manual

SwimPro IQ Recorder

SWIMPRO

performanceswimmingcameras

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1 Before you use SwimPro

PLEASE READ THE FOLLOWING BEFORE YOU USE YOUR SWIMPRO SYSTEM

✘ **DO NOT** tamper with your SwimPro Cameras. All SwimPro Cameras are pressure and depth tested and marine grade sealed. The cameras **will not** leak unless this seal is broken. Cameras that are tampered with are **NOT** covered by SwimPro warranty

✘ **DO NOT** leave your cameras underwater for extended periods of time (e.g. 12+ hours)

✘ **DO NOT** store your IQ recorder in a humid environment. **DO NOT** set up your recorder close to the pool side (water splashes could damage the internal components of the recorder)

✘ **DO NOT** overstretch, pull or over-twist the camera cables. **DO NOT** throw, drop, hit your cameras.

✘ **DO NOT** use 3rd party equipment with your SwimPro system. SwimPro systems are specifically designed for SwimPro equipment. Using other equipment can damage your system

If you do engage in any of the above activities your SwimPro warranty is immediately void.

SwimPro equipment is built and tested to the highest of quality. To ensure longevity of your system, we encourage you to do the following:

✔ **ALWAYS** wash cameras and poles thoroughly after use with fresh water and store safely

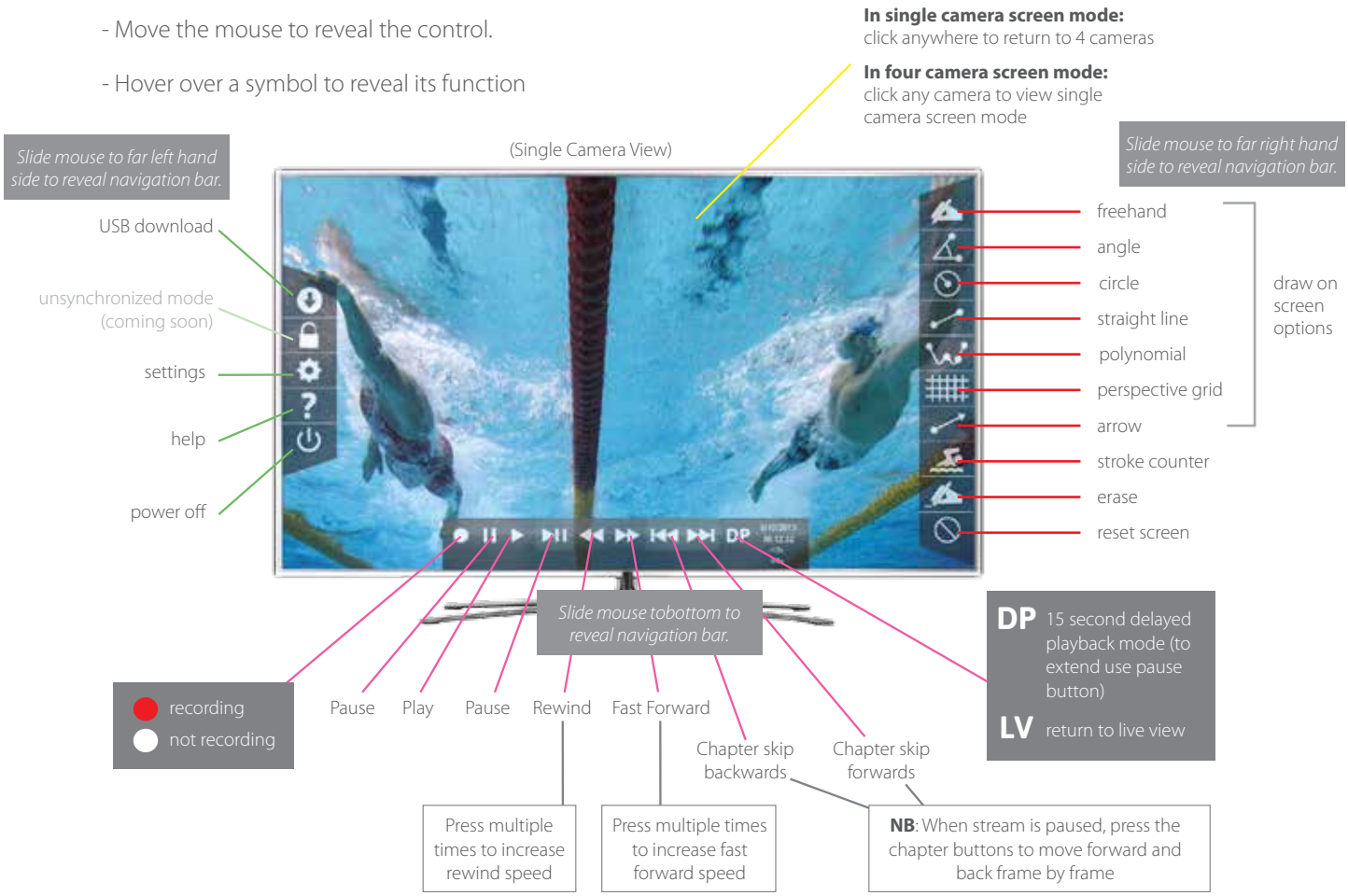
✔ **ALWAYS** store IQ recorder in a dry environment

✔ **ALWAYS** follow the instructions in this manual when using your equipment

CAUTION : Our recorder and associated equipment operates at various voltages and we strongly advise the use of an approved 'Earth Leakage Device'.

2 System screen guide

- Once the machine is powered up, a 4 camera screen will appear.
- Move the mouse to reveal the control.
- Hover over a symbol to reveal its function



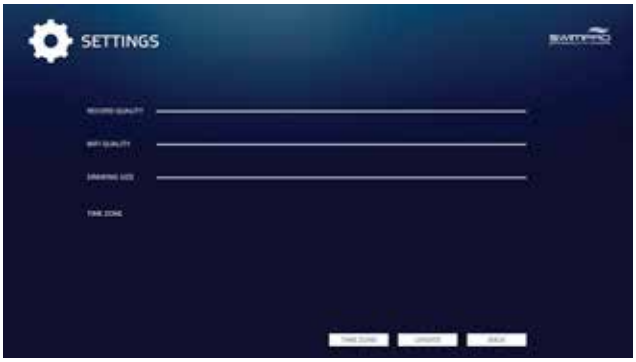
Settings

Record Quality – enhances quality of recording

WIFI Quality – enhances the quality of the image sent to iPad app

Drawing Size – sets the radius of the drawing tool

Time zone - configured to your timezone



USB download

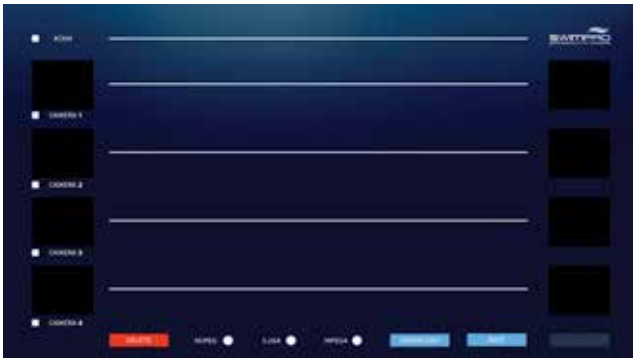
1) select box / boxes to choose cameras

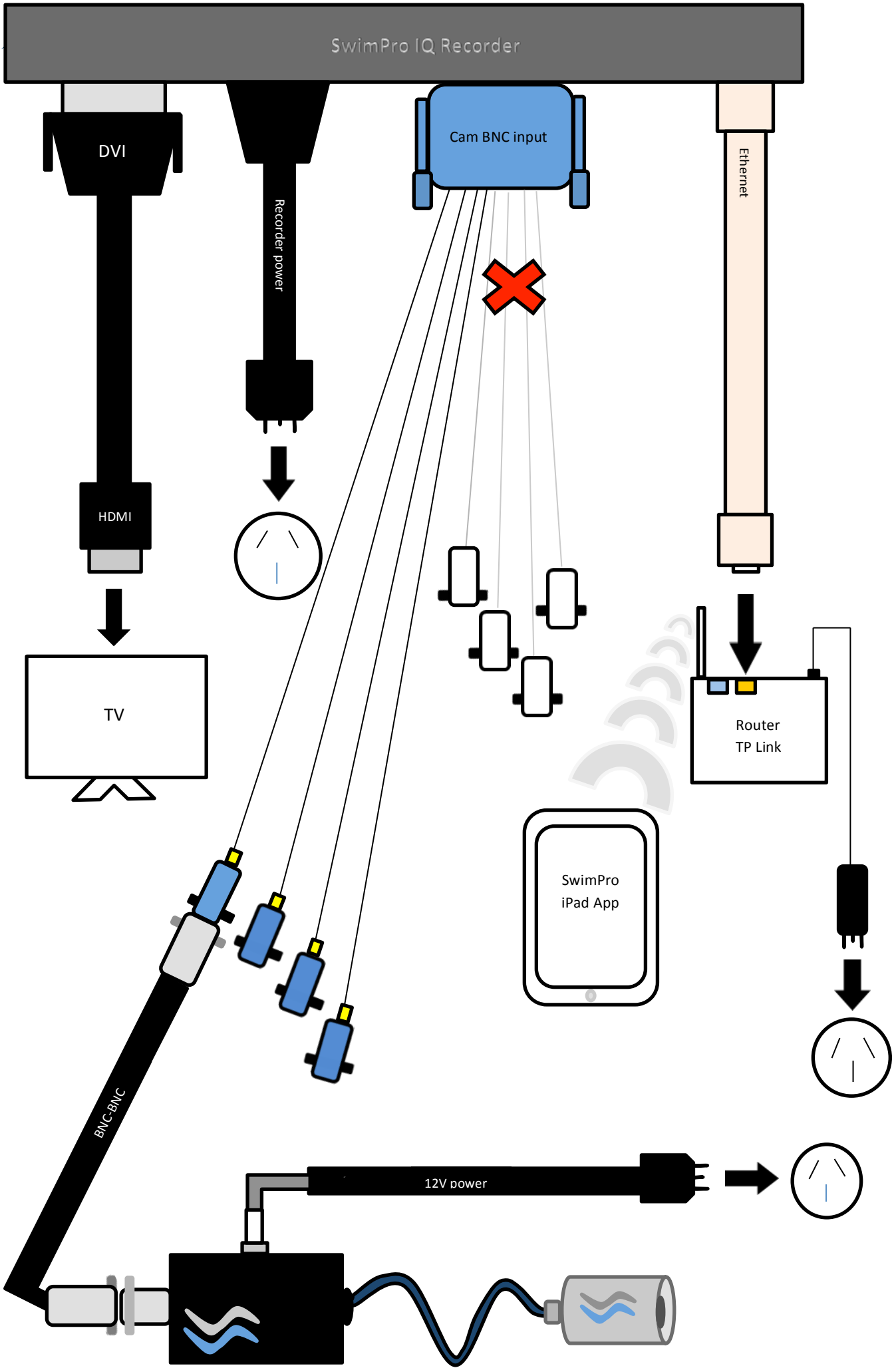
2) move sliders to select start and end of recording required

3) select format

4) press download to download

NB: Delete button deletes **all recordings**

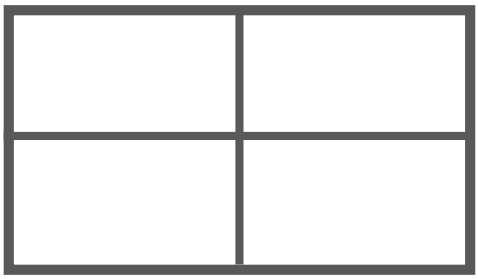



SwimPro IQ Recorder
DVI
Recorder power
Cam BNC input
Ethernet
HDMI
TV
Router
TP Link
SwimPro
iPad App
BNC-BNC
12V power

4 Getting Started

- plug in your IQ Recorder cords (as per the connection diagram on page 5)
- switch on power at wall socket
- turn on power at the front of the recorder
- switch TV to correct HDMI (some TVs have multiple HDMI inputs, make sure TV is switched to the correct HDMI channel into which the recorder is plugged).
- the IQ Recorder will take a moment to start. While loading you will see a SwimPro logo
- hover the mouse on the home screen to bring up the bottom menu
- hover the mouse on the far left of the home screen to bring up the left menu

The screen:



Home screen - cameras will each appear in a quadrant (split in four).

At bottom right of screen:

9/10/2013	The date – day/month/year
10:12:32	Time zone – hour : min : sec
-12s	Time away from live view
1/4x	Speed of viewing (1x is real time)

Bottom of screen:

Bottom menu (see page 7). Hover the mouse at the bottom of the screen to reveal.

Left of screen:

Left menu (see page 8). Hover the mouse to the far left of screen to reveal.

5 Bottom menu

	Button	Function
	Record	Records all up to 4 cameras
	Stop recording	Stops recording all cameras
	Pause	Pauses 1– 4 cameras (Use PAUSE to set custom delayed playback time)
	Play	Return to video stream at normal speed
	Slow motion	Click multiple times until you arrive at desired slow motion speed
	Rewind	Click to determine rewind speed: *When not recording in live view, will jump back to the end of the previous recording* *When recording, will rewind from the present view and will continue to record (normal rewind)* *NB: Pressing play will start the footage playback from the point you've rewound to*
	Fast forward	Fast forwards through footage. Once you have reached the end of your recording, you will be back in live view (LV)
	Skip backward	Skips backward to the previous chapter (a chapter is considered an individual recording) *If paused, will take footage backward frame by frame*
	Skip forward	Skips forward to the next chapter (a chapter is considered an individual recording) *If paused, will take footage forward frame by frame*
LV	Live view	Click to return to live view from any mode
DP	Delayed playback	Click to take viewing back 15 seconds To set a manual delayed playback time, press pause button, allow for the amount of delayed playback time to pass (e.g. 35 secs), then press the play button *NB: the time at the side of the menu shows the difference in time from live view (e.g. -35sec)*

6 Left menu

	Function
	USB download - choose which camera/s you wish to download. - click the box next to the camera/s to select for download (will turn grey upon selection) - drag the marker on the left to desired download start position (see preview screen) - drag the marker on the right to desired download end position (see preview screen) - select file type: *: mjpeg* - full quality as per the recorder recording . Saves as a large file size. *: h264* - a good compromise between file size and quality. *: mpeg4* - lower quality. Saves as a smaller file size. - insert a USB device in either the back or front of the recorder - click 'download' - system will load the footage on to the USB device - to exit the screen press 'back' ***Deleting footage:*** this will delete **ALL** recordings - hover mouse to left of home view screen to bring up left menu - click USB download - press delete button- this will delete **ALL** recordings - press ok to confirm
	Unsynchronised mode [coming soon] *Enable independent control of each camera*
	Pencil/Draw - click and hold down to draw - once mouse has released, drawing will stop - click the mouse to produce a new colour (colour choice is random) (In SwimPro iPad App: Finger replaces mouse. When finger is held on the screen to draw, it creates a rainbow effect) ***Delete drawings on screen:*** press the pencil again. (In SwimPro iPad App, shake/rock your iPad in a back-forward motion) *NB: To change the width of the pencil, select settings, move the bar across between values 1 and 20 - recommended pencil size: 6*

6 Left menu continued

Settings

Record quality

-20 to 200 (brackets to the left show the time left on hard drive at that setting)

- the bigger the recording size, the more space it will take up on the hard drive
- recommended default setting: 60

WiFi quality

- 20 to 200
- recommended default setting: 60
- set lower if experiencing lag/skipping in video quality on iPad

Drawing size

- diameter of pencil from size 1 to 20
- recommended default size: 6

Time zone

- current time zone setting

At bottom left of settings screen:

- memory usage (for debugging only)
- IP Address (IP Address to be entered in to SwimPro iPad app)

Buttons at bottom of settings screen:

Timezone

- change to suit by clicking on map (check time zone name listed on settings screen is correct)

Update

- initiates update process. Follow on screen prompts

USB *(sent via email)*

- download to USB
- insert USB
- press update button
- system instantly searches and applies

Internet *(plug internet cord to BLUE port at the back of the router)*

- system searches for available updates
- if an update is found, system will ask whether you wish to use it. Click ok to install - system will reboot
- if an update is not found, a failure message will appear and offer to attempt a USB update

Turn off recorder

- system **MUST** be turned off via this button

7 Download SwimPro iPad app (for iPad only)

- on your iPad, go to the App store
- in search bar, type 'swimpro' and click the magnifying glass to search
- select 'SwimPro' by RJB Engineering Australia Pty Ltd
- download to your iPad

iPad connectivity

- plug ethernet cable to any of the YELLOW ports on the rear of the router
- connect router to power
- connect to SwimPro network on iPad (settings > WiFi > click on 'SwimPro')
- password : underwater
- open SwimPro app
- system takes a moment:
- if connected, app is ready to use
- if not connected, iPad will ask for IP address.
  On recorder, hover at left of home screen to bring up left menu, go to settings.
  Find IP address at bottom left of settings screen (if IP address is blank on recorder check the router is plugged in and ethernet is in YELLOW port) , enter this IP address in to your iPad.

iPad:

- use your finger to draw
- tap on a quadrant to view full screen
- two finger pinch swipe to return to 4 screen quadrant

- shake to delete drawings
  (rock in forward - back motion)
- tap on controls in bottom menu for desired function

8 Troubleshooting/FAQ's:

Nothing is on my screen?

Turn off your IQ Recorder and plug in to a computer monitor, power the IQ recorder back up.

If successful, your TV is the issue.

Leave power on and re-plug system into the TV. This will then set a resolution the recorder didn't know the TV could support

The system is not working on my laptop?

The IQ Recorder is not designed for use with a laptop - use a TV screen or computer monitor only

The app isn't working on my iPad?

Check router is powered up and the ethernet cord is inserted into the YELLOW port

Ensure you are connected to the SwimPro network

Make sure you have download the correct app : 'SwimPro' by RJB Engineering Australia Pty Ltd

See iPad connectivity - page 10

Is there a remote with the system?

No remote is required for the SwimPro IQ recorder. Use a mouse inserted into the USB port (see page 5)

My USB doesn't download footage ?

Check your USB has sufficient space

Try the port on the back/front of the recorder

Try a different USB device

Check the format of your USB device (supported formats: FAT32, EXT, NTFS).

Format your USB device. The recorder **does not** support MAC OS Journaled USB devices. (When formatting in OSX disk utility, select FAT32 format option)

9 Remote Control:

You can connect a device with a wifi and a web browser to act as a remote control for the Analysis Recroder.

1) Ensure the mobile device is connected to the SwimPro WiFi network,

2) Open the device's browser, and open http://ipaddress:8080/control.html

NOTE: IP address is the same as that used for the iPad app. (found in settings screen on Analysis Recorder)

10 Caring for your SwimPro system

Cameras and brackets must be removed, as a whole and not by the cable, after each use and washed with un-chlorinated (tap) water to drain before dry storage

Cameras should not be hyper extended beyond the cables ability at points where cable enters either the pole or camera head

Cameras should not be twisted so that ram mounts create an external stress on the cable.

Under no circumstances shoud you twist or turn components of the camera (such as the cable gland, canister cap or end of the canister)

Cameras should not be dropped or dragged

Cable is not to be twisted. A minimum 20cm diameter is essential, however we recommend storing the cable at 1m lengths (outstretched arms to create loops is a good approximation of this length)

Cable should not be walked on, left to rub on coarse corners of pools or other coarse surfaces whereby it has the ability to create grazes, cuts or wear on the cable

Cable should not be bent back on itself so to create tension or give the cable potential to break internally.

The cable exiting the base of the pole should not be leaned on or pressured on any surface

Cable should not be twisted or pulled at the entry point of the black box

The recorder should not be wheeled over rough or uneven surfaces on a stand

The recorder should be transported/carried in a careful manner. An adjustment to the hard drive and other internal components can affect the recorder's functionality

The recorder should not be exposed to water and should be protected from humidity

The recorder should not be opened or tampered with under any circumstances

Wireless routers should not be exposed to water and should be protected from humidity

NB: This manual contains FAQ's , 'Caring for your SwimPro system' and our warranty. You will have been sent this manual via a link with your postage confirmation email and hence the aforementioned will be considered read.

11 Camera specs

Signal System	PAL
CPU	SONY Effio-E DSP
Image Sensor	1/3" SONY Super HAD CCD
Pixel	PAL: 976 x 582
Horizontal Resolution	700 TV Line
Sensitivity	0.01Lux
LENS	1/3 Wide Range - Low Light
ESC	(NTSC – 1/60 - 1/60.000), (PAL – 1/50 - 1/60.000)
Video output	1Vp-p 75 Ohm
Supply Voltage	12V DC - Low Voltage
Power Consumption	130mA
Operating Temperature	-10 C to +50 C

Warranty

Before packaging and shipping, each camera is chamber pressure tested and checked for accurate operation.

RJB Engineering Australia holds no responsibility for damage during delivery.

SwimPro (RJB Engineering Australia) products and accessories are guaranteed against manufacturing defects one (1) year from the original date of purchase with invoice number/receipt.

RJB Engineering Australia's only obligation, should such a defect occur, is to repair or replace the defective part or product with a comparable part or product at RJB Engineering Australia's discretion. Except for such repair or replacement, the sale, processing or other handling of this product voids warranty, condition or liability if the defect or loss is caused by negligence or other fault.

Damage resulting from the misuse, tampering, accident, or normal wear and tear is not covered by this or any other warranty.

RJB Engineering Australia warranty is not valid if any repair, service or modification is made by any person/s other than an authorized RJB Engineering Australia agent.

Cameras and brackets must be removed, as a whole and not by the cable, after each use and washed with un-chlorinated (tap) water to drain before dry storage.

Warranty will be considered void if the system is used in such a way that differs from the intended original purpose, instruction and/or care.

RJB Engineering Australia assumes no responsibility for any accident, injury, death, loss or other claim related to or resulting from the use of this product. In no event shall RJB Engineering Australia be liable for incidental or consequential damages relating to or resulting from the use of this product or any of its parts.

Please review and follow manual carefully. See swimmingcam.com

Returns or replacements of parts and/or products may be subject to shipping, handling, replacement and/or restocking fees.

This warranty is NOT transferable.

Licencing

This product uses the following packages which are protected under the GNU General Public License v2.

The Linux Kernel v3.8 - Source code can be obtained from https://github.com/torvalds/linux/releases/tag/v3.8

Upstart v1.8 - Source code can be obtained from http://upstart.ubuntu.com/

The Xorg server v1.13.3 - Source code can be obtained from http://cgit.freedesktop.org/xorg/xserver/

x264 H.264 encoder build 123 - Source code can be obtained from http://www.videolan.org/developers/x264.html

GNU Grub 2 - Source code can be obtained from http://www.gnu.org/software/grub/

The full text of the license can be obtained from https://gnu.org/licenses/old-licenses/gpl-2.0.html

Further, the SwimPro IQ Application is linked with the following packages, which are protected under the GNU Lesser General Public License v2.1:

GNU C Library - Source code can be obtained from http://www.gnu.org/software/libc/

- libm.so.6
- libdl.so.2
- libgcc_s.so.1
- libc.so.6
- libpthread.so.0

Simple DirectMedia Layer v1.2 - Source code can be obtained from http://www.libsdl.org

- libSDL-1.2.so.0

Libswscale v2.1 (part of libav) - Source code can be obtained from http://libav.org

- libswscale.so.2

The full text of the license can be obtained from http://www.gnu.org/licenses/lgpl-2.1.html

This software is based in part on the work of the Independent JPEG Group - http://www.ijg.org/

- libjpeg.so.8

Please do not hesitate to contact us via email or phone with any questions you may have. We love to discuss the capabilities of our industry leading products!

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