



RCMP-1080-01
SHEET 1 of 7
ICD
Issue No.. B

Interface Control Document

RCMP-1080-01-yy-ICD

Remote Control - Monitor Panel

General Description

This specification applies to the remote control monitor panel RCMP-1080-01 and its variants.

The Remote Control supports the AVDU series monitors through a universal proprietary low voltage differential serial control bus optimised for reliable operation in airborne surveillance applications. The unit may be directly attached to either side of compatible monitors in the AVDU series using two bolts that pass through the unit, or mounted elsewhere in the aircraft.

The height and depth of the unit match the height and depth of the AVDU-2640 10.4" series monitors and the remote control panel may be either directly mounted to the left or right of the display screen or independently with vertical or horizontal variants.

This remote control contains:

- Control unit Panel Electronic Circuit (PEC)
- Inverter for the front panel controls backlight
- Buttons, backlights and rotary control



Physical

See attached drawings at the end of this document for dimensions and mounting and configuration options.

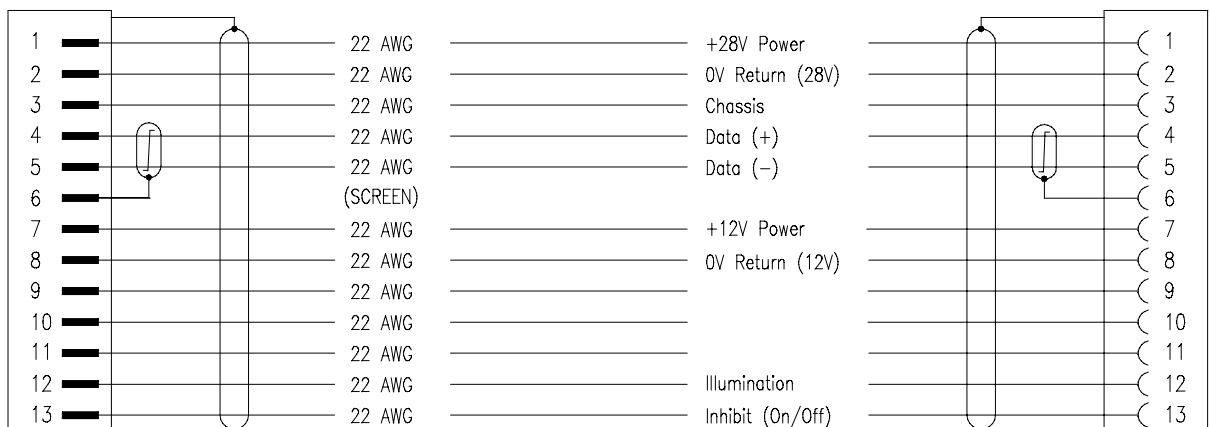
The function of the control buttons and legend are set as part of the manufacturing process. Each variant is defined as a unique part number extension (yy) which fixes the legend and unique function of each button or control. The options are outlined in this document. Horizontal, vertical, inverted and mirrored mounting and legend orientations are possible.

Installation

The unit may be installed with the appropriate orientation using any two of the available 4 through M4 holes.

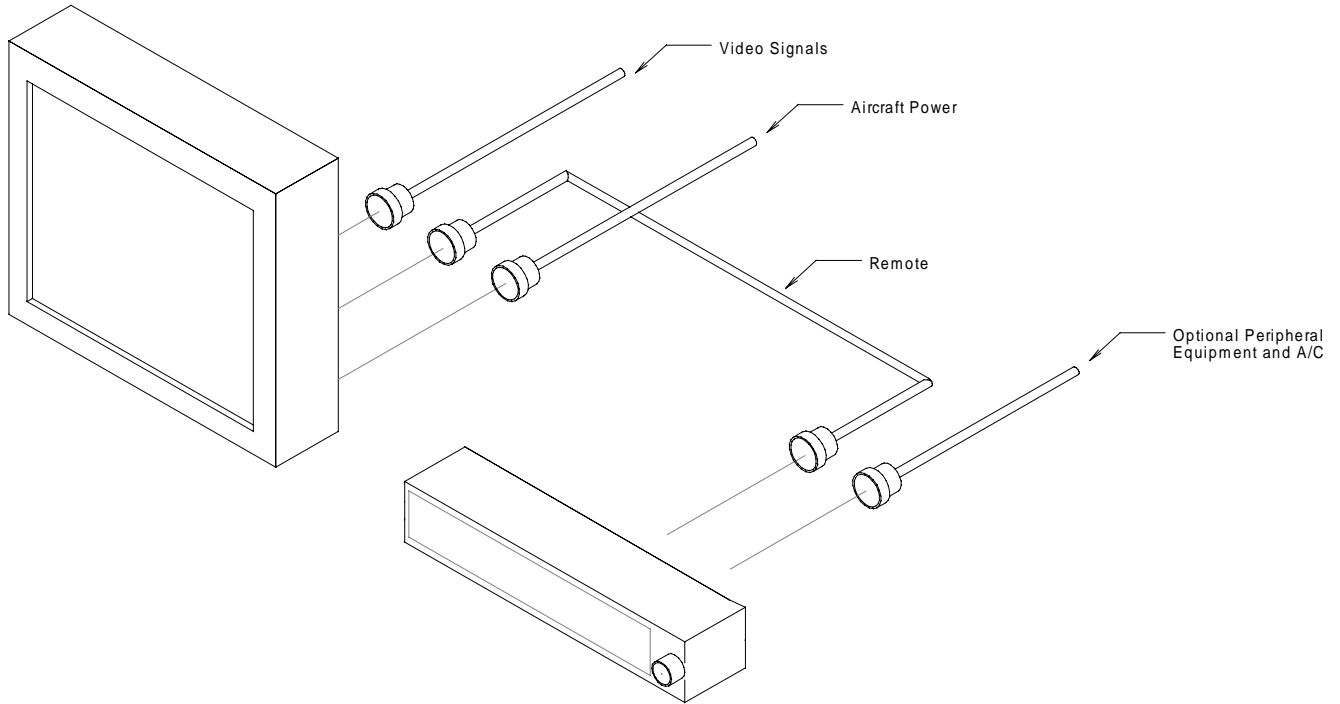
A single cable connects the remote control at the rear of the unit to the "Remote" connector on the rear of a compatible AVDU series monitor. An optional Second "Loop" connector allows connection to other remote control units or peripheral devices.

Typical installation cabling (Monitor to Remote Control):



Interface Control Document

Typical Configuration



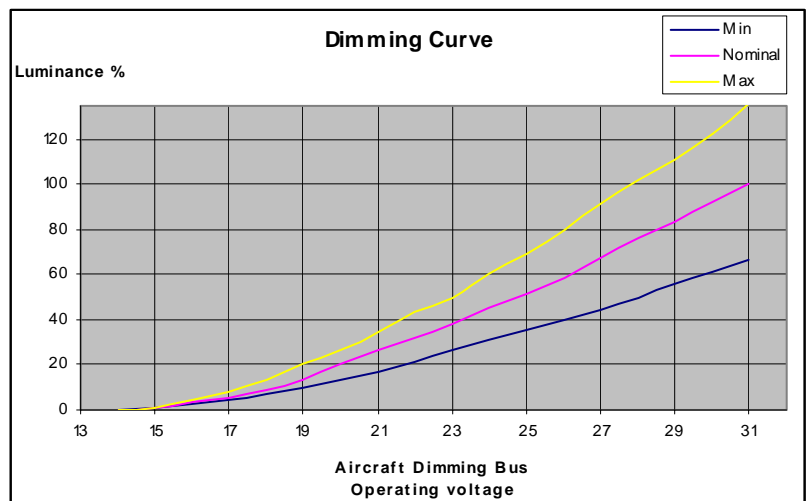
Connection configuration

The unit derives 28V and 12V power from the host monitor and loops these power lines to its output connector for the use of secondary peripheral equipment. The total load on any connector pin must not exceed 5A. The overall current taken from the 28V and 12 V lines must be limited in the monitor.

The unit monitors and controls the "Inhibit" bus line in order remotely power down the monitor (Connecting this line to 0V Return (28V) on pin 2 will shut down the monitor and the remote control).

The unit monitors and controls the Illumination line to control the illumination level of the remote control button backlights and of the monitor button backlights where these are fitted. The Illumination line may be connected to the cockpit illumination control interface bus either via the input or output connectors, The illumination signal should be a 0 to 28V DC signal representing 0 to 100% back illumination levels (see Graph). The illumination bus signal is referenced to the 0V Return (28V) on pin 2

Remote control signals are communicated using a proprietary, shared, differential, serial control bus carried on a screened twisted pair.



Interface Control Document

Function of controls


- a. The brightness of the connected display is adjusted using a rotary brightness control
- b. The set-up and configuration menu of the connected display is accessed by pressing the centre button of the direction keys – this will display the menu On Screen Display (OSD) on the attached monitor. Navigation around the OSD is achieved using the four direction keys and the centre menu button.
- c. The six or eight function keys are configured as part of the manufacturing process and may be assigned to any monitor/display function. Some of the function keys may operate in conjunction with the four direction keys. The configuration of these keys is specified by the part number of the unit where the “yy” digits determine the orientation and function of the buttons.




<p>Typical available Control Functions Functions are dependant on the factory configuration of the unit designated by the “yy” digits in the part number. (See table at the end of the ICD for button definition)</p>	<p>1. Function Keys. - The eight function buttons may be programmed individually at manufacture to perform any combination of the following functions:</p> <ul style="list-style-type: none"> • Power On/Off (Standby power) • Video Brightness • Video Contrast • Video Colour Saturation • Graphic input selection (External XGA input to monitor) [usually designated “MAP” “RADAR” or “COMPUTER”] • Video inputs 1-6 selection (Composite, Y/C or component inputs) <ul style="list-style-type: none"> ○ Pressing a video select button will display that input full screen • PIP, Picture in Picture mode (Video input inserted over a Graphic background) <ul style="list-style-type: none"> ○ Holding the PIP button and using the direction keys will adjust the size of the PIP ○ Direction keys move the centre of the PIP box around the screen ○ Where there is no separate PIP button, PIP may be invoked by pressing the Graphic button a second time • Freeze <ul style="list-style-type: none"> ○ May be programmed to freeze the displayed image, Graphic or video input or just the video image. • Image Zoom <ul style="list-style-type: none"> ○ Holding zoom with a direction key will zoom the image in or out ○ Direction keys move the centre of the zoom ○ Where there is no separate Zoom button, zoom may be invoked by pressing the freeze button a second time (i.e. zoom into a frozen image) <p>2. Rotary control The rotary control may be fitted with an optional dual track and optional integral on/off switch.</p> <ul style="list-style-type: none"> • Monitor/Display Light box Brightness (Rotary control) • Switch Backlight brightness (Slaved to monitor brightness light box or external) • Monitor Power supply inhibit (Total shutdown of power) <p>3. Menu and direction key pad OSD Menu Select (Centre button – hold button down to select the OSD menu) OSD Select up (Up key) OSD Select down (Down Key) Setting + (Right) (Right key) Setting – (Left) (Left Key)</p>
Control interface	Backlit Buttons/rotary controls Proprietary bus serial control
Settings memory	Settings are stored in non volatile memory within the display and the remote unit PIP size and position is stored.

Interface Control Document

Pin assignment (Remote in)

Remote connector (Connection from monitor)											
 <p>Size 22D Contacts Wire size 28,26,24,22 Gauge 1.5, 2, 3, 5A max</p>	<table border="1" style="width: 100%;"> <tr> <td colspan="2" style="text-align: center;">Unit connector</td> </tr> <tr> <td>D38999/20WB 35PN</td> <td>FLANGE MT RECEP 13 WAY Plug</td> </tr> <tr> <td colspan="2" style="text-align: center;">Mating Half (cable connector)</td> </tr> <tr> <td>D38999/26WB 35SN</td> <td>PLUG 13 WAY Socket</td> </tr> <tr> <td>G8801-11M</td> <td>SIZE 11 Backshell</td> </tr> </table>	Unit connector		D38999/20WB 35PN	FLANGE MT RECEP 13 WAY Plug	Mating Half (cable connector)		D38999/26WB 35SN	PLUG 13 WAY Socket	G8801-11M	SIZE 11 Backshell
	Unit connector										
	D38999/20WB 35PN	FLANGE MT RECEP 13 WAY Plug									
	Mating Half (cable connector)										
D38999/26WB 35SN	PLUG 13 WAY Socket										
G8801-11M	SIZE 11 Backshell										
Remote Connector											
1	+28V DC Input										
2	28V Return										
3	Chassis										
4	Data (+)										
5	Data (-)										
6	Data screen										
7	+12V DC Input										
8	12V DC return										
9											
10											
11											
12	Panel brightness (Illumination) referenced to pin 2										
13	Remote On/Off (Power inhibit) short to pin 2 to inhibit										

Pin assignment (Remote out)

Remote connector (Connection to A/C or Peripheral)											
 <p>Size 22D Contacts Wire size 28,26,24,22 Gauge 1.5, 2, 3, 5A max</p>	<table border="1" style="width: 100%;"> <tr> <td colspan="2" style="text-align: center;">Unit connector</td> </tr> <tr> <td>D38999/20WB 35SN</td> <td>FLANGE MT RECEP 13 WAY SOCKET</td> </tr> <tr> <td colspan="2" style="text-align: center;">Mating Half (cable connector)</td> </tr> <tr> <td>D38999/26WB 35PN</td> <td>PLUG 13 WAY PLUG</td> </tr> <tr> <td>G8801-11M</td> <td>SIZE 11 Backshell</td> </tr> </table>	Unit connector		D38999/20WB 35SN	FLANGE MT RECEP 13 WAY SOCKET	Mating Half (cable connector)		D38999/26WB 35PN	PLUG 13 WAY PLUG	G8801-11M	SIZE 11 Backshell
	Unit connector										
	D38999/20WB 35SN	FLANGE MT RECEP 13 WAY SOCKET									
	Mating Half (cable connector)										
D38999/26WB 35PN	PLUG 13 WAY PLUG										
G8801-11M	SIZE 11 Backshell										
Remote Connector											
1	+28V DC Output										
2	28V Return										
3	Chassis										
4	Data (+)										
5	Data (-)										
6	Data screen										
7	+12V DC Output										
8	12V DC return										
9											
10											
11											
12	Panel Brightness (Illumination) referenced to pin 2										
13	Remote On/Off (Power inhibit) short to pin 2 to inhibit										



RCMP-1080-01
SHEET 5 of 7
ICD
Issue No.. B

Interface Control Document

Handling Precautions

Handling of the Display should be in compliance with Real-Time Vision's handling principles.

- 1) Be sure to turn off power supply when inserting or disconnecting the input connectors.
- 2) Wipe off water or fluid droplets immediately. Long contact with water or other fluids may cause discoloration or spots.
- 3) When the front surface is soiled, wipe it with absorbent cotton or other soft cloth.
- 4) Since CMOS LSI is used in this module, take adequate static electricity precautions and ensure correct human earth bonding when handling.
- 5) Do not open nor modify the Assembly.
- 6) Do not puncture the front switch sheet in any way.
- 7) At the insertion or removal of the Interface Connectors, ensure that the sockets are free from debris and be sure not to damage the Interface pins

IMPORTANT USAGE NOTE

This equipment is for use by developers and integrators, the manufacturer accepts no liability for damage or injury caused by the use of this product. It is the responsibility of the developer, integrators or other user of this product to:

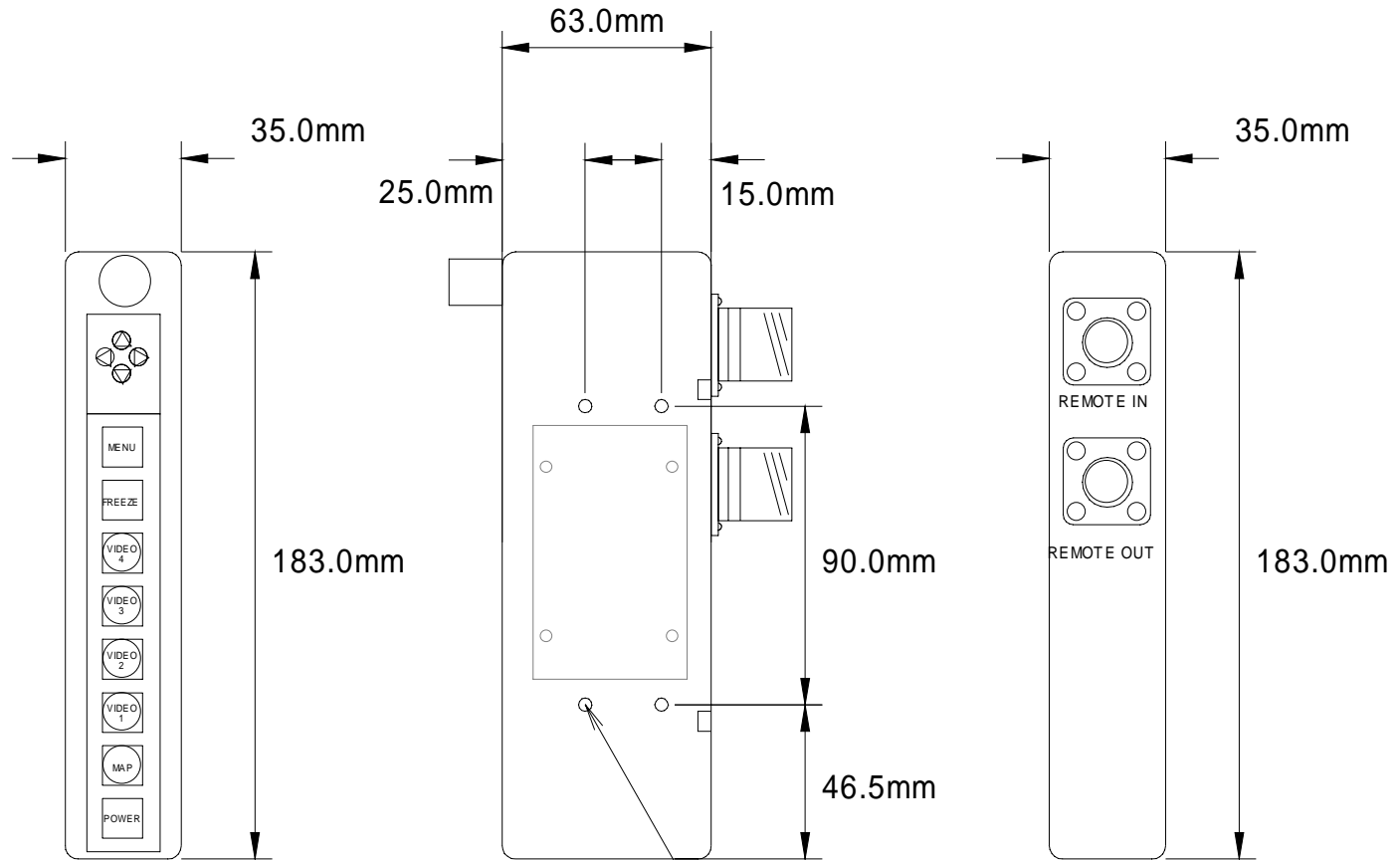
- Ensure that all necessary and appropriate safety measures are taken.
- Obtain suitable regulatory approvals as may be required.
- Check power settings to all component parts before connection.

Disclaimer

Real-Time Vision reserves the right to make changes to this document and the product which it describes without notice. In addition, Real-Time vision. shall not be liable for technical or editorial errors or omissions made herein; nor for incidental or consequential damages resulting from the furnishing, performance, and use of this product.

This product shall not be used for or in connection with equipment that requires an extremely high level of reliability, such as life critical systems, nuclear power control equipment and medical or other life support equipment. Real-Time Vision. takes no responsibility for damage caused by improper use of this product which does not meet the conditions for use specified in this specification sheet.

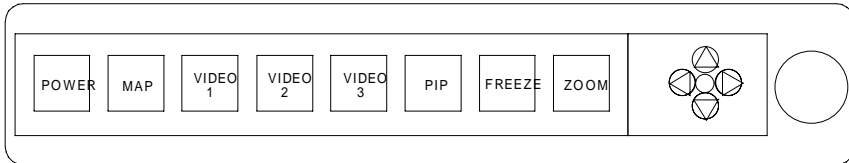
Interface Control Document



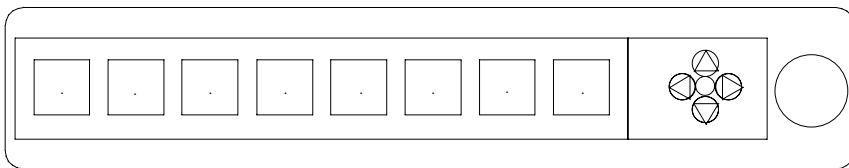
M4 Through holes 4 places

Interface Control Document

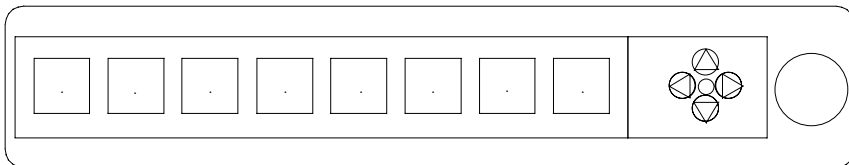
RCMP-1080-01 01 - Standard configuration



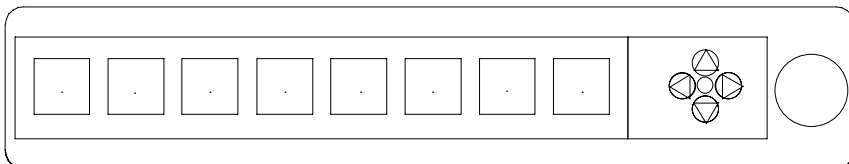
RCMP-1080-01 02 - Configuration (TBD)



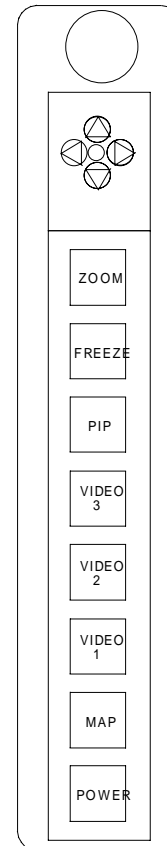
RCMP-1080-01 03 - Configuration (TBD)



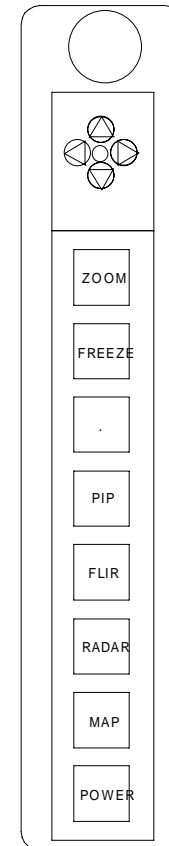
RCMP-1080-01 04 - Configuration (TBD)



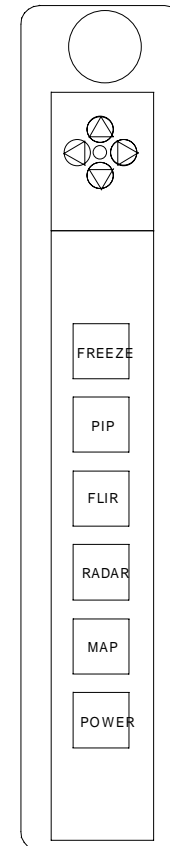
50



51



52



53

