

# Navtech Systems Video Links

## ROVER "Director" MkII

### COFDM Video Receiver User Manual

The **Rover "Director"** is a portable, easy to use, hand held receiver with a 7" full colour monitor.

The '**Director**' features dual channel diversity reception to give exceptional performance in the most challenging conditions.

The '**Director**' has an external V-lock battery docking port. The IDX-type V-lock facility provides for easy, rapid battery changes with operation times in excess of five hours. Optional carry case, shoulder strap and sun visor (for outside viewing in diffused sunlight or in bright studio lighting) are available

The integrated monitor displays video in either 4 : 3 or 16 : 9 format in normal or zoom modes. This User Manual also includes the monitor set up procedures to suit the application.



Rover Director Monitor Receiver

#### Top Panel



Up to sixteen RF channel settings are available via a simple rotary switch located at the RH side, adjacent to the antenna mount.

Two LED indicators show 'Signal Lock' and (battery) power status.

The LH Lock LED shows 'blue' when a transmission 'lock' is achieved

The 'Power' Indicator LED shows:-

<b>Green</b> when input voltage is above 13.5 V	Receiver OK to operate
<b>Amber</b> when between 11 & 13.5 Volts	Receiver OK to operate
<b>Red</b> when input drops below 11 Volts	Receiver will fail below 9 Volts i/p – change battery!

The LH side dual Signal Level LED bar graph shows the signal strength of each channel. The **amber** LEDs indicate low to medium signal reception; **green** indicates good usable signal levels.



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## Video & Audio Output

Composite video output is available via the two BNC's on the LH side panel. If configured for audio, two RCA-Phono connectors provided the audio outputs.

## Antennas

For diversity operation two N type antenna connectors allow for high gain N type antennas to be attached or the smaller, lower gain styles using N type to SMA adapters

The antennas can be detached for storage or transportation in the carry case.

## External Power

External DC is input via the side-mounted connector. The receiver can be operated from an external 12V DC (10-16V DC) supply drawing approximately 1.2A. **Warning:** If higher voltages are applied, the unit will be damaged. Power is applied via a 4 pin XLR or optional 2-pin Lemo connector. The centre mounted rocker switch must be set to the 'I' position to select external power input and the 'II' position for battery power.

## Battery operation

An external V-lock battery may also be used to power the *Director* that will give approx five hours continuous use when fully charged.

## Battery charging

The V-Lock battery charger (optional accessory) is used to charge the battery with a charge time of approximately 3 hours.

## Receiver operation

The *Director* is powered up by ensuring that the V-lock battery is fitted or an external supply is connected. The front panel on/off switch powers the system. If the monitor does not come on automatically this is turned on by the monitor PWR button.

The *Rover Director* receiver uses the latest form of diversity reception technology to optimise performance. Two antennas are used; the receiver will however function with only one antenna fitted but best results are obtained in diversity mode. Simply connect to the antenna connectors. Channel selection is via the rotary switch – as per the transmitter module. The transmitter and receiver must be on the same channel and be compatible with the frequency allocation of the system in use.

The demodulated video is supplied to the monitor. Two additional composite PAL (or NTSC, depending on model) signals are available via the 75ohm BNC outlets.

Operational status is shown as outlined above

When first powered on, the receiver will output colour bars until a signal is detected and demodulated. If the signal is subsequently lost then the lock LED will go out and the screen will go blank. When coherent RF signals are detected again, the lock LED will illuminate and pictures will then resume.

**Warning:** If operating the transmitter very close to the receiver, some signal break-up may be observed. This is simply due to the receiver input stages being 'overloaded' with too much signal. If operating at very close ranges use low gain whip antennas (and / or remove one of the antennas completely).



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## General advice

- a) The antennas used on both the TX and RX are linearly polarised. Try to mount the transmitter so that its antenna is vertical i.e. same orientation as the receive antennas. An SMA right-angle elbow is provided with the transmitter to help facilitate this.
- b) COFDM links will provide far superior performance to traditional analogue FM links in both high multipath and non line of sight conditions. However, due care should still be given to ensuring signals can 'reach' the receiver!

## Monitor Set-Up Procedures

### ➤ PWR (Power ON>OFF)

When the power is on, the green LED on monitor will illuminate.

### ➤ SEL - Menu Selector, (also AV1/A2 Selection)

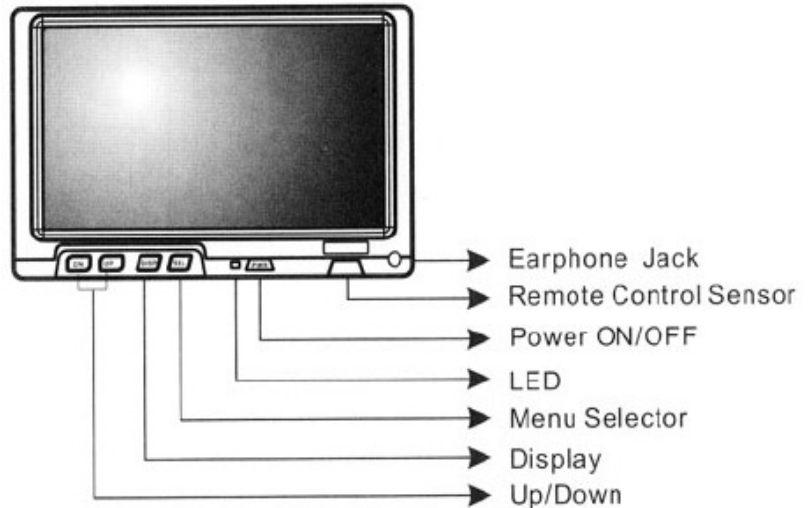
1. Press for 2 seconds to switch menus. The cycle is as follows:-  
BRIGHT – CONTRAST –  
COLOUR – TINT –  
DIMMER – LEFT/RIGHT –  
UP/DOWN – SAFETY (do not change) – DEFAULT.

2. Short press button to switch AV1/AV2 mode. Default to AV2

- ### ➤ DISP (Display Mode) -
- Selects 4 types of display modes:- Full, Normal, Wide, & Zoom  
Note: Also used to cancel menu OSD Display.

### ➤ UP/DN (Menu Adjustment)

In Menus, press UP or DN button to adjust picture condition level, Left/Right Reverse, Up/Down, Safety Selection and Reset Default.



## To Disable Safety Mode

1. Make sure monitor is in "OFF" state.
2. Press and hold both "DN" and "UP" buttons at the same time, then press "PWR" button until the OSD shows the SAFETY selection menu. Release the "PWR" button, then release both the "DN" and "UP" buttons at the same time.
3. Press "DN" button to select "OFF" mode.
4. Press again the "PWR" button to complete this setting. After this setting is completed, even when you press DEFAULT RESET, this setting will not be reset back to "ON" mode. If you want to go back to "ON" mode, you can select the menu to get "ON" mode.



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