

**BLACK BOX  
VIDEO**



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# THE PACKAGE

V-Lock Version  
Stock Code 312

**CAUTION**  
READ  
INSTRUCTIONS  
BEFORE USE

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## DESCRIPTION AND INSTRUCTIONS

**PRICE REDUCTION!**  
£1,285 from  
November 2007



The Package is ready-made and all-inclusive. Without any fuss or needing to do anything, you can just switch it on and start filming.

The Package incorporates the superb DataVideo TLM-700 Monitor which is a 7" TFT LCD Colour Monitor, our Video Sender Transmitter and Mk 2 Receiver (5 Channel), the 8 db High Gain Box Aerial and Black Box Video's unique and exclusive Remote On-Off Switch, with the Kata Carry Bag, and all the relevant custom-made leads.

The Monitor and Receiver fit beautifully into the specially made (by Kata) carry bag, and there is also room in the bag for an V-Lock battery (we include an V-Lock plate, but not the battery) to power them both.

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## **This is what is actually included in The Package:**

- ✓ DataVideo Monitor, which is a 7" TFT LCD Colour Monitor (Model # TLM-700)
- ✓ Kata Carry Bag with shoulder strap (Model # LCM-1)
- ✓ Black Box Video - Video Sender Transmitter (5 Channel)
- ✓ Black Box Video - Video Sender Receiver (5 Channel)
- ✓ 8dB High Gain Box Aerial
- ✓ Black Box Video Remote On-Off Switch (comprising a BP90 input socket to 1 x HRS4M and 1 x BP90 plug leads via illuminated on-off switch)
- ✓ V-Lock Plate
- ✓ HRS4M - HRS4M 18" lead to power the Transmitter
- ✓ BNC - BNC 18" lead for video input to the Transmitter
- ✓ R/A BNC - R/A BNC 6" lead for video input to the Monitor
- ✓ R/A SMA - R/A SMA Aerial lead (between Box Aerial and Receiver)

**The total weight of The Package, excluding the battery, is 2.025 kilos**



**Our Video Sender is designed to transmit high quality pictures and sound from a camera to a monitor using a legal, licence free 2.4 GHz microwave link.**

**The small, lightweight Transmitter can be easily attached to the camera's battery with velcro, and takes its power from the camera battery. The efficient omni-directional aerial radiates in all directions. Make sure the aerial is as high as possible and proud of the camera body.**

**The Transmitter is powered with any voltage from 9 to 36 volts via a standard 4 pin Hirose socket.**



**The new Mk 2 Receiver - much smaller (about 45%) than the Mk 1 unit! - is designed to receive microwave signals from the Transmitter and display high quality pictures and sound on any monitor of your choice, as before. It is compact and light in its new, robust die-cast case, and the efficient omni-directional aerial with right angled SMA connector comes as standard.**

**You can expect up to 300 metres range outdoors (line of sight) or up to 30 metres indoors.**

**The Receiver is housed in a robust case and has a rigid screw-on aerial with a right-angled SMA connector. It can be powered from any nominal 12 volt source capable of supplying 130mA. The actual voltage range is from 8 to 16 volts and is applied via the 4 pin Hirose socket on the end of the unit.**

## WARNING!

If powering from a camera's Hirose socket please make sure your camera can supply the necessary current without blowing the internal fuse. If not, use another source such as the BP90 socket on a PAGlock plate.

Current consumption of the Transmitter is 170mA at 12 volts. The Transmitter has a switch mode power supply inside so will consume half the current at 24 volts and pro-rata for other voltages.

## INSTRUCTIONS FOR USE

### Transmitter

Connect the video in to the BNC socket. The video signal should be PAL or NTSC composite video at 1 volt p-p.

If sound is required connect a line level signal to the phono socket.



Select a suitable free channel on the rotary selector switch, and make sure the Receiver is switched to the same channel.

Switch the unit with the mini toggle power switch and check the green LED comes on.



The aerial is a screw-on type with SMA connector. This allows much greater choice of aerial options - such as the Box Aerial.



### Mk 2 Receiver

The Receiver is housed in a robust die-cast case and has a rigid screw-on right-angled aerial with SMA connector. The Receiver can be powered from any nominal 12 volt source capable of supplying 130 mA. The actual voltage range is from 8 to 16 volts and is applied via the 4 pin Hirose socket on the end of the unit.



Video is output via the BNC socket and sound via the 3.5mm stereo jack socket.

Make sure the rotary selector switch is set to the same channel as the Transmitter.

Switch on using the toggle power switch on the end of the unit and check the red light comes on.

We can supply suitable batteries, mains power pack and cables if required.

Make sure the aerial is vertical and clear of any surrounding metalwork or obstructions.

This Mk 2 version is much smaller than the previous Receiver - in fact, it is 45% smaller!

# INSTRUCTIONS FOR ASSEMBLING “THE PACKAGE”

## Installing Monitor & Cables

- ✓ Unzip bottom flap of bag and place the Monitor face down in bag and secure with straps provided.
- ✓ Feed the short SMA aerial lead with straight plug end through gap between the top of the Monitor and bag to the outside of bag.
  
- ✓ Attach Remote Switch (push button power switch) and loom to spare front lug of bag using the cable tie provided.
- ✓ Fit the cable tie around the waisted heatshrink part of the Remote Switch so that when bag is turned right way up the switch will be pointing upward.
- ✓ Note that the strap is meant to be fitted diagonally across the bag, otherwise the bag will just top-ple over when you hang it round your neck!
  
- ✓ Connect the R/A BNC lead to the BNC out socket on Video Sender Receiver, and the other end to the Monitor input.
- ✓ Plug the HRS4M power plug from the Remote Switch loom into Hirose socket on the Receiver.
- ✓ Plug the BP90 plug into the Monitor's power socket.
- ✓ Finally, screw right angled SMA aerial connector onto the Receiver's aerial socket.
  
- ✓ Fit the battery and plug the BP90 plug into socket on Remote Switch loom.
- ✓ Zip up lower flap of bag with both ends of zips either side of Remote Switch wiring.
  
- ✓ You should note that the DataVideo TLM-700 Monitor is wired centre pin +ve (positive).

## Fitting Box Aerial

- ✓ Turn the bag over and stick large Velcro strip for Box Aerial to the centre of front flap.
- ✓ The Box Aerial must be vertical on front flap with Black Box Video label on top and SMA socket at bottom.
- ✓ The Box Aerial **must** be used in this orientation **NOT** sideways or on edge or severe reduction in performance will result.
- ✓ Screw the SMA aerial lead onto Box Aerial.

## Testing

- ✓ Power up the Transmitter and feed video in via the BNC.
- ✓ Press the large green button on the Remote Switch to switch on the Receiver in The Package - the green button on the Remote Switch should light up.
- ✓ If no picture is displayed on the Monitor, check the Monitor is switched on (power switch is on the bottom right of the Monitor).
- ✓ If there is still no picture, check that the Receiver is switched on in the bag (this is the toggle switch on the aerial end of the Receiver) - the red LED should be lit.
- ✓ If still no picture, make sure the Transmitter and Receiver are both on the same channel.

## Battery Changing

The light on the Remote Power Switch indicates the battery power level. It will get dimmer as the battery runs down and eventually go out - the unit will stop working shortly after.

Switch off or remove the battery when exhausted, otherwise the battery could become over discharged.

## PROBLEM SOLVING

If you experience interference or bad picture break-up try another channel, as it is likely there is another unit on the same frequency. Don't forget the Transmitter and Receiver must be on the same channel.

Note that only channels 1 - 5 on the channel selector are valid.

The Transmitter has an omni-directional aerial which radiates in all directions. It is very important that the aerial tip is in free space with no objects or wires near it.

When using the Sender indoors reflections from girders, wiring, etc, will cause occasional flashes on the received picture when cancellation occurs. This will only happen when the Transmitter or Receiver is moving relative to each other or when objects are moved between the Transmitter or Receiver.

When used with the standard Transmitter outside line of sight these problems largely don't arise and the signal is much more stable. When used with the standard Transmitter a maximum range of about 300 metres should be obtained outside, line of sight. Indoors a range of around 30 metres should generally be expected. (These ranges will be reduced when using the Receiver with The STAMP to 50 metres and 15 metres respectively, but of course this is not applicable to The Package).

## SPECIFICATIONS

### Transmitter Specification

Supply voltage	9 - 36 volts
Supply current @ 12 volts	170 mA
Hirose socket wiring	Pin 1 = -ve, Pin 4 = +ve
Video in (BNC socket)	Composite video PAL or NTSC 1 volt p-p
Sound in (Phono socket)	Line level
Power output	10 mW
Frequency, MHz	2415.5, 2428.5, 2442.5, 2456.5, 2470.5

### Mk 2 Receiver Specification

Supply voltage	8 - 16 volts
Supply current	130 mA
Hirose socket wiring	Pin 1 = -ve, Pin 4 = +ve
Video out	1 volt p-p
Sound out	Line level
Dimensions (excluding aerial)	H 30mm x L 110mm x W 60 mm 196 grms

### PRICES:

**THE PACKAGE** (including TX + RX units, Monitor and cables as listed) Stock Code 312 **£1,285**  
+ £50 for the V-Lock plate and mods

#### Individual Prices for TX and RX units:

**VIDEO SENDER - TRANSMITTER (5 Channel)**

Stock Code 300 **£ 259**

**VIDEO SENDER - RECEIVER (5 Channel)**

Stock Code 301 **£ 259**