XF705 IP STREAMING GUIDE (VLC VERSION)

These materials explain the procedure for receiving XF705's IP streaming with the "VLC" application installed on a PC.
(Please refer to www.videolan.org for system requirements)

1. IP streaming ("VLC" application) set up

1-1 Things to prepare
    ① XF705

    ② PC (with VLC application installed from www.videolan.org)

       *Operation checks have been performed with Ver. 3.0.12.

    ③ Ethernet cable ×1

1-2 Connection diagram
Assumed connection format: XF705 ⇔ Ethernet cable ⇔ PC

Connect (1) XF705 and (2) PC with an Ethernet cable.

(1) XF705
(2) PC

③Ethernet cable

・We recommend using a category 5e (CAT5c) or higher Ethernet cable that supports gigabit.

  *When using a category 5 (CAT5) cable, IP streaming was not possible in some cases.

2. Set the PC's IP address in advance

PC settings:

① Start the PC connected to the network, and go to [Control Panel] ⇒ [Network and Internet] ⇒ [Network and Sharing Center]. On the network settings screen, open Properties from the [Local area connection] state. Select Internet protocol 4 (TCP/IPv4), and open Properties. Do not select [Obtain an IP address automatically]. Instead, select [Use the following IP address] and set the settings shown below.

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically
◉ Use the following IP address:

IP address: 192 . 168 . 000 . 002
Subnet mask: 255 . 255 . 255 . 0
Default gateway:

○ Obtain DNS server address automatically
◉ Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:

☑ Validate settings upon exit   Advanced...

OK   Cancel

・For the IP address, input [192.168.0.xxx]
   For example: [192.168.000.002]

・For the subnet mask, input [255.255.255.0]
  *Generally, the subnet mask values will be entered
   automatically once you input the IP address.

3. Next, perform the XF705's network settings

3-1 Select Ethernet

① From MENU, go to ⊕1 [Network settings menu] ⇒ [Connection settings] ⇒ Press SET.
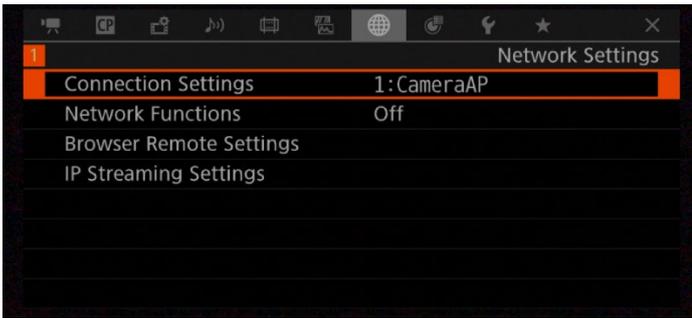
② Select connection destination ⇒ Press SET.

　　・Four connection settings can be registered. Push the joystick up and down to change screens.
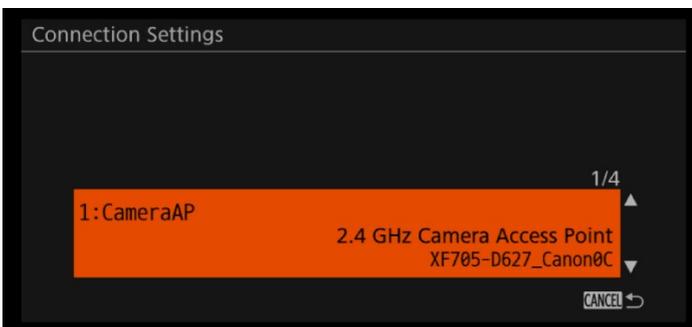
③ Select [Edit] ⇒ Press SET.

④ Select [Ethernet] ⇒ Press SET.
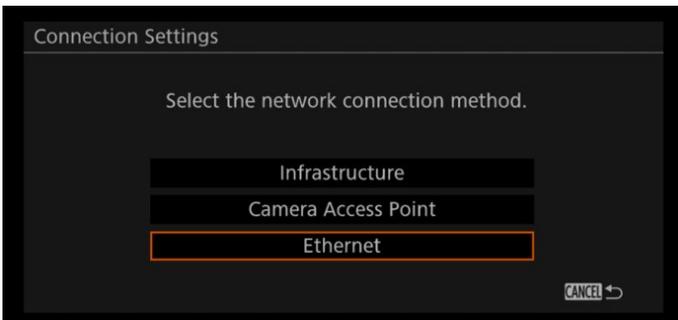
⑤ For the method to obtain IP address, select [Manual] ⇒ Press SET.
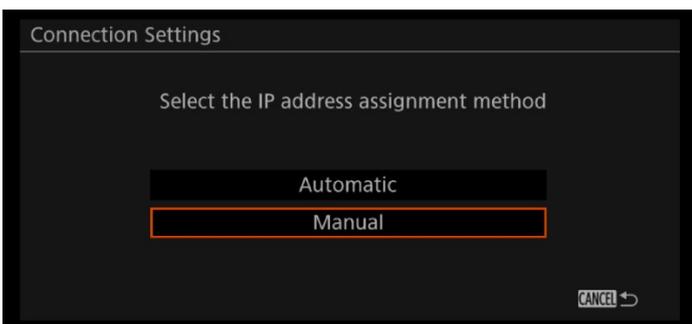
⑥ Input [192.168.0.xxx] as the IP address. Example: [192.168.0.3]

＊These values are the address the XF705 itself has. <u>Set the values at the end so that they are not the same as those</u> <u>of the device you are connecting to (the values set on the PC)</u>.

⑦ Input [255.255.255.0] for subnet mask ⇒ Press SET.
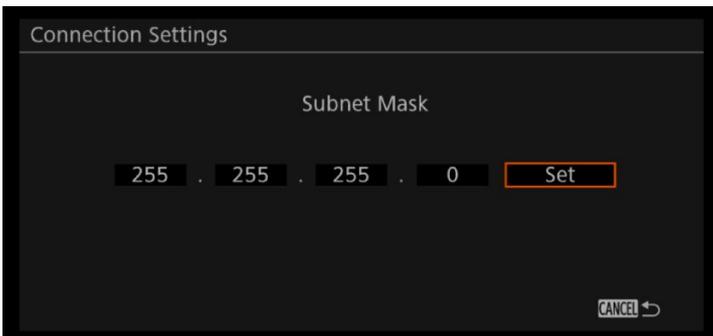
⑧ [Default Gateway], [Primary DNS Server], and [Secondary DNS Server] are not necessary for the assumed connection format of these materials, so you can ⇒ Press SET.

Connection Settings

Secndry DNS Server

0 . 0 . 0 . 0   Set

CANCEL ↩
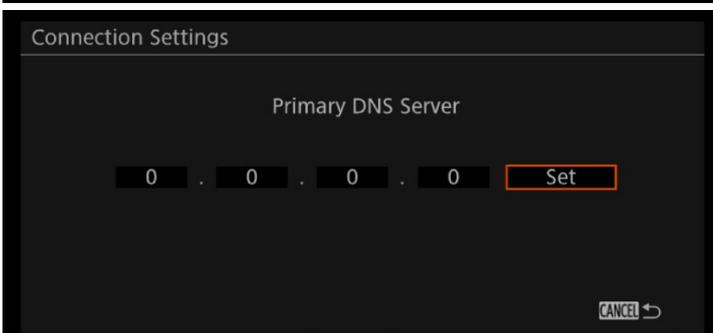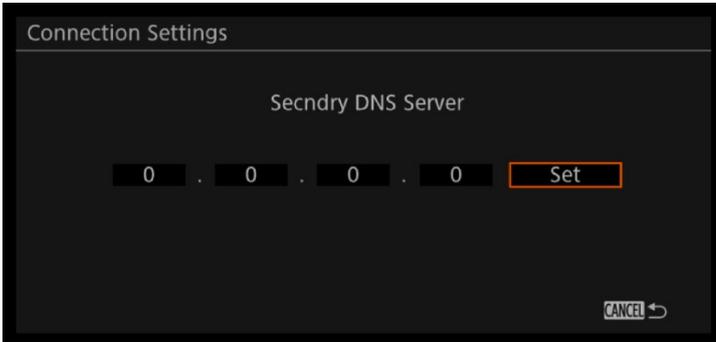
⑨ Confirm the network settings ⇒ Press OK.

Connection Settings

Network configuration saved

OK
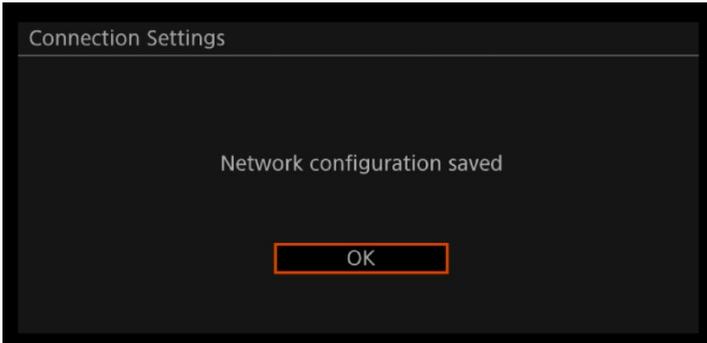
3-2 Make preparations for streaming transmission

3-2-1 Set the recording format and system frequency

① From MENU, select [Recording/Media Setup] ⇒ and for [Recording Format], select [XF-HEVC / XF-AVC].

Recording/Media Setup

Rec Format	XF-HEVC
	▶ XF-AVC
	MP4
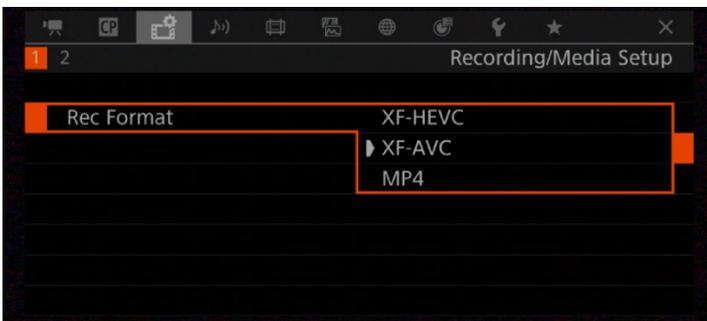
② From MENU, select [Recording/Media Setup] ⇒ and for [System Frequency], select [59.94 Hz / 50.00 Hz].

→ With the two settings above, the details of the [Streaming Output Signal] list displayed will change.

Recording/Media Setup

| System Frequency | ▶ 59.94 Hz |
| | 50.00 Hz |

3-2-2 Select bit rate and resolution.

① Select [Network Settings] ⇒ [IP Streaming Settings] ⇒ [Streaming Output Signal].

② Select any option ⇒ Press SET.

(For recording format, we recommend XF-AVC rather than XF-HEVC for IP streaming with VLC)

```
Network Settings > IP Streaming Settings

Streaming Output Signal        ▶ 16Mbps/3840x2160 59.94P
                                 9Mbps/3840x2160 59.94P
                                 16Mbps/3840x2160 29.97P
                                 9Mbps/3840x2160 29.97P
                                 9Mbps/1920x1080 59.94P
                                 4Mbps/1920x1080 59.94P
                                 9Mbps/1920x1080 29.97P
                                 4Mbps/1920x1080 29.97P
```
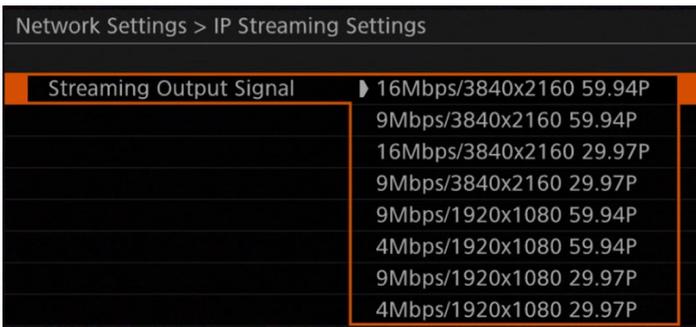
3-2-3 Select the audio output channel

① Select [Network Settings] ⇒ [IP Streaming Settings] ⇒ [Audio Output Channel].

② Select any option ⇒ Press SET.

(*For the audio to record, from MENU [♪)) Audio settings] ⇒ [Select CH1/CH2 Input] and [Select CH3/CH4 Input], you can select any of [INPUT terminal / MIC terminal / Internal mic.])

```
Network Settings > IP Streaming Settings

Audio Out Channels        ▶ CH1/CH2
                            CH3/CH4
```
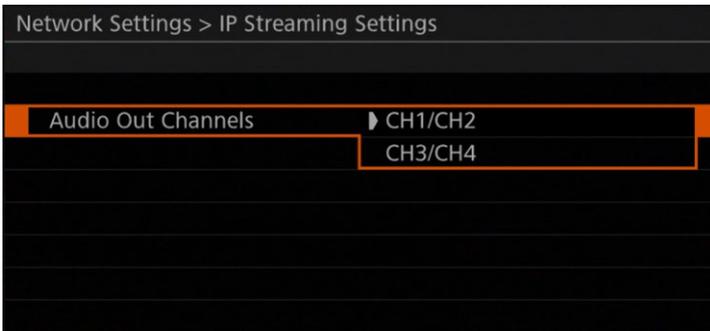
3-2-4 Input streaming destination IP address and port number

① Select [Network Settings] ⇒ [IP Streaming Settings] ⇒ [Dest. IP address].

② Input the IP address of the device you are connecting to (PC) ⇒ Press SET.

Example: [192.168.0.2] (The PC's IP address set in advance.)

```
IP Streaming Settings > Dest. IP Address

              Dest. IP Address

        ▲
        0  .  0  .  0  .  0        Set
        ▼


                                 CANCEL ↩
```

③ If necessary, input the [Dest. Port No.] in the same way ⇒ Press SET.

● Normally, the port number initially set is used (it is normally 5000).

IP Streaming Settings > Dest. Port No.

Dest. Port No.

0   5   0   0   0   Set

CANCEL

3-2-5 Select the transport protocol

① Select [Network Settings] ⇒ [IP Streaming Settings] ⇒ [Protocol].

② Select any one of UDP or RTP or RTP+FEC ⇒ Press SET

  (The [UDP] protocol will be selected for this example).

UDP:	Prioritizes high-speed transmission; reliability/order not guaranteed. Ignores lost/delayed packets.
RTP:	Standard format for video/audio distribution on Internet. Ignores lost/delayed packets.
RTP+FEC:	Through transmission via RTP and forward error correction (FEC*) control, lost/delayed packets are recovered on the receiver side.

*A decoder or PC software that supports FEC control is required.

Network Settings > IP Streaming Settings

Protocol   ▶ UDP
                    RTP
                    RTP+FEC
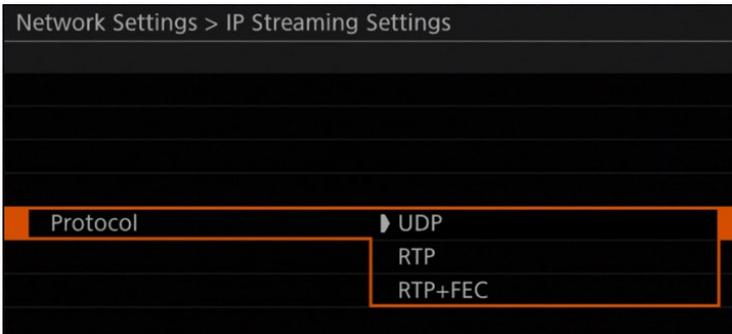
4. Streaming transmission

XF705:

4-1 Select XF705's network connection settings.

① Select [Network Settings] ⇒ [Network Functions] ⇒ [IP Streaming].

② ⇒ Press SET.

Network Functions

Browser Remote
IP Streaming
Off

CANCEL
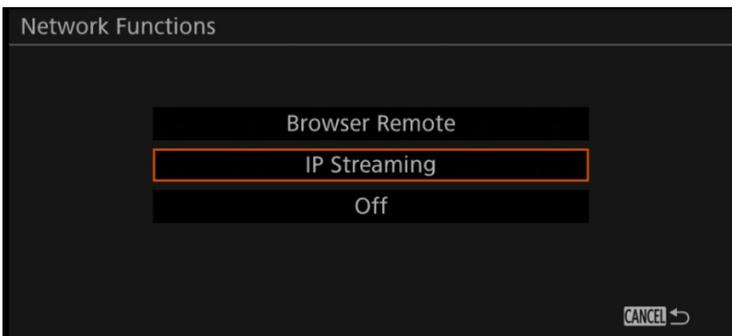
● Camcorder will connect to network and icon showing the connection method will be shown.

● On the screen [📹IP] (yellow) will be shown, and when transmission preparation are complete, the icon will change to white, and video/audio streaming transmission will start.

●When [Off] is selected for [Network Functions], transmission will terminate, and the [📹IP] icon will disappear.

PC:

4-2 Perform VLC settings on the PC

・Open the VLC Media Player, and select [Media] ⇒ [Open Network Stream] ⇒ [Network (N) tab].

⇒ In the [Please enter a network URL] cell, input the network URL that matches the protocol that was selected under the IP Streaming Settings earlier (under 3-2-5 in the guide).

For this example, input 【udp://@:5000】 and click [Play (P)▼].

⇒ If successful, the images will appear on the screen.
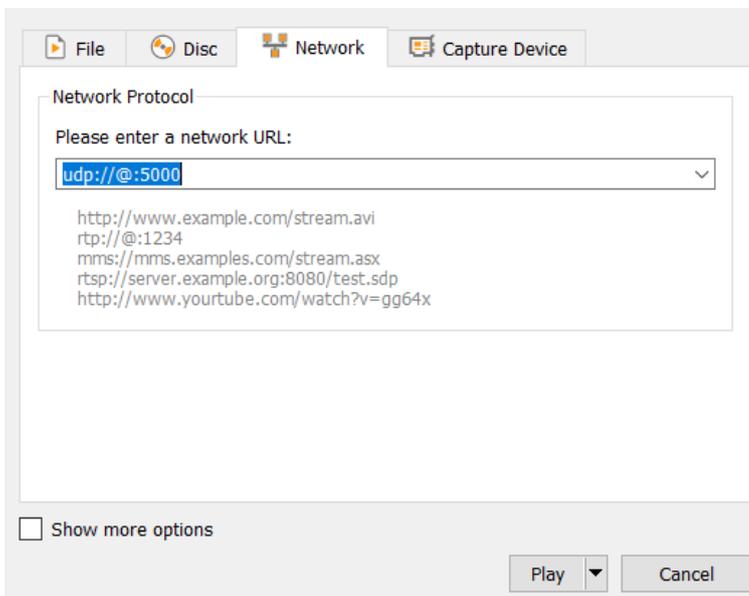
*Notes:

・Recording to the SD card during IP streaming is not possible.

・The specification is for the IP streaming function to remain engaged, and not be turned off when a media mode is switched or the camcorder power is turned off, and for IP streaming to start (restart) when the camcorder recovers, or the camcorder's power is turned back on.