

CVT MANUAL

RINGEDGE INSTALLATION AND CABINET MODIFICATION

(NAOMI CABINET / NET CITY / NEW NET CITY)

IMPORTANT


- Before using this product, read this manual carefully to understand the contents herein stated.
- After reading this manual, be sure to keep it near the product or in a convenient place for easy reference when necessary.


BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:


To maintain safety:

To ensure the safe operation of this product, be sure to read the following before usage. The following instructions are intended for the users, operators and the personnel in charge of the operation of the product. After carefully reading and sufficiently understanding the warning displays and cautions, handle the product appropriately. Be sure to keep this manual close to the product or in a convenient place for future reference.


Herein, explanations which require special attention are enclosed with dual lines. Depending on the potentially hazardous degrees, the terms of DANGER, WARNING, CAUTION, etc. are used. Be sure to understand the contents of the displays before reading the text.


 **DANGER** Indicates that mishandling the product by disregarding this pictograph will cause severe injury or death.

 **WARNING** Indicates that mishandling the product by disregarding this warning will cause a potentially hazardous situation which can result in death or serious injury.

 **CAUTION** Indicates that mishandling the product by disregarding this caution will cause a slight hazardous situation which can result in personal injury and/or material damage.

For the safe usage of the product, the following pictographs are used:

 Indicates "HANDLE WITH CARE." In order to protect the human body and equipment, this display is attached to places where the instruction manual should be referred to.

 Indicates a "protective earth terminal." Before operating the equipment, be sure to connect it to the ground.
(The step may be omitted for products in which a power cable with earth is used.)

- **Perform work in accordance with the instructions herein stated.**
Instructions for work are explained by paying attention to the aspect of accident prevention. Failing to perform work as per the instructions can cause accidents. In the case where only those who have technical expertise should perform the work to avoid hazardous situation, the instructions herein state that the site maintenance personnel should perform such work.
- **Be sure to turn off the power before working on the machine.**
To prevent an electric shock, be sure to turn off the power and unplug the power cable before carrying out any work that requires direct contact with the interior of the product. If the work is to be performed in the power-on status, the instruction manual herein always states to that effect.
- **Be sure to ground the earth terminal.**
(This is not required in the case where a power cable with earth is used.)
This product is equipped with the earth terminal. When installing the product, connect the earth terminal to the "accurately grounded indoor earth terminal" by using an earth wire. Unless the product is grounded appropriately, the user can be subject to an electric shock. After performing repair, etc. for the control equipment, ensure that the earth wire is firmly connected to the control equipment.
- **Ensure that the power supply used is equipped with an earth leakage breaker.**
Using a power supply which is not equipped with the earth leakage breaker can cause a fire when earth leakage occurs.
- **Be sure to use fuses which meet the specified rating.**
(Only for the machines which use fuses.)
Using fuses exceeding the specified rating can cause a fire and an electric shock.

- **Specification changes (removal of equipment, conversion and addition) not designated by SEGA are not allowed.**
The parts of the product include warning labels for safety, covers for personal protection, etc. It is very hazardous to operate the product by removing parts and/or modifying the circuits. Should doors, lids and protective parts be damaged or lost, refrain from operating the product, and contact where the product was purchased from or the office herein stated. SEGA shall not be held responsible for any accidents, compensation for damage to a third party, resulting from the specifications not designated by SEGA.
 - **Ensure that the product meets the requirements of appropriate electrical specifications.**
Before installing the product, check for electrical specifications. SEGA products have a nameplate on which electrical specifications are described. Ensure that the product is compatible with the power supply voltage and frequency requirements of the location. Using any electrical specifications different from the designated specifications can cause a fire and an electric shock.
 - **Install and operate the product in places where appropriate lighting is available, allowing warning labels to be clearly read.**
To ensure safety for the customers, labels and printed instructions describing potentially hazardous situations are applied to places where accidents can be caused. Ensure that where the product is operated has sufficient lighting allowing the warnings to be read. If any label is peeled off, apply it again immediately. Please place an order with where the product was purchased from or the office herein stated.
 - **When handling the monitor, be very careful. (Applies only to products with monitors.)**
Some of the monitor parts are subject to high tension voltage. Even after turning off the power, some portions are still subject to high tension voltage sometimes. Monitor repair and replacement should be performed only by those technical personnel who have knowledge of electricity and technical expertise.
 - **Be sure to adjust the monitor properly. (Applies only to products with monitors.)**
Do not operate the product leaving on-screen flickering or blurring as it is. Using the product with the monitor not properly adjusted may cause dizziness or a headache to an operator, a player, or the customers.
 - **When transporting or reselling this product, be sure to attach this manual to the product.**
- * *In the case where commercially available monitors and printers are used in this product, only the contents relating to this product are explained herein. Some commercially available equipment has functions and reactions not stated in this manual. Read this manual together with the specific instruction manual of such equipment.*
- * *Descriptions herein contained may be subject to improvement changes without notice.*
- * *The contents described herein are fully prepared with due care. However, should any question arise or errors be found, please contact SEGA.*

INSPECTIONS IMMEDIATELY AFTER TRANSPORTING THE PRODUCT TO THE LOCATION

Normally, at the time of shipment, SEGA products are in a status allowing for usage immediately after transporting to the location. Nevertheless, an irregular situation may occur during transportation. Before turning on the power, check the following points to ensure that the product has been transported in a satisfactory status.

- Are there any dented portions or defects (cuts, etc.) on the external surfaces of the cabinet?
- Are casters and adjusters damaged?
- Do the power supply voltage and frequency requirements meet with those of the location?
- Are all wiring connectors correctly and securely connected? Unless connected in the correct way, connector connections can not be made accurately. Do not insert connectors forcibly.
- Do power cables have cuts and dents?
- Are all accessories available?
- Can all doors and lids be opened with the accessory keys? Can doors and lids be firmly closed?

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BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:

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SEGA AMUSEMENTS OFFICES

INTRODUCTION

This manual provides instructions for:

RINGEDGE INSTALLATION AND CABINET MODIFICATION NAOMI CABINET / NET CITY / NEW NET CITY

This manual is intended for use with cabinets.

Before starting any work, make sure that the details and precautions of the kit and the modification procedure are fully understood, and be sure to thoroughly read this manual and the Owner's Manual of NAOMI CABINET / NET CITY / NEW NET CITY.

The target audience of this manual includes the owners, administrators, and operators of the game unit and this kit, as well as the personnel who will be using this kit to perform the modification.

If it is impossible to modify the game machine as instructed by this manual, contact the office listed in this manual or the point-of-purchase for this product.

This work should be performed by site maintenance personnel or other skilled professionals. If no one with proper technological expertise is available, request service from the office listed in this manual or the point-of-purchase for this product.

Use of this product is unlikely to cause physical injuries or damage to property. However, points that require special attention are indicated by bold text, the word "IMPORTANT" and the symbol below.

STOP IMPORTANT

Indicates important information that, if ignored, may result in the mishandling of the product and cause faulty operation or damage to the product.

Definition of 'Site Maintenance Personnel or Other Qualified Individuals'

WARNING

Procedures not described in this manual or marked as 'to be carried out by site maintenance personnel or other qualified professionals' should not be carried out by personnel without the necessary skill or technology. Work carried out by unqualified persons may cause serious accidents, including electrocution.

Parts replacement, maintenance inspections and troubleshooting should be carried out by site maintenance personnel or other qualified professionals. This manual includes directions for potentially dangerous procedures which should only be carried out by professionals with the appropriate specialized knowledge.

The site maintenance personnel or other qualified professionals mentioned in this manual are defined as follows:

Site maintenance personnel:

Individuals with experience in maintaining amusement equipment, vending machines, etc., working under the supervision of the owner/operator of this product to maintain machines within amusement facilities or similar premises by carrying out everyday procedures such as assembly, maintenance inspections, and replacement of units/expendable parts.

Activities to be carried out by site maintenance personnel:

Amusement equipment/vending machine assembly, maintenance inspection and replacement of units/expendable parts.

Other qualified professionals:

Persons employed by amusement equipment manufacturers, or involved in design, production, testing or maintenance of amusement equipment. The individual should have either graduated from technical school or hold similar qualifications in electrical/electronics/mechanical engineering.

Activities to be carried out by other qualified professionals:

Amusement equipment/vending machine assembly, repair/adjustment of electrical/electronic/mechanical parts.

1 PRECAUTIONS WHEN PERFORMING THE MODIFICATION

When performing work using the CVT Kit, observe the points listed below and work safely. Improper handling or disregarding the warnings below or elsewhere in the manual may result in injury to the person doing the modification or to a user of the product. SEGA cannot accept responsibility for damages or injury, including injury to third parties, resulting from failure to read and follow the instructions contained in the manual.

WARNING

- Some modifications may be hazardous if performed by a person without technical knowledge and expertise. This manual instructs these modifications be performed by site maintenance personnel or other qualified professionals. Be sure to observe such precautions as explained in this manual. Failure to do so may result in an accident.
- Before starting work, remove any dust, dirt, or foreign matter that has accumulated inside the cabinet. Dust, dirt, and foreign matter may have been accumulated in the product that you work. Dust or other foreign matter on the IC PCB (printed circuit board) or wiring connections may cause a short circuit or fire.
- After using this product for 3 months, inspect the cables and connectors near parts that generate heat such as the lamp before performing work. Check whether there is any deterioration or any abnormalities. Failure to do so may result in fire, smoke, electric shock, or a short circuit.
- Before starting work, check whether specification changes not designated by SEGA (modifications, addition or removal of equipment) were applied to the product. Do not perform work using the kit on products with approved specification changes. Doing so may cause an unexpected accident, fire or electric shock. It may also cause an accident such as electric shock or injury to players or people in the vicinity. If any accidents arise due to work performed under unauthorized conditions, SEGA will take no responsibility whatsoever for any damages, including those to third parties.
- Proceed with checks and tasks as indicated in these instructions. If instructions are not followed, or if tasks and/or checks are neglected, an electric shock or other very serious accident, even fatal accident, can occur.
- Turn off the power and unplug the power cable from the wall outlet before starting. When using a breaker specified for this product, be sure to turn the switch to OFF before starting work. Failure to do so may result in electrical shock or a short circuit accident. Works may be done without disconnecting the power, only where specifically instructed by this manual.
- Be sure to check the electrical specifications. Ensure that this product is compatible with the location's power supply, voltage, and frequency requirements. A plate describing electrical specifications is attached to the product. Non-compliance with the electrical specifications can cause a fire and electric shock.
- When multiple people are working at the same time, carelessness or negligence may cause injury to other workers. When working with multiple people, assign someone to oversee the work.

WARNING

- Do not operate the product if any important parts, such as doors or covers, are damaged or lost during work. Order the damaged or missing part(s) from the retailer from which the product or modification kit was purchased and then restore the product to a safe operating state before resuming operation.
- This product has warning labels on important parts. Removing the labels or performing work contrary to the explanations given in this manual may cause serious accidents.
- To perform works safely, ensure that the following are available:
 - A spacious working area with adequate lighting
 - All necessary tools and instruments
 - Suitable clothing
 - A stepladder if overhead work is to be performed
 - Several workers as required
- Eliminate any environments, conditions, or elements that may cause an accident, such as:
 - Sloped, grooved, or uneven floor
 - Water spills
 - Slippery surfaces
 - Unstable surfaces
 - Confined work spaces
 - Low ceiling
 - Inappropriate tools and instruments
- Be careful not to lose any fasteners (screws, nuts, or washers) during work. A metallic fastener dropped on an electrified section may cause a short circuit or fire. If any fasteners become lost, use a new one of the specified size. Using a fastener of unspecified size may cause a serious accident (for example, detaching of a fixed part).
- Be careful not to damage any cables. Damaged cables may cause an accident, such as electrical shock, short circuit, or fire. Thin cables may easily break, and some types of connectors may cause frequent cable breakage. Check the connecting direction when attaching connectors. Incorrect connections may result in cable breakage. Because the cables are covered, it is not easy to check if the inside cables are broken. Do not twist or pull the cables unnecessarily.

CAUTION

- Be careful in handling plastic parts. Be sure not to tighten screws or nuts too tightly. If such parts are exposed to excessive loads or impact, they might become damaged, resulting in fragments or cracks that could cause accidental injury.
- When attaching or removing doors or lids, be careful that your hand or finger does not get caught in anything.
- Wear appropriate work clothing so that work can be performed safely. Use gloves and safety shoes to prevent accidents or injuries.

IMPORTANT

- Do not perform circuit inspections on the IC board. Failure to use the specified measuring device or apparatus may result in damage to the board.
- Static electricity from your body may damage some electronics devices on the IC board. Before handling the IC board, touch a grounded metallic surface so that the static electricity can be discharged.
- Some parts are not designed and manufactured specifically for the kit. The manufacturers may discontinue, or change the specifications of such general purpose parts. If this is the case, SEGA cannot repair or replace a failed kit whether or not a warranty period has expired.


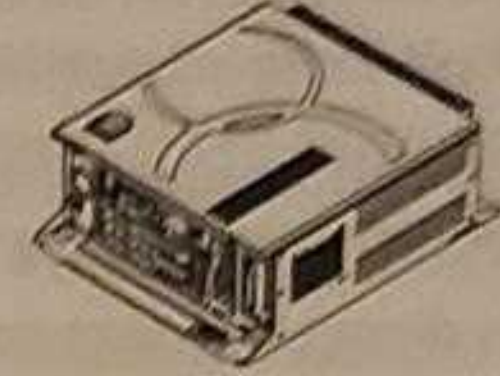
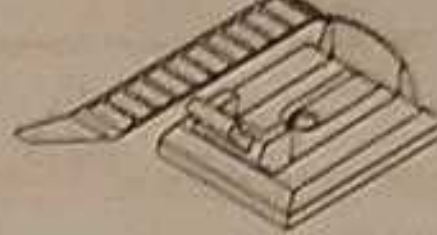





2 PARTS AND TOOLS REQUIRED FOR MODIFICATION

This is a list of the parts required to modify the cabinets specified below in order to make them RINGEDGE compatible.

- NAOMI CABINET
- NET CITY
- NEW NET CITY

Modification of 1 cabinet can be performed with 1 set of the following.
 Check to see whether a FAN UNIT (NOA-1650 or NOI-1650) is installed in the NAOMI CABINET/NET CITY cabinet. If not, procure one FAN MOTOR KIT (XKT-0856). NEW NET CITY cabinets are equipped with an appropriate FAN UNIT as a standard.
 NAOMI CABINET/NET CITY /NEW NET CITY cabinets using a LINDBERGH power source modification kit (XKT-1516) can also be modified.

When installing the kit, check that the parts listed in the following table are present.
 Accessories marked Spare in the note column are consumable items but included as spares.

Part name/Part no.	Diagram/Use etc.	Quantity
CVT MANUAL 420-7361-01	 This manual	1
RINGEDGE	 RINGEDGE unit with software installed has a key chip inserted into the unit.	1
CORD CLAMP 280-7892		2
TAPPING SCREW 4x12 011-P00412		4
CABLE A 605-0148-01		1
CABLE B 605-0181		1
SOUND CONVERSION CABLE 605-0154-025		1
VIDEO CONVERSION CABLE 605-0159-025		1

TOOLS NECESSARY FOR WORK

- Phillips screwdriver (For M3, M4)
- MASTER KEY

3 MODIFICATION WORK

⚠ WARNING

- Connect only the specified connectors to the RINGEDGE unit. Since this is an universal board, games may not use some connectors. Connecting unused connectors may result in overheating, smoke, or burnouts.
- Ensure that the IC circuit board is not exposed to heat. The RINGEDGE unit is equipped with a cooling fan. Ensure that the exhaust port is not blocked. Do not place objects in direct contact around the RINGEDGE, as this may lead to overheating or fire.

⚠ CAUTION

- Be careful in handling plastic parts. If such parts are exposed to excessive loads or impact, they might become damaged, resulting in fragments or cracks that could cause accidental injury.
- When attaching or removing parts, be careful that your hand or finger does not get caught in anything.

STOP IMPORTANT

Follow the provided instructions when attaching parts to the base to prevent the risk of friction and parts damage when placing inside the cabinet.

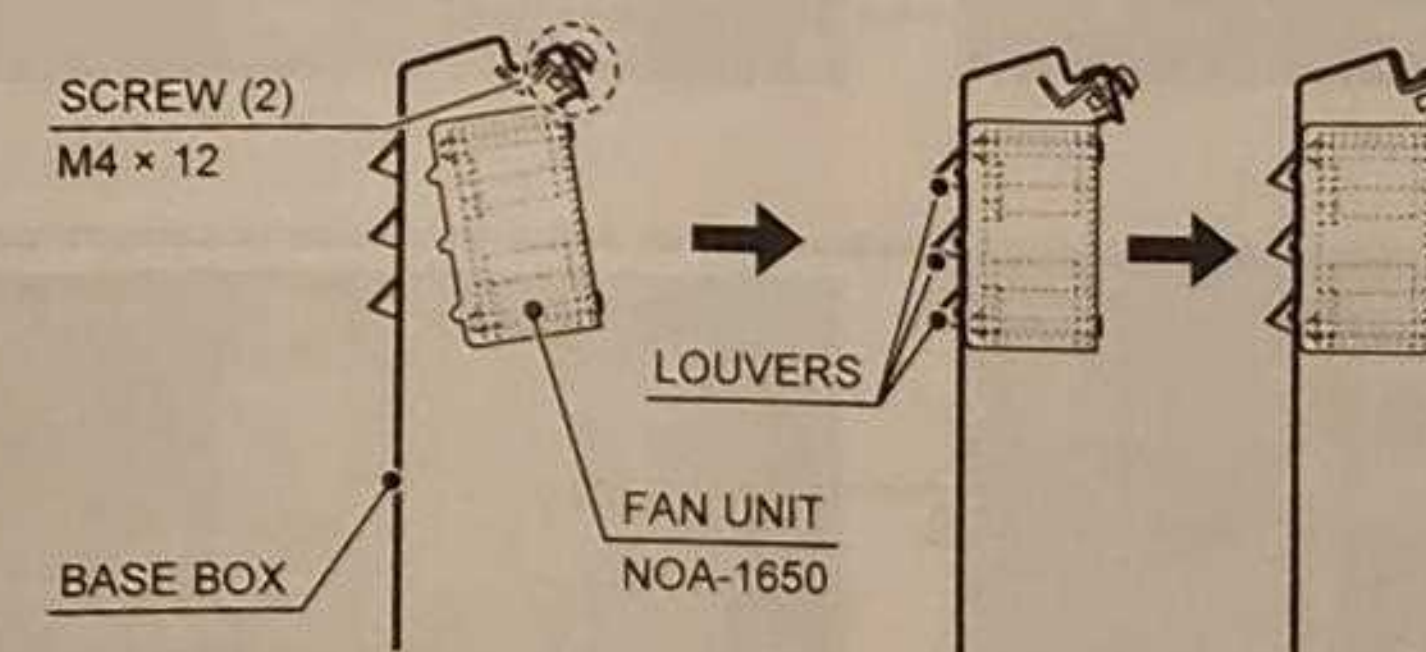
NAOMI CABINET/NET CITY/NEW NET CITY MODIFICATION PROCEDURE

STOP IMPORTANT

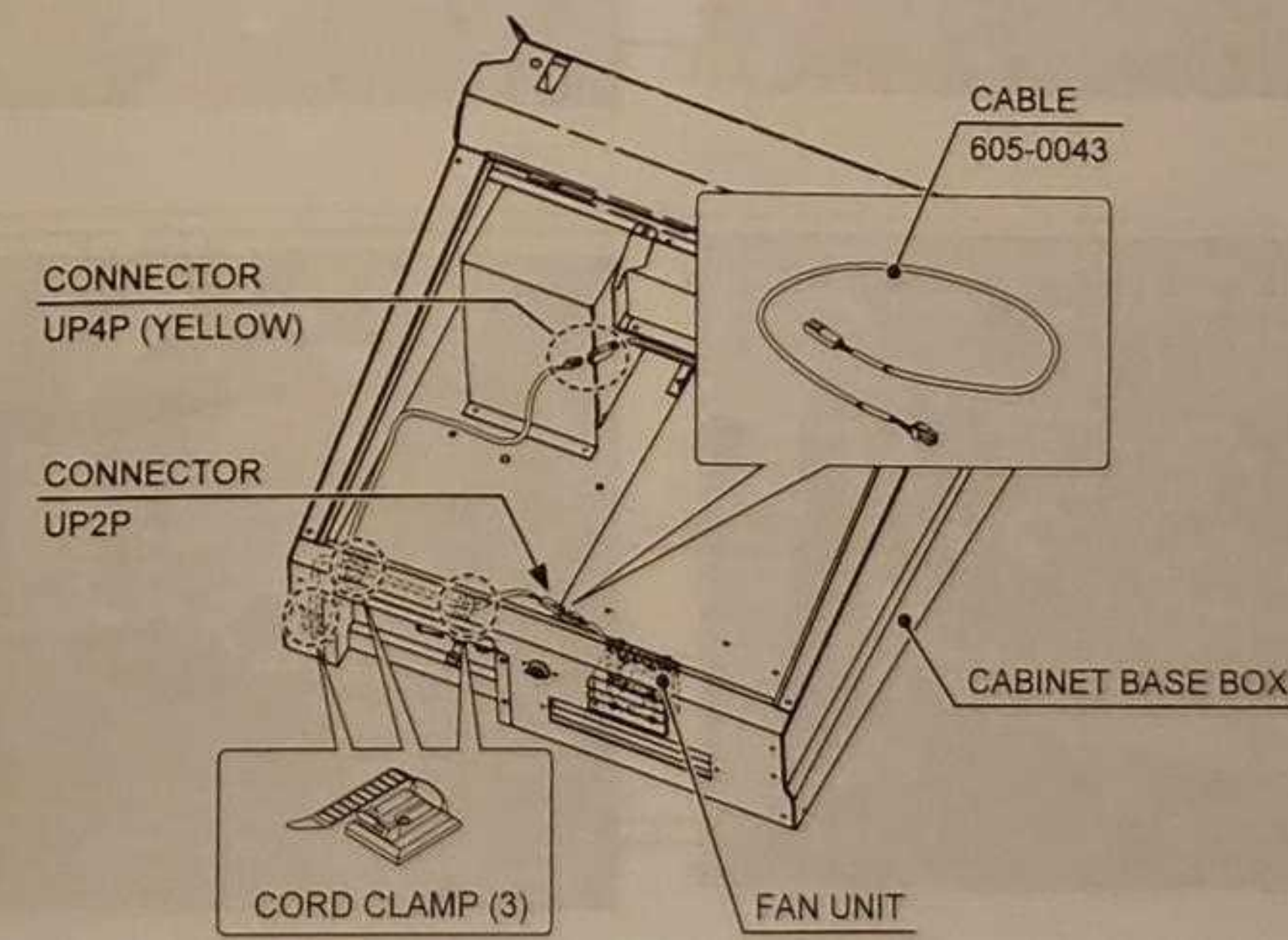
For units modified with a LINDBERGH power source (XKT-1516-01): If the 2 specified connectors are connected to the LINDBERGH power source, the power source unit will not function properly. Be sure to disconnect them from the cabinet.

If the unit uses a VS KIT NAOMI CABINET (XKT-0406) multiplayer connection and VS BD BRKT (NOA-1631)/VS BD SUB BRKT (NOA-1632) were used to attach the VS BD, the RINGEDGE unit cannot be attached. Take off the BRKT (bracket) and use the 4 screws included with the VS KIT to attach the VS BD to the wooden base.

- 1 Turn the power OFF and unplug the power cable.
- 2 Refer to the instruction manual included with the cabinet and take off the game board.
- 3 If no fan unit is installed, procure and attach FAN MOTOR KIT (XKT-0856). If already installed, proceed to Step 6.
- 4 Loosen the 2 fan unit screws and attach the unit to the cabinet's base box, then adjust its position until it slots into the louvers. Thread the 2 screws through the edge of the base box, then tighten them.



- 5 Attach the 3 included cord clamps to the FAN MOTOR KIT (XKT-0856), then add the cable (605-0043) to the base box and connect the connectors.



6 If the cabinet has been modified with a LINDBERGH power source (XKT-1516), release the cord clamp and remove cable (605-0096) and cable (605-0097) connectors. If left connected, the power source will not function properly.

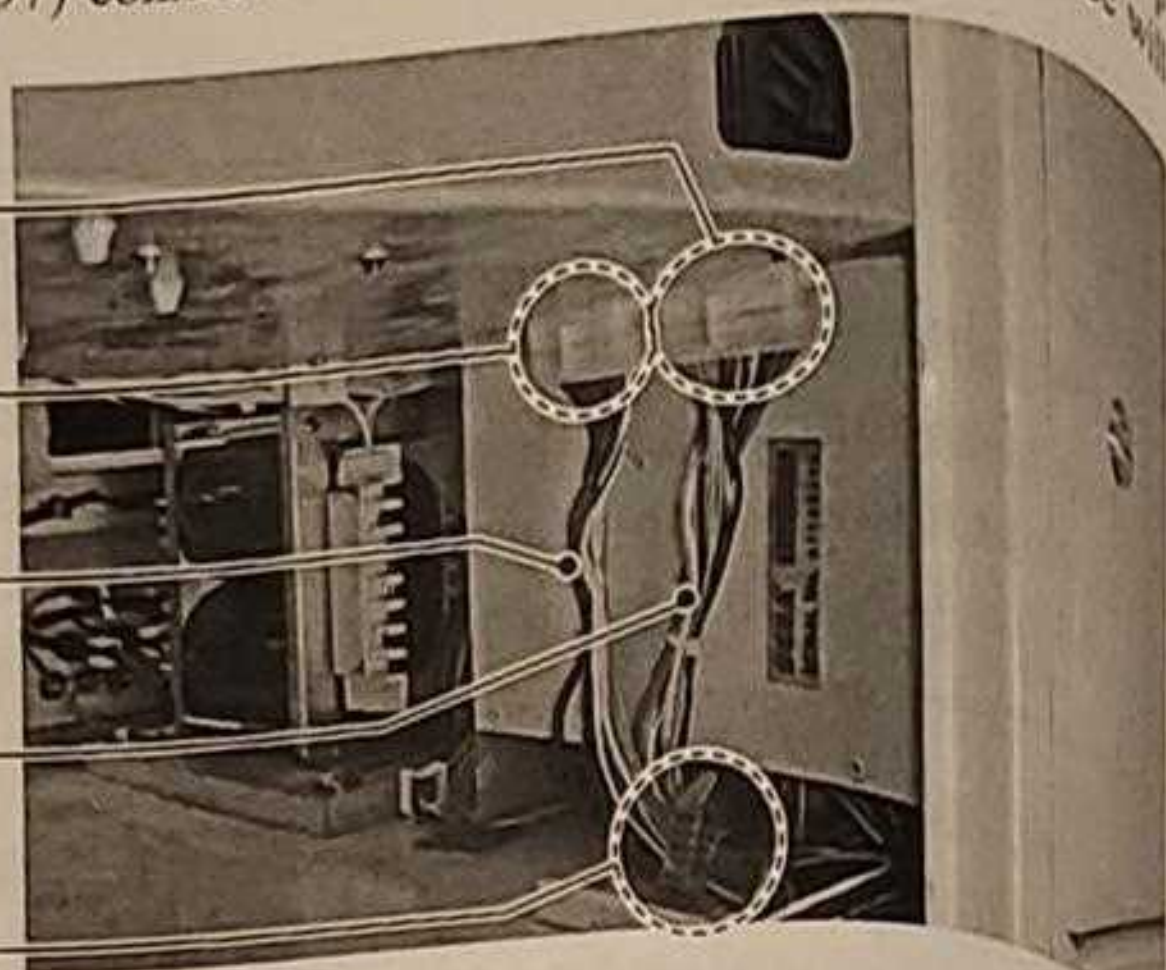
CONNECTOR
MOLEX24P

CONNECTOR
MOLEX20P

CABLE
605-0096

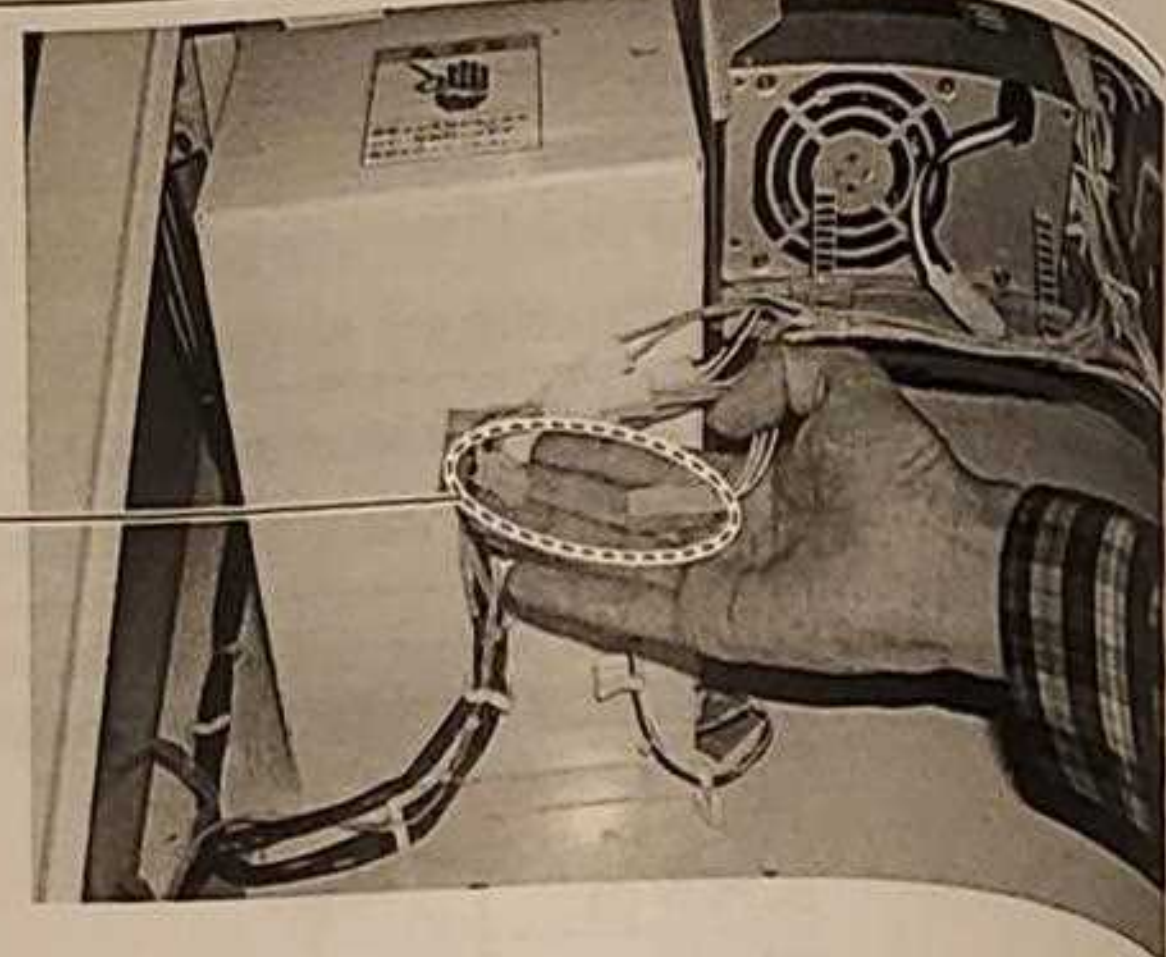
CABLE
605-0097

CORD CLAMP



7 Disconnect the connector.

CONNECTOR
UP4P (YELLOW)

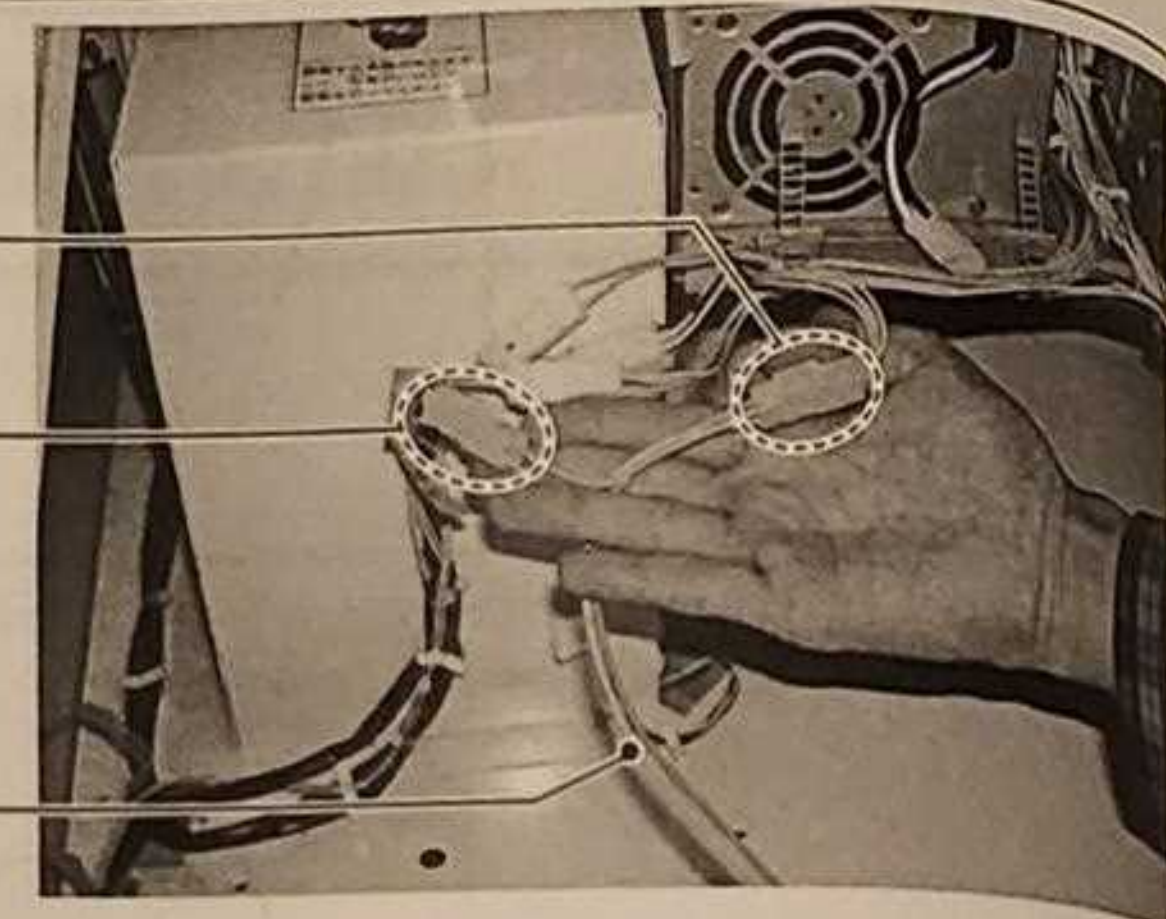


8 Connect the 2 cable A connectors.

CONNECTOR
UP4P (YELLOW)

CONNECTOR
UP4P (YELLOW)

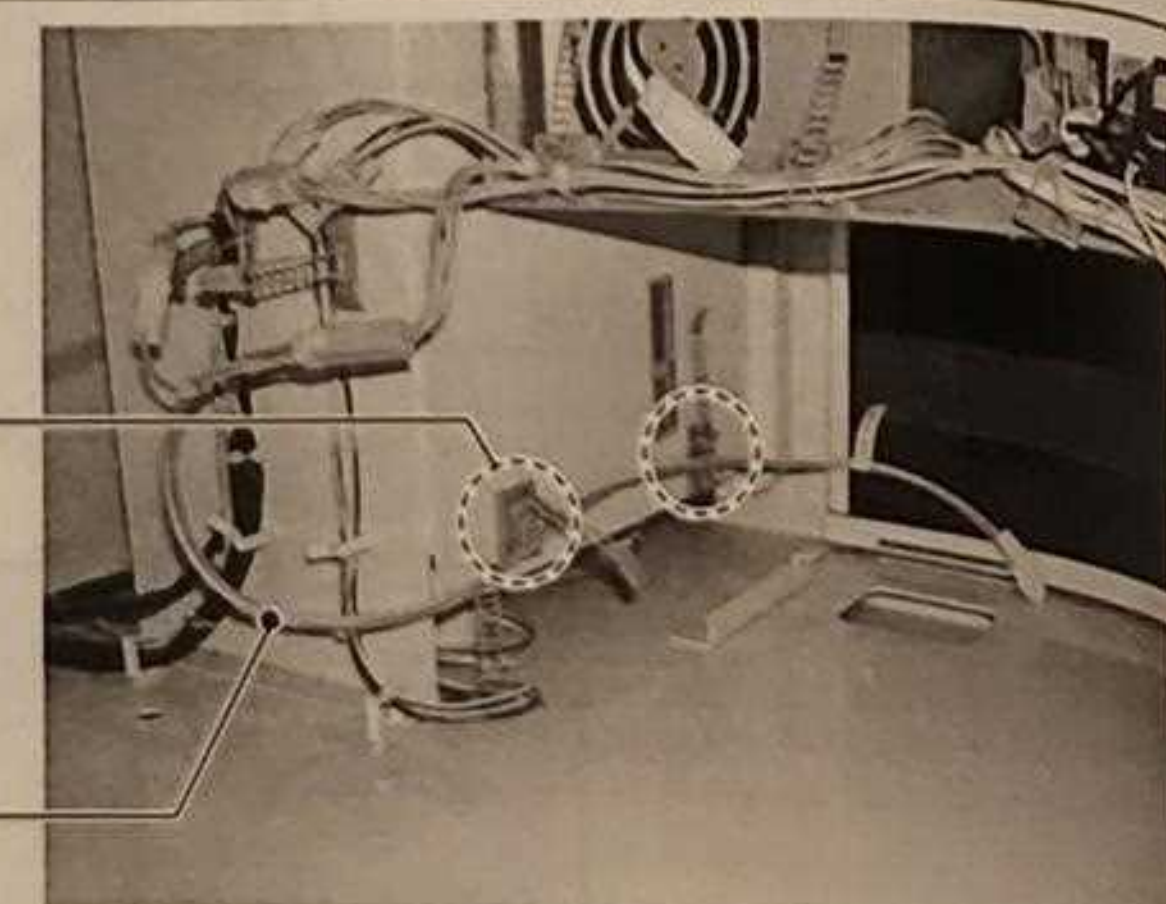
CABLE A
605-0148-01



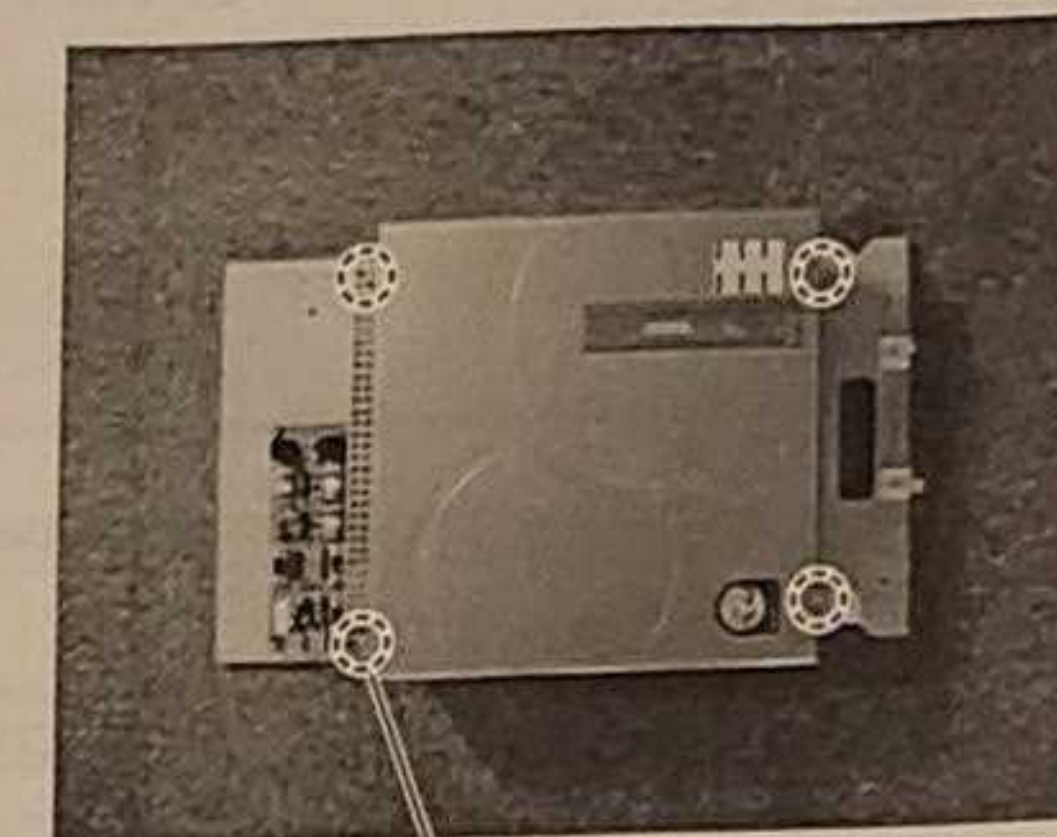
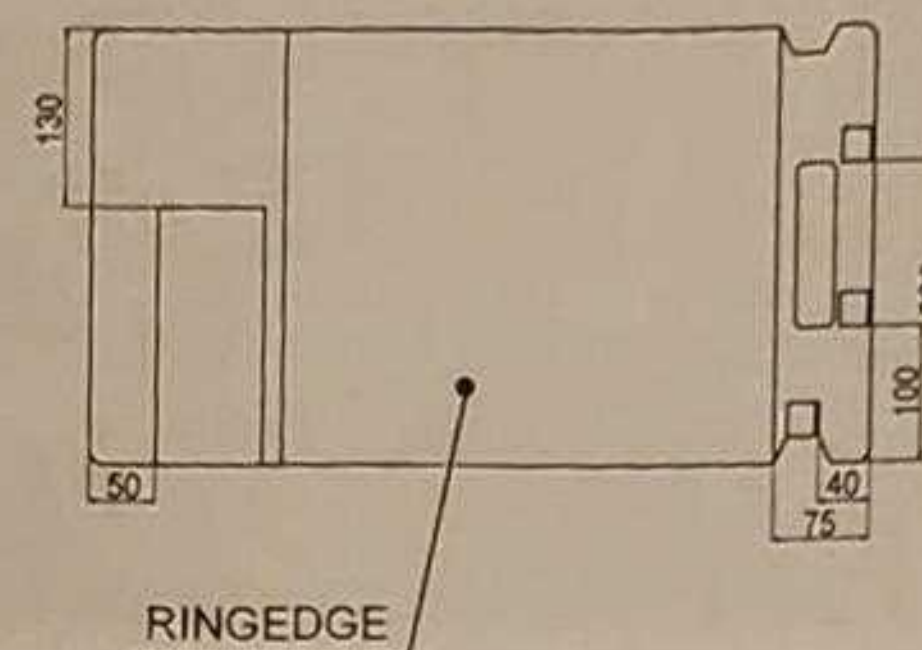
9 Affix the 2 cord clamps as shown and affix cable A.

CORD CLAMP (2)

CABLE A
605-0148-01



10 Attach the RINGEDGE to the wooden base which was taken off in Step 2, and affix with the 4 tapping screws.



TAPPING SCREW (4)
4 x 12

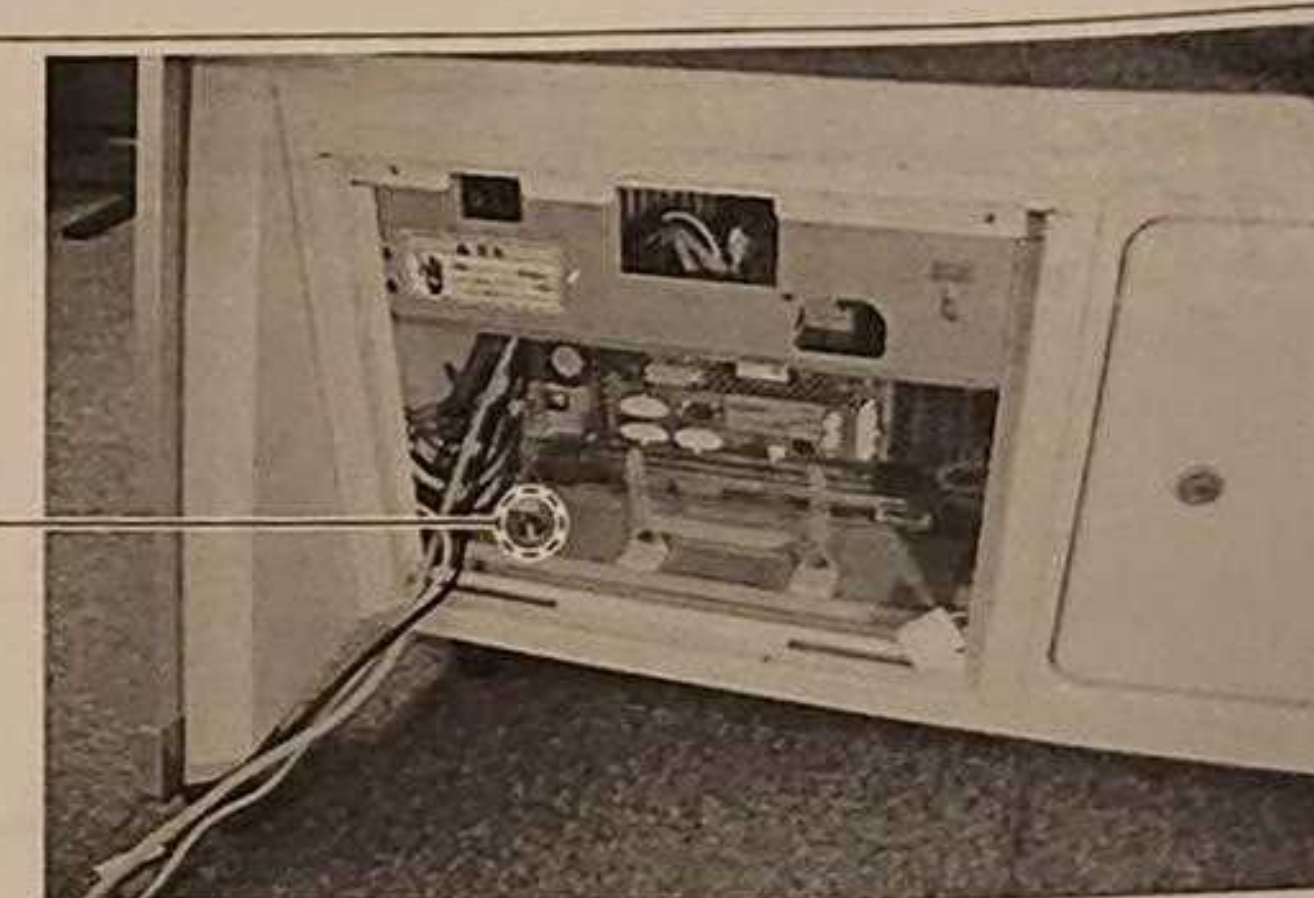
11 Insert the wooden base into the cabinet. Ensure that no cables are damaged in the process.

WOODEN BASE



12 Attach the wooden base with the wing bolt.

WING BOLT
M4 x 25, w/flat washer

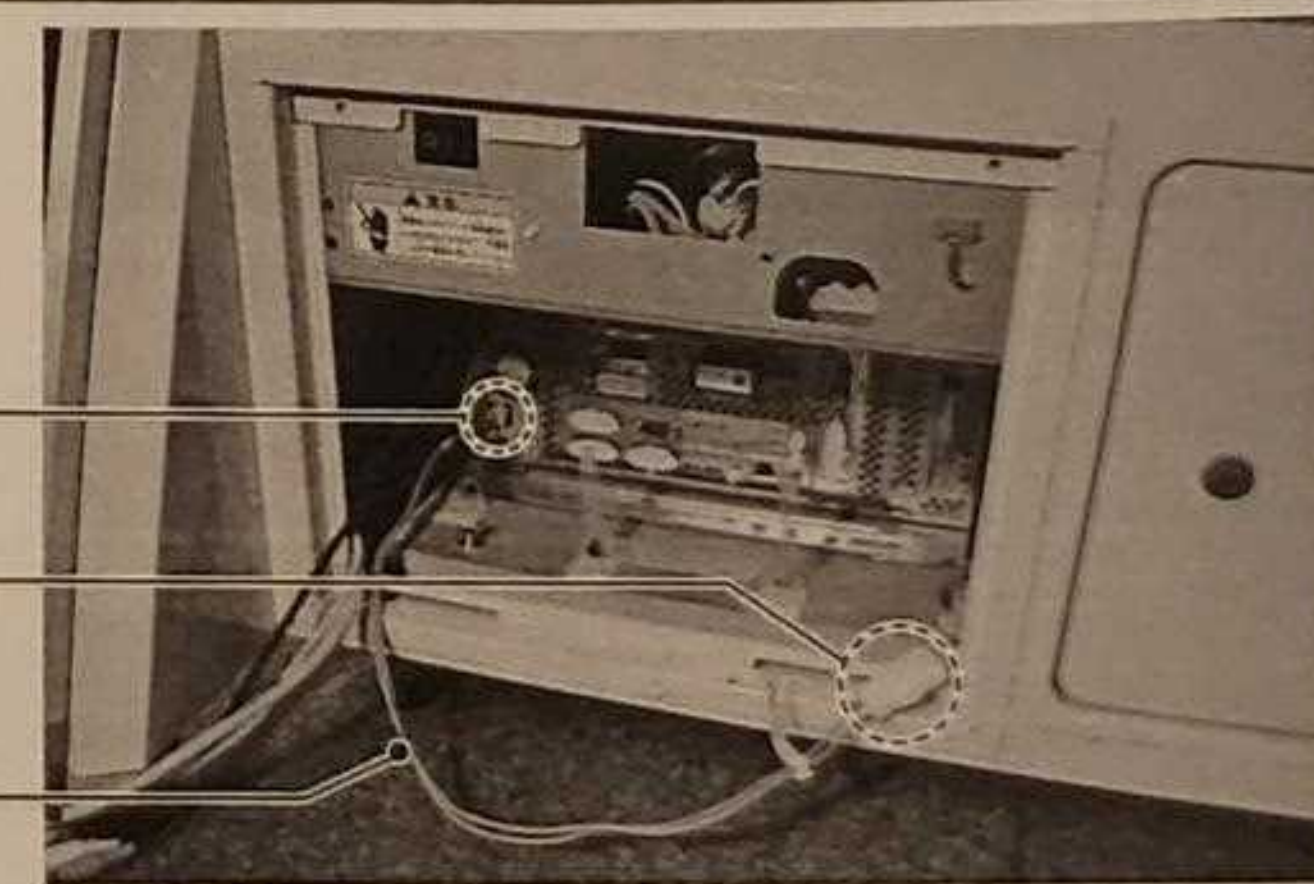


13 Connect the 2 cable B connectors.

CONNECTOR
VH3P

CONNECTOR
VL3P

CABLE B
605-0181



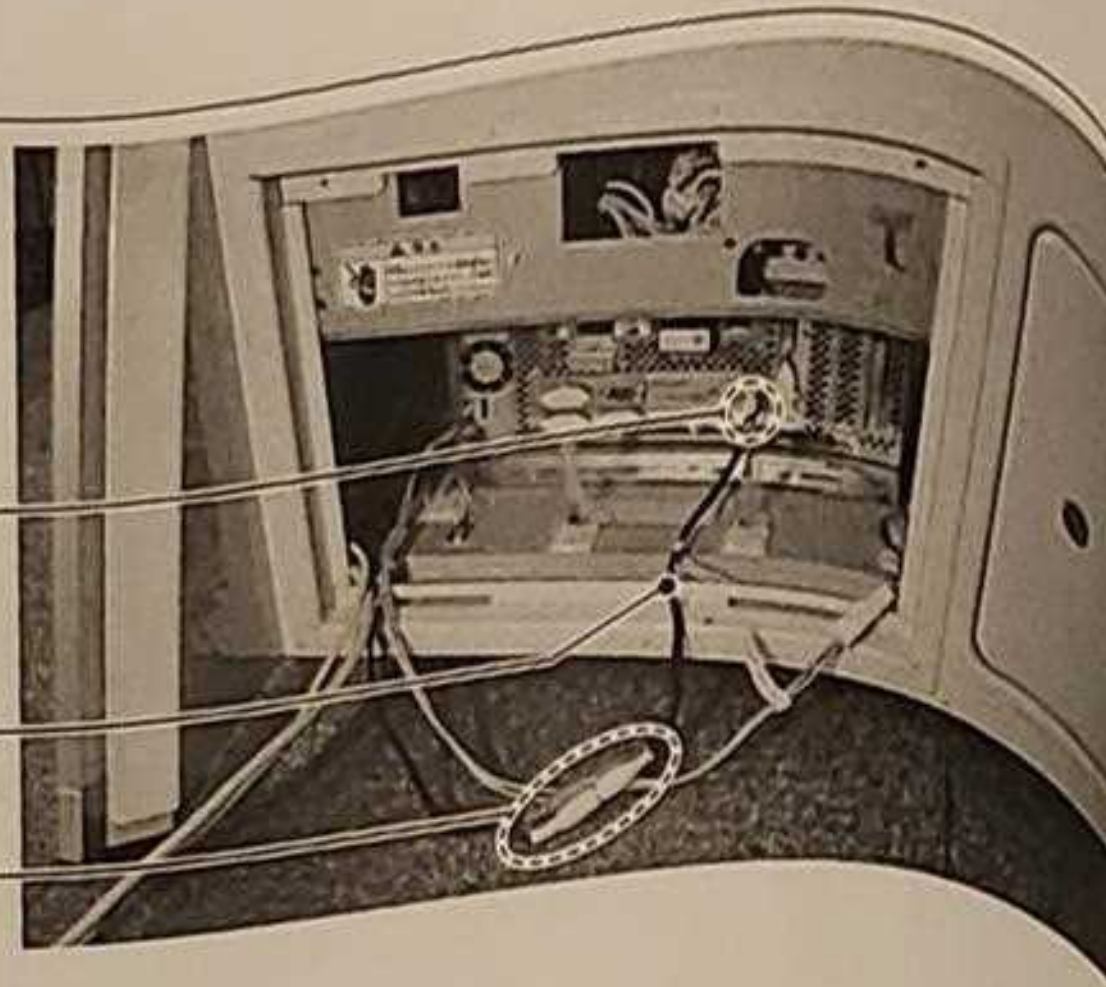
14 Connect the 2 sound conversion cable connectors.

NOTE: Connect the mini jack to the FRONT.

CONNECTOR
MINI JACK

SOUND CONVERSION CABLE

CONNECTOR
AUDIO L/R (RED/WHITE)



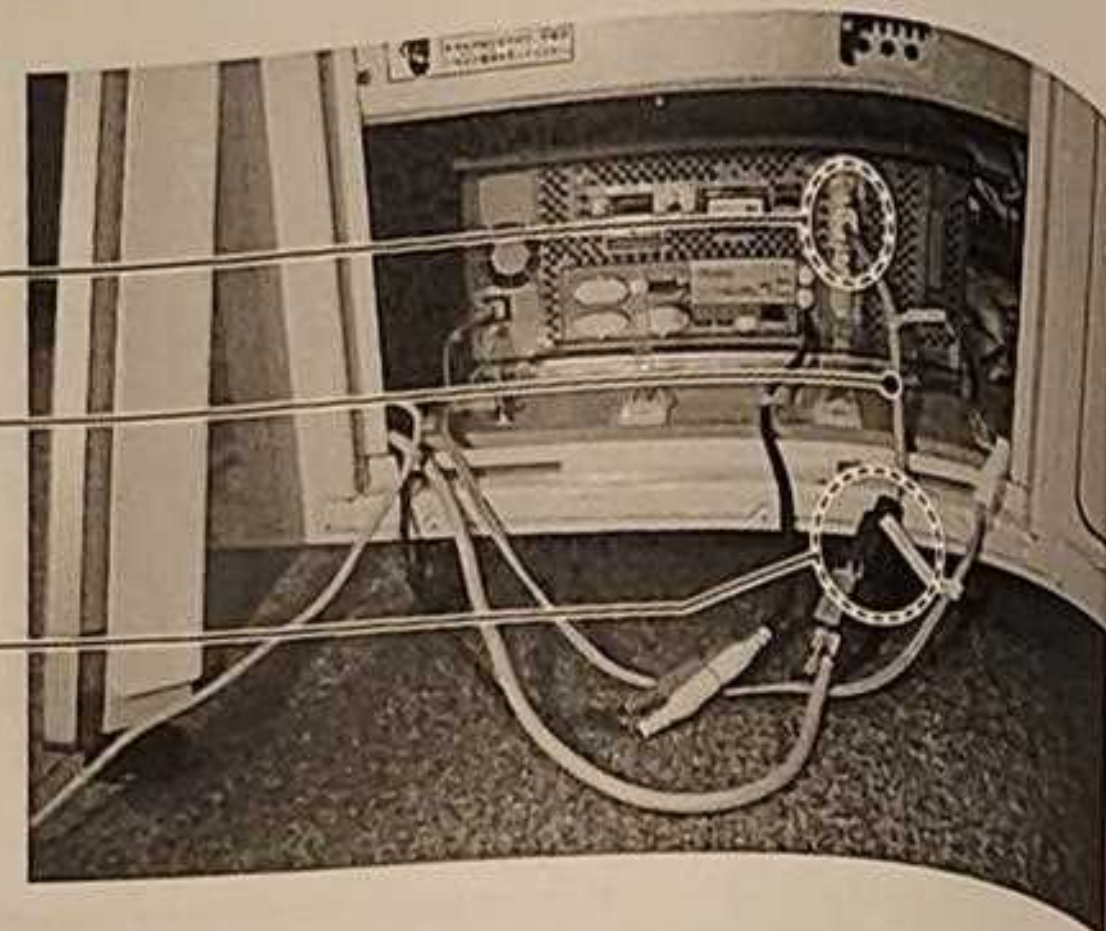
15 Connect the 2 video conversion cable connectors.

NOTE: Affix the D-SUB15P and DVI connectors by tightening the fastening screws. The DVI connection can be to either DIV0 or DIV1.

CONNECTOR
DVI

VIDEO CONVERSION CABLE

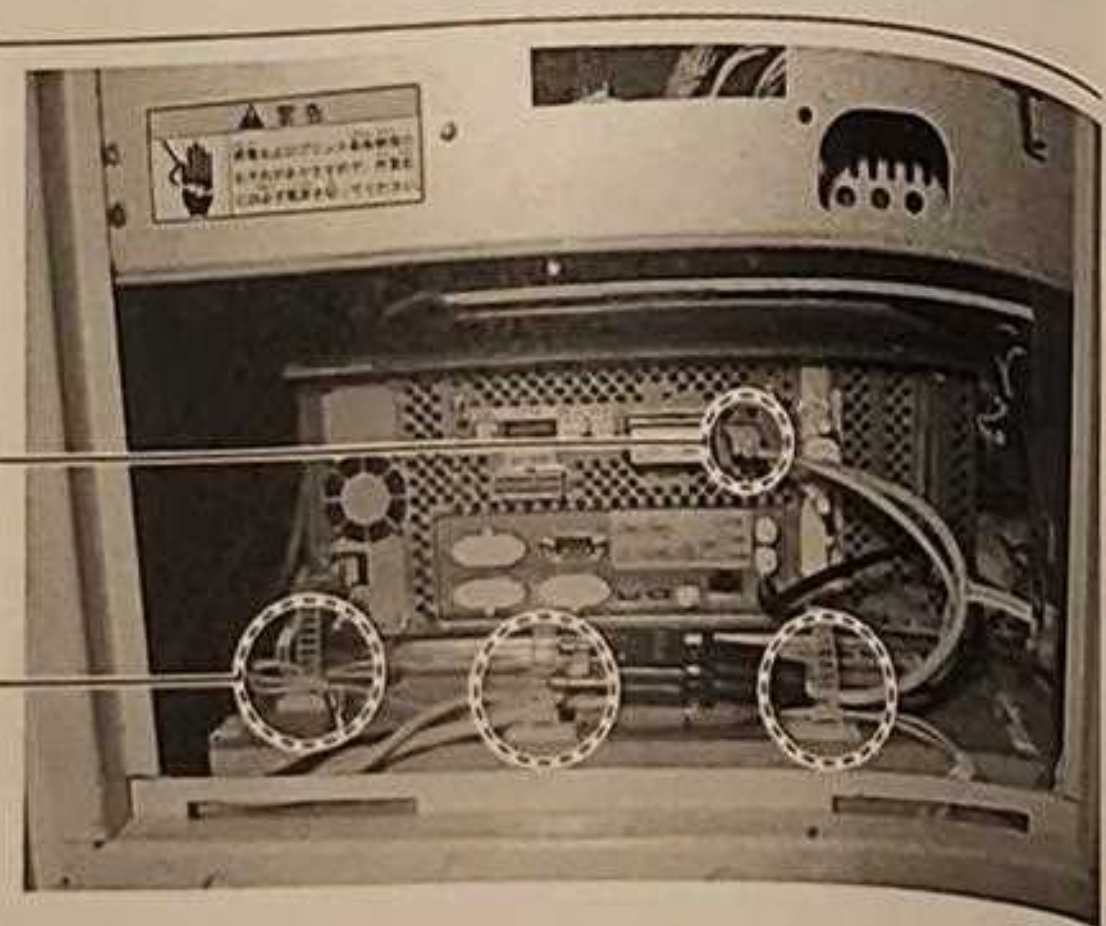
CONNECTOR
D-SUB15P



16 Connect the JVS cable connector, then affix all cables using the 3 cord clamps.

CONNECTOR
JVS

CORD CLAMP (3)



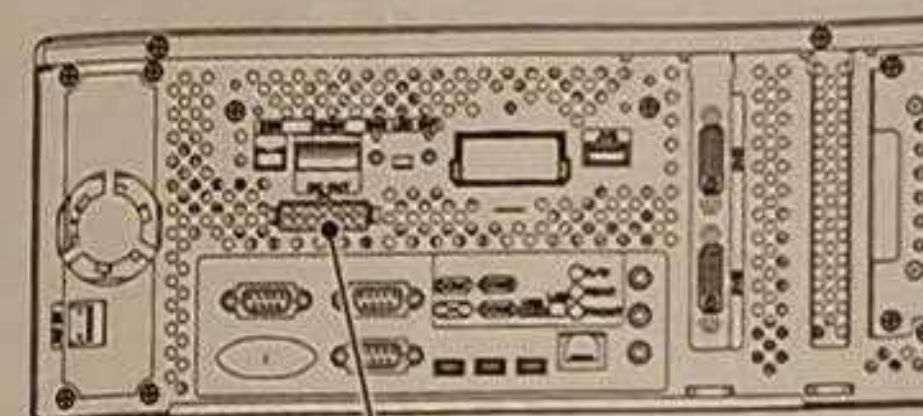
4 CONNECTING THE DVD DRIVE

STOP IMPORTANT

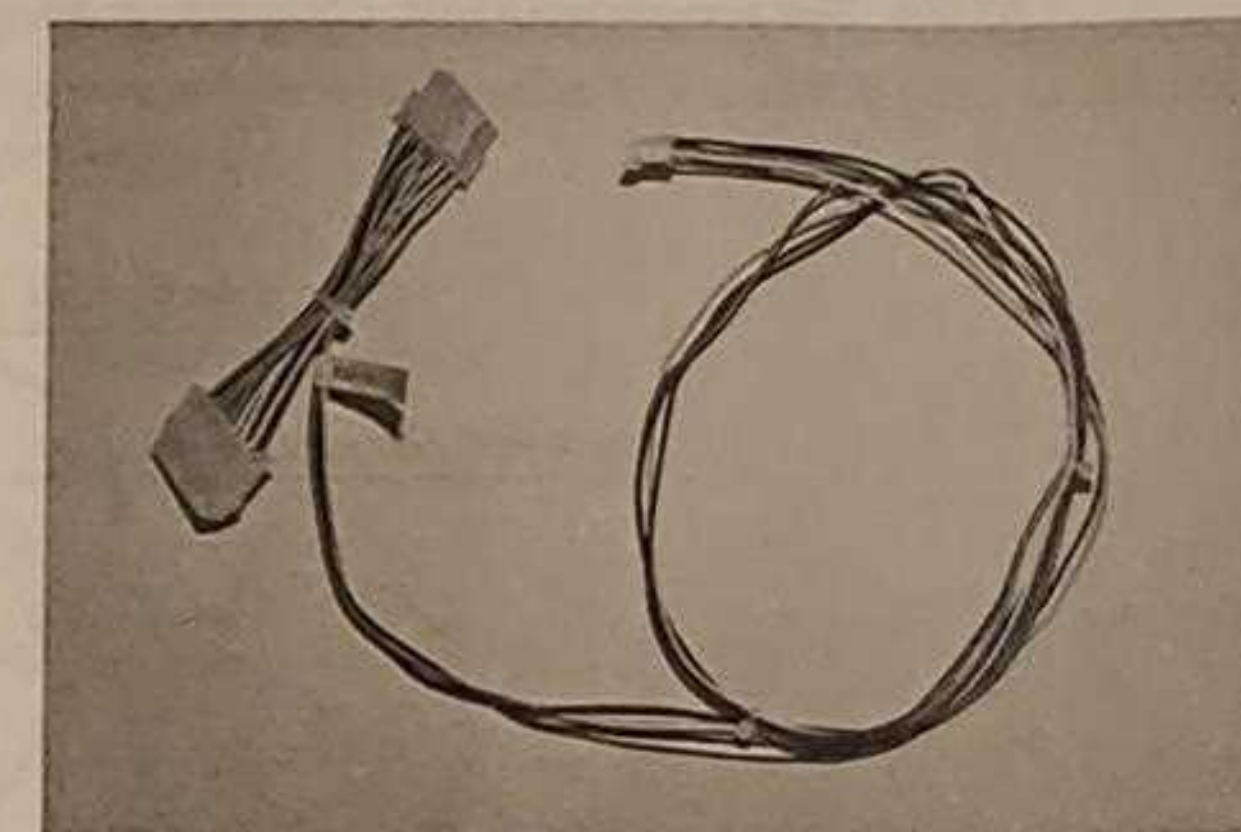
The NH6P connector of the DVD cable is not used. Do not connect it to any open connectors.

To install RINGEDGE software, ready the power cable, DVD drive, and DVD cable, then follow the instructions below to connect the DVD drive.

1 Connect the power cable connector to the RINGEDGE unit.

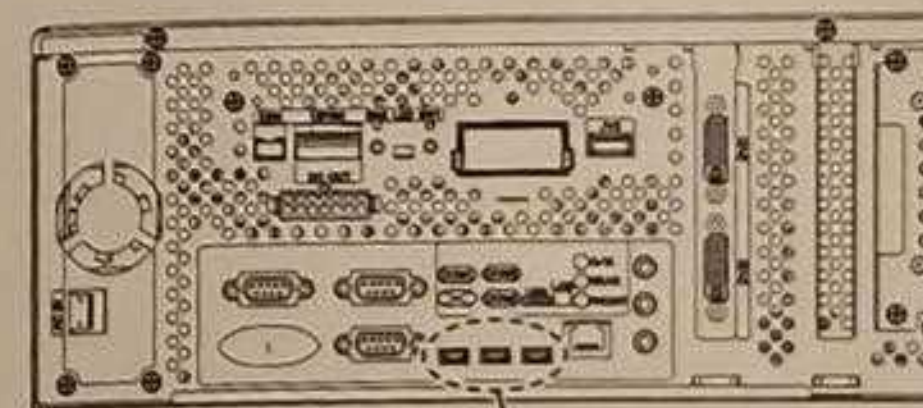


CONNECTOR
MOLEX14P

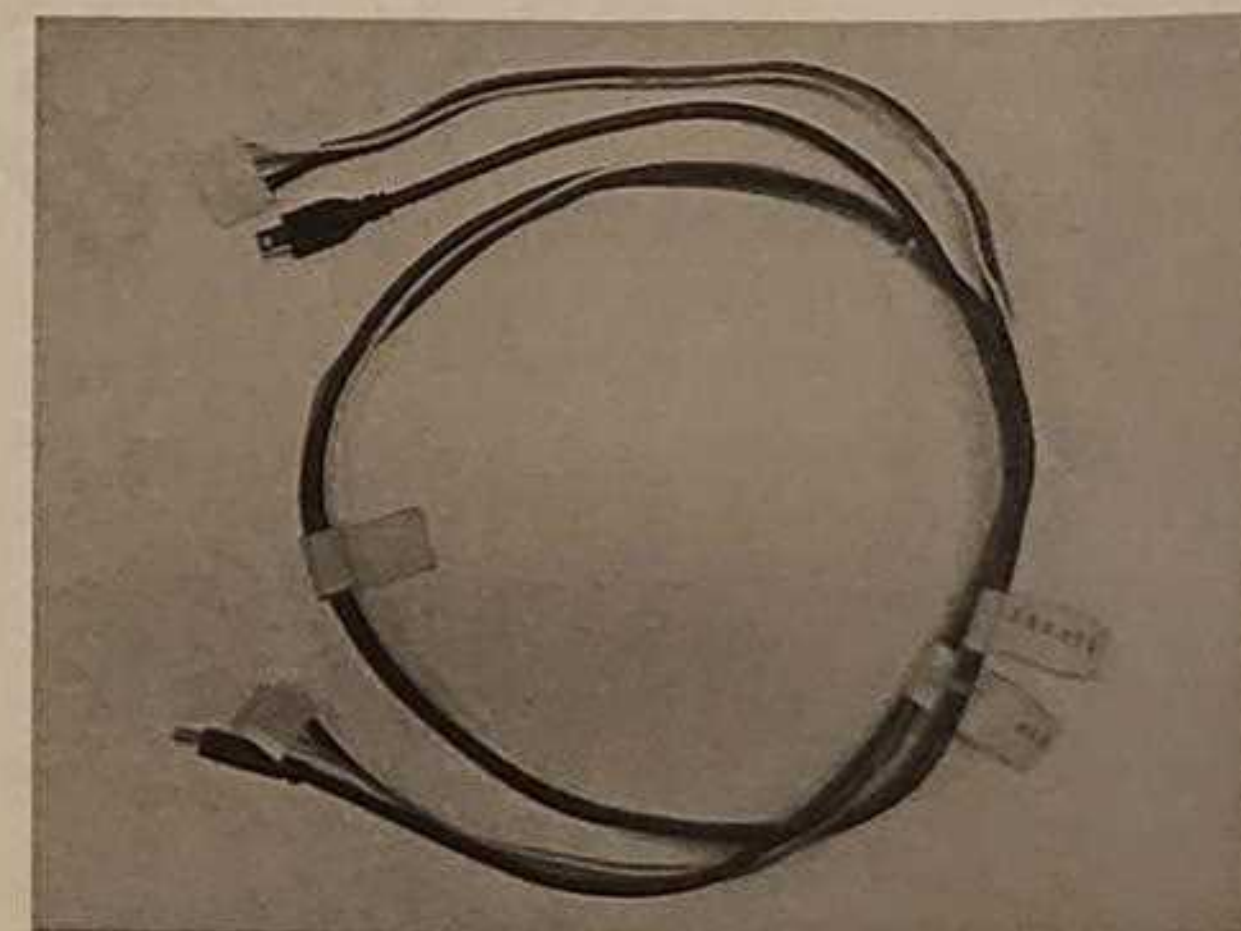


Power Cable

2 Connect the connector at the end of the DVD cable bearing the LINDBERGH tag. The remaining connector at that end of the cable (NH6P) is not used.



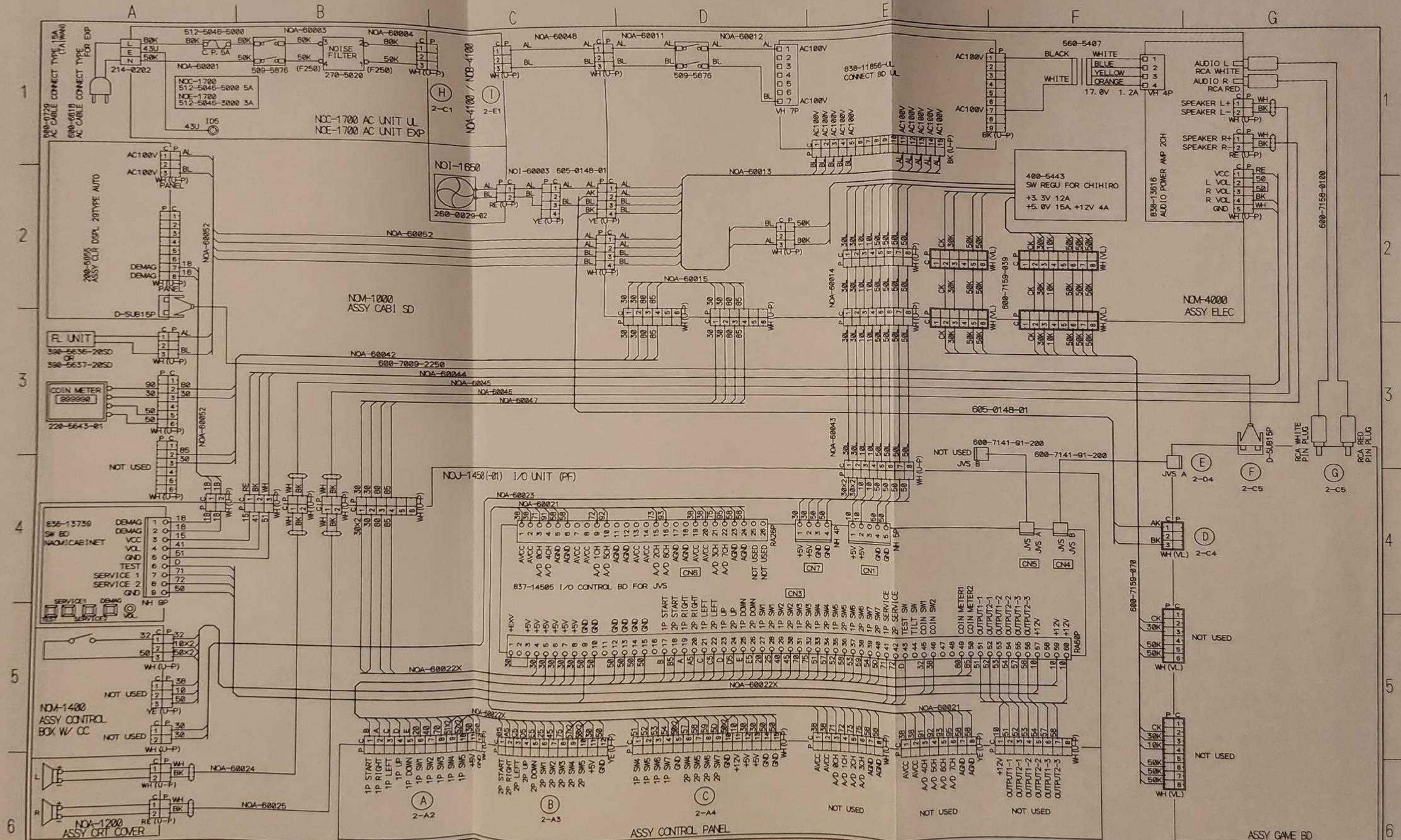
CONNECTOR
USB MINI A



DVD Cable

6 WIRING DIAGRAM

NET CITY (D-1/2)

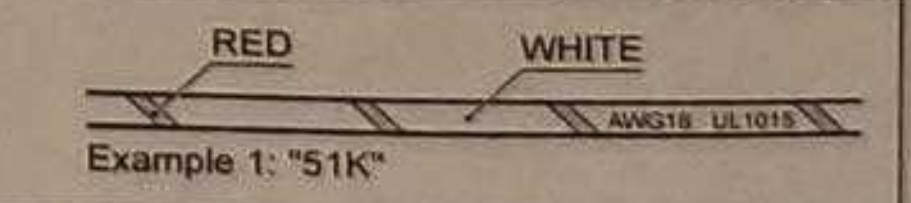


WIRE COLORS

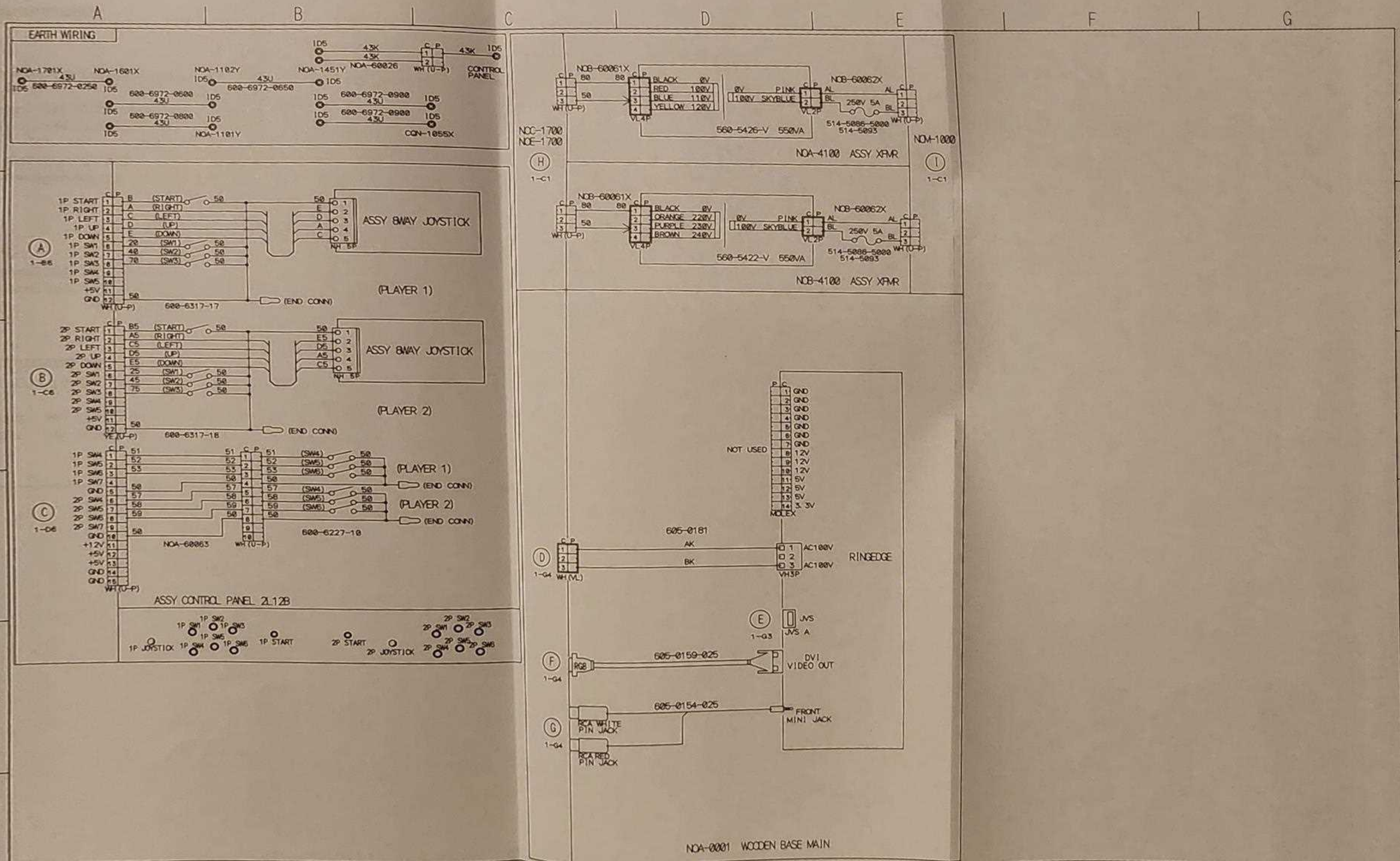
1	RED	7	ORANGE	A	PINK	U	AWG16 UL1015
2	BLUE	8	BLACK	B	SKYBLUE	K	AWG18 UL1015
3	YELLOW	9	GRAY	C	BROWN	L	AWG20 UL1007
4	GREEN			D	PURPLE	None	AWG22 UL1007
5	WHITE	43	EARTH WIRE	E	LIGHT GREEN	T	AWG24 UL1007

WARNING: The wire colors vary depending on the model. Check carefully as any mistakes with the wiring can lead to the generation of smoke or fire.

Example 1: For "51K," the ground color is white, and the spiral is red, while the wire (thickness) is "AWG18 UL1015."
 Example 2: For "50K," the ground color (single color) is white, and the wire (thickness) is "AWG18 UL1015."
 Example 3: For "AK," the ground color is pink (single color), and the wire (thickness) is "AWG18 UL1015."
 Example 4: For "A," the ground color (single color) is pink, and the wire (thickness) is "AWG22 UL1007."



NET CITY (D-2/2)

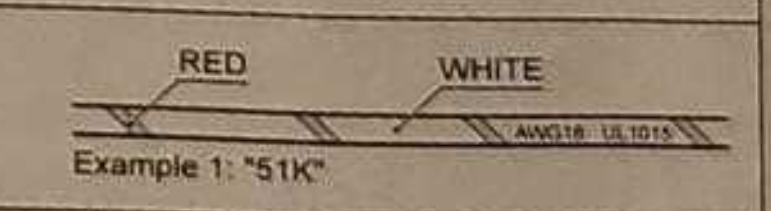


WIRE COLORS

WARNING: The wire colors vary depending on the model. Check carefully as any mistakes with the wiring can lead to the generation of smoke or fire.

1	RED	7	ORANGE	A	PINK	U	AWG18 UL1015
2	BLUE	8	BLACK	B	SKYBLUE	K	AWG18 UL1015
3	YELLOW	9	GRAY	C	BROWN	L	AWG20 UL1007
4	GREEN			D	PURPLE	None	AWG22 UL1007
5	WHITE	43	EARTH WIRE	E	LIGHT GREEN	T	AWG24 UL1007

Example 1: For "51K," the ground color is white, and the spiral is red, while the wire (thickness) is "AWG18 UL1015."
 Example 2: For "50K," the ground color (single color) is white, and the wire (thickness) is "AWG18 UL1015."
 Example 3: For "AK," the ground color is pink (single color), and the wire (thickness) is "AWG18 UL1015."
 Example 4: For "A," the ground color (single color) is pink, and the wire (thickness) is "AWG22 UL1007."



SEGA AMUSEMENTS OFFICES

Sega Amusements

Europe

42, Barwell Business Park, Leatherhead Road, Chessington, Surrey, KT9 2NY United Kingdom

Telephone: +44 (0) 208 391 8060

Facsimile: +44 (0) 208 391 8096

e-mail: mailbox@sega.co.uk

<http://www.segaarcade.com/>

U.S.A.

Telephone:

General Parts: +1 224 265 4287

General Tech: +1 224 265 4283

Facsimile: +1 630 860 7775

SEGA Corporation

TRC Haneda Building, 2-13-1, Higashikojiya, Ohta-ku, Tokyo 144-0033, Japan

Telephone: +81 3 6863 8401

Facsimile: +81 3 6863 8407

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SEGA CORPORATION

TRC Haneda Building, 2-13-1, Higashikojiya, Ohta-ku, Tokyo 144-0033, Japan
Phone: +81-3-6863-8401 Facsimile: +81-3-6863-8407

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