Analog Audio

Dual Junction Amplifier

DV 1175

Technical Dokumentation

Overview of versions

Document No.:	Overview of versions and modifications	Type 1)	Abbrev.	Date of issue
DV11750	First issue		TA	10.98

1)
A: Changes to correct errors in the documents or improve the documents
B: Changes to ensure complete or forward exchangeability
C: Changes which restrict or preclude exchangeability

Revision of the description: see footline
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INHALT

1 Description

The BFE dual junction amplifier DV 1175 contains two mutually independent audio frequency amplifiers on a Euro-size PC-board, for signal summation in high quality studio mixing desks.

Each amplifier can combine the audio signals from up to 100 modulation sources at the zero impedance node of an operational amplifier without back-coupling of these input signals.

The gain of each channel can be adjusted individually in the range from -10dB to +10dB when the signals are connected via series resistors having the recommended value of 2 x 4.75 kOhms. In the normal version of the DV 1175 the input series resistors should not have values less than 2 x 1.5 kOhms. This lowest tolerated value gives a gain adjustment range from 0dB to +20dB.

A high impedance input with 2 x 4.75 kOhms decoupling resistors is provided on the PC-board for standard signals.

Capacitive signal pickup on the sensitive node lines is suppressed as common mode disturbance by the asymmetric mode attenuation of the input. Capacitive alignment of the input as sometimes provided is suitable for rejecting asymmetric to ground signals only when using the standard signal input, therefore active symmetry adjustment is provided in the DV 1175. This gives good common mode (unbalance) rejection and good disturbance immunity even for signal summation at input nodes which are not capacitively compensated.

Special attention has been given in the design of the DV 1175 to dependability and operational reliability, stability of the electrical parameters, exchangeability of the PC-boards, good immunity to disturbance and good crosstalk attenuation between the two signal paths.

1.1 Technical data

Frequency range	40Hz to 15kHz
Frequency response	≤+0/-0.25 dB (20Hz to 20kHz: ≤+0/-0.5dB)
Gain	Adjustable -10dB to +10dB with 2 x 4.75 kOhms
Harmonics rejection	≥56dB with nominal signal level ≥50dB with maximum signal level
Node inputs	Balanced, floating to ground
Source impedances	Normal 2 x 4.75 kOhms
Number of sources	Maximum 100
Input impedance	< 4 Ohms
Common mode rejection	≥ 65dB, according to IRT, adjustable
Standard level inputs	Balanced, floating to ground
Signal level	+6dBm, maximum +22dBm
Input impedance	9,50 kOhms
Common mode rejection	≥ 60dB according to IRT
Outputs	Balanced, floating to ground
Signal level	+6dBm, maximum >+22dBm
Source impedance	<40 Ohms
Load impedance	≥ 300 Ohms
Common mode	≤40dB according to IEC 268-3
Noise level with V=0dB	≤-90dBqp/-84dBqp with 1/30 sources
Extraneous signal level with V=0dB	≤-99dMmrms/-94dBmrms with 1/30 sources
Crosstalk attenuation	≥110dB from channel to channel
Power supply	24V DC. -10%/+15%
Current drain	Approx. 0.08A. max. 0.12A
Fuse on printed circuit board	Miniature fuse, TR5, 250mA slow blow
Pilot light	Green LED beyond the fuse.
Plug connector strip	31-pole, DIN 41617
Required mating socket strip	31-pole, socket connector strip DIN41617
Constructional form	Euro-size PC board with handle 100 x 160 x 8 TE; 7TE might possibly suffice
Weight	540g

2 Technical Documentation

Eingang 1.2 entkoppelt	Input 1.2, decoupled
Eingang 1.1 entkoppelt	Input 1.1, decoupled
Eingang 1 Knoten	Input 1 node
Schirm Schirm	Shield Shield
Eingang 2.2 entkoppelt	Input 2.2, decoupled
Eingang 2.1 entkoppelt	Input 2.1, decoupled
Eingang 2 Knoten	Input 2 node
Ausgang	Output

As from Serial No. 920533432
Dual Junction Amplifier
DV 1175 A
Circuit diagram

Drawing No. DV 1175A.3.5.1

Eingang 1 Knoten	Input 1, node
Eingang 2 Knoten	Input 2, node
Speisung +24V	Power supply voltage +24V
Schirm	Shield
Eingang 1.1 entkoppelt	Input 1.1, decoupled
Eingang 1.2 entkoppelt	Input 1.2, decoupled
Ausgang 1	Output 1
Eingang 2.1 entkoppelt	Input 2.1, decoupled
Eingang 2.2 entkoppelt	Input 2.2, decoupled
Ausgang 2	Output 2

Connections looking onto soldering side of the spring contact strip

Clearance tolerance according to DIN 7168 medium

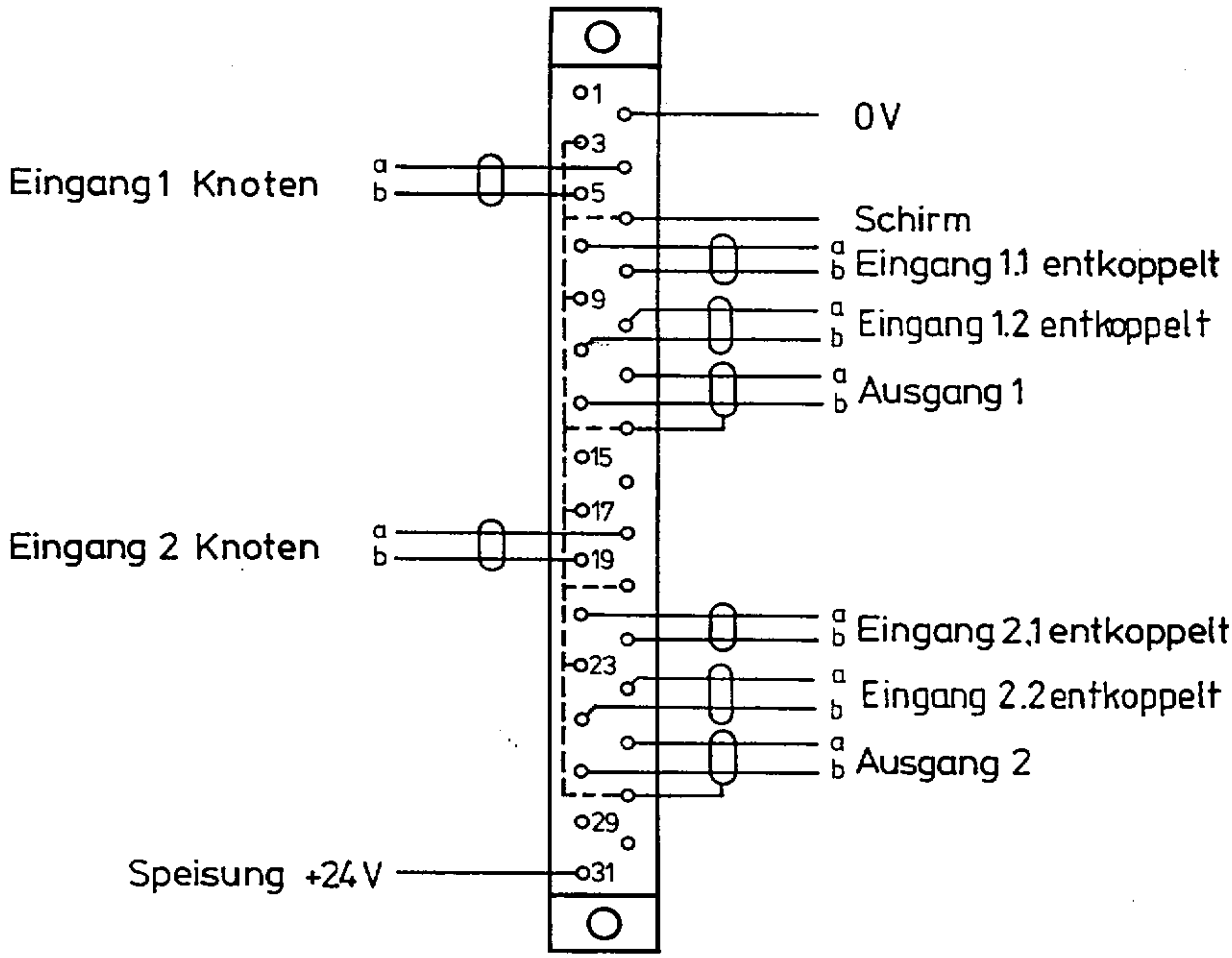
Dual Junction Amplifier
DV 1175 A
Plug connector pinout

Drawing No. DV 1175A . 4 . 6 . 1

ST1 Stiftleiste 31-pol	ST1 pin strip connector, 31-pole
bei Bedarf Bestücken	Fit if required
bei Bedarf ändern	Change if necessary
Ab Seriennummer	As from serial No.

V 1175 A
Printed Circuit Board MO 067c
Components layout diagram

Drawing No. DV 1175 A . 3 . 11.1



Beschaltung auf Lötanschlüsse der Federleiste gesehen

Ausgabe	Änderung	Tag	Name

Freimaßtoleranz nach DIN 7168 mittel

	Tag	Name
Entw.	17.8.92	Danhiel
Bearb.	15.9.92	G. Sattler
Gepr.		

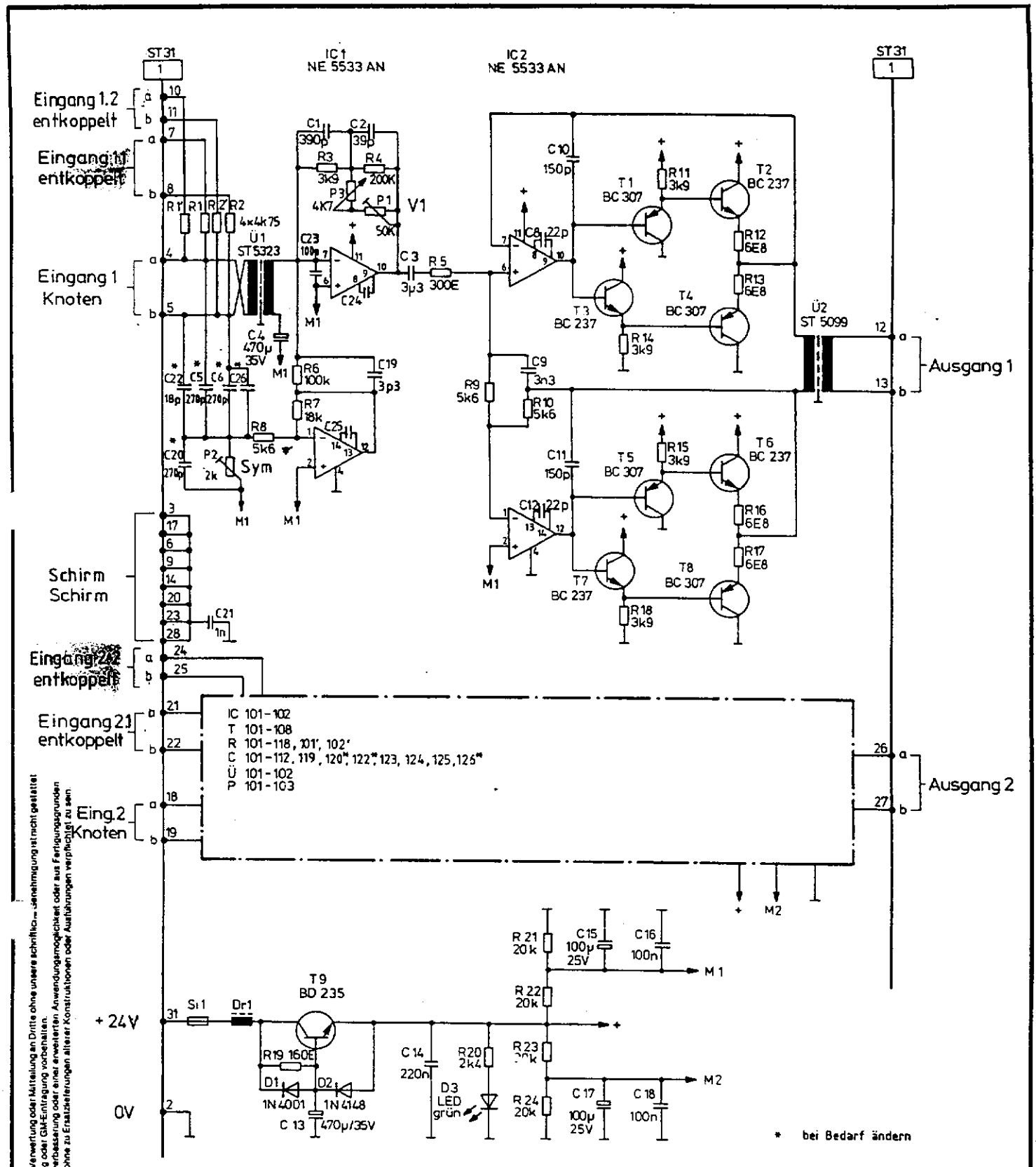
BFS MAINZ

Doppelsammelschienenverstärker DV 1175 A Steckerbelegung

Maßstab

Zeichn.-Nr. DV 1175A . 4 . 6 . 1

Blatt



Ab Serien-Nr 920533432

1992	Tag	Name	Doppelsammelschienenverstärker DV 1175A Schaltbild
Entw	18.8.	Danihel	
Bearb	16.9.		
Gepr			Zeichn Nr DV 1175A .3 .5 .1