

# **OPERATION MANUAL**

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**DDA-106B**

3G/HD/SD Digital Distribution Amp

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1<sup>st</sup> Edition

# Edition Revision History

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Edit.	Rev.	Date	Description	Section/Page
1	-	2016/08/10		

# Precautions



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## Important Safety Warnings




### [Power]

 Caution	Operate unit <b>only</b> at the specified supply voltage.
 Caution	Disconnect the power cord via the power plug only. <b>Do not</b> pull on the cable portion.
 Stop	<b>Do not</b> place or drop heavy or sharp-edged objects on the power cord. A damaged cord can cause fire or electrical shock hazards. Regularly check the power cord for excessive wear or damage to avoid possible fire / electrical hazards.
 Caution	<b>Ensure</b> the power cord is firmly plugged into the AC outlet.


### [Grounding]

 Caution	<b>Ensure</b> the unit is properly grounded at all times to prevent electrical shock.
 Hazard	<b>Do not</b> ground the unit to gas lines, units, or fixtures of an explosive or dangerous nature.




### [Operation]

 Hazard	<b>Do not</b> operate the unit under hazardous or potentially explosive atmospheric conditions. Doing so could result in fire, explosion, or other hazardous results.
 Hazard	<b>Do not</b> allow liquids, metal pieces, or other foreign materials to enter the unit. Doing so could result in fire, other hazards, or a unit malfunction.
 Caution	If a foreign material does enter the unit, turn the power off and <b>immediately</b> disconnect the power cord. Remove the material and contact an authorized service representative if damage has occurred.


### [Transportation]

 Caution	<b>Handle</b> with care to avoid impact shock during transit, which may cause malfunction. When you need to transport the unit, use the original or suitable alternative packing material.
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### [Circuitry Access]

	<p><b>Do not</b> remove covers, panels, casing, or access the circuitry with power applied to the unit. Turn the power off and disconnect the power cord prior to removal. Internal servicing / adjustment of unit should only be performed by qualified personnel.</p>
 Stop	<p><b>Do not</b> touch any parts / circuitry with a high heat factor. Capacitors can retain enough electric charge to cause mild to serious shock, even after the power has been disconnected. Capacitors associated with the power supply are especially hazardous.</p>
 Hazard	<p>Unit <b>should not</b> be operated or stored with cover, panels, and / or casing removed. Operating the unit with circuitry exposed could result in electric shock / fire hazards or a unit malfunction.</p>


### [Potential Hazards]

 Caution	<p>If abnormal odors or noises are noticed coming from the unit, immediately turn the power off and disconnect the power cord to avoid potentially hazardous conditions. If problems similar to the above occur, contact an authorized service representative <b>before</b> attempting to operate the unit again.</p>
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### [Rack Mount Brackets, Ground Terminal, and Rubber Feet]

 Caution	<p>To rack-mount or ground the unit, or to install rubber feet, <b>do not</b> use screws or materials other than those supplied. Doing so may cause damage to the internal circuits or components of the unit. If you remove the rubber feet that are attached to the unit, <b>do not</b> reinsert the screws that secure the rubber feet.</p>
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### [Consumables]

 Caution	<p>Consumable items that are used in the unit must be periodically replaced. For further details on which parts are consumables and when they should be replaced, refer to the specifications at the end of the Operation Manual. Since the service life of the consumables varies greatly depending on the environment in which they are used, such items should be replaced at an early date. For details on replacing consumable items, contact your dealer.</p>
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# Upon Receipt

DDA-106B units and their accessories are fully inspected and adjusted prior to shipment. Check your received items against the packing lists below. Check to ensure no damage has occurred during shipment. If damage has occurred, or items are missing, inform your supplier immediately.

ITEM	QTY	REMARKS
DDA-106B	1	
AC Cord	1 set	(Including ladder strap/retaining clip assembly)
Operation Manual	1	

## Option

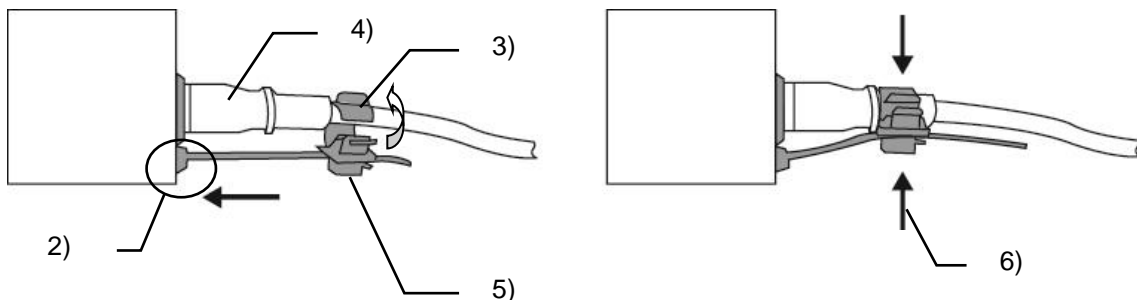
ITEM	QTY	REMARKS
Rack mount bracket set (Type 1)	1 set	Mounts single unit to an EIA 1RU rack space.
Rack mount bracket set (Type 2)	1 set	Mounts two units to an EIA 1RU rack space.

## Installing the AC Cord Retention Clip

Secure the AC cord with the supplied ladder strap/retention clip assembly to prevent accidental removal from the unit.

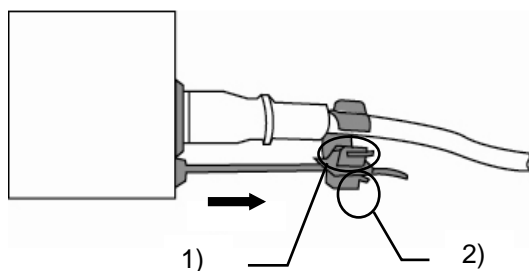
### ◆ Installing the clip

- 1) Wrap the retention clip around the AC cord (with the anchor of the ladder strap toward the unit.)
- 2) Insert the anchor into the hole next to the AC IN socket.
- 3) Lightly fasten the clip around the AC cord.
- 4) Plug in the power cord.
- 5) Slide the clip on the ladder strap toward the plug.
- 6) Fasten the clip tightly.
- 7) Gently pull on the AC cord to ensure it is secured.



### ◆ Unplugging the AC cord

- 1) Push the tab on the retention clip up to unfasten the clip.
- 2) Push the tab on the ladder strap up and slide the clip back.
- 3) Unplug the AC cord.



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# 1. Prior to Starting

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## 1-1. Overview

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Congratulations! By purchasing DDA-106B 3G/HD/SD Digital Distribution Amp you have entered the world of FOR-A and its many innovative products. Thank you for your patronage and we hope you will turn to FOR-A products again and again to satisfy your video and audio needs.

FOR-A provides a wide range of products, from basic support units to complex system controllers, which have been increasingly joined by products for computer video based systems. Whatever your needs, talk to your FOR-A representative. We will do our best to be of continuing service to you.

## 1-2. Features

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The DDA-106B is a half-1U-size 3G/HD/SD-SDI signal distributor. It accepts 3G-SDI, HD-SDI, SD-SDI, or DVB-ASI signal and distributes the input into six outputs.

- Accepts and distributes digital component signals in 3G-SDI, HD-SDI and SD-SDI. (Auto switching)
- Cable compensation function allows the input-side cable length to be as long as 200 meters when BNC 5C-2V or equivalent cable is used for SD-SDI, 100 meters when BNC 5C-FB or equivalent cable is used for HD-SDI, and 70 meters when BNC 5C-FB or equivalent cable is used for 3G-SDI.
- Reclock function minimizes signal jitter.
- 3G, HD and SD Input Signal Auto Detection/Auto Switching
- Bypasses signal input when unit power is off. (OUT-1 only)
- DVB-ASI signal format supported.
- Can be mounted into 1RU EIA racks using an optional rack mount bracket set.

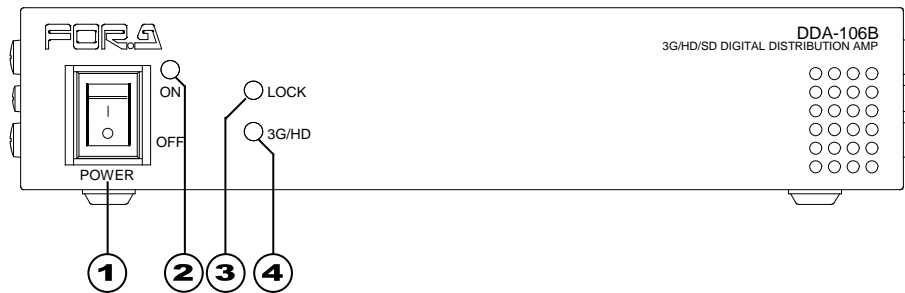
## 1-3. About This Manual

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This manual is intended to help the user easily operate this product and make full use of its functions during operation. Before connecting or operating your unit, read this operation manual thoroughly to ensure you understand the product. Afterwards, store this manual in a safe place for future reference.

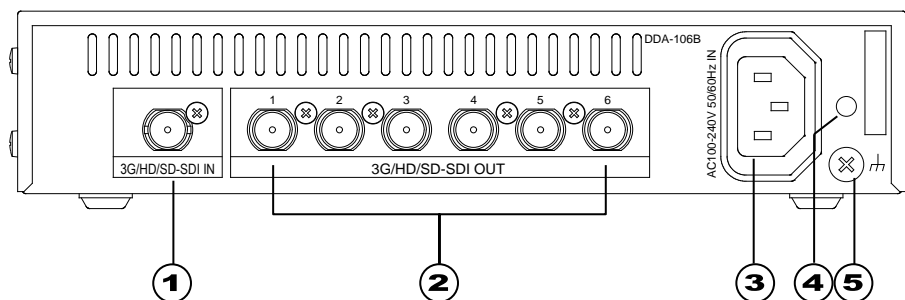
## 2. Panel Descriptions

### 2-1. Front Panel



No.	Name	Description
1	POWER switch	Switch used to turn the unit power ON/OFF.
2	POWER LED	Lights whenever power is applied to the unit.
3	LOCK LED	Lights whenever an input signal is properly input.
4	3G/HD LED	Lights whenever a 3G-SDI or HD-SDI signal is input.

### 2-2. Rear Panel



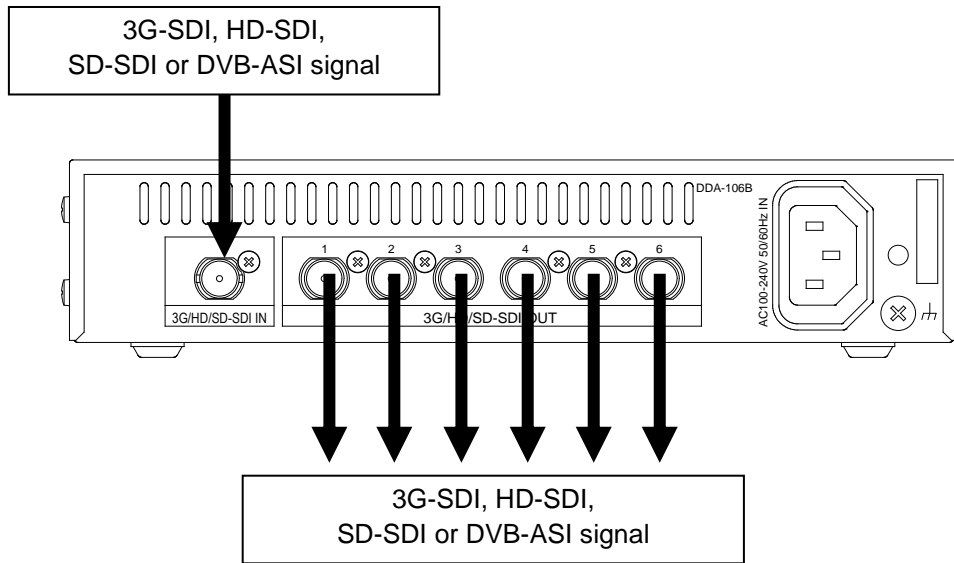
No.	Name	Description
1	3G/HD/SD-SDI IN	3G/HD/SD-SDI signal input connector. (Can bypass input signal to 3G/HD/SD-SDI OUT1.)
2	3G/HD/SD-SDI OUT	1 Bypasses 3G/HD/SD-SDI IN signal input when unit power is off.
		2 to 6 Outputs 3G/HD/SD-SDI signals.
3	AC IN	Used to connect to AC power source via supplied accessory cord (100 to 240 VAC, 50/60 Hz).
4	Ladder strap insertion hole	Insertion hole for ladder strap assembly.
5	Ground terminal	Used to protect operators from static electricity and / or electrical shock.



### 3. Connection

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Refer to the figure below and connect the DDA-106B and other devices.



### 4. Specifications and Dimensions

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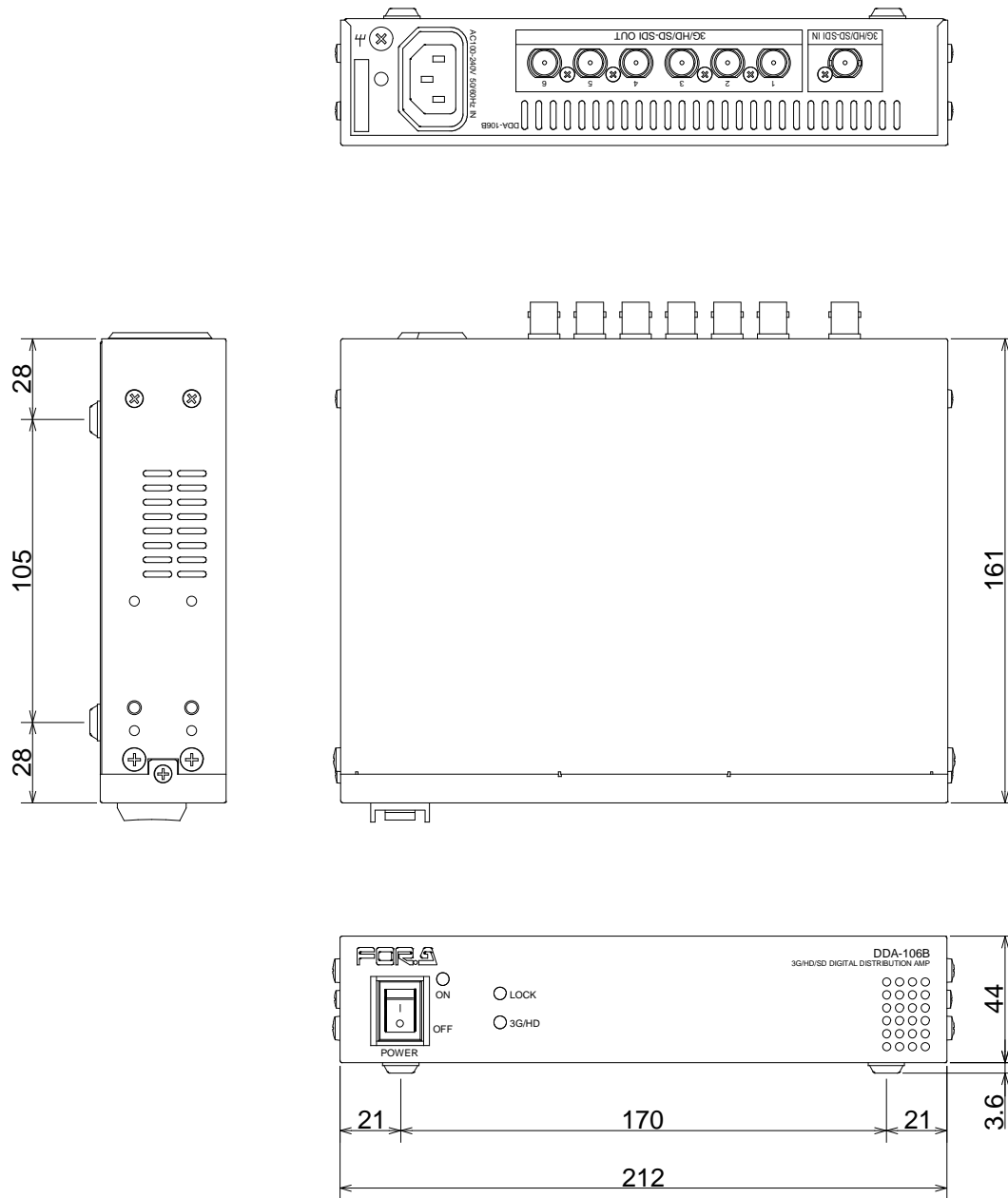
#### 4-1. Unit Specifications

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Video Input	3G-SDI: 3.0 Gbps HD-SDI: 1.5 Gbps SD-SDI: 270 Mbps DVB-ASI: 270 Mbps 75Ω BNC x 1 (Can bypass input signal to HD/SD-SDI OUT1.)
Video Output	3G-SDI: 3.0 Gbps HD-SDI: 1.5 Gbps SD-SDI: 270 Mbps DVB-ASI: 270 Mbps 75Ω BNC x 6
Cable Equalization	Auto cable equalization 3G-SDI: Max. 70m (5C-FB or equivalent) HD-SDI: Max. 100m (5C-FB or equivalent) SD-SDI: Max. 200m (5C-2V or equivalent)
Temperature	5°C to 40°C
Humidity	Lower than 85% (no condensation)
Power	100 VAC to 240 VAC ±10%, 50/60 Hz
Power Consumption	12 VA (6 W) at AC100V to 120V 18 VA (8 W) at AC220V to 240V
Dimensions	212 (W) × 44 (H) × 161 (D) mm, EIA 1RU (excluding protruding parts)
Weight	1.0 kg

## 4-2. External Dimensions

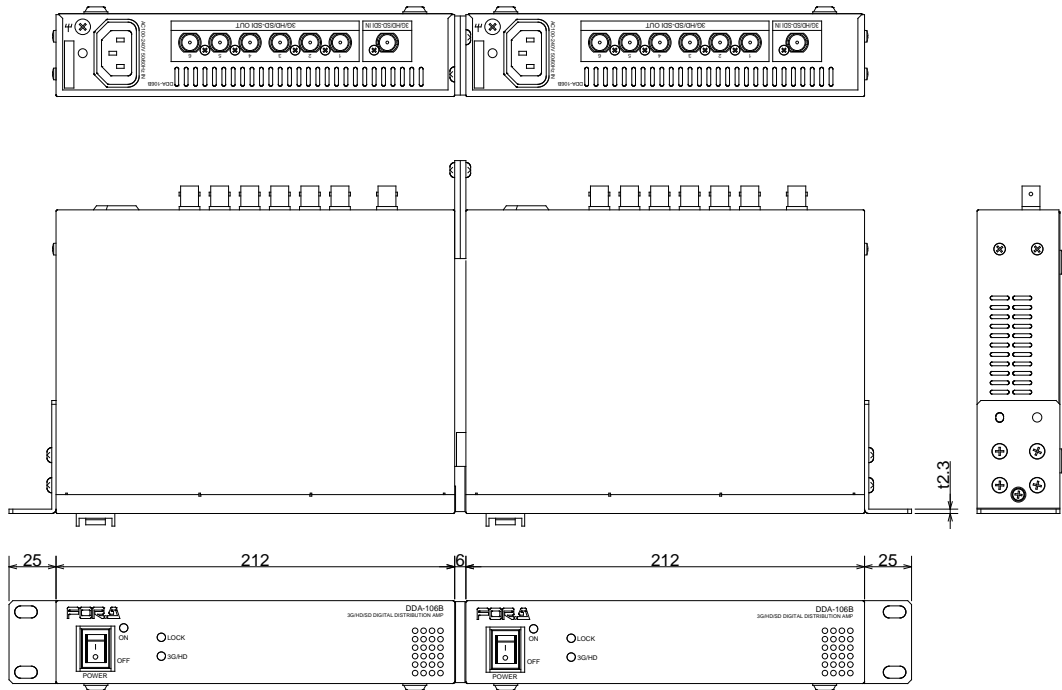
(All dimensions in mm.)



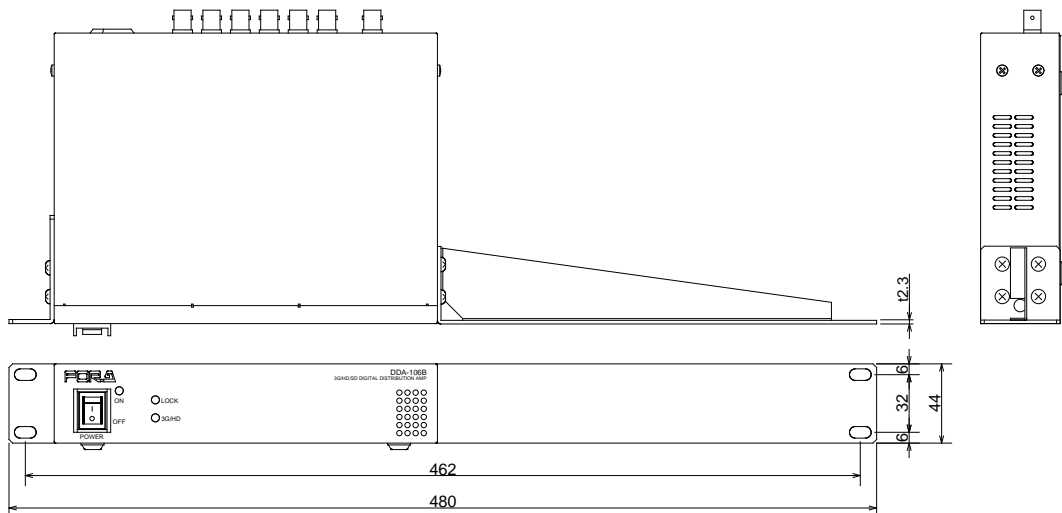
## 4-2-1. Rack Mounted DDA-106B(s)

(All dimensions in mm.)

### ◆ 2 units installed



### ◆ 1 unit installed





## **Warning**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.



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