Specifications

Analog Inputs:	NTSC or PAL Analog Composite
Differential Input	Common Mode rejection >3.5V
Input Return Loss	> 35 dB at 5 MHz
Input A to D Quantization	10 bits
A/D sampling rate	8:4:4 (2x)
Frequency Response	Y 0-5.0 MHz +/- 0.25 dB
K-Factor	< 1%
SCH Phase	< 1 degrees
Differential Gain	< 1.8%
Differential Phase	< 0.8%
S/N	> 50 dB
Chroma Luma Delay	< 2 ns
Y/C Separation	4 or 3 line Adapt. Comb, or notch filter
Conversion Time	1.25H
Digital Outputs:	3 with EDH
Output Quantization	10 bits
Output Return loss	>17 dB @ 270Mbit
Output Error Coding	SMPTE EDH
Jitter Filter LBW	2Hz
Operating Temperature Range	40-110 degrees F.
Humidity	(non-condensing)
Power Input	+5V @ 0.6 Amps
Size	3.7x 2.75x 0.75" (94 x70x19mm)

Specifications subject to change without notice.

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COBALT

Model 6081

Analog Composite
4-line Adaptive Comb Filter,
10 bit A/D to 270Mb
4:2:2 SDI Decoder with EDH

Owner's Manual

The COBALT 6081 is a high quality full 10 bit analog to digital decoder for converting 525 and 625 line, analog composite signals to 270 Mb 4:2:2 SDI (SMPTE 259M-C compliant) output with SMPTE EDH. The user can select different Y-C separation modes (4 or 3 line adaptive or notch filter) for composite input.

6081 Block Diagram
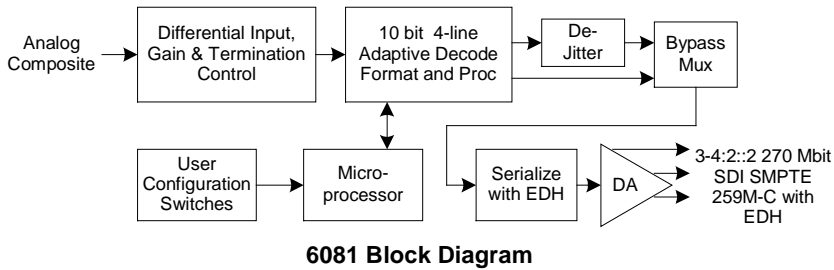
Features include user configurable 75-ohm input termination and user input gain control. The user has a choice of direct or de-jittered SDI output, Color Bar test pattern and Pedestal On/Off functions through externally accessible switches.

Figure 2 - External configuration settings.

```
6081  SWITCH  1-8   SETTINGS
1  2  3  4  5  6  7  8   Function
_____

1 - Adpt.-Comb: 4-Line (ON) / 3-Line OFF
2 - Comb (ON) / Notch OFF
3 - AGC (ON) / Manual gain OFF
4 - De-jitter filter (ON) / OFF
5 - VBit SMPTE (ON) / ITU OFF
6 - Setup Removal (ON) / OFF (NTSC only)
7 - Color (ON) / OFF
8 - Test Color Bars (ON) / OFF
```

Examples:

1	2	3	4	5	6	7	8	Function
On	On	On	On	On	On	On	Off	NTSC or PAL 4-Line Adapt., AGC,Jitter Filter
On	On	On	On	On	On	On	On	Output Color Bars

USER SWITCH SETTINGS

SW 1   ADAPTIVE LINE MODE
   ON   - 4-line Adaptive Comb
   OFF - 3-line Adaptive Comb

SW 2   COMB ENABLE
   ON   - Comb filter enabled
   OFF - Notch filter enabled

SW 3   AUTOMATIC GAIN CONTROL
   ON   - AGC enabled
   OFF - Manual Gain enabled

SW 4   DEJITTER FILTER
   ON   - De-jitter Filter enabled
   OFF – De-jitter Filter disabled

SW 5   V-BIT CONTROL
   ON   - SMPTE standard
   OFF - ITU standard

SW 6   SETUP REMOVAL (Works on NTSC ONLY)
   ON   - 7.5 IRE pedestal removed for NTSC only
   OFF   - Pedestal not removed (JAPAN NTSC)

SW 7   COLOR ON/OFF
   ON   - PASS Color Signals
   OFF   - Force Black and White

SW 8   COLOR BARS ON/OFF
   OFF - Display Video
   ON   - Display COLOR BARS

TERMINATION CONFIGURATION
Remove the top cover and locate the termination switch by the SDI input BNC. Move the switch away from the input BNC to terminate the BNC at 75 ohms or move the switch towards the input BNC to un-terminate the input.

LED INDICATOR
The LED indicates video lock when ON and loss of video when blinking. A dark LED indicates loss of power.

INPUT GAIN ADJUST
Set SW-3 to Manual Gain Control, then open the top cover and adjust RP1 (GAIN) for input gain level. Do not adjust input gain while the unit is in AGC – ON mode.