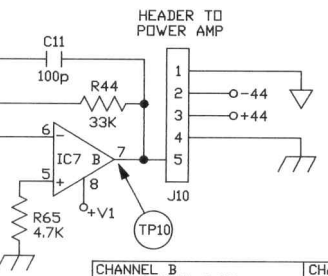


DESIGNATOR	DESCRIPTION	PART NO.
D1,2,4,7,10,13	1N754	21A754-01
D3,6,9,12,15	1N746	21A146-01
D5,8,11,14,16-24	1N914	21A914-01
D25,26	1N5353	21A533-01
D27	GREEN LED	21-502-01
D28,30	RED LED	21-501-01
D29	YELLOW LED	21-503-01
IC1-7	4558	37-458-01
P1,9	100KRA	70-104-23
P2	250KL	70-306-01
P3,4,6	50KL	70-133-01
P5	10KL W/SW	70-103-27
P7	250KA	70-254-22
P8	10KA	70-103-22
P10	10KA W/SW	70-103-28
P11,12	10KL	70-132-01
Q1,2,12	J176	96-176-01
Q3-6,11	J112	96-117-01
Q7	MPS-A55	96-055-01
Q8	2N5639	96-539-01
Q9	TIP 32C	96-032-03
Q10	MPSA06	96-006-01
J1,2	1/4" CLIFF T/S	39-116-01
J3	1/4" CLIFF T/R/S	39-117-01
J5,11-13	4 PIN HEADER	17-310-04
J6-9	187 FASTON TAB	17-894-01
J10	5 PIN HEADER	17-310-05



T.P.	WAVE	CHANNEL B GAIN & LEVEL @ 10' TONES @ 5' 1kHz INPUT SIGNAL		CHANNEL A GAIN & LEVEL @ 10' TONES @ 5' 1kHz INPUT SIGNAL	
		VOLTAGES	WAVE	VOLTAGES	WAVE
1	~	125mVp-p	~	~	~
2	~	420mVp-p	~	~	~
3	~	4.2Vp-p	1Vdc	~	~
4	~	.65Vdc	~	~	~
5	~	~	~	4.8Vp-p	~
6	~	~	~	9.8Vp-p	2.5Vdc
7	~	~	~	10Vp-p	2.1Vdc
8	~	~	~	4.5Vp-p	~
9	~	~	~	6.4Vp-p	~
10	~	~	~	2Vp-p	~
11	~	~	~	0Vdc	-14Vdc
12	~	~	~	+14Vdc	0Vdc
13	~	~	~	10Vp-p across 150 ohm load	6.8Vp-p across 150 ohm load
14	~	~	~	Approx. 200mVp-p varies w/freq.	Approx. 200mVp-p varies w/freq.
15	~	~	~	+15Vdc	+15Vdc
16	~	~	~	-15Vdc	-15Vdc
17	~	~	~	0Vdc	-10Vdc
18	~	~	~	+10Vdc	0Vdc

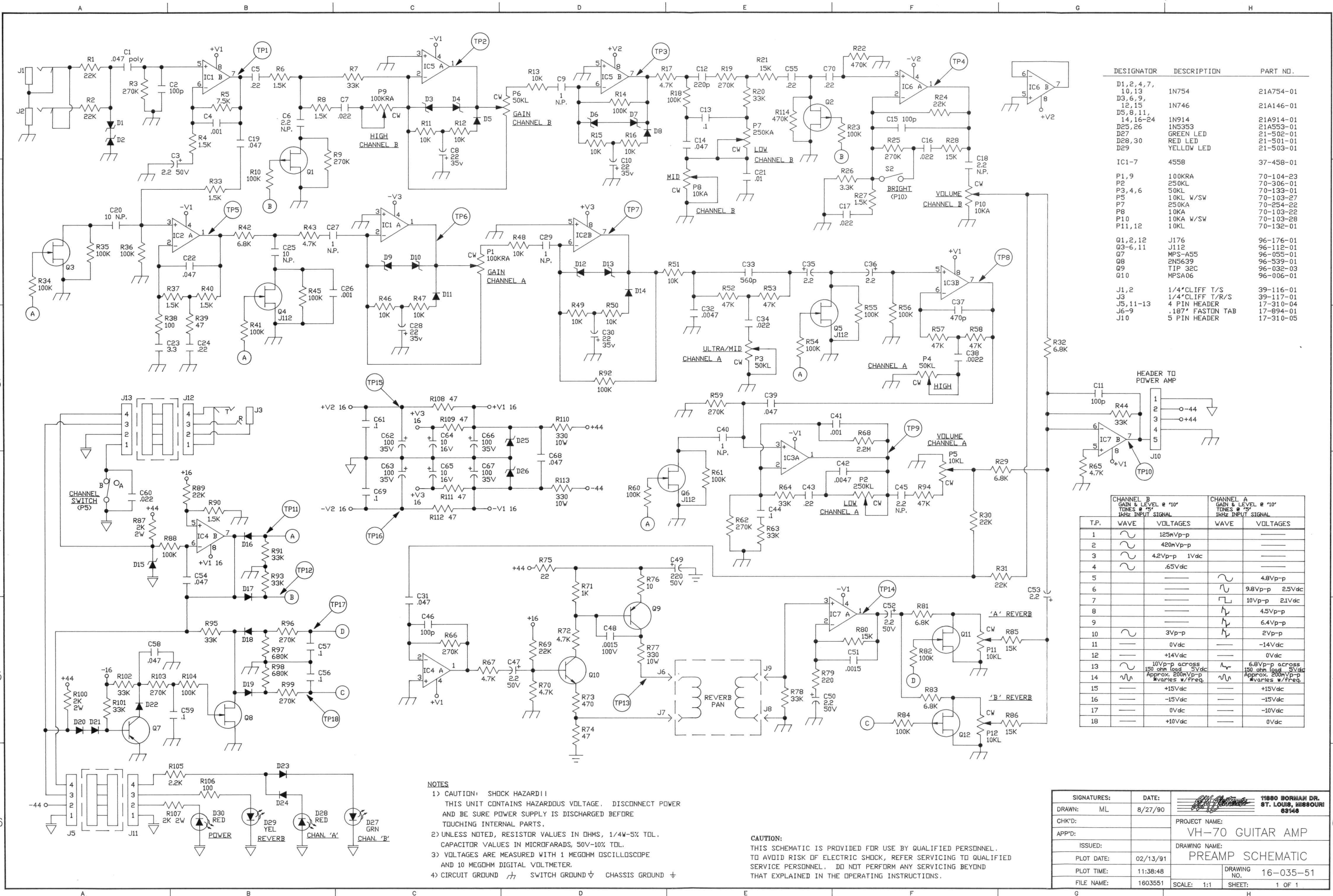
NOTES

- 1) CAUTION: SHOCK HAZARD!! THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
- 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
- 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
- 4) CIRCUIT GROUND \perp SWITCH GROUND ∇ CHASSIS GROUND \oplus

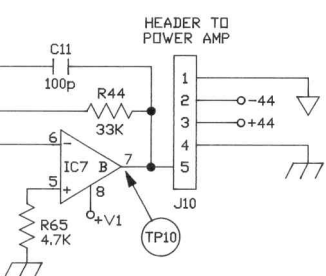
CAUTION:
THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL. TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

REV	DATE	BY	CHK'D	DESCRIPTION
A	8/23/91	SWR		REMOVED C32

SIGNATURES:	DATE:	11880 BORMAN DR. ST. LOUIS, MISSOURI 63148
DRAWN: ML	8/27/90	
CHK'D:	PROJECT NAME:	VH-150 & VH-70 GUITAR AMP
APP'D:	DRAWING NAME:	PREAMP SCHEMATIC
ISSUED:	PLOT DATE:	08/23/91
PLOT TIME:	09:01:50	DRAWING NO. 16-035-51
FILE NAME:	1603551A	SCALE: 1:1 SHEET: 1 OF 1



DESIGNATOR	DESCRIPTION	PART NO.
D1,2,4,7,10,13	1N754	21A754-01
D3,6,9,12,15	1N746	21A146-01
D5,8,11,14,16-24	1N914	21A914-01
D25,26	1N5353	21A533-01
D27	GREEN LED	21-502-01
D28,30	RED LED	21-501-01
D29	YELLOW LED	21-503-01
IC1-7	4558	37-458-01
P1,9	100KRA	70-104-23
P2	250KL	70-306-01
P3,4,6	50KL	70-133-01
P5	10KL W/SW	70-103-27
P7	250KA	70-254-22
P8	10KA	70-103-22
P10	10KA W/SW	70-103-28
P11,12	10KL	70-132-01
Q1,2,12	J176	96-176-01
Q3-5,11	J112	96-112-01
Q7	MPS-A55	96-055-01
Q8	2N5639	96-539-01
Q9	TIP 32C	96-032-03
Q10	MPSA06	96-006-01
J1,2	1/4" CLIFF T/S	39-116-01
J3	1/4" CLIFF T/R/S	39-117-01
J5,11-13	4 PIN HEADER	17-310-04
J6-9	.187" FASTON TAB	17-894-01
J10	5 PIN HEADER	17-310-05



T.P.	CHANNEL B GAIN & LEVEL @ 10" TONE @ 1KHz INPUT SIGNAL		CHANNEL A GAIN & LEVEL @ 10" TONE @ 1KHz INPUT SIGNAL	
	WAVE	VOLTAGES	WAVE	VOLTAGES
1	~	125mVp-p	~	~
2	~	420mVp-p	~	~
3	~	4.2Vp-p 1Vdc	~	~
4	~	.65Vdc	~	~
5	~	~	~	4.8Vp-p
6	~	~	~	9.8Vp-p 2.5Vdc
7	~	~	~	10Vp-p 2.1Vdc
8	~	~	~	4.5Vp-p
9	~	~	~	6.4Vp-p
10	~	3Vp-p	~	2Vp-p
11	~	0Vdc	~	-14Vdc
12	~	+14Vdc	~	0Vdc
13	~	10Vp-p across 150 ohm load 5Vdc	~	6.8Vp-p across 150 ohm load 5Vdc
14	~	Approx. 200mVp-p varies w/freq.	~	Approx. 200mVp-p varies w/freq.
15	~	+15Vdc	~	+15Vdc
16	~	-15Vdc	~	-15Vdc
17	~	0Vdc	~	-10Vdc
18	~	+10Vdc	~	0Vdc

NOTES

- 1) CAUTION! SHOCK HAZARD!! THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
- 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
- 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
- 4) CIRCUIT GROUND \perp SWITCH GROUND ∇ CHASSIS GROUND \oplus

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SIGNATURES:	DATE:	11880 BORNHAIN DR. ST. LOUIS, MISSOURI 63148
DRAWN: ML	8/27/90	PROJECT NAME: VH-70 GUITAR AMP
CHK'D:		DRAWING NAME: PREAMP SCHEMATIC
APP'D:		DRAWING NO.: 16-035-51
ISSUED:		SCALE: 1:1 SHEET: 1 OF 1
PLOT DATE:	02/13/91	
PLOT TIME:	11:38:48	
FILE NAME:	1603551	