John Hornby Skewes Service

AEV-44

Electric violin (Provisional)

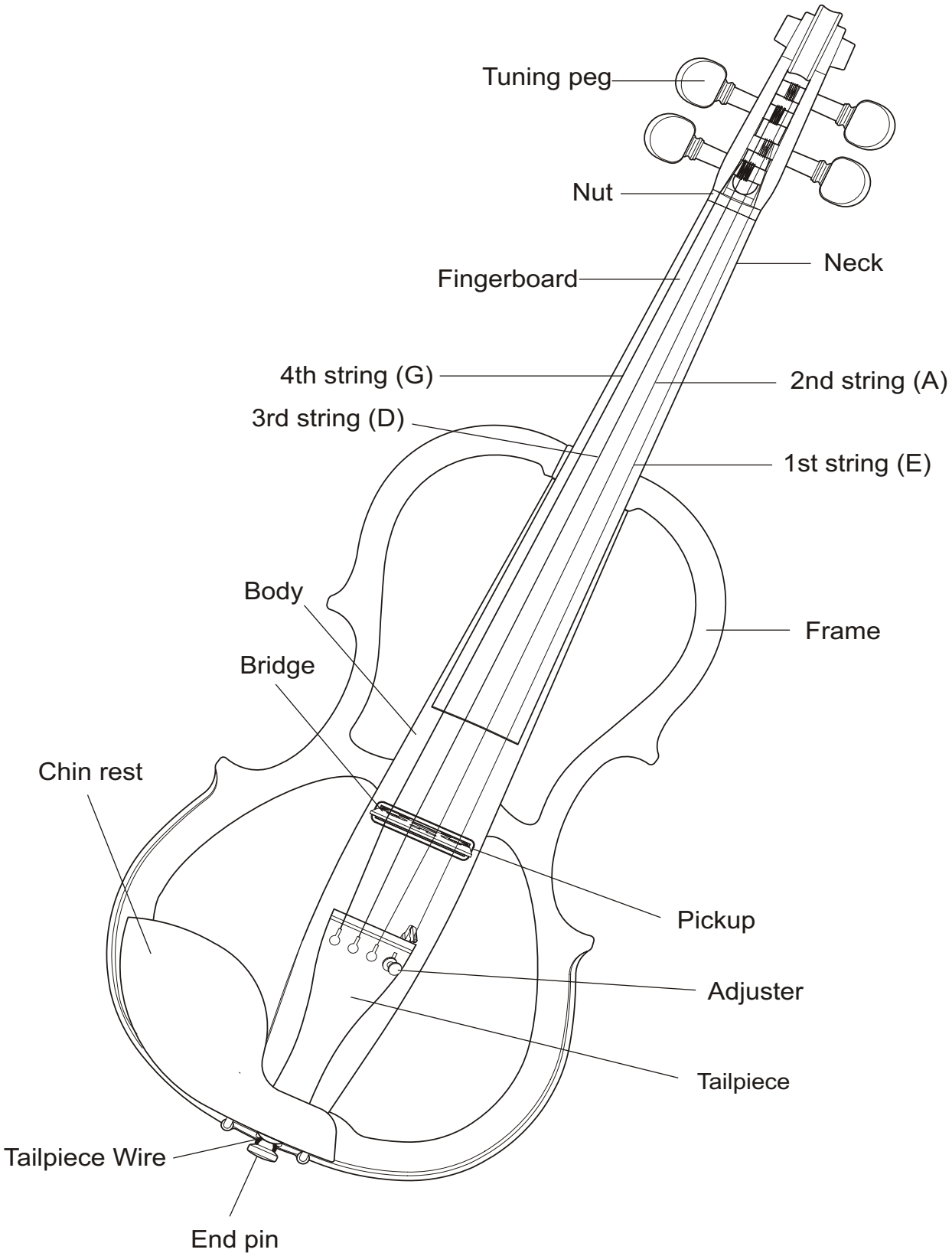
Contents

John Hornby Skewes & Co. Ltd. Parkinson Approach. Garforth. Leeds. LS 25 2HR. England. Tel. +44 113 2 865381. Fax. +44 113 2 868515.

SPECIFICATIONS

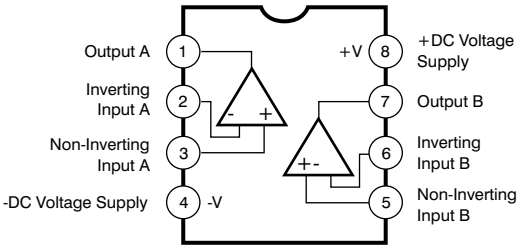
Neck:	Maple?
Body:	Spruce?
Fingerboard:	Ebony?
Tuning Pegs:	Ebony?
Bridge:	Maple?
Chin Rest:	Ebony?
Tailpiece:	Ebony?
Adjuster:	All 4 strings (Wittner)
Strings:	Ball-end type
Pickup:	Piezo (underneath the bridge)
Connectors	Headphone out
	Microphone in
	Line out
Controls:	Volume
	Power Switch (ON/OFF)
Battery:	4 X AAA (SUM4)
Battery Life (Continuous Use):	approximately 12 hours
String Length:	330 mm
Output Impedance:	1K.
Dimensions:	598 (L) x 210 (W) x 116 (H) mm
Weight:	(with battery) 775g?
Accessories:	Owners Manual
	Case
	Strap
	Bow
	Line cable
	Chinrest
	Stereo headphones

Main components
AEV-44

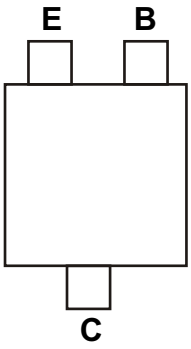


IC Pinouts

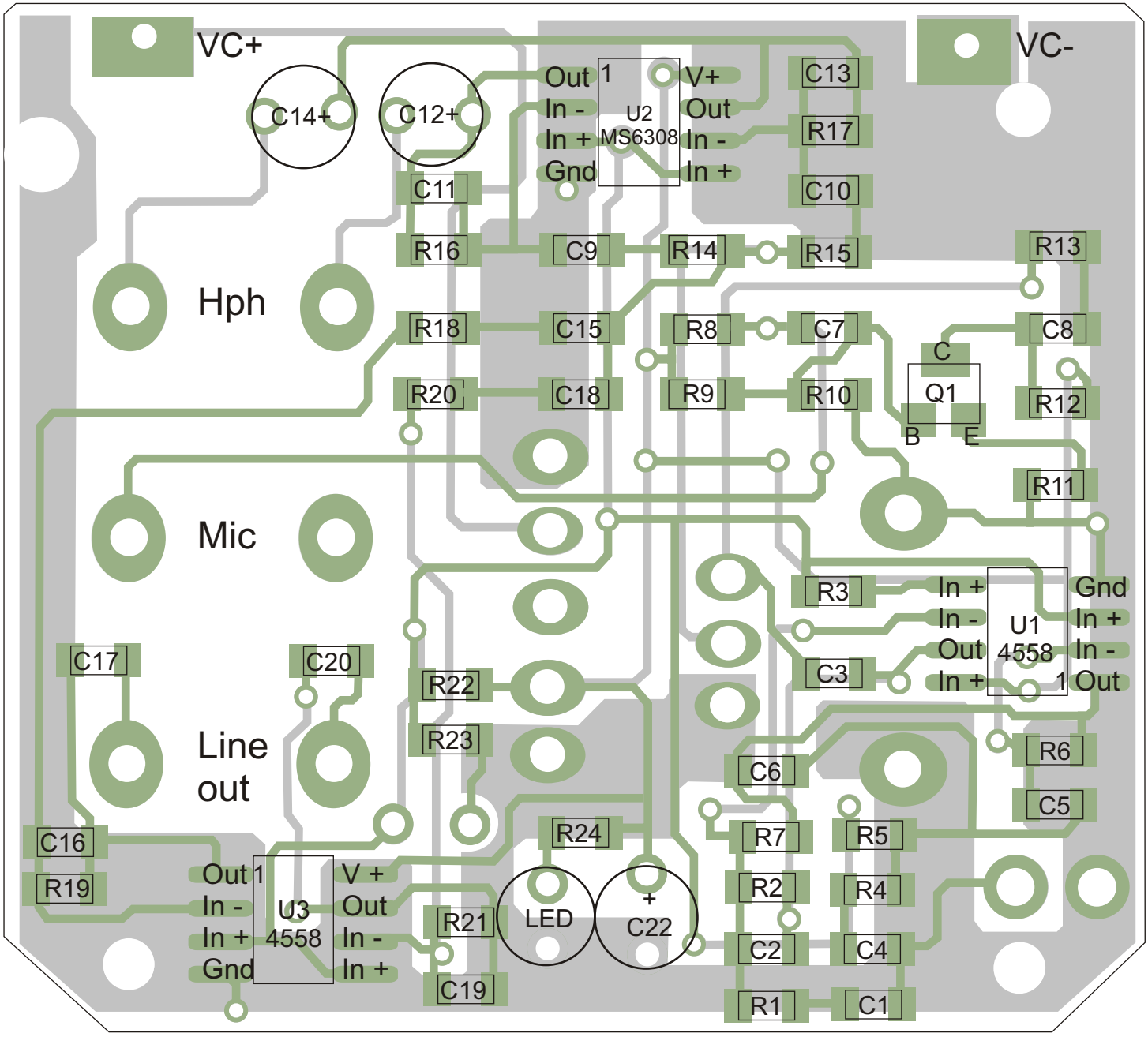
UA4558, MS6308

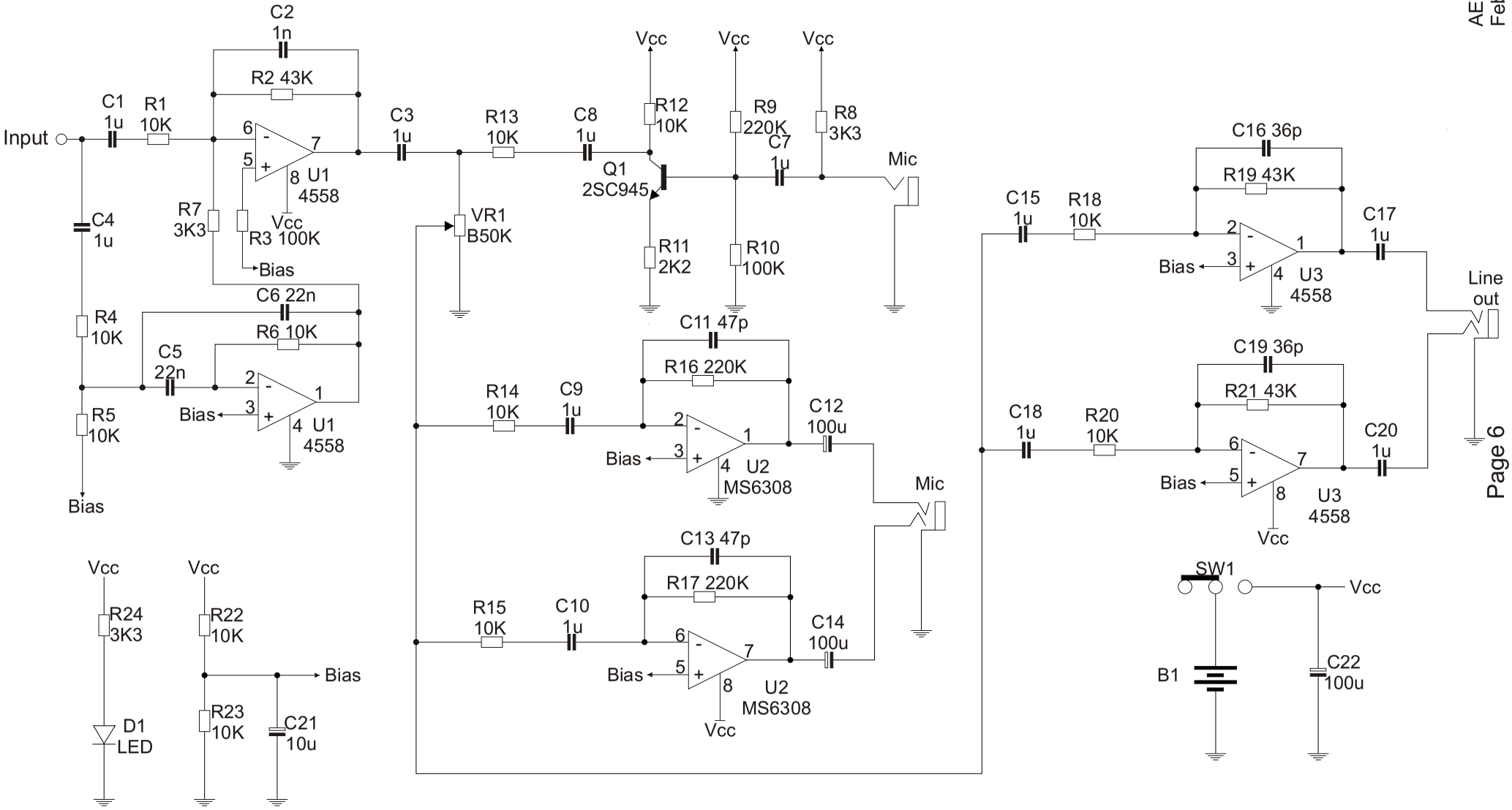


2SC945



PCB


VC+
VC-
C14+
C12+
Out
In -
In +
Gnd
1
U2
MS6308
V+
Out
In -
In +
C13
R17
C10
C11
R16
C9
R14
R15
R13
Hph
R18
C15
R8
C7
C8
C
R20
C18
R9
R10
Q1
R12
B
E
R11
Mic
R3
In +
In -
Out
In +
U1
4558
Gnd
In +
In -
1 Out
C17
C20
R22
C3
R23
Line
out
C6
R6
C5
C16
R24
R7
R5
R19
Out
In -
In +
Gnd
1
U3
4558
V +
Out
In -
In +
R21
LED
+
C22
R2
R4
C2
C4
C19
R1
C1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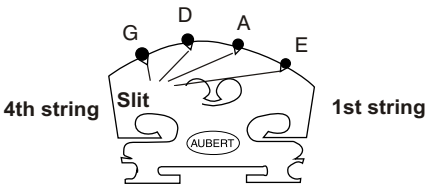
Feb 05.
Page 6
Input
C1
1u
R1
10K
C2
1n
R2 43K
U1
4558
C3
1u
R13
10K
C8
1u
Vcc
R12
10K
R9
220K
R8
3K3
C7
1u
Mic
Q1
2SC945
R11
2K2
R10
100K
VR1
B50K
R7
3K3
R3 100K
Bias
C4
1u
R4
10K
R5
10K
C6 22n
R6 10K
C5
22n
C11 47p
R16 220K
R14
10K
C9
1u
C12
100u
U2
MS6308
C13 47p
R17 220K
R15
10K
C10
1u
C14
100u
C15
1u
R18
10K
C16 36p
R19 43K
C17
1u
U3
4558
Line
out
C18
1u
R20
10K
C19 36p
R21 43K
C20
1u
SW1
B1
C22
100u
R24
3K3
D1
LED
R22
10K
R23
10K
C21
10u

Service hints

Checking the electronics
Turn on the [POWER ON / OFF] switch, and confirm that the LED illuminates red.
Play the strings, and turn the [VOLUME] knob from MIN to MAX, confirm that the sound volume from the headphones or speakers varies smoothly.
Check that no noise is generated when the volume control is rotated.

Tracing mechanical noises
The fine tuner screws can vibrate if they are protuding a long way out.
Check that the bridge is not fitted offset.

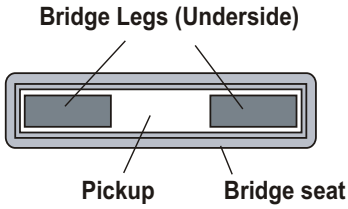
Fitting the bridge
The lower side of the bridge supports the 1st string (E), the higher side supports the 4th string (G). Make sure the bridge is placed properly, then set the bridge in the bridge seat. (Make sure the logo side of the bridge is facing the tailpiece.)



[Looking from the tailpiece]

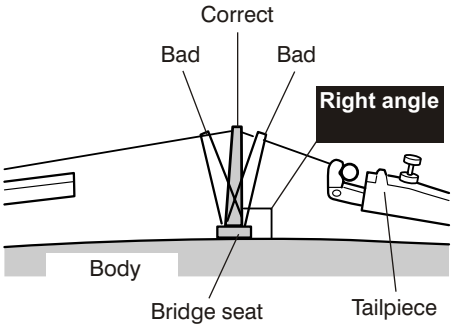
Make sure the entire underside of the bridge's legs is in contact with the pickup.

Also ensure that the bridge does not slide off of the Bridge Seat or that its legs are touching the sides of the Bridge Seat. Doing so will result in deteriorated sound quality.



[Placing the Bridge s Legs]

Ensure that the bridge stands vertically. If it leans to one side, use both hands to adjust. Make sure that each string passes over the correspond-ing slits in the bridge.



Body Assembly
Bridge
String, Set
String, E
String, A
String, D
String, G
Tailpiece Assembly
Chin Rest
Pickup Assembly
Pickup
Connector Housing
Escutcheon
Panel Lid Assembly
Knob
Bind Head Tapping Screw-P
Bind Head Tapping Screw-1
Adjuster
Circuit Board
Tuning Peg

C1	1uF 0805
C2	1nF 0805
C3	1uF 0805
C4	1uF 0805
C5	22nF 0805
C6	22nF 0805
C7	1uF 0805
C8	1uF 0805
C9	1uF 0805
C10	1uF 0805
C11	47pF 0805
C12	100uF 10V Rad
C13	47pF 0805
C14	100uF 10V Rad
C15	1uF 0805
C16	33pF 0805
C17	1uF 0805
C18	1nF 0805
C19	33pF 0805
C20	1uF 0805
C21	10uF 10V Rad
C22	100uF 10V Rad

D1	Red LED

IC1	4558
IC2	MS6308
IC3	4558

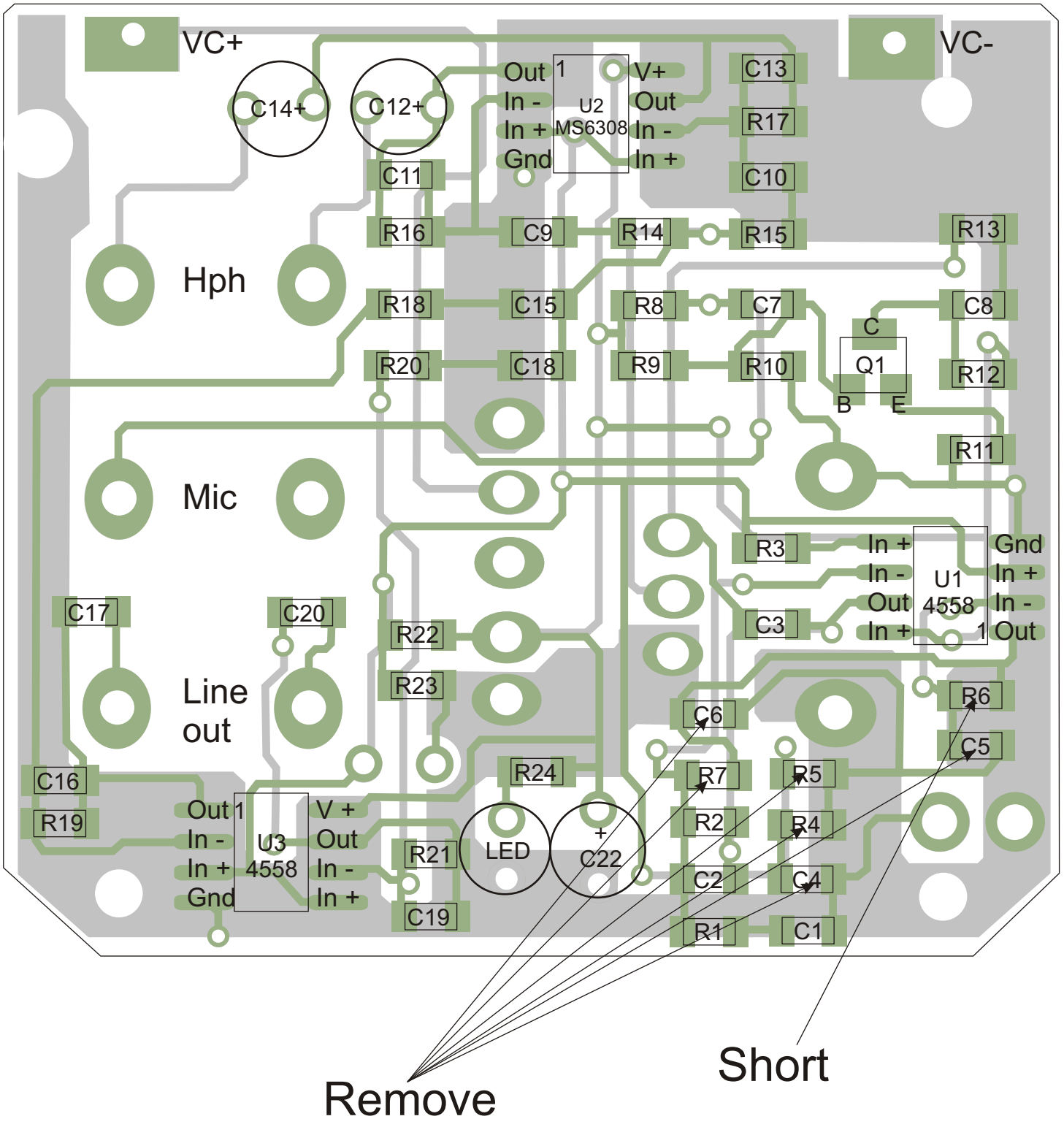
Q1	2SC945

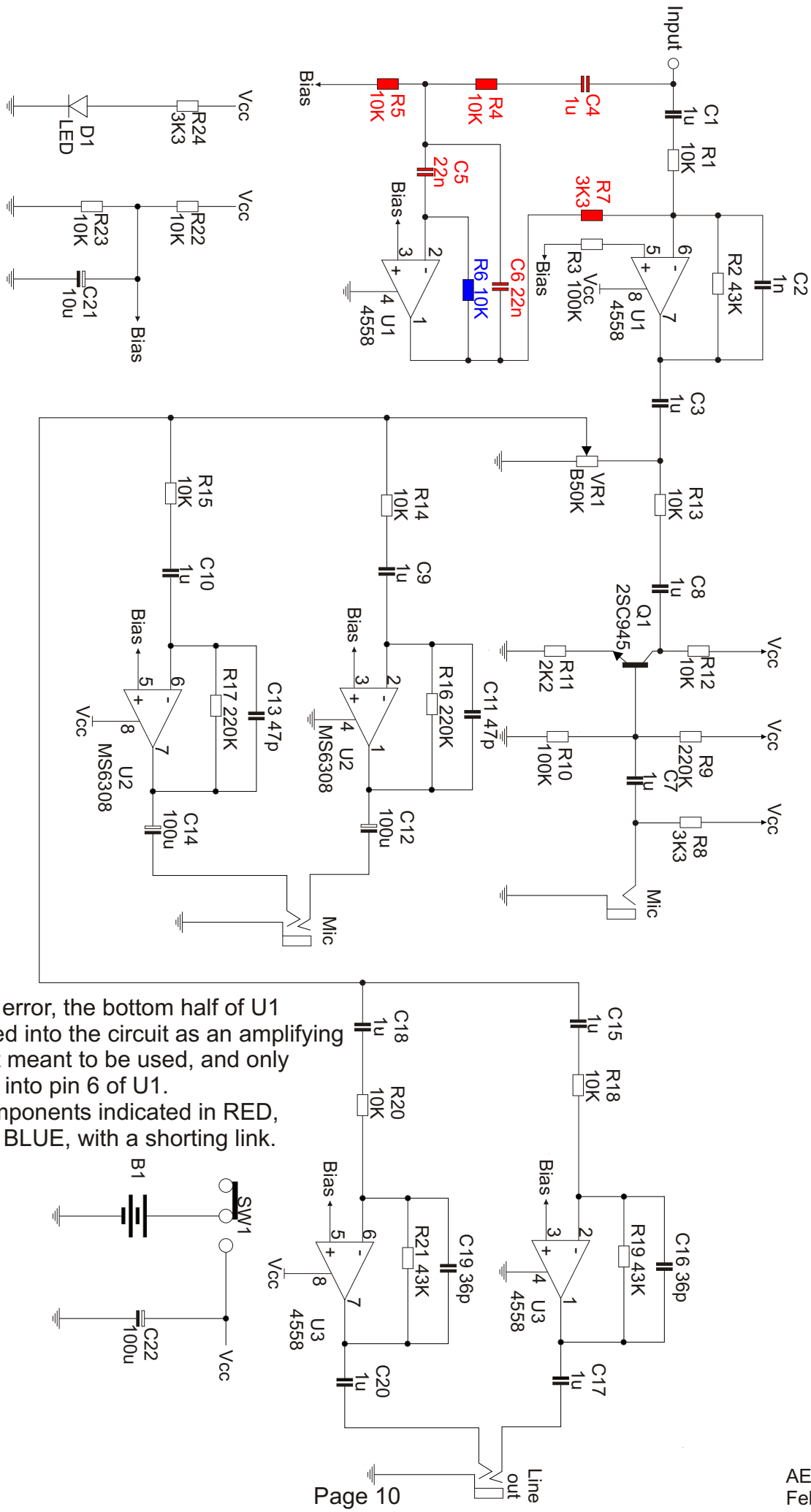
R1	10K 0805
R2	43K 0805
R3	100K 0805
R4	10K 0805
R5	10K 0805
R6	10K 0805
R7	3K3 0805
R8	3K3 0805
R9	220K 0805
R10	100K 0805
R11	2K2 0805
R12	10K 0805
R13	10K 0805
R14	10K 0805
R15	10K 0805
R16	220K 0805
R17	220K 0805
R18	10K 0805
R19	43K 0805
R20	10K 0805
R21	43K 0805
R22	10K 0805
R23	10K 0805
R24	3K3 0805

VR1	B50K

Due to a design error, the bottom half of U1 has been inserted into the circuit as an amplifying stage, it was not meant to be used, and only generates noise into pin 6 of U1.

Remove the components indicated, and replace R6 with a shorting link.





Due to a design error, the bottom half of U1 has been inserted into the circuit as an amplifying stage, it was not meant to be used, and only generates noise into pin 6 of U1.
Remove the components indicated in RED, and replace R6, BLUE, with a shorting link.