

Pioneer *sound.vision.soul*

VIDEO SWITCHER
VSW-1

Operating Instructions

Thank you for buying this Pioneer product.

Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However the method of connecting and operating the unit is the same. K015 En

IMPORTANT



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



CAUTION: TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

D3-4-2-1-1_En-A

NOTE: THE NO USER-SERVICEABLE PARTS COMPARTMENT WARNING IS LOCATED ON THE APPLIANCE BOTTOM.

IMPORTANT SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the product is operated.

RETAIN INSTRUCTIONS — The safety and operating instructions should be retained for future reference.

HEED WARNINGS — All warnings on the product and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

CLEANING — The product should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzene, insecticides or other volatile liquids since they may corrode the cabinet.

ATTACHMENTS — Do not use attachments not recommended by the product manufacturer as they may cause hazards.

WATER AND MOISTURE — Do not use this product near water — for example, near a bathtub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.

ACCESSORIES — Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

CART — A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



VENTILATION — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

POWER SOURCES — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

LOCATION — The appliance should be installed in a stable location.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

GROUNDING OR POLARIZATION

- If this product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other), it will fit into the outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- If this product is equipped with a three-wire grounding type plug, a plug having a third (grounding) pin, it will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

OUTDOOR ANTENNA GROUNDING — If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.

LIGHTNING — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

POWER LINES — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

OVERLOADING — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

OBJECT AND LIQUID ENTRY — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

SERVICING — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

DAMAGE REQUIRING SERVICE — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance — this indicates a need for service.

REPLACEMENT PARTS — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

SAFETY CHECK — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

WALL OR CEILING MOUNTING — The product should not be mounted to a wall or ceiling.

HEAT — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

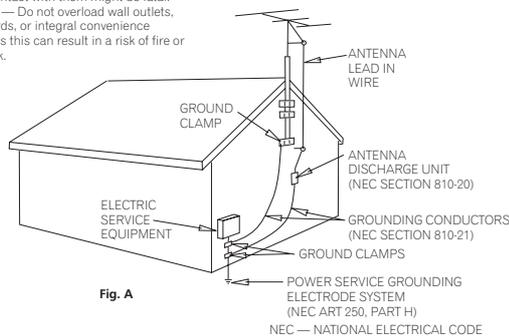


Fig. A

D1-4-2-2_En

WARNING

This equipment is not waterproof. To prevent a fire or shock hazard, do not place any container filled with liquid near this equipment (such as a vase or flower pot) or expose it to dripping, splashing, rain or moisture.

D3-4-2-1-3_A_En

When using this product follow the instructions written on the underside of the unit, which concern rated voltage, etc.

D3-4-2-2-4_En

IMPORTANT NOTICE — THE SERIAL NUMBER FOR THIS EQUIPMENT IS LOCATED IN THE REAR. PLEASE WRITE THIS SERIAL NUMBER ON YOUR ENCLOSED WARRANTY CARD AND KEEP IN A SECURE AREA. THIS IS FOR YOUR SECURITY.

D1-4-2-6-1_En

Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

D8-10-2_En

CAUTION: This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances such as radios and televisions, use shielded cables and connectors for connections.

D8-10-3a_En

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

D8-10-1-3_EF

CAUTION — PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD. RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION — POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVRETT.

D2-4-4-1_EF

WARNING: Handling the cord on this product or cords associated with accessories sold with the product will expose you to lead, a chemical known to the State of California and other governmental entities to cause cancer and birth defects or other reproductive harm.

Wash hands after handling

D36-P4_En

POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

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NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

D8-10-1-2_En

Features

1. Quick response

Using the latest circuit technology, this unit suppresses noises and color distortion even during sudden switchovers.

2. Automatic switching

Can be combined with a Pioneer DJ mixer for video switching linked to the fader start mode.

3. Full complement of input/output connectors

Supports component video, S-Video, and composite video IN/OUT signals.

(Signals are only input and output; no conversion function is provided.)

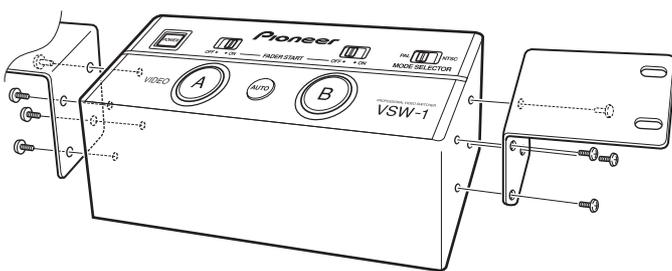
Handling Precautions

Installation location

- Do not install above an amplifier or other heat-emitting component, or use for long periods near spotlights or other head-emitting appliances, since the unit may suffer adverse effects.
- Install away from tuners and television sets. When placed near such components, noise and video distortion may occur; such effects are particularly subject to occurrence when an internal antenna is used; in such cases, either use an external antenna, or turn off this unit's power.
- The screws on the right and left sides of this unit can be used to mount the unit in a rack installation or stand. For details, consult your dealer.

Note:

When installing the unit in a rack or stand, always use the screw holes provided on the right and left sides of the unit.



Cleaning the Unit

- Use a polishing cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water and wrung out well, then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

Specifications

1. General

Power	AC 120 V, 60 Hz
Power consumption	8 W
Operating temperature	+5°C to +35°C
Storage temperature	-40°C to +60°C
Operating humidity	5-85 % R.H. (without precipitation)
Weight	1.4 kg
External dimensions	250 (W) x 88 (D) x 87.5 (H) mm (not including connectors, buttons and other protruding parts)

2. Video input section (input level/impedance)

Component video	BNC connectors x 3 (2 systems)
Y	1 Vp-p / 75 Ω
C _B /P _B	0.7 Vp-p / 75 Ω
C _R /P _R	0.7 Vp-p / 75 Ω
S-Video	S connector (2 systems)
Y	1 Vp-p / 75 Ω
C	0.286 Vp-p / 75 Ω
Composite video	RCA connector (2 systems)
	1 Vp-p / 75 Ω

3. Video output section (output level/impedance)

Component video	BNC connectors x 3 (1 system)
Y	1 Vp-p / 75 Ω
C _B /P _B	0.7 Vp-p / 75 Ω
C _R /P _R	0.7 Vp-p / 75 Ω
S-Video	S connector (1 system)
Y	1 Vp-p / 75 Ω
C	0.286 Vp-p / 75 Ω
Composite video	RCA connector (1 system)
	1 Vp-p / 75 Ω

4. Sync signal output section

Sync output	BNC connector (2 systems)
	1 Vp-p / 75 Ω
Supported video modulation systems	NTSC/PAL

5. Other connectors

Control input	minijack (3.5 dia) 2 systems
Control output	minijack (3.5 dia) 2 systems

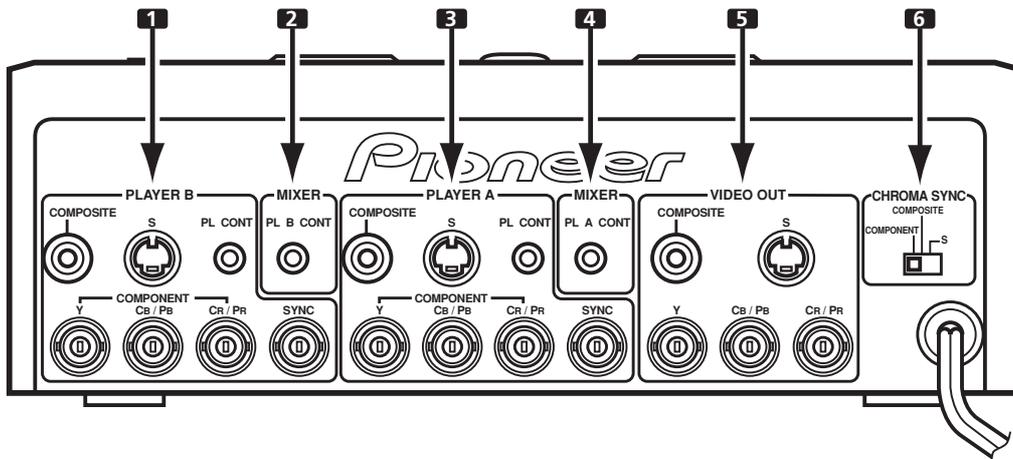
6. Accessories

● BNC cables	2
● Control cables	2
● Operating Instructions	1
● Warranty	1

For improvement purposes, specifications and design may be subject to modification without notice.

Connections

Connection Panel



1. PLAYER B connectors

Use to connect this unit to player B (DVJ-X1).

COMPOSITE

Composite video input connector (RCA pin jack x 1).

Use video cable (provided with DVJ-X1) to connect to player B's **VIDEO OUT** connector.

S

S-Video input connector (4-pin mini DIN connector x 1).

Use a S-Video cable (sold separately) to connect to the player B's S-Video **VIDEO OUT** connector.

COMPONENT

Component video input connectors (BNC connectors x 3).

Use 3 BNC plug coaxial cables (sold separately) to connect to player B's component video output connectors (**Y, Cb/Pb, Cr/Pr**).

PL CONT

Player control connector, used to control player, fader start and other operations (minijack x 1).

Use the control cable (provided with DVJ-X1) to connect to player B's **CONTROL** connector.

SYNC

Video sync signal output connector (BNC connector x 1).

The sync signal is used to synchronize video signals between players A and B, thus preventing video distortion resulting from mix-matched signals when switching between images.

Use the BNC plug coaxial cable (furnished with this unit) to connect to player B's **SYNC IN** connector.

2. Player B control input connector (MIXER)

PL B CONT

Intermediary connector for player control signals (for fader start, etc.) from the DJ mixer (minijack x 1).

Use the control cable (furnished with this unit) to connect to the **CONTROL** connector of the channel which will control the DJ mixer's player B.

3. PLAYER A connectors

Use to connect this unit to player A (DVJ-X1).

COMPOSITE

Composite video input connector (RCA pin jack x 1).

Use a video cable (supplied with DVJ-X1) to connect to player A's **VIDEO OUT** connector.

S

S-Video input connector (4-pin mini DIN connector x 1).

Use a S-Video cable (sold separately) to connect to the player A's S-Video **VIDEO OUT** connector.

COMPONENT

Component video input connectors (BNC connectors x 3).

Use 3 BNC plug coaxial cables (sold separately) to connect to player A's component video output connectors (**Y, Cb/Pb, Cr/Pr**).

PL CONT

Player control connector, used to control player, fader start and other operations (minijack x 1).

Use the control cable (provided with DVJ-X1) to connect to player A's **CONTROL** connector.

SYNC

Video sync signal output connector (BNC connector x 1).

The sync signal is used to synchronize video signals between players A and B, thus preventing video distortion resulting from mix-matched signals when switching between images.

Use the BNC plug coaxial cable (furnished with this unit) to connect to player A's **SYNC IN** connector.

4. Player A control input connector (MIXER)

PL A CONT

Intermediary connector for player control signals (for fader start, etc.) from DJ mixer (minijack x 1).

Use the control cable (furnished with this unit) to connect to the **CONTROL** connector of the channel that will control the DJ mixer's player A.

5. VIDEO OUT connectors

Connect to video monitor.

Note:

In order to produce the various video system outputs, the same input system signals are necessary (the unit does not perform video signal conversion).

COMPOSITE

Composite video output connector for player A or player B as selected by this unit (RCA pin jack).

S

S-Video output connector for player A or player B as selected by this unit (4-pin mini DIN connector).

In order to support very quick switching of video signals, this unit does not support S2 video signals.

Y, Cb/Pb, Cr/Pr

Component video output connectors for player A or player B as selected by this unit (BNC connectors x 3).

6. CHROMA SYNC selector switch

Use to select chroma signal phase comparator. Set this in accordance with the setting of the main monitor connected to the video output connectors.

S

Sets chroma signal phase comparator to S-Video.

COMPOSITE

Sets chroma signal phase comparator to composite video signal.

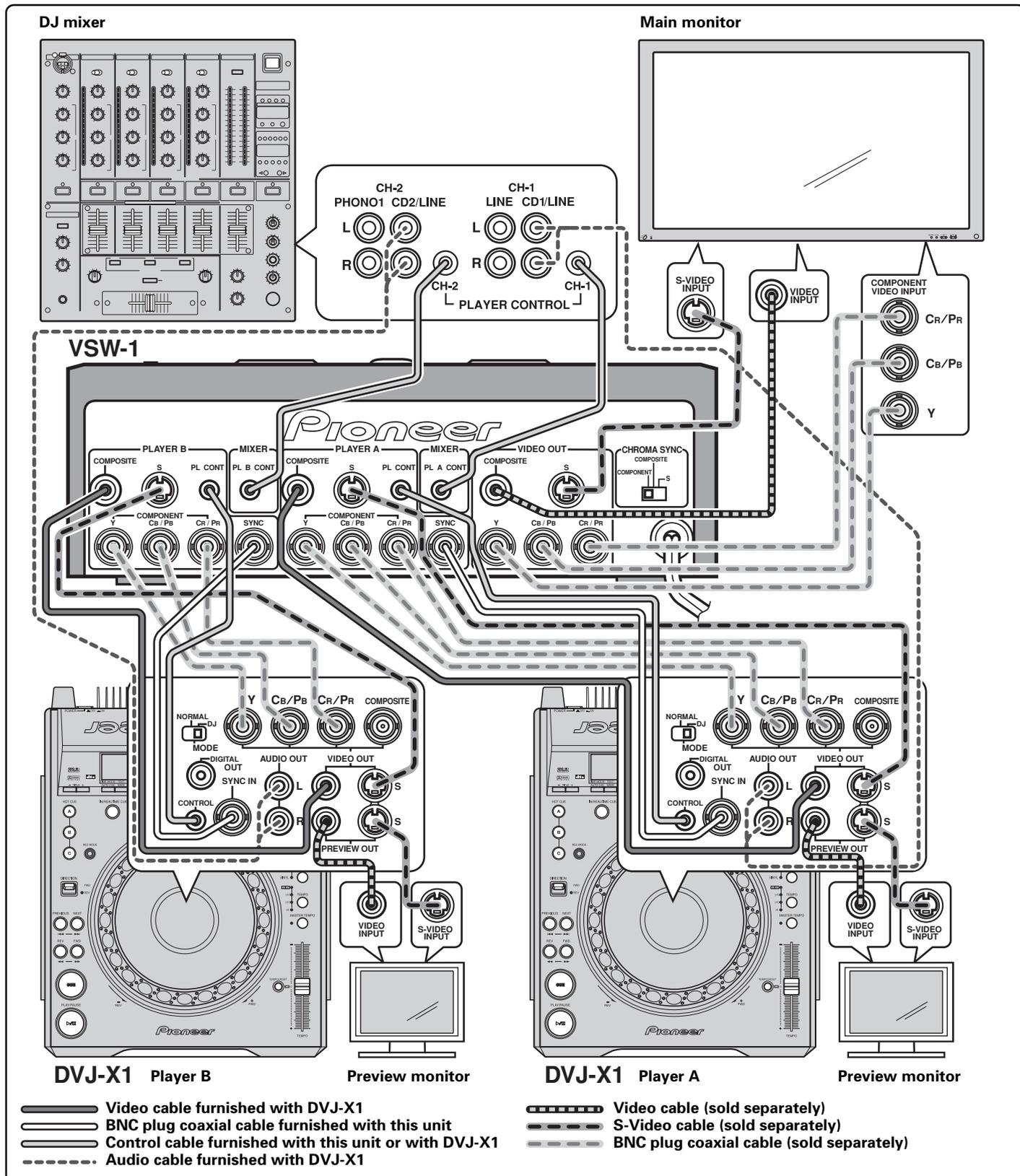
COMPONENT

Phase comparison is not performed. Use this position when using components other than DVJ-X1.

Basic Connections

This unit is designed to allow switching between component video, S-Video, and composite video signals, but does not support signal conversion. As a result, the same signals required for output must be input. Further, while three different types of signals can be connected simultaneously for switching between them, only one of the types must be selected for chroma signal synchronization.

When connecting or changing the installation of components, always turn off power and disconnect power cord's plug from their outlets before proceeding.



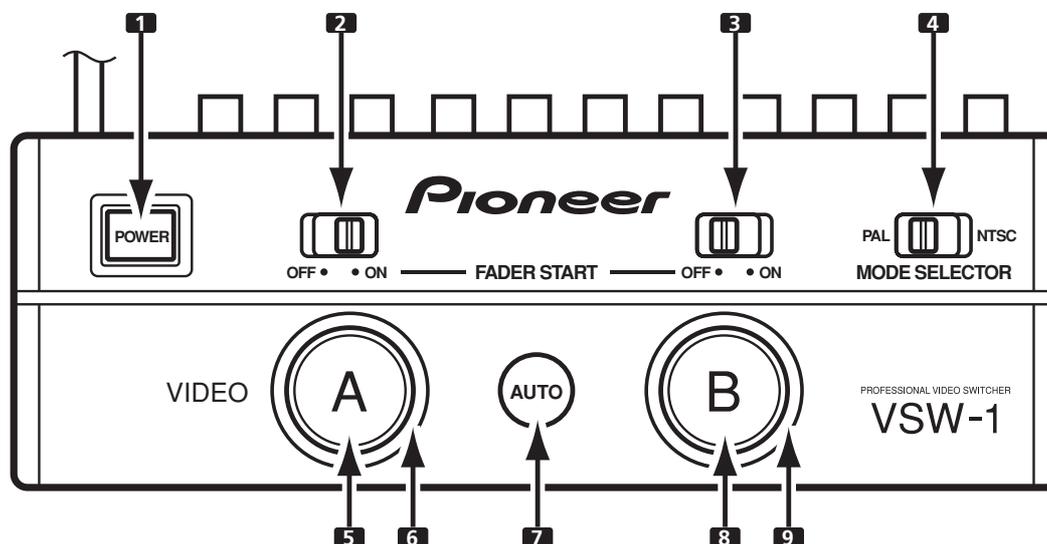
Power cord connection

After all other connections are completed, insert the power cord's plug into a wall power outlet or the auxiliary power outlet of an amplifier.

Operation

This unit is a 2-channel video selector designed to allow switching between the video output signals from two DVJ-X1 DJ DVD players. This component is designed to allow use of a fader start signal output from a DJ mixer to perform automatic signal switching; it also generates sync signals to help suppress image distortion when switching between video signals.

Operation Panel



1. POWER button

Power is turned ON when this button is depressed to the lock position. Press again to the unlock position to turn power OFF.

When power is first turned ON, **PLAYER A** input is selected, and the **VIDEO A** button's outer-ring indicator lights. The **AUTO** button also lights, indicating that the AUTO mode is selected, and the fader start signal from the DJ mixer is used to perform automatic input selection.

2. FADER START switch A

ON: Transmits fader start signal from DJ mixer to player A.

OFF: Disables fader start signal from DJ mixer to player A.

3. FADER START switch B

ON: Transmits fader start signal from DJ mixer to player B.

OFF: Disables fader start signal from DJ mixer to player B.

4. Sync signal MODE SELECTOR switch

Selects timing for the standard sync signal generated by the unit.

PAL: Generates sync signal conforming to PAL standard.

NTSC: Generates sync signal conforming to NTSC standard.

- Sync signal can be reacquired by resetting the position of the sync signal **MODE SELECTOR** switch.

Note:

The discs used in the two players (A and B) should be compliant with the same signal format (PAL/NTSC). Synchronization cannot be performed if the discs have differing signal formats.

5. VIDEO A button

When pressed to the ON position, **PLAYER A** input is selected, and the ring indicator around the **VIDEO A** button lights.

Whenever power is first turned on, **PLAYER A** input is selected by default.

- If the **VIDEO B** button is pressed while holding the **VIDEO A** button depressed, **PLAYER B** input is selected; when the **VIDEO B** button is then released, input returns immediately to **PLAYER A**, thus allowing quick switching between A/B inputs.

6. VIDEO A indicator

The indicator around the border of the **VIDEO A** button lights when **PLAYER A** input has been selected.

7. AUTO select button/indicator

When pressed to the ON position, the **AUTO** button indicator lights and when a fader start signal is received from the DJ mixer, inputs are switched automatically. If the **VIDEO A** or **VIDEO B** button is pressed manually during the AUTO mode (namely, pressing whichever input button is not currently selected), the input will switch to the one pressed, but the AUTO mode will continue in effect; as a result, when a fader start signal is subsequently received from the DJ mixer, the inputs will automatically switch once again.

When the **AUTO** button is pressed once again to the OFF condition (button indicator goes out), the inputs will not switch even if a fader start signal is received from the DJ mixer.

- Whenever power is first turned ON, the **AUTO** mode is selected by default (AUTO button indicator lights).
- Whenever the AUTO mode is being used be sure that the DJ mixer's fader start switch is in the ON position.

8. VIDEO B button

When pressed to the ON position, **PLAYER B** input is selected, and the ring indicator around the **VIDEO B** button lights.

- If the **VIDEO A** button is pressed while holding the **VIDEO B** button depressed, **PLAYER A** input is selected; when the **VIDEO A** button is then released, input returns immediately to **PLAYER B**, thus allowing quick switching between A/B inputs.

9. VIDEO B indicator

The indicator around the border of the **VIDEO B** button lights when **PLAYER B** input has been selected.

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.

If the trouble cannot be rectified even after checking the following items, contact your dealer or nearest PIONEER service center.

Symptom	Cause	Remedy
Power doesn't turn on.	<ul style="list-style-type: none"> ● Power cord is not connected. 	<ul style="list-style-type: none"> ● Connect power cord to wall outlet.
No images are seen.	<ul style="list-style-type: none"> ● Cables are not connected properly, or are loose. ● Connectors or plugs and jacks are dirty. ● Monitor power is not turned on. 	<ul style="list-style-type: none"> ● Connect properly. ● Clean connectors and plugs, jacks. ● Turn on power to monitor.
Video images are not synchronized when switching is performed.	<ul style="list-style-type: none"> ● MODE SELECTOR switch setting differs from the type of video signal (PAL/NTSC) being played back. ● Use of a long cable causes drop in signal level or quality. ● This unit's sync signal output is not connected to the DJ DVD player, or is loose. 	<ul style="list-style-type: none"> ● Set the MODE SELECTOR switch to match the type of video signal being played (PAL/NTSC). ● Change to shorter cables. ● Connect properly.
Color is distorted when performing input switching.	<ul style="list-style-type: none"> ● The setting of the connection panel's CHROMA SYNC switch differs from the type of video signal being played back. 	<ul style="list-style-type: none"> ● Set the CHROMA SYNC switch to match the kind of signal being played.
This unit inputs do not change when the DJ mixer's fader lever is operated.	<ul style="list-style-type: none"> ● DJ mixer's fader start switch is in set to OFF. ● This unit's AUTO button is set to OFF (indicator is off). ● DJ DVD player's control cable is not connected to this unit, or is loose. 	<ul style="list-style-type: none"> ● Set DJ mixer's fader start switch to ON. ● Press AUTO button to ON (indicator lights). ● Connect properly.
DJ DVD player doesn't start when DJ mixer's fader lever is operated.	<ul style="list-style-type: none"> ● DJ mixer's fader start switch is set to OFF. ● Control cables between DJ DVD player and this unit, or between DJ mixer and the unit are not connected properly, or are loose. ● This unit's FADER START switch is set to OFF. 	<ul style="list-style-type: none"> ● Set DJ mixer's FADER START switch to ON. ● Connect control cables properly. ● Press this unit's FADER START switch to ON position.

Static electricity or other external interference may cause the unit to malfunction. To restore normal operation, turn the power off and then on again.



Dear Customer:

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion-and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

We Want You Listening For A Lifetime

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

Decibel Level Example

30	Quiet library, soft whispers
40	Living room, refrigerator, bedroom away from traffic
50	Light traffic, normal conversation, quiet office
60	Air conditioner at 20 feet, sewing machine
70	Vacuum cleaner, hair dryer, noisy restaurant
80	Average city traffic, garbage disposals, alarm clock at two feet.

THE FOLLOWING NOISES CAN BE DANGEROUS UNDER CONSTANT EXPOSURE

90	Subway, motorcycle, truck traffic, lawn mower
100	Garbage truck, chain saw, pneumatic drill
120	Rock band concert in front of speakers, thunderclap
140	Gunshot blast, jet plane
180	Rocket launching pad

Information courtesy of the Deafness Research Foundation.



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Should this product require service in the U.S.A. and you wish to locate the nearest Pioneer Authorized Independent Service Company, or if you wish to purchase replacement parts, operating instructions, service manuals, or accessories, please call the number shown below.

800 – 782 – 7210

Please do not ship your product to Pioneer without first calling the Customer Support Division at the above listed number for assistance.

**PIONEER ELECTRONICS (USA), INC.
CUSTOMER SUPPORT DIVISION
P.O. BOX 1760, LONG BEACH,
CA 90801-1760, U.S.A.**

For warranty information please see the Limited Warranty sheet included with your product.

Should this product require service in Canada, please contact a Pioneer Canadian Authorized Dealer to locate the nearest Pioneer Authorized Service Company in Canada. Alternatively, please contact the Customer Service Department at the following address:

Pioneer Electronics of Canada, Inc.

**300 Allstate Parkway
Markham, ON L3R OP2
(905) 479-4411
1 (877) 283-5901**

For warranty information please see the Limited Warranty sheet included with your product.

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