TELEPHONE HYBRID

USER MANUAL

Geachte klant,

Wij danken u hartelijk voor uw keuze en het vertrouwen dat u in ons produkt stelt.
U deed een goede keus, dit produkt is ontworpen door en voor professionele gebruikers.

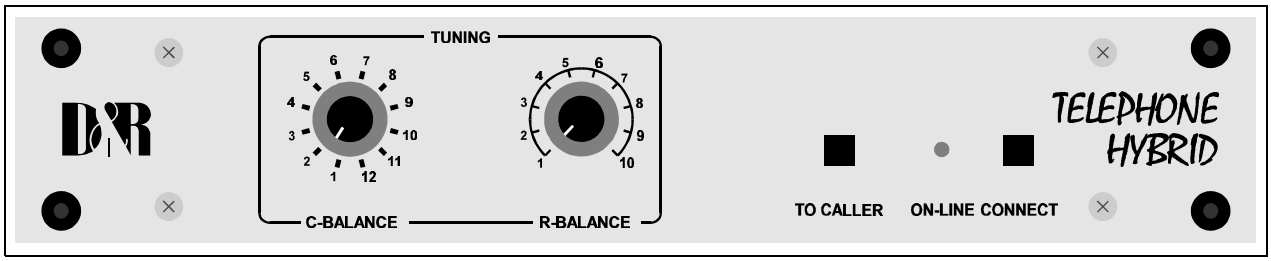
Er is gebruik gemaakt van onze enorme "know how" in mengtafel en signaal processor technieken en dit gekombineerd met hoogwaardige komponenten geeft u de zekerheid van een lange gebruiksduur.

Bovenstaande eigenschappen resulteren in een zeer betrouwbaar en bedrijfszeker eindprodukt.

Deze gebruiksaanwijzing helpt u in het optimaal benutten van alle mogelijkheden die dit produkt in zich heeft.

Mocht u nog vragen hebben dan kunt u zich altijd tot onze dealers wenden en in uiterste nood tot ons.

D&R ELECTRONICA WEESP B.V.
Rijnkade 15B
1382 GS WEESP-HOLLAND
The Netherlands
Phone: 0294-418 014
Fax: 0294-416 987
Website: http://www.d-r.nl
E-mail: info@d-r.nl



TELEPHONE HYBRID.

D&R's newest Telephone Hybrid is an interface between a standard telephone line and a mixing console. Its purpose is to enable to record or broadcast a conversation between a caller and a presenter in an easy way. Superb audio separation between in and outgoing signals are achieved by carefully designed internal circuitry. It is a problem solver for changing two wire communication into a four wire system with separate in and outputs.

Specs:
Output: balanced mic level -20db.
Input: Line level 0 dBu balanced.
R/C balance: fully adjustable
Separation: more than 30db.

USER MANUAL

The D&R telephone hybrid is intended to be used to create an easy connection between the telephone line and studio equipment. Connection has to be made between telephone and the telephone line by way of the hybrid. Connect the two wires of the telephone line to the tip and ground of the line input and connect the telephone itself to the phone output on the tip and ground only.
Now the hybrid is interfaced (fully balanced) between your telephone and its connection to the outside world. The hybrid is now capable of splitting the send and return signals. Connect the hybrid balanced audio input to a (preferabie) balanced output of around +4dBu. This output has to be the mix of all signals except the signal coming from the hybrid itself to avoid feedback. An Aux. output will do, or in broadcast mixers a modified cleanfeed is the best.

SETTING UP PROCEDURE

Push the "to caller" switch and leave the "connect" switch in the up position Now dial the caller to whom you want to talk. If this connection is made you connect the caller to the mixing console by pushing the connect switch. Now listen by means of a pfl switch to the caller and adjust while talking the C and R balance so that the outgoing signal (your talking) is best damped. Practically for a start is to put the C balance on number 7 and the R balance on 5 Carefully adjusting afterwards can be realised by slowly adjusting the R balance for optimum damping. This can be left in this way for most of your calis, because only the line to you own telephone station has to be balanced once. The damping will be around 22 to 26 dB.
The function of the "connect" switch is to connect the hybrid to the telephone line instead of the phone itself (which is now switched off). The led indicates that a connection has been made.
The function "to caller" is there to disconnect the outgoing signal to the caller for private discussions

DECLARATION OF CONFORMITY

Manufacturers Name: D&R Electronica Weesp b.v.

Manufacturers Address: Rijnkade 15B,
1382 GS Weesp,
The Netherlands

declares that the product

TELEPHONE HYBRID

conforms to the following product specifications:

EMC: EN 55022: 1987
CISPR 22 (1993) class B

EN 500082-1 (1992)

Supplementary Information:

The products herewith complies with the requirements of the EMC Directive 89/336/EEC (1989) as amended by the CE Marking Directive 93/68/EEC (1993).

D&R Electronica Weesp b.v.
Rijnkade 15 B
1382 GS WEESP
The Netherlands
President of Engineering

PRODUCT SAFETY

This product is manufactured with the highest standards and is double checked in our quality control department for reliability in the "HIGH VOLTAGE" section.

CAUTION

Never remove any panels, or open this equipment. No user servicable parts inside.
Equipment power supply must be grounded at all times.
Only use this product as described, in user manual or brochure.
Do not operate this equipment in high humidity or expose it to water or other liquids.
Check the AC power supply cable to assure secure contact.
Have your equipment checked yearly by a qualified dealer service center.
Hazardous electrical shock can be avoided by carefully following the above rules.

PLEASE READ THE FOLLOWING INFORMATION

Especially in sound equipment on stage the following information is essential to know.
An electrical shock is caused by voltage and current, actually it is the current that causes the shock.
In practise the higher the voltage the higher the current will be and the higher the shock.
But there is another thing to consider and it is resistance.
When the resistance in Ohms is high between two poles, the current will be low and vica versa.
All three of these; voltage, current. and resistance are important in determining the effect of an electrical shock.
However, the severity of a shock primarily determined by the amount of current flowing through a person.
A person can feel a shock because the muscles in a body respond to electrical current and because the heart is a muscle it can affect, when the current is high enough.
Current can also be fatal when it causes the chest muscles to contract and stop breathing. At what potential is current dangereous.
Well the first feeling of current is a tingle at 0.001 Amp of current.
The current between 0.1 Amp and 0.2 Amp is fatal.
Imagine that your home fuses of 20 Amp can handle 200 times more current than is necessary to kill. How does resistance affect the shock a person feels.
A typical resistance between one hand to the other in "dry" condition could well over 100,000 Ohm.

If you are playing on stage your body is perspiring extensively and your body resistance is lowered by more than 50%. This is a situation in which current can easily flow.
Current will flow when there is a difference in ground potential between equipment on stage and in the P.A. system. Please do check if there is any potential between the housing of the mikes and the guitarsynth amps, which will be linked by your body on stage. Imagine, a guitar in your hand and your lips close to the mike! A ground potential difference of above 10 volts is not unusual, in improperly wired buildings it can possibly be as high as 240 volts.

Allthough removing the ground wire sometimes cures a system hum, it will create a very hazardeous situation for the performing musician.
Always earth all your equipment by the grounding pin in your mains plug.
Hum loops should be only cured by proper wiring and isolation input/output transformers.

Replace fuses always with the same type and rating after the equipment has been turned off and unplugged.
If the fuse blows again you have an equipment failure, do not use it again and return it to your dealer for repair.

And last but not least be carefull not to touch a person being shocked as you, yourself could also be shocked.
Once removed from the shock, have someone send for medical help inmediately

Always keep the above mentioned information in mind when using electrically powered equipment.

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TELEPHONE HYBRID

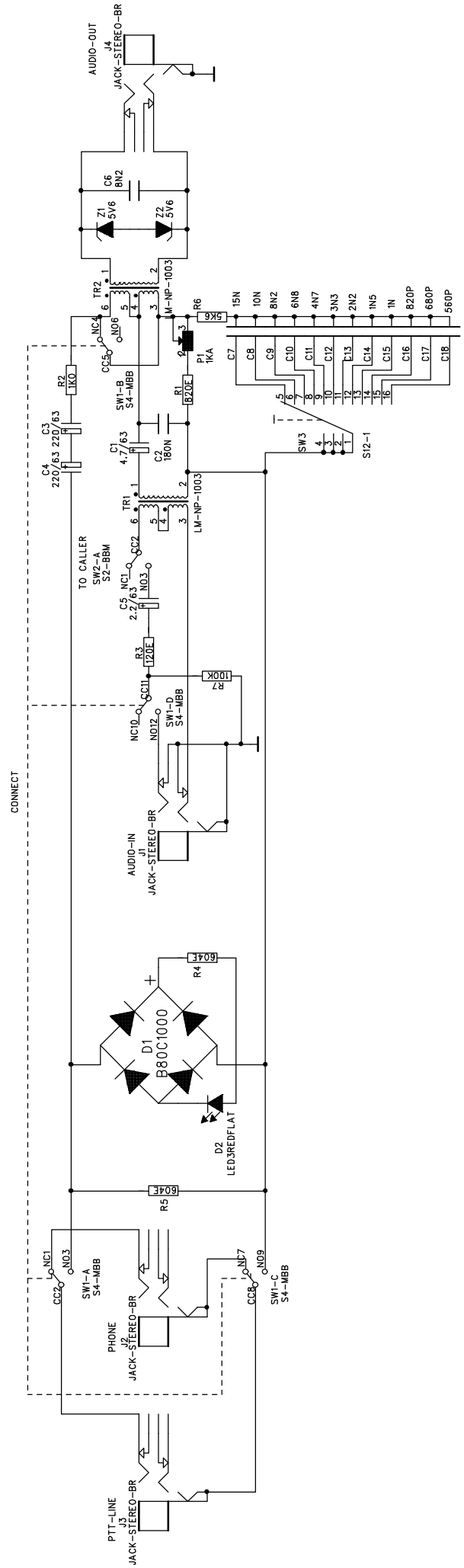
SERVICE MANUAL

Date: 18-08-9918-08-99 [[16:1716:17]] B I L L O F M A T E R I A L

D & R Electronica Weesp BV (SERVICE-MANUAL) Comp: 100
91928508 Telephone hybride 9.5"

Articlecode	Description	Quantity	Unit
10250345	Brugcel B80C1000 (rond)	1.0000	st
10400233	Condensator ker 560p R2.5	1.0000	st
10400234	Condensator ker 680p R2.5	1.0000	st
10400235	Condensator ker 820p R2.5	1.0000	st
10401246	Condensator poly 1n0 R5.0	1.0000	st
10401247	Condensator poly 1n5 R5.0	1.0000	st
10401248	Condensator poly 2n2 R5.0	1.0000	st
10401249	Condensator poly 3n3 R5.0	1.0000	st
10401250	Condensator poly 4n7 R5.0	1.0000	st
10401251	Condensator poly 6n8 R5.0	1.0000	st
10400278	Condensator poly 8n2 R5.0	2.0000	st
10401253	Condensator poly 10n R5.0	1.0000	st
10400273	Condensator poly 12n R5.0	1.0000	st
10401263	Condensator poly 180n R5.0	1.0000	st
10400280	Elco 2.2uF / 50V radiaal R5.0	1.0000	st
10400293	Elco 220uF / 63V radiaal R5.0	2.0000	st
10400281	Elco 4.7uF / 50V radiaal R5.0	1.0000	st
10600432	Jack chassis break	4.0000	st
10300791	Potm 12 1x1KA lin	1.0000	st
10200530	Print Telephone-hybrid-C	1.0000	st
10550400	Schakelaar Alps 2p-ns (2 x om)	1.0000	st
10550963	Schakelaar Alps 4p-sh (4 x om)	1.0000	st
10550315	Schakelaar Draai 1 x 12	1.0000	st
10950018	Trafo LM-NP-1003-B (PTT line)	2.0000	st
10350517	Weerstand 0E 5% 1/4W	1.0000	st
10350718	Weerstand 120E 5% 1/4W	1.0000	st
10350792	Weerstand 604E 1% 1/4W	2.0000	st
10350728	Weerstand 820E 5% 1/4W	1.0000	st
10250351	Zenerdiode 5V6 / 400mW	2.0000	st
10700631	Afdekdop 11.0mm rond zwart	1.0000	st
10700665	Afdekdop 14.7mm (12.7x11.3)gat	1.0000	st
10450195	Deksel SiFam 11mm gray bulk	2.0000	st
10700975	Dubbelzijdig plakband 12mm dun	20.0000	cm
10100371	Front 9.5" Telephonehybrid/E	1.0000	st
10500084	Isolatieplaat 9.5" randapp.PVC	1.000	st
10600436	Jack moer	4.0000	st
10700685	Kartelring M 10 potmeter dun	2.0000	st
10150093	Kast 9.5" 1HE version D	1.0000	st
10450253	Knop Druktoets 3.3 grey-square	2.0000	st
10450104	Knop SiFam grey D-shaft(11mm)	2.0000	st
10250387	Led 3mm red SLR-03A510-020	1.0000	st
20850531	Print bestukt Telephonehybrid	1.0000	st

Articlecode	Description	Quantity	Unit
10800275	Sticker OUT/IN	1.0000	st
10800276	Sticker PHONE/LINE	1.0000	st
10700790	Taptite M3x6 verzkop/pozidr/zw	4.0000	st
10800924	Doos Randapparatuur 9.5"	1.0000	st
10800956	Schuimblok 9.5"	2.0000	st
60898508	Telephone hybride + verpakking	1.0000	st



Title: Telephone Hybrid
Rev: P
Date: 23-01-1995
Sheet: 1 of 1
Design: G.J. Eijlders

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