

# Canon XL H1 JackPack Workflow Overview

Version 1.0

## INTRODUCTION:

The XL H1 is Canon's first high definition (HD) camcorder. It combines Canon's many years of innovative optical, integrated circuit and camera design into a camcorder designed for use by broadcasters in ENG, documentary and reality/episodic TV production and filmmakers.

With the "Professional JackPack" on the Canon XL H1 you can: send out an uncompressed HD signal (through the HD-SDI terminal), input and output SMPTE time code and receive a Gen lock signal.

## SECTION 1: HD / SD SDI

The XL H1 can output both HD and SD SDI signals. These conform to SMPTE 292M and 259M respectively.

When shooting in the 60i mode (factory standard for North America), the output of the SDI terminal is 59.94 fps. This output the same whether the camcorder is in HD or SD; 60i, 30F or 24F frame rates.

If the camcorder is set for 60i, 24F (23.976 fps) the camcorder's DSP output has a 2:3 pull down applied to it, so that the SDI terminal will be 59.94 fps.

If the optional upgrade has been performed, the XL H1 can be switched to 50i mode and the SDI output is then 50 fps. This output is the same whether the camcorder is in HD or SD; 50i or 25F frame rates.

The XL H1 has the ability to down convert an HDV recorded tape or a live signal from HD to SD. This is useful for monitoring or recording to SD while recording the HD in the camcorder.

The XL H1 will not convert between 50i/60i or 60i/50i.

## SECTION 2: Gen Lock

The XL H1 has SMPTE standard Gen Lock input. In the 60i mode (factory standard for North America), the input is 29.97 fps drop frame. In the 50i mode (optional upgrade) the input is 25 fps.

For SD (Standard Definition) operation a Blackburst signal should be used. For HD (High Definition) operation HD Tri-Level sync should be used.

The camcorder has to be set for Gen Lock Input in the menu system. When the camcorder is in sync, the Gen Lock display on the LCD panel in the middle of the power dial will stop flashing.

### **SECTION 3: Time Code**

The XL H1 is equipped with SMPTE standard Time Code Input and Output. These time codes run at 29.97 fps drop frame in 60i mode and 25 fps in 50i mode (optional upgrade) regardless of the Frame rate of the XL H1.

You can jam the Time Code of the XL H1 by connecting a Time Code generator for a minimum of 10 seconds. If the camcorder is powered down or the battery pack is changed, the Time Code will be lost and the XL H1 will need to re-jammed.

### **Conclusion:**

The Canon XL-H1 is fully equipped with the professional features you'll need for any situation you might find yourself in: from guerilla-style documentaries to studio broadcast environments (ENG, documentary and reality/episodic TV production) to feature film productions.