Pioneer

sound. vision. soul

Training Guide
DJM-909

Technical Training Department
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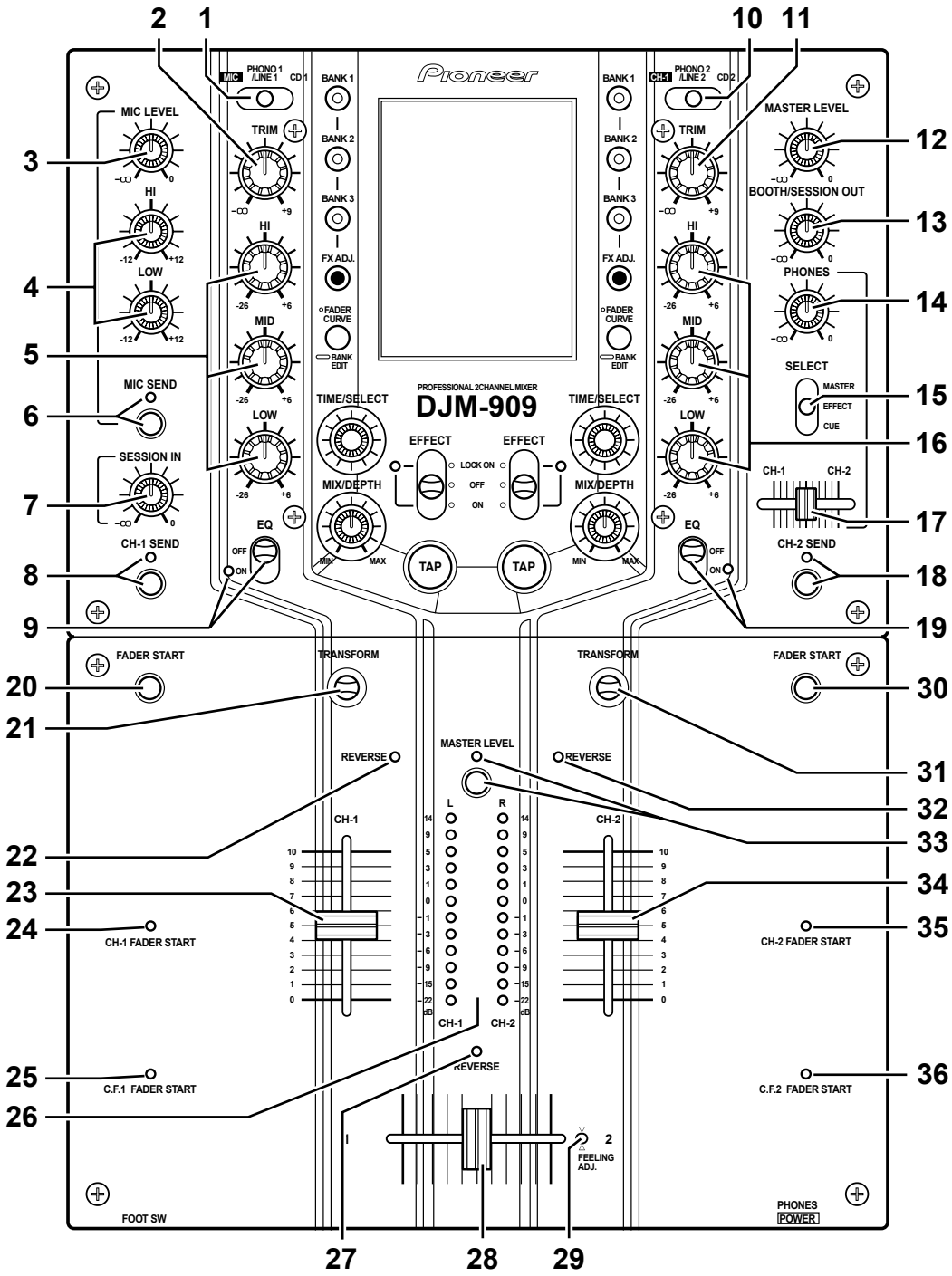
Pioneer SERVICE

Contents

1. PART NAMES AND FUNCTIONS

Top Panel (1)



1 CH-1 input selector switch (MIC – PHONO 1/LINE 1 – CD 1)

Use to select input signal from MIC jack, CH-1 PHONO/LINE input jacks, or CH-1 CD input jacks, and send them to the TRIM control.

* When [MIC] is selected, the MIC signals are sent directly to the TRIM section without passing through the microphone level and microphone equalizer circuits.

2 CH-1 TRIM dial

Use to adjust the CH-1 input signal level (range of adjustment: +9 dB to –8).

3 Microphone level dial (MIC LEVEL)

Use to adjust the microphone level (range of adjustment: 0 dB to –8).

4 Microphone equalizer dials (HI/LOW)

HI

Use to adjust microphone treble response (range of adjustment: 10 kHz, ±12 dB).

LOW

Use to adjust microphone bass response (range of adjustment: 100 Hz, ±12 dB).

5 CH-1 equalizer dials (HI/MID/LOW)

HI

Use to adjust CH-1 input treble response (range of adjustment: 13 kHz, +6 dB to –26 dB).

MID

Use to adjust CH-1 input midrange response (range of adjustment: 1 kHz, +6 dB to –26 dB).

LOW

Use to adjust CH-1 input bass response (range of adjustment: 70 Hz, +6 dB to –26 dB).

6 MIC SEND button and indicator

When set to On, the indicator lights, and microphone signals are output at the SEND jacks. This function is disabled when the CH-1 input selector switch is set to [MIC].

7 Session input level dial (SESSION IN)

Use to adjust the session input volume (range of adjustment: 0 dB to –8).

8 CH-1 SEND button and indicator

When set to On, the indicator lights, and CH-1 signals are output at the SEND jacks.

9 CH-1 EQ ON/OFF switch and indicator

When set to [ON], the indicator lights and CH-1 equalizer is enabled.

When set to [OFF], the indicator goes out and the equalizer circuit is bypassed.

10 CH-2 input selector switch (CH-1 – PHONO 2/LINE 2 – CD 2)

Use to select input signal from CH-1 (component selected with CH-1 input selector switch), CH-2 PHONO/LINE input jacks, or CH-2 CD input jacks, and send them to the TRIM control.

* When [CH-1] is selected, signals are sent to the CH-2 TRIM control without being sent through the CH-1 TRIM control.

11 CH-2 TRIM dial

Use to adjust the CH-2 input signal level (range of adjustment: +9 dB to –8).

12 MASTER LEVEL dial

User to adjust the master output volume level (range of adjustment: 0 dB to –8).

13 Booth monitor level dial (BOOTH/SESSION OUT)

Use to adjust the volume level of signals at the BOOTH/ SESSION OUT jacks (range of adjustment: 0 dB to –8).

This level can be set independently of the setting of the MASTER LEVEL dial.

14 Headphones level dial (PHONES)

Use to adjust the volume level of the headphones output (range of adjustment: 0 dB to –8).

15 Monitor SELECT switch

MASTER position

selects MASTER output. (This setting allows output regardless of the setting of the MASTER LEVEL dial.)

EFFECT position

Regardless of the [ON/OFF] setting of the EFFECT switch, the output is the signal selected with CUE, with effects added.

CUE position

selects the channel adjusted with the headphone mixing lever (17).

16 CH-2 equalizer dials (HI/MID/LOW)

HI

Use to adjust CH-2 input treble response (range of adjustment: 13 kHz, +6 dB to –26 dB).

MID

Use to adjust CH-2 input midrange response (range of adjustment: 1 kHz, +6 dB to –26 dB).

LOW

Use to adjust CH-2 input bass response (range of adjustment: 70 Hz, +6 dB to –26 dB).

17 Headphone mixing lever (CH-1 – CH-2)

This lever does not function when the monitor SELECT switch (15) is set to [MASTER].

When the monitor SELECT switch (15) is set to [EFFECT] or [CUE], moving the lever to the left side produces CH-1 monitor output, while moving it to the right produces CH-2 monitor output. Centering the lever at the center detent position produces balanced output of CH-1 and CH-2 signals.

18 CH-2 SEND button and indicator

When set to On, the indicator lights, and CH-2 signals are output at the SEND jacks.

19 CH-2 EQ ON/OFF switch and indicator

When set to [ON], the indicator lights and the CH-2 equalizer is enabled.

When set to [OFF], the indicator goes out and the equalizer circuit is bypassed.

20 CH-1 FADER START button

When this button is set to On, fader start and back cue can be performed on the CH-1 CD player.

Whether the operation is initiated by operation of the CH-1 fader lever, or by the cross fader lever is determined by the position of the front panel's FADER START selector switch; the selection is indicated by the lighting of the top panel's CH-1 FADER START indicator or C.F.1 FADER START indicator.

* For DJ CD players supporting the fader start/back cue function, see page 5, "**1. Connecting Input Components**".

21 CH-1 output On/Off lever (TRANSFORM)

Use to set CH-1 output to On or Off (Mute).

The lever's setting angle can be changed in 45° increments (changing of the angle should be performed by an authorized Pioneer service technician).

22 CH-1 REVERSE indicator
When lighted, indicates that the front panel's FADER REVERSE switch has been set so that the CH-1 fader lever operates in the reverse direction (see front panel item 52).

23 CH-1 fader lever
The CH-1 fader lever is used to control the level of signals sent to the cross fader. Signal level is maximum at scale mark "10," and minimum at scale mark "0".
When the front panel CH-1 FADER REVERSE switch is set to [ON], the signal level is maximum at scale mark "0," and minimum at scale mark "10".
* The channel fader curve can be adjusted by means of the front panel FADER CURVE dials.

24 CH-1 FADER START indicator
Lights when the CH-1 fader start/back cue function is enabled (see also top panel item 20 and front panel item 53).

25 C.F.1 FADER START indicator
Lights when CH-1 cross-fader start/back cue function is enabled (see also top panel item 20 and front panel item 53).

26 Level meters
Displays CH-1 and CH-2 peak levels or master output (stereo) peak levels (see also item 33).

27 Cross fader REVERSE indicator
Indicates that the front panel's FADER REVERSE switch has been set so that the cross fader now operates in reverse (left side is CH-2, right side is CH-1) (see also front panel item 52).

28 Cross fader lever
When the lever is moved to the left side, CH-1 is at maximum output and CH-2 is at minimum. When moved to the right side, CH-2 is at maximum output and CH-1 is at minimum.
* The cross fader curve can be adjusted individually for CH-1 and CH-2 by means of the front panel FADER CURVE dials.

29 Operating load adjust screw (FEELING ADJ.)
The hexagonal Allen screw located next to the panel's slider opening can be rotated with a hexagonal Allen driver to adjust the sliding resistance of the cross fader lever. (See page 17, "**Operating load adjust screw**".)

30 CH-2 FADER START button
When this button is set to On, fader start and back cue can be performed on the CH-2 CD player.
Whether the operation is initiated by operation of the CH-2 fader lever, or by the cross fader lever is determined by the position of the front panel's FADER START selector switch; the selection is indicated by the lighting of the top panel's CH-2 FADER START indicator or C.F.2 FADER START indicator.
* For DJ CD players supporting the fader start/back cue function, see page 5, "**1. Connecting Input Components**".

31 CH-2 output On/Off lever (TRANSFORM)
Use to set CH-2 output to On or Off (Mute).
This lever's setting angle can be changed in 45° increments (changing of the angle should be performed by an authorized Pioneer service technician).

32 CH-2 REVERSE indicator
When lighted, indicates that the front panel's FADER REVERSE switch has been set so that the CH-2 fader lever operates in the reverse direction (see front panel item 52).

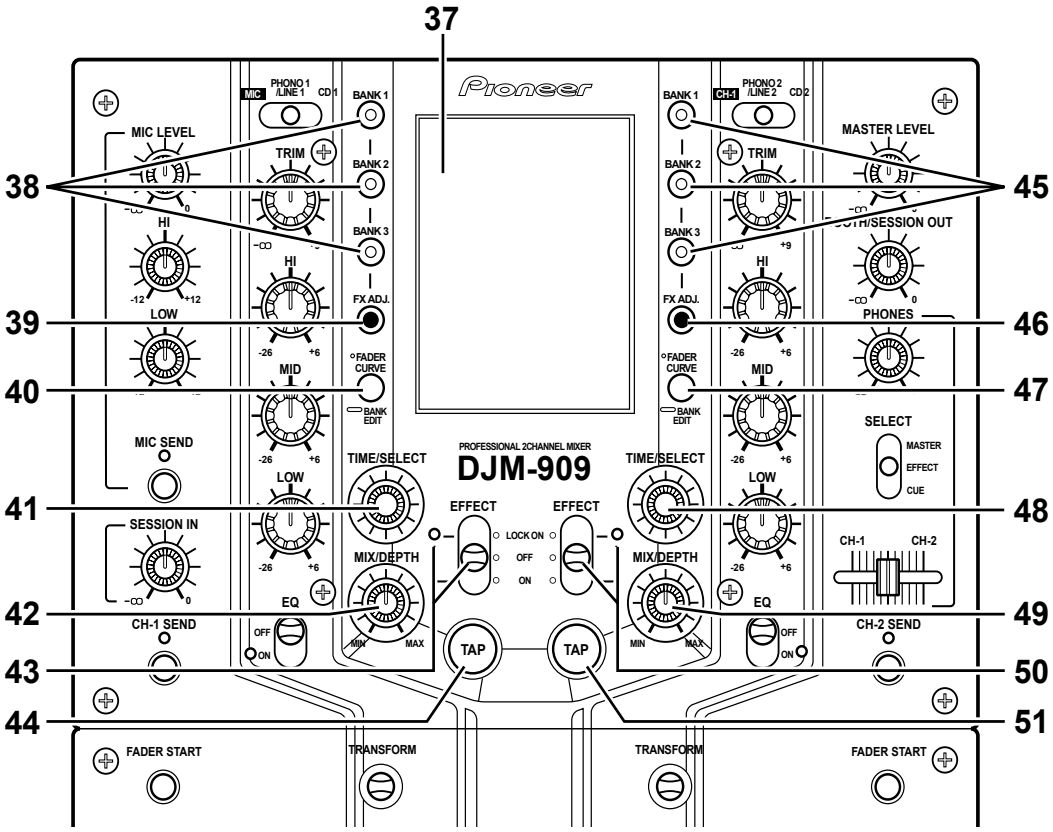
33 MASTER LEVEL display button and indicator
When depressed to the On position, the indicator lights and the level meters display the master output (stereo) peak levels. When turned Off, the level meters display the peak levels for CH-1 (left) and CH-2 (right) (see also item 26).

34 CH-2 fader lever
The CH-2 fader lever is used to control the level of signals sent to the cross fader. Signal level is maximum at scale mark "10," and minimum at scale mark "0".
When the front panel CH-2 FADER REVERSE switch is set to [ON], the signal level is maximum at scale mark "0," and minimum at scale mark "10".
* The channel fader curve can be adjusted by means of the front panel FADER CURVE dials.

35 CH-2 FADER START indicator
Lights when the CH-2 fader start/back cue function is enabled (see also top panel item 30 and front panel item 53).

36 C.F.2 FADER START indicator
Lights when CH-2 cross-fader start/back cue function is enabled (see also top panel item 30 and front panel item 53).

Top Panel (2)



37 Touch Panel

Touch this screen to set effects in accordance with the displayed menus.

* The panel's screen contrast and backlight luminance can be adjusted (see rear panel items 61 and 63).

38 CH-1 effect bank buttons and indicators (BANK 1, 2, 3)

When one of these buttons is pressed, the indicator lights and the corresponding preset effect is enabled. Each BANK button can be recorded with three effects for CH-1 (at time of shipping, the buttons have been factory preset with typically used effects). BANK 1 is selected in the default condition after power is initially turned on.

39 CH-1 effect parameter adjust button (FX ADJ.)

Press to display the touch panel's CH-1 effect parameter adjust menu.

40 Fader curve display and CH-1 effect select button (FADER CURVE/BANK EDIT)

Press to display the fader curve on the touch panel. Holding the button depressed for about one second will cause the touch panel to display the CH-1 effect select menu.

41 CH-1 effect time adjust/select dial (TIME/SELECT)

Use to adjust the time parameters of effects applied to CH-1 (rotate clockwise to lengthen, counterclockwise to shorten). When the effect select menu is displayed, causes the effects list to scroll.

42 CH-1 effect mix ratio/depth adjust dial (MIX/DEPTH)

Use to adjust the volume (amount) of effects applied to CH-1 (rotate clockwise to increase effects, counterclockwise to reduce).

43 CH-1 effect switch and indicator (EFFECT LOCK ON/OFF/ON)

To turn effects [ON], either pull switch forward (switch returns automatically to [OFF] when released) or slide to far side to the [LOCK ON] position. When effects are [ON], the indicator flashes and effects are applied to CH-1.

44 CH-1 TAP button

Under normal conditions, the automatic BPM counter operates to display the track's BPM value on the touch panel. Automatic BPM counting may be difficult with some tracks, however. In such cases, or if you wish to deliberately set a different BPM, use the TAP button.

- The BPM value can be changed by rotating the TIME/SELECT dial while holding the TAP button depressed.
- Tapping the button in time with the beat will cause the function to switch to the manual BPM count mode; the tapped beat will be counted and displayed as the BPM value. Returning to the auto BPM mode is performed from the effect parameter adjust screen (see page 16, "**Automatic Mode BPM Counting**") .

45 CH-2 effect bank buttons and indicators (BANK 1, 2, 3)

When one of these buttons is pressed, the indicator lights and the corresponding preset effect is enabled. Each BANK button can be recorded with three effects for CH-2 (at time of shipping, the buttons have been factory preset with typically used effects). BANK 1 is selected in the default condition after power is initially turned on.

46 CH-2 effect parameter adjust button (FX ADJ.)

Press to display the touch panel's CH-2 effect parameter adjust menu.

47 Fader curve display and CH-2 effect select button (FADER CURVE/BANK EDIT)

Press to display the fader curve on the touch panel. Holding the button depressed for about one second will cause the touch panel to display the CH-2 effect select menu.

48 CH-2 effect time adjust/select dial (TIME/SELECT)

Use to adjust the time parameters of effects applied to CH-2 (rotate clockwise to lengthen, counterclockwise to shorten). When the effect select menu is displayed, causes the effects list to scroll.

49 CH-2 effect mix ratio/depth adjust dial (MIX/DEPTH)

Use to adjust the volume (amount) of effects applied to CH-2 (rotate clockwise to increase effects, counterclockwise to reduce).

50 CH-2 effect switch and indicator (EFFECT LOCK ON/OFF/ON)

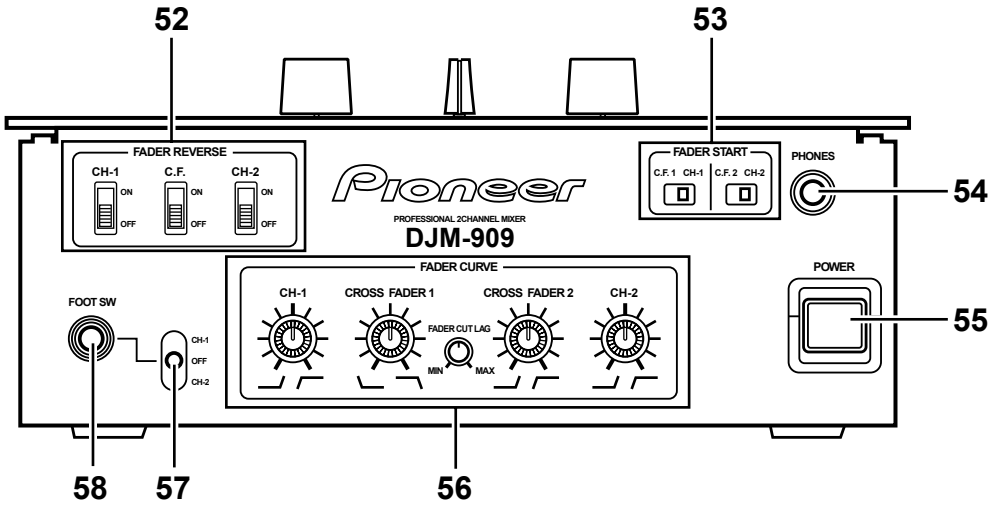
To turn effects [ON], either pull switch forward (switch returns automatically to [OFF] when released) or slide to far side to the [LOCK ON] position. When effects are [ON], the indicator flashes and effects are applied to CH-2.

51 CH-2 TAP button

Under normal conditions, the automatic BPM counter operates to display the track's BPM value on the touch panel. Automatic BPM counting may be difficult with some tracks, however. In such cases, or if you wish to deliberately set a different BPM, use the TAP button.

- The BPM value can be changed by rotating the TIME/SELECT dial while holding the TAP button depressed.
- Tapping the button in time with the beat will cause the function to switch to the manual BPM count mode; the tapped beat will be counted and displayed as the BPM value. Returning to the auto BPM mode is performed from the effect parameter adjust screen (see page 16, "**Automatic Mode BPM Counting**") .

Front Panel



52 FADER REVERSE switches

CH-1 ON/OFF

When set to [ON], the top panel's CH-1 REVERSE indicator lights, and the CH-1 fader lever operates in the reverse direction (scale mark "0" becomes 0 dB attenuation, and "10" becomes minus infinity). The fader start function also operates in reverse.

CH-2 ON/OFF

When set to [ON], the top panel's CH-2 REVERSE indicator lights, and the CH-2 fader lever operates in the reverse direction (scale mark "0" becomes 0 dB attenuation, and "10" becomes minus infinity). The fader start function also operates in reverse.

C.F. ON/OFF

When set to [ON], the top panel's cross fader REVERSE indicator lights, and the cross fader lever operates in the reverse direction (left side becomes CH-2, and right side becomes CH-1). The fader start function also operates in reverse.

53 FADER START selector switches

C.F.1 / CH-1

This switch determines whether the fader start operation for the CD player connected to CH-1 is activated by the cross fader lever, or by the CH-1 fader lever.

When the top panel's CH-1 FADER START button is set to On, selecting [C.F.1] causes the top panel's C.F.1 FADER START indicator to light, and selecting [CH-1] causes the top panel's CH-1 FADER START indicator to light.

C.F.2 / CH-2

This switch determines whether the fader start operation for the CD player connected to CH-2 is activated by the cross fader lever, or by the CH-2 fader lever.

When the top panel's CH-2 FADER START button is set to On, selecting [C.F.2] causes the top panel's C.F.2 FADER START indicator to light, and selecting [CH-2] causes the top panel's CH-2 FADER START indicator to light.

54 Headphone output jack (PHONES)

Accepts a 6.3 mm stereo headphones plug.

55 POWER switch

56 Fader attenuation dials (FADER CURVE)

CH-1

Use to adjust CH-1's fader attenuation curve.

CH-2

Use to adjust CH-2's fader attenuation curve.

CROSS FADER 1

Use to adjust cross fader's CH-1 attenuation curve.

CROSS FADER 2

Use to adjust cross fader's CH-2 attenuation curve.

FADER CUT LAG

Use to adjust mechanical play at both extremes of the cross fader movement (the range in which lever movement produces no effect).

(See page 17, "**Fader attenuation curve adjustment**".)

57 Foot switch channel select switch (FOOT SW CH-1/OFF/CH-2)

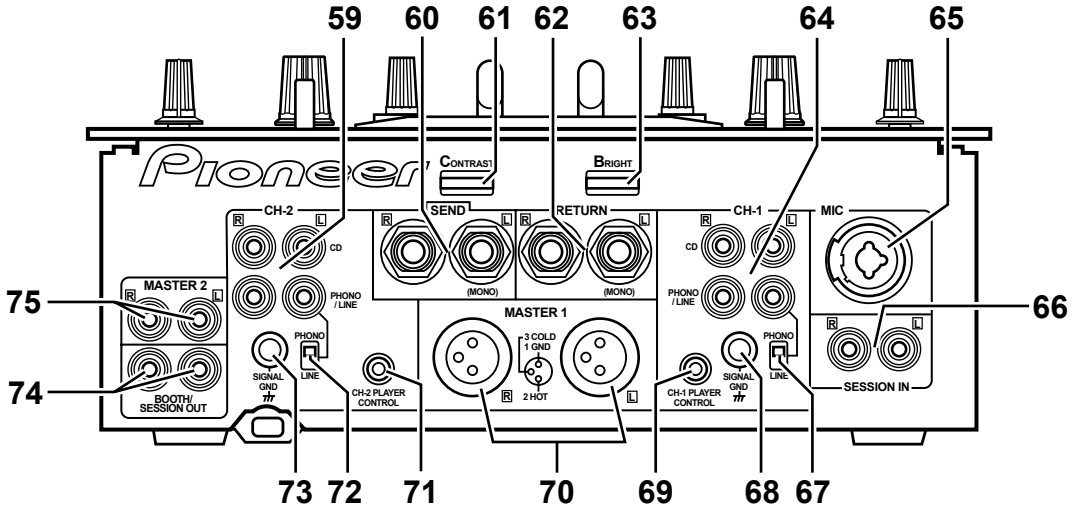
Use to select whether the Effect On/Off foot switch function operates on channel 1 [CH-1], channel 2 [CH-2]. When the switch is in the center position, both CH-1 and CH-2 are [OFF].

58 Foot switch jack (FOOT SW)

This 6.3 mm RCA jack can be used to connect an On/Off type pedal switch used to turn effects On and Off.

Various types of foot switch are available; some turn On when pressed, some turn Off when pressed, and others have locking mechanisms (alternate On/Off with successive presses). Select the type in accordance with your own preferences.

Rear Panel



59 CH-2 input jacks

CD

Connect to audio output from CH-2 CD player.

PHONO / LINE

Connect to audio output from CH-2 analog turntable, cassette deck or other line signal level component.

60 External effector output jacks (SEND)

Connect to the input connectors of an external effector. When the top panel switches (MIC SEND, CH-1 SEND, and CH-2 SEND) are set to On, these jacks output the MIC, CH-1, and CH-2 signals to the external effector.

When using an effector with a monaural input, connect it to the L channel output only. The signal actually sent to the effector will represent a mix of L and R signals.

61 Touch panel screen contrast control (CONTRAST)

Use to adjust the top panel's touch panel contrast.

62 External effector return jacks (RETURN)

Connect to the output connectors of the external effector. When using an effector with monaural output, connect only to the L channel input. The signal received from the effector will be input to both L and R channels.

63 Touch panel backlight control (BRIGHT)

Use to adjust the top panel's touch panel backlight luminance.

64 CH-1 input jacks

CD

Connect to the audio output of the CH-1 CD player.

PHONO / LINE

Connect to audio output from CH-1 analog turntable, cassette deck or other line signal level component.

65 Microphone input jack (MIC)

Connect to a microphone with XLR type or PHONE type plug. When applying effects to the microphone sound, set the top panel's CH-1 input selector switch (MIC–PHONO 1/LINE 1–CD1) to the [MIC] position.

66 Session input jacks (SESSION IN)

When using multiple mixers simultaneously, connect the other mixer outputs to these jacks.

67 CH-1 PHONO/LINE selector switch

Use to set the input sensitivity at the CH-1 PHONO/LINE connectors. The [PHONO] position supports an MM type cartridge.

* When no analog turntable is used, set this switch to the [LINE] side.

68 CH-1 signal ground (SIGNAL GND)

Connect to the CH-1 analog turntable's ground wire. Note that this is not meant as a safety ground.

69 CH-1 PLAYER CONTROL jack

When a Pioneer DJ CD player is connected to the CH-1 CD jacks, a special control cord can be used to connect this jack to the player's control jack, thus enabling the fader start function.

70 MASTER 1 jacks

XLR type balanced output. Connect to the power amplifier's balanced input jacks.

71 CH-2 PLAYER CONTROL jack

When a Pioneer DJ CD player is connected to the CH-2 CD jacks, a special control cord used to connect this jack to the player's control jack, thus enabling the fader start function.

72 CH-2 PHONO/LINE selector switch

Use to set the input sensitivity at the CH-2 PHONO/LINE connectors. The [PHONO] position supports an MM type cartridge.

* When no analog turntable is used, set this switch to the [LINE] side.

73 CH-2 signal ground (SIGNAL GND)

Connect to the CH-2 analog turntable's ground wire. Note that this is not meant as a safety ground.

74 BOOTH/SESSION OUT jacks

Connector jacks for booth monitor output. When using this unit in tandem with another mixer, connect these jacks to the other mixer's session input jacks.

75 MASTER 2 jacks

RCA type unbalanced output. Connect to the power amplifier's unbalanced input jacks.

EFFECT FUNCTIONS

Types of Effects

This unit is equipped with a beat effector linked to the BPM, and fader effector linked to the channel or cross fader, producing a total of 50 basic effects, but an even wider variety of effects can be produced by varying the parameters of each effect.

Beat Effector (effects linked to BPM)

Name	Function	FX ADJ. Parameter (touch panel)
1 DELAY (*1)	In time with BPM, outputs repeat sound once.	Set delay time of 1/8 to 8/1 of each beat of BPM.
2 ECHO (*1)	In time with BPM, outputs repeat sound several times, while diminishing.	Set delay time of 1/8 to 8/1 of each beat of BPM.
3 PAN ECHO (*1)	In time with BPM, outputs repeat sound, alternately to left and right.	Set delay time of 1/8 to 8/1 of each beat of BPM.
4 PITCH ECHO (*1)	In time with BPM, outputs repeat sound while changing pitch.	Set delay time of 1/8 to 2/1 of each beat of BPM; and set pitch shifter up or down.
5 REVERSE DELAY (*1)	In time with BPM, outputs repeat sound in reverse of playback direction.	Set delay time of 1/8 to 8/1 of each beat of BPM.
6 DUCKING ECHO (*1)	Outputs repeat sound when input sound level drops below a certain point.	Set delay time of 1/8 to 8/1 of each beat of BPM.
7 ROLL (*2)	With the turning ON of the EFFECT switch as a trigger, the input sound is recorded, and the recorded sound is repeated in units of individual beat.	Set effect time of 1/8 to 8/1 of each beat of BPM.
8 HOLD ECHO (*1) (*2)	In time with BPM, outputs repeat sound several times while diminishing. Repeat sound is preserved even if EFFECT switch is turned OFF.	Set delay time of 1/8 to 8/1 of each beat of BPM.
9 MULTI TAP DELAY (*1)	Output delay sound in time with beat, at intervals of preset delay time.	Set delay time of 1/4 to 1/1 of each beat of BPM; select delay pattern; and set feedback ON/OFF.
10 RAIN (*1)	Outputs sound with feeling of being in water.	Set delay time of 1/8 to 8/1 of each beat of BPM.
11 REVERB1 (*1)	Produces reverberation sound similar to that of a garage-sized room.	8 patterns can be set based on different filters.
12 REVERB2 (*1)	Produces reverberation sound similar to that of a large hall.	8 patterns can be set based on different filters.
13 REVERB3 (*1)	Hall reverberation (echo) is added to sound lag timed to BPM.	Set delay time of 1/8 to 4/1 of each beat of BPM.
14 PITCH SHIFTER1	Allows changing of pitch within range of ± 1 octave.	Set amount of pitch shift.
15 PITCH SHIFTER2	Outputs three types of pitches together with preset pitches.	Set type of changing pitch harmonies.
16 PAN	In time with BPM, outputs sound alternately to left and right.	Set right-left allocation time in units of 1/8 to 8/1 of each beat of BPM.
17 TRANS	In time with BPM, cut sound.	Set cut time in units of 1/8 to 8/1 of each beat of BPM.
18 RHYTHM TRANS	Cut sound in time with BPM and preset pattern.	Set effect time of 1/2 to 2/1 of each beat of BPM; and select cut pattern.
19 TRANS PAN	In time with BPM, cut long-period PAN outputs at set time.	Set cut time in units of 1/16 to 1/1 of each beat of BPM; and set PAN period.
20 TREMOLO	Produces wavering sound by applying tonal modulation.	Set modulation period based on beats calculated from BPM.
21 VIBRATO	Apply modulation to frequency, thus producing tonal variation.	Set modulation period based on beats calculated from BPM.

(*1) When the channel fader or cross fader is used to lowering sound volume, no effect sounds will be heard, even if monitor SELECT switch is set to the [EFFECT] position.

(*2) When EFFECT switch is turned OFF, no effect sounds will be heard even if the monitor SELECT switch is set to the [EFFECT] position.

EFFECT FUNCTIONS

Name	Function	FX ADJ. Parameter (touch panel)
22 CHORUS1	Produces broadened musical effect resembling the production of same pitch sounds from multiple sources.	Set period of chorus wavers based on beats calculated from BPM.
23 CHORUS2	Produces even broader musical effect than CHORUS1.	Set period of chorus wavers based on beats calculated from BPM.
24 CHORUS3	Changes degree of waver in chorus sound.	Set period of chorus waver based on beats calculated from BPM, and set degree of chorus sound waver.
25 FLANGER1	Produce flange effect by adding delayed sound. In time with BPM, change frequency band receiving flange effect.	Set period of flange effect shift based on beats calculated from BPM.
26 FLANGER2	In time with BPM, change frequency band receiving flange effect, thus producing either undulating or rotating effect.	Set period of flange effect shift based on beats calculated from BPM.
27 PHASER1	Phase effect is produced by adding sound with delayed phase. The phase-affected frequency band changes in time with BPM.	Set period of phase effect shift based on beats calculated from BPM.
28 PHASER2	Phase-affected frequency band changes in time with BPM. Phase effect change is inverted between L and R.	Set period of phase effect shift based on beats calculated from BPM.
29 TOUCH PHASER	Phase effect is produced in correspondence to input volume. The higher the input volume, the higher the frequencies producing the effect.	Set the number of filter stages producing the phase effect. Greater numbers of stages produce deeper effects.
30 TOUCH PHASER2	Phase effect is produced in correspondence to input volume. The higher the input volume, the lower the frequencies producing the effect.	Set the number of filter stages producing the phase effect. Greater numbers of stages produce deeper effects.
31 FILTER (LPF)	Change low-pass filter's cutoff frequency in time with BPM.	Set period of cutoff frequency shift based on beats calculated from BPM.
32 FILTER (HPF)	Change high-pass filter's cutoff frequency in time with BPM.	Set period of cutoff frequency shift based on beats calculated from BPM.
33 FILTER (BPF)	Change band pass filter's center frequency in time with BPM.	Set period of center frequency shift based on beat calculated from BPM.
34 FILTER PAN	In time with BPM, bass and treble sounds pan in opposite directions.	Set period of cutoff frequency shift based on beats calculated from BPM.
35 COMPRESSOR	Inputs above the threshold level are compressed before output.	Set degree of compression.

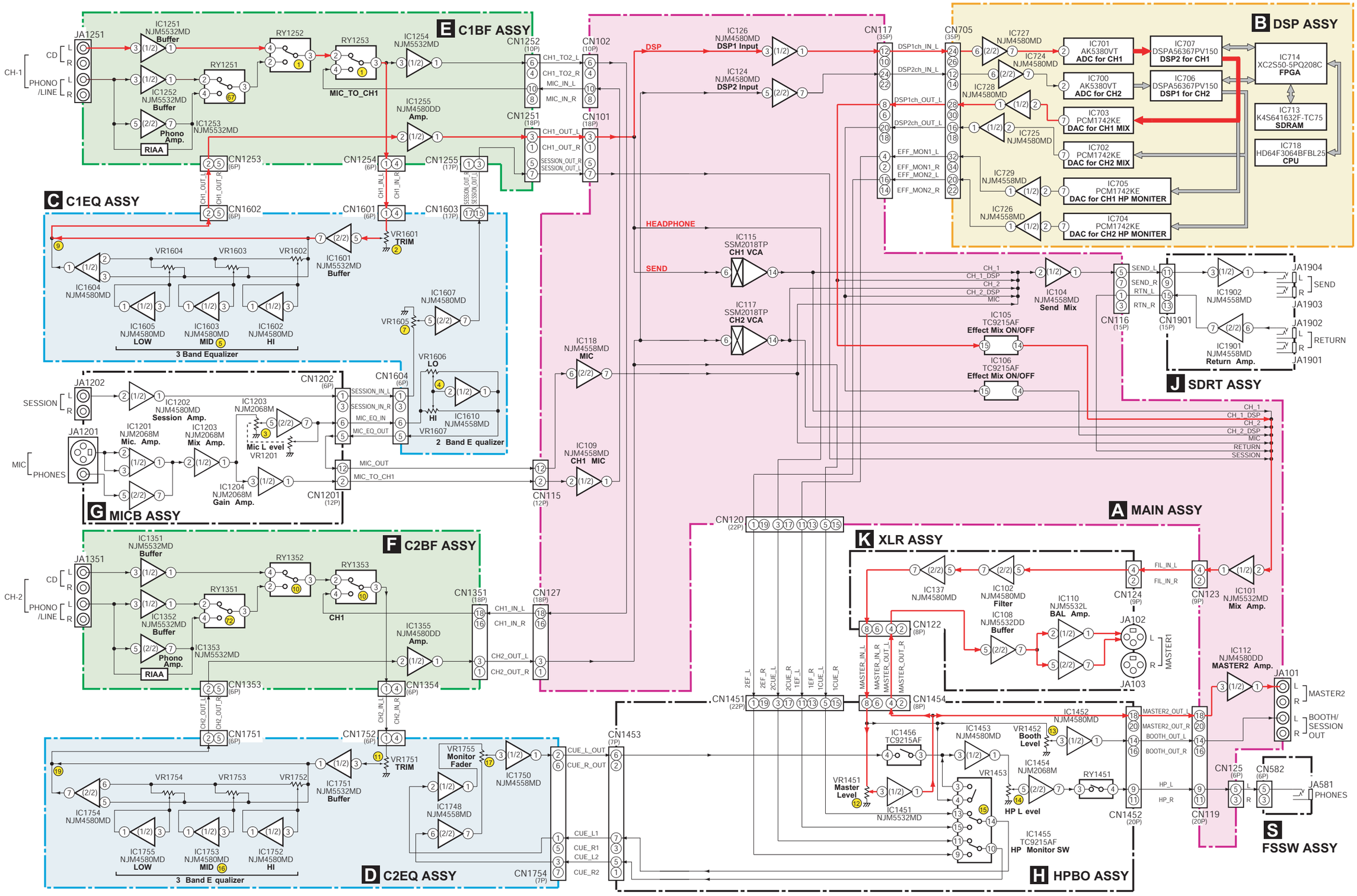
Fader Effector (effects linked to channel or cross fader)

Name	Function	FX ADJ. Parameter (touch panel)
36 FADER ROLL (*2)	EFFECT switch turn ON or fader position is used as trigger to record input sound, and then output the sound repeatedly within range of 1/1 to 1/16 beat.	Select either channel fader or cross fader. Set base ROLL time to 1/2, 1/1, or 2/1.
37 FADER MULTI TAP DELAY (*1)	At preset intervals repeat sound is output at 1/1 to 1/16 beat set with fader.	Select either channel fader or cross fader. Set basic beat time of 1/2 to 2/1 for each BPM beat, and set delay pattern selection.
38 FADER TRANS PAN	In time with the BPM, long-period PAN output is cut at time corresponding to fader position.	Select either channel fader or cross fader. Set PAN operation period and basic effect time to be cut with fader.
39 FADER PITCH SHIFTER	In response to fader position, pitch of input sounds is changed.	Select either channel fader or cross fader. Set type of pitch change.
40 FADER RING	Produces metallic bass sound effect.	Select either channel fader or cross fader. Set frequency of sound effect.
41 FADER VOCODER1	Vocoder effect; modulates internal oscillator sound in response to input sound. Depending on fader position, changes internal oscillator sound's fundamental frequency. 7 code sounds can be added.	Select either channel fader or cross fader. Set code type.
42 FADER VOCODER2		
43 FADER FILTER (LPF)	Changes low-pass filter's cutoff frequency, depending on fader position.	Select either channel fader or cross fader.
44 FADER FILTER (HPF)	Changes high-pass filter's cutoff frequency, depending on fader position.	Select either channel fader or cross fader.
45 FADER FILTER (BPF)	Changes band-pass filter's center frequency depending on fader position.	Select either channel fader or cross fader.
46 FADER FLANGER	Changes frequency band subjected to flanger effect, depending on fader position.	Select either channel fader or cross fader.
47 FADER PHASER	Changes frequency band subjected to phaser effect, depending on fader position.	Select either channel fader or cross fader. Set number of filter stages producing phase effect. Greater numbers of stages produce deeper effects.
48 FADER SYNTHE1	Outputs sine wave sound source.	Select either channel fader or cross fader. Select frequency equivalent to note "DO".
49 FADER SYNTHE2	Outputs sawtooth wave sound source.	Select either channel fader or cross fader. Select frequency equivalent to note "DO".
50 FADER SYNTHE3	Outputs square wave sound source.	Select either channel fader or cross fader. Select frequency equivalent to note "DO".

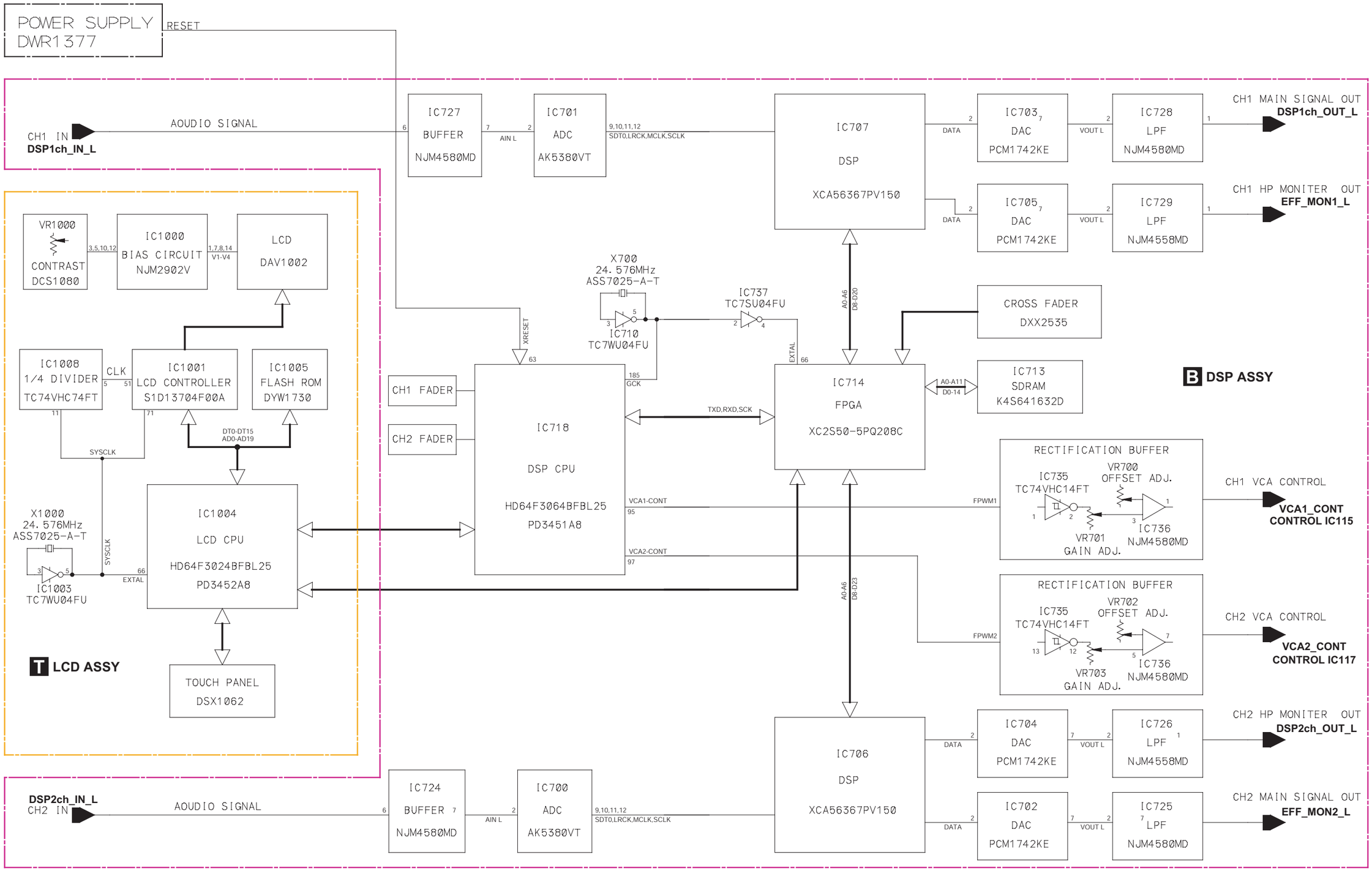
(*1) When the channel fader or cross fader is used to lowering sound volume, no effect sounds will be heard, even if monitor SELECT switch is set to the [EFFECT] position.

(*2) When EFFECT switch is turned OFF, no effect sounds will be heard even if the monitor SELECT switch is set to the [EFFECT] position.

DJM-909 - OVERALL BLOCK DIAGRAM



DJM-909 - DSP/ LCD BLOCK DIAGRAM



TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think there is something wrong with this component, check the points below. Sometimes the trouble may originate from another component. Thus, also check the other electrical appliances also in use.
and then on again.

Problem	Possible Cause	Countermeasure
The power does not turn on.	● The power cord has not been connected.	● Connect the cord to a power outlet.
There is little or no sound.	● The Input selector switch is in the wrong position. ● The rear panel's PHONO/LINE selector switch is set to [LINE] when a analog turntable is connected to the input connectors. ● The connection cable hasn't been connected properly or has been disconnected. ● The terminal or plug is dirty. ● The TRANSFORM lever is tripped.	● Set the Input selector switch to the device currently playing. ● Set the PHONO/LINE selector switch to [PHONO]. ● Connect it properly. ● Clean and reconnect. ● Return the TRANSFORM lever to its upright position.
Sound is distorted.	● Master output level is too high. ● Input level is too high. ● The rear panel's PHONO/LINE selector switch is set to [PHONO] when a cassette deck or other line component is connected to the input connectors.	● Adjust MASTER LEVEL dial. ● Adjust the TRIM dial so that the input level approaches 0 dB on the peak level meter. ● Set the PHONO/LINE selector switch to [LINE].
CD player's fader won't start.	● The top panel's FADER START button is set to Off. ● The rear panel's PLAYER CONTROL jack hasn't been connected.	● Set the top panel's FADER START button to On. ● Use the control cord to connect the unit and CD player.
Effects don't work.	● EFFECT switch is [OFF]. (If hand is released when switch is in [ON] position, it will return to [OFF].) ● The effect MIX/DEPTH dial is set to [MIN].	● Either hold EFFECT switch at [ON] position, or set to [LOCK ON]. ● Adjust effect MIX/DEPTH dial properly.
External effector's sound distorted.	● The input level from the external effector is too high.	● Lower the external effector's output level.
External effector don't work.	● The top panel's SEND buttons (MIC SEND, CH-1 SEND, CH-2 SEND) are set to Off. ● An external effector's output coupler is not connected to the RETURN jacks.	● Turn on the top panel's SEND button corresponding to the channel you wish to apply external effects to (indicator will light). ● Connect an external effector's output coupler to the RETURN jacks.
BPM can't be measured, or value is strange.	● Input level is too high or too low. ● BPM may not measure properly with some tracks.	● Adjust TRIM dial to set input level around 0 dB on the peak level meter. ● Set other channels so that input level is around 0 dB. ● Strike TAP switch to count BPM manually.
The counted BPM differs from the CD's published value.	● Different counting methods are used, resulting in some variation in values.	● No response necessary.
Can't see touch panel display.	● Improper contrast adjustment. ● Backlight is too dark.	● Adjust touch panel CONTRAST control on rear-panel. ● Adjust the rear panel's touch panel backlight control (BRIGHT).

GENERAL INFORMATION

DIAGNOSIS

SERVICE MODE

1. Outline of Service Mode

• This unit is controlled by a system control microcomputer, which controls the whole system, and an LCD microcomputer, which processes displays and effects. Setup modes for both the system control microcomputer and the LCD microcomputer, and Test mode for the LCD microcomputer are provided.

① Display Check mode
Mode for checking button inputs and display functions

② Setup mode
Initial Setting mode for the noncontact fader, Calibration mode for the touch panel, and Factory-Preset Effect mode can be selected from this mode.

③ Initial Setting mode for the noncontact fader
Mode for initial setting of the noncontact fader.
(If this initial setting is not correctly performed, correct crossfader signals cannot be output.)
One of the modes selected from Setup mode.

Note:
After replacement of the Noncontact Fader Assy or DSP Assy or rewriting of the program for the system control microcomputer, be sure to make this initial setting.

④ Calibration mode for the touch panel
Mode for calibrating the touch panel.
(If calibration is not correctly performed, the indications on the touch panel may be shifted from the corresponding operational positions.)
One of the modes selected from Setup mode.

Note:
After replacement of the LCD Assy or the LCD microcomputer, it is necessary to calibrate the touch panel.

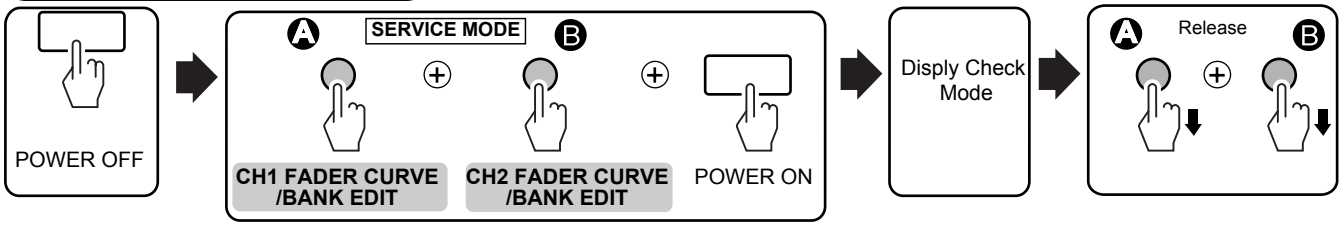
⑤ Factory-Preset Effect mode
Mode for resetting the effect type and parameter values to factory-preset values. One of the modes selected from Setup mode.

⑥ Version Check mode
You can check the software version of each microcomputer.

2. Display Check Mode

To enter this mode, while holding the CH1 FADER CURVE/ BANK EDIT and CH2 FADER CURVE/ BANK EDIT buttons pressed, press the POWER button.

Disply Check Mode : ON



Disply Check Mode : CANCEL

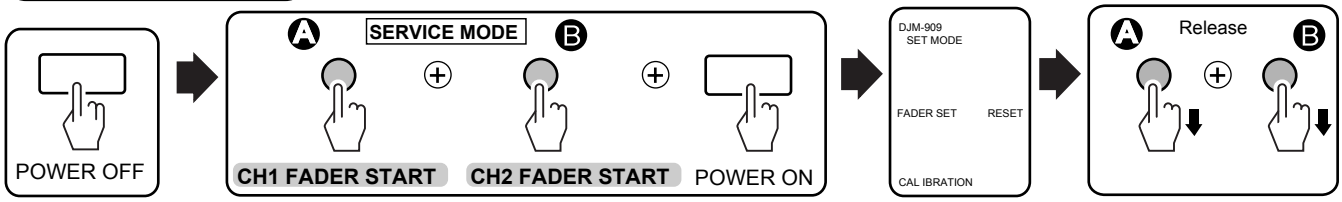
- In this mode, you can check if the input to each button or VR is normal and if the display functions normally by observing the corresponding indications, as shown in the table below:

Type	Button	Indication
	CH1 BANK1	The LED for CH1 BANK1 lights up.
	CH1 BANK2	The LED for CH1 BANK2 lights up.
	CH1 BANK3	The LED for CH1 BANK3 lights up.
	CH2 BANK1	The LED for CH2 BANK1 lights up.
	CH2 BANK2	The LED for CH2 BANK2 lights up.
	CH2 BANK3	The LED for CH2 BANK3 lights up.
	CH1 FX ADJ.	The CH1 EFFECT2 indication on the LCD lights up.
	CH1 FADER CURVE/ BANK EDIT	The CH1 EFFECT3 indication on the LCD lights up.
	CH2 FX ADJ.	The CH2 EFFECT2 indication on the LCD lights up.
	CH2 FADER CURVE/ BANK EDIT	The CH2 EFFECT3 indication on the LCD lights up.
	CH1 EFFECT	The LED for CH1 EFFECT lights up.
	CH2 EFFECT	The LED for CH2 EFFECT lights up.
	CH1 TAP	The CH2 EFFECT1 indication on the LCD lights up.
	CH2 TAP	The CH2 EFFECT1 indication on the LCD lights up.
	Touch panel	The CH1 EFFECT1 indication on the LCD lights up.
	CH1 TIME/SELECT	The value of the CH1 parameter on the LCD increases as the CH1 TIME/SELECT button is turned clockwise.
	CH2 TIME/SELECT	The value of the CH2 parameter on the LCD increases as the CH2 TIME/SELECT button is turned clockwise.
	CH1 MIX/DEPTH	The value of the CH1 BPM indication on the LCD increases as the CH1 MIX/DEPTH button is turned clockwise.
	CH2 MIX/DEPTH	The value of the CH2 BPM indication on the LCD increases as the CH2 MIX/DEPTH button is turned clockwise.

3. Setup mode

To enter Setup mode, while holding both the CH1 FADER START and CH2 FADER START buttons pressed, press the POWER button.

Setup Mode : ON



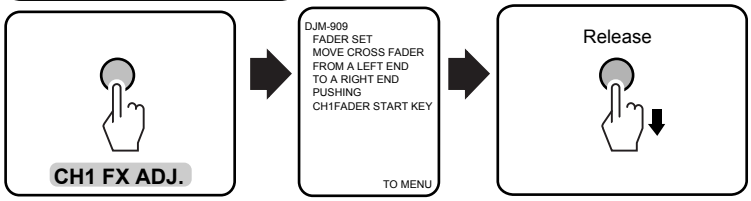
• When Setup mode is activated, "DJM-909 SETMODE" is displayed on the LCD.
During Setup mode, if the CH1 FX ADJ. button is pressed, Initial Setting mode for the noncontact fader is activated.
During Setup mode, if the CH1 FADER CURVE/ BANK EDIT button is pressed, Calibration mode for the touch panel is activated.
During Setup mode, if the CH2 FX ADJ. button is pressed, Factory-Preset Effect mode is activated.

Setup Mode : CANCEL

4. Initial Setting mode for the noncontact fader

To enter this mode, press the CH1 FX ADJ. button during Setup mode. (For details on how to enter Setup mode, see "3. Setup mode.")

Fader Setup Mode



Fader Setup Mode : CANCEL

• When Initial Setting mode for the noncontact fader is activated, "DJM-909 FADER SET MOVE CROSS FADER FROM A LEFT END TO A RIGHT END PUSHING CH1 FADER START KEY" is displayed on the LCD.

How to set up

① Move the crossfader lever to the leftmost position.
② While holding the CH1 FADER START button pressed, move the crossfader lever to the rightmost position.
Move the lever at a constant speed from the leftmost to the rightmost position, taking 1.5 seconds or more.
③ Release the CH1 FADER START button.

• When the initial setting is completed, "END" is displayed on the LCD, and the CH-1 FADER START and C.F.1 FADER START indications light up.
• If the initial setting fails, "ERROR" is displayed on the LCD, and the CH-1 FADER START, C.F.1 FADER START, CH-2 FADER START, or C.F.2 FADER START indication flashes, depending on the type of error.

LED	Error
CH-1 FADER START	Start error: At the start of making the initial setting, the crossfader lever was not set to its leftmost position.
C.F.1 FADER START	Speed error: The crossfader lever was moved too quickly.
CH-2 FADER START	End error: The crossfader lever was not moved to its rightmost position.
C.F.2 FADER START	Code error: The gray codes for the crossfader could not be read.

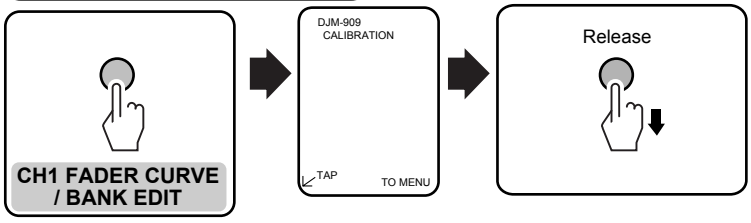
If an error is generated, repeat from Step ① of "How to set up."

• When the initial setting for the noncontact fader is completed, press the CH2 FADER CURVE/ BANK EDIT button to return to the menu of Setup mode. You can proceed to Calibration mode for the touch panel.

5. Calibration mode for the touch panel

To enter this mode, press the CH1 FADER CURVE/ BANK EDIT button during Setup mode. (For details on how to enter Setup mode, see "3. Setup mode.")

Calibration Mode : ON



Calibration Mode : CANCEL

• When Calibration mode for the touch panel is activated, "DJM-909 CALIBRATION" is displayed at the upper center of the LCD, and "TAP" and an arrow are displayed at the lower right.

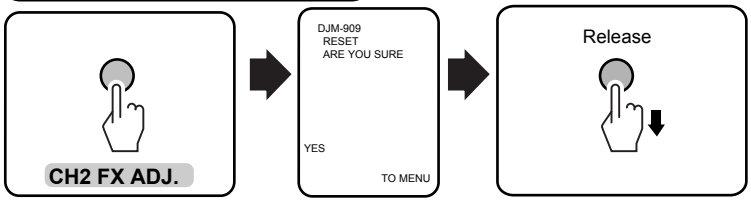
How to set up

① Tap on the tip of the arrow at the lower left of the LCD with a pointed object.
② When "TAP" and an arrow are displayed at the upper right of the LCD, tap on the tip of the arrow with the pointed object.

6. Factory-preset effect mode

To enter this mode, press the CH2 FX ADJ. button during Setup mode. (For details on how to enter Setup mode, see "3. Setup mode.")

Efect Mode : ON



Efect Mode : CANCEL

• When Factory-Preset Effect mode is activated, "DJM-909 RESET" is displayed at the upper center of the LCD, and "ARE YOU SURE" is displayed at the lower center.

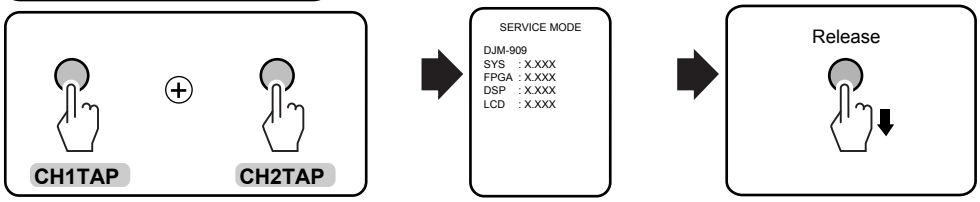
How to reset to factory-preset values

① Press the CH1 FADER CURVE/ BANK EDIT button.

7. Version Check mode

• You can check the software version of each microcomputer.

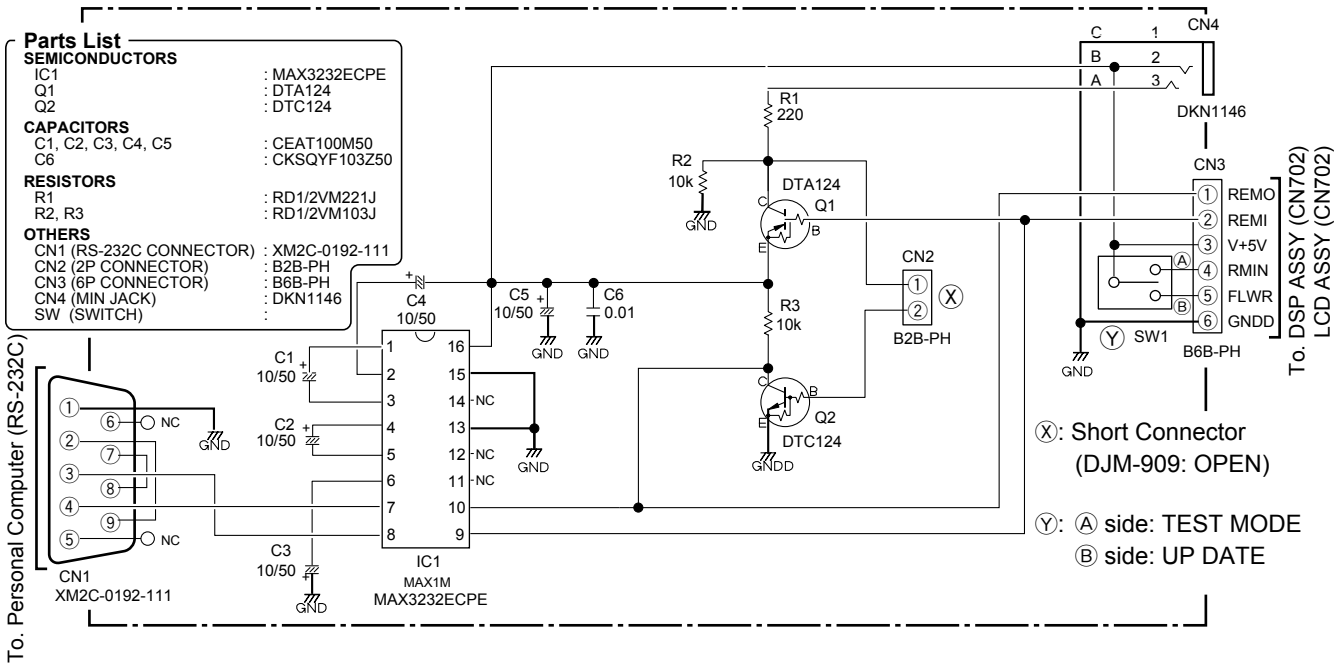
Version Mode : ON



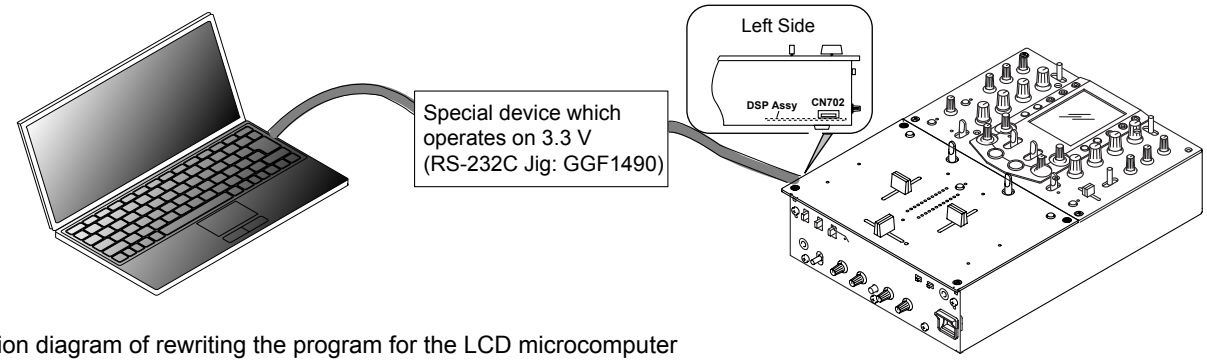
• In normal operation mode, press the CH1 TAP and CH2 TAP buttons simultaneously and hold them pressed for 10 seconds. The software version of each microcomputer is displayed on the LCD.

• To quit this mode, press any of the CH1 BANK1, CH1 BANK2, CH1 BANK3, CH2 BANK1, CH2 BANK2, CH2 BANK3, CH1 FX ADJ., CH1 FADER CURVE/ BANK EDIT, CH2 FX ADJ., or CH2 FADER CURVE/ BANK EDIT buttons.

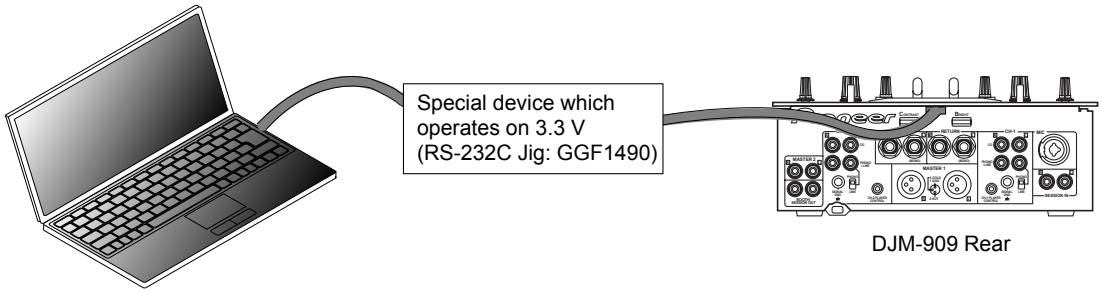
[RS-232C Jig Schematic Diagram] : (Jig No. GGF1490)



• Connection diagram of rewriting the program for the system control microcomputer



• Connection diagram of rewriting the program for the LCD microcomputer



DJM-909 Rear

<How to rewrite software for the DJM-909>

The DJM-909 has five types of program and data blocks that can be rewritten from the outside.

A. Connector of rewriting the program for the system control microcomputer (DSP Assy: CN702)

① Program for the system control microcomputer: mixer_sys_xxxx.mot (or PD3451x8.mot)

B. Connector of rewriting the program for the LCD control microcomputer (LCD Assy: CN1001)

② Program for the LCD microcomputer: LCD_Verxxxx.mot (or PD3452x8.mot)
③ Effect program: f_upxxx_00.mot
④ Display data 1: f_upxxx_01.mot
⑤ Display data 2: f_upxxx_02.mot

Among the above-mentioned program or data blocks, programs ① and ② can be directly rewritten using the above-mentioned connectors, but the program or data blocks ③-⑤ cannot be directly rewritten, because connectors for direct rewriting are not provided. Therefore, to rewrite the program or data blocks ③-⑤, the program or data is (are) first copied to the LCD microcomputer with a program for executing rewriting, and after executing that program, rewriting will be executed. The program for performing this rewriting remains in the LCD microcomputer after the program or data blocks ③-⑤ has (have) been rewritten, and if you turn on the power in this condition, the program that performs the rewriting will run again.

Therefore, it is necessary to rewrite the program of the LCD microcomputer ② after any of the program or data blocks ③-⑤ is (are) rewritten.

Note:
If the unit is accidentally turned on without rewriting the program of the LCD microcomputer ② after any of the program or data blocks ③-⑤ was (were) rewritten, the LED of the main unit (see Fig. 1) will blink. Be sure to wait until the LED stops blinking and remains lit, then turn off the unit. If you turn off the unit while the LED is blinking, the unit will not operate properly.

- Effect program : BANK1 LED (Ⓐ)
- Display data 1 : BANK2 LED (Ⓑ)
- Display data 2 : BANK3 LED (Ⓒ)

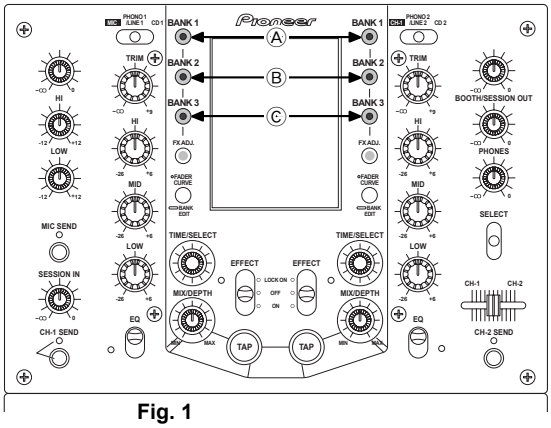


Fig. 1

• Time required for rewriting

1. Time required for transferring the rewriting control program: 5 sec
2. Time required for rewriting the program for the system control microcomputer: 2 min 30 sec
3. Time required for transferring the Effect program: 40 sec
   Time required for rewriting the program: 15 sec
4. Time required for transferring Display data 1: 1 min 15 sec
   Time required for rewriting the program: 15 sec
5. Time required for transferring Display data 2: 1 min
   Time required for rewriting the program: 15 sec
6. Time required for rewriting the program for the LCD microcomputer: 1 min 25 sec

• Notes

- Use the special device for PC connection, which operates on 3.3 V (Jig No.GGF1490).
- Be sure to rewrite the program for the LCD microcomputer after rewriting the flash ROM. If the Effect program, Display data 1, and Display data 2 are to be rewritten along with the program for the LCD microcomputer, rewrite these first then rewrite the program for the LCD microcomputer.
- If the rewriting control program is not transferred when OK is clicked on while "Set to Boot mode and restart by resetting" is displayed in the rewriting procedure below, the following causes may be suspected:
  1. The special device is not securely connected.
  2. The special device does not operate on 3.3 V.
  3. The DJM-909 is not turned on.

- **After rewriting the program for the system control microcomputer, make the initial setting for the noncontact fader (see "7.1.1 Service mode").**
- **After rewriting the program for the LCD control microcomputer, make the initial setting for the Calibration mode (touch panel) (see "7.1.1 Service mode").**

1. How to rewrite the program for the system control microcomputer

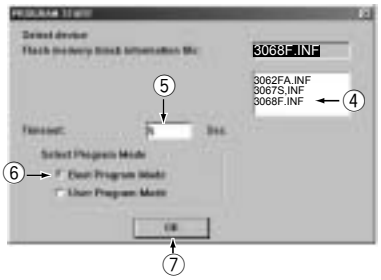
① With the DJM-909's power off, connect the DJM-909 and a PC via the special device, by connecting it to the connector for rewriting the program for the system control microcomputer.
② Turn on the DJM-909.
③ Start up [FLASH.exe.], the software for rewriting, on the PC.
④ Assign "3068F.INF" to "Device selection Flash memory block information file."

⑤ Assign 5 sec to "Timeout duration."

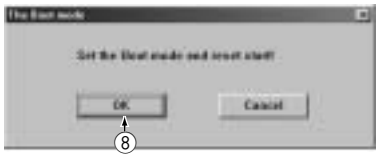
⑥ Assign "Boot mode" to "Mode selection."

⑦ Click on "Set".

• Operating screen



⑧ If "Set to Boot mode and restart by resetting" is displayed, click on "OK".

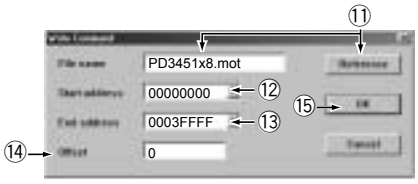


⑨ The rewriting control program is transferred in 5 seconds.

⑩ When program transfer is finished, the display in the window disappears.
Select "WRITE" at the upper left of the menu bar.

⑪ After clicking on "Reference", select "mixer_sys_xxxx.mot" (or PD3453x8.mot) for "File name."
⑫ Assign "00000000" to "Start address."
⑬ Assign "0003FFFF" to "End address."
⑭ Assign "0" to "Offset."

⑮ Click on "OK".



⑯ The system control computer program is transferred in 2 min 30 sec.

⑰ When program transfer is finished, the display in the window disappears.
Select File on the menu bar then Exit to exit the program.

⑱ Turn off the DJM-909.
⑲ Disconnect the special device from the DJM-909.

• After rewriting the program for the system control microcomputer, make the initial setting for the noncontact fader (see "7.1.1 Service mode").

2. How to rewrite the Effect program (rewriting the program in the flash ROM)

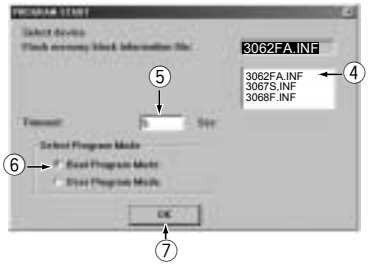
① With the DJM-909's power off, connect the DJM-909 and a PC via the special device by connecting it to the connector for rewriting the program for the LCD microcomputer.
② Turn on the DJM-909.
③ Start up [FLASH.exe.], the software for rewriting, on the PC.
④ Assign "3062FA.INF" to "Device selection Flash memory block information file."

• Operating screen

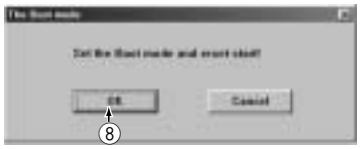
⑤ Assign 5 sec to "Timeout duration."

⑥ Assign "Boot mode" to "Mode selection."

⑦ Click on "Set".



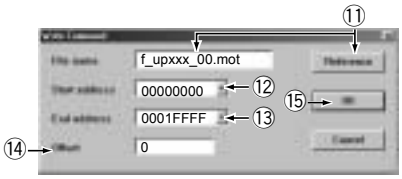
⑧ If "Set to Boot mode and restart by resetting" is displayed, click on "OK".



⑨ The rewriting control program is transferred in 5 seconds.

⑩ When program transfer is finished, the display in the window disappears.
Select "WRITE" at the upper left of the menu bar.

⑪ After clicking on Reference, select "f_upxxx_00.mot" for "File name."
⑫ Assign "00000000" to "Start address."
⑬ Assign "0001FFFF" to "End address."
⑭ Assign "0" to "Offset."
⑮ Click on "OK".



⑯ The program is transferred in 40 sec.

⑰ When program transfer is finished, the display in the window disappears.
Select File on the menu bar then "Exit" to exit the program.

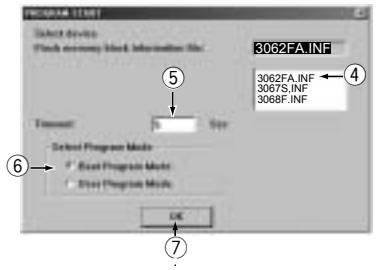
⑱ Turn off the DJM-909.
⑲ Disconnect the special device from the DJM-909.
⑳ Turn on the DJM-909.
㉑ Rewriting of the flash ROM by the LCD microcomputer starts and is completed in 15 seconds. Nothing is displayed on the LCD.
㉒ Rewriting is completed when the "BANK 1" LED lights up.
㉓ Turn off the DJM-909.

Note: Be sure to rewrite the program for the LCD microcomputer after rewriting the program in the flash ROM.
If rewriting of Display data 1 and Display data 2 are also required along with the Effect program, be sure to rewrite these first then rewrite the program for the LCD microcomputer.

3. How to rewrite the Display data 1 (rewriting the data in the flash ROM)

① With the DJM-909's power off, connect the DJM-909 and a PC via the special device, by connecting it to the connector for rewriting the program for the LCD microcomputer.
② Turn on the DJM-909.
③ Start up [FLASH.exe.], the software for rewriting, on the PC.
④ Assign "3062FA.INF" to "Device selection Flash memory block information file."

• Operating screen

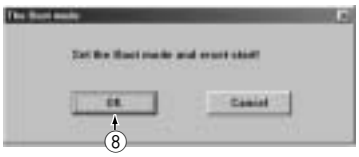


⑤ Assign 5 sec to "Timeout duration."

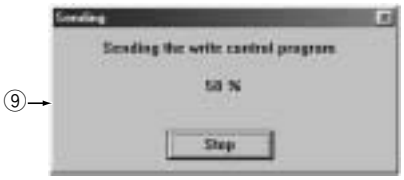
⑥ Assign "Boot mode" to "Mode selection."

⑦ Click on "Set".

⑧ If "Set to Boot mode and restart by resetting" is displayed, click on "OK".

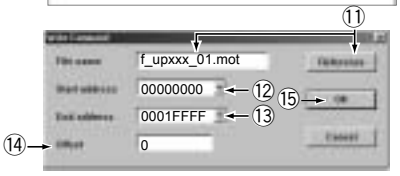


⑨ The rewriting control program is transferred in 5 seconds.



⑩ When program transfer is finished, the display in the window disappears.
Select "WRITE" at the upper left of the menu bar.

⑪ After clicking on Reference, select "f_upxxx_01.mot" for "Filename".
⑫ Assign "00000000" to "Start address."
⑬ Assign "0001FFFF" to "End address."
⑭ Assign "0" to "Offset."
⑮ Click on "OK".



⑯ The program is transferred in 1 min 15 sec.

⑰ When program transfer is finished, the display in the window disappears.
Select File on the menu bar then Exit to exit the program.
⑱ Turn off the DJM-909.
⑲ Disconnect the special device from the DJM-909.
⑳ Turn on the DJM-909.
㉑ Rewriting of the data in the flash ROM by the LCD microcomputer starts and is completed in 15 seconds. Nothing is displayed on the LCD.
㉒ Rewriting is completed when the "BANK 2" LED lights up.
㉓ Turn off the DJM-909.

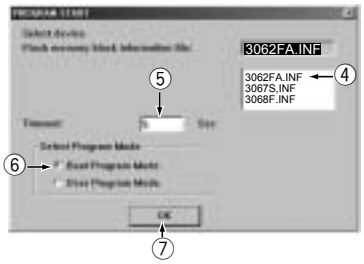
Note: Be sure to rewrite the program for the LCD microcomputer after rewriting the data in the flash ROM.
If rewriting of Effect program and Display data 2 are also required along with Display data 1, be sure to rewrite these first then rewrite the program for the LCD microcomputer.

4. How to rewrite the Display data 2 (rewriting the data in the flash ROM)

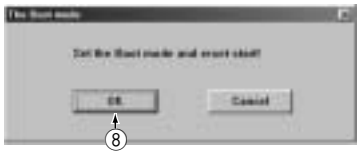
① With the DJM-909's power off, connect the DJM-909 and a PC via the special device, by connecting it to the connector for rewriting the program for the LCD microcomputer.
② Turn on the DJM-909.
③ Start up [FLASH.exe.], the software for rewriting, on the PC.

④ Assign "3062FA.INF" to "Device selection Flash memory block information file."
⑤ Assign 5 sec to "Timeout duration."
⑥ Assign "Boot mode" to "Mode selection."
⑦ Click on "Set".

• Operating screen



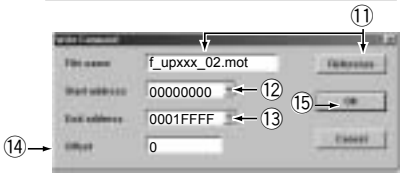
⑧ If "Set to Boot mode and restart by resetting" is displayed, click on "OK".



⑨ The rewriting control program is transferred in 5 seconds.

⑩ When program transfer is finished, the display in the window disappears.
Select "WRITE" at the upper left of the menu bar.

⑪ After clicking on Reference, select "f_upxxx_02.mot" for "Filename".
⑫ Assign "00000000" to "Start address."
⑬ Assign "0001FFFF" to "End address."
⑭ Assign "0" to "Offset."
⑮ Click on "OK".



⑯ The program is transferred in 1 min.

⑰ When program transfer is finished, the display in the window disappears.
Select File on the menu bar then Exit to exit the program.
⑱ Turn off the DJM-909.
⑲ Disconnect the special device from the DJM-909.
⑳ Turn on the DJM-909.
㉑ Rewriting of the data in the flash ROM by the LCD microcomputer starts and is completed in 15 seconds. Nothing is displayed on the LCD.
㉒ Rewriting is completed when the "BANK 3" LED lights up.
㉓ Turn off the DJM-909.

Note: Be sure to rewrite the program for the LCD microcomputer after rewriting the data in the flash ROM.
If rewriting of Effect program and Display data 1 are also required along with Display data 2, be sure to rewrite these first then rewrite the program for the LCD microcomputer.

5. How to rewrite the program for the LCD microcomputer

① With the DJM-909's power off, connect the DJM-909 and a PC via the special device, by connecting it to the connector for rewriting the program for the LCD microcomputer.
② Turn on the DJM-909.
③ Start up [FLASH.exe.], the software for rewriting, on the PC.

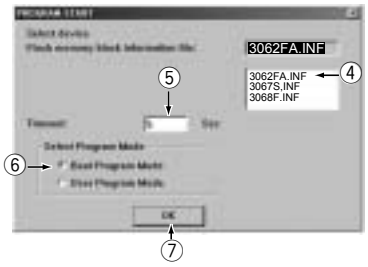
• Operating screen

④ Assign "3062FA.INF" to "Device selection Flash memory block information file."

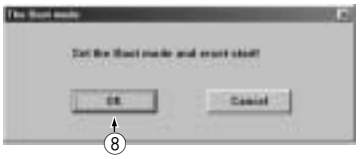
⑤ Assign 5 sec to "Timeout duration."

⑥ Assign "Boot mode" to "Mode selection."

⑦ Click on "Set".



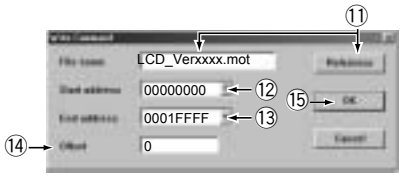
⑧ If "Set to Boot mode and restart by resetting" is displayed, click on "OK".



⑨ The rewriting control program is transferred in 5 seconds.

⑩ When program transfer is finished, the display in the window disappears.
Select "WRITE" at the upper left of the menu bar.

⑪ After clicking on Reference, select "LCD_Verxxxx.mot" (or "PD3452x8.mot") for "Filename".
⑫ Assign "00000000" to "Start address."
⑬ Assign "0001FFFF" to "End address."
⑭ Assign "0" to "Offset."
⑮ Click on "OK".



⑯ The program is transferred in 1 min 25 sec.

⑰ When program transfer is finished, the display in the window disappears.
Select File on the menu bar then Exit to exit the program.

⑱ Turn off the DJM-909.
⑲ Disconnect the special device from the DJM-909.

• After rewriting the program for the LCD control microcomputer, make the initial setting for the Calibration mode (touch panel) (see "7.1.1 Service mode").

POWER ON SEQUENCE

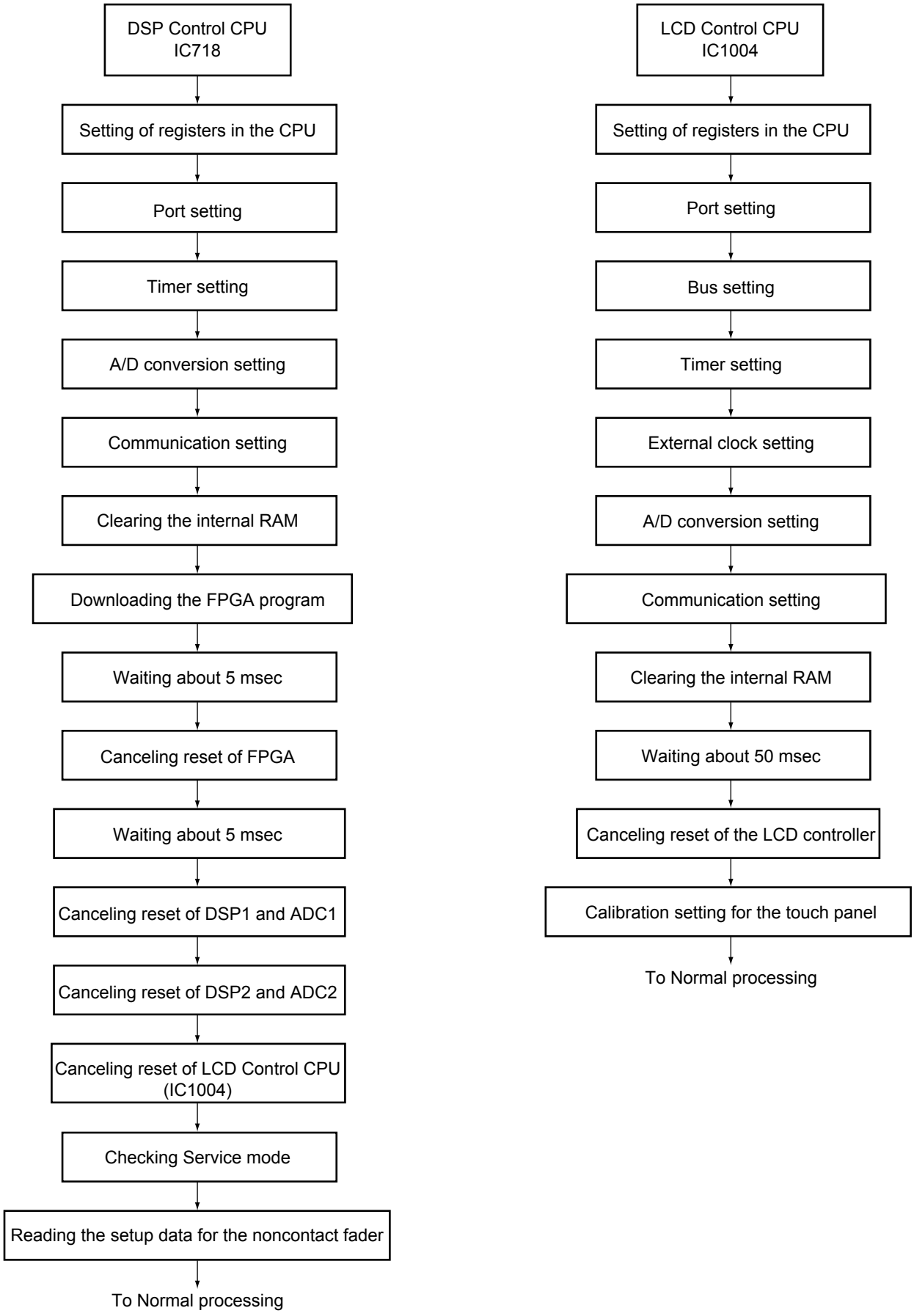


Table of the roles of the microcomputers

CPU	Operation Panel part	Operation position
LCD CONTROL CPU (IC1004)	Effect Operation Panel	Touch Panel CH1 BANK 1 - 3 CH2 BANK 1 - 3 CH1 FX ADJ. CH2 FX ADJ. FADER CURVE CH1 FADER CURVE/ BANK EDIT CH2 FADER CURVE/ BANK EDIT CH1 TIME/ SELECT CH2 TIME/ SELECT CH1 MIX/ DEPTH CH2 MIX/ DEPTH CH1 EFFECT ON/OFF CH2 EFFECT ON/OFF CH1 TAP CH2 TAP Touch Panel Backlight Control
	Rear Panel	
DSP CONTROL CPU (IC718)	Operation Panel	CH1 Fader Start ON/OFF CH2 Fader Start ON/OFF CH Transformer CH Transformer CH1 CH Fader CH2 CH Fader Cross Fader Monitor Select Switch
	Front Panel	CH1 Fader Reverse CH2 Fader Reverse Cross Fader Reverse Foot Switch Channel Select Switch CH1 Fader Curve CH2 Fader Curve Cross Fader 1Curve Cross Fader 2Curve Fader Cut Lag VR CH1 Fader Start Selector Switch CH2 Fader Start Selector Switch Foot SW Jack Insertion Detection
Except microcomputer operation	Operation Panel	CH1 Input Selector Switch CH2 Input Selector Switch MIC SEND ON/OFF CH1 SEND ON/OFF CH2 SEND ON/OFF CH1 EQ ON/OFF CH2 EQ ON/OFF Level Meter Change
	Rear Panel	Cross Fader Feeling ADJ. LCD Contrast ADJ. CH1 LINE/PHONO Select Switch CH2 LINE/PHONO Select Switch Return Jack Insertion Detection Send Jack Insertion Detection
Audio-signal operation sections		CH1 TRIM CH2 TRIM CH1 EQ (Hi, Mid , Lo) CH2 EQ (Hi, Mid , Lo) MIC VR MIC EQ (Hi, Lo) SESSION VR Master VR BOOTH /SESSION VR Phones VR Monitor Balance

CPU	Disply Panel	Disply Control Panel
LCD CONTROL CPU (IC1004)	Effect Operation Panel	LCD Disply LCD LED Lighting
DSP CONTROL CPU (IC718)		VCA Voice Level Control Mute Control Fader Start Signal Analog Switch Control Lighting All LED
Except LED microcomputer operation	Operation Panel	MIC SEND CH1 SEND CH2 SEND CH1 EQ ON CH2 EQ ON CH1 TAP CH2 TAP Level Meter Change

ADJUSTMENT

ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

DSP Assy

- **When repaired**

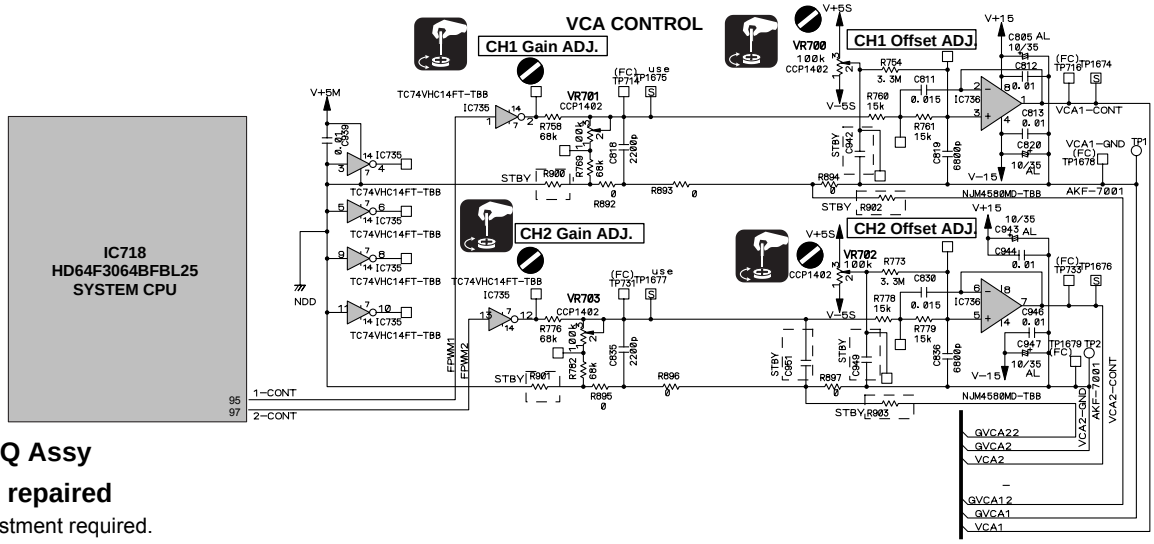
No adjustment required.

- **When repaired**

When repair and System CPU are exchanged for a VCA control circuit

- When fixing and part exchanging a Ch1 VCA control circuit → CH1 Gain Adjustment , CH1 Offset Adjustment
- When fixing and part exchanging a Ch2 VCA control circuit → CH2 Gain Adjustment , CH2 Offset Adjustment

- **Adjusting Point**



C1EQ Assy

- **When repaired**

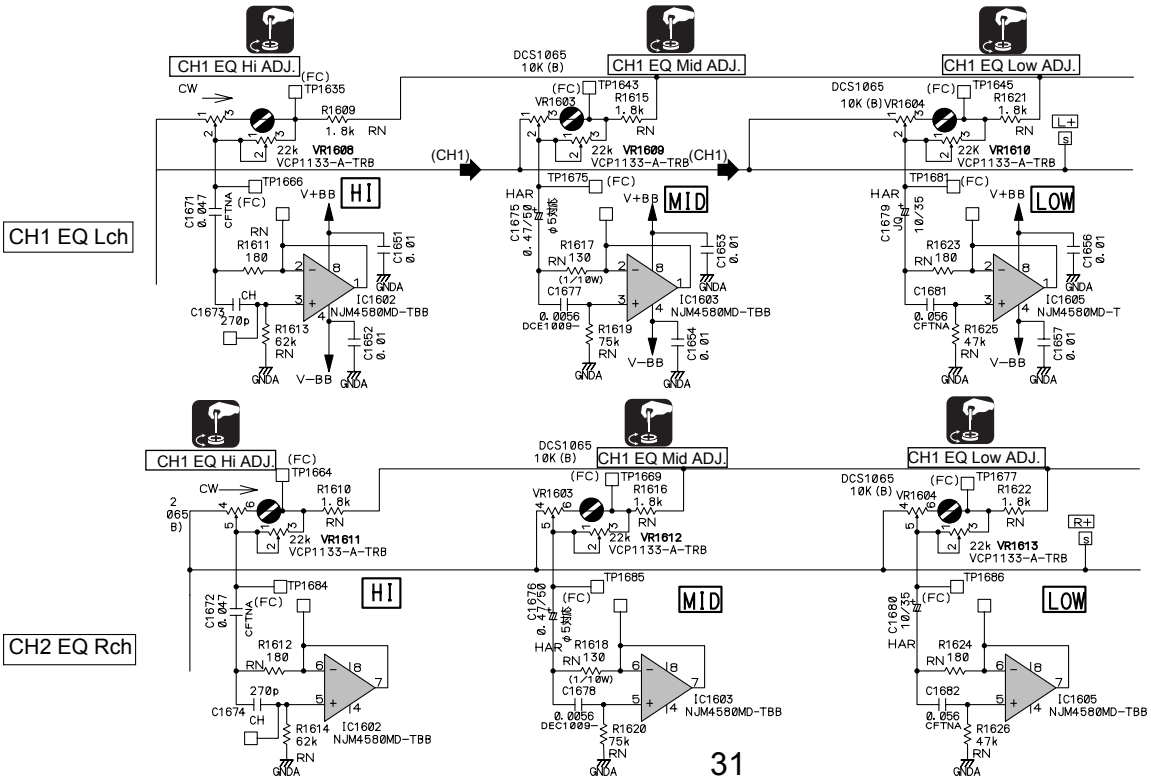
No adjustment required.

- **When repaired**

When repair and parts are exchanged for EQ circuit

- When fixing and part exchanging a Ch1 Lch (Rch) EQ (Hi) circuit. → CH1 Lch (Rch) EQ Hi Adjustment
- When fixing and part exchanging a Ch1 Lch (Rch) EQ (Mid) circuit → CH1 Lch (Rch) EQ Mid Adjustment
- When fixing and part exchanging a Ch1 Lch (Rch) EQ (Low) circuit → CH1 Lch (Rch) EQ Low Adjustment

- **Adjusting Point**



C2EQ Assy

• When repaired

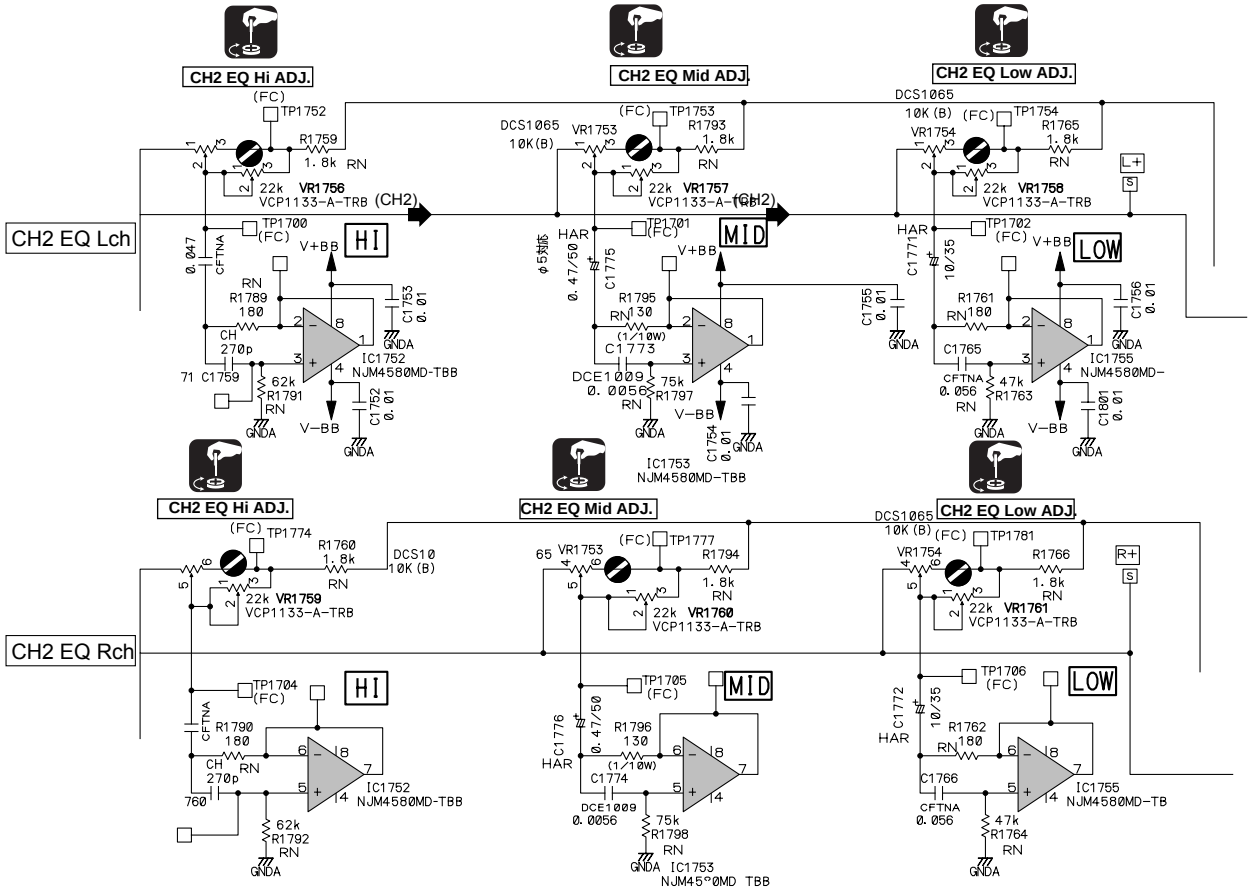
No adjustment required.

• When repaired

When repair and parts are exchanged for EQ circuit

- When fixing and part exchanging a Ch2 Lch (Rch) EQ (Hi) circuit. → CH2 Lch (Rch) EQ Hi Adjustment
- When fixing and part exchanging a Ch2 Lch (Rch) EQ (Mid) circuit → CH2 Lch (Rch) EQ Mid Adjustment
- When fixing and part exchanging a Ch2 Lch (Rch) EQ (Low) circuit → CH2 Lch (Rch) EQ Low Adjustment

• Adjusting Point



CH1 OFFSET ADJUSTMENT

Adjustment condition

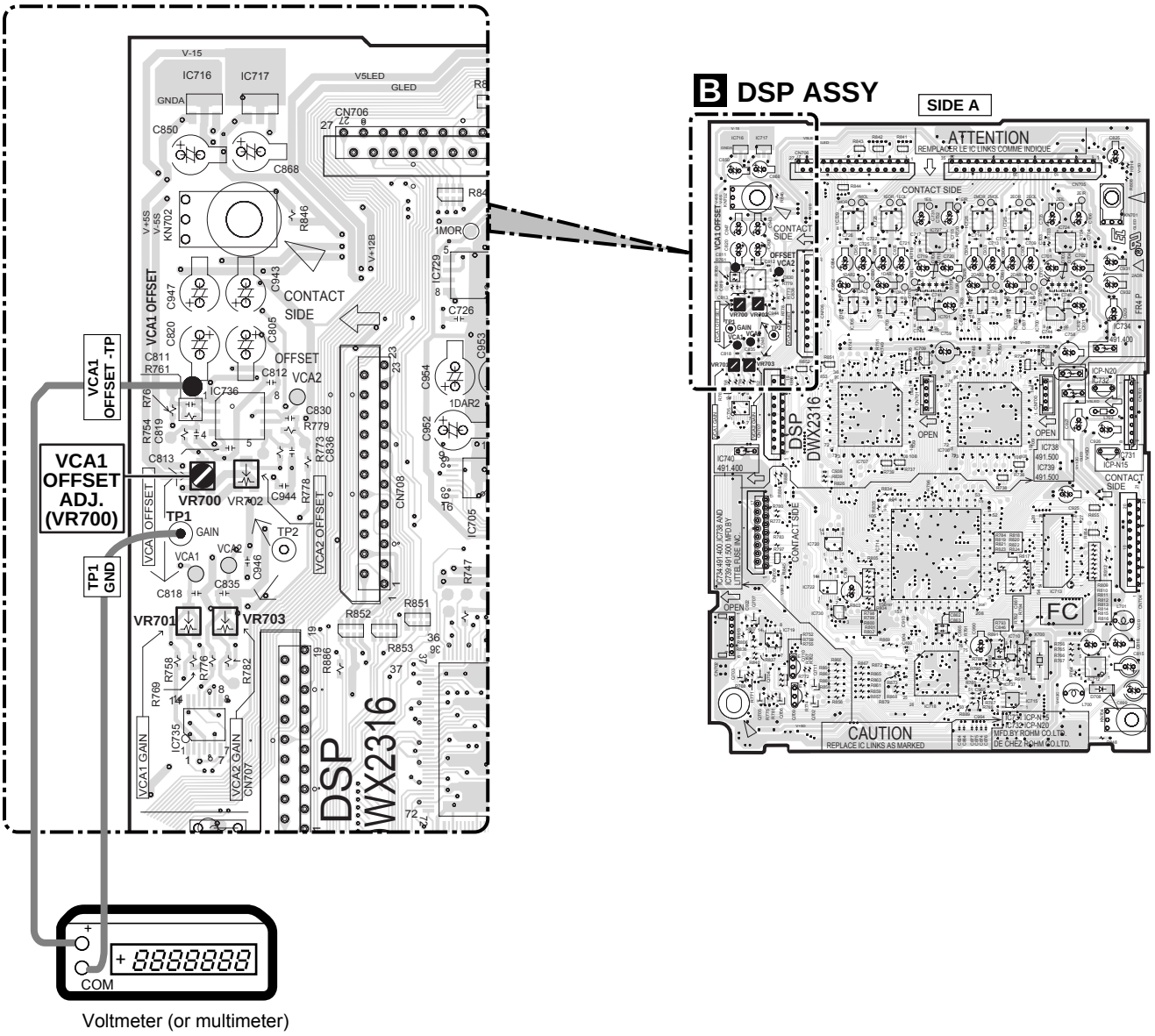
• Power -ON state

Measuring instrument

• Digital multi-meter which can be measured to 0.1mV unit

Adjustment value / Adjustment points

• 0V ± 0.01V (VR700)



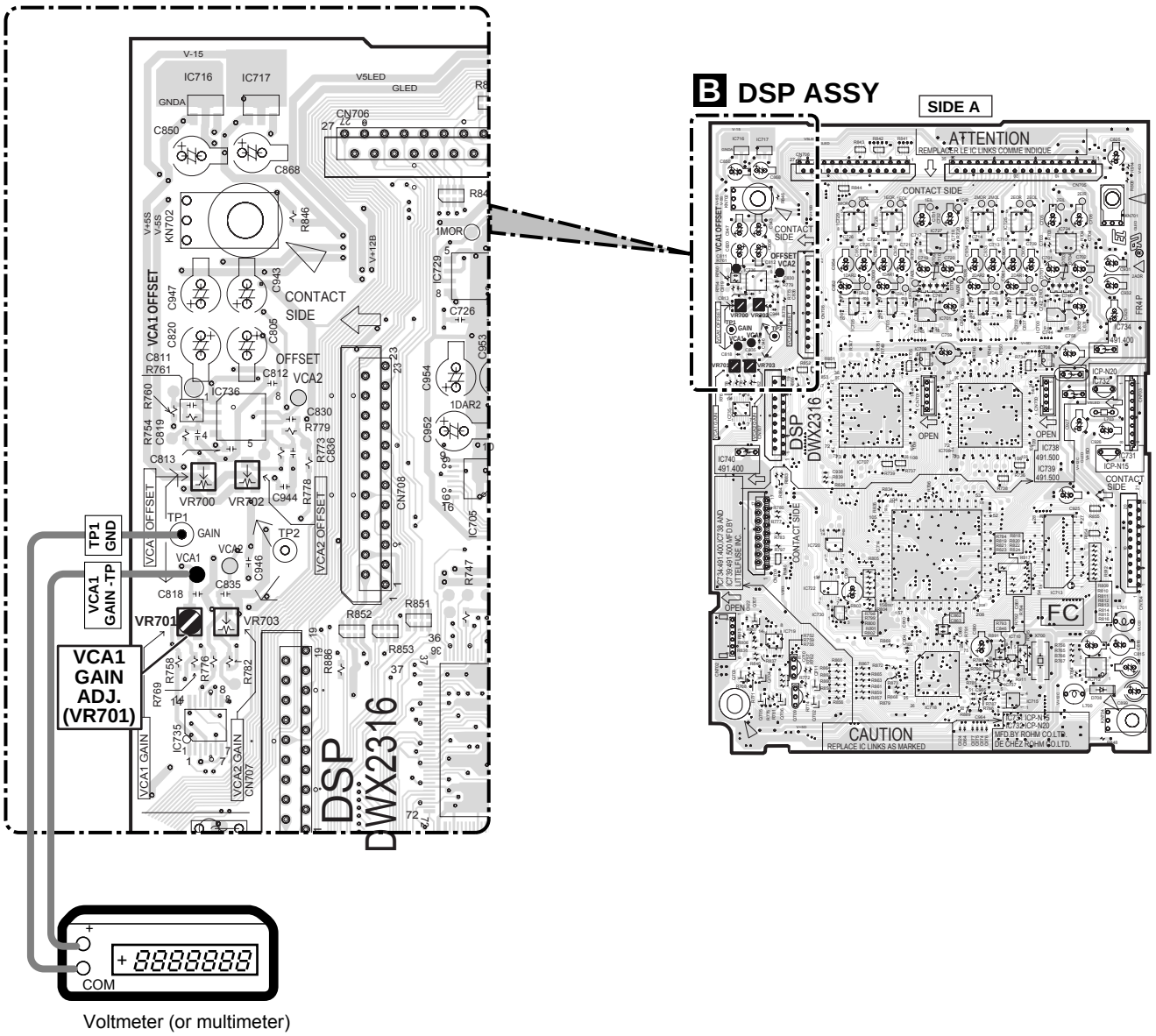
Adjustment points / Connection diagram

CH1 GAIN ADJUSTMENT

Adjustment condition
• Power -ON state

Measuring instrument
• Digital multi-meter which can be measured to 0.1mV unit

Adjustment value / Adjustment points
• 3V ± 0.01V (VR701)



Voltmeter (or multimeter)

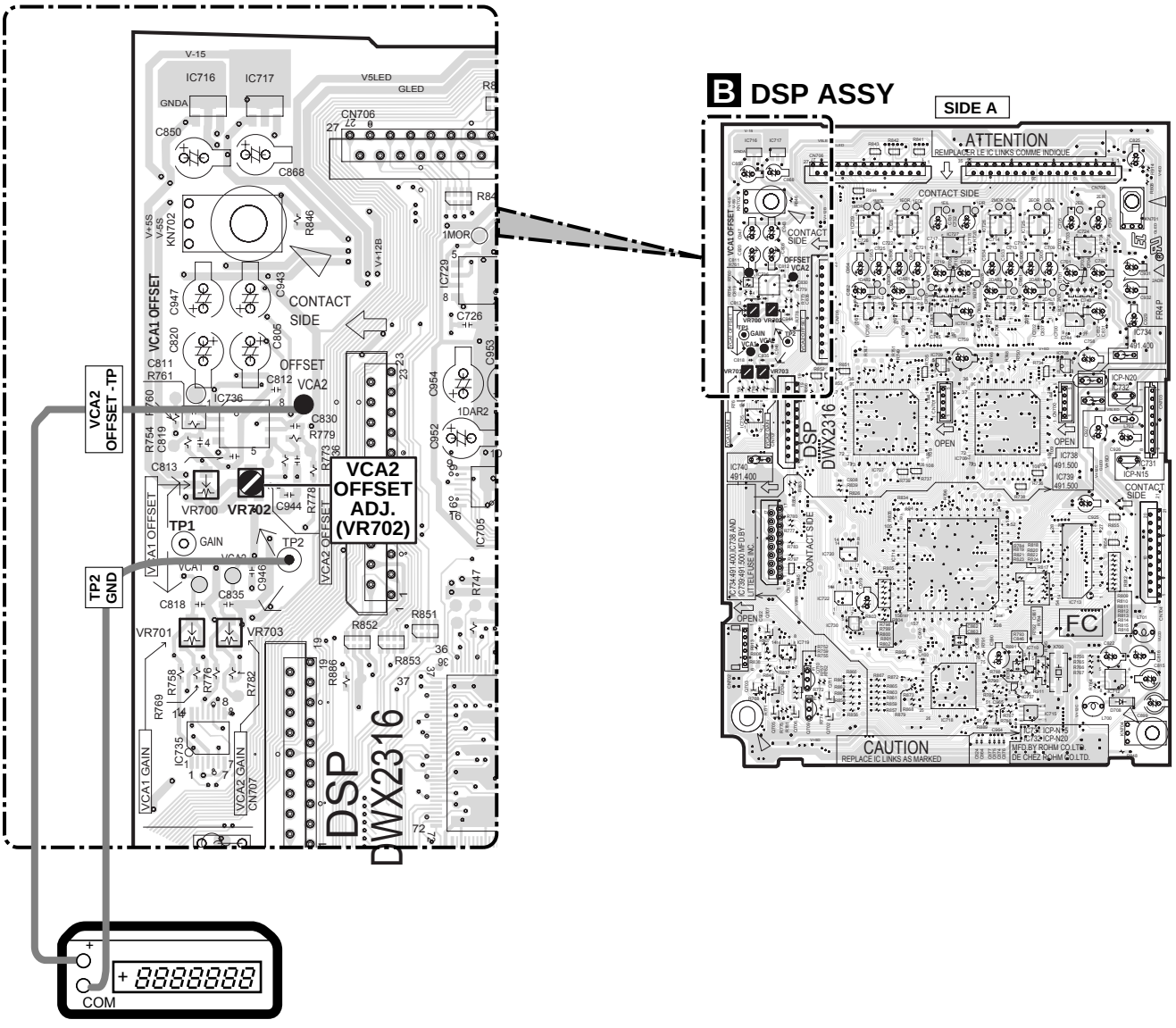
Adjustment points / Connection diagram

CH2 OFFSET ADJUSTMENT

Adjustment condition
• Power -ON state

Measuring instrument
• Digital multi-meter which can be measured to 0.1mV unit

Adjustment value / Adjustment points
• 0V ± 0.01V (VR702)



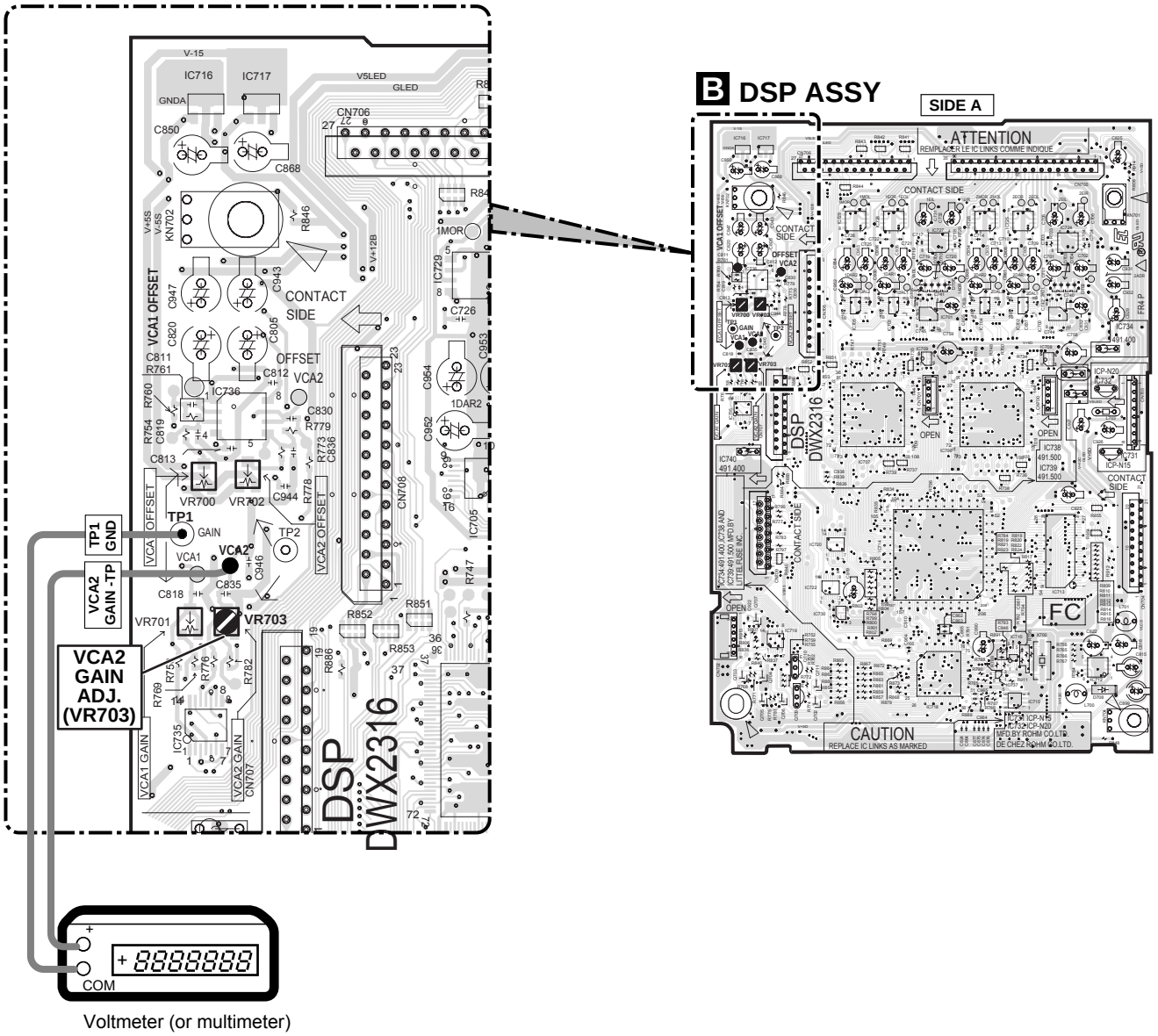
Adjustment points / Connection diagram

CH2 GAIN ADJUSTMENT

Adjustment condition
• Power -ON state

Measuring instrument
• Digital multi-meter which can be measured to 0.1mV unit

Adjustment value / Adjustment points
• 3V ± 0.01V (VR703)



Adjustment points / Connection diagram

CH1 EQ Low ADJUSTMENT

Adjustment condition

• CH1 EQ ADJ VR [VR1604 (LOW): B , VR1603 (MID): C , VR1602 (HI) : D] : Center click

• CH1 INPUT SELECTOR: CD1 J , CH1 FADER: MAX K , CROSS FADER: 1 side L , MASTER LEVEL: MAX M

• EFFECT OFF: N , TRANSFORM: O , FADER REVERSE SW: P : All are turned OFF

Measuring instrument

• Low frequency transmitter

• Analog voltage meter which can be measured to 0.2dB unit

Adjustment method

Set the output of transmitter to 70Hz 2Vrms.

• Lch EQ Low ADJ.

1. Turn S1601 (CH1 EQ ON/OFF: A) to OFF.
2. Adjust VR1601 (CH1 TRIM: E) so that the L ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1601 (CH1 EQ ON/OFF: A) to ON.
4. Adjust VR1610 (C1EQ Assy (CH1 Low Lch) : A) so that the L ch output becomes **0dBv+0.2/-0dB**.

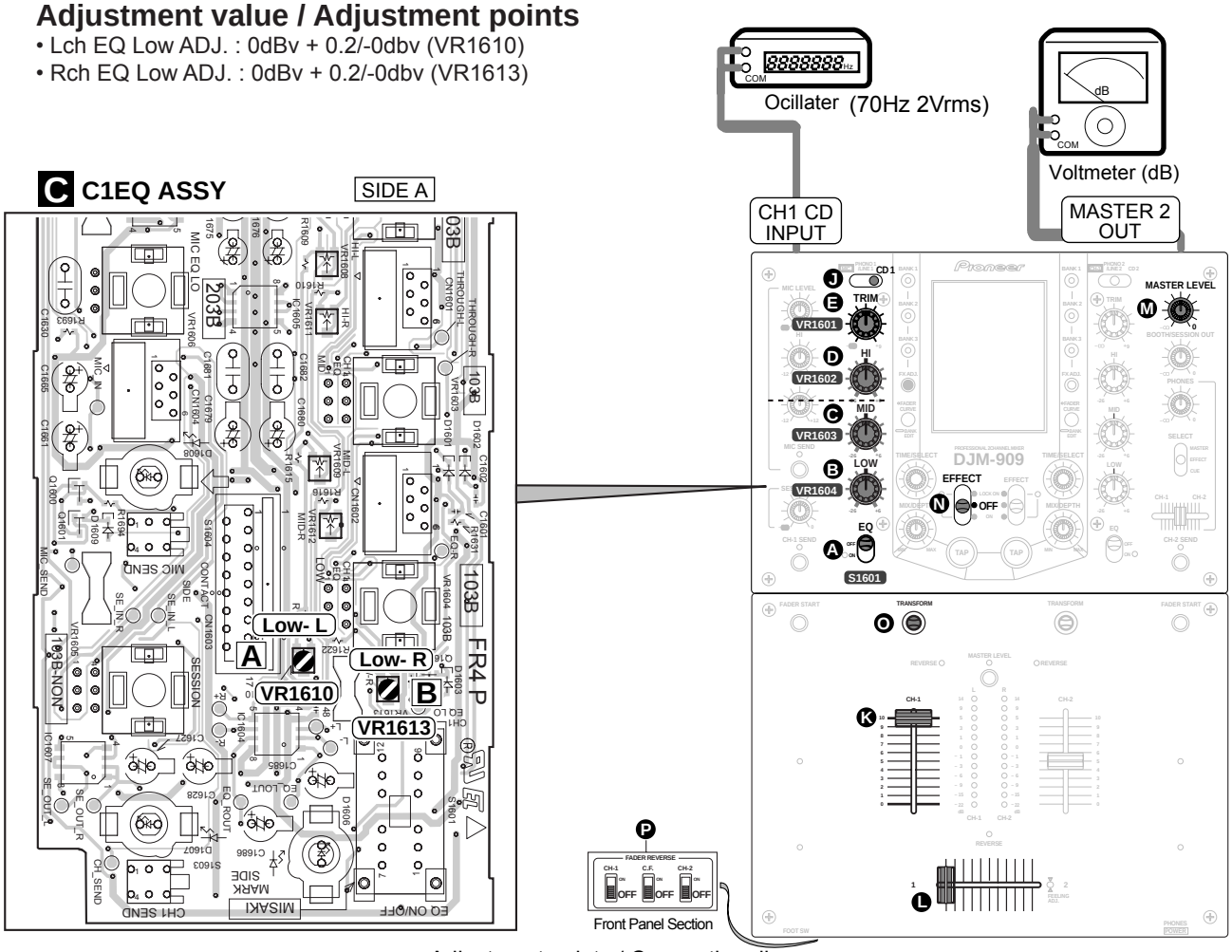
• Rch EQ Low ADJ.

1. Turn S1601 (CH1 EQ ON/OFF: A) to OFF.
2. Adjust VR1601 (CH1 TRIM: E) so that the R ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1601 (CH1 EQ ON/OFF: A) to ON.
4. Adjust VR1613 (C1EQ Assy (CH1 Low Rch) : B) so that the R ch output becomes **0dBv+0.2/-0dB**.

Adjustment value / Adjustment points

• Lch EQ Low ADJ. : 0dBv + 0.2/-0dbv (VR1610)

• Rch EQ Low ADJ. : 0dBv + 0.2/-0dbv (VR1613)



Adjustment points / Connection diagram

CH1 EQ Mid ADJUSTMENT

Adjustment condition

• CH1 EQ ADJ VR [VR1604 (LOW): **B**, VR1603 (MID): **C**, VR1602 (HI) : **D**] : Center click

• CH1 INPUT SELECTOR: CD1 **J**, CH1 FADER: MAX **K**, CROSS FADER: 1 side **L**, MASTER LEVEL: MAX **M**

• EFFECT OFF: **N**, TRANSFORM: **O**, FADER REVERSE SW: **P** : All are turned OFF

Measuring instrument

• Low frequency transmitter

• Analog voltage meter which can be measured to 0.2dB unit

Adjustment method

Set the output of transmitter to 1kHz 2Vrms.

• Lch EQ Mid ADJ.

1. Turn S1601 (CH1 EQ ON/OFF: **A**) to OFF.
2. Adjust VR1601 (CH1 TRIM: **E**) so that the L ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1601 (CH1 EQ ON/OFF: **A**) to ON.
4. Adjust VR1609 (C1EQ Assy (CH1 Mid Lch) : **C**) so that the L ch output becomes **0dBv+0.2/-0dB**.

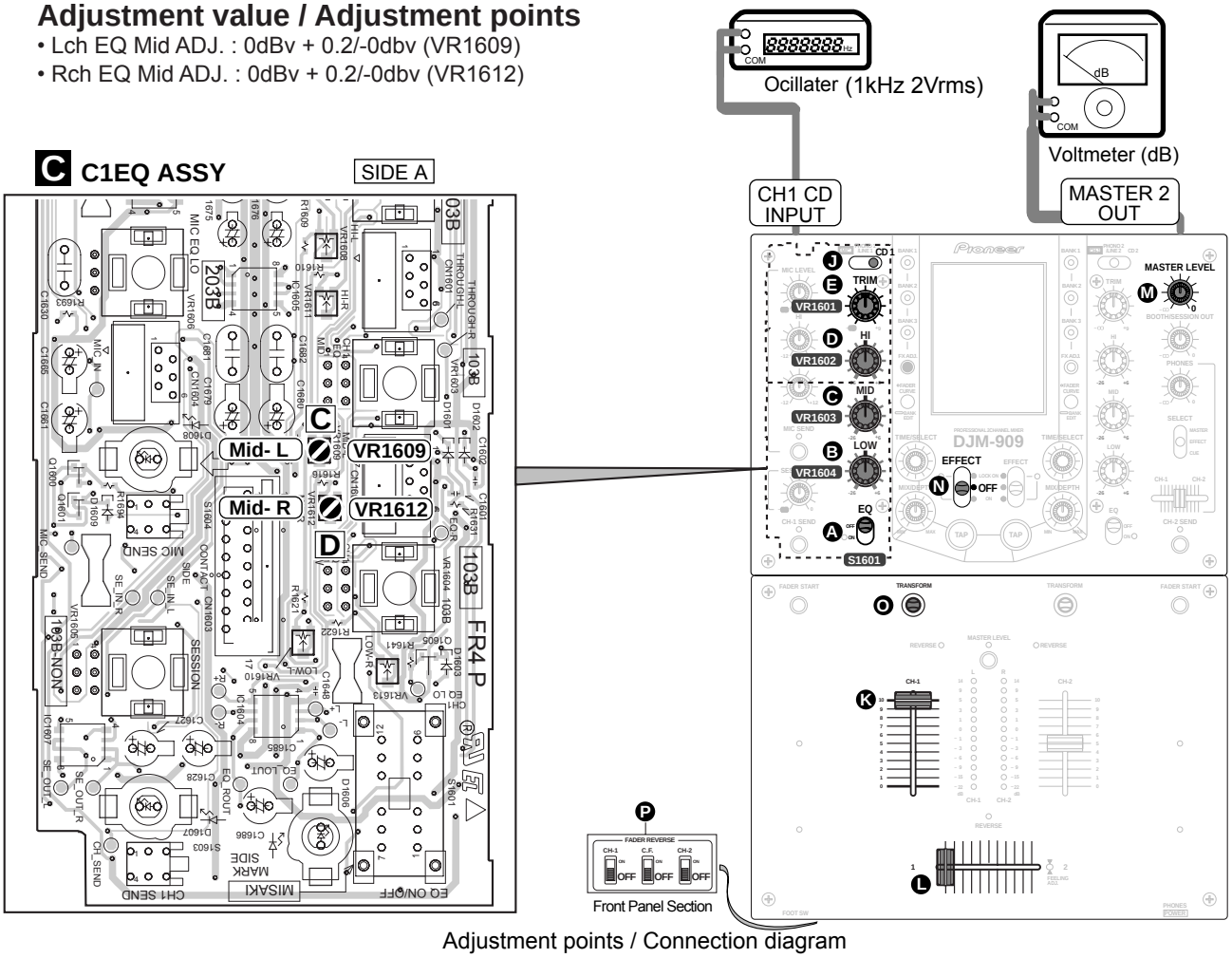
• Rch EQ Mid ADJ.

1. Turn S1601 (CH1 EQ ON/OFF: **A**) to OFF.
2. Adjust VR1601 (CH1 TRIM: **E**) so that the R ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1601 (CH1 EQ ON/OFF: **A**) to ON.
4. Adjust VR1612 (C1EQ Assy (CH1 Mid Rch) : **D**) so that the R ch output becomes **0dBv+0.2/-0dB**.

Adjustment value / Adjustment points

• Lch EQ Mid ADJ. : 0dBv + 0.2/-0dbv (VR1609)

• Rch EQ Mid ADJ. : 0dBv + 0.2/-0dbv (VR1612)



Adjustment points / Connection diagram

CH1 EQ Hi ADJUSTMENT

Adjustment condition

• CH1 EQ ADJ VR [VR1604 (LOW): (B), VR1603 (MID): (C), VR1602 (HI) : (D)] : Center click

• CH1 INPUT SELECTOR: CD1 (J), CH1 FADER: MAX (K), CROSS FADER: 1 side (L), MASTER LEVEL: MAX (M)

• EFFECT OFF: (N), TRANSFORM: (O), FADER REVERSE SW: (P) : All are turned OFF

Measuring instrument

• Low frequency transmitter

• Analog voltage meter which can be measured to 0.2dB unit

Adjustment method

Set the output of transmitter to 13kHz 2Vrms.

• Lch EQ Hi ADJ.

1. Turn S1601 (CH1 EQ ON/OFF: (A)) to OFF.
2. Adjust VR1601 (CH1 TRIM: (E)) so that the L ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1601 (CH1 EQ ON/OFF: (A)) to ON.
4. Adjust VR1608 (C1EQ Assy (CH1 Hi Lch) : [E]) so that the L ch output becomes **0dBv+0.2/-0dB**.

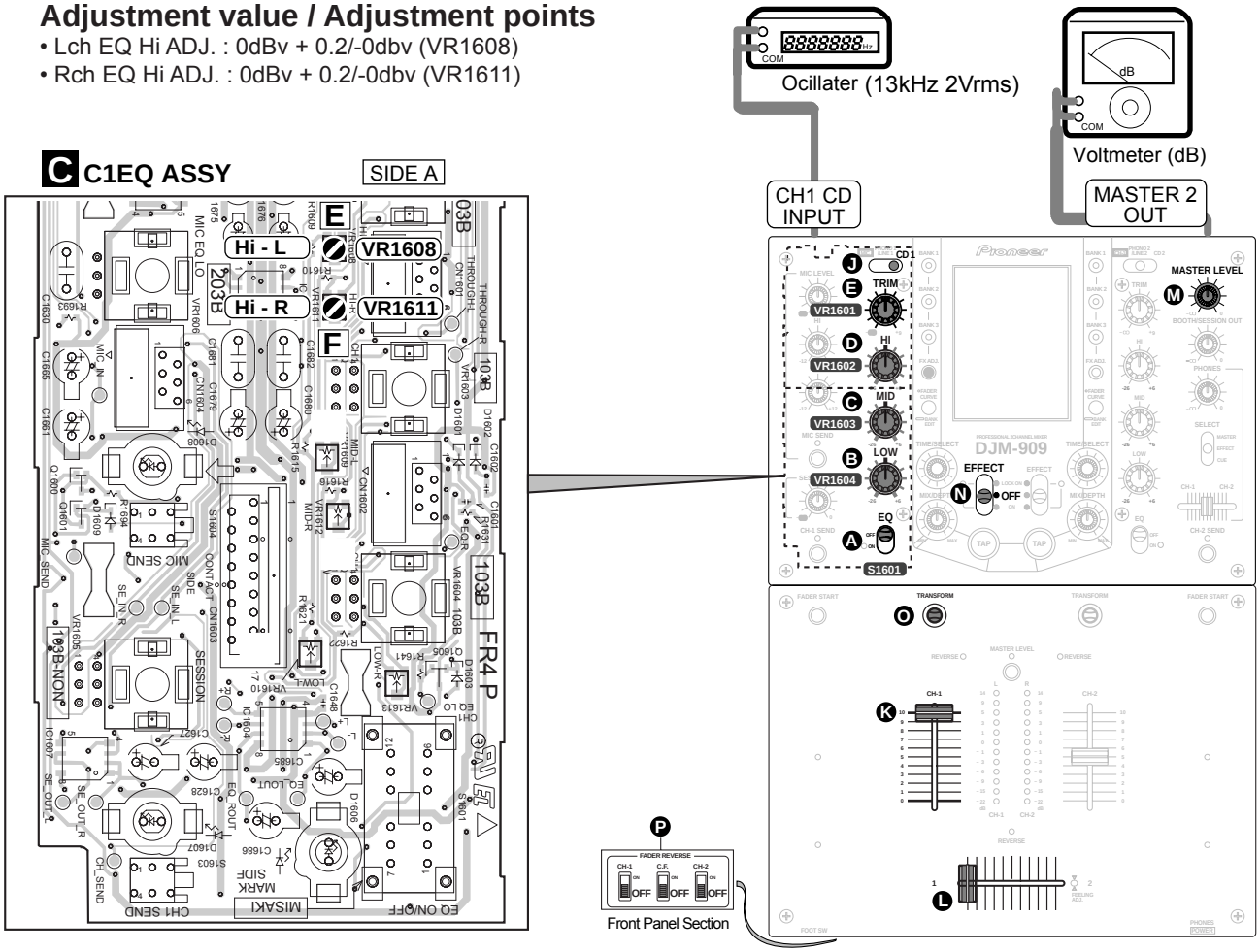
• Rch EQ Hi ADJ.

1. Turn S1601 (CH1 EQ ON/OFF: (A)) to OFF.
2. Adjust VR1601 (CH1 TRIM: (E)) so that the R ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1601 (CH1 EQ ON/OFF: (A)) to ON.
4. Adjust VR1611 (C1EQ Assy (CH1 Hi Rch) : [F]) so that the R ch output becomes **0dBv+0.2/-0dB**.

Adjustment value / Adjustment points

• Lch EQ Hi ADJ. : 0dBv + 0.2/-0dbv (VR1608)

• Rch EQ Hi ADJ. : 0dBv + 0.2/-0dbv (VR1611)



Adjustment points / Connection diagram

CH2 EQ Low ADJUSTMENT

Adjustment condition

- CH2 EQ ADJ VR [VR1754 (LOW): G , VR1753 (MID): H , VR1752 (HI) : I] : Center click
- CH2 INPUT SELECTOR: CD2 J , CH2 FADER: MAX K , CROSS FADER: 2 side L , MASTER LEVEL: MAX M
- EFFECT OFF: N , TRANSFORM: O , FADER REVERSE SW: P : All are turned OFF

Measuring instrument

- Low frequency transmitter
- Analog voltage meter which can be measured to 0.2dB unit

Adjustment method

Set the output of transmitter to 70Hz 2Vrms.

• Lch EQ Low ADJ.

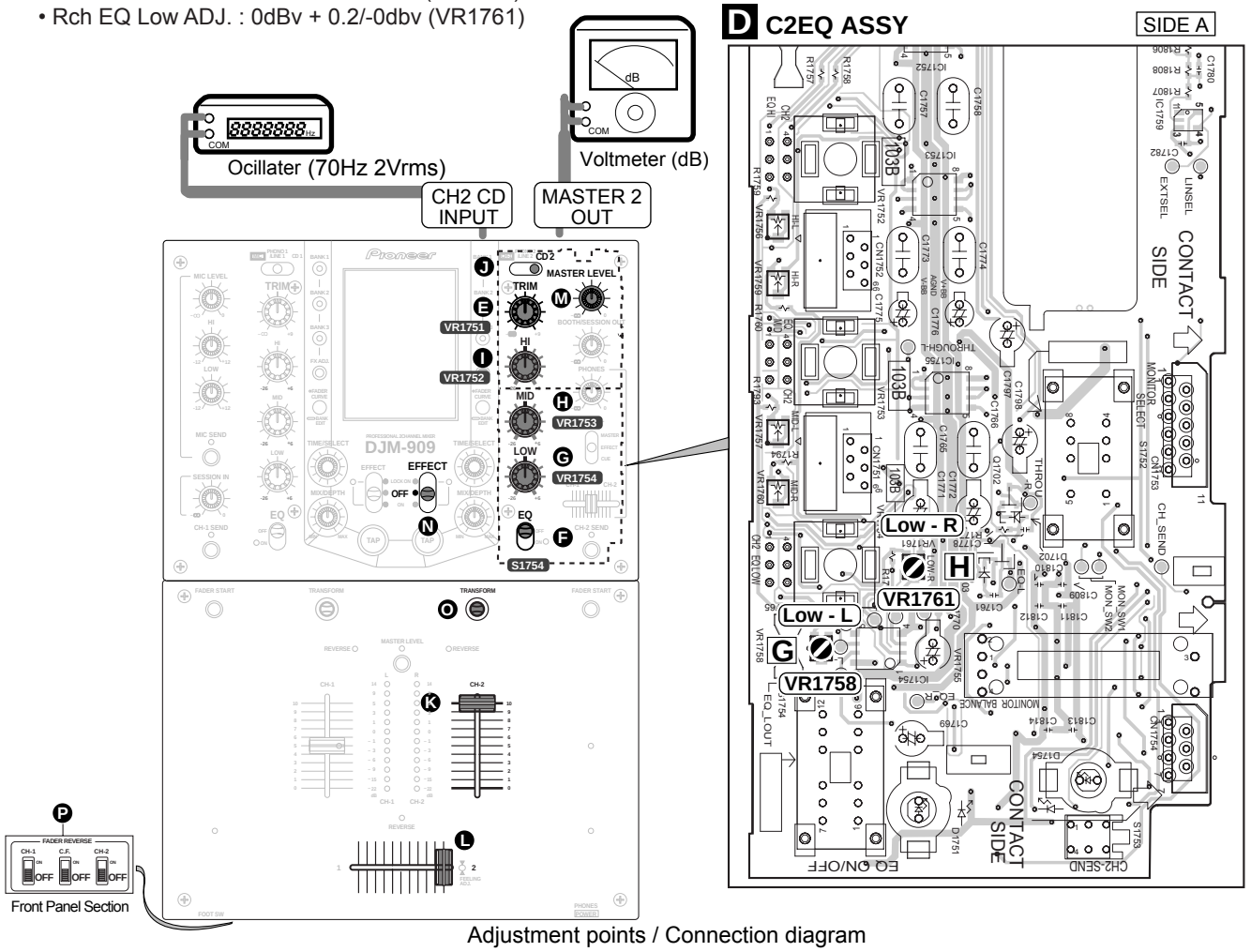
1. Turn S1754 (CH2 EQ ON/OFF: F) to OFF.
2. Adjust VR1751 (CH2 TRIM: E) so that the L ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1754 (CH2 EQ ON/OFF: F) to ON.
4. Adjust VR1758 (C2EQ Assy (CH2 Low Lch) : G) so that the L ch output becomes **0dBv+0.2/-0dB**.

• Rch EQ Low ADJ.

1. Turn S1754 (CH2 EQ ON/OFF: F) to OFF.
2. Adjust VR1751 (CH2 TRIM: E) so that the R ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1754 (CH2 EQ ON/OFF: F) to ON.
4. Adjust VR1761 (C2EQ Assy (CH2 Low Rch) : H) so that the R ch output becomes **0dBv+0.2/-0dB**.

Adjustment value / Adjustment points

- Lch EQ Low ADJ. : 0dBv + 0.2/-0dbv (VR1758)
- Rch EQ Low ADJ. : 0dBv + 0.2/-0dbv (VR1761)



Adjustment points / Connection diagram

CH2 EQ Mid ADJUSTMENT

Adjustment condition

• CH2 EQ ADJ VR [VR1754 (LOW): G , VR1753 (MID): H , VR1752 (HI) : I] : Center click

• CH2 INPUT SELECTOR: CD2 J , CH2 FADER: MAX K , CROSS FADER: 2 side L , MASTER LEVEL: MAX M

• EFFECT OFF: N , TRANSFORM: O , FADER REVERSE SW: P : All are turned OFF

Measuring instrument

• Low frequency transmitter

• Analog voltage meter which can be measured to 0.2dB unit

Adjustment method

Set the output of transmitter to 1kHz 2Vrms.

• Lch EQ Mid ADJ.

1. Turn S1754 (CH2 EQ ON/OFF: F) to OFF.
2. Adjust VR1751 (CH2 TRIM: E) so that the L ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1754 (CH2 EQ ON/OFF: F) to ON.
4. Adjust VR1757 (C2EQ Assy (CH2 Mid Lch) : I) so that the L ch output becomes **0dBv+0.2/-0dB**.

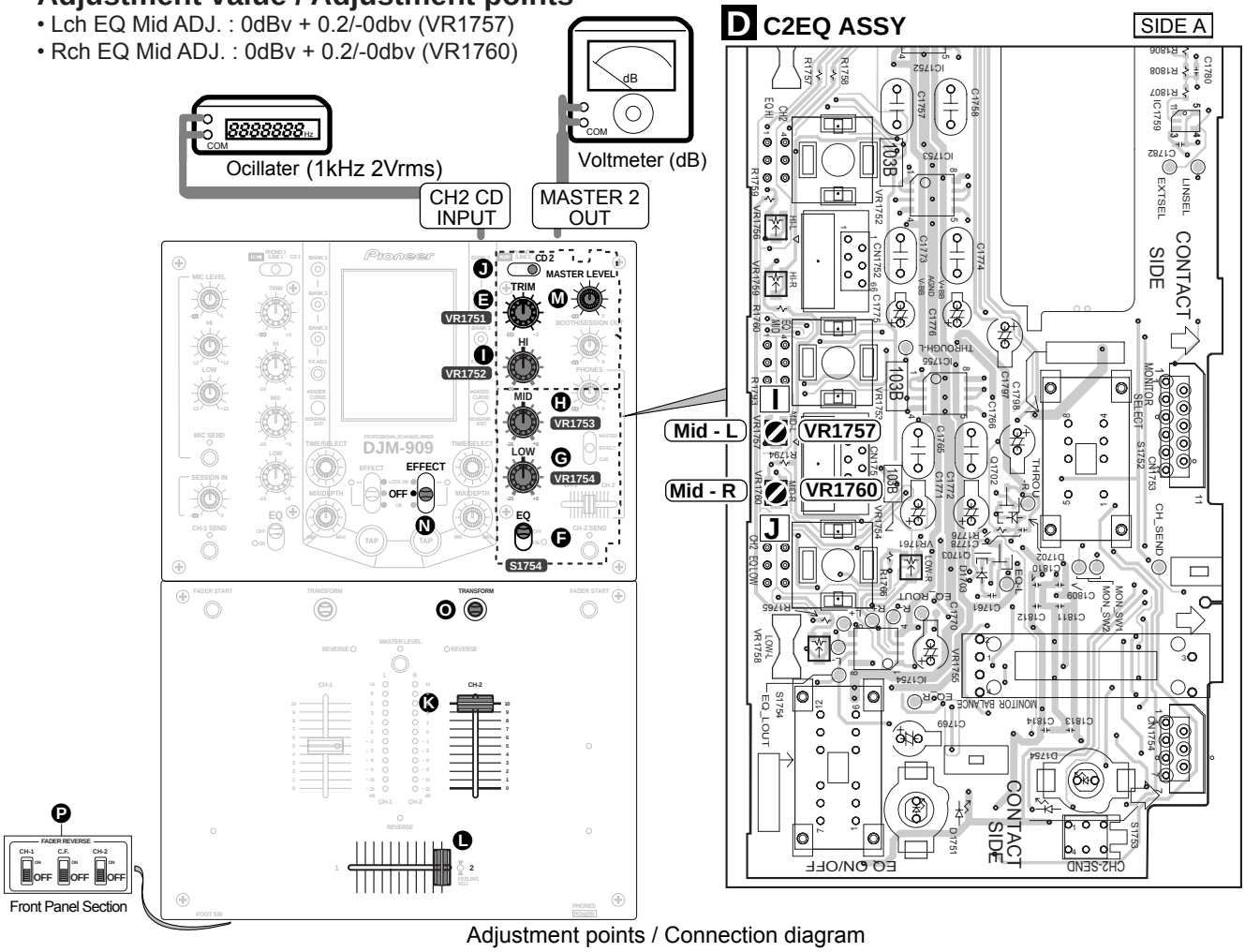
• Rch EQ Mid ADJ.

1. Turn S1754 (CH2 EQ ON/OFF: F) to OFF.
2. Adjust VR1751 (CH2 TRIM: E) so that the R ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1754 (CH2 EQ ON/OFF: F) to ON.
4. Adjust VR1760 (C2EQ Assy (CH2 Mid Rch) : J) so that the R ch output becomes **0dBv+0.2/-0dB**.

Adjustment value / Adjustment points

• Lch EQ Mid ADJ. : 0dBv + 0.2/-0dbv (VR1757)

• Rch EQ Mid ADJ. : 0dBv + 0.2/-0dbv (VR1760)



Adjustment points / Connection diagram

CH2 EQ Hi ADJUSTMENT

Adjustment condition

- CH2 EQ ADJ VR [VR1754 (LOW): G , VR1753 (MID): H , VR1752 (HI) : I] : Center click
- CH2 INPUT SELECTOR: CD2 J , CH2 FADER: MAX K , CROSS FADER: 2 side L , MASTER LEVEL: MAX M
- EFFECT OFF: N , TRANSFORM: O , FADER REVERSE SW: P : All are turned OFF

Measuring instrument

- Low frequency transmitter
- Analog voltage meter which can be measured to 0.2dB unit

Adjustment method

Set the output of transmitter to 13kHz 2Vrms.

• Lch EQ Hi ADJ.

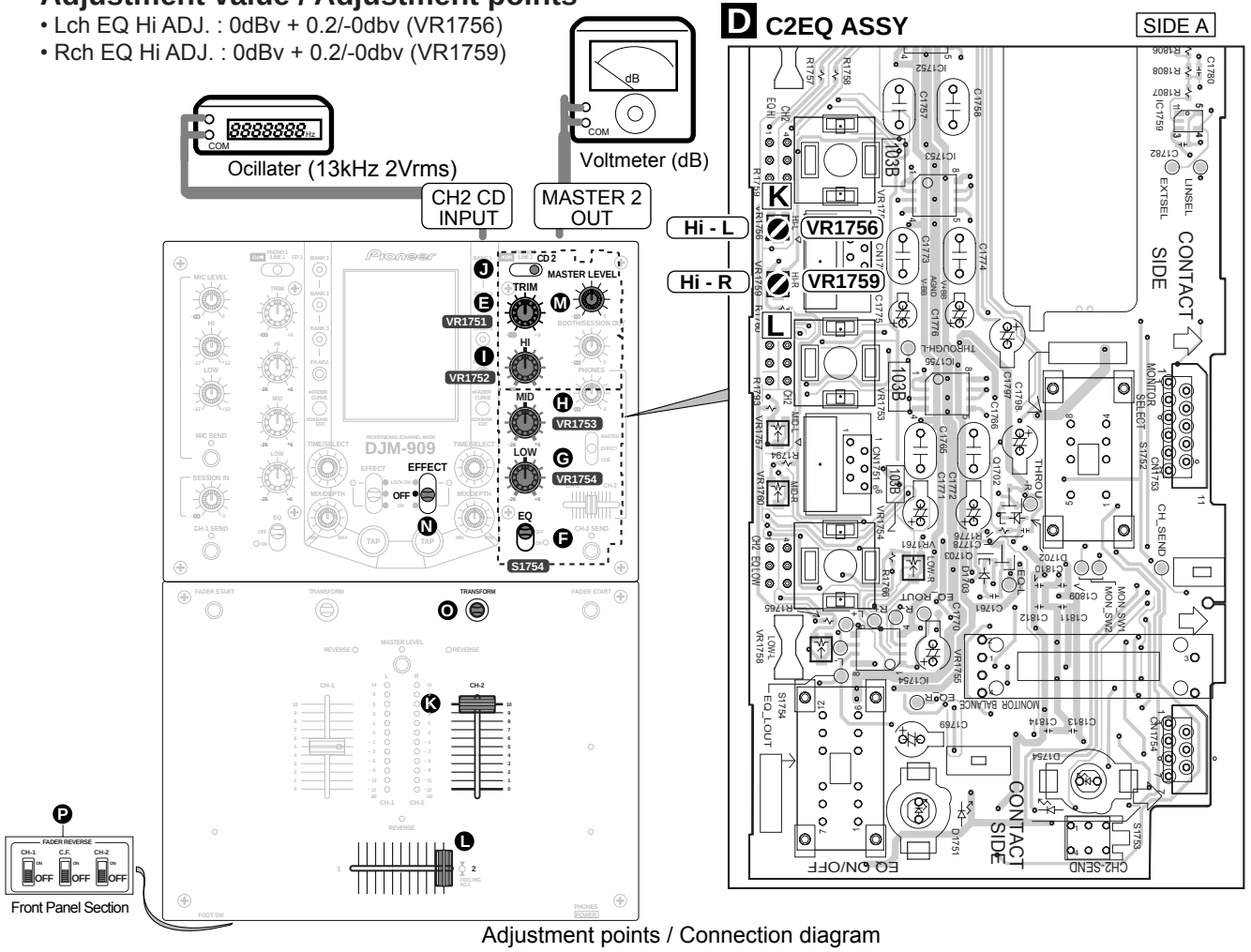
1. Turn S1754 (CH2 EQ ON/OFF: F) to OFF.
2. Adjust VR1751 (CH2 TRIM: E) so that the L ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1754 (CH2 EQ ON/OFF: F) to ON.
4. Adjust VR1756 (C2EQ Assy (CH2 Hi Lch) : K) so that the L ch output becomes **0dBv+0.2/-0dB**.

• Rch EQ Hi ADJ.

1. Turn S1754 (CH2 EQ ON/OFF: F) to OFF.
2. Adjust VR1751 (CH2 TRIM: E) so that the R ch output becomes **0dBv+0.2/-0dB**.
3. Turn S1754 (CH2 EQ ON/OFF: F) to ON.
4. Adjust VR1759 (C2EQ Assy (CH2 Hi Rch) : L) so that the R ch output becomes **0dBv+0.2/-0dB**.

Adjustment value / Adjustment points

- Lch EQ Hi ADJ. : 0dBv + 0.2/-0dbv (VR1756)
- Rch EQ Hi ADJ. : 0dBv + 0.2/-0dbv (VR1759)



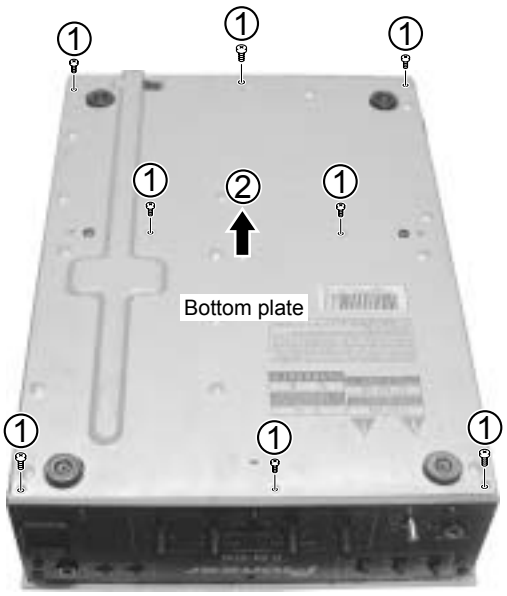
Adjustment points / Connection diagram

DISASSEMBLY

Diagnosis of MAIN Assy

To diagnose the MAIN Assy, remove the bottom plate, as shown below:

① Remove the eight screws.
② Remove the bottom plate.

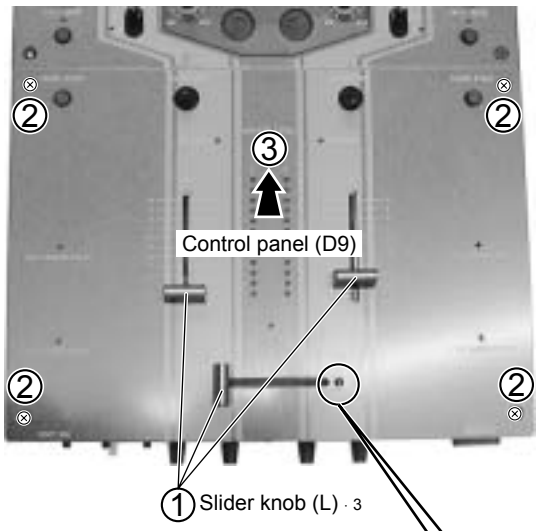


● **Bottom view**

Diagnosis

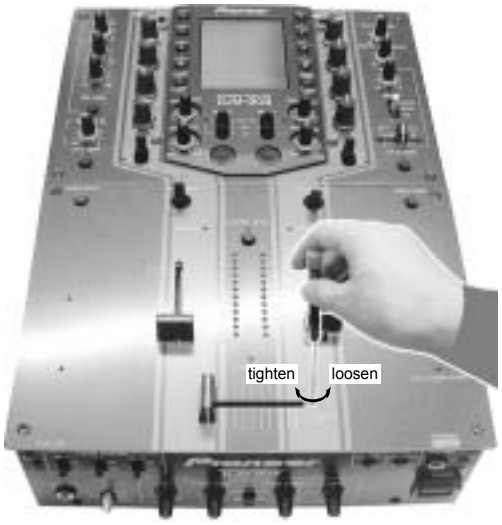
1 Diagnosis of Fader Section

① Remove the three slider knob (L)s.
② Remove the four screws.
③ Remove the control panel (D9).



● **About the load-adjuster screw (FEELING ADJ.) for the slider**

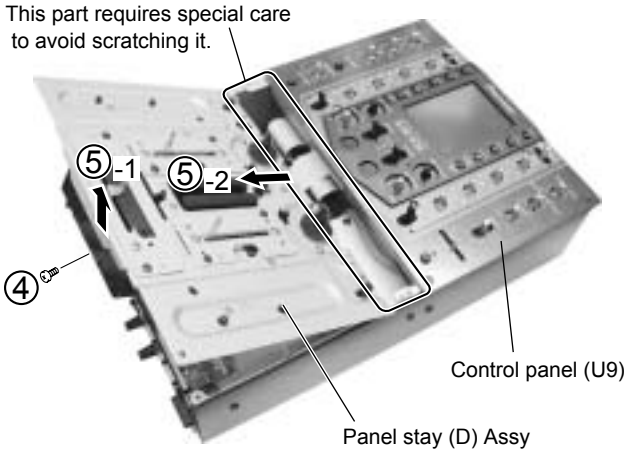
Loading (smoothness) of the slider can be adjusted according to the user's preference.
For adjustment, use the supplied hexagonal driver.



④ Remove the one screw.

⑤ Remove the panel stay (D) assy.

Note: As the control panel (U9) may easily get scratched, pull out or push in the panel stay (D) assy, slightly tilting it during disassembly or reassembly.

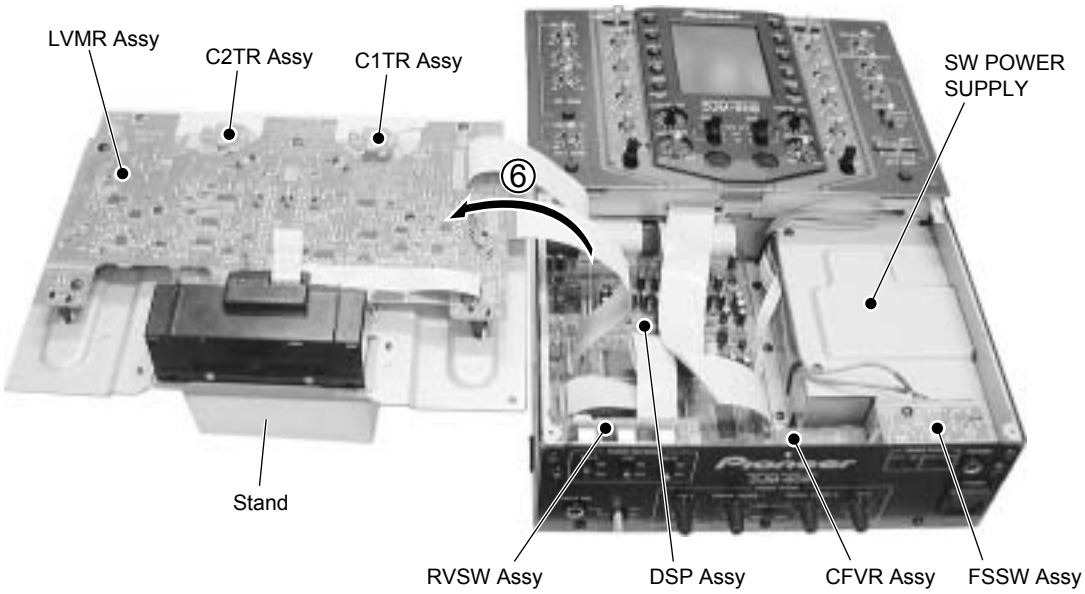


Note for removing the Front Panel block

When removing the Front Panel block from the unit, remove the screws indicated by the arrows (⇩).

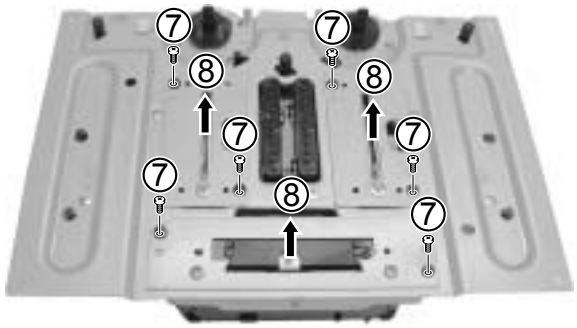
⑥ Arrange the unit as shown in the photo below.

Note: As the flexible cables are short, provide a stand with a height similar to the unit's below the plate, to make your work easier.



Diagnosis

⑦ Remove the six screws.
⑧ Remove the three volumes.

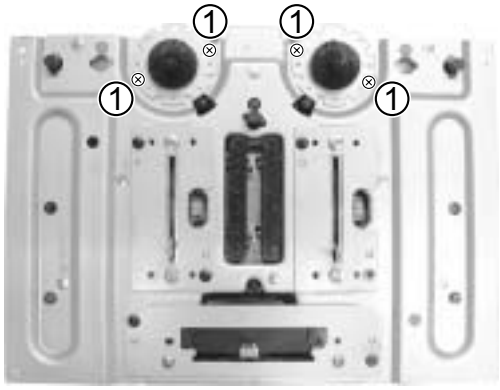


Exchange

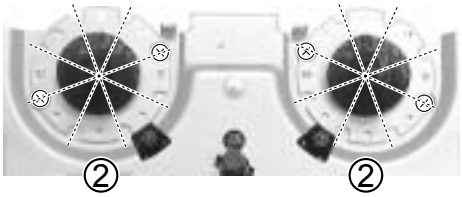
● About the TRANSFORM ON/OFF lever

The pivot direction of the TRANSFORM ON/OFF lever can be changed by 45°, according to the user's preference.

① Remove the four screws.



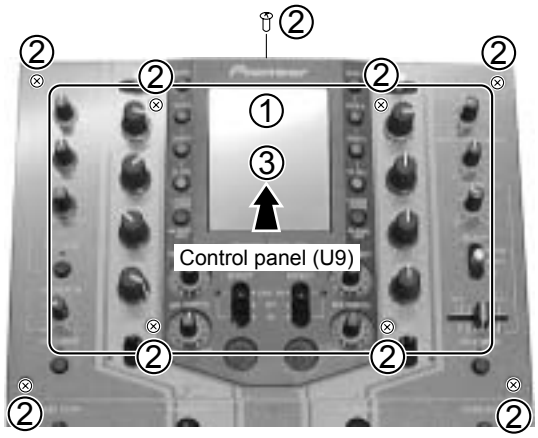
② Turn a direction.



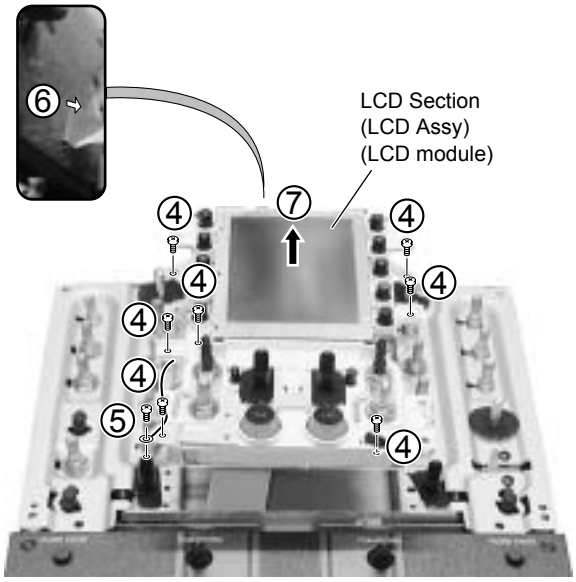
③ Reattatch the four screws.

2 Diagnosis of LCD, EQ and SEND Section

① Remove all volume knobs.
② Remove the nine screws.
③ Remove the control panel (U9).



④ Remove the seven screws.
⑤ Remove the earth lead by removing the one screw.
⑥ Remove the Flexible Cable
⑦ Remove the LCD Section.

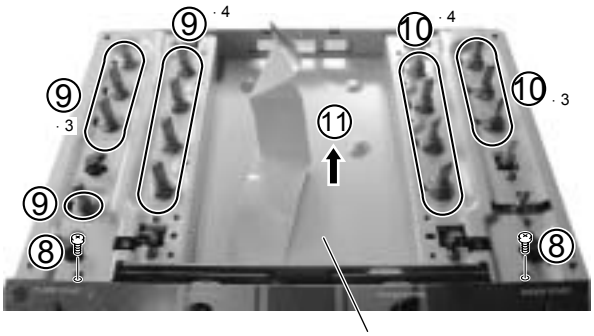


⑧ Remove the two screws.

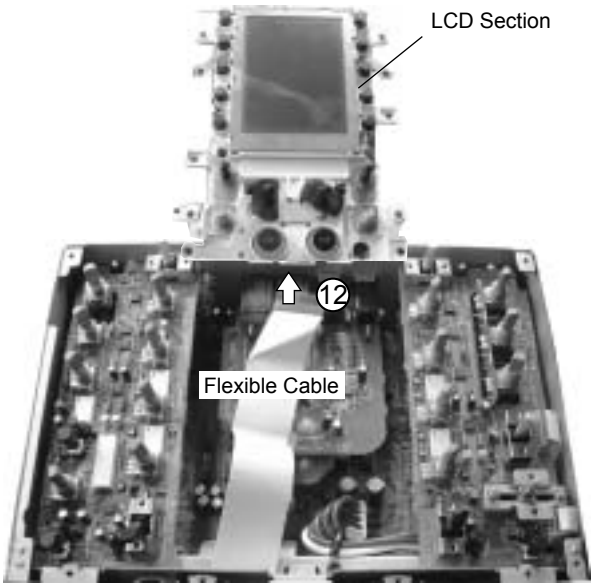
⑨ Remove the two hexagonal nuts.

⑩ Remove the two hexagonal nuts.

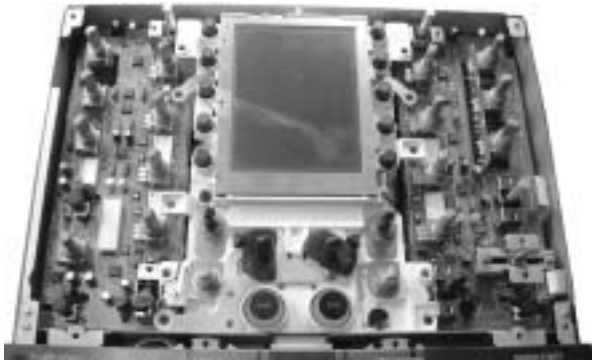
⑪ Remove the panel stay (U9).



⑫ Insert the flexible-cable connector to the LCD block.



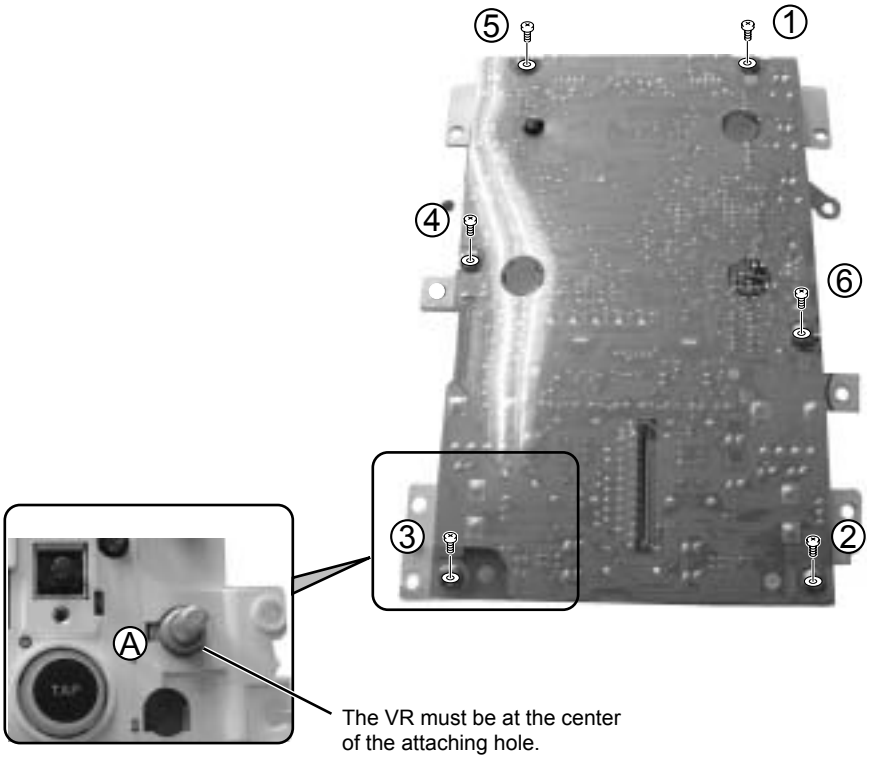
⑬ Return the LCD block to its original position.



Diagnosis

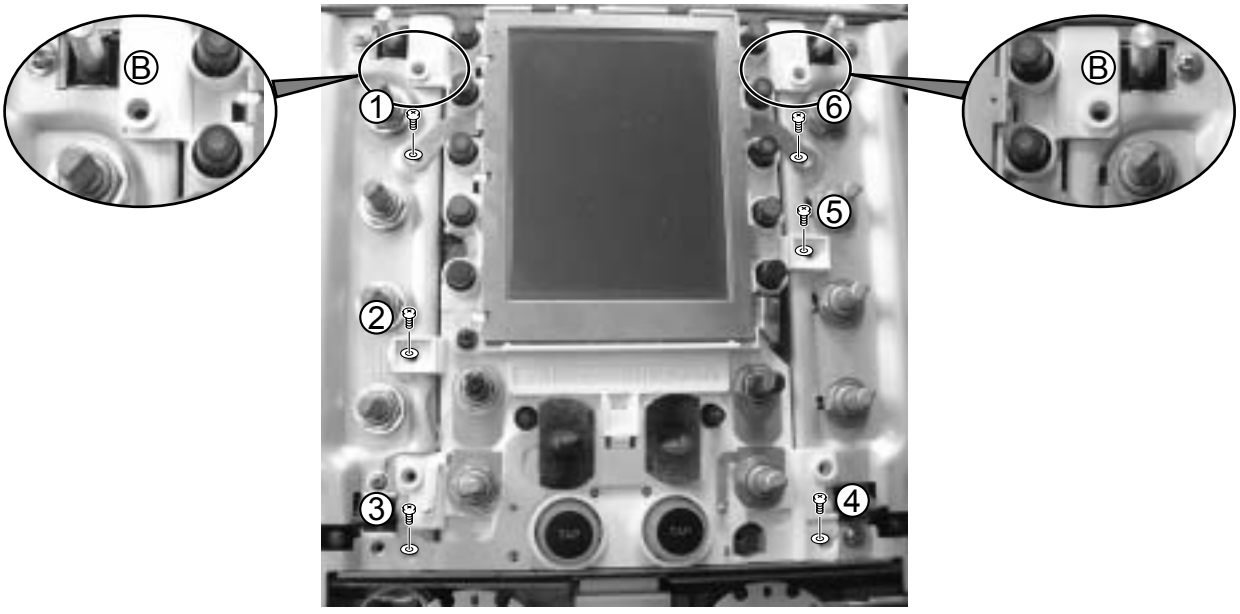
3 Note for attaching the LCD Assy

When tightening the six screws ① – ⑥ , make sure that the VR Ⓐ is at the center of the attaching hole.



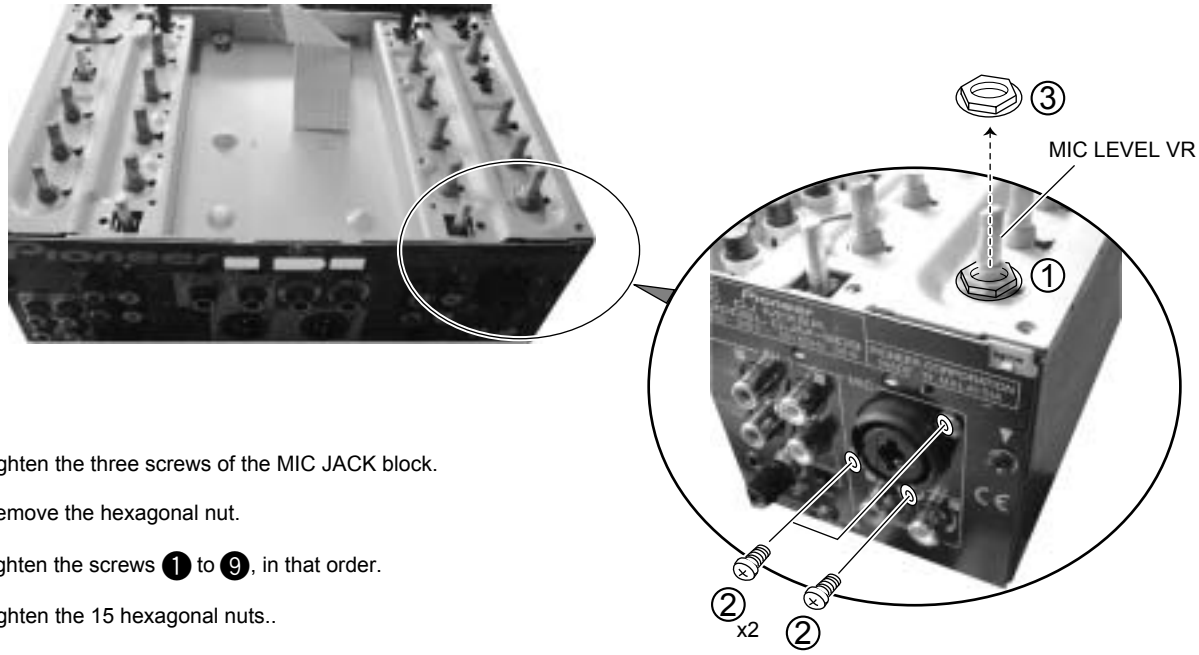
4 Note for attaching the LCD Assy to the panel stay

When tightening the six screws ① – ⑥, make sure that the positions of the two holes Ⓑ of the LCD Assy will not be shifted from the holes on the panel stay.



5 Note for attaching the MIC LEVEL VR

① Tighten only the nut for the MIC LEVEL VR, and leave the other nuts untightened at this point.

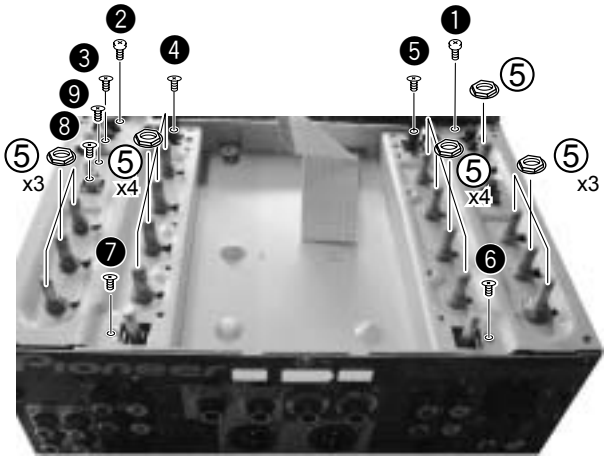


② Tighten the three screws of the MIC JACK block.

③ Remove the hexagonal nut.

④ Tighten the screws ❶ to ❾, in that order.

⑤ Tighten the 15 hexagonal nuts..



CONFIGURATION OF THE PC BOARD