

## Features

- Extremely light and compact
- Records one video and two audio channels
- Low power consumption
- Non-destructive IRIG-B time code and date stamping
- NTSC and PAL compatible
- Motion JPG compression
- Selectable compression ratio
- Dual CF card interface for removable media
- Discrete and serial remote control interfaces



## General Description

The Sekai ADV-21 with IRIG-B time code is a compact, rugged solid state video recorder for airborne applications that prioritizes excellent video quality and ease of use. Two audio channels can be recorded together with either Composite or Y/C video. The recorder accepts both PAL and NTSC video formats. Motion JPEG recording with variable compression offers the best picture quality available with maximum flexibility; the compression ratio is user selectable from 4:1 to 20:1. The ADVSR operates on 28VDC vehicle power and requires only 5W, the lowest power consumption in the industry.

This unit accepts an IRIG-B signal and non-destructively integrates the time code within the video stream so that no part of the image is covered by the time code data. The IRIG-B time code is stamped on each individual frame and can be retrieved during playback using Sekai's ADVSR Video Player (software provided with unit).

## ADVSR Applications

- Flight test applications
- UAVs
- Police Helicopters
- Law Enforcement Agencies
- Broadcast applications
- All terrain vehicles
- Aerial Scientific Research Applications



### General

Recording Media	Compact Flash (CF)
Video format	NTSC and PAL
Analog Resolution	550TVL (at 5:1 compression)
Power Requirement	28Vdc, Mil-Std-704D
Power Consumption	<5W
Dimensions	2.6"H X 5.84"W X 5.27"D
Weight	2.9 lbs (1315g)
Connectors	MIL-C-38999 Series III



CF card (actual size)  
(Not included)

### IRIG-B

Connectors	BNC
Input Impedance	25K ohm

### Control Interfaces

Digital Serial	RS-232 (optional -422)
Commands	All typical VCR modes
Status	All typical VCR status
Discrete	Switch closures
Commands	Basic operation modes
Status	Basic operation status

### Video

Signal Standards	RS-170A, NTSC CCIR, PAL
S-Video Input	Y: 1.0Vp-p, C: 0.3Vp-p
S-Video Output	Y: 1.0Vp-p, C: 0.3Vp-p
Composite Video Input	1.0Vp-p
Composite Video Output	1.0Vp-p

### Video Encoding

Recording Format	Digital 4:2:2 YCrCb
Digital Color Space	YUV
Sampling	13.5MHz
Pixel Resolution	720 X 486 pixels (525/60) 720 X 576 pixels (625/50)
S/N Ratio	50 dB
Bandwidth	7MHz (-3dB)
Compression Method	Motion JPEG
Compression ratio	1:4 to 1:20 variable preset

### Audio

Channels	2 in, 2 out
Analog Input	1.0 Vrms, nominal
Analog Output	1.0 Vrms
Input Impedance	35K Ohms
Output Impedance	10K Ohms
Resolution	16 bits
Sampling Rate	48KHz
Dynamic Range	90dB

### Recording Media

Type	Compact Flash (CF)
Supported Media	Multi-word DMA mode 2
Recommended Media	SanDisk Ultra-II
Maximum Compact Flash	2 chips
Maximum Data Rate	16.6 MB/sec

### Environmental Specifications

High Temperature	MIL-STD810E, Method 501.3 Procedure I: +80°C (Storage)* Procedure II: +55°C (Operational)
Low Temperature	MIL-STD-810E, Method 502.3 Procedure I: -54°C (Storage)* Procedure II: -40°C (Operational)
Acceleration	MIL-STD-810E, Method 513.4 Procedure II, 15G's, all axes
Vibration	MIL-STD-810E, Method 514.4 (Jet Aircraft & Helicopter profiles)
Shock	MIL-STD-810E, Method 516.4 Procedure I & V, 40G's 6-9msec Procedure IV, 122cm* Procedure V, 75G's 6-9msec*
Altitude	MIL-STD-810E, Method 500.3 Procedure II, -15,000* to 60,000ft
Humidity	MIL-STD-810E, Method 507.3 Procedure III*
Salt Fog	MIL-STD-810E, Method 509.3*
Sand and Dust	MIL-STD-810E, Method 510.3* Blowing Dust (para II-1.1.1)
Explosive Atmosphere	MIL-STD-810E, Method 511.3 Procedure I
EMI	MIL-STD-461D / 462D RE-102 CE-102

\*Design Goals

All information subject to change without notice