

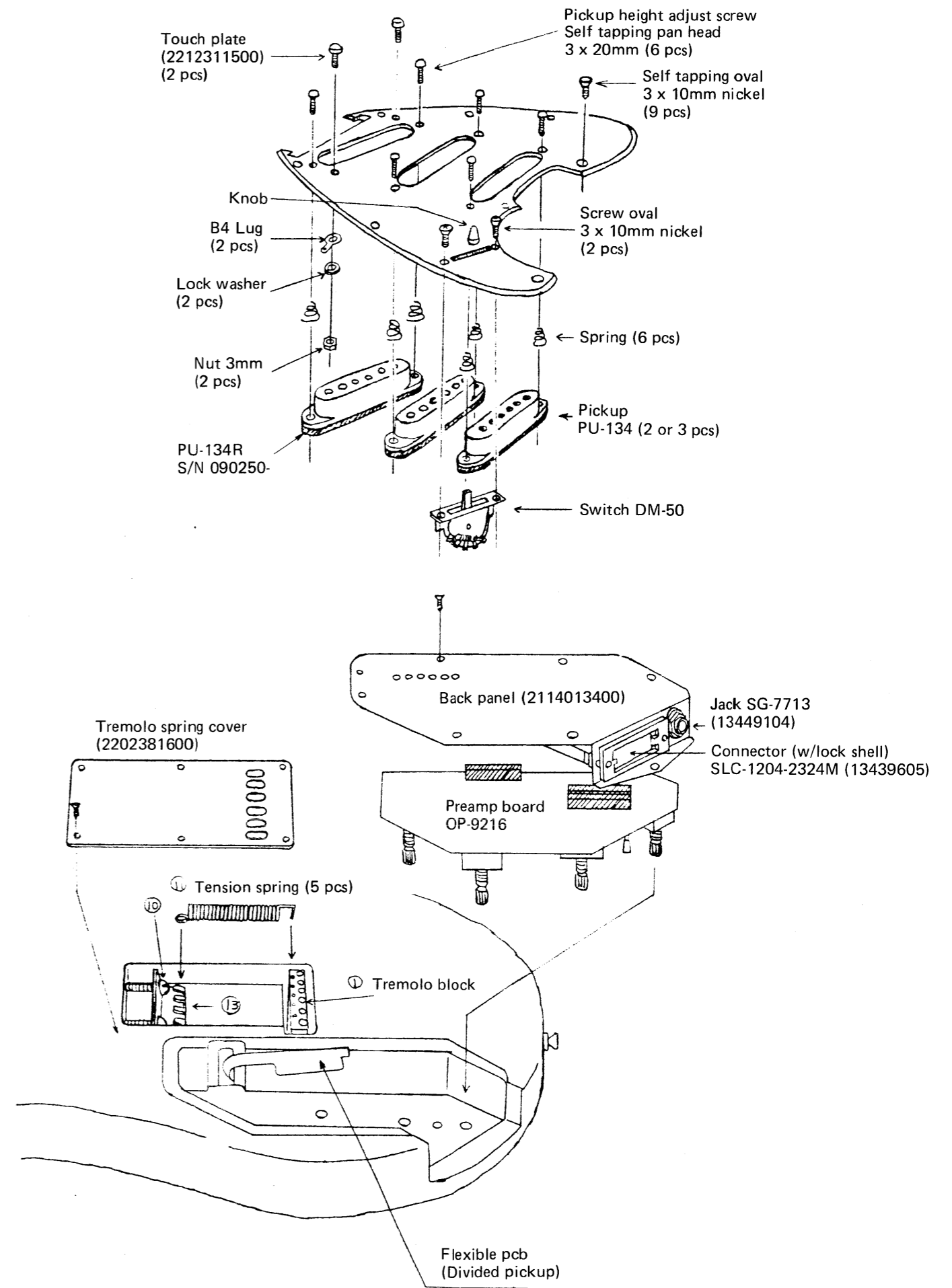
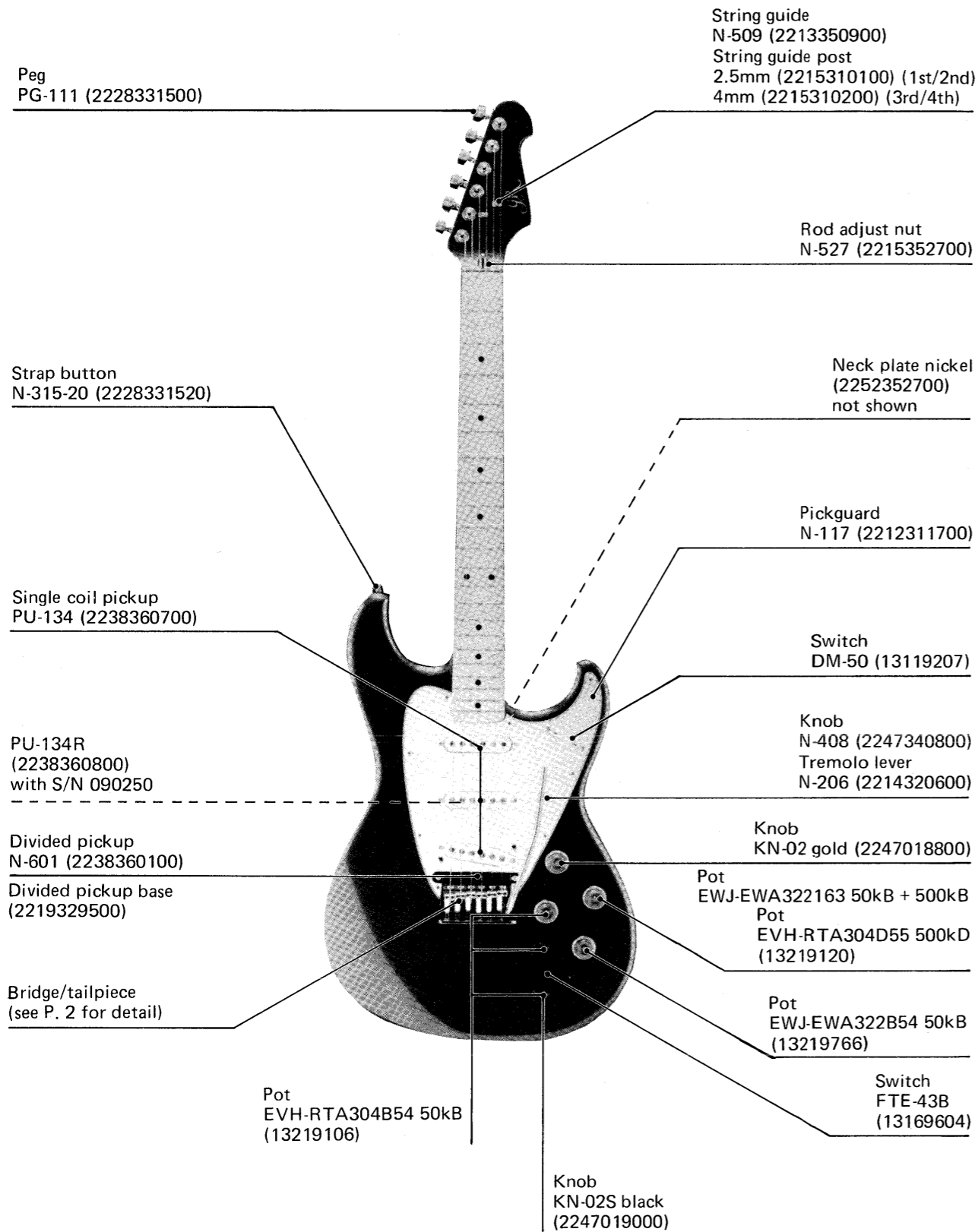
G-505

SERVICE NOTES

First Edition

SPECIFICATIONS

ERRATA & SUPPLEMENT is attached at the end of the page.
最終頁に正誤表 & 追加情報があります。



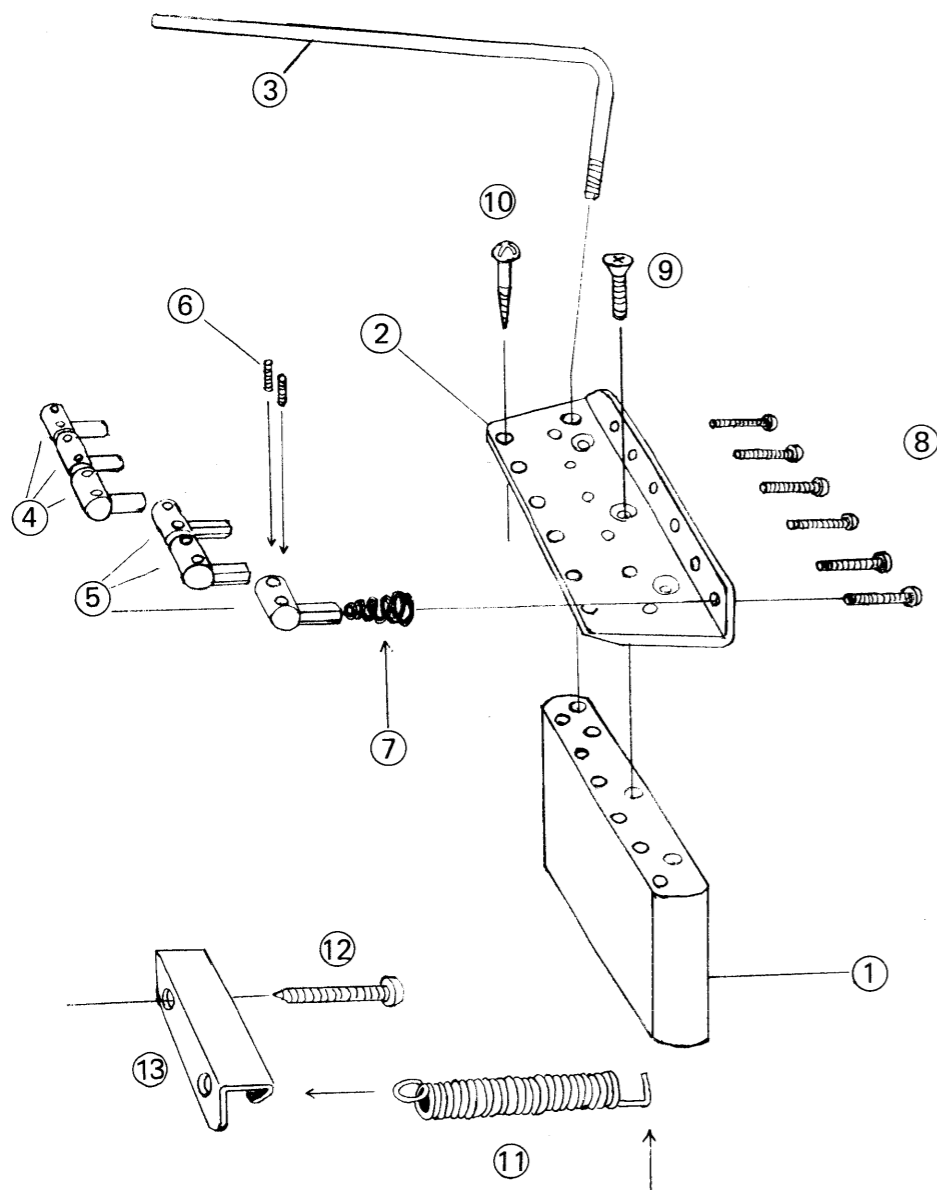


Fig. 1

- | | |
|--|--------------|
| 1 Tremolo block | (2213334100) |
| 2 Bridge base plate | (2213334000) |
| 3 Tremolo lever | (2214320600) |
| 4 Bridge saddle 21mm chrome
#1, #2, #3 | (2213390500) |
| 5 Bridge saddle 19mm chrome
#4, #5, #6 | (2213390600) |
| 6 Height adjust screw (worm)
3 x 8mm . . . #1, #6
3 x 10mm . . . #2-#5 | |
| 7 Saddle spring | |
| 8 Intonation adjust screw
3 x 20mm pan | |
| 9 Screw 4 x 10mm flat | |
| 10 Wood screw 3.6 x 30mm round | |
| 11 Tension spring | (2217330600) |
| 12 Tension adjust screw 5 x 50mm
round self tapping | |
| 13 Tension spring bracket | (2219329600) |

BRIDGE/TAIPIECE (TREMOLO ASSEMBLY)

On the guitar with tremolo mechanism, balance of tension on the guitar strings and tremolo springs ⑪ determines strings height and length when tremolo lever ③ rests at neutral. Thus, to achieve satisfactory tuning action, understanding of tremolo mechanism and its installation is necessary before starting tuning.

The tailpiece pivots on wood screws ⑩, cylindrical travel range being limited by points a and b.

Six screws ⑩ serve as fulcrum as well as anchor for tailpiece mounting plate. Their insertion angle and tightness are key to a stable and smooth action. Screws must be perpendicular to the mounting plate and there should be no clearance between their faces. The entire bottom of mounting plate must be flush with guitar top (Fig. 3-a ②) when all strings are relaxed.

Fig. 3-b Unsettled plate will jolt with lever traveling.

Fig. 3-d Overtightened, the plate resists lever motion.

NOTES:

When replacing tremolo assembly or rescrewing all the screws ⑩, screw in the following order - #1, #6, #2, #3, #4 and #5. As for factory assembly, the number of tremolo springs is five and may be changed to four or three to meet the user's preference.

TUNING. STRING HEIGHT. STRING LENGTH

Both adjustments must be done after conformation of tailpiece setting to the conditions in the preceding section; and be repeated for a successful result since any tension change on one string will alter the pitch of the remaining strings. This is due to balance point shift, e.g. if a string is wound to raise the pitch, the tailpiece and bridge unit is pulled toward the guitar neck. Five strings slacken and their pitch lower.

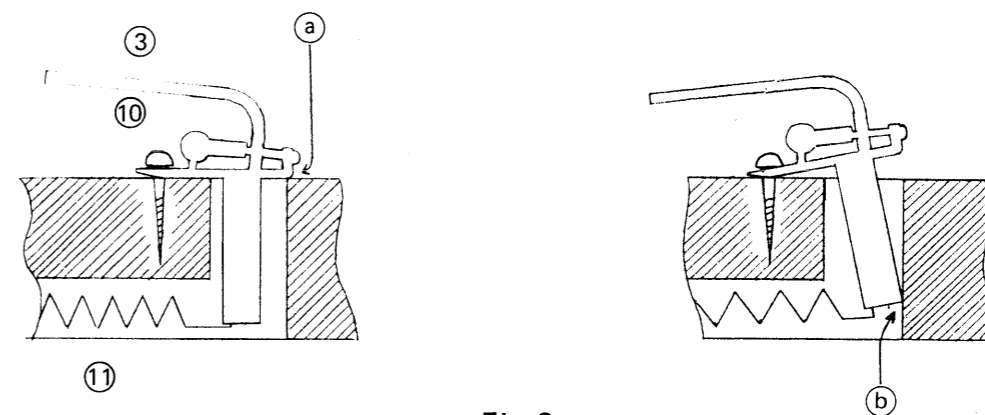


Fig. 2

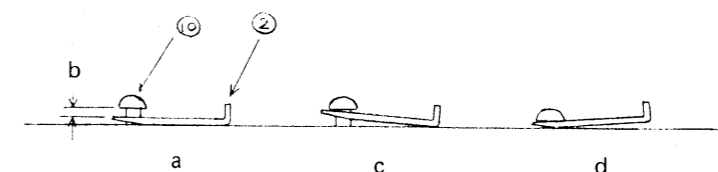


Fig. 3

TUNING (COARSE)

Tune open strings in the usual manner in the order given below. Because of reasons explained above, reference pitch goes down as the adjoining string is tensed. Consequently, this is a relative tuning and should be repeated three times.

1. Relax all of the strings.
2. Tune 5th to 110Hz. Lower any pickup that touches the string.
3. Tune 6th to a pitch perfect fourth below 5th pitch which is lowering as 6th is wound (e.g. the interval might be obtained when 5th lowered to 108Hz and 6th to 80Hz. This is different from in ordinary tuning method but of course is to be corrected in the final adjustment).
4. Tune 4th string to perfect fourth above 5th's (maybe below 146Hz).
5. Similarly, tune 3rd, 2nd and 1st strings with respect to preceding string (as a reference).

Intervals among strings may be out of tune, leave them as they are.

REFERENCE FREQUENCIES

FRET	STRING					
	6	5	4	3	2	1
0	82.41	110.00	146.83	196.00	246.94	329.63
1	87.31	116.54	155.56	207.65	261.63	349.23
2	92.50	123.47	164.81	220.00	277.18	369.99
3	98.00	130.81	174.61	233.08	293.66	392.00
4	103.83	138.59	185.00	246.94	311.13	415.30
5	110.00	146.83	196.00	261.63	329.63	440.00
6	116.54	155.56	207.65	277.18	349.23	466.16
7	123.47	164.81	220.00	293.66	369.99	493.88
8	130.81	174.61	233.08	311.13	392.00	523.25
9	138.59	185.00	246.94	329.63	415.30	554.37
10	146.83	196.00	261.63	349.23	440.00	587.33
11	155.56	207.65	277.18	369.99	466.16	622.25
12	164.81	220.00	293.66	392.00	493.88	659.26
13	174.61	233.08	311.13	415.30	523.25	698.46
14	185.00	246.94	329.63	440.00	554.37	739.99
15	196.00	261.63	349.23	466.16	587.33	783.99
16	207.65	277.18	369.99	493.88	622.25	830.61
17	220.00	293.66	392.00	523.25	659.26	880.00
18	233.08	311.13	415.30	554.37	698.46	932.33
19	246.94	329.63	440.00	587.33	739.99	987.77
20	261.63	349.23	466.16	622.25	783.99	1046.50
21	277.18	369.99	493.88	659.26	830.61	1108.73

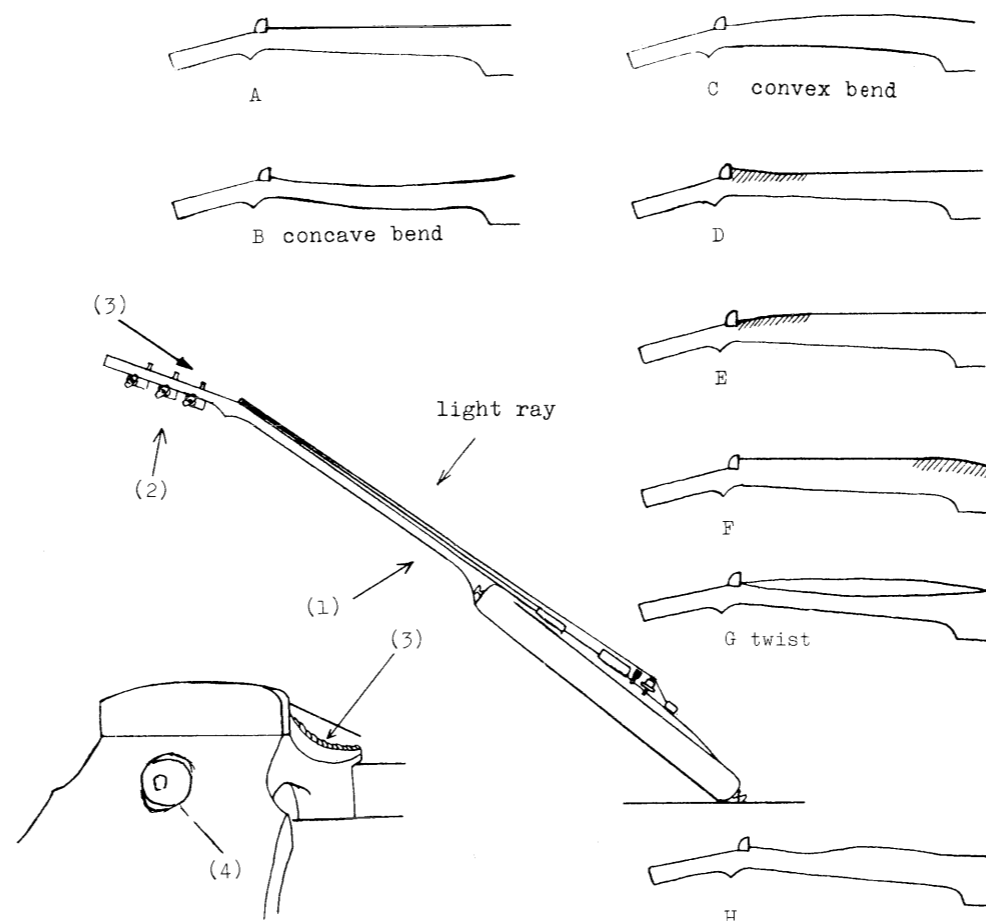


Fig. 4

6. CHECKING NECK AND FINGERBOARD for CAMBERING, WARPING, PULLING or TWISTING

Hold the neck joint with one hand (1); with the other hand, gently hold the guitar head (2). Position the guitar on the table.

View the curve of the fingerboard and neck across the top of the head from both edges alternately (3).

B to H in Fig. 4 are examples of would be occurred. Of course any combinations of these examples might be found on the guitar.

When adjusting, tighten or loosen the nut (4), with an 4mm wrench, small amount at a time while checking the result. DO NOT OVERTIGHTEN.

A Ideal.

B, C, D Adjust truss rod. Check that there is no buzzing when the string is played open. (Slighter curvature shaded in D can be ignored.)

E, F, G, H When possible action is cannot obtained after compensated for by truss rod adjustment, any adjustments it needs should be left to someone with experience on guitar repair.

7. Adjust tension springs ① for 2mm clearance between bottom of the tailpiece and guitar face at the back end with screws ② (See Fig. 5.)

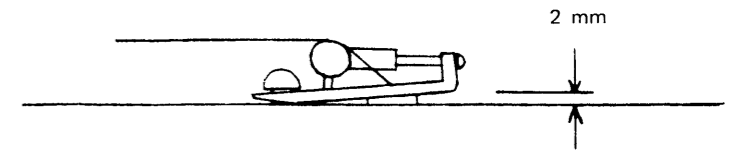


Fig. 5

8. TUNING (2nd)

Back to steps 2-5, this time in combination with step 7. Repeat tuning and measure clearance between tailpiece bottom and guitar top, (Fig. 5). Readjust spring ① tensions as necessary.

9. STRING HEIGHT With strings open adjust screws⑥ to the height in the table below.

Standard String Height (at the open 14th)

	1st	2nd	3rd	4th	5th	6th
String Height (mm)	1.5	1.6	1.7	1.8	1.9	2.0

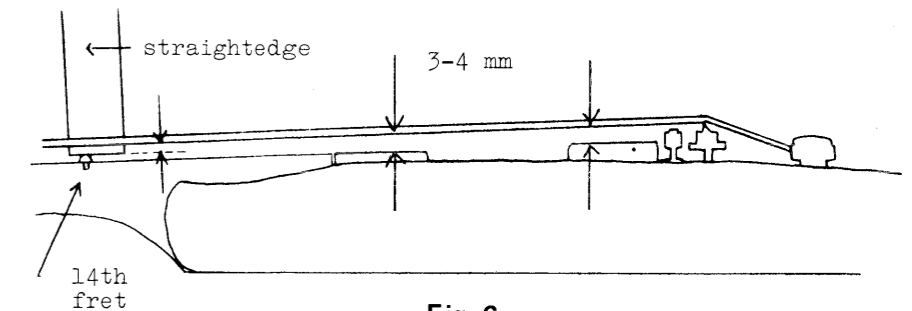


Fig. 6

10. TUNING (3rd) Do steps 2-5.

11. STRING LENGTH (OCTAVE ADJUSTMENT)

Tune strings (open) to the frequency (fret 0, in the table left). Test intonation at the 12th fret whether string is sharp or flat in terms of octave pitch. If a string is going sharp at 12th fret, move back the saddle to add string length by turning screw ⑧. If flat, toward neck.

12. TUNING (FINE) Steps 2-5.

13. DIVIDED PICKUP HEIGHT Do not attempt the following steps prior to completion of Tremolo assy adjustments.

Make sure that strings are on the line parallel to fingerboard top curvature.

Slightly off-centered string over divided pickup head can be negligible.

With strings in tune, position divided pickup so that clearances between the head top and the bottom of string are 0.5mm at #1 and 0.8mm at #6, when 21st is fretted.

When tremolo lever is pulled upward to raise pitch, bridges go down and strings come down close to the divided pickup heads. Avoid string from touching with head by lowering the pickup.

14. NORMAL GUITAR PICKUP HEIGHT Possible action on guitar pickup depends greatly on strings and players, with strings supplied 3-4mm at 6th works well. Then, adjust pickup height at 1st side to have well balanced sound from higher strings.

NOTES:

As is usual with most single coil pickup, permanent magnets having strong magnetic force are incorporated with the PU-134. When close coupled with string, the flux will interfere with string vibration, resultant is tremolo-like effect. This is distinctive with relation of front pickup to 6th string fretted at high position.

PU-134R (for Center Pickup)

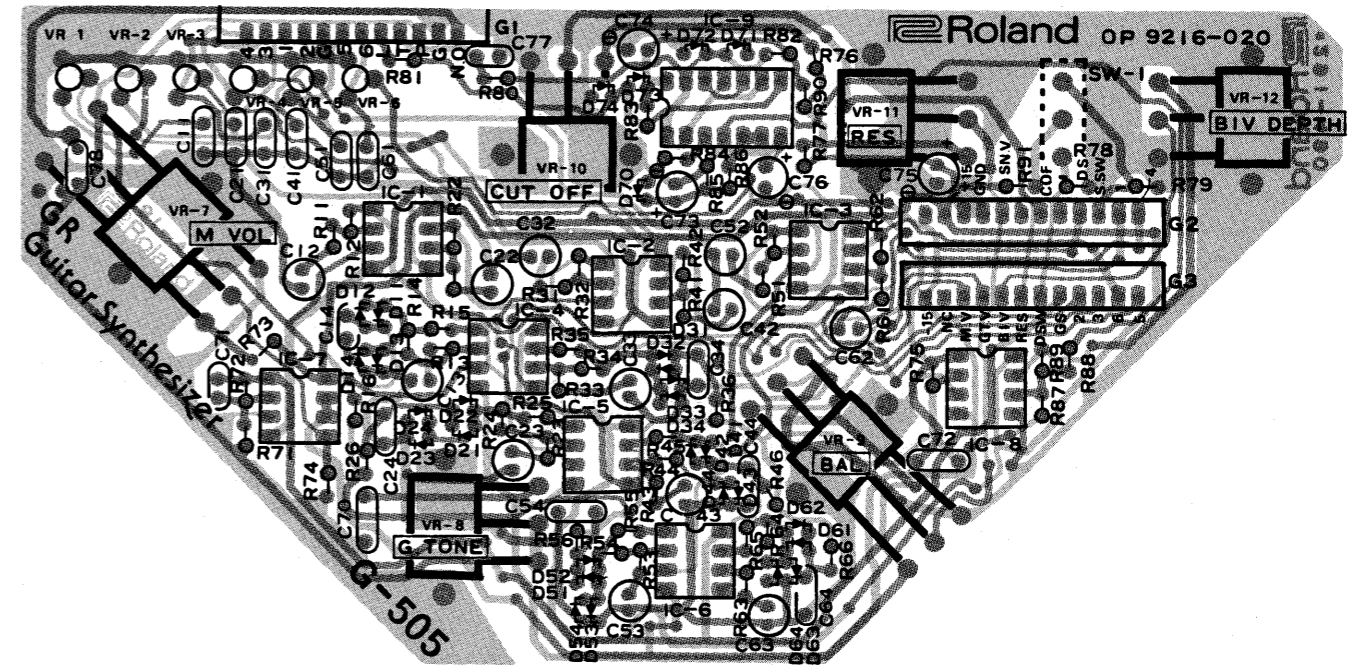
Employed with S/N 090250 and higher.

As the name implies, PU-134R has reversal magnetic polarity and reversed coil leads. When its output is drawn in combination with front/rear pickups, the mixed output contains in-phase string signal and out-of-phase hum induced extrenally.

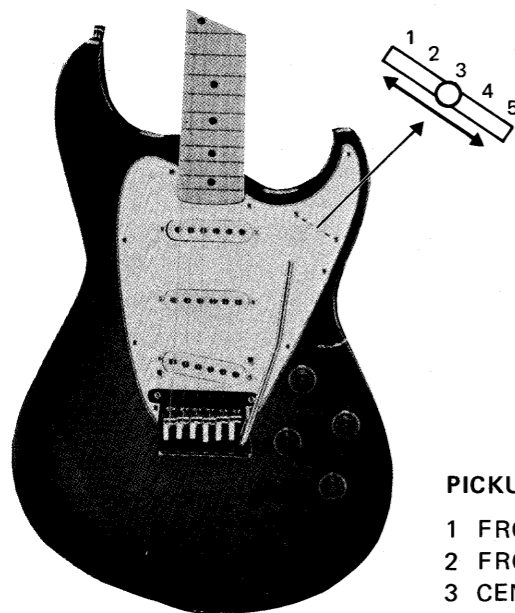
WIRE LEADS

PU-134 Shielded pair

PU-134R . . . Separated yellow-hot; black-cold



**OP9216-020
(7921602000)
(pcb 2291349000)**



PICKUP SELECTOR

- 1 FRONT
- 2 FRONT + CENTER
- 3 CENTER
- 4 CENTER + REAR
- 5 REAR

15. BALANCING DIVIDED PICKUP OUTPUTS

Variation in divided pickup head sensitivities, due to string or the pickup replacement, can be compensated for by adjusting trimmers of PREAMP board. Although provides the user with easier playing condition, this adjustment should be done after basic adjustments are confirmed.

Connect G-505 to GR-300. Switch COMPRESSION off.

Expose GR-300 VOICING board, connect a scope to a pin of A3 connector (HEX ENV) of GR-300.

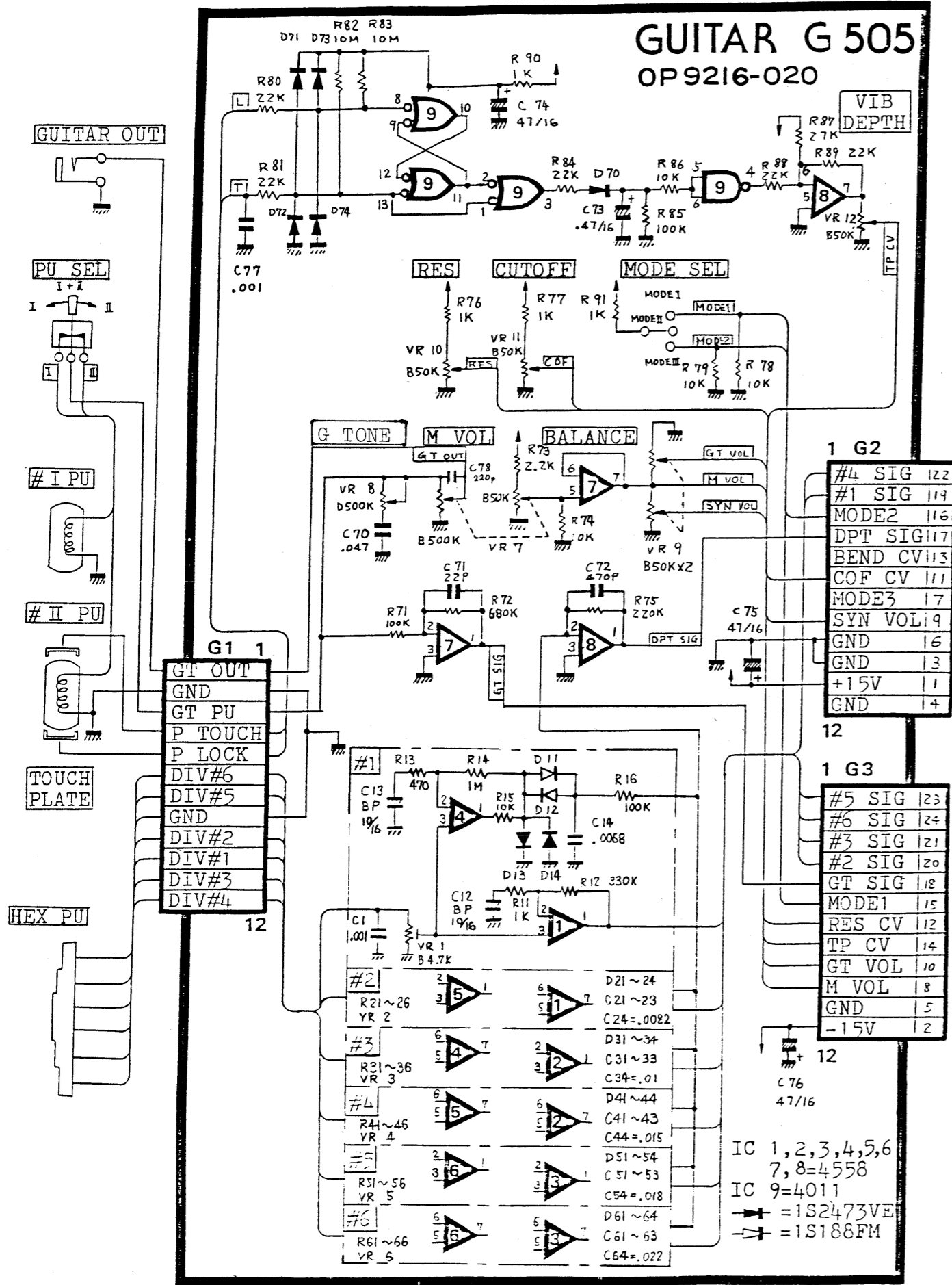
Softly plucking corresponding string with a guitar pick, adjust the channel VRO- in G-505 through the hole in the back panel for 5-7V peak. The voltage will increases 8-11V peak at heavy picking.

Adjust all other strings individually in the same manner.

Fine adjust by ear with the aid of monitor amp for well balanced sounds.

GUITAR G 505

OP 9216-020



PARTS LIST

PCB ASSEMBLY

- 79216020 Preamp board OP9216-020
- 2291349000 PCB less parts

POTENTIOMETER

- 13219106 EVH-RTA304B54 50kΩB
CO FREQ/RESO/VIB DEPTH
- 13219120 EVH-RTA304D55 500kΩD G TONE
- 13219766 EWJ-EWA322B54 50kΩBx2
BALANCE
- 13219772 EWJ-EWA322163 50kΩB+500kΩB
MASTER VOL
- 13299128 EVN-38C53B 5kΩB trimmer
- 2219510600 VR support N-106

SEMICONDUCTOR

- 15189105 IC μPC4558
- 15159104Z0 IC MC14011BCP
- 15019108 Di 1S-2473VE Si, V. mount
- 15019124 Di 1S-188FM Ge, V. mount

JACK. CONNECTOR

- 13439605 SLC-1204-2324M GR bus
- 12139303 SLC-1204-24L2 Lock shell
- 13429121 FH1-12S-2.54DSA Flexible PCB socket
- 2291016700 Flexible PCB N-167
- 2291338400 Flexible PCB N-384 Divided PU
- 13449104 Jack SG-7713

SWITCH

- 13169604 FTE-43B Mode selector
- 13119207 DM-50 P.U. selector

KNOB

- 2247019000 Knob KN-02S black
- 2247018800 Knob KN-02 gold
- 2247340800 Knob N-408 P.U. selector

PICKUP

- 2238360100 Divided pickup N-601
- 2238360700 Single-coil pickup PU-134
- 2238360800 PU-134R center, with S/N 090250
and higher
- 2219329500 Divided PU base N-295
- 2212311500 Touch plate (R, L same)

BRIDGE/TAILOPIECE (TREMOLO UNIT)

- 2213334100 Tremolo block N-341
- 2213334000 Bridge base plate N-340
- 2214320600 Tremolo lever N-206
- 2213390600 Bridge saddle N-906 19mm Chrome
(4-6th)
- 2213390500 Bridge saddle N-905 21mm Chrome
(1-3rd)
- Bridge saddle spring
- Height adjust screw 8mm (1.6)
- Height adjust screw 10mm (2-5)
- Intonation adjust screw
- 2217330600 Tension spring N-306
- 2219329600 Tension spring bracket N-296
Tension adjust screw

PEG

- 2228331500 Peg (machine head) PG-111
- 2213350900 String guide N-509
- 2215310100 String guide post N-101 2.5mm (1/2)
- 2215310200 String guide post N-102 4mm (3/4)
- 2215352700 Rod adjust nut N-527

BODY

- 2212311700 Pickguard N-117
- 2252352700 Neck plate N-527
- 2114013400 Back panel N-134
- 2228331520 Strap button N-315-20
- 2202381600 Tremolo spring cover N-816

