



Medical Limited

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MAS SD RECORDING SYSTEM Installation & Operation Instructions



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Registered in England No 4566558



MAS Medical Ltd - Recording Systems

MAS Medical Ltd are principle suppliers of:
Fluoroscopy Video Recording Systems in Medicine

We Technically Advise and Contractually Support:
Hardware, Operation, Video Control and Video System Applications

Technical Support is Conveniently Available:
Telephone / Fax / Email / On-Site Service
OEM Trained, Service Engineer Attendance

High Quality Recordings allow High Quality replay with
PC or Laptop

Recording Media is inexpensive and compact

Unique features of the System are:
Auto control of recording linked X-Ray System
Annotation of patient details to the Recording

System Applications Include:
Speech Therapy, Barium Swallow
Paediatric Urography Study
Cardiac Study
Ultrasound

Principle components of the MAS SD Recording System:
Sony HVO-550MD Medical Grade Recorder
Sony LMD-2110MD Medical Grade Monitor
VCS-2 Lite Video Control System

Options:
Sound System
Opto-Isolation between System and X-Ray



Installation

The Sony HVO-550MD and Video Control System (VCS-2 Lite) are supplied with comprehensive interface cabling. Care should be taken when removing the equipment from the packaging.

Installation should only be carried out by a competent person and will normally require an Appropriate X-Ray Engineer for connection of the Video Signal from X-Ray or Ultrasound.

System Connections

Mains Power:

13 Amp Socket Outlets

Video In:

X-Ray 625 Line 50Hz Video Signal
(Video Input can be Opto-Isolated)

Video Out:

Monitor Line Video Signal

Audio In:

Pre-Amp Line Audio Signal

Audio Out:

Monitor Line Audio Signal

Keyboard:

Recorder USB 2

Control Signal – VCS-2 Lite / Recorder Interface:

VCS-2 Lite Control Cable interfaces Recorder Remote 1

Control Signal - VCS-2 Lite / X-Ray Interface:

VCS-2 Lite Video Control System requires a Fluoroscopic and a Radiographic Signal from the X-Ray equipment to control Recorder Functions

VCS-2 Lite Active or Passive X-Ray Interface Cable

Active Interface connection requires high level +24v signal from X-Ray equipment

Passive Interface connection requires isolated, normally open, relay or switch contact from X-Ray equipment

BS-AA25 & BS-AP25 Cables are pre-wired to comply with IEC 601 part 1



Connection of X-Ray Interface

Either an active or passive connection is made between X-Ray unit and the VCS-2 Lite Video Control System.

Please Note

**Active / Passive Connection Cables are Incompatible
Damage to VCS-2 Lite results through improper use**

DAMAGE INVALIDATES WARRANTY

Active Interface (BS-AA25)

A high level +24v signal from the X-Ray triggers both Fluoroscopic and Radiographic acquisition 'Start' An Opto-isolator provides Electrical Isolation between X-Ray and VCS-2 Lite

Cable BS-AA25 provides an active interface connection

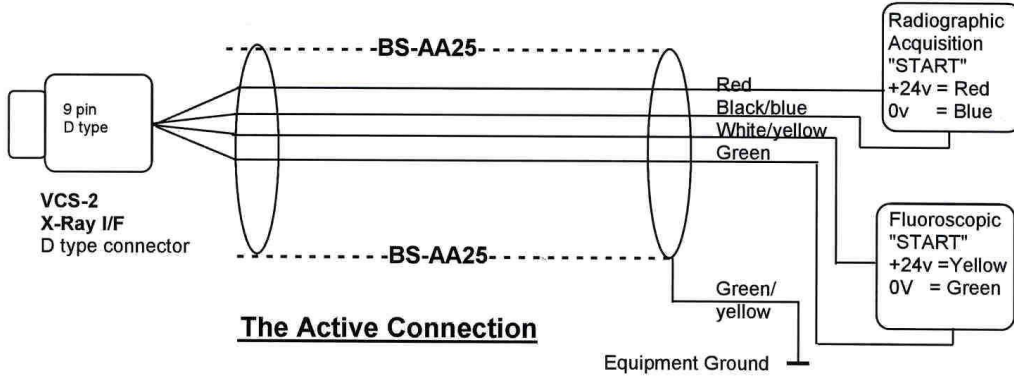
Passive Interface (BS-AP25)

X-Ray Systems outwith a high level +24v Fluoroscopic and Radiographic acquisition 'Start' Signal, a passive interface is utilised

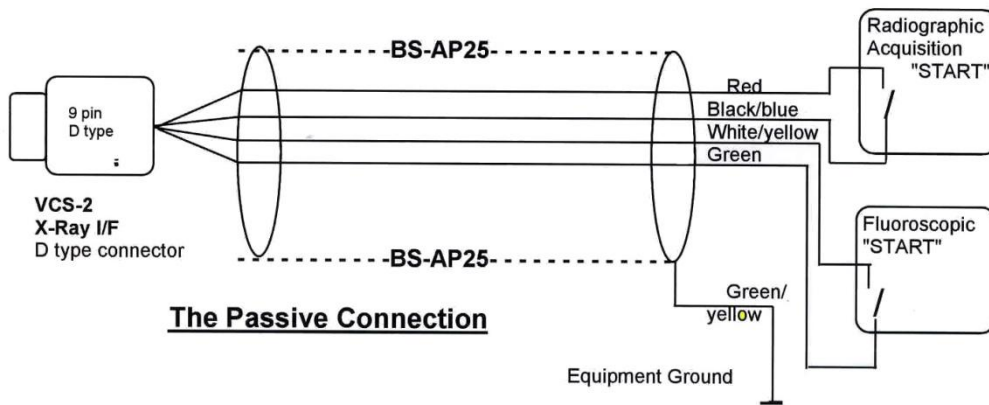
Isolated 'NO' (Normally Open) Relay or Switch Contact triggers both Fluoroscopic and Radiographic Acquisition 'Start'

Cable BS-AP25 provides a passive interface connection

BS-AA 25 Active Interface Cable / 25Metre



BS-AP25 Passive Interface Cable / 25 Metre





Operation / Recording

Please Note:

Sony HVO-550MD is a Multifunctional / Multimedia Recorder. The following is a basic guide to recording Video / Audio Events, and intended as an introduction to the M.A.S. Medical SD Recording System
Reference to the HVO-550MD Manual details comprehensive Recorder options.

Quick Start Guide:

Connect mains power and confirm:

Sony Recorder is on

To confirm Format of Video Input Signal, press and hold 'Enter' key, 5 seconds.

Repeat for other Video Input Signal options

VCS-2 Lite is on

VCS-2 Lite performs a 5 second System Test when power is applied

To disable the audible alert test, initially deselect Fluoro, Acq and Manual Buttons

Sony Monitor is on

Phono Pre Amp on (Sound Systems)

Select VCS-2 Lite 'Fluoro' or 'Acq' (Default to 'Fluoro')

X-Ray Image is displayed

Input Patient Information:

Select HVO-550MD *Menu*

Select *Recording Preparation*

Input Data either by the 'On Screen' or 'Attached' Keyboard

Select *Done*

Recording Test:

Activation from X-Ray: Recording Start

Deactivation from X-Ray: Recording Pause

Select HVO-550MD *Stop*: Recording End



Save Recording to Multimedia (DVD, Optical Flash Disk):

Select *Menu*

Navigate to *Recording List*

Enter

Navigate to *Play*

Enter

Navigate to *Save To*

Check Recordings for Save

Navigate to *Execute*

Enter

Select Relevant Recording Media

Insert Relevant Media

Select *Execute*

Select *Close*

Playback from HDD:

Navigate to *Recording List*

Enter

Highlight recording to *Playback*

Select *Play*

Playback from Multimedia:

Recordings are replayed from PC or Laptop

Note - HVO-550MD does not have the functionality to replay from Multimedia



Specification

Video Recorder

Model:	Sony HVO-550MD
Recording Media:	DVD-R USB Flash Drive
Recording File Save Format:	MP4

Video Monitor

Model:	Sony LMD-2110MD
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Video Control System

Model:	VCS-2 Lite
X-Ray Interface:	Fluoroscopy / Acquisition <i>Either:</i> +24V Active Interface <i>Or:</i> NO Contact Passive Interface

Power Supplies

230 V AC / 50 Hz

Mains Plug Fuse Rating

Recorder	3 A
Monitor	3 A
VCS-2 Lite	3 A
Opto-Isolator	5 A



Frequently Asked Questions

Sound Recording?

Sound can be Recorded with a Microphone and Pre-amp
Sound Systems are available from MAS Medical Ltd

Delete Recordings?

Recordings can be deleted from the Internal HDD

Edit Recordings?

Use of Video Editing Software enables Edit of Recording

Power Point Presentation?

Use of Power Point Software, enables addition of Video Clips to Presentation

Recording Media?

The SONY HVO-550MD records to DVD-R and USB Flash Drive
We recommend that good quality media from a reputable manufacturer are used.
Appropriate media can be supplied by MAS Medical Ltd

Video Play Back?

HVO-550MD (From Internal HDD Only)
PC with compatible Play Back Software

Dubbing?

Recordings are auto saved to a Hard Disk within the Recorder
HVO-550MD will save Video Files to Multimedia

**For further information, please contact MAS Medical Ltd
01484 721906**