

# **audio research**

H I G H D E F I N I T I O N<sup>®</sup>

5740 GREEN CIRCLE DRIVE / MINNETONKA, MINNESOTA 55343-4424 / PHONE 612/939-0600 FAX 612/939-0604

VT130SE AMPLIFIER

SCHEMATIC

10-26-95

# VT130SE AMPLIFIER

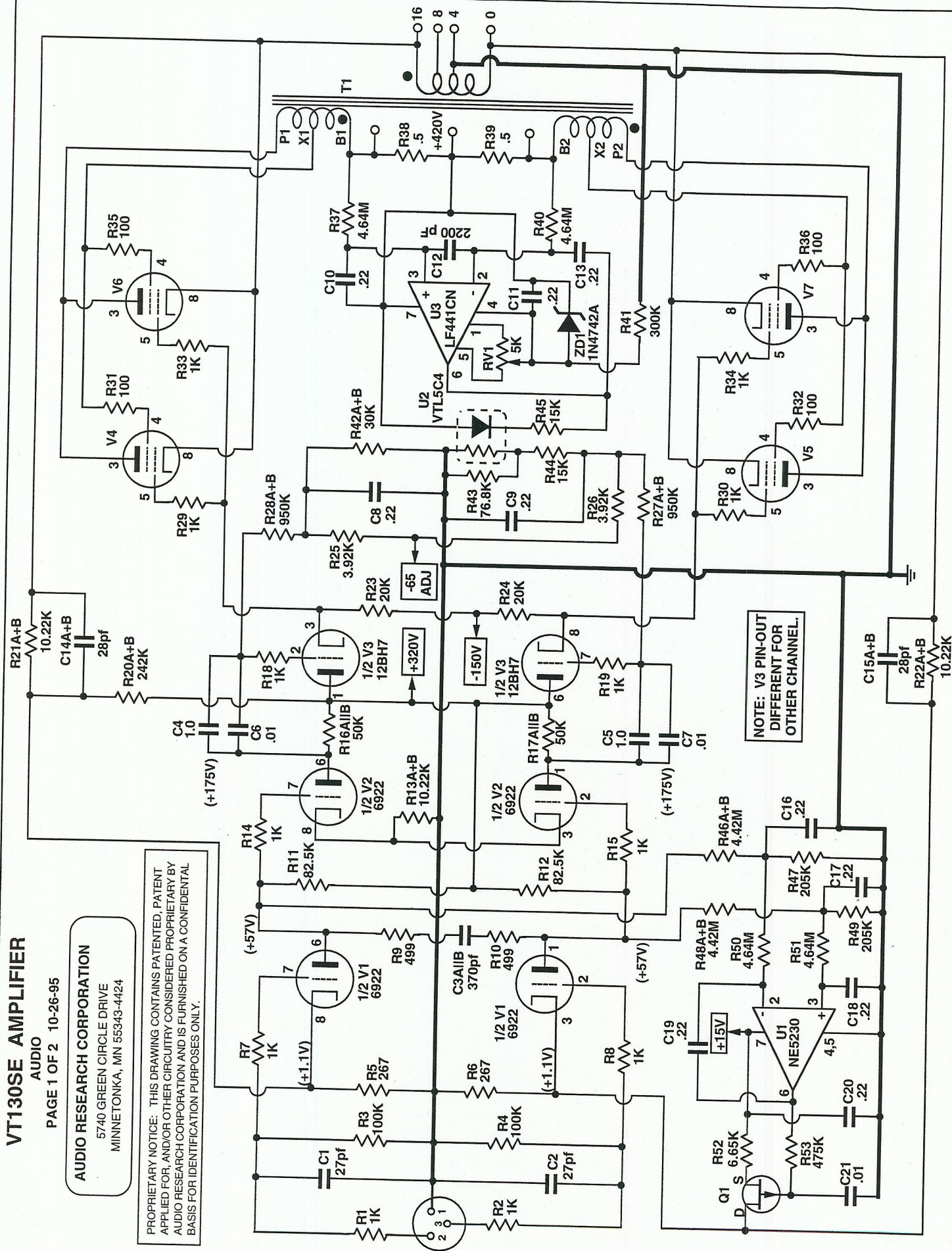
AUDIO

PAGE 1 OF 2 10-26-95

AUDIO RESEARCH CORPORATION

5740 GREEN CIRCLE DRIVE  
MINNETONKA, MN 55343-4424

PROPRIETARY NOTICE: THIS DRAWING CONTAINS PATENTED, PATENT APPLIED FOR, AND/OR OTHER CIRCUITRY CONSIDERED PROPRIETARY BY AUDIO RESEARCH CORPORATION AND IS FURNISHED ON A CONFIDENTIAL BASIS FOR IDENTIFICATION PURPOSES ONLY.



NOTE: V3 PIN-OUT  
DIFFERENT FOR  
OTHER CHANNEL.



## PARTS LIST

As of APR 6 95

PRODUCT: VT130 SE

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
C CAPACITORS			
C1,2	4	53270101	CAP. 27 PF +/-1PF 630V PNP
C3A	2	53150202	CAP. 150 PF 2 1/2% 630V PPN
C3B	2	53220201	CAP. 220 PF $\pm 2.5\%$ 630V PPN
C4,5	4	53100610	CAP. 1UF 400V
C6,7,60	5	53100412	CAP. .01UF 600V
C8-11,13,16-20,34-36,39,42,44-47,54	32	53220507	CAP. .22 UF 10% 160V
C 55,62			
C12	2	53220306	CAP. 2200 PF 10% 100VDC
C14A,14B,15A,15B	8	53560103	CAP. 56 PF +/-2% 630V DPN
C21,30-33,37	7	53100406	CAP. .01 UF +/-10% 630V
C22-25	4	50800801	CAP. 800 UF 450V GRAY
C26-29,38	5	53200602	CAP. 2 UF +/-10% 450V
C40,41	2	50100912	CAP. 1000UF 100V
C43	1	53100410	CAP. .01 UF 400V MKP10
C48-51	4	52100400	CAP. .01 UF 200V
C52,53	2	50220903	CAP. 2200 UF 35V.
C56-59	4	53100407	CAP. .01 UF 250V 20% MPE MALL.
C61,63	2	50100806	CAP. 100 UF 63V.
C64	1	50470807	CAP. 470UF 450V
C65	1	50100508	CAP. 100 UF 450V
C 66	1	53470402	CAP. 0.047 UF 160V 10%
D DIODES			
D1,6,7	3	30500400	IN4005 GENERAL INSTRUMENT
D2-5	4	30503310	EDAL #M4G5
D8-11	4	30501500	MOTOROLA IN5400
D12,13	2	30500910	1N916B
D14	1	30500400	IN4005 GENERAL INSTRUMENT
F FUSES			
F1	1	34501000	FUSE, 6-1/4 MDX
F2	1	34500102	FUSE, 1/4 250V
F3	1	34500202	FUSE, AGC 1/2
J CONNECTORS			
J1	2	23201970	XLR CONNECTOR (Female)
J2-5	8	10036620	BINDING POST & KNOB
L INDUCTORS			
L1-4	4	61000160	CHOKE, 2.7 UH +/- 10%

## PARTS LIST

As of APR 6 95

PRODUCT: VT130 SE

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
LE			PANEL INDICATOR
LE1	1	34300102	L.E.D. COLLAR & RETAINING RING
M			METERS/FANS
M1,2	2	65000500	METER, VT150
PL1-4	4	34000410	LAMP, VT150SE
Q			TRANSISTORS
Q1	2	30006424	FET, GRAY YELLOW
Q2	1	30006836	FET, GREEN BLUE
Q3,4	2	30008401	FET, RED BLUE
R			RESISTORS
R1,2,29,30,33,34	12	42100314	RES. 1K 1% MK-5 50PPM
R3,4,59,61	6	42100503	RES. 100K+/-1% MK-3 50PPM
R5,6,91	5	42267203	RES. 267 OHM 1% MK-3 50PPM
R7,8,14,15,18,19,87	13	42100303	RES. 1K 1% MK-3 50PPM
R9,10	4	42499203	RES. 499 OHM 1% MK-3 50PPM
R11,12	4	42825405	RES. 82.5K 1% MK-8 50PPM
R13A,13B,21A,21B,22A,22B	12	42511313	RES. 5.11K 1% MK-4 50PPM
R16A,16B,17A,17B,65,66	10	42100505	RES. 100K 1% MK-8 50PPM
R20A,20B	4	42121503	RES. 121K 1% MK-350PPM
R23,24	4	42200414	RES. 20K 1% MK-5 50PPM
R25,26	4	42392303	RES. 3.92K 1% MK-3 50PPM
R27A,27B,28A,28B,53	10	42475503	RES. 475K 1% MK-3 50PPM
R31,32,35,36	8	43100200	RES. 100 OHM 5% 2W
R37,40,50,51	8	42464603	RES. 4.64 MEG. 1% MK-3 50PPM
R38,39	4	43050004	RES. 0.5 OHM+/-2% 3W W.W.
R41	2	42300514	RES. 300K 1% MK-5 50PPM
R42A,42B,44,45	8	42150403	RES. 15K 1% MK-3 50PPM
R43	2	42768403	RES. 76.8K 1% MK-3 50PPM
R46A,46B,48A,48B	8	42221603	RES. 2.21 MEG 1% MK-3 50PPM
R47,49	4	42205503	RES. 205K 1% MK-3 50PPM
R52	2	42665303	RES. 6.65K 1% MK-3 50PPM
R54-58,60	6	42100203	RES. 100 OHM 1% MK-3 50PPM
R62A,62B	2	42200205	RES. 200 OHM+/-1% MK8 50PPM
R63,76,81	3	42301503	RES. 301K 1% MK-3 50PPM
R64	1	42392403	RES. 39.2K 1% MK-3 50PPM
R67	1	42499303	RES. 4.99K 1% MK-3 50PPM
R68	1	42127403	RES. 12.7K 1% MK-3 50PPM
R69A,69B	2	42562513	RES. 562K 1% MK-4 50PPM
R70	1	42332203	RES. 332 OHM 1% MK-3 50PPM
R71	1	43100002	RES. 1 OHM 2W 5% W.W.
R72,73,77,82,84,89,94	7	42549103	RES. 54.9 OHM 1% MK-3 50PPM
R74,75,79,80	4	42511403	RES. 51.1K 1% MK-3 50PPM
R78,83	2	42196403	RES. 19.6K 1% MK-3 50PPM
R85,86	2	43680000	RES. 6.8 OHM 2W 5% SPH
R88	1	42100103	RES. 10 OHM 1% MK-3 50PPM

## PARTS LIST

As of APR 6 95

PRODUCT: VT130 SE

## NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
R90	1	42287303	RES. 2.87K 1% MK-3 50PPM
R92	1	43200301	RES. 2K 5% 5W
R93	1	42274403	RES. 27.4K 1% MK-3 50PPM
RV			CONTROLS
RV1	2	45500300	5K TRIM POT 10%
RV2,3	2	45250401	25K BIAS POT 550 R253A
RV4	1	45150201	POT 150 OHM 2W.
RV5	1	45500300	5K TRIM POT 10%
RV6	1	45100300	TRIM POT 1K
RY			RELAYS
RY1	1	64101200	RELAY, 24V POWER ON
RY2,3	2	64101300	RELAY, 24V 10A PC MNT.
SW			SWITCHES
SW1	1	24002900	SWITCH, AC VT130SE
SW2	1	24003000	SWITCH, BIAS 2-SECTION VT130SE
T			TRANSFORMERS
T1	2	60011020	VT130 OUTPUT TRANSFORMER
T2	1	60011100	XFR., VT130 120V.
TH			THERMISTORS
TH1	1	47000300	THERMISTOR 30 OHM +/-20% CL60
U			INTEGRATED CIRCUITS
U1	2	31004200	OP AMP, LOW VOLTAGE
U2	2	34400121	PHOTO COUPLER TESTED ACCEPT
U3	2	31002401	LF 441 CN TESTED-ACCEPT
U4	1	31002210	OP176GP
U5	1	31004000	ADJ. O.P. VLTG. REG.
V			VACUUM TUBES
V1,2	4	32001150	VAC.TUBE 6922 RUSSIAN
V3	2	32001200	VAC.TUBE, 12BH7A
V4,5,6,7	8	32000551	VAC TUBE SOVTEK 6550-TESTED
ZD			ZENER DIODES
ZD1	2	30502700	IN4742A
ZD2	1	30500300	IN4740A
ZD3	1	30504210	IN5535A (KNOX ONLY)
ZD4,5	2	31000705	LM329DZ GREEN
ZD6	1	30503500	IN5359 B