Warranty

Digital Security Controls Ltd. warrants that for a period of 12 months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, Digital Security Controls Ltd. shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls Ltd. such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Digital Security Controls Ltd. Digital Security Controls Ltd. neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

In no event shall Digital Security Controls Ltd. be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product.

WARNING: Digital Security Controls Ltd. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected

IMPORTANT INFORMATION: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void the user's authority to operate this equipment.

FCC Compliance Statement

CAUTION: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the Instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient the receiving antenna
• Increase the separation between the equipment and receiver
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/ TV technician for help.

The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Introduction

The HS-VM1100 is a one-channel monaural frequency agile audio/video modulator. The modulator adds an RF (video) signal from security cameras or other video sources to your video distribution network using an unused channel. The HS-VM1100 covers UHF channels 14 to 78 and CATV channels 65 to 135.

Contents of Package

Qty 1	HS-VM1100	Qty 1	Video Patch Cord
Qty 1	AC Adaptor	Qty 1	Audio Patch Cord

Specifications

Output Frequency Range: ....470MHz – 860MHz
Output Channels: ....UHF: CH14-78, CATV: CH65-135
Video Frequency Response:..............................+/- 1dB
Aural Intercarriers Stability: ....4.5MHz w/n +/- 3KHz
Video Input Imp/RF Output Imp: ....75 Ohm
Audio Input Impedance: ....>10K Ohm
Frequency Accuracy/Stability: ....PLL Crystal Stabilized +/- 5KHz
Video Input Level:..1Vp-p
Audio THD: 0.4%
Output Level:...+10dBmV
Video Mod Index: ....70% +/- 10%
Dual Sideband Aural/Visual Carrier Ratio:..........-15dB
Video S/N Ratio/Audio S/N Ratio: 52dB/50dB
Size: ....95 x 75 x 26 mm (L x W x H)
 ....3 ¾ x 3 x 1 in.
Weight (approx. w/o adapter): ....115 grams (4 oz.)
Power Adapter ....(Input): 120VAC, 60Hz, 6W
 ....(Output): 12VDC, 250 mA
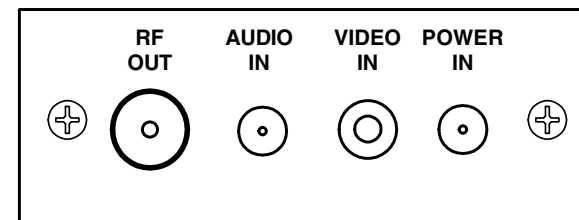

Figure 1

Installation Instructions

DSC recommends installing the modulator close to the signal source. However, you may choose to install the modulator at the signal distribution end in the Concourse cabinet. Installation instructions for both options follow below. Observe proper coaxial cable wiring practices to ensure proper operation.

At Signal Source

1. Locate the HS-VM1100 within two feet of the signal source and within 6ft of an AC outlet.

2. Connect the RF (video) output from the video source to the HS-VM1100 "VIDEO IN" jack using the supplied video patch cord. See Figure 1.

3. (Optional) Connect the audio output from the source to the HS-VM1100 "AUDIO IN" jack (3.5mm) using the supplied audio patch cord. See Figure 1.

4. Home run an RG6 coaxial cable from the HS-VM1100 to the Concourse cabinet housing the video distribution modules. Allow sufficient length at both ends of the run to avoid stress and for proper termination and trim out. Terminate both ends of the coaxial cable with male F-type connectors. At the source end, connect the coaxial cable to the "RF OUT" connector on the HS-VM1100. At the distribution end, connect the coaxial cable to an unused port of a cable combiner, e.g. HS-VH400. Please refer to the installation instructions included with the combiner to insure proper operation.

5. Plug the provided 12 VDC, 250mA power supply into the power line and connect to the HS-VM1100 "POWER IN" jack.

At Signal Distribution

1. Choose a suitable location in the Concourse cabinet to install the HS-VM1100. The recommended location is near the video combiner, e.g. HS-VH400. This installation will require optional mounting bracket HS-MOD001-BRKT (not supplied).

2. Home run video and audio patch cords from the source to the HS-VM1100. Note: The supplied cords may not be long enough for some installations.

3. Connect the RF (video) output patch cord from the video source to the HS-VM1100 "VIDEO IN" jack. See Figure 1.

4. (Optional) Connect the audio output patch cord from the source to the HS-VM1100 "AUDIO IN" (3.5 mm) jack. See Figure 1.

5. Construct a coaxial cable patch cord, terminating both ends of the coaxial cable with male F-type connectors. Connect the coaxial cable patch cord to the "RF OUT" connector on the HS-VM1100 and to an unused port of a cable combiner, e.g. HS-VH400. Please refer to the installation instructions included with the combiner to insure proper operation.

6. Plug the provided 12 VDC, 250mA power supply into the power line and connect to the HS-VM1100 "POWER IN" jack.

   Note: Use only the AC adapter supplied with the HS-VM1100.

Channel Select Programming Instructions

1. Using a paper clip or ballpoint pen tip, press and hold the "SELECT" button until the LED flashes. Release the "SELECT" button. See Figure 2.

2. Press the "CHANNEL" p (up) or q (down) buttons to select the desired channel. Channel selection can only take place while the LED is flashing. You must select an unused channel that is at least one channel removed from an existing channel, e.g. if channel 87 is in use, the nearest channel you can select channel 89.

3. Press the "SELECT" button to finish programming. The LED will stop flashing. The LED will stop flashing after a few seconds once a channel is selected even if the "SELECT" button is not pressed.
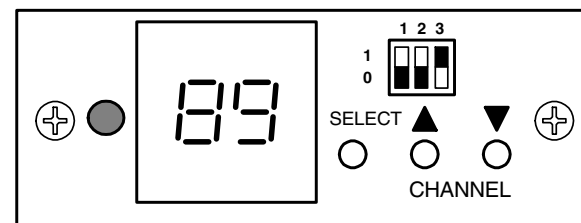

Figure 2

Notes:
1. If the power goes off when the unit is in Channel Select Programming mode, the selected channel will not be stored in memory. Repeat steps 1 through 3 above.

2. The channel display is a 2-digit display. When the selected channel is 2 digits, the display will show the channel as selected. If the channel selected is a 3 digit channel, the display will show the last two digits of the selected channel with a dot between the two digits. The third digit "1" will not be shown. See Figure 3.

Figure 3

Channel Range Settings

The dipswitches on the front panel of the HS-VM1100 modulator are used to select the range of channels available. See Figure 2.

There are three settings for the dipswitches, UHF only, CATV Ultra only and UHF/CATV Ultra. See Figure 4. The modulator is preset to the UHF Band (CH 14-78).
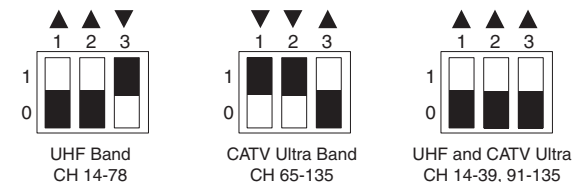

| UHF Band | CATV Ultra Band | UHF and CATV Ultra |
| CH 14-78 | CH 65-135 | CH 14-39, 91-135 |

Figure 4

WARNING: Unplug the AC adapter from the HS-VM1100 before changing the DIP switch settings.