



SERVICES CULTURE ÉDITIONS
RESSOURCES POUR
L'ÉDUCATION NATIONALE

**Ce document a été numérisé par le CRDP de Bordeaux pour la
Base Nationale des Sujets d'Examens de l'enseignement professionnel.**

Campagne 2012

- Identification plate situated on the 1200W HMI followspot.

WARNING! HMI SPOTLIGHT - OPERATING INSTRUCTIONS.

- Read user's instructions before using this lighting unit.
- High voltage ignition: disconnect from the mains before any servicing.
- U.V. rays : Protect your eyes.
- Bulb and holder hot: wait until the unit is cold, before servicing.
- Service only by qualified personnel.

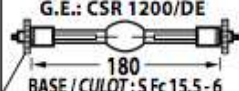
ATTENTION PROJECTEUR HMI - PRECAUTIONS D'UTILISATION.

- Avant de mettre l'appareil en service, veuillez lire les consignes d'utilisation.
- Amorçage haute tension: mise hors tension obligatoire avant toute intervention.
- Emission de rayons U.V.: Protéger votre vue.
- Lampe et support chauds: attendre que l'appareil soit froid avant toute intervention.
- Intervention par technicien qualifié.

1449 "LUCY" / 1149 "SUPER KORRIGAN"

MODELE	VERS.			
ALIM/PSU		P	1200W	IP 20
U_L	100V	I_L	13,8A	t_a
			40°C	t_c
				230°C

OSRAM : HMI 1200
PHILIPS : MSI 1200
G.E.: CSR 1200/DE



BASE / CULOT : S Fc 15,5-6


Made in the EU - France -

ROBERT JULIAT .com


CE

CONNECTIONS.

Manual version :




Motorised version :
FPAC000058



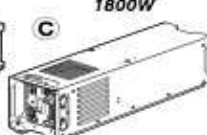
Make sure the fan is working correctly when switching on the unit.

Power supply unit (P.S.U.) :

1200W



1800W



• Use only the listed cables to connect to the mains - Refer to the respective PSU technical file.

Mains voltage.

- Check the conformity of the mains voltage input with the values indicated on the identification plate of the PSU (mains voltage & lamp power).

Lighting unit / Power supply connection.




- Connect the lighting unit's power cable (B) by passing it inside the yoke.
- Leave a little slack and then block the cable (B) into the lock (d).
- Place the lamp into position - refer to section A - 7.
- Connect the cable (2) to the mains.

DESCRIPTION : 1200W

(A) 1200W Hot restrike followspot.

(B) Lighting unit's power cable.
Cable 18G 1,5mm², length 3m equipped with 16 x 16A male HARTING connector. Detachable on the motorised version.

Annexe G : vidéoprojecteur BARCO

		XLM HD30	FLM R22-	FLM HD2C
				
Display	Projector type	HD 3-chip DLP digital projector	5XGA+ 3-chip DLP digital projector	HD 3-chip DLP digital projector
	Technology	1.2" DMD™ x3	0.95" DMD™ x3	0.95" DMD™ x3
	Resolution (pixels)	2,048 x 1,080	1,400 x 1,050	1,920 x 1,080
	Brightness - center lumens - ANSI lumens	32,000 30,000	24,000 21,000	20,000 19,000
	Contrast ratio (normal) Brightness uniformity	2,000 - 2,800:1 (full field) 80%	1,700 - 2,200:1 (full field) 90%	2,100 - 2,700:1 (full field) 90%
	Aspect ratio	16/5	4/3	16/9
	Edge blending/warping	horizontal and vertical edge blending	horizontal and vertical edge blending	horizontal and vertical edge blending
Optical & Lamp	Lenses range	1:1 ; 1.45-1.8:1 ; 1.8-2.4:1 2.2-3.0:1 ; 2.8-5.5:1 ; 5.5-8.5:1	0.73:1 ; 1.2:1 ; 1.25 -1.6:1 ; 1.5-2.0:1 ; 2.0-2.8:1 ; 2.8-4.5:1 ; 4.5-7.5:1 ; 7.5-11.2:1****	0.73:1 ; 1.2:1 ; 1.25 -1.5:1 1.5-2.0:1 ; 2.0-2.8:1 ; 2.8-4.5:1 ; 4.5-7.5:1 ; 7.5-11.2:1****
	Optical lens shift:	Vert -10%+110%; Hor +/-50% on zoom lenses	Vert -10%+110%; Hor +/-50% on zoom lenses	Vert -10%+110%; Hor +/-30% on zoom lenses
	Color correction	P7	P7	P7
	Lamps	6.3 kW Xenon	3 kW Xenon	3 kW Xenon
	Lamp life (typical/maximum)	1,000 Hrs	1,000 Hrs	1,000 Hrs
Features	Sealed DLP core	Standard	Standard	Standard
	Optical dewar	Standard	Standard	Standard
	Advanced Picture in Picture	Four sources simultaneously	Two sources simultaneously	Two sources simultaneously
	Orientation	table/ceiling/side (portrait)*/vertical	table/ceiling/side (portrait)*/vertical	table/ceiling/side (portrait)*/vertical
	Others	Can be controlled by DMX512 console (optional), warping, 3D optional	Can be controlled by DMX512 console (optional), warping, 3D optional	Can be controlled by DMX512 console (optional), warping, 3D optional
Connectivity	Standard inputs	DVI; SDI/HDSDI RGB SDI; HDSDI; DVI	DVI (HDCP); SDI/HDSDI 1x 5-BNC (RGBHV, RGBS/RGSB) Composite video; S-Video; VGA	DVI (HDCP); SDI/HDSDI 1x 5-BNC (RGBHV, RGBS/RGSB) Composite video; S-Video
	Optional inputs	RSR 2x SDI/HDSDI; DVI	DVI (HDCP); SDI/HDSDI 5-BNC RGBHV (RGBS/RGSB, YUV C5/S0Y, Composite video, S-Video)	DVI (HDCP); SDI/HDSDI 5-BNC RGBHV (RGBS/RGSB, YUV C5/S0Y, Composite video, S-Video)
	Input resolution	From NISL up to 2,148 x 1,080	From NISL up to JXGA (1,600 x 1,200) incl. HD (1,920 x 1,080)	From NISL up to UXGA (1,600 x 1,200) incl. HD (1,920 x 1,080)
	Software tools Control	Projection Toolset XLR wired + IR; RS232/422	Projection Toolset: XLR wired + IR; RS232/422	Projection Toolset XLR wired + IR; RS232/422
	Network	2 x 10/100 Base-T, RJ-45 connection	10/100 Base-T, RJ-45 connection	10/100 Base-T, RJ-45 connection
General	Power consumption	8,000 W	3,500 W	3,700 W
	Operating noise level (typ)	67 dB (A)	56 dB (A)	58 dB(A)
	Dimensions (W x L x H)	810 x 1,563 x 631 mm	707 x 1,025 x 548 mm	707 x 1,025 x 548 mm
	Weight	180 kg	99 kg	99 kg
	Certification	Compliant with UL1950 and EN60950 complies with FCC rules & regulations, part 15 Class A and CE EN55022 Class A, RoHS	Compliant with UL1950 and EN60950 complies with FCC rules & regulations, part 15 Class A and CE EN55022 Class A, RoHS	Compliant with UL1950 and EN60950 complies with FCC rules & regulations, part 15 Class A and CE EN55022 Class A, RoHS
	Warranty	2 years**	2 years**	2 years**

Mac Pro : Caractéristiques techniques

Dimensions et poids

- Hauteur : 51,1 cm
- Largeur : 20,6 cm
- Profondeur : 47,5 cm
- Poids : 8-Core : 18,7 kg¹
- Quad-Core : 18,1 kg



Processeurs

- **8-Core (configuration standard)**
 - Deux processeurs Quad-Core Intel Xeon série E5620 "Westmere" à 2,4 GHz
 - 12 Mo de cache N3 entièrement partagé par processeur
 - Performances dynamiques Turbo Boost jusqu'à 2,66 GHz
 - Technologie Hyper-Threading fournissant jusqu'à 16 cœurs virtuels
- **Quad-Core (configuration standard)**
 - Un processeur Quad-Core Intel Xeon série W3530 "Nehalem" à 2,8 GHz
 - 8 Mo de cache N3 entièrement partagé par processeur
 - Performances dynamiques Turbo Boost jusqu'à 3,06 GHz
 - Technologie Hyper-Threading fournissant jusqu'à 8 cœurs virtuels
- **Microarchitecture Intel avancée**
 - Contrôleur mémoire intégré
 - Moteur SIMD SSE4 128 bits
 - Chemins et registres de données 64 bits
 - Optimisée pour les économies d'énergie



Connecteurs et audio

- Quatre ports FireWire 800 (deux en façade, deux à l'arrière)
- Cinq ports USB 2.0 (deux en façade, trois à l'arrière)
- Deux ports USB 2.0 sur le clavier fourni
- Prise casque mini-jack en façade et haut-parleur interne
- Ports Toslink d'entrée/sortie audio numérique optique
- Prises mini-jack d'entrée/sortie ligne stéréo analogique
- Audio multicanal via le port Mini DisplayPort

Gestion graphique et affichage

- Connecteur graphique PCI Express 2.0 double largeur, 16 voies avec l'une des cartes graphiques suivantes installée :
 - o ATI Radeon HD 5770 avec 1 Go de mémoire GDDR5, PCI Express 2.0, deux ports Mini DisplayPort et un port DVI double liaison
 - o ATI Radeon HD 5870 avec 1 Go de mémoire GDDR5, PCI Express 2.0, deux ports Mini DisplayPort et un port DVI double liaison
- Possibilité d'installer deux cartes graphiques ATI Radeon HD 5770
- Prise en charge de six moniteurs²
- Prise en charge des résolutions numériques jusqu'à 2 560 x 1 600 pixels
- Prise en charge des résolutions analogiques jusqu'à 2 048 x 1 536 pixels
- Adaptateurs vidéo disponibles pour :
 - o Sortie DVI supplémentaire à l'aide d'un adaptateur Mini DisplayPort vers DVI (en option)
 - o Sortie DVI double liaison supplémentaire à l'aide d'un adaptateur Mini DisplayPort vers DVI double liaison (en option)
 - o Sortie VGA à l'aide d'un adaptateur Mini DisplayPort vers VGA ou d'un adaptateur DVI vers VGA (en option)



Mémoire

- **Systèmes biprocesseurs**
 - o Système 2,4 GHz : SDRAM DDR3 ECC à 1 066 MHz
 - o Systèmes 2,66 GHz et 2,93 GHz : SDRAM DDR3 ECC à 1 333 MHz
 - o Huit emplacements mémoire (quatre par processeur) pour un maximum de 32 Go de mémoire principale avec des modules DIMM de 1 Go, 2 Go ou 4 Go
- **Systèmes monoprocesseurs**
 - o Systèmes 2,8 GHz et 3,2 GHz : SDRAM DDR3 ECC à 1 066 MHz
 - o Système 3,33 GHz : SDRAM DDR3 ECC à 1 333 MHz
 - o Quatre emplacements mémoire pour un maximum de 16 Go de mémoire principale avec des modules DIMM de 1 Go, 2 Go ou 4 Go

Communication

- Connectivité Wi-Fi AirPort Extreme 802.11n intégrée ; compatible avec la norme IEEE 802.11a/b/g
- Technologie sans fil Bluetooth 2.1 + EDR (Enhanced Data Rate)
- Deux interfaces Ethernet 10/100/1000BASE-T (RJ-45) indépendantes avec prise en charge des trames étendues



Stockage

- Quatre baies de disque dur sans câble à connexion directe de 3,5 pouces avec canaux Serial ATA 3 Gbit/s indépendants intégrés ; quatre porte-disques internes inclus
- Jusqu'à 8 To de stockage interne⁶ dans les baies 1 à 4 grâce aux configurations de disques durs ou de disques SSD suivantes :
 - o Serial ATA 1 To ou 2 To (3 Gbit/s), 7 200 tr/min, 32 Mo de cache
 - o Serial ATA SSD 512 Go (3 Gbit/s)
- Carte RAID pour Mac Pro en option avec 512 Mo de mémoire cache et une batterie de secours de 72 heures pour la mémoire cache⁷
- SuperDrive 18x avec prise en charge des supports double couche (DVD±RDL/DVD±RW/CD-RW)
 - o Vitesse d'écriture sur DVD+R et DVD-R : jusqu'à 18x
 - o Vitesse d'écriture sur DVD+R et DVD-R double couche : jusqu'à 8x
 - o Vitesse d'écriture sur DVD+RW : jusqu'à 8x
 - o Vitesse d'écriture sur DVD-RW : jusqu'à 6x
 - o Vitesse de lecture des DVD : jusqu'à 18x
 - o Vitesse d'écriture sur CD-R et CD-RW : jusqu'à 32x
 - o Vitesse de lecture des CD : jusqu'à 32x
- Une baie de lecteur optique libre pour l'ajout d'un deuxième SuperDrive en option



Quelques options de configuration à la demande :

- ATI Radeon HD 5770 avec 1 Go de mémoire GDDR5, deux sorties Mini DisplayPort et une sortie vidéo DVI double liaison
- Serial ATA de 1 To (3 Gbit/s), 7 200 tr/min
- Connectivité Wi-Fi AirPort Extreme 802.11n et Bluetooth 2.1 + EDR (Enhanced Data Rate) intégrée
- Carte Fibre Channel 4 Gbit double canal

Contribution Applications: The Adtec mediaHUB-HD-422 supports a comprehensive array of video encoding profiles with BISS encryption. A highly robust single channel per carrier (SCPC) DVB compliant MPEG 2 Transport Stream is output via ASI and GIGE concurrently.

For multiplexing many services or channels per carrier (MCPC), Adtec's DTA-3050 is the perfect companion product. The DTA provides 10 ASI inputs for flexibility and high performance throughput with exceptionally low jitter. It remaps PIDs, adds and drops services, enables DVB-CSA encryption, builds DVB Tables, and adds the ability to operate encoders and DTA's fully redundant.

Distribution Applications: Distribute the highest quality MPEG 2 and MPEG 4 AVC Digital Television sound and pictures 24 x 7 x 365 with the mediaHUB-HD 422. The mediaHUB-HD 422 supports ATSC, DVB, MPEG, and IPTV platforms delivering a pristine MPEG 2 transport stream including broadcast quality Video, Audio with excellent lip sync, Closed Captions, Teletext, and static ATSC and DVB service information. Add the DTA-3050 as for multiplexing and fully dynamic ATSC and DVB service information applications.

Studio Applications: Frame accurately capture video and four pairs of stereo audio with the mediaHUB-HD 422. The standard Sony 9-PIN interface operates in Controller and Recorder mode allowing it to control a tape device or be controlled by a non-linear editor (NLE). Encode in real-time with the Recorder mode directly from an NLE time line directly to file. Create High and Standard Definition Cable Labs compliant MPEG 2 transport streams with the mediaHUB-HD 422, ideal for VOD and DPI content creation.

mediaHUB-HD 422
Multi-CODEC High Definition Encoder
MPEG 2 & MPEG 4 AVC



Winner of STAR Award for Superior Technology at NAB 2009

Offering the highest-quality and most flexible encoding features of Adtec's seasoned encoder line-up, the mediaHUB-HD 422 is a High and Standard Definition multi-CODEC work-horse. With the ability to encode any combination of HD or SD, MPEG 2 or MPEG 4 AVC with 4:2:0 or 4:2:2 color space, the mediaHUB-HD 422 supports past, present and future requirements.

With support for 40 encoding profiles and auto-detection capability for resolution and frame rate, this product can hit the ground running regardless of your application...

Contribution, Distribution or Studio Encoding!

Its rugged design and standard LCD front panel for status and configuration makes it ideal for mobile contribution applications while the on-board web-based control application offers ease of use for distribution and studio encoding.

This all-in-one rack mountable unit is designed with standards compliance in mind and can easily be integrated with other leading broadcast gear.

Feature highlights

- Video:** The mediaHUB-HD-422 supports a wide range of encoding profiles via SDI and composite.
 - MPEG 2**
MP 4:2:0, 4:2:2, 4:4:4, 4:4:4, 4:4:4, 4:4:4
 - MPEG 4 AVC**
MP 4:2:0, MP 4:2:2, MP 4:4:4, MP 4:4:4
- SDI Video:** Video per SMPTE 292M for High Definition and SMPTE 259M for Standard Definition.
- Audio:** Audio Encoding available via AES, Analog and SDI.
- Four AES3 digital audio inputs:**
 - Inputs 1 - 4 support MPEG 1 Layer 2 encoding.
 - Inputs 1 - 2 support Dolby Digital encoding and passthrough from external Dolby E/5.1.
- SDI Audio:** 18 channels
Audio per SMPTE 299M for High Definition and SMPTE 272M for Standard Definition.
- Analog Audio:** 2 Stereo pairs
- Transport:** MPEG 2 Transport Stream via ASI and GIGE supporting UDP / RTP / SMPTE 2022.
- SDI Plug and Encode:** Automatic SDI detector ; HD and SD ; of standards and frame rate.
- Configuration and Monitoring:** Rapidly and accurately configure and monitor the mediaHUB-HD 422 via the front panel or on-board web application and SNMP.
- Highest quality HD and SD:** When it comes to the best on-air look, med aiUB-HD 422 delivers with excellent quality High and Standard Definition video encoding using MPEG 2 and MPEG 4 AVC.
- Decode While Encode (DWE):** Built-in conference encoder nearly eliminates the need for external local encoders.
 - Decodes and
 - Encodes
 - Not supported



ADTEC
DIGITAL


Standard Definition Video Frame Rates
 NTSC 29.97i, PAL 25i

Standard Definition Video Resolutions
 720x480, 640x480, 352x480 NTSC, 720x576 PAL
 (Down scaled video resolutions only supported when encoding MPEG 2)

High Definition Video Frame Rates
 720P24, 720P50, 720P59.94, 720P60, 1080i50, 1080i59.94, 1080i60

High Definition Video Resolutions
 1920x1080, 1440 x 1080, 1280x720

Encoder Video Profiles and Levels
 MPEG 2
 • MP@ML, 422P@ML, MP@HL, 422P@HL
 • (Supports 420 and 422* for all resolutions)

MPEG 2 Data rates:
 • Standard Definition 420 - 1 to 15Mbs
 • Standard Definition 422 - 1 to 50Mbs
 • High Definition 420 / 422 - 6 to 80Mbs

 • MPEG 4 Part 10 Advanced Video Coding (AVC) - Commonly referred to as
 MPEG 4 AVC MP@L3.0, MP@L3.1, MP@L3.2, HP@L4.0, HP@L4.1
 • (Supports 420 and 422* for all resolutions)

MPEG 4 Data rates:
 • Standard Definition 420 / 422 - 700 to 20Mbs
 • High Definition 420 / 422 - 3 to 80Mbs

Group of Pictures
 • MPEG 2: 1 - 30 (I, IP, IBB, IBBP)
 • MPEG4 AVC: 1-60 (I, IP, IBB, IBBP)

Interlace Coding
 MPEG 2
 • Field

 MPEG 4
 • Field
 • Frame
 • Frame with MBAFF
 • Frame without MBAFF
 • PAFHH.264

Motion Estimation and Precision
Search Range
 • Horizontal: -169.75 to +155.75 pixel
 • Vertical: -87.5 to + 115.75 pixel

Pixel Precision for Compensation
 • MPEG 4 AVC: 1/2, 1/4 Pixel
 • MPEG2: 1/2 Pixel

Block Size for Compensation
 • MPEG 4 AVC: 16 X 16, 16 X 8, 8 X 16, 8 X 8
 • MPEG2: 16 X 16, 16 X 8 MC

Encoder Latency (MPEG 2 and MPEG 4 AVC)
 • Long (~ 1 second) Distribution Applications
 • Normal (~ 400 ms) Contribution Applications
 • Low (~ 300 ms) Low Latency Contribution
 • Very Low (~ 120 ms) Lowest Latency Applications
 (Most IRDs can not handle Very Low latency even with only MPEG 1 Layer 2 audio)

SD/HD Signal Generation
 SMPTE Bars (requires valid HD video source for clock on 7712 IO sled)

OSD
 • DVB Information
 - Service Name
 - Service Provider
 - Network Information (Satellite, Terrestrial, Cable)
 • ATSC Information
 - Name
 - Long Name

Audio Tones

- Selectable Frequency from 440 hz to 6Khz
- Selectable mute for L/R individually for each of the four (4) pairs

Encoder Video Inputs
Standard Definition Video

- Analog NTSC and PAL Composite (BNC)
- SDI (SMPTE 259M) with embedded audio (SMPTE 272M)
 - Auto detect SD 270Mbps for SD
 - D1 Encoding Only - no internal up-conversion.

Standard Definition Video Pre-Processing

- Encoder Filters (SD Only)
- Temporal & Spatial (Median)
- Time Base Corrector (TBC) on SDI inputs for SD only
- Chroma filtering and scaling for NTSC/PAL

High Definition Video

- SDI (SMPTE 292M) with embedded audio (SMPTE 299M) with auto detect for HD 1.485 Gbs.

Encoder Audio Profiles

- Dolby Digital 2.0 (AC3) Two (2) stereo encoders included
- MPEG1 Layer 2 Four (4) stereo encoders included
- Dolby E, Dolby 5.1 and Dolby Digital 2.0 (AC3) passthrough on AES3 1, 2

Audio Inputs

- Analog audio input on DB15 male.
 - Two stereo pairs (includes 1/2 meter DB15 to 4 XLR male breakout cable)
- AES3-1 digital audio input uncompressed LPCM or compressed bit stream passthrough from external Dolby E, 5.1, 2.0 (AC3) Linear Acoustic Stream Stacker via BNC - 75 Ohm input.
- AES3-2 digital audio input uncompressed LPCM or compressed bit stream passthrough from external Dolby E, 5.1, 2.0 (AC3) Linear Acoustic Stream Stacker via BNC - 75 Ohm input.
- AES3-3 digital audio input uncompressed LPCM in - MPEG 1 Layer 2 encoding
- AES3-4 digital audio input uncompressed LPCM in - MPEG 1 Layer 2 encoding only.
- SDI embedded per SMPTE 272M for SD and SMPTE 299M for HD with support for up to 8 pairs based on group selection.
 - User selectable concurrency for Groups 1 and 2 or 3 and 4 (8 channels concurrently).
 - SDI Matrix (shuffle) allows selection of any pair within two groups of embedded audio to be routed to the audio encoder or passthrough.
- User-defined analog and digital Audio level control with sample rate conversion on all four AES3, analog and embedded SDI audio inputs.

Audio CODEC Profiles

- Dolby Digital 2.0 (AC3) Two (2) stereo encoders included
- MPEG1 Layer 2 Four (4) stereo encoders included
 - Support for Phase Alignment standard
- Intelligent Dolby E, Dolby 5.1, Dolby Digital 2.0 (AC3), LPCM (SMPTE 302M), Linear Acoustic Stream Stacker passthrough on AES3 1, 2 and SDI

Transport Outputs

- ISO13818-1 MPEG 2 Transport Stream per EN 50083-9:1997 (188 byte only)
- Three (3) mirrored outputs via BNC 75 Ohm
- Maximum Transport Rate 100 Mbs

MPEG 2 Transport over IP (TSoIP)

- Configure up to four (4) concurrent TSoIP routes
 - Unicast and multicast
 - UDP and RTP
 - SMPTE 2022 (COP3 FEC) per route
- Maximum Transport Rate via GIGE 100 Mbs

MPEG 2 Transport to local storage or NAS

- (NAS optional, local storage limited to maximum transport rate of 40 Mbs) SI, Multiple TSoIP and storage operate concurrently

Video User Data Inputs

- Waveform (Composite or SD SDI)
- Closed Captions per CEA-608-C (2005)
- Closed Captions per DVS-157
- Wide Screen Signaling (WSS) per ETSI EN300294 V1.4.1 (2003-04)
- Teletext per ETSI EN 300 472 V1.3.1 (2003-05)
- AMOL

VANC per SMPTE 291M (Native via SD/HD SDI)

- Closed Captions per CEA-708 (SMPTE 291M)
- OP47
- SMPTE 2031
 - VITC
 - EBU Teletext/Subtitles