



# **K2 Edge Smart Playout Center Join In Progress User Manual**

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# 1 Grass Valley Product Support

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## 2 Compatibility

JIP requires following software versions:

- K2 Edge from version 4.0.2
- Cobalt Playout Control (POC) from version 2.85
- Channel Composer from version 1.6.2

## 3 Introduction

The Join In Progress (JIP) feature allows for a second, high priority Playlist to temporarily override the normal Playlist's output and when finished, join again with the normal Playlist that kept on running in the background. JIP works for any situation where a relatively short Playlist, for example breaking news, needs temporary control over the main program. The latter is merely suppressed and continues in the background until taking over again.

JIP works in combination with the primary HD/SD Channel and can also be used in a simulcast setup.



## 4 Setting up JIP



Setting up JIP consists of the following steps:

- Activate JIP via the IP Manager.
- Define a JIP Channel in Cobalt.
- Define JIP-templates plus the jipOff template in Channel Composer.
- Optional: create Format Rules to replace normal formats with JIP-formats for the JIP Channel.

### 4.1 Activating the JIP Channel via the IP Manager

- Open the IP Manager web interface; enter the IP Manager's IP-address in a web browser and log in.
- Go to **Channel Configuration > Enable JIP channel > select On.**
- Click **Set > Activate**. Note that activating changes will interrupt playout.

The screenshot shows the IP Manager web interface for a K2-Edge device. The page title is 'GRASS VALLEY K2 Edge | IPMANAGER'. The left sidebar contains a navigation menu with categories like 'System configuration', 'Network configuration', 'IP-manager', 'K2Edge', 'Channel configuration', 'Audio channels', 'SDI port misc', 'Time settings', 'Licenses', 'System monitoring', 'SNMP monitoring', 'System info', 'Fans', 'UDP Monitoring', 'System administration', 'Server start/stop', 'Manage services', 'database', 'dataserver', 'encoderd', 'firebird', 'nexos', 'playout\_distri', 'pt\_guard', 'schedulesync0', 'sequencer0', and 'sequencer1'. The main content area is titled 'Channel configuration' and includes sections for 'Video Bypass' (Bypass disabled selected), 'Channel layout' (1xSD+preview (1) selected), 'Region' (PAL selected), 'HD-format' (720p selected), 'Genlock' (Blackburst selected), 'Audio channels', and 'SDI port misc'. Under 'SDI port misc', the 'Enable JIP channel' option is set to 'On'. A message states 'The changed settings need to be activated before they take effect.' and there are 'Activate' and 'Set' buttons.

Example JIP enabled in IP Manager.

## 4.2 Defining a JIP Channel in Cobalt

To create a JIP Channel definition in Cobalt:

- Double-click the Cobalt icon to open Cobalt.



- Click the Asset Manager icon to open Asset Manager.



- In Cobalt Asset Manager, go to a Channel-tab and click the new icon.



**Are you sure to add a new asset? > Ok.**

- Specify the following settings:
  - **channel name:** a name for the Channel, for example 'JIP-Main'.
  - **server ip (playout):** the IP-address of the K2 Edge playout node (main or backup) this Channel will run on.
  - **broadcast set:** select 5:broadcast-4

Channel	Broadcast set
Single HD/SD	0
Simulcast 1 of 2 (HD)	0
Simulcast 2 of 2 (SD)	0
Preview	1
Record	3
JIP	4

- **server port:** server port, default 5020
  - Select the correct broadcast format.
  - **opt out:** opt out channel: not used
  - **join in progress:** select the Channel to JIP with; this should be the primary Channel (broadcast set 0).
- Click **Save** to save changes, **Cancel** to discard.

Other settings can be left at the default.

Cobalt | Ingest

MAIN

channel name: JIP-main

server ip: (playout) 10.250.51.31 server port: 5020

broadcast set: 5: broadcast4 opt out: main

PAL (25)

playout\_distri

look ahead: 24 (hours)

error look ahead: 12 (hours)

alarm threshold: 60 (minutes)

sequencer

manual event: 5 trigger delay (frames)

virtual:  (no sequencer)

schedule\_syncer

sync with: <no channel>

look ahead: 24 (hours)

accumulate messages: 60 (minutes)

join\_in\_progress

jip with: ComedyChan-main

external ref: \_\_\_\_\_

PREVIEW (don't care if not used)

channel name: <no channel>

SYSTEM

cache remove:

max disk usage: 90 %

keep played assets: 2 (hours)

transfer speed:

overall: 1000 Mb/s (>1)

use  partner system ip: \_\_\_\_\_

media name: \_\_\_\_\_

check error events: 4

forced\_distri use string or [TAB] here

forced criteria: \_\_\_\_\_ (crit 1:crit n)

using original filename for: \_\_\_\_\_ (crit 1:crit n)

interval: 30 (minutes >30)

playout\_distri

log level: info

GROUP COLORS and THUMB

colors:

Cancel Save

Example JIP Channel definition in Cobalt Asset Manager.



When correctly configured, a grey JIP indicator icon **JIP ON AIR** will be shown in Cobalt Playout Control (POC) next to the ON AIR signs for both the normal Channel and the JIP Channel.



When a Channel (name) has been modified or created, user rights have to be set again in Cobalt Asset Manager.

### 4.3 Configuring the JIP backup Channel

The K2 Edge backup node runs a process (schedulesync) that synchronizes schedules from the main playout server to the backup playout server.

To define the JIP Channel for the backup server:

- First define the Channel for the main node with the main node's IP-address as described in the previous paragraph. For example 'JIP-Main'.
- Then define the Channel for the backup node, with the backup node's IP-address. For example 'JIP-Backup'.
- Fill in the schedule-syncer section.  
**sync with:** specify the Channel on the main node that you want to backup, in this example 'JIP-Main'.

### 4.4 Defining JIP-templates in Channel Composer



For more information on Channel Composer, please refer to the Channel Composer User Manual.



#### How it works

The normal and JIP Playlists use the same Channel Pack. This Pack contains the "normal" and JIP-templates, plus the jipOff template described below. JIP-templates must have the following characteristics:

- Objects in the JIP-templates should be placed on higher layers than Objects used in the normal templates so that the JIP video output will (partially) overlay the normal program output (that continues to play in the background).
- JIP-templates should not interfere in any way with the normal playout templates. Therefore, the JIP template should use dedicated (player) objects.

Control is returned to the normal Playlist when the JIP Playlist ends, or temporarily during a gap in the JIP Playlist.

To restore to normal output, any changes caused by the various JIP-templates must be undone. The players that were started by any of the JIP-templates must be stopped. To achieve this, a template with the reserved name jipOff is created and added to the Channel Pack. This template should stop all players used in the JIP-templates.

The jipOff template will be automatically called when the JIP Playlist ends and control is returned to normal output.



Gaps in the JIP-Playlist are supported. During a gap, control will temporarily return to normal output. When an Event starts in the JIP Playlist, control is automatically returned to the JIP Channel.



Keep in mind not to change the JIP Playlist within 10 seconds before it ends, since the jipOff template is preloaded in these 10 seconds.



The quality of restoring to normal output depends on the jipOff template. If incomplete, or not defined at all, normal output cannot be restored.

To create JIP-templates:

- In Channel Composer, define the templates and formats for the JIP channel design.
  - Make sure these templates use dedicated (player) objects.
  - Also note that JIP Objects should be placed on higher layers (this can be checked in the Channel Composer Objects window) than the Objects used in the templates for normal playout.
- Create a jipOff template that stops all the players used in the JIP-templates. Note that the name for this template (jipOff) is fixed.
- Export and activate the Channel Pack to both the primary Channel (broadcast set 0) and the JIP Channel (broadcast set 4). Note that the normal and JIP Playlists use the same Channel Pack. You can also activate the Pack in a later stage.

## 4.5 Simulcast

To allow for Channel differences in a simulcast setup, different jipOff templates can be defined for each of the two Channels by adding a channel number suffix to the template name as shown below:

Template name	Description
jipOff	Automatically triggered when returning to normal output. Works for any Channel. Only used when no dedicated channel specific template could be found.
jipOff-chan0	Automatically triggered when returning to normal output on the first channel. If not found, template jipOff is used instead.
jipOff-chan1	Automatically triggered when returning to normal output on the second channel. If not found, template jipOff is used instead.

## 4.6 Format Rules

To make sure only JIP-templates and formats are used in the JIP Channel, you can define a Format Rule that replaces normal formats with JIP-formats for the JIP Channel.

Example Rule activated for the JIP Channel: IF Format = *Clip* THEN replace the *Clip-format* with the *JIP-Clip-format*.



For more information on Format Rules, please refer to the Format Control User Manual.



## 5 Operation



For more information on POC, please refer to the Cobalt User Manual.

### 5.1 Preparation

- In POC, open both Playlists and make sure the normal Playlist is running.
- Verify that JIP is configured correctly: when correctly configured, a grey JIP indicator icon will be shown in Cobalt Playout Control (POC) next to the ON AIR signs for both the normal Channel and the JIP Channel.

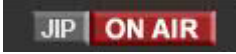
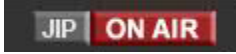


The screenshot displays the Cobalt PlayOutControl interface. It features a timeline at the top and two main panels for channel management. The left panel, labeled '113-br0', shows a list of events for 'MPEG2-HD, 16:9' with a duration of '00:00:30:00'. The right panel, labeled '113-br1', shows events for 'Katy Perry Feat Snoop' and 'Jessie J, Do it like a DJ', both with a duration of '00:00:30:00'. The 'ON AIR' indicator for the right channel is accompanied by a grey JIP icon. The interface includes various control buttons like 'Next', 'Go', 'Down', 'Up', 'Delete', 'Clear', 'Refresh', 'Filter', 'As Run', and 'Search'. The bottom status bar shows 'Event queued, playout will start within seconds' and 'Ready for playout'.

*Example normal and JIP Channels active in POC with grey JIP- icon visible.*

- Make sure the Channel Pack that contains the JIP-templates is activated on both the normal and JIP Channel. This can be checked in POC > main menu > **View** > **Channel Packs** or using the Channel Pack Manager. If applicable, activate the JIP Channel pack using the Channel Pack Manager.  
Note that the normal and JIP Playlist use the same Channel Pack.
- If applicable, in the JIP Playlist, schedule Events with the JIP-formats.

## 5.2 Activating the JIP Channel and returning to normal playout

- In POC, with the normal schedule running, either manually activate the high priority JIP Playlist (manually start an Event in the JIP Playlist with **(Cue and) Go** or **Next**, or wait for the scheduled activation (Event with fixed start time in the JIP Playlist).  
 The moment the JIP Playlist takes control, the JIP-indicator icon above the normal Playlist will turn red.

Normal Channel	JIP Channel
JIP configured correctly. Normal Channel active, JIP not active.	
	
JIP configured correctly. JIP Channel active, normal Channel suppressed.	
	

- During a gap in the JIP Playlist, or when the JIP Playlist ends, control will automatically return to normal output.



Note that you cannot return to normal playout manually, by starting an Event in the normal Playlist. To return to normal playout, delete all Events after the current Event in the JIP Playlist. When the current Event's end time is reached, control is returned to normal playout.

The `jipOff` template is automatically called when control returns to normal output.

The moment the normal Playlist takes control, the JIP-indicator icon above the normal Playlist will turn grey.

## 6 Appendix: the JIP-workflow

