

Technical Guide | BRC-X400/SRG-X400/X120

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# SRT introduction

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# 1. Overview

This document explains typical Procedures and Tips for the SRT connectivity when using Sony's Color Video Camera BRC-X400/SRG-X400/SRG-X120/BRC-X401/SRG-201M2/SRG-HD1M2 (hereinafter, called "the cameras").

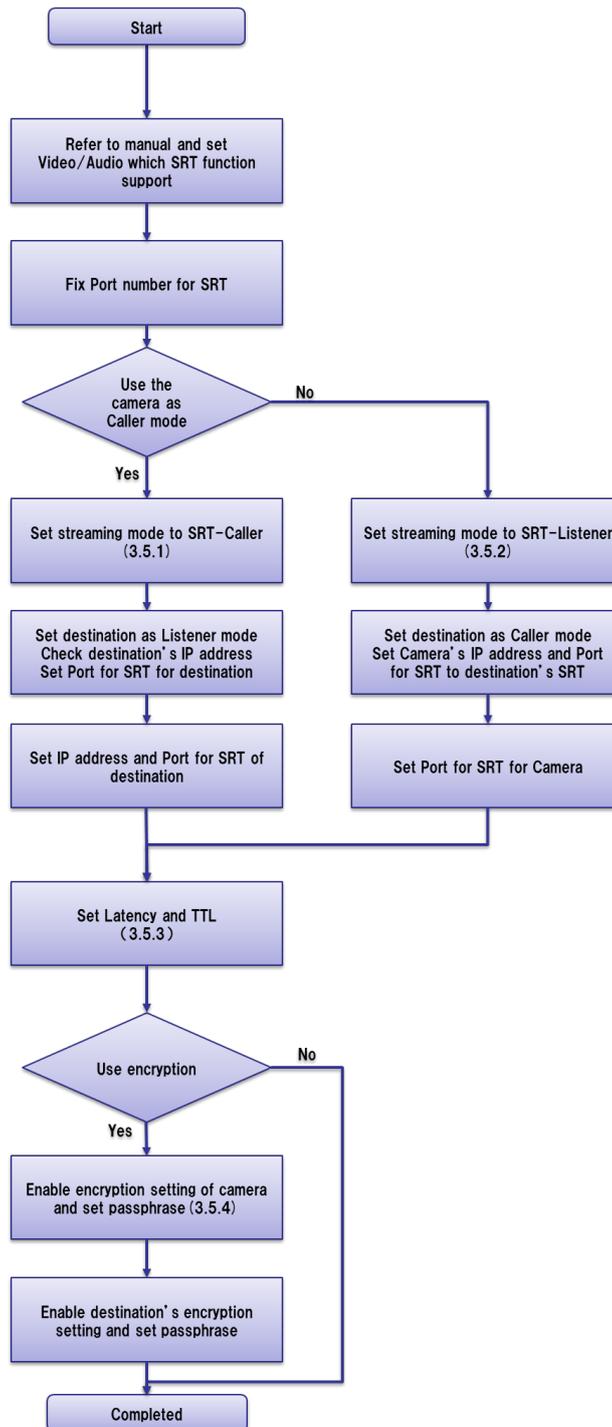
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## 2. Flowchart

The flowchart shows outline of the procedure for enabling the SRT connectivity function of the camera described in the following chapter.



\*Please refer to the manual of the devices to be connected.

## 3. Pre-configuration Settings

This section describes some pre-configuration settings you will need before activating the SRT function for the cameras.

### 3.1. HTTP/RTSP setting

The HTTP/RTSP communication setting need to be enabled in order to communicate via network before the SRT function of the camera is enabled. Please refer to the Operation Manual of the target camera, and set the HTTP/RTSP communication setting.

Ref).

- The section of [Adjusting and Configuring the Camera through On-Screen Menus] – [SYSTEM Menu] - [HTTP/RTSP] of the Camera's Operation Manual.
- The section of [Accessing the Camera from a Web Browser] – [Enabling HTTP/RTSP in the Camera] of the Camera's Operation Manual.

### 3.2. Set IP address by using the RM-IP Setup Tool

For IP communication, the IP address needs to be set. You can use RM-IP Setup Tool to assign IP address to the camera. Please refer to the RM-IP Setup Tool Guide for more details.

[Note] The DHCP setting cannot be enabled from the RM-IP Setup Tool.

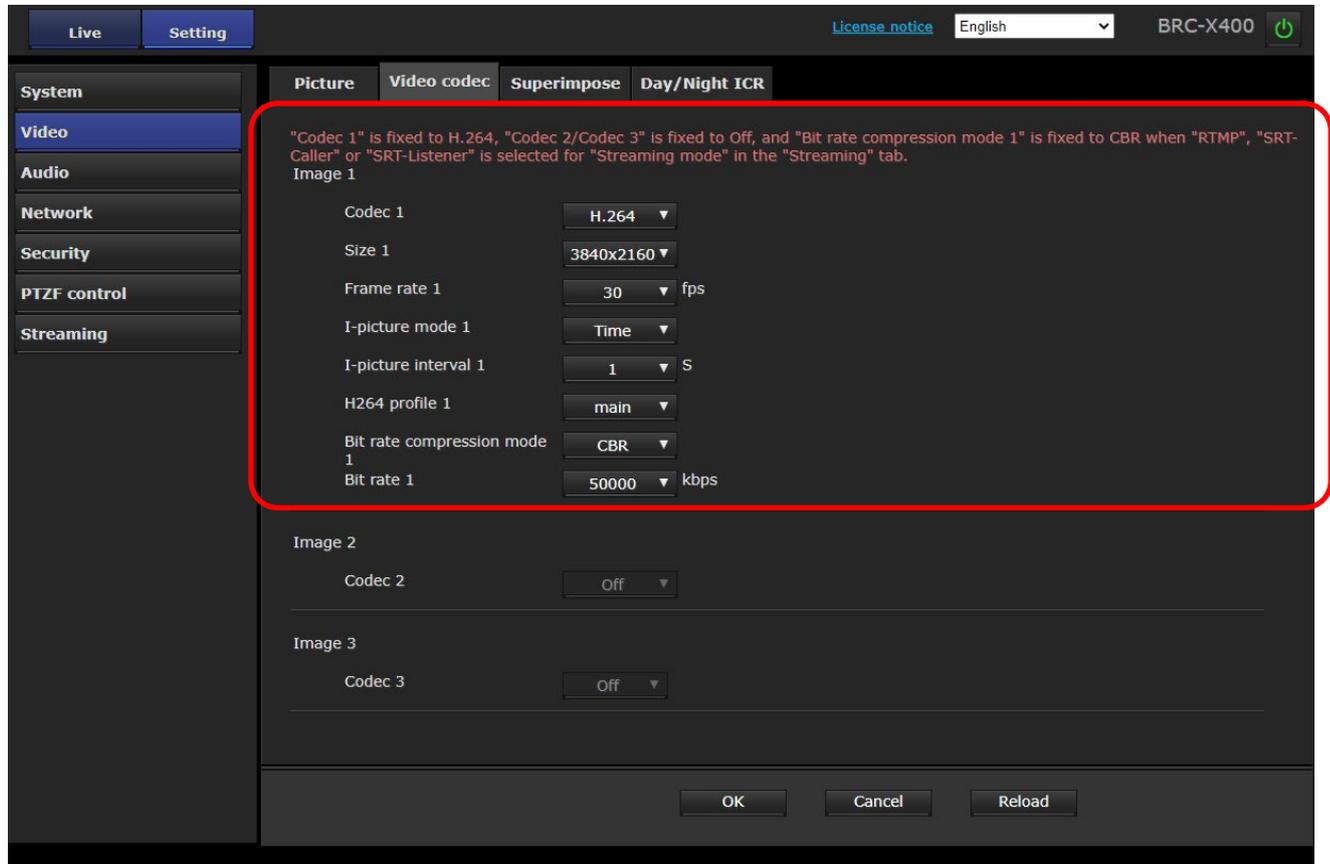
### 3.3. Change the default password

When the procedure of 3.1 and 3.2 are performed, HTTP access to the camera is available. Please change the default password (initial password) according to the Operation Manual of the Camera. Ref).

The section of [Accessing the Camera from a Web Browser]-[Changing the Initial Password] of the Camera's Operation Manual.

### 3.4. Camera's Codec Setting

For SRT function, available channel is Image 1, fixed with H.264.



#### 3.4.1. Audio setting

Please enable Audio to use SRT function. SRT function cannot be used when Audio is not enabled.

Open the [Audio] tab of the Administrator Settings menu, and check [Enable] checkbox of [Send].

### 3.5. SRT Setting

Before starting SRT transmission, Port to be used and whether Camera is set to Caller mode or Listener mode needs to be fixed.

Caller means it starts the transmission, while Listener means it waits for it.

Caller/Listener can be set regardless of whether it sends/receives the images. Once one side is set as Caller, the other needs to be Listener.

In general, the device in firewall is set as Caller, and the device with global IP address such as server is set as Listener.

Both Caller and Listener are supported for the cameras. If camera is set as Caller, set the connection destination as Listener. If camera is set as Listener, set the connection destination as Caller.

Some devices support either Caller or Listener only. In that case, set camera to establish the connection.

Please refer to the manual of the device to be connected as well.

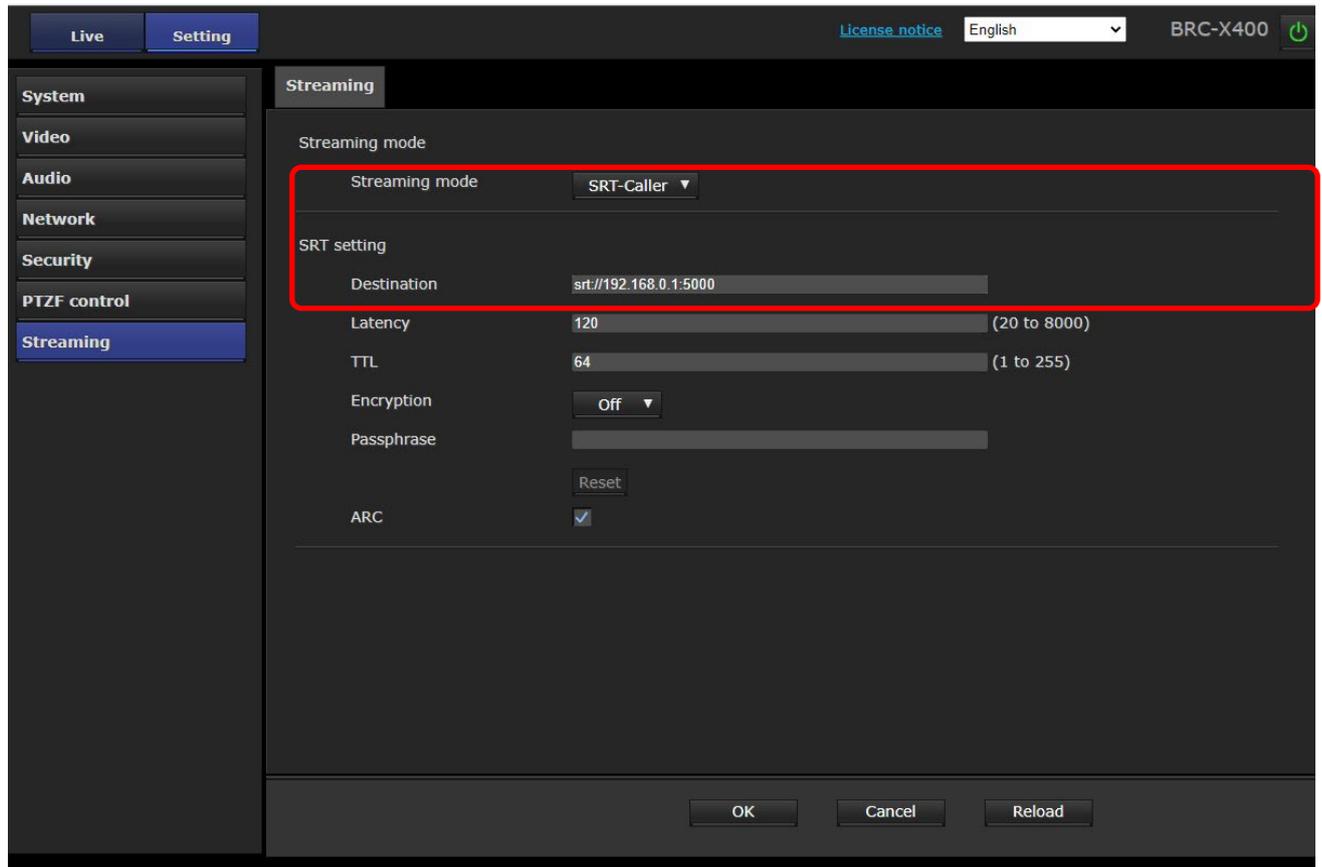
Regarding the SRT connection environment, please refer to the information announced from SRT Alliance.

<https://www.srtalliance.org/srt-deployment-guide/>

### 3.5.1. When setting camera as Caller

Open [Streaming] tab of the Administrator Settings menu, and select [SRT-Caller] of [Streaming mode].

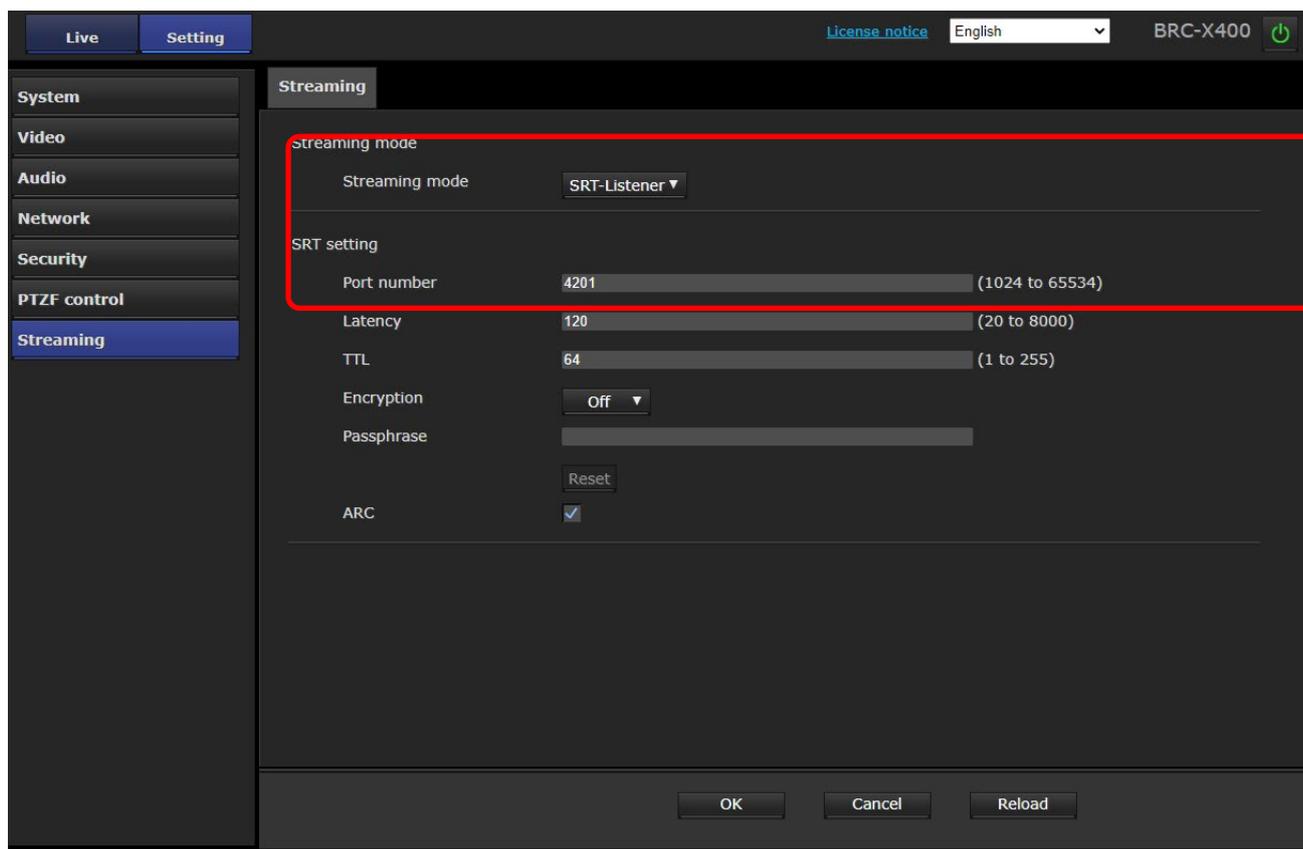
Set IP address or URL, then [:] followed by Port number for [URL(Destination)]. Press [OK] to complete the setting.



### 3.5.2. When setting camera as Listener

Open [Streaming] tab of the Administrator Settings menu, and select [SRT-Listener] of [Streaming mode].

Set Port number of the destination for [Port number]. Press [OK] to complete the setting.



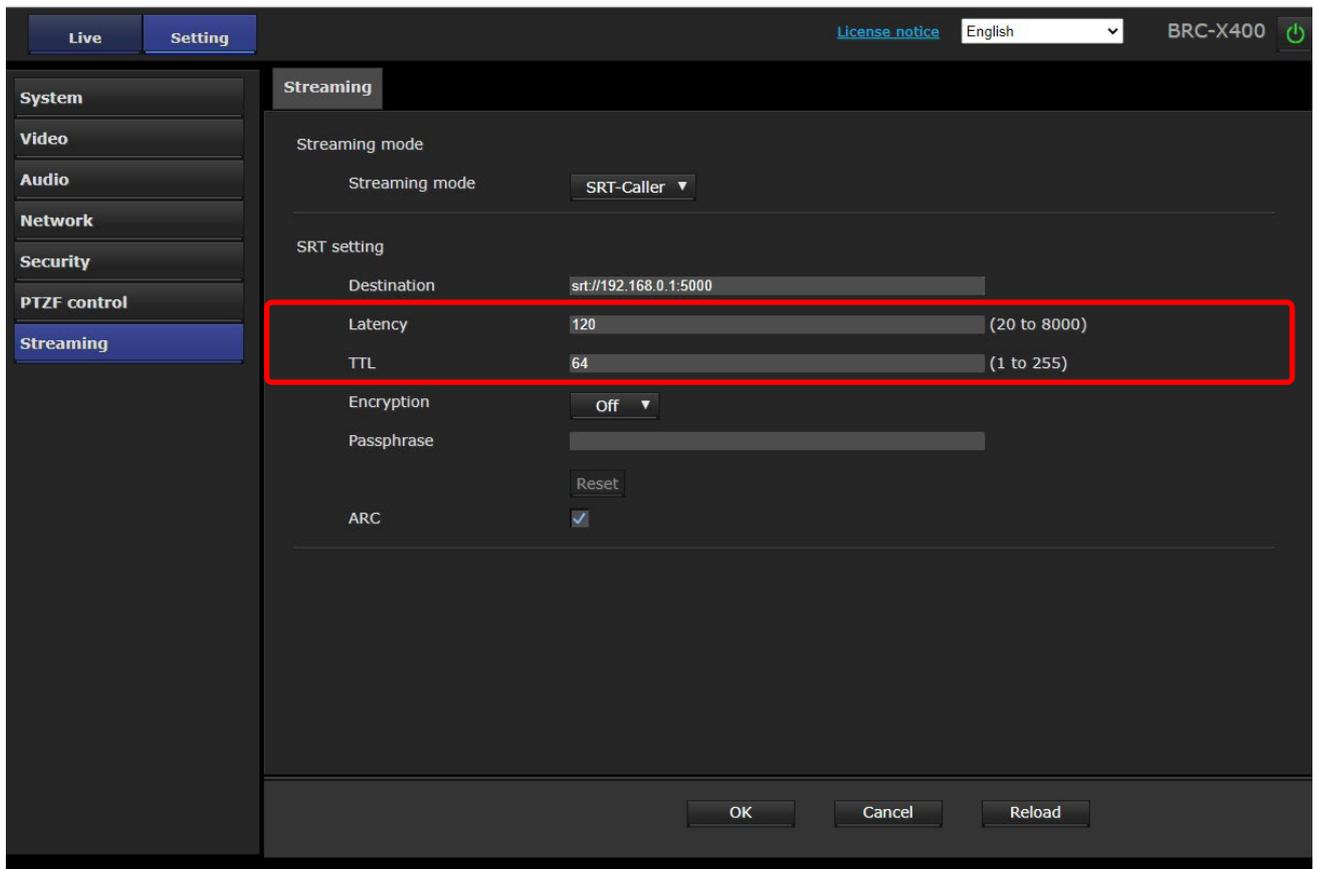
### 3.5.3. Setting of Latency and TTL

Set [Latency] and [TTL] upon the transmission environment.

Recommended to set enough latency according to RTT to the destination measured in advance.

For the recommended setting value, please refer to the information announced from SRT Alliance.

<https://www.srtalliance.org/srt-deployment-guide/>



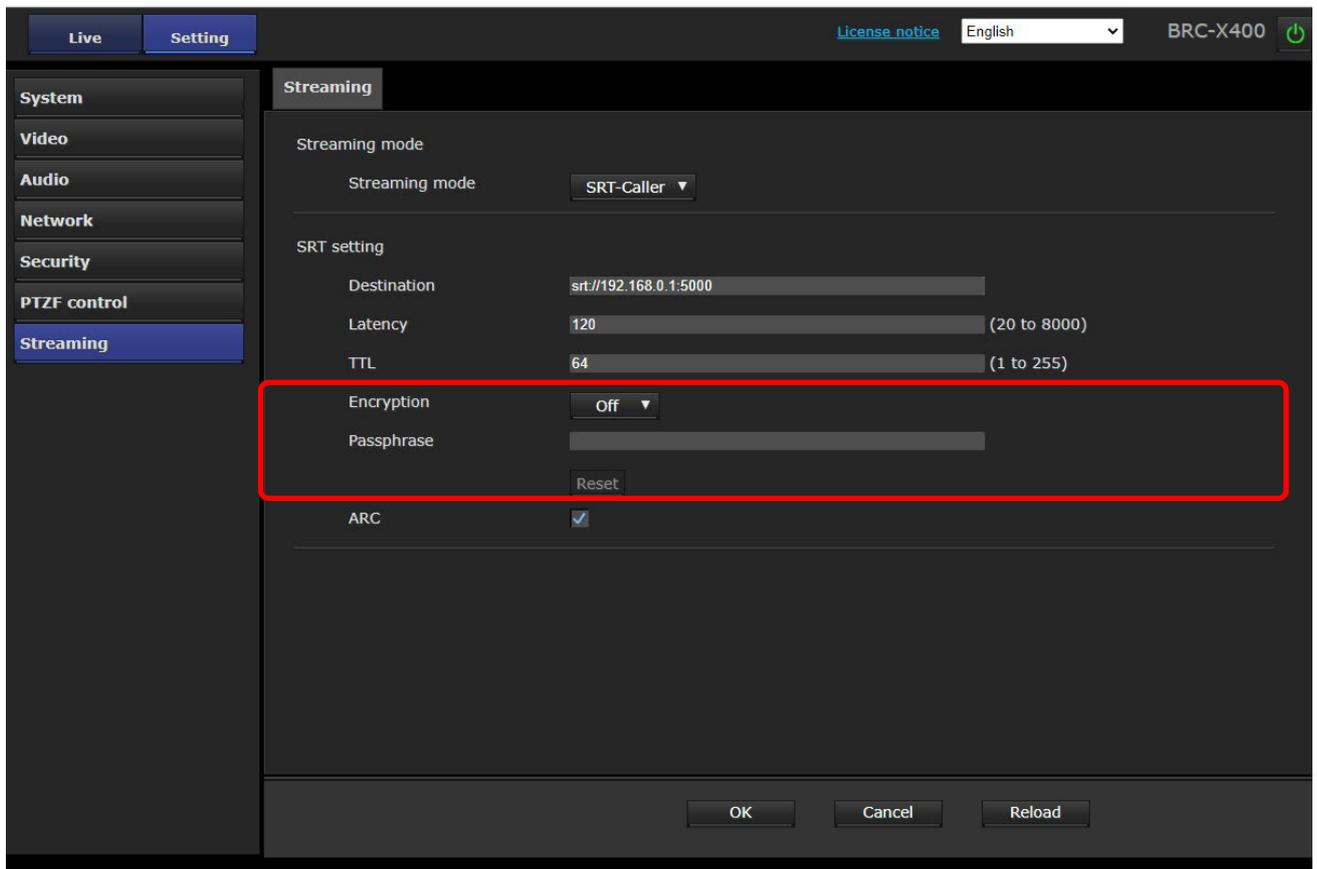
### 3.5.4. Encryption setting

Set when data needs to be encrypted by passphrase.

Select the length of encryption by [Encryption]. If encryption is not required, select [OFF].

Set the passphrase to use in [Passphrase]. To change it, press [Reset] to clear the previous setting, then set new passphrase.

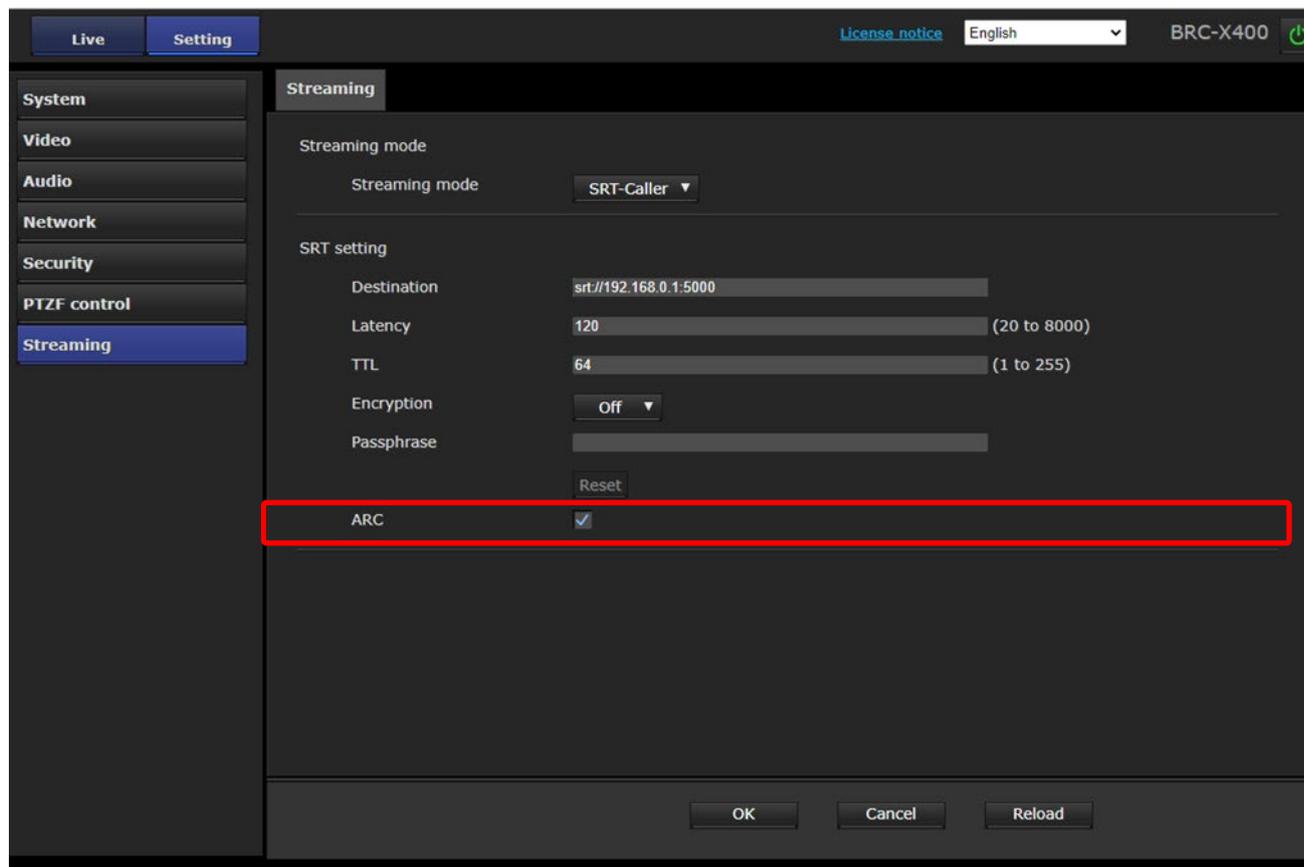
If encryption is enabled, set same length of passphrase and passphrase to the device of destination.



### 3.5.5. Adaptive Rate Control (ARC) setting

To enable ARC, open [Streaming] tab and check[ARC].

When ARC is enabled, distortion of the image affected by congestion of the line etc. can be reduced.



## 4. Troubleshooting

This section describes how to manage the problems might happen for SRT function of the cameras.

- Unable to connect
  - [Case 1] Check the network connection.
  - [Case 2] Check the Caller/Listener mode. If camera is Caller, set destination as Listener. If Camera is Listener, set destination as Caller.
  - [Case 3] Check the setting of destination's passphrase setting. It must be same as camera's setting.
  - [Case 4] Video setting such as size might not be supported by destination's device. Change video setting of Camera to which the device of the destination supports.
  
- Image is distorted or interrupted
  - [Case 1] Network might be unstable. Try more stable line such as wired.
  - [Case 2] [Latency] setting might be out of the recommendation of SRT Alliance. Please refer to the information announced from SRT Alliance, for the recommended setting value.  
<https://www.srtalliance.org/srt-deployment-guide/>
  
- Repeat cycle of poor and good image quality
  - ARC is working by detecting unstable network. Please try followings:
    - Connect to stable network
    - Connect to faster network
    - Open [Video Codec] tab in [Video] and select lower bitrate at [Bitrate 1]
    - Uncheck ARC

## Revision History

Date	Revision	Description
2021/06/11	1.0	Released

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