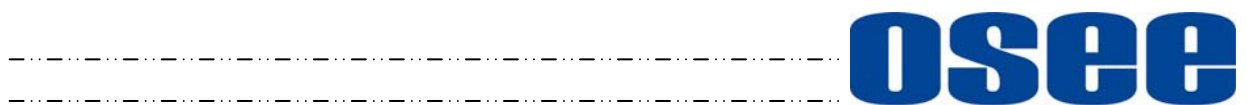# VCA680xN Analog Video Equalizing and Clamping Distribution Amplifier

USER MANUAL

osee

Product Information

Model: VCA680xN Analog Video Equalizing and Clamping Distribution Amplifier
Version: V010000
Release Date: May 22th, 2008

Company

OSEE TECHNOLOGY CO., LTD.

Contact Information

Address: No.22 Building, No.68 zone, Beiqing Road, Haidian District, Beijing, China
Post Code: 100094
Tel: (+86) 010-62434168
Fax: (+86) 010-62434169
Web: http://www.osee-dig.com/
E-mail: sales@osee-dig.com

Contents

VCA680xN Analog Video Equalizing and Clamping Distribution Amplifier

Chapter 1 Introduction

Overview

In this manual, the different types of models for VCA680xN are introduced as follows:

VCA6801N single input distribution amplifier: supports 1 channel of analog video input, and the input corresponds to 8 channels of analog video outputs

VCA6802N dual-input distribution amplifier: supports 2 channels of analog video inputs, and each input corresponds to 4 channels of analog video outputs

All these modules can be installed in 6800N series frame.

Features

The VCA680xN offers the following features:

✓   One or two unbalanced input, eight channels unbalanced output

✓   Support clamping of analog video signal

✓   AD/DC coupling

✓   ±3dB gain range adjustment

✓   One channel input, eight outputs (VCA6801N)

✓   Dual channel, channel 1 for four outputs and channel 2 for four outputs (VCA6802N)

✓   Can be adjusted at the range of 100 meters (Belden 8281)

✓   Hot-swappable modules

✓   525/625 input signal detection

✓   Support SNMP control

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions: (1) This device may not cause harmful interference,

and (2) this device must accept any interference received, including interference that may cause undesired operation.

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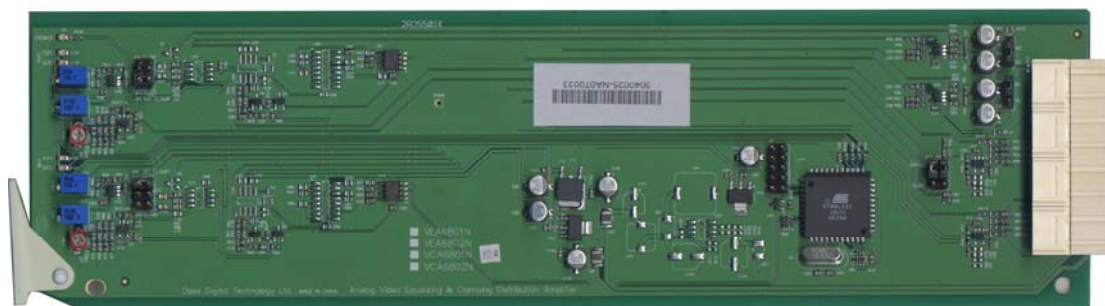Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

Module Descriptions

The Front Part of Module

Figure 1-1 shows the boards of VCA6802N

Fig. 1-1 the boards of VCA6802N

Back Connector

VCA680xN
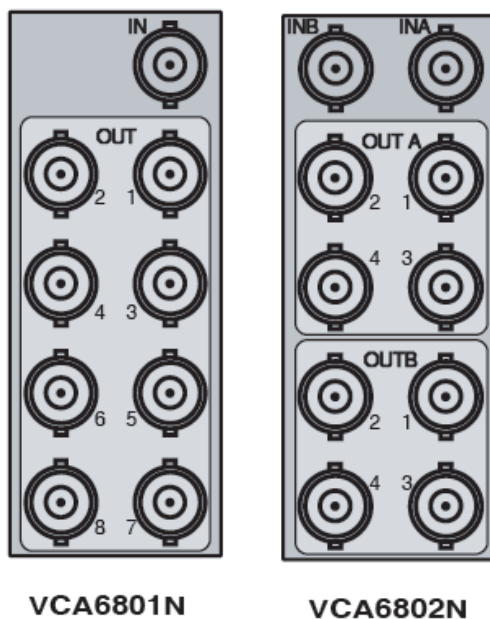
VCA6801N   **VCA6802N**

Fig.1-2 Back Connector of VCA6801N (left) / VCA6802N (right)

Tab. 1-1 description of VCA6801N Back Connector

Item	Description
IN	ANALOG VIDEO input
1~8	ANALOG VIDEO output

Tab. 1-2 description of VCA6802N Back Connector

Item	Description
INA	ANALOG VIDEO input, channel A
INB	ANALOG VIDEO input, channel B
OUTA1, OUTA2 OUTA3, OUTA4	ANALOG VIDEO output, channel A
OUTB1, OUTB2 OUTB3OUTB4	ANALOG VIDEO output, channel B

Signal Flow
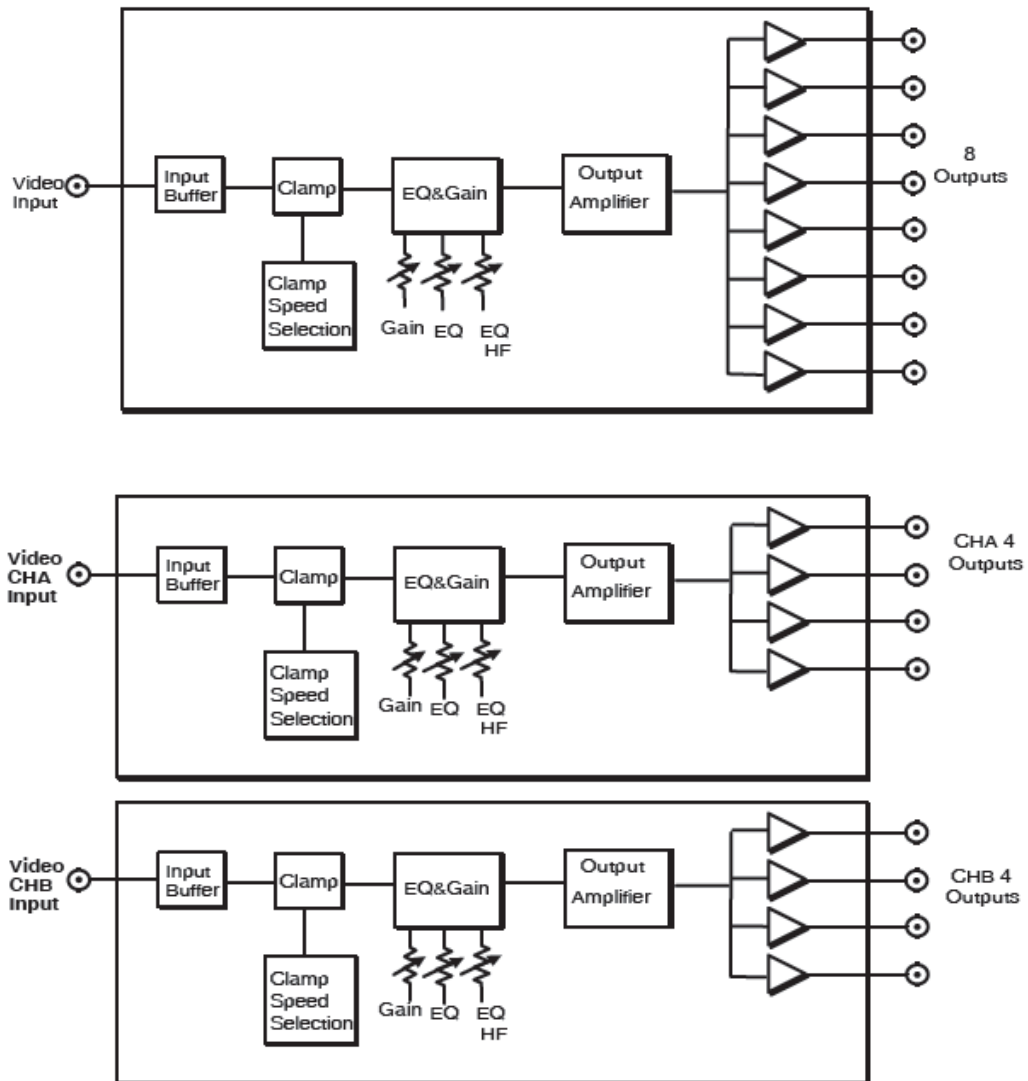
Fig. 1-3 Signal Flow of VCA6801N (up)/ VCA6802N (down)

Chapter 2 Installation

Overview

The power consumption for module and the maximum power ratings that frame can sustain have to be confirmed before installing the module.

In this chapter, the following topics on installation process for VCA680xN are discussed below:

- Unpacking the module
- Installing the module
- Making the connections
- Removing the module

- Setting Jumper

Maximum Power Ratings for Frame

The maximum power ratings that different types of frames can sustain are listed in the Table 2-1

Tab. 2-1 Maximum Power Consumption

Frame	Maximum Voltage	Redundant Power Supplies	Numbers of Slots
6800N-1U	40W	Yes	4
6800N-2U	60W	Yes	10

Unpacking the Module

Preparing the Product for Installation

Contact your dealer right now if any items are missing.

Follow the procedures below before installing the module:

- Check the equipment for any invisible damage that may have occurred during transit.
- Confirm all the items listed on the packing list have been received.
- Remove all the packing material including electrostatic-resistant packing.
- Retain these packing for future use.

Check the Packing List

Tab. 2-2 Packed Components

Model Name	Description
VCA6801N	VCA6801N module (1pc); back connector (1pc), and other accessories
VCA6802N	VCA6802N module (1pc); back connector (1pc), and other accessories

Installing the Module

Caution：Static electricity may cause sensitive semiconductor out of order. Avoid installing or removing the module in the electrostatic-induced environment.

Follow the following steps to install the module:

Step 1

Step2

Step3

Step 4

Step5

Fig. 2-1 Installation of 2U Frame of 6800N Series

- ✓ Locate the position for back connector and insert the back connector
- ✓ Fasten the screw to fix the back connector.
- ✓ Locate the slot for module.
- ✓ Get the module installed in the slot, push the module slightly along the slot, press module again to confirm that the module is installed firmly and then close swivel handle.
- ✓ Install the front panel.

Making the Connections

Please connect signals based on Fig. 1-2.

Removing the Module

Follow the following steps to remove VCA680xN module:

1. Open the front part of frame.
2. Open the swivel handle to the full.

3. First make sure the frame stands firmly, and then pull the module gently along the slot till out of frame.
4. Install the front panel.

Setting Jumper

There exist four 3-pin jumpers, and the following table gives their definition.

Tab. 2-3 Description of VCA680xN Jumpers

Item		Description
CHA	JP2 (NO CLAMP)	The three jumpers are all 2-pin jumper, please choose one of them.
	JP3 (FAST)	
	JP4 (SLOW)	You need to set FAST to VCA680xN. (Please don't change the default setting).
CHB	JP6 (NO CLAMP)	The three jumpers are all 2-pin jumper, please choose one of them
	JP7 (FAST)	
	JP8 (SLOW)	You need to set FAST to VCA680xN. (Please don't change the default setting).
JP1, JP5 (AC/DC)		You need to set it at DC
JP9, JP10 (Single/Dual)		You need to set them at Single to VCA6801N, while you must set them at Dual to VCA6802N.

LED Indicator

Table 2-4   LED Indicator Function

Item	Description
Power	On, Indicates power is supplied
CHA 525	On, Working in 525 video format.
CHA 625	On, Working in 625 video format.
CHB 525	On, Working in 525 video format.
CHB 625	On, Working in 625 video format.

Chapter 3 Specifications

Analog Video Input

Tab. 3-1 Analog Video Input Specifications

Item	Parameter
Numbers of Inputs	VCA6801N: 1, VCA6802N: 2
Connector	BNC (IEC169-8)
Impedance	75 Ω
Return Loss	>45dB to 5MHz, >40dB to 10MHz

Analog Video Output

Tab. 3-2 Analog Video Output Specifications

Item	Parameter
Numbers of Outputs	VCA6801N: 8 VCA6802N: 2 channels, 4 per channel
Connector	BNC (IEC169-8)
Impedance	75 Ω
Return Loss	>45dB to 5MHz, >40 dB to 10MHz
Gain Range	-3 dB to +3 dB
Frequency Response	+/-0.05dB to 10MHz
Differential Gain Differential Phase S/N Ratio	0.15% 0.15 degree 70dB

Note: Specifications are subject to change without notice

Warranty for **osee** product

What the warranty covers:

osee warrants its products to be free from defects in material and workmanship during the warranty period of two year from purchase date. If a product proves to be defective in material or workmanship during the warranty period, **osee** will, at its sole option, repair or replace the product with a similar product. The replacement unit will be covered by the balance of the time remaining on the customer's original limited warranty.

No sales personnel of the seller or any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties on behalf of **osee**, beyond the time period describe above.

This warranty is extended to the first consumer only, and proof of purchase is necessary to honor the warranty. If there is no proof of purchase provided with a warranty claim, **osee** reserves the right not to honor the warranty set forth above. Therefore, labor and parts may be charged to the consumer.

What the warranty does not cover:

1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
   - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product
   - Repair or attempted repair by anyone not authorized by **osee**
   - Any damage of the product due to shipment.
   - Removal or installation of the product.
   - Causes external to the product, such as electric power fluctuations or failure.
   - Use of supplies or parts not meeting **osee** product's specifications.
   - Normal wear and tear.
   - Any other cause which does not relate to a product defect.