

# CAVS Network Karaoke System

Version 4.0



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## 1. Synology DS220+ Nas Server

### Assembly

The NAS server DS220+ is a desktop unit and requires the following assembly. Insert the hard drives numbered 1 - 2 into the slots numbered 1 - 2 of the NAS server. The numbers must match and be sure to push in the hard drives firmly to snap close the lock handles.

### Connection

Next connect an Ethernet port on the back of the NAS server to the local network (VLAN) using the enclosed LAN cable. You can use any one of the two Ethernet ports to connect. Note that the MAC addresses corresponding to the Ethernet ports are written on the bottom of the NAS server and will be needed to enable the NAS server in the VLAN. Connect the enclosed power cable to a power source. Power on by pressing the Start button which is at the lower right side of the front panel.

### Setting IP address

When connecting the NAS server to the VLAN for the first time, it is required to set the IP address of the NAS server within the range of the IP address allowed in the VLAN. Connect directly an Ethernet port of the NAS server to an Ethernet port of a laptop installed with Synology Assistant program. Run the Synology Assistant program in the laptop and follow the program instruction to set the IP address for the NAS server. The Synology Assistant program can be downloaded from [Synology.com](http://Synology.com) website.

## 2. CAVS JB-199 IV Online

### Assembly

Attach the enclosed rackears to the JB-199 IV player. There are only 2 front rackears. To support its weight, the JB-199 IV player is better to be located at the bottom of a rack system where its whole body can be supported rather than just by the front rackears.



### Connection

- Use the enclosed VGA cable to connect the JB-199 IV Online to a control monitor.
- Use the enclosed HDMI cable to connect the JB-199 IV Online to a TV.
- Connect an Ethernet port, any of the two on the back of the JB-199 IV player, to the VLAN using an enclosed Ethernet cable.
- Connect the enclosed power cable to a power source. Power on.



### Finding MAC address

After powering on the JB-199 IV, use the enclosed keyboard and mouse to operate the JB-199 IV Online. Inside the JB-199 IV Online, go to Command Prompt and type in "ipconfig /all". Look for "Physical Address" which is the JB-199 IV's MAC address.

### Setting IP address

When connecting the JB-199 IV Online to the VLAN for the first time, it is required to set the IP address of the JB-199 IV Online within the range of the IP address allowed in the VLAN. In the JB-199 IV Online, go to Open Networks & Internet setting > Ethernet > Change adpoter options. Right click on the Ethernet port which is connected to the VLAN and select Properties. Next select Internet Protocol Version 4 (TCP/IPv4) and click Properties. Select the Use the following IP address and fill in the IP address, Subnet mask, and Default gateway. Also selet Use the following DNS server address, and fill in the Preferred DNS server and Alternate DNS server. Click OK and exit. Reboot the JB-199 IV Online.

## 3. CAVS DK3 Karaoke Mixer

### Connection

Refer to the following pictures for connections.

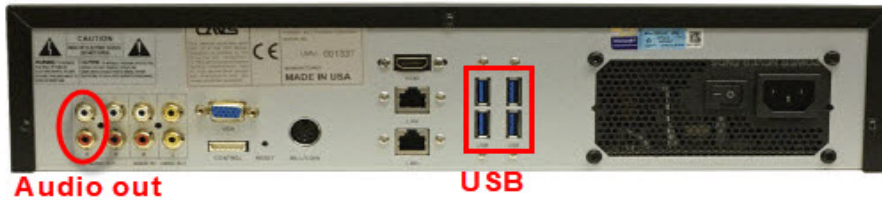
DK3 Mixer Front Panel



DK3 Mixer Back Panel



JB-199 IV Online Back Panel



- Use the enclosed USB cable to connect the DK3 mixer to the JB-199 IV Online. The USB-B end of the cable goes to the front of the DK3 mixer. The USB-A end of the cable goes to a USB port on the back panel of the JB-199 IV Online.
- Use the enclosed RCA cable to connect the Audio In (BGM) on the back panel of the DK3 mixer to the Audio Out of the back panel of the JB-199 IV Online.
- Use the Mic In inputs in the front and back panels of the DK3 mixer to connect Wired or Wireless microphones.
- Use the Audio Out (XLR Right and Left) on the back panel of the DK3 mixer to connect to the external sound system (amplifier, speakers).
- Use the enclosed Power cable to connect the Power input on the back panel of the DK3 mixer to a power source.

## 4. E-Songbook

E-Songbook can be a dedicated device such as an iPad, Samsung Galaxy, Lenovo Duet 3i, etc. It can also be any personal smart phone or tablet as long as it has a way to connect to Internet and browse.



### Connection

Connect the device wirelessly to the venue network. Open a browser and input an IP address or scan a QR code to connect to the karaoke player at a set port such as 5000, 5010, etc. The tablet can reserve, play, stop, or cancel the songs in the karaoke player. It can also use the Mixer control to adjust the music volume, microphone volume, echo, reverb, etc.

### Finding MAC address

After starting the tablet, go to Command Prompt and type in "ipconfig /all". Look for "Physical Address" which is the MAC address.

## Setting IP address

When connecting the tablet to the venue network, it may be required to set the IP address of the tablet according to the instruction of the IT administration. Go to Open Networks & Internet setting > Wi-Fi > Change adopter options. Right click on the wireless port which is connected to the ship network and select Properties. Next select Internet Protocol Version 4 (TCP/IPv4) and click Properties. Select the Use the following IP address and fill in the IP address, Subnet mask, and Default gateway. Also select Use the following DNS server address, and fill in the Preferred DNS server and Alternate DNS server. Click OK and exit. Reboot the tablet.

## Appendix 1. URL Whitelist for VLAN

The VLAN requires the following whitelist of URLs.

<b>CAVS USA Inc</b>	<b>Port</b>
cavskaraoke000.synology.me	1194
cavskaraoke003.synology.me	1194

<b>Microsoft</b>	<b>Port</b>
windowsupdate.microsoft.com	443
*.windowsupdate.microsoft.com	443
*.update.microsoft.com	443
*.windowsupdate.com	443
download.windowsupdate.com	443
download.microsoft.com	443
*.download.windowsupdate.com	443
wustat.windows.com	443
ntservicepack.microsoft.com	443
go.microsoft.com	443

<b>Synology</b>	<b>Port</b>
account.synology.com	443
api.insight.synology.com	443
api.segment.io	443
api.wootric.com	443
apiauth.quickconnect.to	443
auth.docker.io	443
autoupdate7.synology.com	443
cdn.auth0.com	443
cdn.segment.com	443
cdn.wootric.com	443
checkip.dyndns.org	443
checkip.synology.com	443
checkip.webrtc.quickconnect.to	443
checkipv6.quickconnect.to	443

checkipv6.synology.com	443
checkport.synology.com	82
codecstatistic.synology.com/codec_feedback.php	443
collectorautoupdate7.synology.com	443
collectorupdate7.synology.com	443
czr1.re.cs.quickconnect.to	443
czr2.re.cs.quickconnect.to	443
dataautoupdate7.synology.com	443
database.clamav.net	443
dataupdate.synology.com	443
dataupdate7.synology.com	443
ddns.synology.com	443
dec.quickconnect.to	443
der3.re.cs.quickconnect.to	443
der4.re.cs.quickconnect.to	443
der7.re.cs.quickconnect.to	443
der8.re.cs.quickconnect.to	443
desktop.docker.com	443
docker.io	443
docker-pinata-support.s3.amazonaws.com	443
download.synology.com	443
download.synology.com/routerdb	443
dseasb33srmr.cloudfront.net	443
elb-io.us-east-1.aws.dckr.io	443
elb-registry.us-east-1.aws.dckr.io	443
frlp.lp.cs.quickconnect.to	443
frp1.punch.cs.quickconnect.to	443
frp2.punch.cs.quickconnect.to	443
frp3.punch.cs.quickconnect.to	443
frp4.punch.cs.quickconnect.to	443
frr2.re.cs.quickconnect.to	443
frr3.re.cs.quickconnect.to	443
frr4.re.cs.quickconnect.to	443
global.download.synology.com	443
global.geo.synology.com/multilingual_reverse.php	443
global.quickconnect.to	443
global.synologydownload.com	443
gofile.me	443
help.synology.com	443
help.synology.com/spreadsheet/	443
hub.docker.com	443

hub.docker.com/_/node	443
identity.us.c2.synology.com	443
index.docker.io	443
jpr4.re.cs.quickconnect.to	443
jpr5.re.cs.quickconnect.to	443
kb.synology.com	443
ldap.identity.us.c2.synology.com	443
license.synology.com	443
login.docker.com	443
myds.synology.com	443
notification.synology.com	443
notify.bugsnag.com	443
orlp.lp.cs.quickconnect.to	443
orp1.punch.cs.quickconnect.to	443
orp2.punch.cs.quickconnect.to	443
payment.synology.com	443
pkgautoupdate7.synology.com	443
pkgupdate7.synology.com	443
production.cloudflare.docker.com	443
registry.hub.docker.com	443
registry.npmjs.org	443
registry-1.docker.io	443
registry-origin.docker.io	443
report.synology.com/upload.php	443
sessions.bugsnag.com	443
sgr3.re.cs.quickconnect.to	443
sgr4.re.cs.quickconnect.to	443
signal1.fr.webrtc.quickconnect.to	443
signal1.or.webrtc.quickconnect.to	443
signal1.ty.webrtc.quickconnect.to	443
signal2.fr.webrtc.quickconnect.to	443
signal2.or.webrtc.quickconnect.to	443
signal2.ty.webrtc.quickconnect.to	443
signal3.fr.webrtc.quickconnect.to	443
signal4.fr.webrtc.quickconnect.to	443
sns.synology.com	443
subscribe.insight.synology.com	443
supapi.synology.com	443
synocloudsync.synology.com	443
synoconf.synology.com	443
synoconfkms.synology.com	443

synosurveillance.synology.com	443
twc.quickconnect.to	443
twr1.re.cs.quickconnect.to	443
twr2.re.cs.quickconnect.to	443
twr5.re.cs.quickconnect.to	443
twr6.re.cs.quickconnect.to	443
twr7.re.cs.quickconnect.to	443
twr8.re.cs.quickconnect.to	443
tylp.lp.cs.quickconnect.to	443
typ1.punch.cs.quickconnect.to	443
typ2.punch.cs.quickconnect.to	443
update.nai.com	443
update.synology.com	443
update.synology.com/btsearchupdate/getServerInfo.php	443
update.synology.com/filehostupdate/getfilehosts.php	443
update7.synology.com	443
us.c2.synology.com	443
usc.quickconnect.to	443
us-east-1-elbio-rm5bon1qaeo4-623296237.us-east-1.elb.amazonaws.com	443
us-east-1-elbregis-10fucsvj1tcgy-133821800.us-east-1.elb.amazonaws.com	443
usr1.re.cs.quickconnect.to	443
usr2.re.cs.quickconnect.to	443
usr5.re.cs.quickconnect.to	443
usr6.re.cs.quickconnect.to	443
utyupdate.synology.com	443
www.synology.com	443
www.synology.com/company/legal/privacy	443
www.synology.com/company/legal/Services_Data_Collection_Disclosure#technical-support	443
www.synology.com/company/term_packagecenter.php	443

## Appendix 2. Data Sync and Map Drive

### Data Sync

After the NAS server and the JB-199 IV Online karaoke players are setup in the venue network/VLAN with their own respective local IP addresses, the NAS server can next be connected to CAVS HQ NAS server using VPN for data synchronization.

- In a JB-199 IV Online karaoke player, open the Google Chrome browser and navigate to "NAS server IP address:5000". You will see the sign-in page of the NAS server.
- Input the username and password to enter. Select Control Panel > Network > Network Interface.
- Click on "VPN-Connection" and press "Connect". A message "Connected" will appear showing you the connection is successfully made. Close the Control Panel.

- Sign out of the NAS server by selecting the User Account at the top right corner of the screen. Sign in again and confirm that the "Synology Drive ShareSync" icon appears at the top right corner of the screen. Sign out of the NAS server and close the Google Chrome browser in the JB-199 IV Online player.

## Map Drive

- In the JB-199 IV Online, open the File Explorer and go to Documents > JB-199IV. Right click on the mapdrive.json file and select edit.
- Replace the IP address shown in the mapdrive.json file with the local IP address of the NAS server. Do not change anything else, such as port number, etc.
- Save and close the editor and close the File Explorer. Restart the karaoke program in the JB-199 IV Online.
- When the karaoke program restarts, confirm that the network drive X:\ is activated.

## Appendix 3. Advertisement and Background video

### File Format

File formats recommended for the Advertisement and Background video are as follow.

- Photo
  - JPG, BMP
  - 16:9 (for example 1920 x 1080)
- Video
  - MP4
  - 16:9 (for example 1920 x 1080)
  - 15 - 30 fps
  - Embedded audio is automatically muted

### Loading

After the contents for the Advertisement and Background video are created, contact Princess Cruise / Entertainment Department for loading of the contents onto the NAS server.

### Advertisement Sync

After the Data sync and Map drive are established between the CAVS HQ NAS server, the venue NAS server, and the JB-199 IV Online karaoke players, the Advertisement sync and BGV Sync can next be established as follows.

- In a JB-199 IV Online karaoke player, go to the Control Panel > Function Menu > Advertisement.
- Click on the Load button at the far right side. Navigate to X:\AdvLibrary and select Adv.txt to open..
- Click on Playlist in the Function Menu.

### Background Video Sync

- In a JB-199 IV Online karaoke player, go to the Control Panel > Function Menu > Pictures.
- Click on the Load button at the far right side. Navigate to X:\BgvLibrary and select Bgv.txt to open..
- Click on Playlist in the Function Menu.

**Reboot the JB-199 IV Online to store the new settings.**

**END**