
47/25
3k9
1k5
%
0.1
D4
56
22k
phantome
buss
5V6
5V6
BC650
22p
6k8
%
BC337
BC416
1000p
470
+18V
0.022
5532 AN
1
2
47/25
4k7x
1k
470
470p
150p
10p
2k
2k2
22p
470
47k
4k7x
270
100/10
@

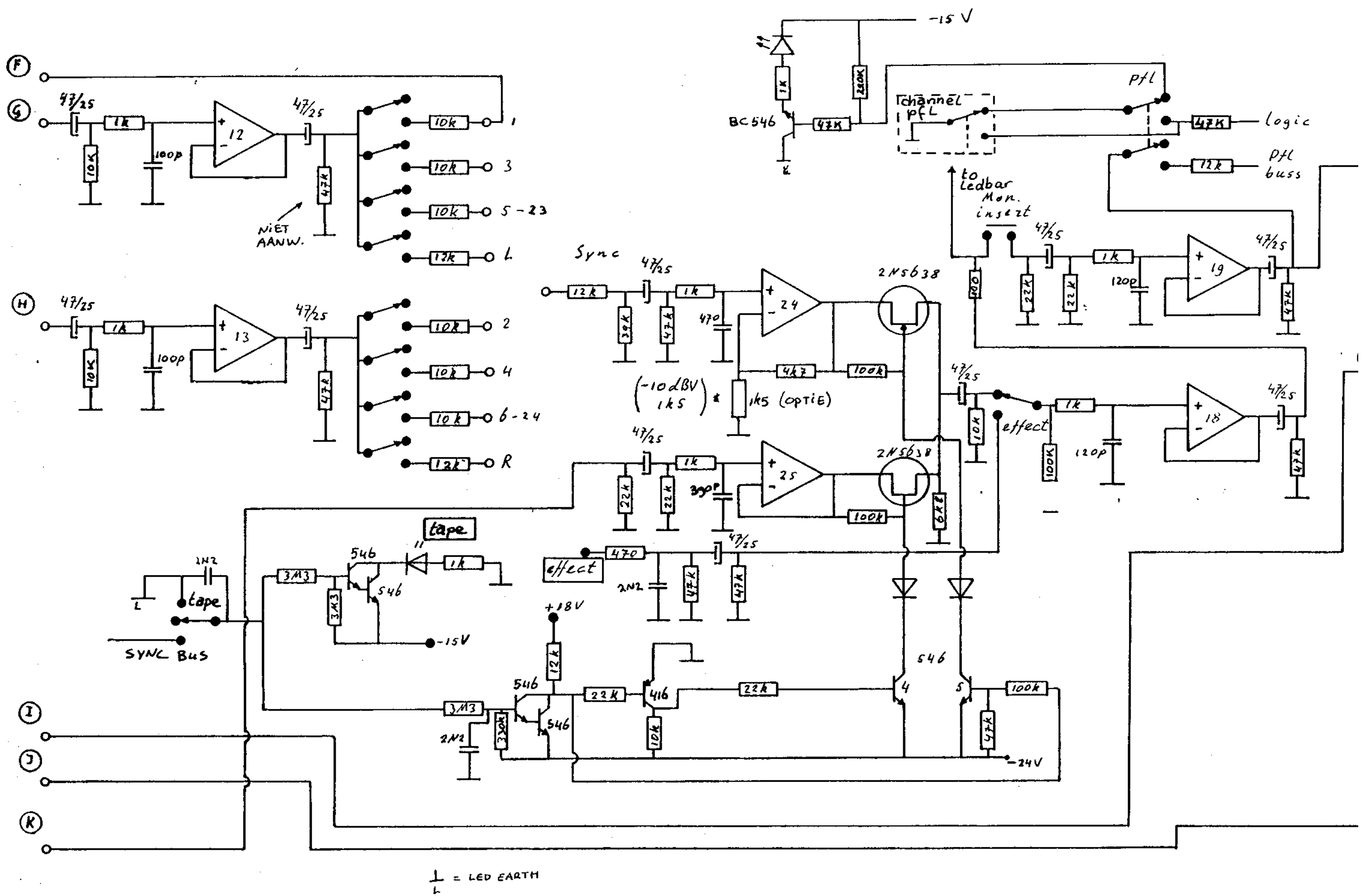

18P
18P
-18V
33K
14
13
12
11
10
9
8
1
2
3
4
5
6
7
SMM2015
47/63
10
1%
6K8
1%
6K8
1%
1n
5V6
5V6
n22
220/63
25dB
270
Mic
INPUT
47/63
10
6K8
1%
6K8
1%
1n
5V6
5V6
8K25
1%
0.1
-18V
0.1
+18V
47P
8K2
47/25
10K
56K
100K
22K
22P
47/25
47K
Ø
Ø
47/63
phantome
+48V
10
22K
0.1
@
4K7 X
cw
1K
470
150P
470P
2K2
3
2
1
22P
470
4K7 X
cw
47/25
47K
270
100/25

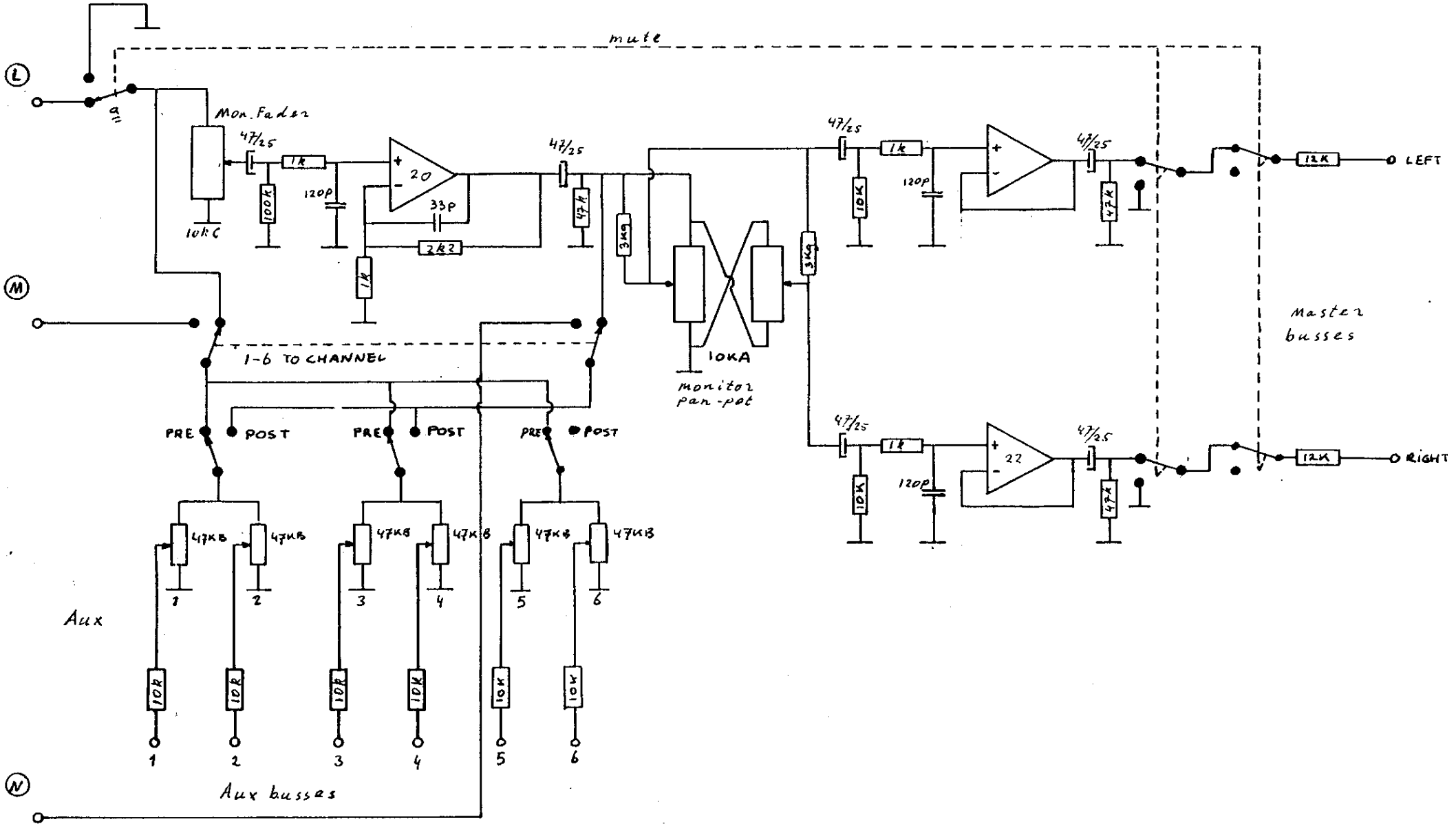

Mic line
remix
mic
line
a
b
25KB
line gain
47/25
1k
100K
100K
120p
3
27p
4k7
4k7
47/25
on
off
High pass
2M2
0.1
0.1
47k
100KC
4
47/25
2k7
47n
4k7
4k7
4k7
47k
1k
220p
1k
220p
100
NIET AANW. (1G)
line input
remix input
multitrack feed output
47/25
47k
26
39p
4k7
8k2
47/25
1k
470n
22k
a
b
c

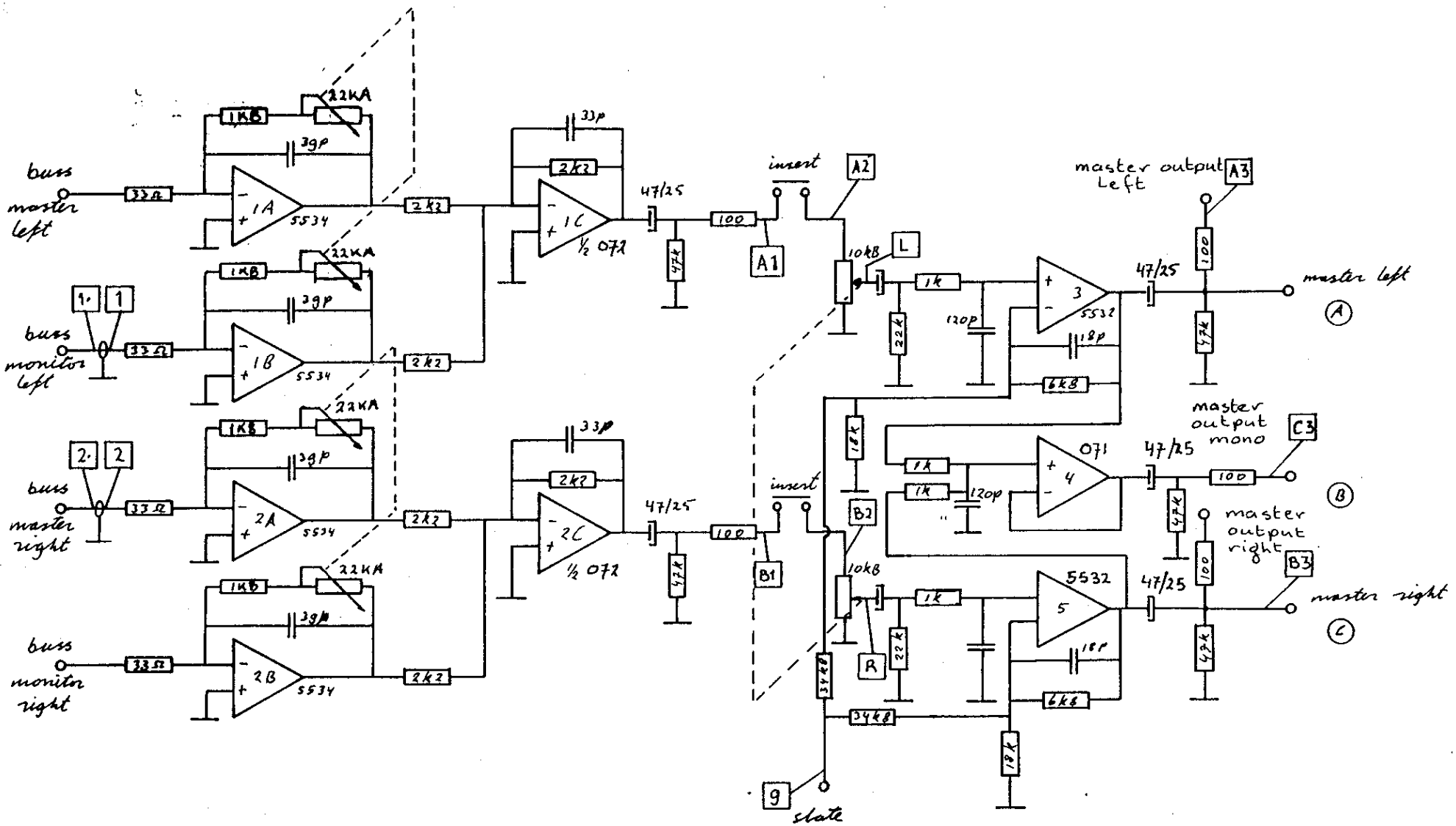

High
Low
Mid
Mid
equalizer
off
on
100kA
100kA
6k8
6k8
15k
15k
680p
680p
12k
8k
1M
100k
100k
47/25
6
8
3p9
47k
0.022
0.022
1M
120 Hz
60 Hz
10k
2k2
15k
22N
100kC
100kC
47/25
5
7
1k8
10k
47k
3k3
6k8
22N
2k2
6k8
2200p
10K
10K
1000p
10K
10K
47k
220
220
4k7A
4k7A
220
4K7
.2 - 2 kHz
1 - 11 kHz
B
C
D
E

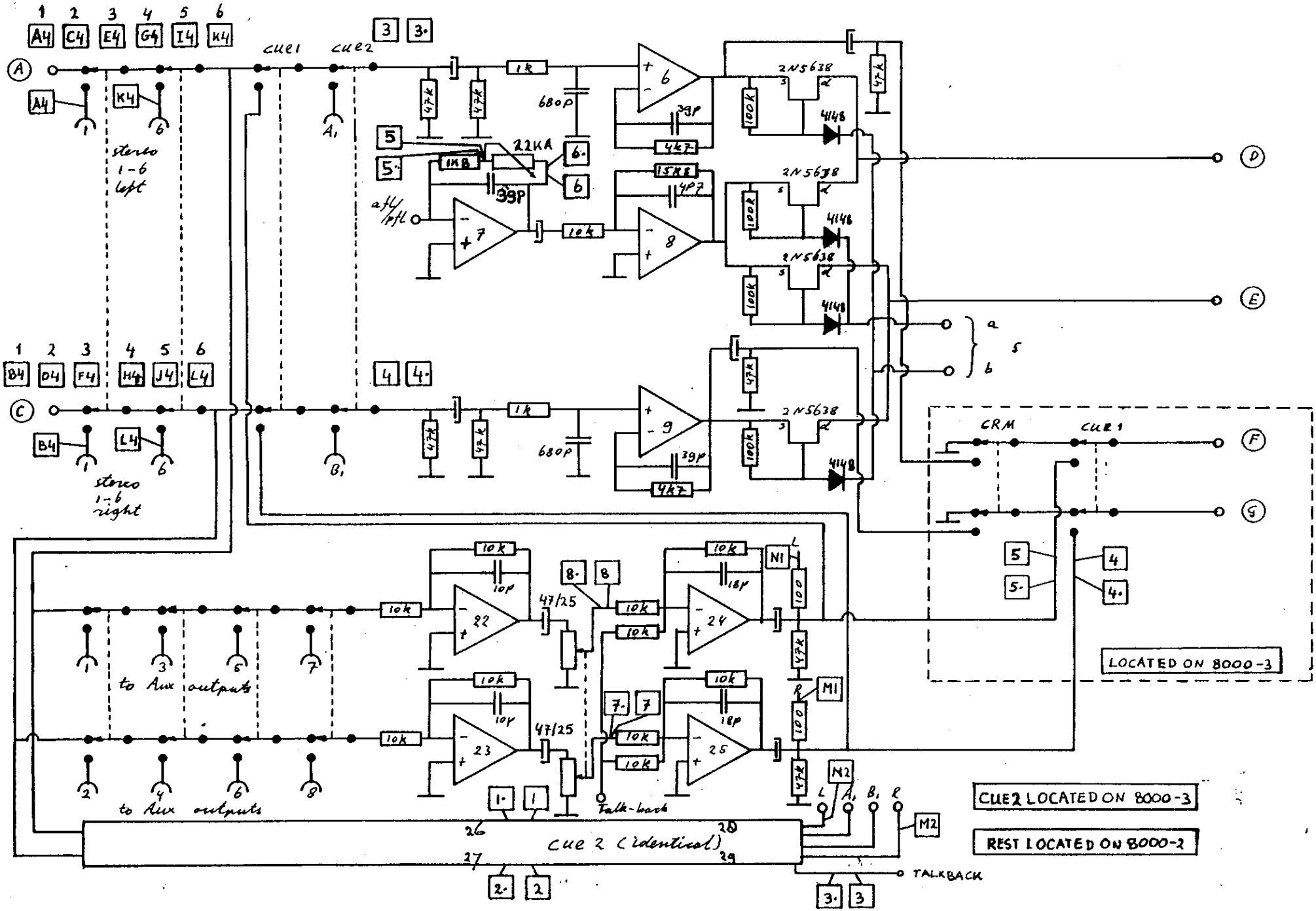


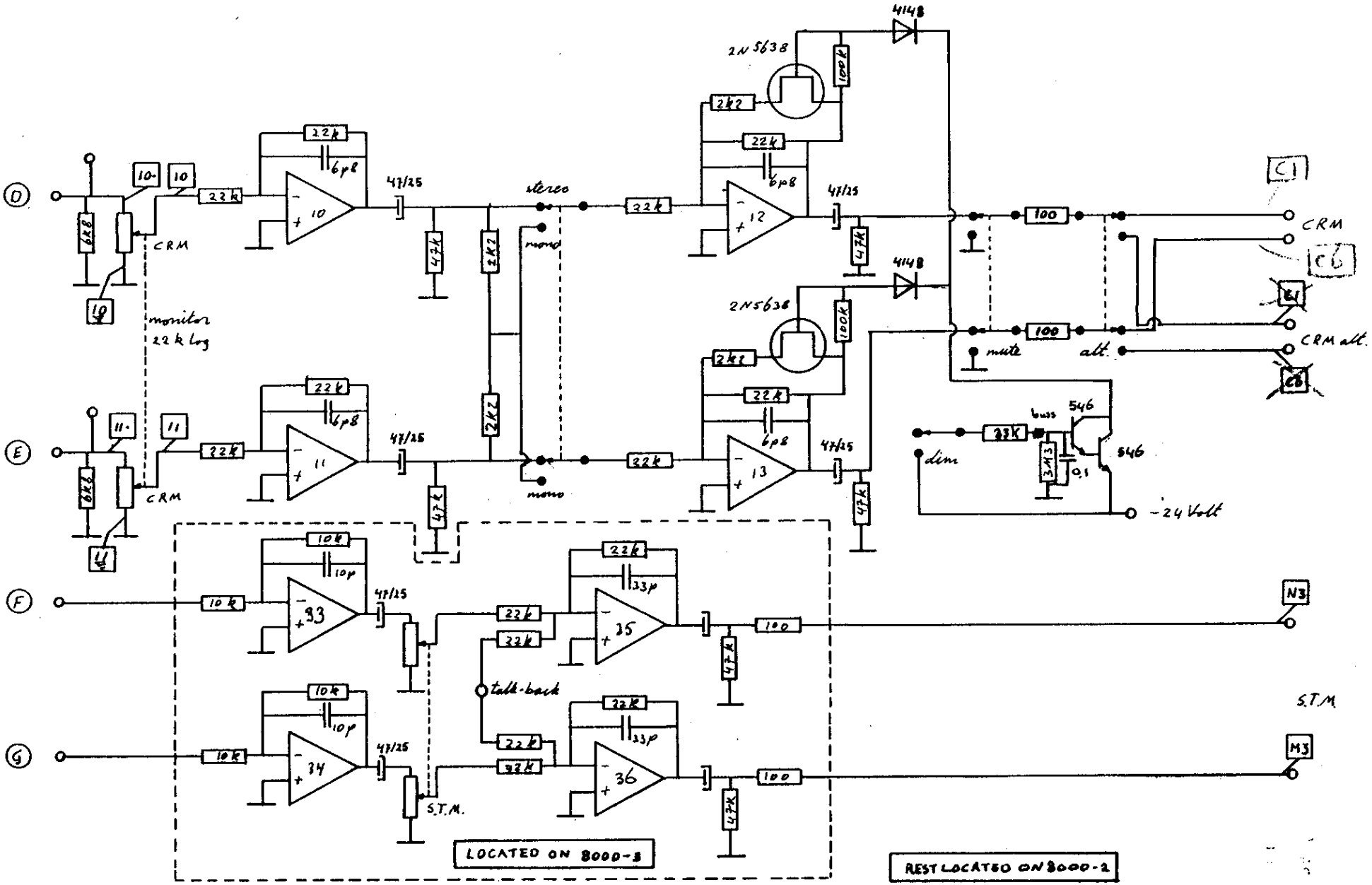
$\frac{\perp}{L}$ = LED EARTH

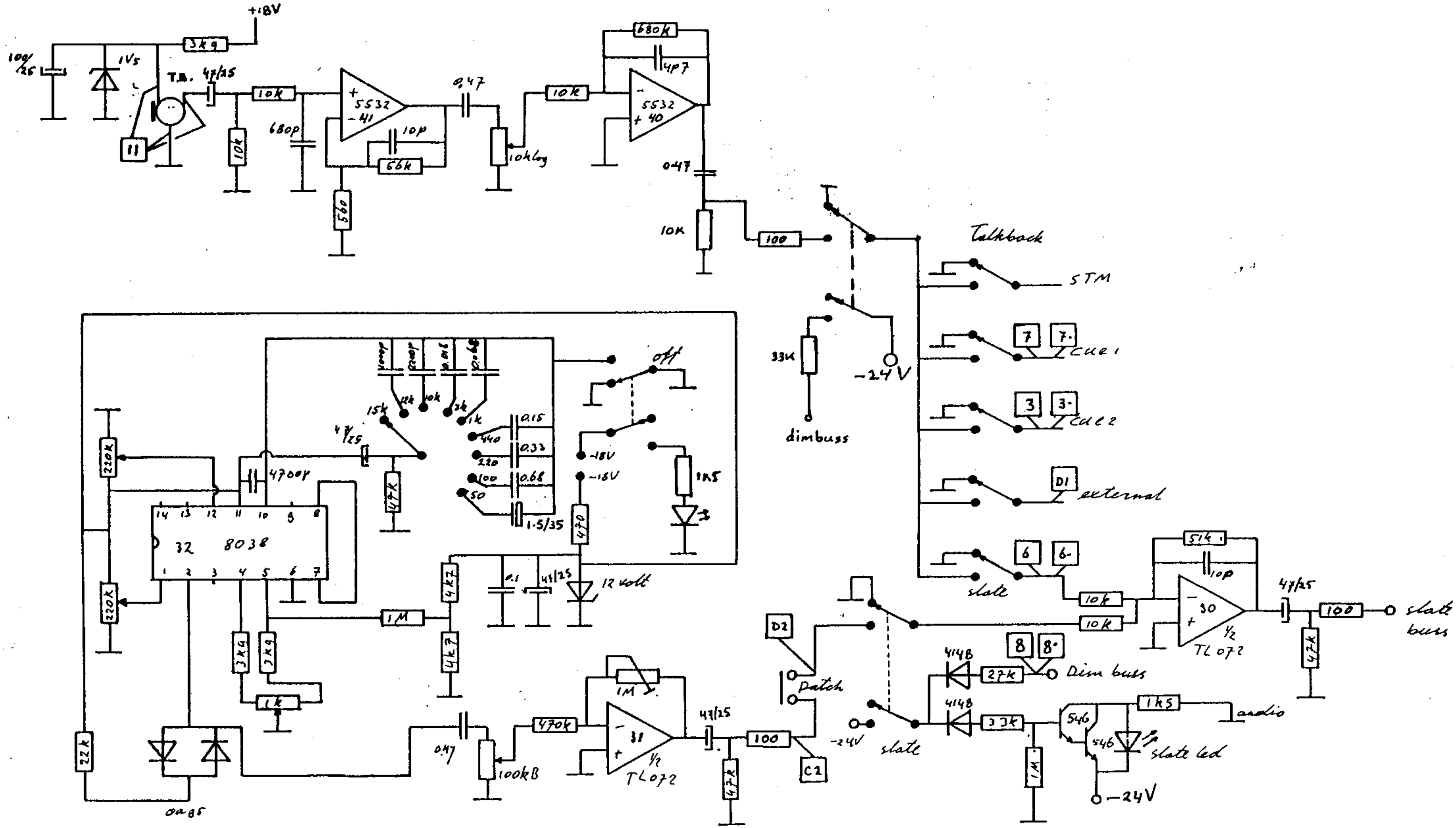

F
G
H
I
J
K
47/25
1k
10K
100p
12
13
47k
NIET AANW.
10k
12k
1
3
5-23
L
2
4
6-24
R
-15 V
BC546
280K
47K
channel pfL
pfl
logic
pfl buss
to Ledbar
Mon. insert
100
22k
120p
19
18
Sync
39k
470
24
25
2N5638
4k7
100k
(-10dBV 1k5) *
1k5 (OPTIE)
390P
6k8
effect
2N2
tape
SYNC BUS
546
3M3
-15V
+18V
416
330k
-24V
= LED EARTH

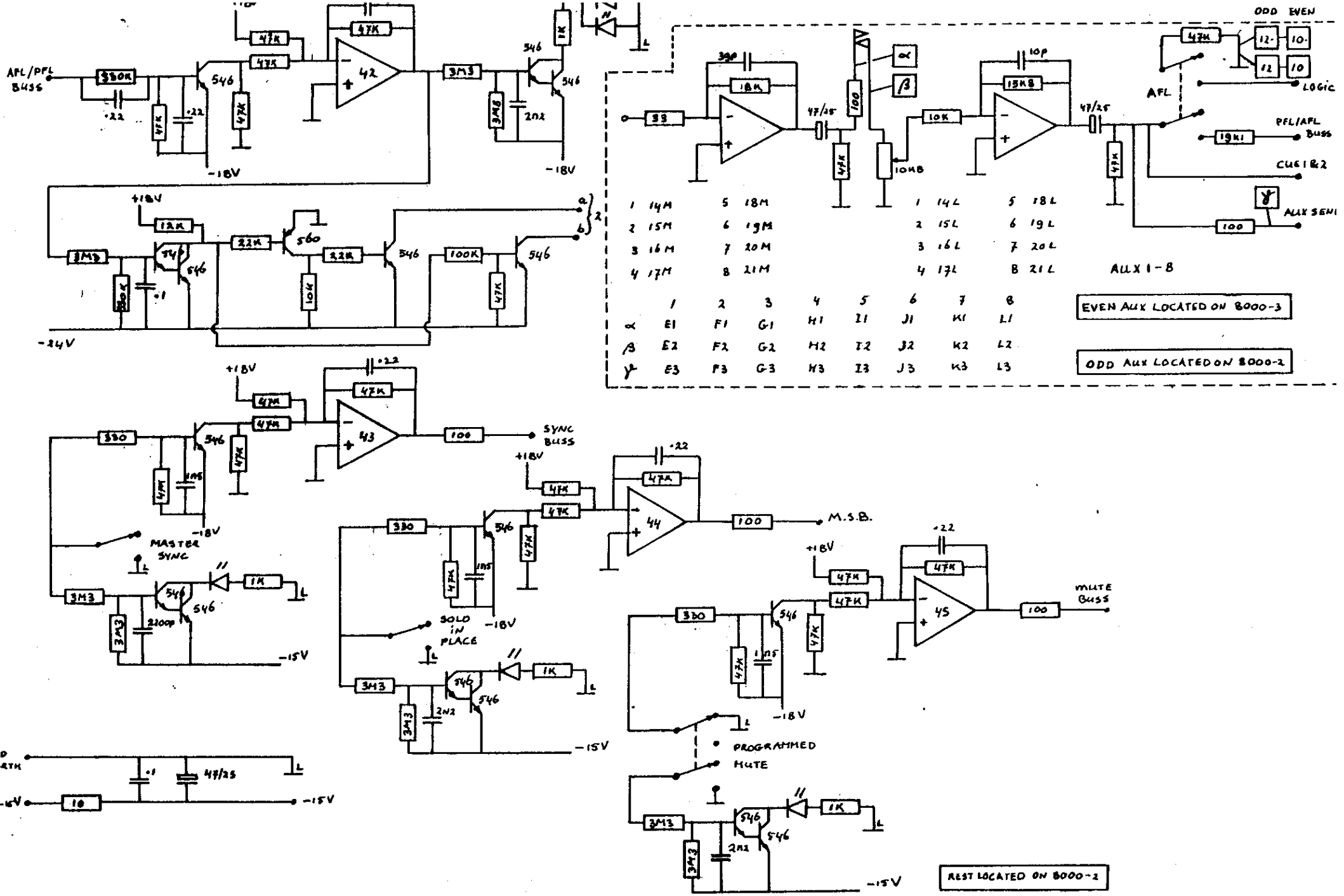

mute
L
M
N
Mon. Fader
10kC
47/25
1k
100K
120P
33P
2k2
47K
3k9
10KA
monitor pan-pot
master busses
LEFT
RIGHT
12K
10K
22
1-6 TO CHANNEL
PRE
POST
47KB
Aux
Aux busses
1
2
3
4
5
6

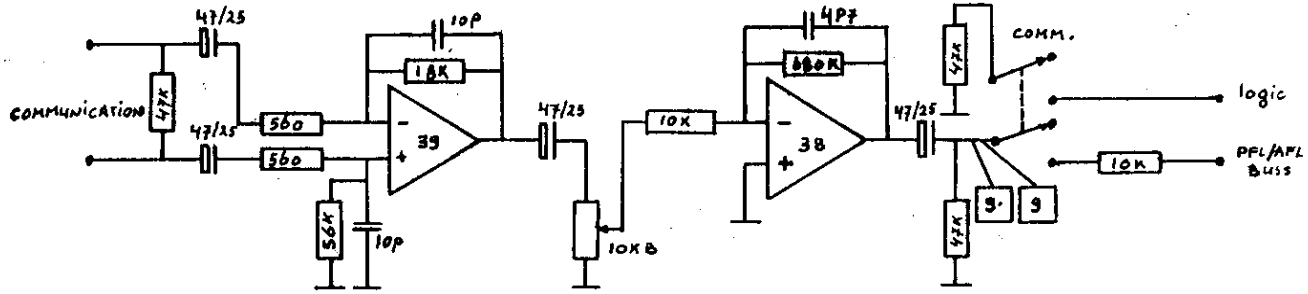

buss master left
buss monitor left
buss master right
buss monitor right
1A
1B
1C
½ 072
2A
2B
2C
½ 072
5534
1KB
22KA
39p
33Ω
2k2
33p
47/25
100
47k
insert
A1
A2
B1
B2
10kB
L
R
1k
22k
120p
3
5532
18p
6k8
master output Left
A3
master left
A
master output mono
C3
071
4
B
master output right
B3
master right
C
5532
5
34k8
18k
9
slate
all located on 8000-2
master outputs

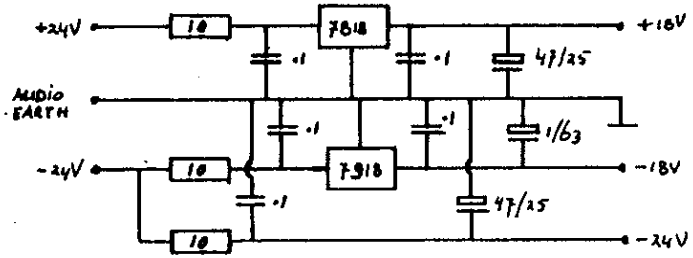

1 2 3 4 5 6
A4 C4 E4 G4 I4 K4
cue1
cue2
3 3·
A
A4
K4
1
6
stereo
1-6
left
A1
1k
47k
680P
5
5·
22KA
1KB
6·
6
39P
aff/pfl
7
10k
6
39P
47k
15KB
4P7
8
100k
2N5638
4148
47k
D
E
a
b
5
1 2 3 4 5 6
B4 D4 F4 H4 J4 L4
C
B4
L4
1
6
stereo
1-6
right
B1
4 4·
9
LOCATED ON 8000-3
CRM
CUE1
F
G
5
5·
4
4·
10k
10P
22
47/25
8·
8
24
18P
N1
L
100
47k
M1
R
23
10P
7·
7
25
1
3
to Aux outputs
6
7
2
4
to Aux outputs
6
8
1·
Talk-back
26
27
cue 2 (identical)
28
29
2·
2
L
A1
B1
R
M2
TALKBACK
3·
3
CUE2 LOCATED ON 8000-3
REST LOCATED ON 8000-2


D
E
F
G
10
11
12
13
33
34
35
36
22k
6pF
47/25
2k2
47k
100k
100
10k
10pF
33pF
4148
2N5638
stereo
mono
CRM
monitor
22k log
mute
alt.
CRM alt.
dim
546
33K
3M3
0,1
-24 Volt
talk-back
S.T.M.
C1
C6
E1
C8
N3
M3
LOCATED ON 8000-3
REST LOCATED ON 8000-2

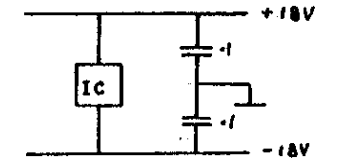

+18V
3k9
1V5
100/25
T.B.
47/25
10k
5532
41
680p
10p
56k
560
0.47
10klog
680k
4p7
40
047
10K
100
Talkback
STM
cue 1
cue 2
D1
external
slate
33K
-24V
dimbuss
off
-18V
1k5
0.15
0.33
0.68
1.5/35
4700p
47k
8038
470
12 volt
4k7
1M
3k9
1k
220k
22k
0A85
100kB
470k
TL072
47/25
C2
D2
patch
51k
10p
30
½ TL072
slate buss
Dim buss
4148
27k
33k
546
1k5
audio
slate led


AFL/PFL BUSS
330K
.22
47K
546
42
3M3
1K
2n2
-18V
+18V
12K
3M3
330K
.1
22K
560
104
100K
-24V
ODD EVEN
39P
18K
47/25
100
10K
10KB
15KB
10P
AFL
LOGIC
PFL/AFL Buss
CUE 1&2
AUX SEND
100
1 14M 5 18M
2 15M 6 19M
3 16M 7 20M
4 17M 8 21M
1 14L 5 18L
2 15L 6 19L
3 16L 7 20L
4 17L 8 21L
AUX 1-8
1 2 3 4 5 6 7 8
α E1 F1 G1 H1 I1 J1 K1 L1
β E2 F2 G2 H2 I2 J2 K2 L2
γ E3 F3 G3 H3 I3 J3 K3 L3
EVEN AUX LOCATED ON 8000-3
ODD AUX LOCATED ON 8000-2
43
SYNC BUSS
MASTER SYNC
44
M.S.B.
SOLO IN PLACE
45
MUTE BUSS
PROGRAMMED MUTE
2200P
2N2
LED EARTH
-6V
10
REST LOCATED ON 8000-2

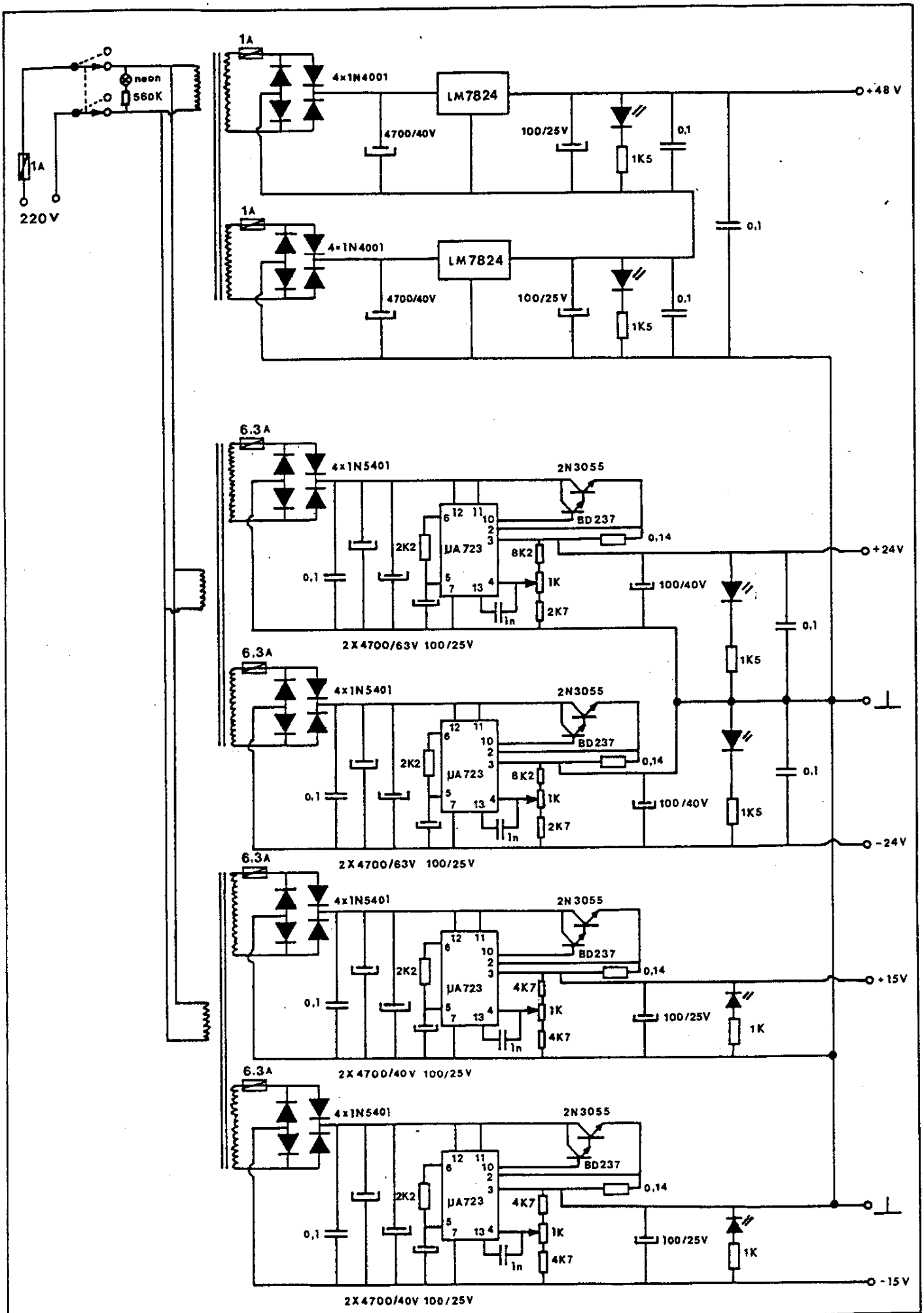




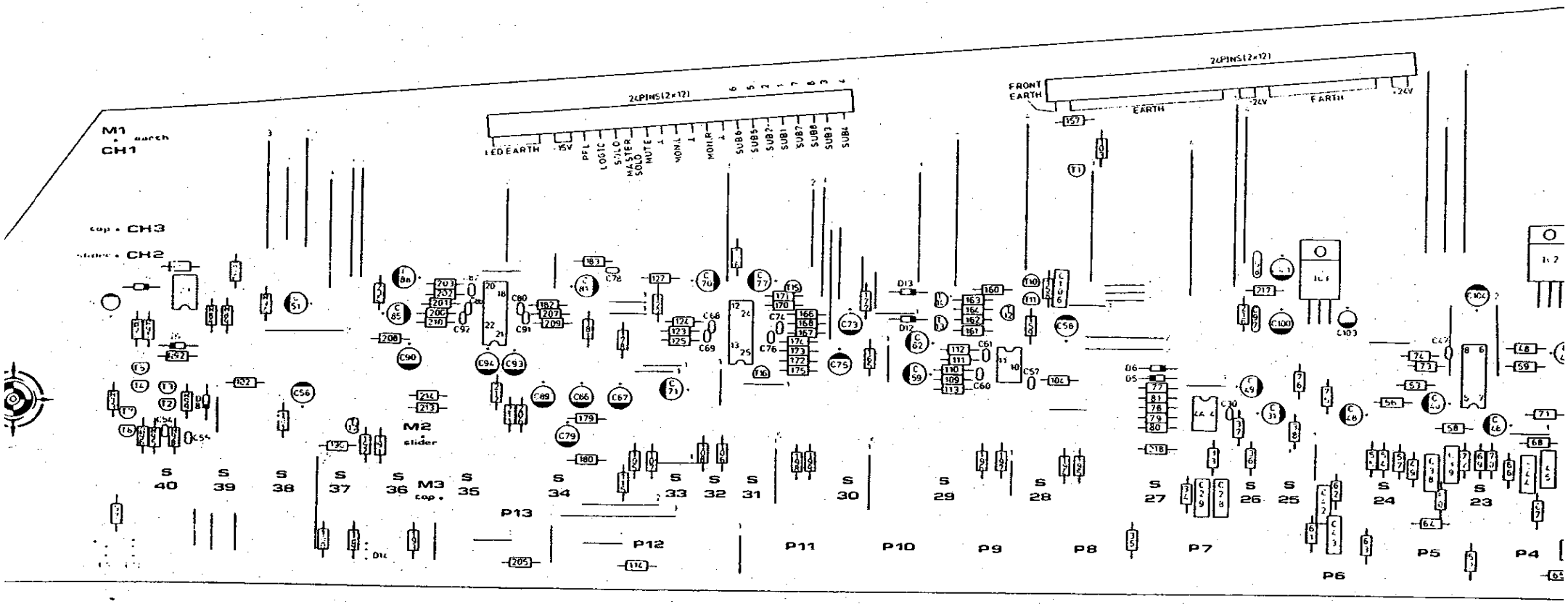
BOTH 8000-2 AND 8000-3

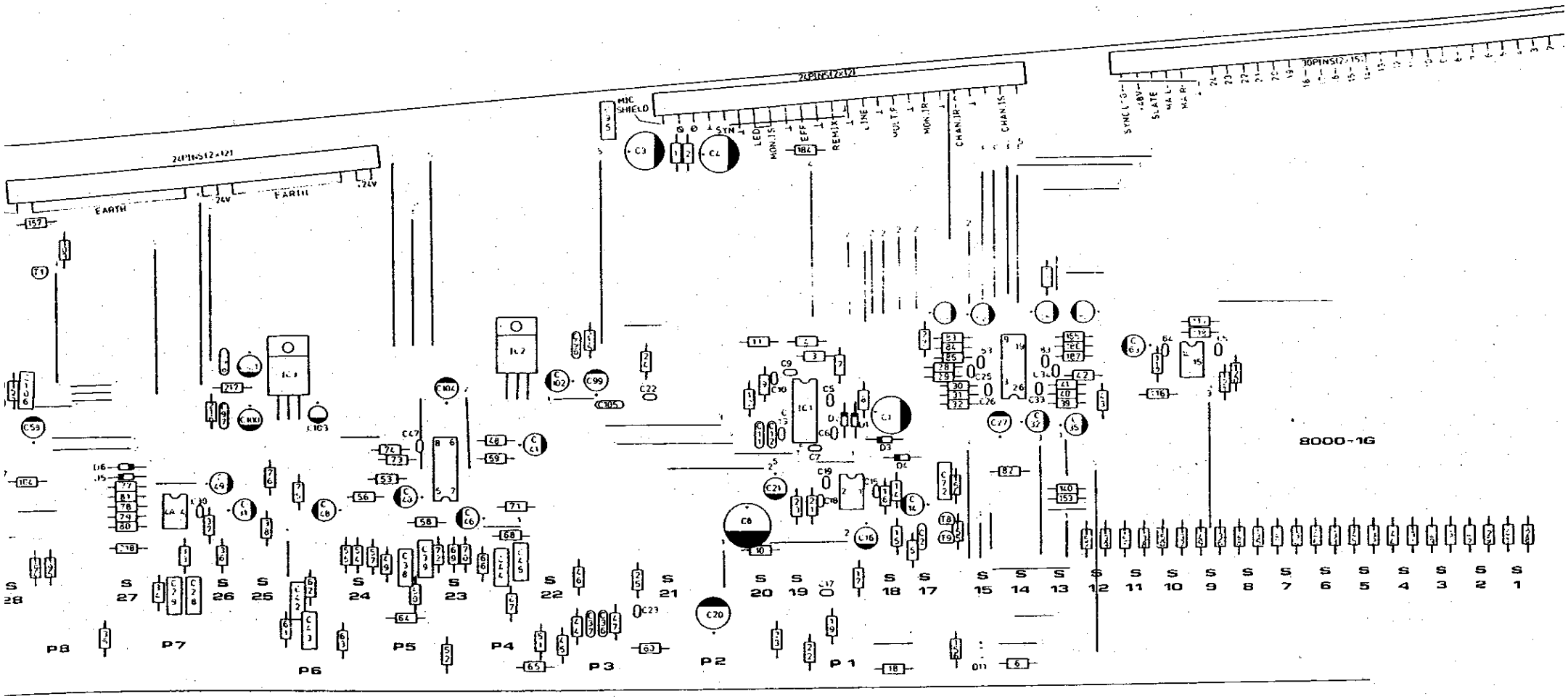


ALL IC'S ON 8000-2 AND 8000-3

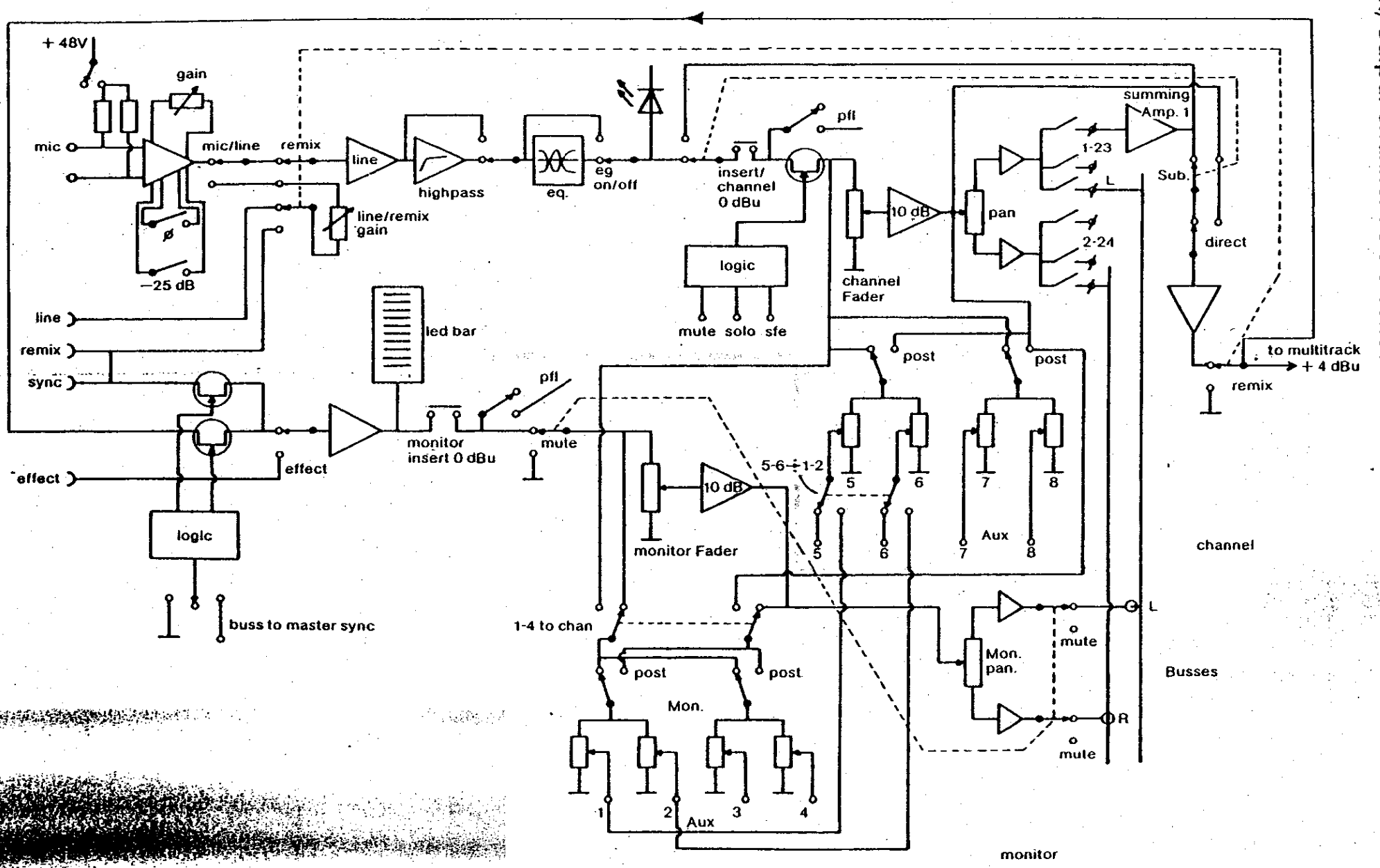


D&R	DATE :	18-1-83
POWER SUPPLY-8000		
DESIGN :	D.de Rijk	


M1
slider
CH1
top : CH3
slider : CH2
24PINS(2x12)
LED EARTH
-15V
PFL
LOGIC
SYS
MASTER
MUTE
MON.T
MON.R
SUB8
SUB7
SUB6
SUB5
SUB4
SUB3
SUB2
SUB1
24PINS(2x12)
FRONT EARTH
EARTH
-24V
EARTH
+24V
M2
slider
M3
top :
S 40
S 39
S 38
S 37
S 36
S 35
S 34
S 33
S 32
S 31
S 30
S 29
S 28
S 27
S 26
S 25
S 24
S 23
P13
P12
P11
P10
P9
P8
P7
P6
P5
P4


24PINS(12+12)
EARTH
24V
EARTH
+24V
MIC SHIELD
SYN
LED
MON.IS
EFF
REMIX
LINE
VOLTS
MON.IR
CHAN.IR
CHAN.IS
30PINS(7+15)
SYNC L-G
+18V
SLATE
MAL
MAR
8000-16G
P8
P7
P6
P5
P4
P3
P2
P1

In/output channel 8000 series



== ELECTRONICA B.V.
produktie en ontwikkeling van geluidsmengpanelen en accessoires

Date: 21-03-1986 R & D department

PARTLIST1: 8000-1 MONO CHANNEL print index:0

	PartNr	Value	Notes	ArtNr
phant	R1	6k81	1%	0846
	R2	6k81	1%	0846
mic	R3	6k81	1%	0846
	R4	6k81	1%	0846
phant	R5	22k	5%	0745
	R6	10E	5%	0705
mic	R7	10E	5%	0705
	R8	10E	5%	0705
	R9	33k2	1%	0862
	R10	280E	1%	0814
	R11	8k25	1%	0520
	R12	8k25	1%	0520
	R13	---	---	----
	R14	56k	5%	0750
	R15	10k	5%	0741
	R16	22k	5%	0745
	R17	47k	5%	0749
	R18	2k2	5%	0733
	R19	1k	5%	0729
	R20	470E	5%	0725
	R21	470E	5%	0725
	R22	270E	5%	0722
	R23	47k	5%	0749
line	R24	1k	5%	0729
	R25	1k	5%	0729
	R26	---	---	----
	R27	100k	5%	0753
	R28	100k	5%	0753
	R29	1k	5%	0729
	R30	4k7	5%	0737
	R31	4k7	5%	0737
	R32	47k	5%	0749
hpass	R33	2M2	5%	0768
	R34	2k7	5%	0734
	R35	2k7	5%	0734
	R36	4k7	5%	0737
	R37	2k7	5%	0734
	R38	47k	5%	0749
tapeout	R39	47k	5%	0749
	R40	4k7	5%	0737
	R41	8k2	5%	0740
	R42	1k	5%	0729
	R43	22k	5%	0745
eq	R44	6k8	5%	0739
	R45	100k	5%	0753
	R46	1M	5%	0765
	R47	6k8	5%	0739

	R48	100k	5%	0753
	R49	6k8	5%	0739
	R50	6k8	5%	0739
	R51	220E	5%	0721
	R52	220E	5%	0721
	R53	2k7	5%	0734
	R54	1k8	5%	0732
	R55	10k	5%	0741
	R56	47k	5%	0749
	R57	15k	5%	0743
	R58	2k2	5%	0733
	R59	10k	5%	0741
	R60	47k	5%	0749
	R61	15k	5%	0743
	R62	1M	5%	0765
	R63	15k	5%	0743
	R64	220E	5%	0721
	R65	220E	5%	0721
	R66	10k	5%	0741
	R67	10k	5%	0741
	R68	2k7	5%	0734
	R69	3k3	5%	0735
	R70	6k8	5%	0739
	R71	47k	5%	0749
	R72	27k	5%	0746
	R73	10k	5%	0741
	R74	47k	5%	0749
	R75	47k	5%	0749
peak	R76	6k8	5%	0749
	R77	10k	5%	0741
	R78	56k	5%	0750
	R79	56k	5%	0750
	R80	82k	5%	0752
	R81	56k	5%	0750
insert	R82	100E	5%	0717
chmute	R83	22k	5%	0745
	R84	22k	5%	0745
	R85	1k	5%	0729
peak	R86	47k	5%	0749
	R87	3k3	5%	0735
	R88	56k	5%	0750
	R89	2k2	5%	0733
	R90	1M	5%	0765
	R91	100k	5%	0753
	R92	330E	5%	0723
	R93	560E	5%	0726
	R94	10E	5%	0705
chmute	R95	3M3	5%	0770
	R96	3M3	5%	0770
	R97	1k	5%	0729
	R98	3M3	5%	0770
	R99	330k	5%	0759
chpfl	R100	12k	5%	0742
chmute	R101	47k	5%	0749
	R102	100k	5%	0753
	R103	1k8	5%	0732
	R104	1k	5%	0729
aux	R105	10k	5%	0741
aux1	R106	10k	5%	0741
aux3	R107	10k	5%	0741
aux2	R108	10k	5%	0741
chfdr	R109	47k	5%	0749
	R110	1k	5%	0729
	R111	1k5	5%	0731
	R112	3k3	5%	0735
	R113	47k	5%	0749
chpan	R114	3k9	5%	0736

	R115	3k9	5%		0736
subamp	R116	47k	5%		0749
	R117	10k	5%		0741
	R118	10k	5%		0752
	R119	82k	5%		0752
	R120	10k	5%		0741
	R121	33E	5%		0711
chpan	R122	10k	5%		0741
	R123	10k	5%		0741
	R124	1k	5%		0729
	R125	1k	5%		0729
	R126	---	---		----
	R127	47k	5%		0749
routing	R128	10k	5%		0741
	R129	10k	5%		0741
	R130	10k	5%		0741
	R131	10k	5%		0741
	R132	10k	5%		0741
	R133	10k	5%		0741
	R134	10k	5%		0741
	R135	10k	5%		0741
	R136	10k	5%		0741
	R137	10k	5%		0741
	R138	10k	5%		0741
	R139	10k	5%		0741
	R140	12k	5%		0742
	R141	10k	5%		0741
	R142	10k	5%		0741
	R143	10k	5%		0741
	R144	10k	5%		0741
	R145	10k	5%		0741
	R146	10k	5%		0741
	R147	10k	5%		0741
	R148	10k	5%		0741
	R149	10k	5%		0741
	R150	10k	5%		0741
	R151	10k	5%		0741
	R152	10k	5%		0741
	R153	12k	5%		0742
tape	R154	3M3	5%		0770
	R155	3M3	5%		0770
	R156	1k	5%		0729
tape/ch	R157	3M3	55%		0770
	R158	330k	5%		0759
	R159	12k	5%		0742
	R160	22k	5%		0745
	R161	10k	5%		0741
	R162	22k	5%		0745
	R163	100k	5%		0753
	R164	47k	5%		0749
tape	R165	12k	5%		0742
	R166	39k	5%		0748
	R167	47k	5%		0749
	R168	1k	5%		0729
	R169	1k5	5%	optie	0731
	R170	4k7	5%		0737
	R171	100k	5%		0753
	R172	22k	5%		0745
	R173	22k	5%		0745
	R174	1k	5%		0729
	R175	100k	5%		0753
	R176	2k7	5%		0734
	R177	10k	5%		0741
effect	R178	470E	5%		0725
	R179	47k	5%		0749
	R180	47k	5%		0749

tape/ch	R181	100k			
	R182	1k	5%		0729
	R183	47k	5%		0749
monins	R184	100E	5%		0717
	R185	22k	5%		0745
	R186	22k	5%		0745
	R187	1k	5%		0729
	R188	47k	5%		0749
monpfl	R189	12k	5%		0742
pfl	R190	47k	5%		0749
	R191	220k	5%		0757
	R192	47k	5%		0749
	R193	1k	5%		0729
aux1	R194	10k	5%		0741
aux2	R195	10k	5%		0741
aux3	R196	10k	5%		0741
aux4	R197	10k	5%		0741
aux5	R198	10k	5%		0741
aux6	R199	10k	5%		0741
monfdr	R200	100k	5%		0753
	R201	1k	5%		0729
	R202	1k	5%		0729
	R203	2k2	5%		0733
	R204	47k	5%		0749
monpan	R205	3k9	5%		0736
	R206	3k9	5%		0736
	R207	10k	5%		0741
	R208	10k	5%		0741
	R209	1k	5%		0729
	R210	1k	5%		07289
	R211	47k	5%		0749
	R212	47k	5%		0749
	R213	12k	5%		0742
	R214	12k	5%		0742
psupply	R215	10E	5%		0705
	R216	10E	5%		0705
	R217	10E	5%		0705
peak	R218	100k	5%		0753
phant	C1	47/63	elco		0289
	C2	0.1/63	ker		0241
mic	C3	47/63	elco		0289
	C4	47/63	elco		0289
	C5	1000 p	ker		0236
	C6	1000 p	ker		0236
	C7	220 p	ker		0229
	C8	220/63	elco		0229
	C9	18 p	ker		0216
	C10	18 p	ker		0216
	C11	0.1/63	ker		0241
	C12	0.1/63	ker		0241
	C13	47 p	ker		0221
	C14	47/25	elco		0287
	C15	22 p	ker		0217
	C16	47/25	elco		0287
	C17	150 p	ker		0227
	C18	470 p	ker		0232
	C19	22 p	ker		0217

Date: 21-03-1986 R & D department

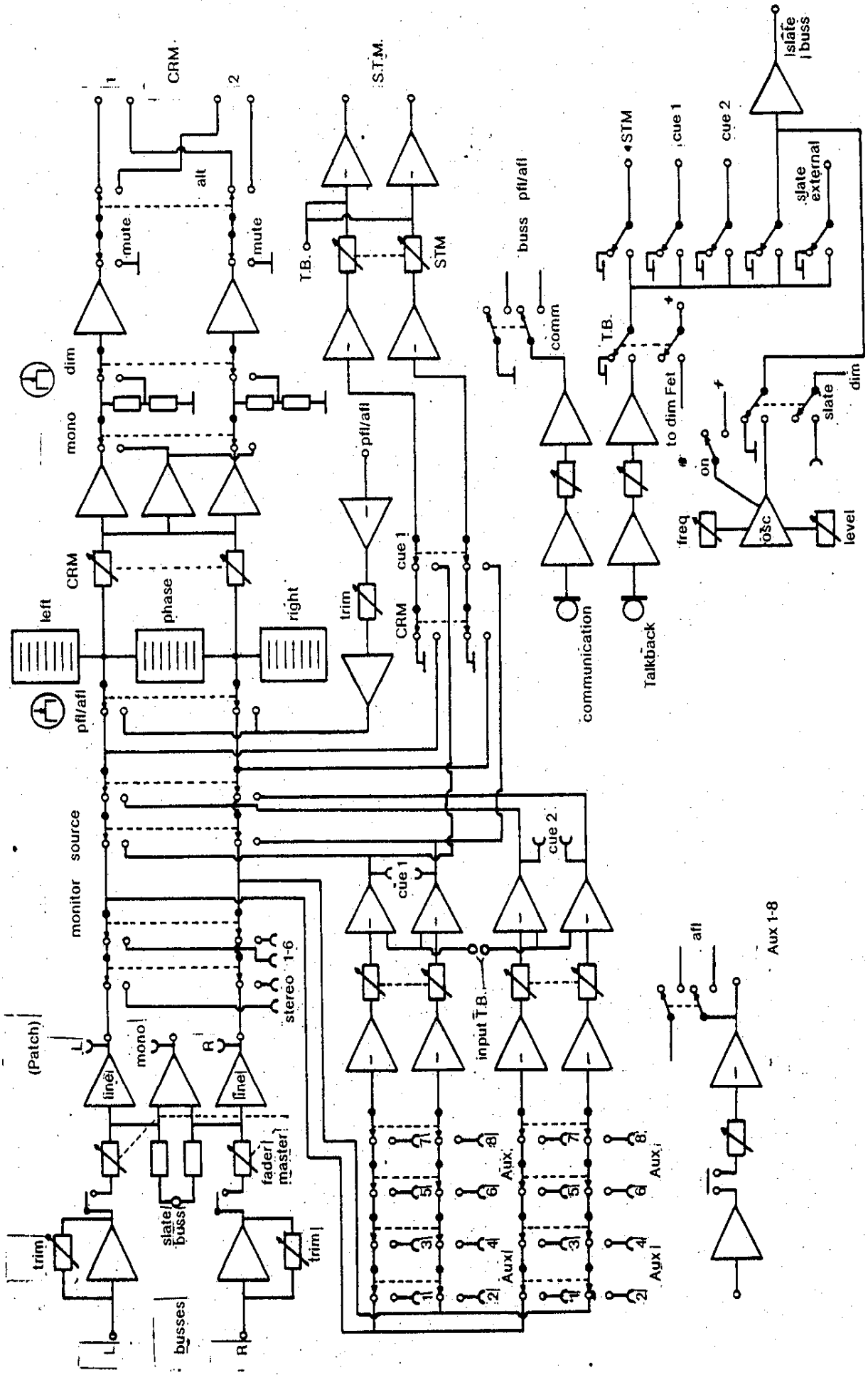
PARTLIST2: 8000-1 MONO CHANNEL print index:0

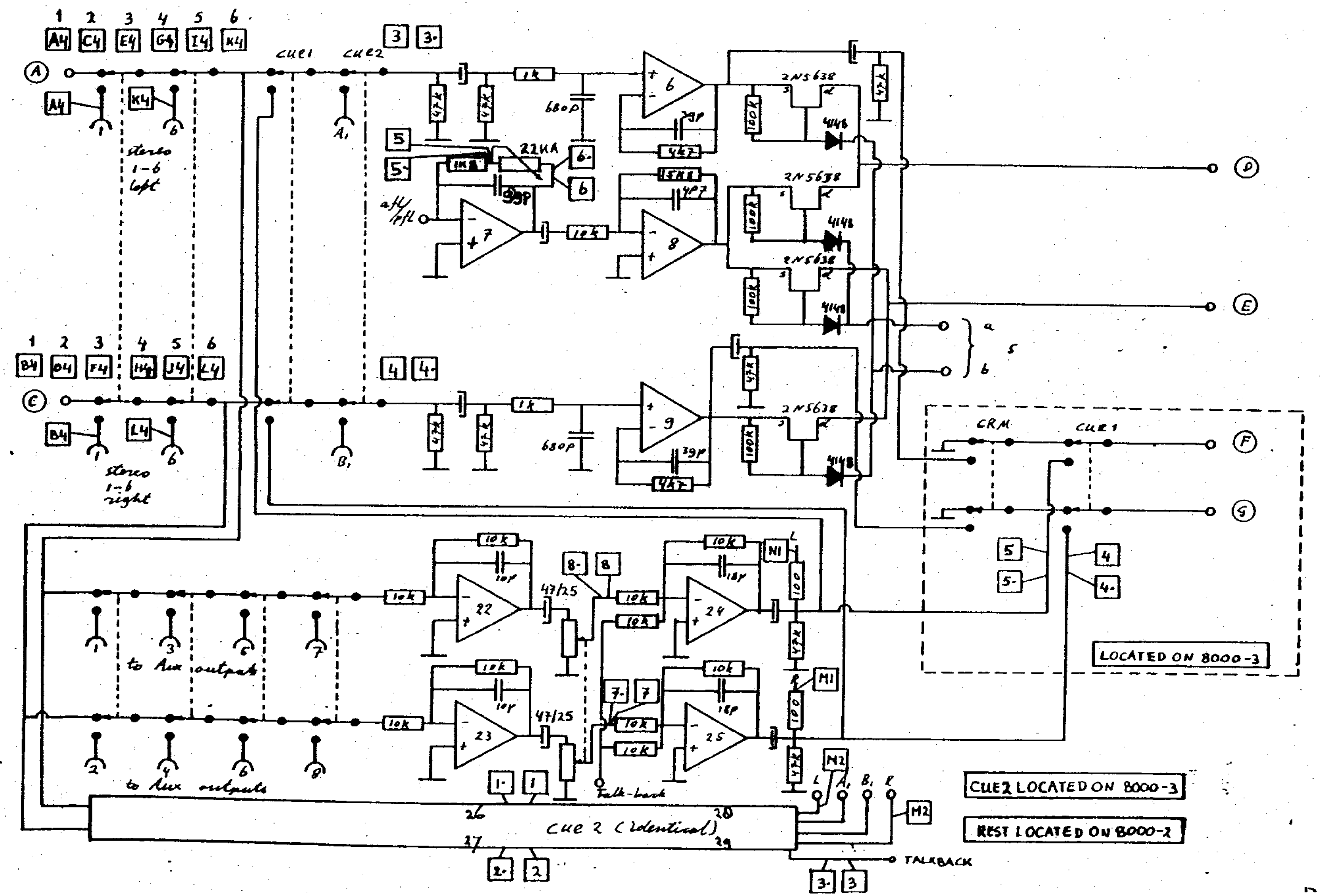
	PartNr	Value	Notes	ArtNr
	C20	100/25	elco	0292
	C21	47/25	elco	0287
line	C22	220 p	ker	0229
	C23	220 p	ker	0229
	C24	47/25	elco	0289
	C25	120 p	ker	0226
	C26	27 p	ker	0218
	C27	47/25	elco	0289
hpass	C28	0.1 u	poly	0261
	C29	0.1 u	poly	0261
	C30	47 p	ker	0221
	C31	47/25	elco	0289
tapeout	C32	47/25	elco	0289
	C33	39 p	ker	0220
	C34	470 p	ker	0232
	C35	47/25	elco	0289
eq	C36	680 p	poly	0245
	C37	680 p	poly	0245
	C38	0.022 u	poly	0256
	C39	0.022 u	poly	0256
	C40	47/25	elco	0289
	C41	47/25	elco	0289
	C42	0.022 u	poly	0256
	C43	0.022 u	poly	0256
	C44	1000 p	poly	0246
	C45	2200 p	poly	0248
	C46	47/25	elco	0289
	C47	3 p 9	ker	0208
	C48	47/25	elco	0289
peak	C49	47/25	elco	0289
	C50	1/63	elco	0279
	C51	47/25	elco	0289
	C52	47/25	elco	0289
chmute	C53	120 p	ker	0226
peak	C54	22200 p	ker	0239
	C55	2200 p	ker	0239
chmute	C56	47/25	elco	0289
	C57	120 p	ker	0226
	C58	47/25	elco	0289
chfader	C59	47/25	elco	0289
	C60	120 p	ker	0226
	C61	33 p	ker	0219
	C62	47/25	elco	0289
sub`	C63	47/25	elco	0289
	C64	8 p 2	ker	0212
	C65	39 p	ker	0220
chpan	C66	47/25	elco	0289
	C67	47/25	elco	0289
	C68	100 p	ker	0225
	C69	100 p	ker	0225
	C70	47/25	elco	0289
	C71	47/25	elco	0289
tape	C72	2200 p	poly	0248
	C73	47/25	elco	0289
	C74	470 p	ker	0232
	C75	47/25	elco	0289
	C76	100 p	ker	0225

	C77	47/25	elco 0289
effect	C78	2200 p	ker 0239
	C79	47/25	elco 0289
tape/ch	C80	120 p	ker 0226
	C81	47/25	elco 0289
monins	C82	47/25	elco 0289
	C83	120 p	ker 0226
	C84	47/25	elco 0289
monfdr	C85	47/25	elco 0289
	C86	120 p	ker 0226
	C87	33 p	ker 0219
	C88	47/25	elco 0289
monpan	C89	47/25	elco 0289
	C90	47/25	elco 0289
	C91	120 p	ker 0226
	C92	120 p	ker 0226
	C93	47/25	elco 0289
	C94	47/25	elco 0289
mic	C95	0.68 u	poly 0267
psupply	C96	0.1/63	ker 0241
	C97	0.1/63	ker 0241
	C98	0.1/63	ker 0241
	C99	47/25	elco 0289
	C100	47/25	elco 0289
	C101	47/25	elco 0289
	C102	47/25	elco 0289
	C103	1/63	elco 0279
	C104	47/25	elco 0289
	C105	0.1/63	ker 0241
tape/ch	C106	2200 p	poly 0248
mic	D1	5 V 6	zener 0351
	D2	5 V 6	zener 0351
	D3	5 V 6	zener 0351
	D4	5 V 6	zener 0351
peak	D5	1N4148	sgn 03342
	D6	1N4148	sgn 0342
	D7	12 V	zener 0353
chmute	D8	1N4148	sgn 0342
peak	D9	led	5x2 red 0390
mute	D10	led	5x2 grn 0389
tape	D11	led	5x2 red 0390
tape/ch	D12	1N4148	sgn 0342
	D13	1N4148	sgn 0342
pfl	D14	led	5x2 red 0390
peak	D15	1N4148	sgn 03342
mic	IC1	SSM2015	mic.preamp 0331
psupply	IC22	7818	pos.reg. 0322
	IC3	7918	neg.reg. 0323
mic	1,2	NE5532	lownoise 0307
div	3,9,19,226	TL074	bifet 0305
hp/peak	4,4A	TL072	bifet 0304
eq	5-8	TL074	bifet 0305
chfdr	10,11	NE5532	lownoise 0307
div	12,13,24,25	TL074	bifet 0305
sub	14,15	NE5532	lownoise 0307
div	18,20,21,22	TL074	bifet 0305
peak	23	TL071	bifet 0303
mic	P1	4 k 7 Ast	12.5 0898
line	P2	22 k B	12.5/15 0896/0108
hpass	P3	100 k A	12.5/15 0888/0118
eq	P4	100 k/ 4k7	12.5 0119
	P5	100 k/ 4k7	12.5 0119
	P6	100 k A	12.5/15 0888/0113

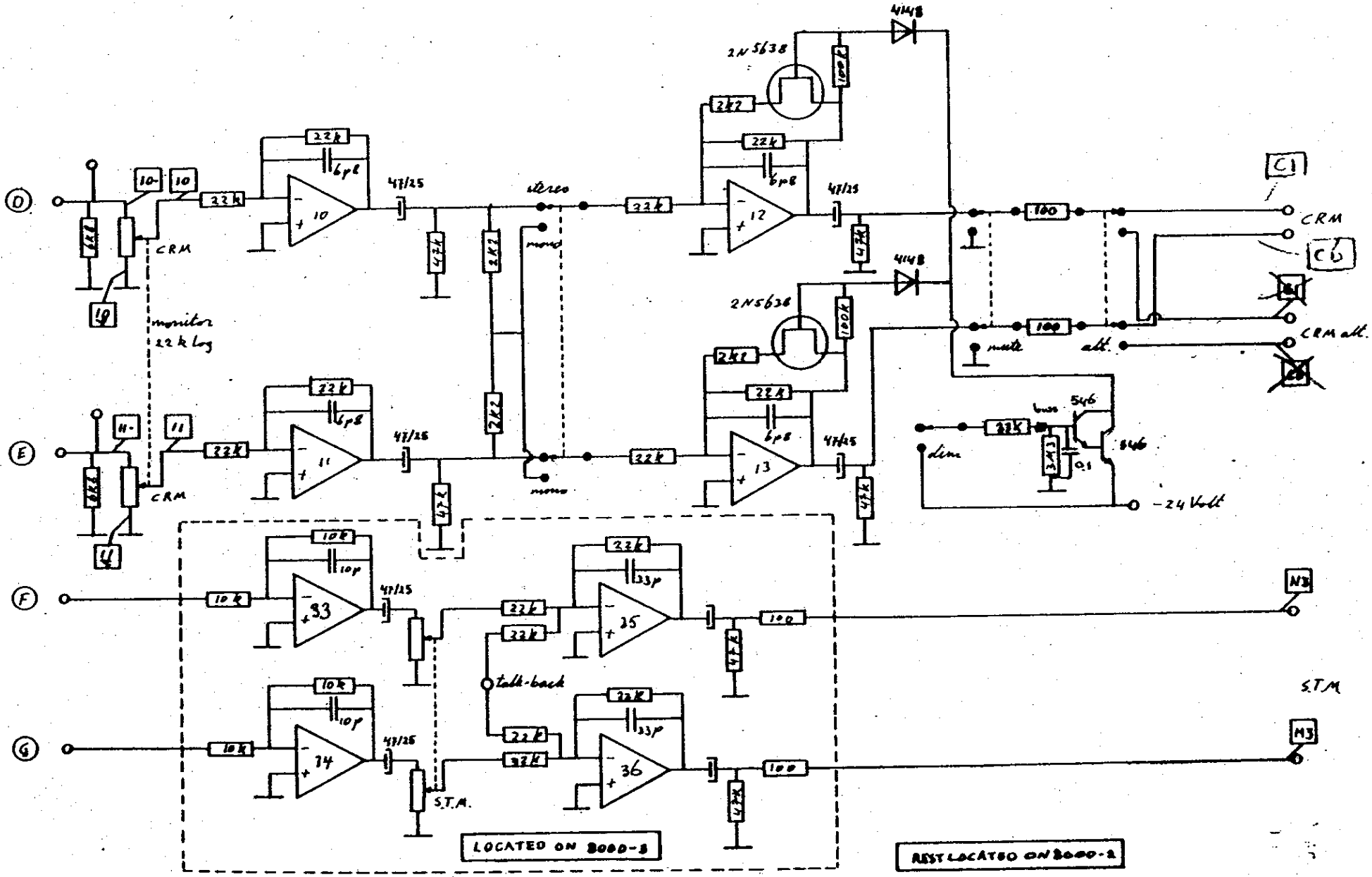
	P7	100 k	Cat	12.5/15	0891/0118
aux1,2	P8	47 k	Bco	12.5/15	0999/0112
aux3,4	P9	47 k		12.5/15	0999/0112
aux5,6	P10	47 k	Bco	12.5/15	0999/0112
aux7,8	P12	47 k	Bco	12.5/15	0999/0112
chpan	P12	10 k	Ast	12.5/15	0892/0128
monpan	P13	10 k	Ast	12.5/15	0892/0128
monfdr	F1	10 k	B	philips	0130
chfdr	F2	10 k	B	ALPS luxe	0097
chmute	T1	2N5638		FET NJD switch	0338
	T2	BC546		NPN	0328
	T3	BC546		NPN	0328
peak	T4	BC560/416		PNP	0327
	T5	BC560/416		PNP	0327
chmute	T6	BC546		NPN	0328
	T7	BC546		NPN	0328
tape	T8	BC546		NPN	0328
	T9	BC546		NPN	0328
tape/ch	T10	BC546		NPN	0328
	T11	BC546		NPN	0328
	T12	BC560/416		PNP	0327
	T13	BC546		NPN	0328
	T14	BC546		NPN	0328
	T15	2N5638		FET NJD switch	0338
	T16	2N5638		FET NJD switch	0338
pfl	T17	BC560/416		PNP	0327

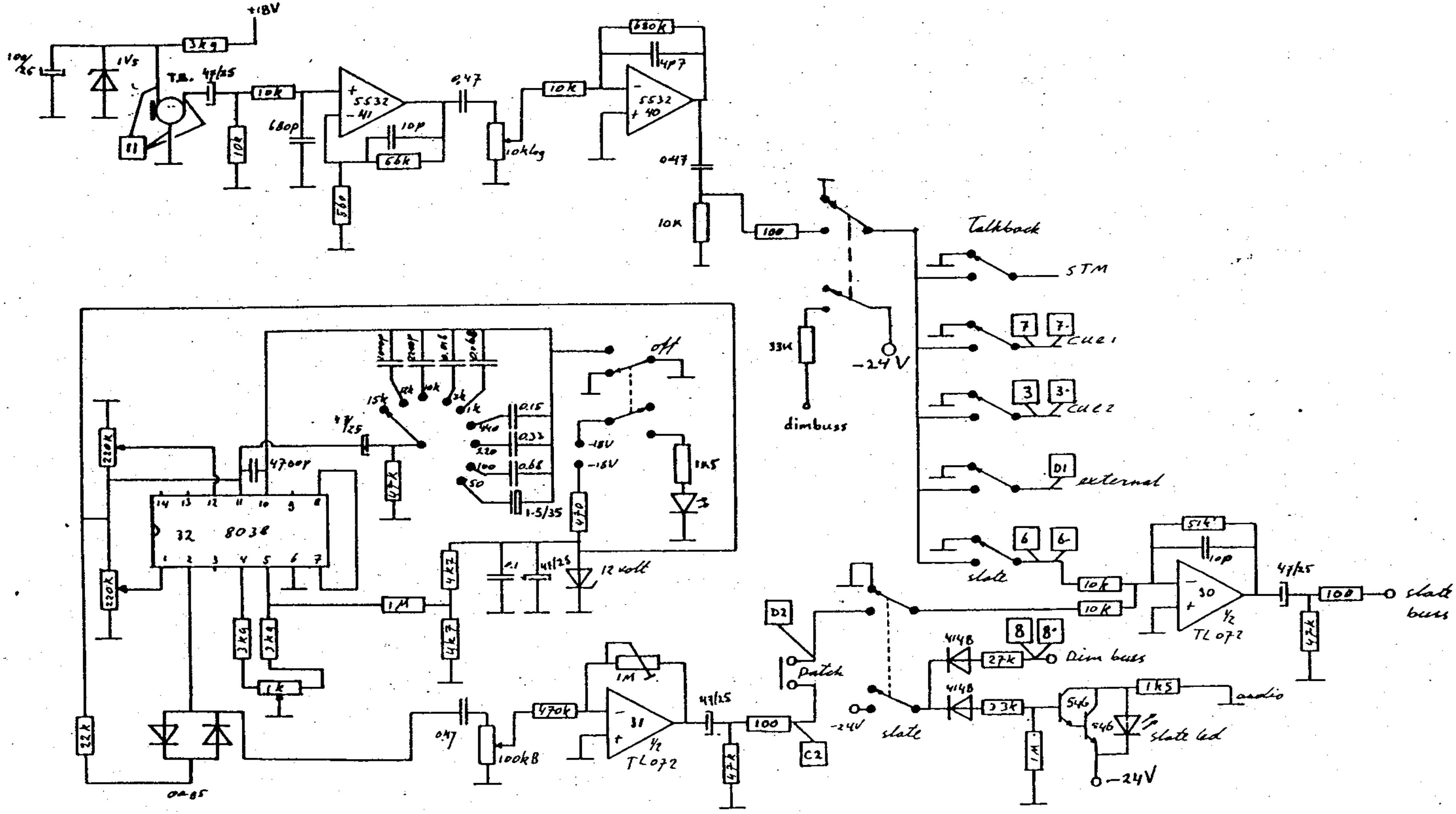
Master 8000 series



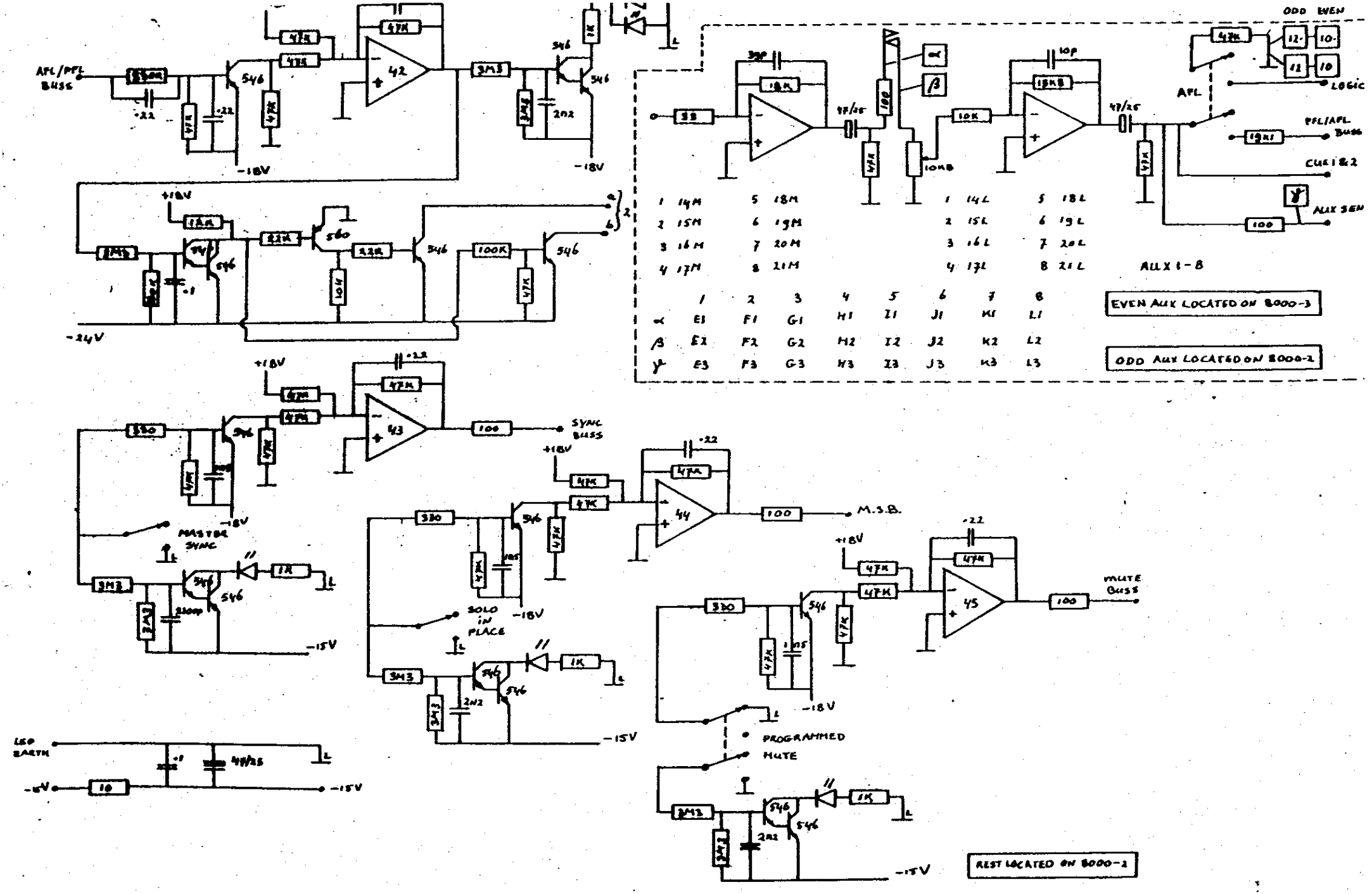


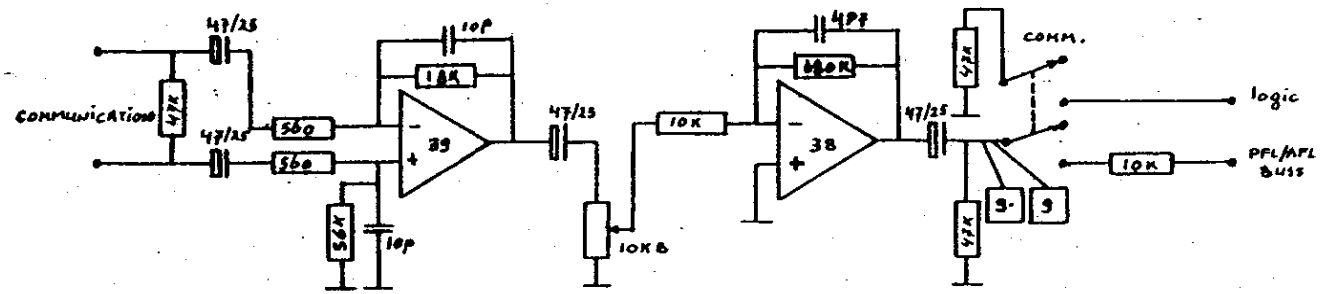
A4 C4 E4 G4 I4 K4
B4 D4 F4 H4 J4 L4
cue1
cue2
stereo 1-6 left
stereo 1-6 right
2N5638
4148
22KA
aft/pfl
Talk-back
to Aux outputs
CRM
CUE 1
CUE 2 (Identical)
TALKBACK
LOCATED ON 8000-3
CUE2 LOCATED ON 8000-3
REST LOCATED ON 8000-2

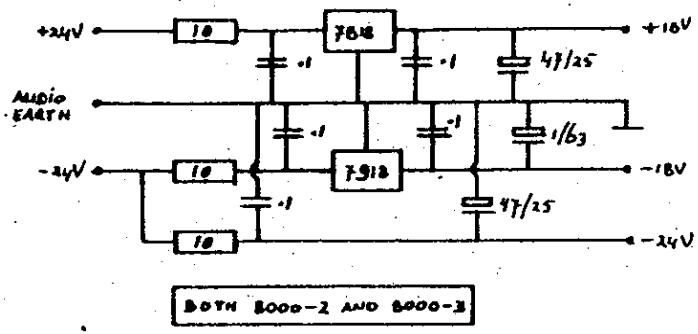

D
E
F
G
10
11
12
13
33
34
35
36
2N5638
4148
monitor
22k log
CRM
stereo
mono
mute
alt.
dim
talk-back
S.T.M.
-24 Volt
546
C1
C2
M3
LOCATED ON 8080-8
REST LOCATED ON 8080-2



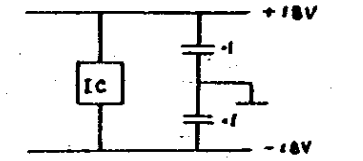
+18V
3k9
10/25
1V5
T.B.
47/25
10k
680p
5532
10p
66k
560
0.47
10klog
680k
4p7
0.47
10K
100
Talkback
STM
cue 1
cue 2
external
slate
-24V
33K
dimbuss
8038
4700p
47K
15k
1k
0.15
0.33
0.68
1-5/35
off
-18V
1k5
470
12 volt
4k7
1M
3k9
1k
22k
OA85
0.47
100kB
470k
TL072
47/25
47k
100
Patch
slate
4148
27k
Dim buss
33k
1k5
audio
546
slate led
51k
30
47/25
slate buss


AFL/PFL BUSS
-18V
+18V
-24V
SYNC BUSS
MASTER SYNC
-15V
SOLO IN PLACE
M.S.B.
MUTE BUSS
PROGRAMMED MUTE
LEO EARTH
ODD EVEN
AFL
LOGIC
PFL/AFL BUSS
CUE 1&2
AUX SEN
AUX 1-8
EVEN AUX LOCATED ON 8000-3
ODD AUX LOCATED ON 8000-2
REST LOCATED ON 8000-2

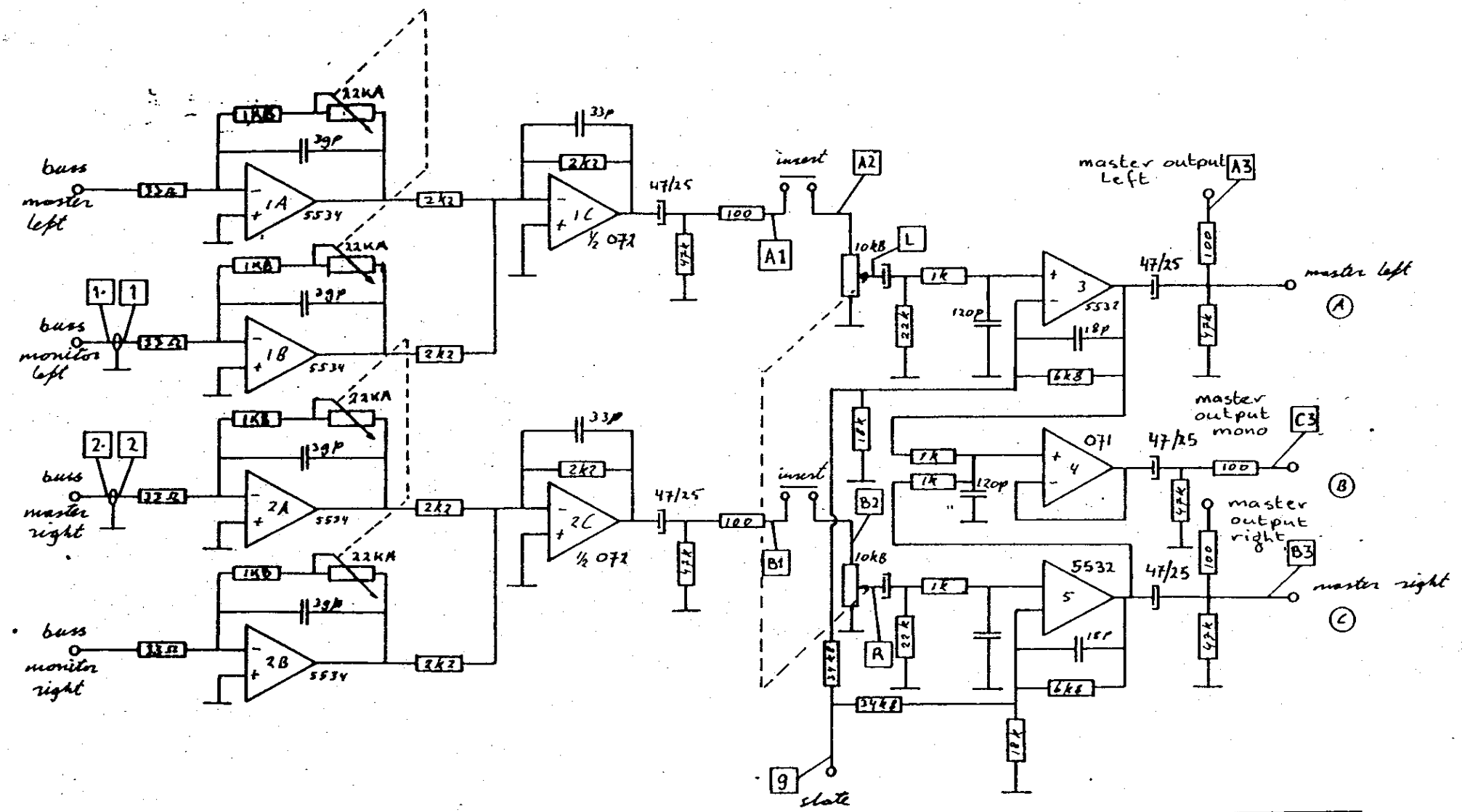




BOTH 8000-2 AND 8000-3



ALL IC'S ON 8000-2 AND 8000-3


bass master left
bass monitor left
bass master right
bass monitor right
1A
1B
2A
2B
1C
2C
5534
½ 072
22KA
39p
33p
2k2
12k
1K8
47/25
100
4k7
insert
A1
A2
B1
B2
10kB
L
R
1k
22R
120p
3
5532
8p
6k8
master output Left
A3
master left
A
071
4
master output mono
C3
B
master output right
B3
5
18p
42k
37k8
3k48
18k
9
slate
all located on 8000-2
master outputs

== ELECTRONICA B.V.

produktie en ontwikkeling van
geluidsmengpanelen en accessoires

Date: 17-02-1986

Title : Componentenlijst 8000-2C

PartNr	Value	Notes	ArtNr
R1	33E	5%	0711
R2	1k8	5%	0732
R3	2k2	5%	0733
R4	33E	5%	0711
R5	1k8	5%	0732
R6	2k2	5%	0733
R7	2k2	5%	0733
R8	47k	5%	0749
R9	100E	5%	0717
R10	22k	5%	0745
R11	1k	5%	0729
R12	34k8	1%	0863
R13	18k	5%	0744
R14	6k8	5%	0739
R15	100E	5%	0717
R16	47k	5%	0749
R17	33E	5%	0711
R18	1k8	5%	0732
R19	2k2	5%	0733
R20	33E	5%	0711
R21	1k8	5%	0732
R22	2k2	5%	0733
R23	2k2	5%	0733
R24	47k	5%	0749
R25	100E	5%	0717
R26	22k	5%	0745
R27	1k	5%	0729
R28	34k8	1%	0863
R29	18k	5%	0744
R30	6k8	5%	0739
R31	100E	5%	0717
R32	47k	5%	0749
R33	1k	5%	0729
R34	1k	5%	0729
R35	47k	5%	0749
R36	100E	5%	0717
R37	47k	5%	0749
R38	47k	5%	0749
R39	1k	5%	0729
R40	4k7	5%	0737
R41	100k	5%	0753
R42	47k	5%	0749
R43	47k	5%	0749
R44	47k	5%	0749
R45	1k	5%	0729
R46	4k7	5%	0737
R47	100k	5%	0753
R48	47k	5%	0749

R53	100k	5%	0753
R54	10k	5%	0741
R55	10k	5%	0741
R56	10k	5%	0741
R57	10k	5%	0741
R58	10k	5%	0741
R59	100E	5%	0717
R60	47k	5%	0749
R61	10k	5%	0741
R62	10k	5%	0741
R63	10k	5%	0741
R64	10k	5%	0741
R65	10k	5%	0741
R66	100E	5%	0717
R67	47k	5%	0749
R82	6k8	5%	0739
R83	22k	5%	0745
R84	22k	5%	0745
R85	47k	5%	0749
R86	2k2	5%	0733
R87	22k	5%	0745
R88	2k2	5%	0733
R89	22k	5%	0745
R90	100k	5%	0753
R91	47k	5%	0749
R92	100E	5%	0717
R93	6k8	5%	0739
R94	22k	5%	0745
R95	22k	5%	0745
R96	47k	5%	0749
R97	2k2	5%	0733
R98	22k	5%	0745
R99	2k2	5%	0733
R100	22k	5%	0745
R101	100k	5%	0753
R102	47k	5%	0749
R103	100E	5%	0717
R104	33k	5%	0747
R105	3M3	5%	0770
R151	330k	5%	0759
R152	47k	5%	0749
R153	47k	5%	0749
R154	47k	5%	0749
R155	47k	5%	0749
R156	47k	5%	0749
R157	3M3	5%	0770
R158	3M3	5%	0770
R159	1k	5%	0729
R160	3M3	5%	0770
R161	330k	5%	0759
R162	12k	5%	0742
R163	22k	5%	0745
R164	10k	5%	0741
R165	22k	5%	0745
R166	100k	5%	0753
R167	47k	5%	0749
R168	330E	5%	0723
R169	47k	5%	0749
R170	47k	5%	0749
R171	47k	5%	0749
R172	47k	5%	0749
R173	47k	5%	0749
R174	100E	5%	0717
R175	3M3	5%	0770
R176	3M3	5%	0770
R177	1k	5%	0729

C122	10 p	ker	0213
C124	10 p	ker	0213
C126	47/25	elco	0287
C128	47/25	elco	0287
C130	47/25	elco	0287
C132	47/25	elco	0287
C141	0.1/63	ker	0241
C142	0.1/63	ker	0241
C143	47/25	elco	0287
C144	0.1/63	ker	0241
C145	0.1/63	ker	0241
C146	1/63	elco	0279
C147	0.1/63	ker	0241
C148	47/25	elco	0287
C157	0.1/63	ker	0241
C158	0.1/63	ker	0241
C159	0.1/63	ker	0241
C160	0.1/63	ker	0241
C161	0.1/63	ker	0241
C162	0.1/63	ker	0241
C163	0.1/63	ker	0241
C164	0.1/63	ker	0241
C165	0.1/63	ker	0241
C166	0.1	ker	0241
C167	0.1/63	ker	0241
C168	0.1/63	ker	0241
C169	0.1/63	ker	0241
C170	0.1/63	ker	0241
C171	0.1/63	ker	0241
C172	0.1/63	ker	0241
C173	0.1/63	ker	0241
C174	0.1/63	ker	0241
C175	0.1/63	ker	0241
C176	0.1/63	ker	0241
C177	0.1/63	ker	0241
C178	0.1/63	ker	0241
C179	0.1/63	ker	0241
C180	0.1/63	ker	0241
C181	0.1/63	ker	0241
C182	0.1/63	ker	0241
C183	0.1/63	ker	0241
C184	0.1/63	ker	0241
C185	0.1/63	ker	0241
C186	0.1/63	ker	0241
C187	0.1/63	ker	0241
C188	0.1/63	ker	0241
C189	0.1/63	ker	0241
C190	0.1/63	ker	0241
D1	1N4148	sgn	0342
D2	1N4148	sgn	0324
D3	1N4148	sgn	0324
D4	1N4148	sgn	0324
D5	1N4148	sgn	0324
D6	1N4148	sgn	0324
D14	LED	3mm red	0387
D15	LED	3mm red	0387
D16	LED	3mm red	0387
D17	LED	3mm red	0387
D18	LED	3mm red	0387
T1	2N5638	FET	0338
T2	2N5638	FET	0338
T3	2N5638	FET	0338
T4	2N5638	FET	0338
T5	2N5638	FET	0338

R184	100E	5%	0717
R185	3M3	5%	0770
R186	3M3	5%	0770
R187	1k	5%	0729
R188	330E	5%	0723
R189	47k	5%	0749
R190	47k	5%	0749
R191	47k	5%	0749
R192	47k	5%	0749
R193	47k	5%	0749
R194	100E	5%	0717
R195	3M3	5%	0770
R196	3M3	5%	0770
R197	1k	5%	0729
R198	10E	5%	0705
R199	33E	5%	0711
R201	33E	5%	0711
R203	33E	5%	0711
R205	33E	5%	0711
R207	18k	5%	0744
R209	18k	5%	0744
R211	18k	5%	0744
R213	18k	5%	0744
R215	47k	5%	0749
R217	47k	5%	0749
R219	47k	5%	0749
R221	47k	5%	0749
R223	100E	5%	0717
R225	100E	5%	0717
R227	100E	5%	0717
R229	100E	5%	0717
R231	10k	5%	0741
R233	10k	5%	0741
R235	10k	5%	0741
R237	10k	5%	0741
R239	15k8	1%	0853
R241	15k8	1%	0853
R243	15k8	1%	0853
R245	15k8	1%	0853
R247	47k	5%	0749
R249	47k	5%	0749
R251	47k	5%	0749
R253	47k	5%	0749
R255	47k	5%	0749
R257	47k	5%	0749
R259	47k	5%	0749
R261	47k	5%	0749
R263	19k1	1%	0855
R265	19k1	1%	0855
R267	19k1	1%	0855
R269	19k1	1%	0855
R271	100E	5%	0717
R273	100E	5%	0717
R275	100E	5%	0717
R277	100E	5%	0717
R288	10E	5%	0705
R289	10E	5%	0705
R290	10E	5%	0705

C1	39 p	ker	0220
C2	39 p	ker	0220
C3	33 p	ker	0219
C4	47/25	elco	0287
C5	47/25	elco	0287
C6	120 p	ker	0226
C7	18p	ker	0216
C8	47/25	elco	0287

C12	47/25	elco	0287
C13	47/25	elco	0287
C14	120 p	ker	0226
C15	18 p	ker	0216
C16	47/25	elco	0287
C17	120 p	ker	0226
C18	47/25	elco	0287
C19	47/25	elco	0287
C20	680 p	ker	0234
C21	39 p	ker	0220
C22	47/25	elco	0287
C23	47/25	elco	0287
C24	680 p	ker	0234
C25	39p	ker	0220
C26	47/25	elco	0287
C27	39 p	ker	0220
C28	47/25	elco	0287
C29	4 p 7	ker	0209
C30	10 p	ker	0213
C31	47/25	elco	0287
C32	18 p	ker	0216
C33	47/25	elco	0287
C34	10 p	ker	0213
C35	47/25	elco	0287
C36	18p	ker	0216
C37	47/25	elco	0287
C46	6 p 8	ker	0211
C47	47/25	elco	0287
C48	6 p 8	ker	0211
C49	47/25	elco	0287
C50	6 p 8	ker	0211
C51	47/25	elco	0287
C52	6 p 8	ker	0211
C53	47/25	elco	0287
C54	0.1/63	ker	0214
C86	0.22 u	poly	0264
C87	0.22	poly	0264
C88	0.22	poly	0264
C89	2200 p	poly	0248
C90	0.1/63	ker	0241
C91	1500 p	ker	0238
C92	0.22 u	poly	0264
C93	2200 p	poly	0248
C94	1500 p	ker	0238
C95	0.22 u	poly	0264
C96	2200 p	poly	0248
C97	1500 p	ker	0238
C98	0.22 u	poly	0264
C99	2200 p	poly	0248
C100	0.1/63	ker	0241
C101	47/25	elco	0287
C102	39 p	ker	0220
C104	39 p	ker	0220
C106	39 p	ker	0220
C108	39 p	ker	0220
C110	47/25	elco	0287
C112	47/25	elco	0287
C114	47/25	elco	0287
C116	47/25	elco	0287
C118	10 p	ker	0213
C120	10 p	ker	0213
C120	10 p	ker	0213

T7	BC546		NPN	0328
T8	BC546		NPN	0328
T11	BC546		NPN	0328
T12	BC546		NPN	0328
T13	BC546		NPN	0328
T14	BC546		NPN	0328
T15	BC546		NPN	0328
T16	BC560/416		PNP	0327
T17	BC546		NPN	0328
T18	BC546		NPN	0328
T19	BC546		NPN	0328
T20	BC546		NPN	0328
T21	BC546		NPN	0328
T22	BC546		NPN	0328
T23	BC546		NPN	0328
T24	BC546		NPN	0328
T25	BC546		NPN	0328
T26	BC546		NPN	0328
T27	BC546		NPN	0328
1A	NE5534		lowns	0306
1B	NE5534		lowns	0306
2A	NE5534		lowns	0306
2B	NE5534		lowns	0306
1C,2C	TL072		bifet	0304
3,5	NE5532		lowns	0307
4	TL071		bifet	0303
6-9	TL074		bifet	0305
10-13	TL074		bifet	0305
14L,16L	NE5532		lowns	0307
14M,18M	NE5532		lowns	0307
16M,20M	NE5532		lowns	0307
18L,20L	NE5532		lowns	0307
22,23	TL072		bifet	0304
24,25	TL072		bifet	0304
42-45	TL074		bifet	0305
46	7818		pos.reg.	0322
47	7918		neg.reg.	0323
P1	22 k	Ast	12.5	0127
P2	22 k	Ast	12.5	0127
P3	22 k	Akl	12.5	0126
P4	22 k	B	~~12.5~~/15	~~0303~~/0108
P5	10 k	B	~~12.5~~/15	~~0304~~/0104
P6	10 k	B	~~12.5~~/15	~~0304~~/0104
P7	10 k	B	~~12.5~~/15	~~0304~~/0104
P8	10 k	B	~~12.5~~/15	~~0304~~/0104
P9	22 k	Bst	~~12.5~~/15	~~0056~~/0109
F1	10 k	Bst	ALPS luxe	0098

== ELECTRONICA B.V.

produktie en ontwikkeling van
geluidsmengpanelen en accessoires

Date: 25-06-1986 R & D department

PARTLIST : 8000-3 SUBMASTER print index: c

PartNr	Value	Notes	ArtNr
R68	10k	5%	0741
R69	10k	5%	0741
R70	10k	5%	0741
R71	10k	5%	0741
R72	10k	5%	0741
R73	100E	5%	0717
R74	47k	5%	0749
R75	10k	5%	0741
R76	10k	5%	0741
R77	10k	5%	0741
R78	10k	5%	0741
R79	10k	5%	0741
R80	100E	5%	0717
R81	47k	5%	0749
R106	10k	5%	0741
R107	10k	5%	0741
R108	22k	5%	0745
R109	22k	5%	0745
R110	22k	5%	0745
R111	47k	5%	0749
R112	100E	5%	0717
R113	10k	5%	0741
R114	10k	5%	0741
R115	22k	5%	0745
R116	22k	5%	0745
R117	22k	5%	0745
R118	47k	5%	0749
R119	100E	5%	0717
R120	3k9	5%	0736
R121	10k	5%	0741
R122	10k	5%	0741
R123	560E	5%	0726
R124	56k	5%	0750
R125	10k	5%	0741
R126	680k	5%	0763
R127	10k	5%	0741
R128	100E	5%	0717
R129	33k	5%	0747
R130	1k5	5%	0731
R131	470E	5%	0725
R132	4k7	5%	0737
R133	1M0	5%	0765
R134	4k7	5%	0737
R135	3k9	5%	0736
R136	3k9	5%	0736
R137	22k	5%	0745
R138	47k	5%	0749
R139	470k	5%	0761
R140	47k	5%	0749
R141	100E	5%	0717

ELECTRONICA B.V.

productie en ontwikkeling van geluidsmengpanelen en accessoires

Date: 25-06-1986 R & D department

PARTLIST : 8000-3 SUBMASTER print index: C

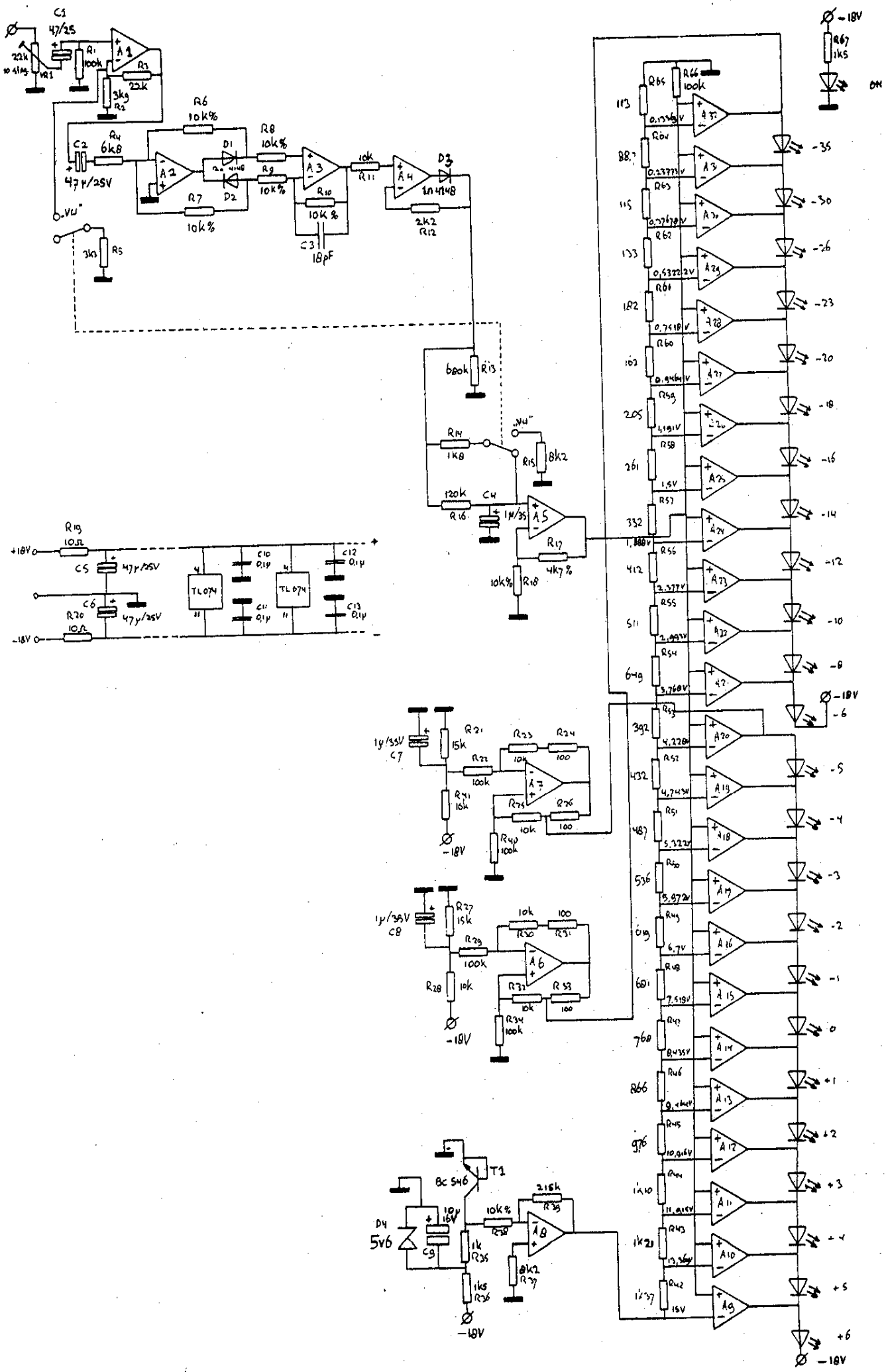
PartNr	Value	Notes	ArtNr
R68	10k	5%	0741
R69	10k	5%	0741
R70	10k	5%	0741
R71	10k	5%	0741
R72	10k	5%	0741
R73	100E	5%	0717
R74	47k	5%	0749
R75	10k	5%	0741
R76	10k	5%	0741
R77	10k	5%	0741
R78	10k	5%	0741
R79	10k	5%	0741
R80	100E	5%	0717
R81	47k	5%	0749
R106	10k	5%	0741
R107	10k	5%	0741
R108	22k	5%	0745
R109	22k	5%	0745
R110	22k	5%	0745
R111	47k	5%	0749
R112	100E	5%	0717
R113	10k	5%	0741
R114	10k	5%	0741
R115	22k	5%	0745
R116	22k	5%	0745
R117	22k	5%	0745
R118	47k	5%	0749
R119	100E	5%	0717
R120	2k9	5%	0736
R121	10k	5%	0741
R122	10k	5%	0741
R123	560E	5%	0726
R124	56k	5%	0750
R125	10k	5%	0741
R126	680k	5%	0763
R127	10k	5%	0741
R128	100E	5%	0717
R129	33k	5%	0747
R130	1k5	5%	0731
R131	470E	5%	0725
R132	4k7	5%	0737
R133	1M0	5%	0765
R134	4k7	5%	0737
R135	3k9	5%	0736
R136	3k9	5%	0736
R137	22k	5%	0745
R138	47k	5%	0749
R139	470k	5%	0761
R140	47k	5%	0749
R141	100E	5%	0717

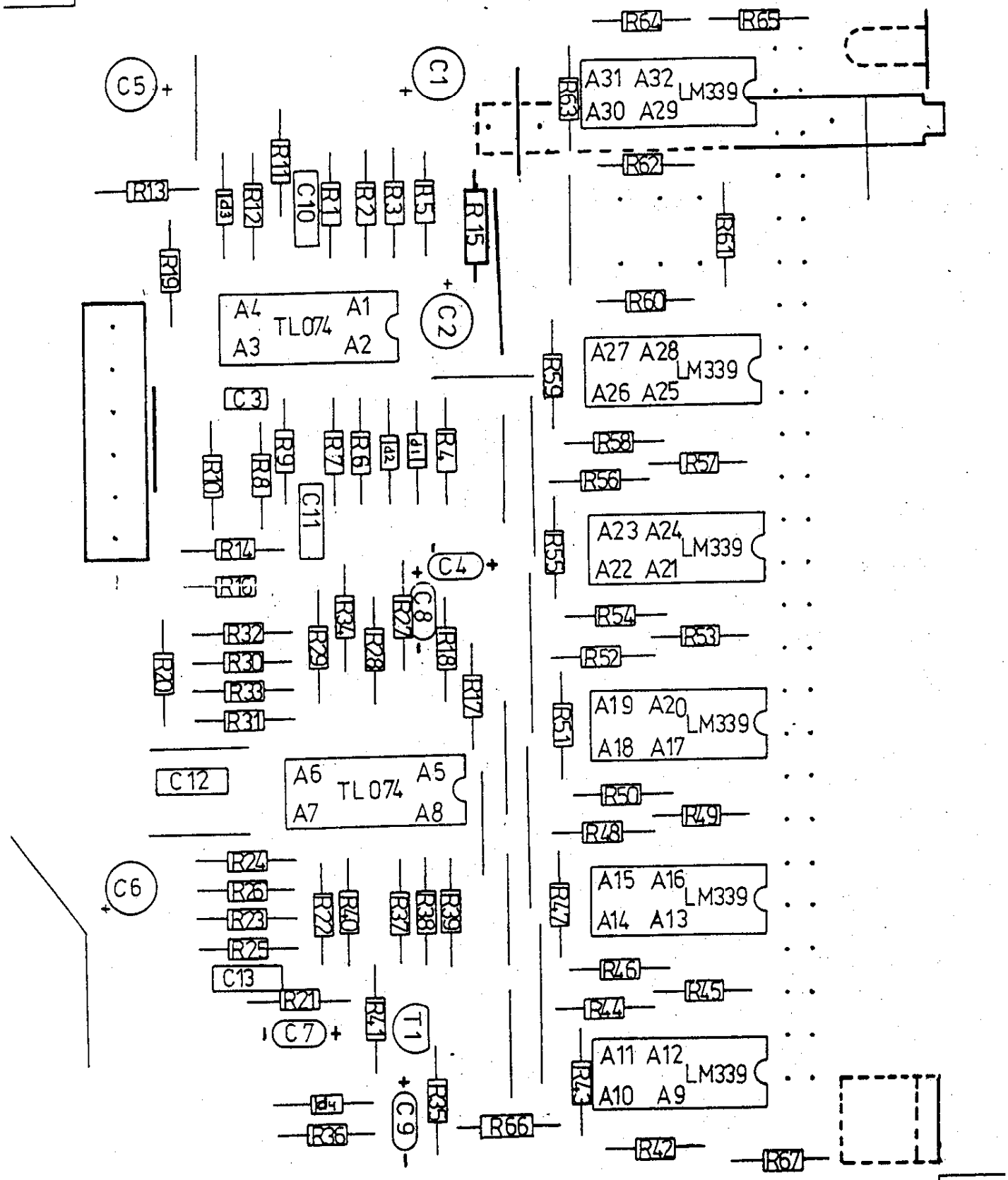
C55	10 p	ker	0213
C56	47/25	elco	0287
C57	33 p	ker	0219
C58	47/25	elco	0287
C59	10 p	ker	0213
C60	47/25	elco	0287
C61	33 p	ker	0219
C62	47/25	elco	0287
C63	100/25	elco	0292
C64	47/25	elco	0287
C65	680 p	ker	0234
C66	10 n	ker	0213
C67	0.47 u	poly	0255
C68	4 p 7	ker	0209
C69	0.47 u	poly	0255
C70	1000 p	poly	0246
C71	2200 p	poly	0248
C72	.018 u	poly	0255
C73	.068 u	poly	0260
C74	0.15 u	poly	0262
C75	0.33 u	poly	0265
C76	0.68 u	poly	0267
C77	1/63	elco	0279
C78	47/25	elco	0287
C79	4700 p	poly	0250
C80	0.1/63	ker	0241
C81	47/25	elco	0287
C82	0.47 u	poly	0266
C83	47/25	elco	0287
C84	10 p	ker	0213
C85	47/25	elco	0287
C103	39 p	ker	0220
C105	39 p	ker	0220
C107	39 p	ker	0220
C109	39 p	ker	0220
C111	47/25	elco	0287
C113	47/25	elco	0287
C115	47/25	elco	0287
C117	47/25	elco	0287
C119	10 p	ker	0213
C121	10 p	ker	0213
C123	10 p	ker	0213
C125	10 p	ker	0213
C127	47/25	elco	0287
C129	47/25	elco	0287
C131	47/25	elco	0287
C133	47/25	elco	0287
C134	47/25	elco	0287
C135	47/25	elco	0287
C136	10 p	ker	0213
C137	10 p	ker	0213
C138	47/25	elco	0287
C139	4 p 7	ker	0209
C140	47/25	elco	0287
C149	0.1/63	ker	0241
C150	0.1/63	ker	0241
C151	47/25	elco	0287
C152	0.1/63	ker	0241
C153	0.1/63	ker	0241
C154	1/63	elco	0279
C155	0.1/63	ker	0241
C156	47/25	elco	0287
C191	0.1/63	ker	0241
C192	0.1/63	ker	0241
C193	0.1/63	ker	0241
C194	0.1	ker	0241

R142	27k	5%	0746
R143	33k	5%	0747
R144	1M0	5%	0755
R145	1k5	5%	0731
R146	10k	5%	0741
R147	10k	5%	0741
R148	51k1	1%	0867
R149	47k	5%	0749
R150	100E	5%	0717
R200	33E	5%	0711
R202	33E	5%	0711
R204	33E	5%	0711
R206	33E	5%	0711
R208	10k	5%	0741
R210	10k	5%	0741
R212	10k	5%	0741
R214	10k	5%	0741
R216	47k	5%	0749
R218	47k	5%	0749
R220	47k	5%	0749
R222	47k	5%	0749
R224	100E	5%	0717
R226	100E	5%	0717
R228	100E	5%	0717
R230	100E	5%	0717
R232	10k	5%	0741
R234	10k	5%	0741
R236	10k	5%	0741
R238	10k	5%	0741
R240	15k8	1%	0853
R242	15k8	1%	0853
R244	15k8	1%	0853
R246	15k8	1%	0853
R248	47k	5%	0749
R250	47k	5%	0749
R252	47k	5%	0749
R254	47k	5%	0749
R256	47k	5%	0749
R258	47k	5%	0749
R260	47k	5%	0749
R262	47k	5%	0749
R264	19k1	1%	0855
R266	19k1	1%	0855
R268	19k1	1%	0855
R270	19k1	1%	0855
R272	100E	5%	0717
R274	100E	5%	0717
R276	100E	5%	0717
R278	100E	5%	0717
R279	47k	5%	0749
R280	560E	5%	0726
R281	560E	5%	0726
R282	18k	5%	0744
R283	10k	5%	0741
R284	6k8	5%	0763
R285	47k	5%	0749
R286	47k	5%	0749
R287	10k	5%	0741

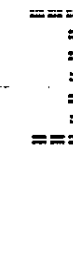
C38	10 µ	ker	0213
C39	47/25	elco	0287
C40	18 µ	ker	0216
C41	47/25	elco	0287
C42	10 µ	ker	0213
C43	47/25	elco	0287
C44	18 µ	ker	0216
C45	47/25	elco	0287

C195	0.1/63	ker	0241
C196	0.1/63	ker	0241
C197	0.1/63	ker	0241
C198	0.1/63	ker	0241
C199	0.1/63	ker	0241
C200	0.1/63	ker	0241
C201	0.1/63	ker	0241
C202	0.1/63	ker	0241
C203	0.1/63	ker	0241
C204	0.1/63	ker	0241
C205	0.1/63	ker	0241
C206	0.1/63	ker	0241
C207	0.1/63	ker	0241
C208	0.1/63	ker	0241
C209	0.1/63	ker	0241
C210	0.1/63	ker	0241
D7	4 V	zener	0317
D8	LED	3mm red	0307
D9	12 V	zener	0353
D10	OA95		0541
D11	OA95		0541
D12	1N4148	sgn	0342
D13	1N4148	sgn	0342
T9	BC546	NPN	0329
T10	BC54A	NPN	0329
A15L+A17L	NE5532	lownoise	0307
A15M+A19M	NE5532	lownoise	0307
A17M+A21M	NE5532	lownoise	0307
A19L+A21L	NE5532	lownoise	0307
A26+A27	TL072	bifet	0304
A28+A29	TL072	bifet	0304
A30+A31	TL072	bifet	0304
IC32	AD536 JD	prec	0309
A33-A36	TL074	bifet	0305
A38+A39	NE5532	lownoise	0307
A40+A41	NE5532	lownoise	0307
IC46	7912	pos.reg.	0322
IC49	7918	neg.reg.	0323
P10	100 kB	lin	0116
P11	22 kBst	lin	0109
P12	10 kB	lin	0104
P13	10 kB	lin	0104
P14	10 kB	lin	0104
P15	10 kB	lin	0104
P16	22 kBst	lin	0109
P17	10 kB	lin	0104
P18	10 kB	lin	0104
P19	1 M inst.10gl.	l.	0162


C1
4,7/25
22k
10 dog
VR1
R1
100k
A1
R3
22k
3k9
R2
R6
10k%
R4
6k8
C2
47µ/25V
A2
D1
D2
R8
10k%
R9
10k%
R7
10k%
A3
R10
10K%
C3
18pF
10k
R11
A4
D3
1n4148
2k2
R12
"VU"
3k3
R5
680k
R13
R14
1k8
"VU"
R15
8k2
120k
R16
C4
1µ/35
A5
R17
4k7 %
10k%
R18
R19
10Ω
+18V
C5
47µ/25V
C6
47µ/25V
R20
10Ω
-18V
TL074
C10
0,1µ
C11
0,1µ
C12
0,1µ
C13
0,1µ
+18V
R66
100k
A21
A20
A19
A18
A17
A16
A15
A14
A13
A12
A11
A10
A9
R67
1k5
ON
-35
-30
-26
-23
-20
-18
-16
-14
-12
-10
-8
-18V
-6
-5
-4
-3
-2
-1
0
+1
+2
+3
+4
+5
+6
-18V
1µ/35V
C7
R21
15k
R22
100k
R23
10k
R24
100
A7
R25
10k
R26
100
R41
10k
R40
100k
-18V
1µ/35V
C8
R27
15k
R29
100k
R28
10k
A6
R30
10k
R31
100
R33
10k
R32
100k
-18V
T1
BC 546
D4
5V6
C9
10µ
16V
10k%
R38
2,15k
R35
A8
1k
R36
1k5
R37
8k2
-18V


C5
C1
R64
R65
A31 A32
A30 A29
LM339
R63
R62
R61
R60
R59
R58
R57
R56
R55
R54
R53
R52
R51
R50
R49
R48
R47
R46
R45
R44
R43
R42
R67
A27 A28
A26 A25
A23 A24
A22 A21
A19 A20
A18 A17
A15 A16
A14 A13
A11 A12
A10 A9
R11
R13
R12
C10
R1
R2
R3
R5
R15
R19
A4 A1
A3 TL074 A2
C2
C3
R10
R8
R9
R7
R6
R4
C11
R14
R16
C4
C8
R34
R27
R32
R29
R28
R18
R20
R30
R33
R31
R17
C12
A6 A5
A7 TL074 A8
C6
R24
R26
R23
R25
R22
R40
R37
R38
R39
C13
R21
C7
R41
T1
R35
R1
R36
C9
R66

01-0008



ELECTRONICA B.V.

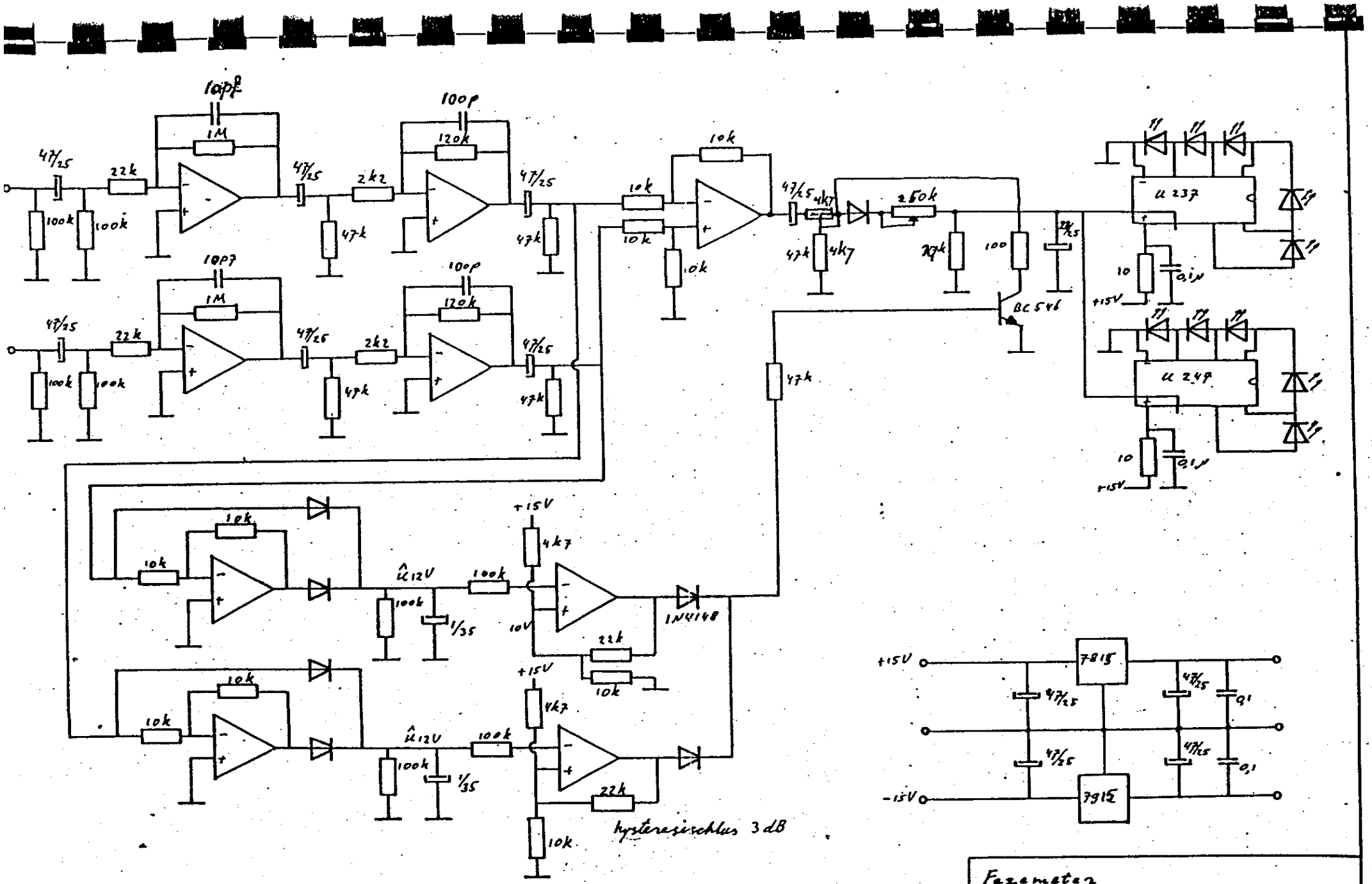
produktie en ontwikkeling van geluidsmengpanelen en accessoires

Date: 04-07-1985 R & D department

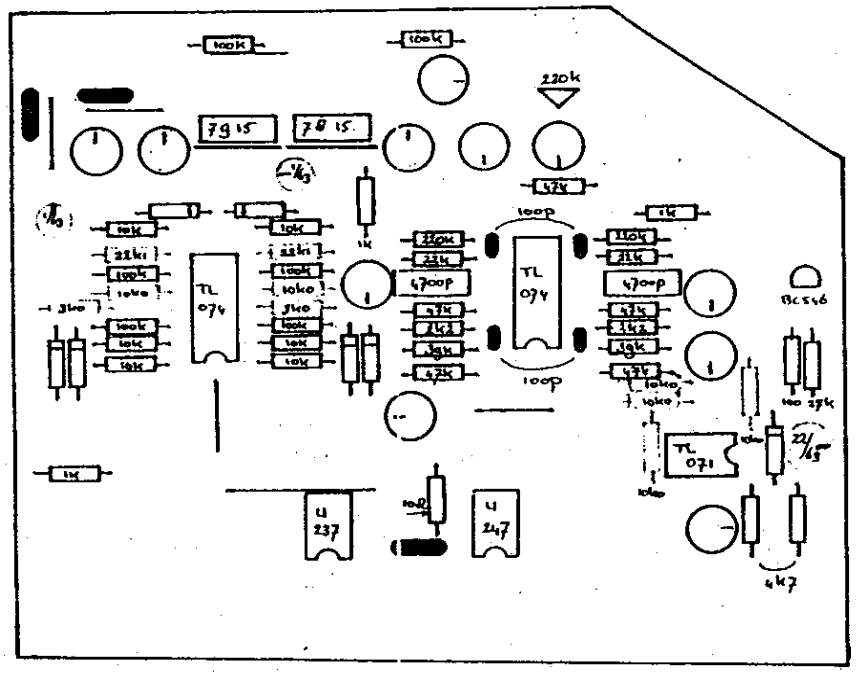
Title : 8000-10 LEDBAR 25 segm.

PartNr	Value	Notes	ArtNr
R1	100 k	5%	0753
R2	3 k 9	5%	0736
R3	22 k	5%	0745
R4	6 k 8	5%	0739
R5	3 k 3	5%	0735
R6	10 k	1%	0848
R7	10 k	1%	0848
R8	10 k	1%	0848
R9	10 k	1%	0848
R10	10 k	1%	0848
R11	10 k	5%	0741
R12	2 k 2	5%	0733
R13	680 k	5%	0763
R14	1 k 8	5%	0732
R15	8 k 2	5%	0740
R16	120 k	5%	0754
R17	4 k 75	1%	0844
R18	10 k 0	1%	0848
R19	10 E	5%	0705
R20	10 E	5%	0705
R21	15 k	5%	0743
R22	100 k	5%	0753
R23	10 k	5%	0741
R24	100 E	5%	0717
R25	10 k	5%	0741
R26	100 E	5%	0717
R27	15 k	5%	0743
R28	10 k	5%	0741
R29	100 k	5%	0753
R30	10 k	5%	0741
R31	100 E	5%	0717
R32	10 k	5%	0741
R33	100 E	5%	0717
R34	100 k	5%	0753
R35	1 k	5%	0729
R36	1 k 5	5%	0731
R37	8 k 2	5%	0740
R38	10 k	1%	0848
R39	214 k	1%	0800
R40	100 k	5%	0753
R41	10 k	5%	0741
R42	1 k 37	1%	0832
R43	1 k 21	1%	0830
R44	1 k 10	1%	0827
R45	976 E	1%	0828
R46	866 E	1%	[illegible]

R48	681 E	1%	0824
R49	619 E	1%	0823
R50	536 E	1%	0822
R51	487 E	1%	0821
R52	432 E	1%	0819
R53	392 E	1%	0818
R54	649 E	1%	0864
R55	511 E	1%	0817
R56	412 E	1%	0820
R57	332 E	1%	0816
R58	261 E	1%	0813
R59	205 E	1%	0812
R60	162 E	1%	0811
R61	182 E	1%	0847
R62	133 E	1%	0805
R63	115 E	1%	0854
R64	88 E 7	1%	0809
R65	113 E	1%	0806
R66	100 k	5%	0753
R67	1 k 5	5%	0731
C1	47/25	elco rad.	0287
C2	47/25	elco rad.	0287
C3	18 pF		0216
C4	1/35	tan.	0276
C5	47/25	elco rad.	0287
C6	47/25	elco rad.	0287
C7	1/35	tan.	0276
C8	1/35	tan.	0276
C9	10/16	tan.	0278
C10	0.1/63	ker.	0241
C11	0.1/63	ker.	0241
C12	0.1/63	ker.	0241
C13	0.1/63	ker.	0241
D1	1N4148	sgn.diode	0342
D2	1N4148	sgn.diode	0342
D3	1N4148	sgn.diode	0342
D4	5V6	zenerdiode	0351
T1	BC 546	NPN	0328
A1 t/m A4	TL 074	bifet.	0305
A5 t/m A8	TL 074	bifet.	0305
A9 t/m A12	LM 339	quad.comparator	0316
A13 t/m A16	LM 339	quad.comparator	0316
A17 t/m A20	LM 339	quad.comparator	0316
A21 t/m A24	LM 339	quad.comparator	0316
A25 t/m A28	LM 339	quad.comparator	0316
A29 t/m A32	LM 339	quad.comparator	0316
VR1	22 k	10-turn gr.	0155
S1	Fox.2xom	N2UEE	0400


10pF
1M
47µ/25
22k
100k
100k
100p
120k
2k2
47k
10k
4k7
250k
BC 546
100
µ 237
µ 247
10
0,1µ
+15V
1N4148
hysteresisschlus 3 dB
7815
7915
-15V
Fazemeter
-45 dB — +22 dB
juiste uitlezing ± 6%

8000-8



Stempel

Bruggen 6x
5 x 1cm
1 x 2cm

Dioden 7x
7 x 1N4148

Weerstanden 33x
1 x 10Ω
1 x 100Ω
3 x 1k
2 x 2k2
2 x 4k7
6 x 10k
2 x 22k
1 x 27k
2 x 39k
5 x 47k
6 x 100k
2 x 220k

Weerstanden 14x
2 x 2k2
6 x 10k
2 x 22k

IC-voet 5x
3 x 8pens
2 x 14pens

IC's 5x
1 x TL071
2 x TL074
1 x U 237
1 x U 247

Pf's 6x
6 x 100p

Transistor 1x
1 x BC546

Condensator 5x
2 x 4700p
3 x 0,1 Ker

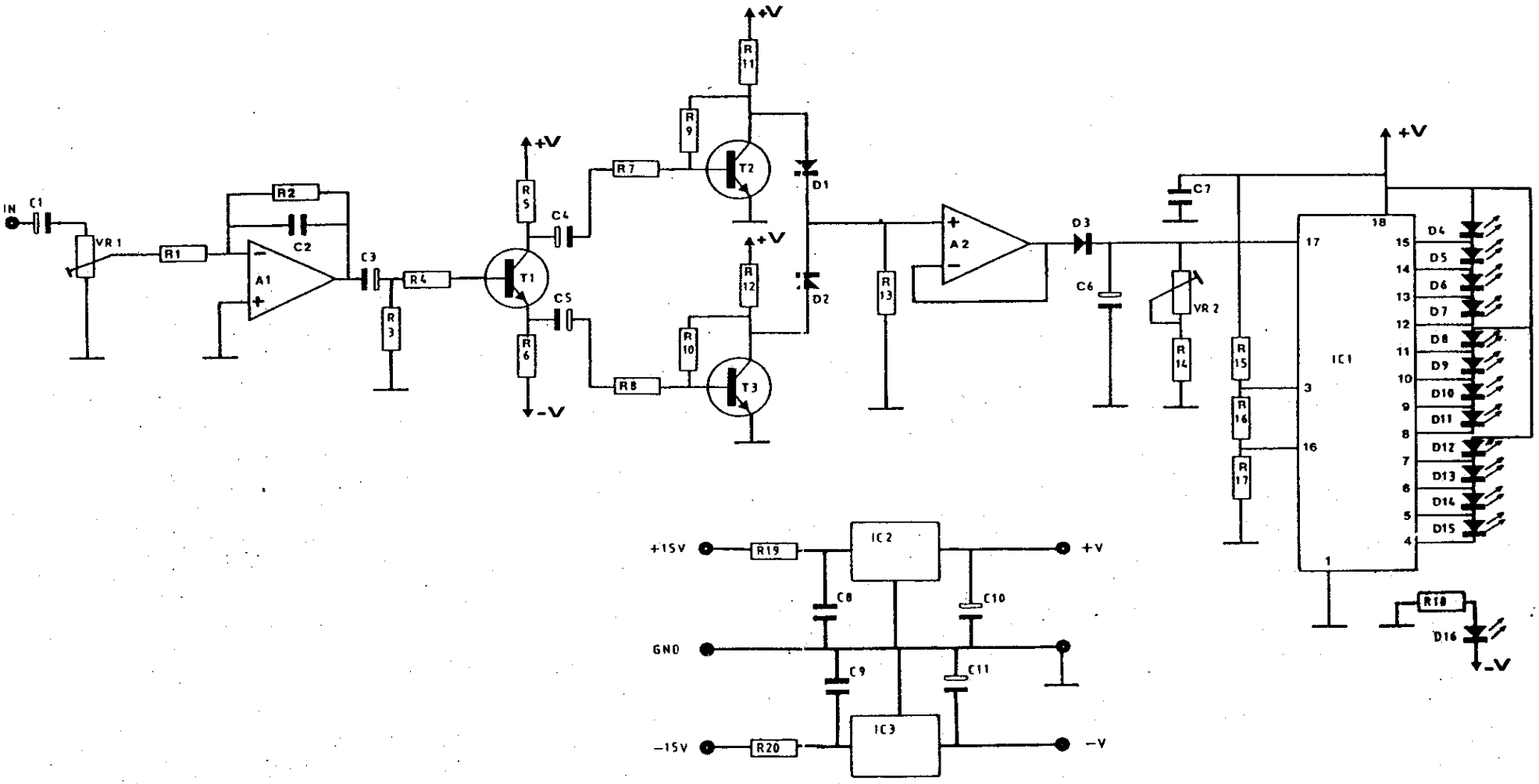
Instelpot 1x
1 x 220k

Elco's 14x
2 x 1/63
1 x 22/63
11 x 47/25

Spanningsreg 2x
1 x 7815
1 x 7915

Comp: 9

Punten: 44

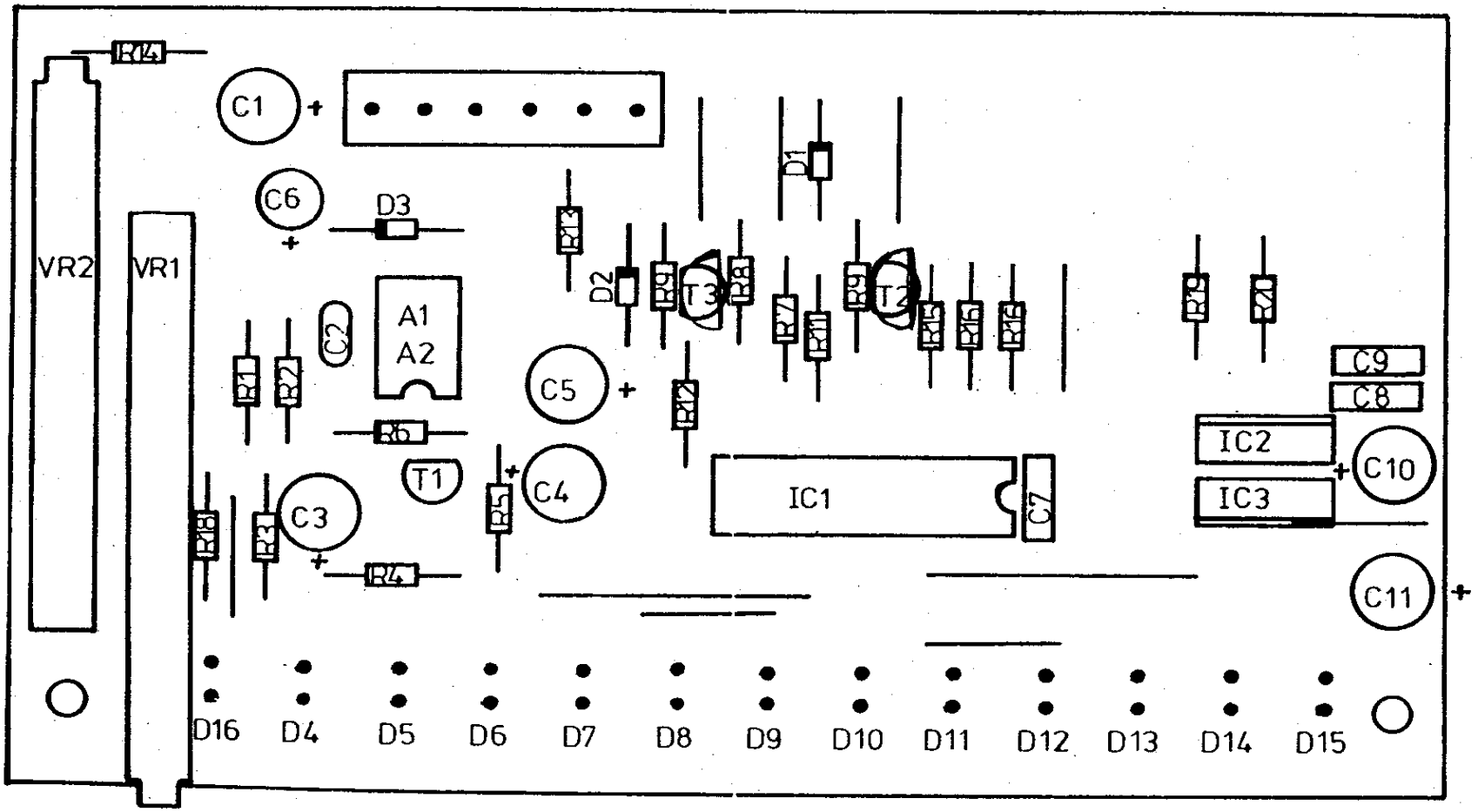


LEDBAR 8000

8000-5f

13 SEGMENTS

8000-5f


R14
C1
VR2
VR1
C6
D3
D1
D2
R13
R9
T3
R8
R7
R11
R9
T2
R15
R16
R18
R19
R21
C2
A1
A2
R1
R2
C5
C9
C8
R12
R6
T1
C4
R5
IC1
C7
IC2
IC3
C10
C3
R18
R3
R4
C11
D16
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15

== ELECTRONICA B.V.
produktie en ontwikkeling van
geluidsmengpanelen en accessoires

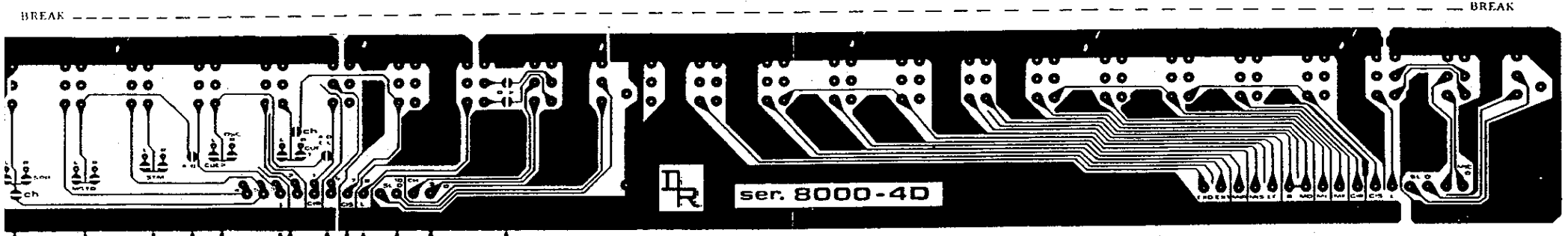
Date: 09-12-1985 R & D department

Title : 8000-5 LEDBAR 13 segm.

	PartNr	Value	Notes	ArtNr
audio	R1	22 k	5%	0745
	R2	22 k	5%	0745
	R3	100 k	5%	0753
	R4	10 k	5%	0741
	R5	1 k 2	5%	0730
	R6	1 k 2	5%	0730
rect	R7	10 k	5%	0741
	R8	10 k	5%	0741
	R9	47 k	5%	0749
	R10	47 k	5%	0749
	R11	10 k	5%	0741
	R12	10 k	5%	0741
	R13	47 k	5%	0749
	R14	100 k	5%	0753
leddr	R15	10 k	5%	0741
	R16	10 k	5%	0741
	R17	270 E	5%	0722
	R18	1 k	5%	0729
supply	R19	10 E	5%	0705
	R20	10 E	5%	0705
audio	C1	47/25	rad	0287
	C2	47 pF	ker	0221
	C3	47/25	rad	0287
	C4	47/25	rad	0287
	C5	47/25	rad	0287
rect	C6	1/63	rad	0279
leddr	C7	0.1/63	ker	0241
supply	C8	0.1/63	ker	0241
	C9	0.1/63	ker	0241
	C10	47/25	rad	0287
	C11	47/25	rad	0287
rect	D1	1N4148	sgn	0342
	D2	1N4148	sgn	0342
	D3	1N4148	sgn	0342
leddr	D4	led grn	5x2	0389
	D5	led grn	5x2	0389
	D6	led grn	5x2	0389
	D7	led grn	5x2	0389
	D8	led grn	5x2	0389
	D9	led grn	5x2	0389
	D10	led grn	5x2	0389
	D11	led grn	5x2	0389
	D12	led grn	5x2	0389
	D13	led red	5x2	0390
	D14	led red	5x2	0390
	D15	led red	5x2	0390
	D16	led grn	5x2	03389

	T3	BC546	NPN	0328
s/r	A1-2	TL072	opamp	0304
leddr	IC1	UAA180	led 12	0308
supply	IC2	7812	pos.reg	0318
	IC3	7912	neg.reg	0319
audio	VR1	22 k	instel 10sl.	0161
rect	VR2	1 M	instel 10sl.	0158

PATCHPANEL 8000-series model 2



Q-X : Q,R,S,T,U,V,W,X
pin 7 t/m 10: M-N-O-P
A-B,E-L : A,B,E,F,G,H,I,J,K,L
CH : Q,R,S,T,U,V,W,X
CUE 1 L : M-O
CUE 1 R : N-P
pin 3 : C-D
CUE 2 L : M-O
R/OSC: C-D,N-P
A-B : A,B
STM L : M-O
STM R : N-P
MSTR L : A-C-E-G-I-K
MSTR R : B-D-F-H-J-L
SPR L/R : optie
CH : Q,R,S,T,U,V,W,X

Note: - De printen 1 t/m 24 zijn aangegeven met resp. A t/m X.

- Met b.v. Q,R,S,T,U,V,W,X wordt bedoeld: Op ieder van de printen Q t/m X wordt een tin-verbinding gelegd.

- Met b.v. A-C-E-G-I-K wordt bedoeld: Tussen print A en K wordt een buss gelegd, met een tin-verbinding op de printen: A,C,E,G,I en K.

== ELECTRONICA B.V.
produktie en ontwikkeling van
geluidsmengpanelen en accessoires

Date: 10-02-1986 R & D department

Title : 8000 Patchpanel

Externe soldeeraansluitingen 8000-40:

Pin:	4	5	3	2	1	6	7	8	10	9	EXO	EXI
A:	A4	A5	A3	A2	A1	-	exo37	exi37	exi25	exo25	exo1	exi1
B:	B4	B5	B3	B2	B1	-	exo38	exi38	exi26	exo26	exo2	exi2
C:	C4	C5	C3	C2	C1	C6	exo39	exi39	exi27	exo27	exo3	exi3
D:	D4	D5	C3	D2	D1	-	exo40	exi40	exi28	exo28	exo4	exi4
E:	E4	E5	E3	E2	E1	-	exo41	exi41	exi29	exo29	exo5	exi5
F:	F4	F5	F3	F2	F1	-	exo42	exi42	exi30	exo30	exo6	exi6
G:	G4	G5	G3	G2	G1	-	exo43	exi43	exi31	exo31	exo7	exi7
H:	H4	H5	H3	H2	H1	-	exo44	exi44	exi32	exo32	exo8	exi8
I:	I4	I5	I3	I2	I1	-	exo45	exi45	exi33	exo33	exo9	exi9
J:	J4	J5	J3	J2	J1	-	exo46	exi46	exi34	exo34	exo10	exi10
K:	K4	K5	K3	K2	K1	-	exo47	exi47	exi35	exo35	exo11	exi11
L:	L4	L5	L3	L2	L1	-	exo48	exi48	exi36	exo36	exo12	exi12
M:	M4	M5	M3	M2	M1	-	-	-	-	-	exo13	exi13
N:	N4	N5	N3	N2	N1	-	-	-	-	-	exo14	exi14
O:	O4	O5	O3	O2	O1	-	-	-	-	-	exo15	exi15
P:	P4	P5	P3	P2	P1	-	-	-	-	-	exo16	exi16
Q:	mir25	mis25	mei25	mtf25	cir25	-	cis25	cli25	sl25	cmi25	exo17	exi17
R:	mir26	mis26	mei26	mtf26	cir26	-	cis26	cli26	sl26	cmi26	exo18	exi18
S:	mir27	mis27	mei27	mtf27	cir27	-	cis27	cli27	sl27	cmi27	exo19	exi19
T:	mir28	mis28	mei28	mtf28	cir28	-	cis28	cli28	sl28	cmi28	exo20	exi20
U:	mir29	mis29	mei29	mtf29	cir29	-	cis29	cli29	sl29	cmi29	exo21	exi21
V:	mir30	mis30	mei30	mtf30	cir30	-	cis30	cli30	sl30	cmi30	exo22	exi22
W:	mir31	mis31	mei31	mtf31	cir31	-	cis31	cli31	sl31	cmi31	exo23	exi23
X:	mir32	mis32	mei32	mtf32	cir32	-	cis32	cli32	sl32	cmi32	exo24	exi24

Pin:	MIR	MIS	EF	R	MO	MI	CIR	CIS	L	MIC	SL
A:	mir1	mis1	mei1	rmx1	mto1	mti1	cir1	cis1	cli1	cmi1	sl1
B:	mir2	mis2	mei2	rmx2	mto2	mti2	cir2	cis2	cli2	cmi2	sl2
C:	mir3	mis3	mei3	rmx3	mto3	mti3	cir3	cis3	cli3	cmi3	sl3
D:	mir4	mis4	mei4	rmx4	mto4	mti4	cir4	cis4	cli4	cmi4	sl4
E:	mir5	mis5	mei5	rmx5	mto5	mti5	cir5	cis5	cli5	cmi5	sl5
F:	mir6	mis6	mei6	rmx6	mto6	mti6	cir6	cis6	cli6	cmi6	sl6
G:	mir7	mis7	mei7	rmx7	mto7	mti7	cir7	cis7	cli7	cmi7	sl7
H:	mir8	mis8	mei8	rmx8	mto8	mti8	cir8	cis8	cli8	cmi8	sl8
I:	mir9	mis9	mei9	rmx9	mto9	mti9	cir9	cis9	cli9	cmi9	sl9
J:	mir10	mis10	mei10	rmx10	mto10	mti10	cir10	cis10	cli10	cmi10	sl10
K:	mir11	mis11	mei11	rmx11	mto11	mti11	cir11	cis11	cli11	cmi11	sl11
L:	mir12	mis12	mei12	rmx12	mto12	mti12	cir12	cis12	cli12	cmi12	sl12
M:	mir13	mis13	mei13	rmx13	mto13	mti13	cir13	cis13	cli13	cmi13	sl13
N:	mir14	mis14	mei14	rmx14	mto14	mti14	cir14	cis14	cli14	cmi14	sl14
O:	mir15	mis15	mei15	rmx15	mto15	mti15	cir15	cis15	cli15	cmi15	sl15
P:	mir16	mis16	mei16	rmx16	mto16	mti16	cir16	cis16	cli16	cmi16	sl16
Q:	mir17	mis17	mei17	rmx17	mto17	mti17	cir17	cis17	cli17	cmi17	sl17
R:	mir18	mis18	mei18	rmx18	mto18	mti18	cir18	cis18	cli18	cmi18	sl18
S:	mir19	mis19	mei19	rmx19	mto19	mti19	cir19	cis19	cli19	cmi19	sl19

X: mir24 mis24 mei24 rmx24 mto24 mti24 cir24 cis24 cli24 cmi24 sl24

signalen op de 8000-40: page 2

code-key:	to print: /	multiconnector:
A1 - master insert left send	8000-2/3	
A2 - master insert left return	8000-2/3	
A3 - master left out	8000-2/3	
A4 - tape 1 left out	8000-2/3	plug 3
A5 - tape 1 right out		plug 3
B1 - master insert right send	8000-2/3	
B2 - master insert right return	8000-2/3	
B3 - master right out	8000-2/3	
B4 - tape 1 left in	8000-2/3	plug 3
B5 - tape 1 right in		plug 3
C1 - control room monitor left	8000-2/3	
C2 - oscillator out	8000-2/3	
C3 - master mono out	8000-2/3	
C4 - tape 2 out left	8000-2/3	plug 3
C5 - tape 2 in left		plug 3
C6 - control room monitor right	8000-2/3	plug 3
D1 - talkback in	8000-2/3	
D2 - oscillator(ext) in	8000-2/3	
D4 - tape 2 right out	8000-2/3	plug 3
D5 - tape 2 right in		plug 3
E1 - aux 1 insert send	8000-2/3	
E2 - aux 1 insert return	8000-2/3	
E3 - aux 1 out	8000-2/3	
E4 - tape 3 left out	8000-2/3	plug 3
E5 - tape 3 left in		plug 3
F1 - aux 2 insert send	8000-2/3	
F2 - aux 2 insert return	8000-2/3	
F3 - aux 2 out	8000-2/3	
F4 - tape 3 right out	8000-2/3	plug 3
F5 - tape 3 right in		plug 3
G1 - aux 3 insert send	8000-2/3	
G2 - aux 3 insert return	8000-2/3	
G3 - aux 3 out	8000-2/3	
G4 - tape 4 left out	8000-2/3	plug 3
G5 - tape 4 left in		plug 3
H1 - aux 4 insert send	8000-2/3	
H2 - aux 4 insert return	8000-2/3	
H3 - aux 4 out	8000-2/3	
H4 - tape 4 right out	8000-2/3	plug 3
H5 - tape 4 right in		plug 3
I1 - aux 5 insert send	8000-2/3	
I2 - aux 5 insert return	8000-2/3	
I3 - aux 5 out	8000-2/3	
I4 - tape 5 left out	8000-2/3	plug 3
I5 - tape 5 left in		plug 3
J1 - aux 6 insert send	8000-2/3	
J2 - aux 6 insert return	8000-2/3	
J3 - aux 6 out	8000-2/3	

```
K2 - aux 7 insert return                    8000-2/3
K3 - aux 7 out                              8000-2/3
K4 - tape 6 left out                        8000-2/3   plug 3
K5 - tape 6 left in                                    plug 3

L1 - aux 8 insert send                      8000-2/3
L2 - aux 8 insert return                    8000-2/3
L3 - aux 8 out                              8000-2/3
L4 - tape 6 right out                       8000-2/3   plug 3
L5 - tape 6 right in                                   plug 3

M1 - cue 1 left                             8000-2/3
M2 - cue 2 left                             8000-2/3
M3 - studio monitor left                    8000-2/3
M4 - spare 3 right                          8000-2/3   plug 3
M5 - spare 1 right                          8000-2/3   plug 3

N1 - cue 1 right out                        8000-2/3
N2 - cue 2 right out                        8000-2/3
N3 - studio monitor right out               8000-2/3
N4 - spare 4                                8000-2/3   plug 3
N5 - spare 2                                8000-2/3   plug 3

O1 - studio 1                                          plug 3
O2 - studio 3                                          plug 3
O3 - studio 5                                          plug 3
O4 - studio 9                                          plug 3
O5 - studio 7                                          plug 3

P1 - studio 2                                          plug 3
P2 - studio 4                                          plug 3
P3 - studio 6                                          plug 3
P4 - studio 10                                         plug 3
P5 - studio 8                                          plug 3

sli-32   : studio lines 1-32                          plug 1
cmi1-32  : mic input channel 1-32           8000-1
cli1-32  : line input channel 1-32          8000-1
cis1-32  : insert send channel 1-32         8000-1
cir1-32  : insert return channel 1-32       8000-1
mtf1-32  : multitrack feeds 1-32            8000-1
mti1-24  : input multitrack 1-24                       plug 4
mto1-24  : output multitrack 1-24                      plug 5
mei1-32  : monitor effect input ch1-32      8000-1
mis1-32  : monitor insert send ch1-32       8000-1
mir1-32  : monitor insert return ch1-32     8000-1
exi1-24  : external equipment input1-24                plug 2
exi25-48 : external equipment input25-48               plug 6
exo1-24  : external equipment output 1-24              plug 2
exo25-48 : external equipment output 25-48             plug 6
rmx1-24  : remix track 1-24 >ch 1-24        8000-1
```

==========

'tindrop-points' en bussen op de 8000-40 page 3

==========

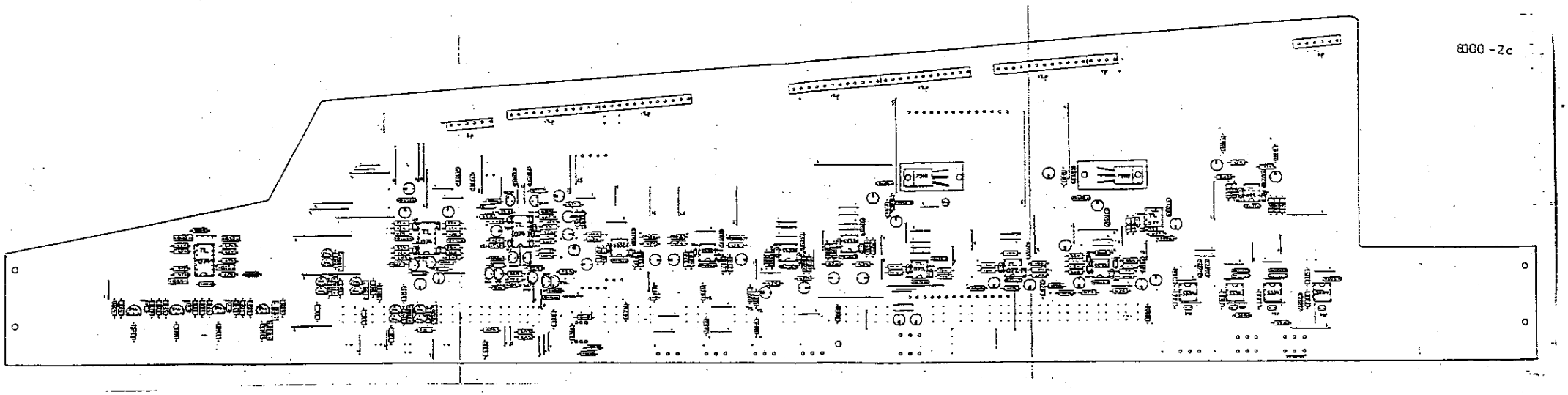
```
 * : tin-drop-point
 *-*---*-*-* : buss

-------------------------------------------------------------------------------
          A B C D E F G H I J K L M N O P Q R S T U V W X
-------------------------------------------------------------------------------
SPR L/R :    optional
CH      :                              * * * * * * * *
MSTR L  :*---*---*---*---*---*
MSTR R  :  *---*---*---*---*---*
```

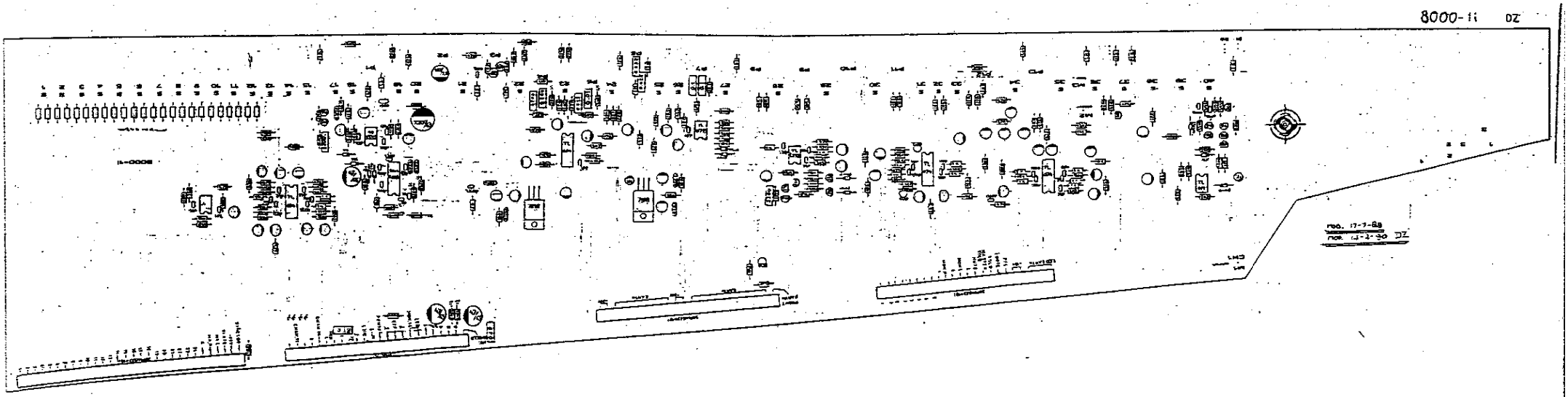
```
CUE2 L  :                          *---*
  ' R/OSC:     *-*                   *---*
CH        :                                * * * * * * * * *
CUE1 L    :                          *---*
CUE1 R    :                            *---*
A-B,E-L   :* *      * * * * * * * * *
Q-X       :                                * * * * * * * * *
pin 3     :     *-*
pin 7     :                          *-*-*-*
pin 8     :                          *-*-*-*
pin 9     :                          *-*-*-*
pin 10    :                          *-*-*-*
```

```
          A B C D E F G H I J K L M N O P Q R S T U V W X
```

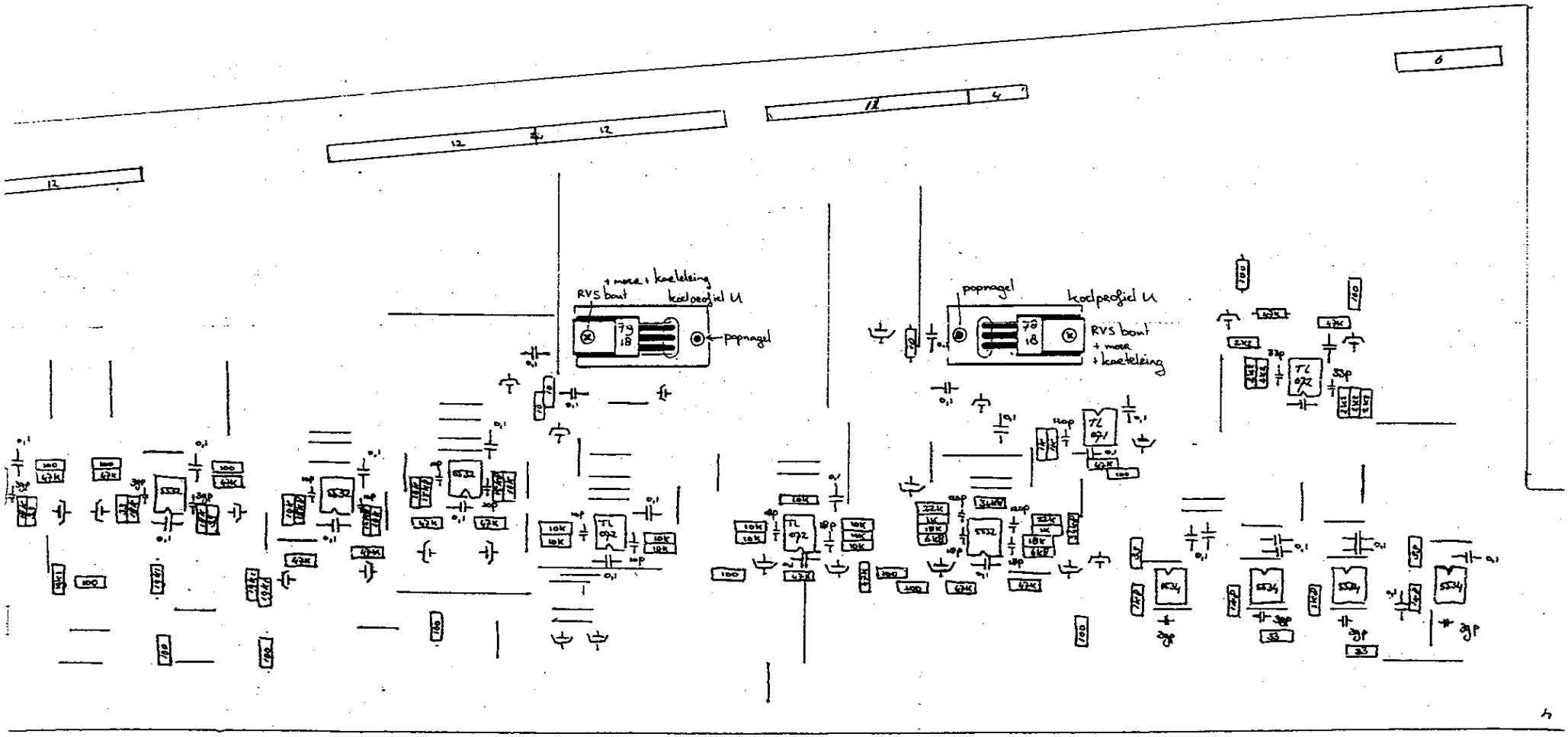
PLUG info :

plug 1	: 99 ELCO krimpcontacten 0472	
plug 2	:	58 ELCO soldeercontacten 0473
plug 3	: 50 ELCO krimpcontacten 0472	14 ELCO soldeercontacten 0473
plug 4	: 72 ELCO krimpcontacten 0472	
plug 5	: 72 ELCO krimpcontacten 0472	
plug 6	:	58 ELCO soldeercontacten 0473
totaal	: 293 ELCO krimpcontacten 0472	
	130 ELCO soldeercontacten 0473	


8000-2c

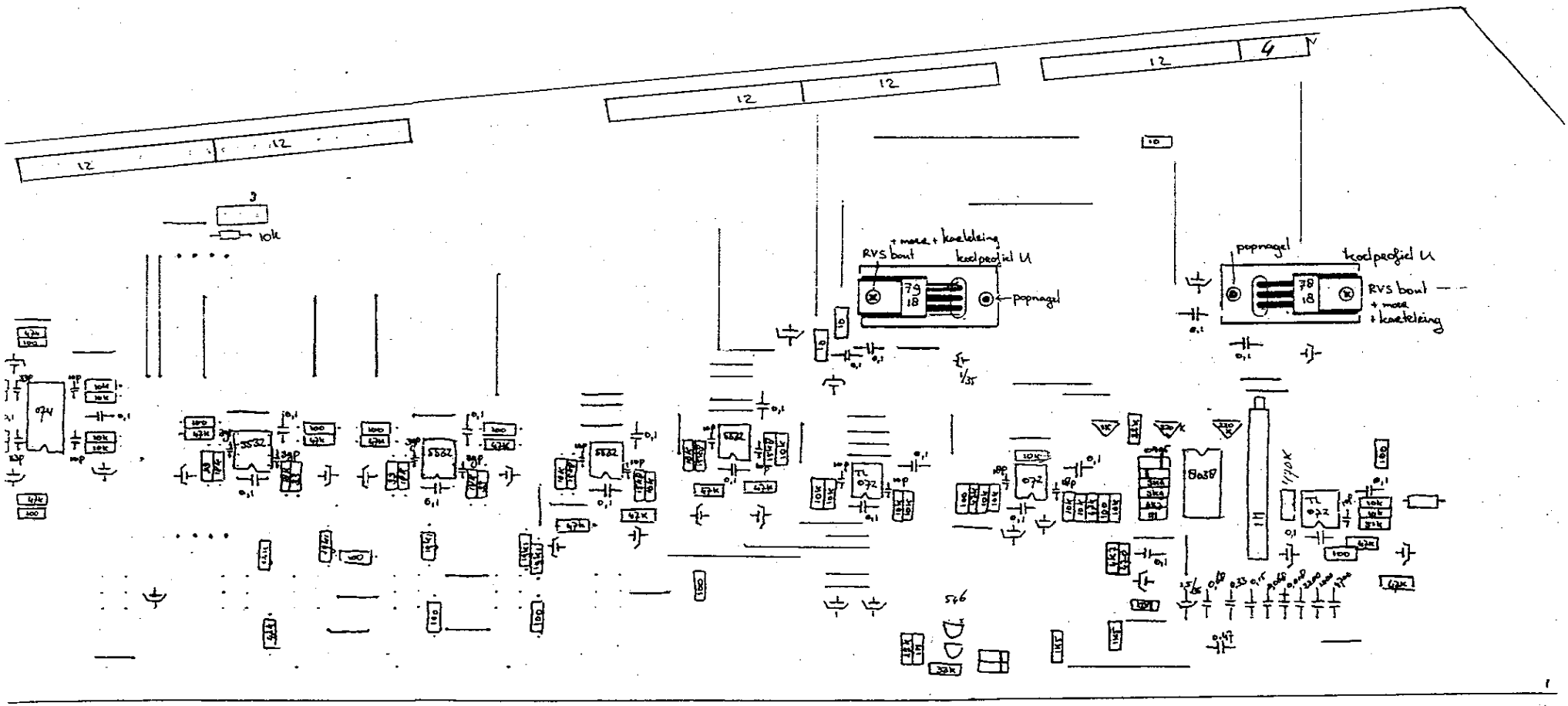

8000-1i
DZ

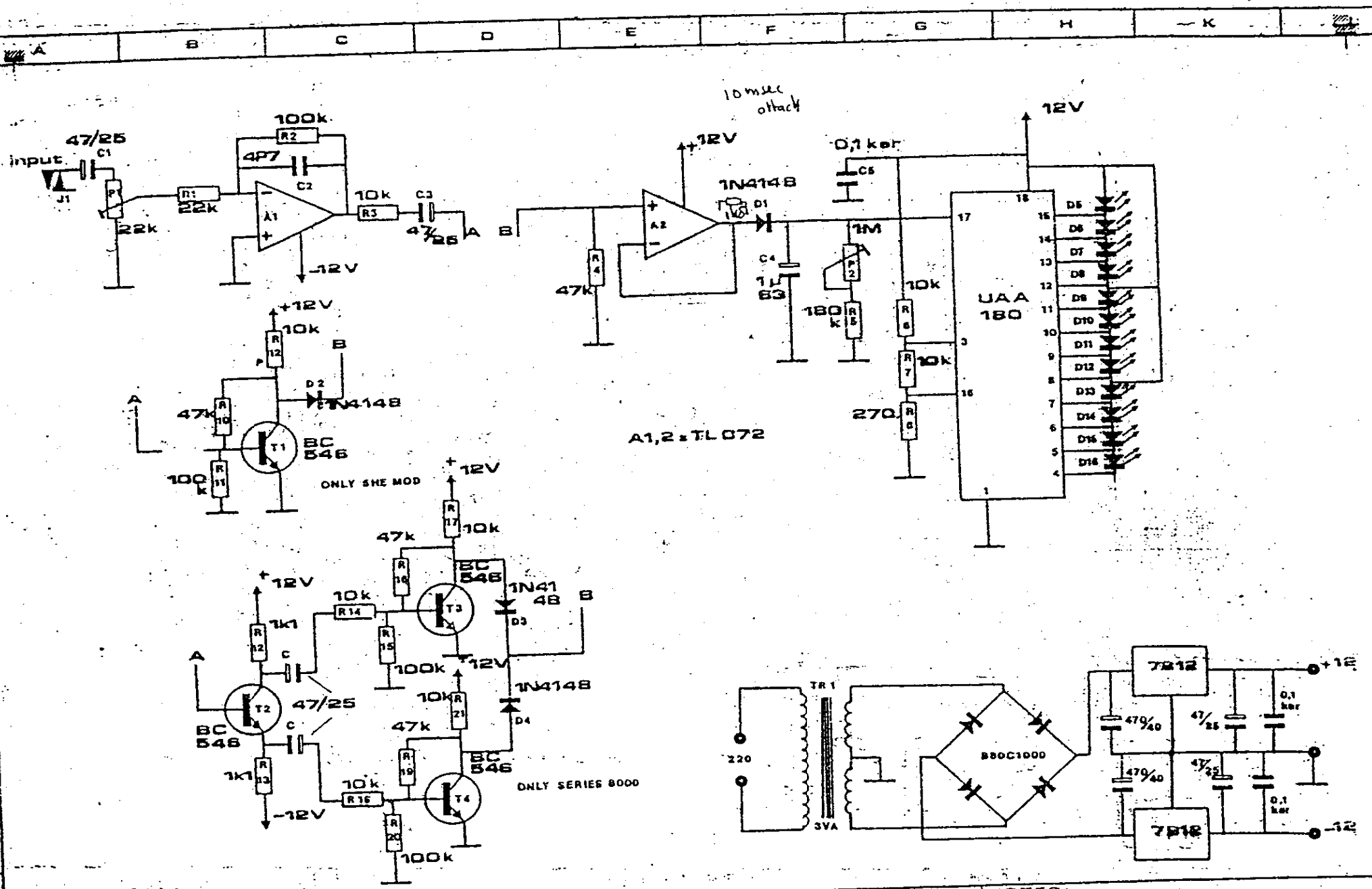
SER 8000-2


RVS bout
+ moer + koeleleing
koelprofiel U
popnagel
popnagel
koelprofiel U
RVS bout
+ moer
+ koeleleing

2000 - 2

SRA 8000-3


12
12
12
12
4
3
10k
RVS bout
+ mica + koelplaatje
koelprofiel U
79
18
popnagel
popnagel
koelprofiel U
78
18
RVS bout
+ mica
+ koelplaatje
1/35
546



CHASSESTRAAT 26
1057 JE AMSTERDAM
PHONE : 020 - 183556

TITLE:
LEDBAR

P.C.B. NR. :

DRAWN :

DATE :

NOTES:
FOR SHE & 8000 ONLY