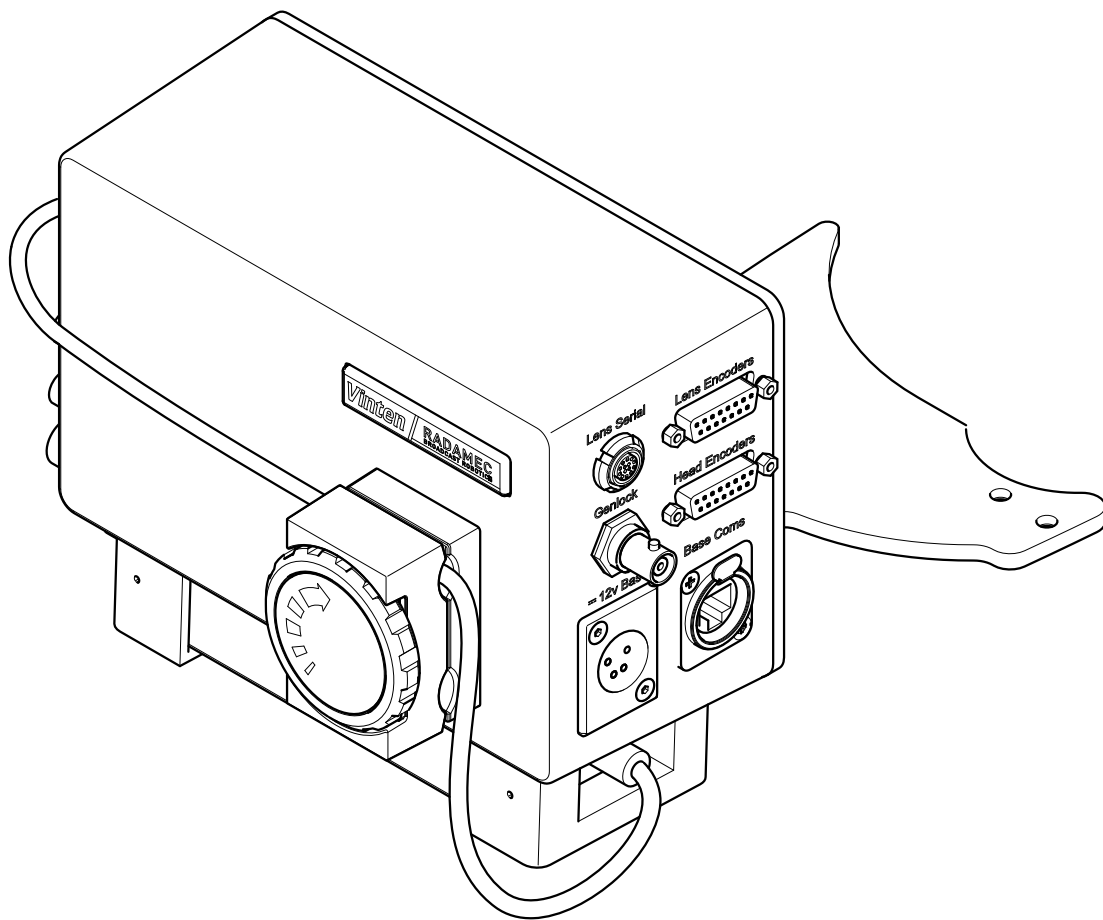


Vinten Radamec HPM

Operators Guide
V3851-4981

Vinten

RADAMEC
BROADCAST ROBOTICS



Robotic Camera Control Systems



Head Processing Module Operators Guide

Original Instructions

Publication Part No. V3851-4981 Issue 2

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Published by:

Technical Publications Department
William Vinten Building
Western Way
Bury St Edmunds
Suffolk IP33 3TB
UK
Tel: +44 1284 752 121
Fax: +44 1284 750 560

Safety - Read This First

Understanding these instructions

English

EN The original instructions presented in this operators guide were written in English, and subsequently translated into other languages. If you are unable to understand these instructions, contact Vinten Radamec or your distributor to obtain a translation of the original instructions (EU Countries).

БЪЛГАРСКИ

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CS Pokyny uvedené v této operátorské příručce byly původně napsány anglicky a následně byly přeloženy do ostatních jazyků. Nerozumíte-li těmto pokynům, kontaktujte společnost Vinten Radamec nebo svého distributora, abyste získali překlad originálních pokynů (členské státy EU).

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DA De originale instruktioner, der præsenteres i denne betjeningsvejledning, er skrevet på engelsk og derefter oversat til andre sprog. Hvis du ikke forstår disse instruktioner bedes du kontakte Vinten Radamec eller vor forhandler for at få en oversættelse af de originale instruktioner (EU-lande).

Deutsch

DE Die Originalanleitung in diesem Bedienungshandbuch wurde auf Englisch verfasst und anschließend in andere Sprachen übersetzt. Bei Verständnisproblemen in einer der übersetzten Sprachen kontaktieren Sie bitte Vinten Radamec oder Ihren Fachhändler; dort erhalten Sie eine Übersetzung der ursprünglichen Anleitung (EU-Staaten).

Eesti

ET Käesoleva kasutajjuhendi algtekst on koostatud inglise keeles ning seejärel tõlgitud teistesse keeltesse. Kui juhend osutub teie jaoks arusaamatuks, võtke juhendi emakeelse tõlke hankimiseks ühendust Vinten Radameci või kohaliku esindajaga (Euroopa Liidu riigid).

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EL Οι αρχικές οδηγίες αυτού του οδηγού για το χειριστή συντάχθηκαν στα Αγγλικά και μεταφράστηκαν στη συνέχεια σε άλλες γλώσσες. Εάν δυσκολεύεστε να καταλάβετε αυτές τις οδηγίες, επικοινωνήστε με τη Vinten Radamec ή το διανομέα σας για να λάβετε μια μετάφραση των αρχικών οδηγιών (Χώρες ΕΕ).

Español

ES Las instrucciones originales que se indican en esta guía del operador se han redactado en inglés y posteriormente se han traducido a otros idiomas. Si no entiende estas instrucciones, póngase en contacto con Vinten Radamec o con su distribuidor para obtener una traducción de las instrucciones originales (para países de la UE).

Français

FR Les instructions originales présentées dans ce guide d'utilisation ont été écrites en anglais puis traduites dans d'autres langues. Si vous ne comprenez pas ces instructions, contactez Vinten Radamec ou votre revendeur pour obtenir une traduction des instructions originales (pour les pays de l'UE).

Gaeilge

GA Scríobhadh na treoracha bunaidh don treoirleabhar oibritheora seo as Béarla, agus aistríodh iad go teangacha eile ina dhiaidh sin. Mura bhfuil tú in ann na treoracha seo a thuiscint, téigh i dteagmháil le Vinten Radamec nó le do dháileoir, chun aistriúchán de na treoracha bunaidh a fháil (Tíortha an AE).

Italiano

IT Le istruzioni originali presentate in questa guida per l'operatore sono in lingua inglese e successivamente tradotte nelle altre lingue. Qualora le istruzioni non fossero disponibili nella lingua desiderata, potete contattare Vinten Radamec o il vostro distributore per ricevere la traduzione delle istruzioni originali (Paesi UE).

Latviešu

(LV) Šajā operatora rokasgrāmatā iekļautie norādījumi sākotnēji tika sarakstīti angļu valodā un pēc tam pārtulkoti citās valodās. Ja nesaprotat šos norādījumus svešvalodā, sazinieties ar Vinten Radamec vai tirgotāju, lai saņemtu norādījumu tulkojumu (kādā no ES dalībvalstu valodām).

Lietuvių

(LT) Šiame operatoriaus vadove pristatomos pirminės instrukcijos parašytos anglų kalba ir vėliau išverstos į kitas kalbas. Jei šių instrukcijų nesuprantate, susisiekite su „Vinten Radamec“ arba savo platintoju ir gaukite pirminių instrukcijų vertimą (ES šalies kalba).

Magyar

(HU) A kezelői útmutatóban található utasítások angol nyelven íródtak, és utólag fordították azokat más nyelvekre. Ha nem érti ezen utasításokat, kérjük, vegye fel a kapcsolatot a Vinten Radamecnel vagy a helyi képviselővel, és igényelje az eredeti utasítások fordítását (EU országok).

Malti

(MT) L-istruzzjonijiet originali ipprezentati f'din il-gwida ta' operaturi kienu miktuba bi-Ingliż, u sussegwentement maqluba fl-lingwi oħra. Jekk ma tistax tifhem dawn l-istruzzjonijiet, ikkuntattja lil Vinten Radamec jew id-distributtur tieghek biex tikseb traduzzjoni ta' l-istruzzjonijiet originali (Pajjiżi ta' UE).

Nederlands

(NL) De oorspronkelijke instructies in deze bedieningshandleiding zijn geschreven in het Engels en vervolgens in andere talen vertaald. Als het onmogelijk is deze instructies te begrijpen, neemt u contact op met Vinten Radamec of met uw distributeur om een vertaling te bemachtigen van de oorspronkelijke instructies (EG-landen).

Polski

(PL) Oryginalne instrukcje zamieszczone w niniejszym podręczniku operatora zostały napisane w języku angielskim, a następnie przetłumaczone na inne języki. Jeśli nie rozumieją Państwo tych instrukcji, prosimy skontaktować się z siedzibą lub dystrybutorem Vinten Radamec, aby uzyskać tłumaczenie oryginalnych instrukcji (kraje UE).

Português

(PT) As instruções originais apresentadas no guia do operador foram escritas em Inglês e traduzidas para outros idiomas. Se não conseguir compreender estas instruções contacte a Vinten Radamec ou o seu distribuidor para obter a tradução das instruções originais (Países da UE).

Română

(RO) Instrucțiunile originale prezentate în acest ghid pentru operatori au fost scrise în limba engleză, și traduse ulterior în alte limbi. În cazul în care nu înțelegeți aceste instrucțiuni, contactați Vinten Radamec sau distribuitorul dumneavoastră pentru a obține o traducere a instrucțiunilor originale (Țările UE).

Slovensky

(SK) Pôvodné pokyny, uvedené v tomto návode na obsluhu, boli napísané v angličtine a následne preložené do iných jazykov. Ak nerozumiete týmto pokynom, obráťte sa na spoločnosť Vinten Radamec alebo vášho distribútora, aby vám zaslal preklad originálnych pokynov (krajinu EÚ).

Slovenščina

(SL) Originalno besedilo teh navodil za uporabo je bilo napisano v angleščini in prevedeno v ostale jezike. Če ne razumete teh navodil, se obrnite na podjetje Vinten Radamec ali lokalnega zastopnika, ki vam bo posredoval originalna navodila (velja za dr_ave EU).

Suomi

(FI) Tähän käyttäjän oppaaseen sisältyvät ohjeet on kirjoitettu alun perin englanniksi ja käännetty sitten muille kielille. Ellet ymmärrä näitä ohjeita, ota yhteyttä Vinten Radameciin tai jälleenmyyjään ja pyydä alkuperäisten ohjeiden käännöstä (EU-maat).

Svenska

(SV) Instruktionerna i denna handbok skrevs ursprungligen på engelska och har sedan översatts till flera språk. Om du inte förstår dessa instruktioner, kontakta Vinten Radamec eller din återförsäljare för en ny översättning av originalinstruktionerna (EU-länder).

Safety guidelines

Warning symbols in this guide



Where there is a risk of personal injury or injury to others, comments appear highlighted by the word **WARNING!**—supported by the warning triangle symbol.

Where there is a risk of damage to the product, associated equipment, process or surroundings, comments appear highlighted by the word **CAUTION!**

Warning symbols on the product

The following warning symbols may appear on the product.



On encountering the warning triangle and open book symbols it is imperative that you consult the operators guide before using this product or attempting any adjustment or repair.



Where there is a risk of exposure to laser radiation, comments appear supported by the laser warning triangle symbol.

Important safety instructions

1. Take heed of warnings and instructions

You should read all of the safety instructions before operating the equipment. Retain this operators guide for future reference and adhere to all warnings in the guide or on the equipment. Do not attempt to operate this equipment if you do not understand how to operate it.

2. Usage Statement

Do not use this product for any other purpose other than that specified in this usage statement. The Vinten Radamec HPM is designed for use in television studios to interface with the Vinten 'E' pan/tilt heads and pedestals for use with studio VR systems. The HPM is intended to be used by television camera operators within an indoor studio environment.

3. Water, moisture and dust

Protect the product from water, moisture and dust. The presence of electricity near water can be dangerous. Do not use the product near water and take care that liquids are not spilled onto the equipment. For outdoor applications, only use products that are specifically designed for outdoor usage.

4. Climate

The equipment should not be used outside the operating limits. Refer to the Technical Specifications for the operating range of the equipment.

5. Cleaning

We encourage regular cleaning of the product.

- Do not use oil or grease on any exposed part of the equipment. This is unnecessary and traps dirt which acts as an abrasive.
- Do not use solvent or oil based cleaners, abrasives or wire brushes to remove accumulations of dirt as these damage the protective surfaces. To clean mechanical surfaces, use only detergent based cleaners.

- External electrical connection ports should only be cleaned with a semi-stiff brush or a clean, dry air supply.

6. Servicing

You should not attempt to service the equipment. Contact Camera Dynamics Ltd or your local distributor to arrange servicing. Maintenance beyond that detailed in this guide must be performed by competent personnel in accordance with the procedures in the Technical or Maintenance Manual for the equipment.

7. Notes about Robotic equipment

Display prominent warning signs in studios, alerting personnel that robotic equipment is present and may move without warning. Ensure personnel remain a minimum of 1 m (40 inches) clear of robotic equipment in use.

Operators must familiarise themselves with the resulting working envelope of robotic products including all ancillary equipment (lens, zoom and focus controls, viewfinder, prompter etc.), to prevent inadvertent collisions.

Only operate robotic products remotely when you can see them to avoid harm to personnel and collisions with obstacles and other hazards.

8. Power sources

Only connect the equipment to a power supply of the type described in the Technical Specifications or as marked on the equipment.

9. Cables

Always ensure that all power and auxiliary communications cables are routed so that they do not present any danger to personnel. Take care when routing cables in areas where robotic equipment is in use.

Certificates and Compliances

This product conforms to the following European Directives:



89/336/EEC The Electromagnetic Compatibility Directive

EN 61000-6-4:2001 Electromagnetic compatibility - Part 6-4: Generic standard - Emission standard for industrial environments.

EN 61000-6-2:2001 Electromagnetic compatibility - Part 6-2: Generic standards - Immunity standard for industrial environments.

EN 61000-3-2:2000 Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16A per phase.

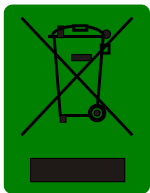
EN 61000-3-3:1995 Electromagnetic compatibility (EMC) - Part 3: Limits - Section 3: Limitation of voltage in public low voltage supply systems, for equipment with rated current $\leq 16A$ per phase not subject to conditional connection.

Other certification

FCC:

CFR 47:2006 Class A

Caring for the environment by recycling



This symbol on the product or on its packaging indicates that this product must not be treated as household waste (applicable in the European Union and European countries with separate collection systems). It shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. Please visit www.vinten.com/recycle for details.

By ensuring this product is disposed of correctly, you will help prevent potentially negative consequences for the environment and human health, and help conserve natural resources.

Technical specifications

Weight (including HPM mounting bracket)	1.68 kg (lb)
Height (not including optional power supply unit and fixing	12.0 cm (4.72in.)
Length	22.1 cm (8.70in.)
Width (not including optional power supply unit and fixing)	11.8 cm (4.65in.)
Current	2.5 Amps
Power input	12V DC
Shock insulation	Class I (basic insulation)
Supported protocol	RS422 (D1 data packet)



WARNING!

This product has basic insulation only (class I) and for safety requires an earth connection ('ground' in the U.S.A.).

Specifications are subject to change without notice.

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Introduction

The Vinten Radamec Head Processing Module (HPM) (Figure 1) has been designed to integrate with Vector 950E or Vision 250E pan and tilt heads, Canon and Fujinon lenses and Quattro-SE pedestal, coordinating encoder output from all axes for VR applications. The HPM mounts directly to the Vinten ‘E’ pan and tilt head, receiving power and a Genlock signal from a studio source, and supplying power, ethernet and Genlock signals to the Quattro-SE pedestal and outputting VR data to the studio.

Lens feedback

Canon and Fujinon lenses (with encoder output) and externally mounted Vinten Radamec lens encoders are supported by the HPM—to coordinate VR software with lens movements.

Vinten Radamec PDA

The HPM is configured using the Vinten Radamec PDA, which not only formats communication settings with the VR system, but also calibrates the connected Vinten ‘E’ pan and tilt head and Quattro-SE pedestal. For more information please refer to the Vinten Radamec PDA Operators Guide (Publication Part No. V4015-4980).

Vinten Radamec HPM (Fig 1)

- (1)..... Power input socket
- (2)..... HPM reset button
- (3)..... Genlock sockets
- (4)..... (Optional) power supply unit, power input connector
- (5)..... Head mounting bracket
- (6)..... Lens encoders port
- (7)..... Head encoders port
- (8)..... Head mounting screws (Vector 950E version illustrated)
- (9)..... Lens serial port
- (10)..... Base coms (ethernet) port (to pedestal)
- (11)..... Genlock socket (to pedestal)
- (12)..... Power output socket (to pedestal)
- (13)..... (Optional) power supply unit, power output lead (to HPM)
- (14)..... Cable clamp
- (15)..... VR data output port
- (16)..... PDA Comms and charging port
- (17)..... Power on / off switch
- (18)..... Power / diagnostic indicators

Operation

Installing the HPM

The Vinten Radamec HPM seamlessly integrates with a Vector 950E or Vision 250E pan/tilt head and Quattro-SE pedestal. Please refer to the relevant operators guides for detail on safely setting up the pan/tilt head and pedestal.

Fitting to the head

The HPM is supplied with a mounting bracket (5) which attaches to fixing holes on the pan and tilt head. If fitting the HPM to a Vector 950E head, position the head mounting bracket (5) as shown in (Figure 2) and attach securely in place using the four fixing screws (8).

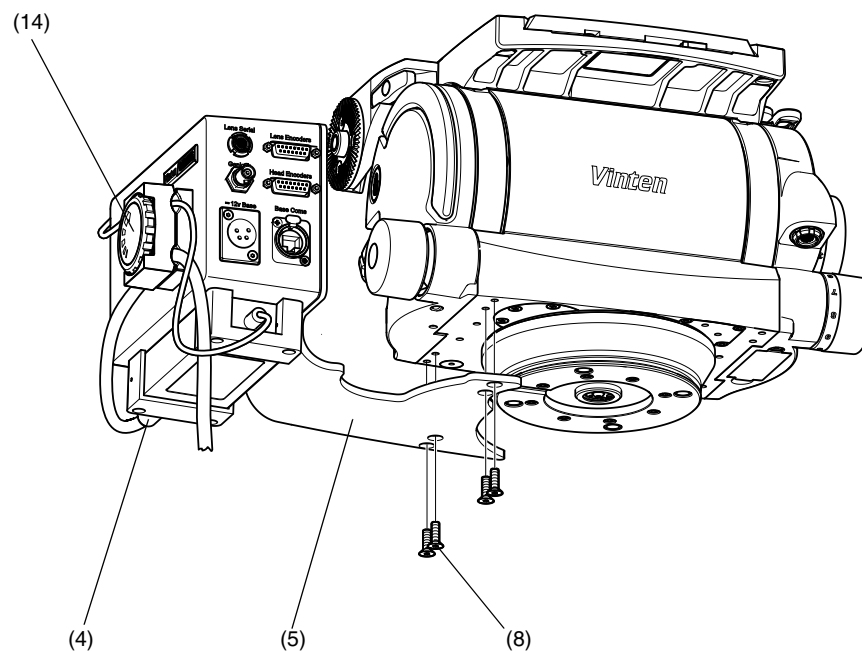


Figure 2 Fitting to a Vector 950E head

If fitting the HPM to a Vision 250E head (Figure 3), proceed as follows:

Remove the four fixing screws (8) in the corners of the pan encoder plate (20), leaving the two central fixing screws (19) in place, retaining the pan encoder plate (20).

Leave the pan encoder plate (20) in place and position the head mounting bracket (5) on top as shown in (Figure 3).

Attach the head mounting bracket (5) securely in place using the four fixing screws (8).

CAUTION! When fitting a Vision 250E pan and tilt head/HPM configuration to a Quattro-SE pedestal, ALWAYS fit the adapter ring kit (3354-900SP) between the head and the pedestal weight tray—to avoid trapping the ethernet, power and genlock cables.

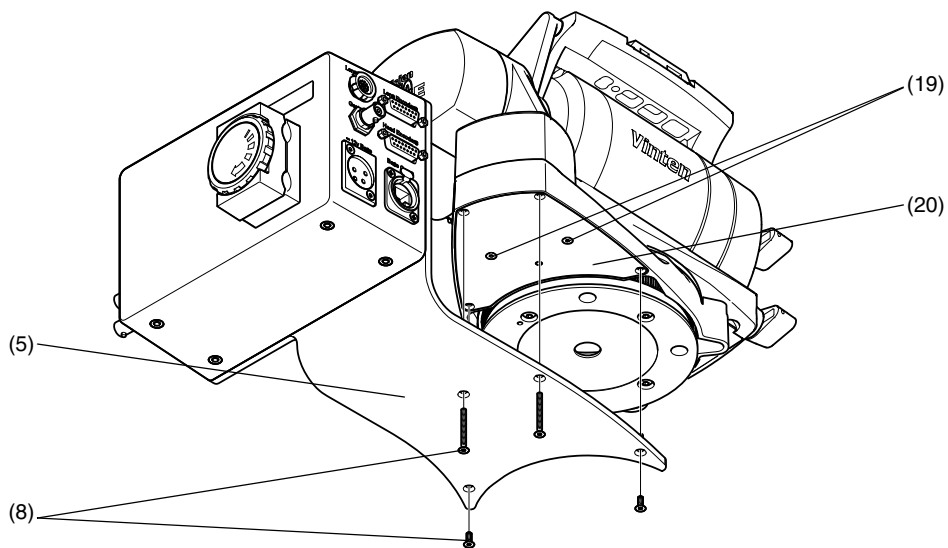


Figure 3 Fitting to a Vision 250E head



WARNING!

Do NOT attempt to lift and carry the pan and tilt head via the HPM mounting bracket (5).

Power connections

Connect a standard IEC power cable to the HPM power supply unit's input connector (4). The output of the HPM power supply unit (13) is then fed through the cable clamp (14) and around the side of the HPM, connecting to the power input socket (1).

NOTE: Also ensure that the (input) power lead (4) is secured by the cable clamp (14) to prevent the HPM suddenly losing power if the cable becomes snagged (Figure 2).

Alternatively, a 12V power supply can be sourced from the camera or other power supply unit via a standard 4 pin XLR cable.

CAUTION! Using alternative power sources will invalidate the system EMC liability.

The power output socket (12) supplies power to the Quattro-SE pedestal via the pedestal's cable management system. For more information please refer to the Quattro-SE Pedestal Operators Guide (Publication Part No. V3851-4980).

CAUTION! Do NOT attempt to power other external devices from the HPM power output socket (12). Damage may occur to the HPM if any device other than the Quattro-SE pedestal is connected.

Genlock connections

The Genlock signal synchronises encoder feedback from the various axes with the TV camera, ensuring that movement data is timed correctly in the VR software application.

There are three identical Genlock sockets on the HPM unit, but the location of each one suits different applications. The Genlock socket on the rear of the unit (11) should be used to connect to the Quattro-SE pedestal via the cable management system. One of the two Genlock sockets (3) on the front side of the HPM unit is used to connect the external studio Genlock signal—the other socket is a spare.

Ethernet connection

Connect the base Comms port (10) to the ethernet port on the Quattro-SE pedestal via the cable management system. For more information please refer to the Quattro-SE Pedestal Operators Guide (Publication Part No. V3851-4980).

Head connection

The head encoders cable connects the head encoders port (7) to the encoder connector on the Vector 950E or Vision 250E pan and tilt head. For more information please refer to either the Vector 950E Operators Guide (Publication Part No. V4004-4980) or the Vision 250E Operators Guide (Publication Part No. 3793-8).

Lens encoder connection

If required, Vinten Radamec externally mounted lens encoder devices can be connected to the lens encoders port (6) with an appropriate cable.

Lens serial connection

The lens serial port (9) is not currently utilized.

Vinten Radamec PDA connection

The Vinten Radamec PDA configures, calibrates and coordinates all devices connected to the HPM. Connect the Vinten Radamec PDA to the PDA Comms port (16) using the supplied PDA cable. For more information please refer to the Vinten Radamec PDA Operators Guide (Publication Part No. V4015-4980).

VR connection

The VR data port (15) provides output for the studio VR system. The RS422 pin designations are as follows:

Pin HPM	Function	Pin VR Computer	Function
2	RXD- / RXA	VR specified	TXD- / TXA
6	RXD+ / RXB	VR specified	TXD+ / TXB
3	TXD- / TXA	VR specified	RXD- / RXA
7	TXD+ / TXB	VR specified	RXD+ / RXB

The data is outputted in the Vinten Radamec D1 data packet.

Cable Clamp

All cables can be fed through and secured using the cable clamp (14) to keep the system tidy and prevent connectors/ports from being damaged if a cable becomes snagged.

CAUTION! Ensure that connected cables do not become entangled around the pan axis, due to the possible continuous 360° rotation of the head.

Switching on

Once all connections have been made, the HPM can be switched on using the power switch (17).

Resetting the HPM

In the unlikely event that the HPM becomes unresponsive, the unit can be reset by using a suitable pointer (e.g. a pen) to press the reset button (2).

Maintenance

General

The Vinten Radamec HPM is robustly made to high engineering standards and little attention is required to maintain serviceability save regular cleaning. Refer to the appropriate section in the Technical Manual if any defect is apparent. Adjustments and repairs should be carried out only by a trained and competent person.

Routine checks

During use, check the following:

Check that cables do not become entangled around the pan axis. Rotate the Vector 950E head as necessary to free the cables.

Check that all cables are connected properly. Re-fit cables if necessary.



WARNING!

Always check cables for signs of damage. Damaged cables may cause injury to personnel and/or damage the equipment.

No further routine maintenance is required.

Cleaning



WARNING!

1. **Disconnect power from the product before cleaning.**
 2. **This product has been designed for indoor use. Protect from water, moisture and dust.**
-
-

During normal use the only cleaning required should be a regular wipe over with a lint-free cloth. Dirt accumulated during storage or periods of disuse may be removed with a semi-stiff brush. Particular attention should be paid to all the connection ports (1, 3, 6, 7, 9, 10, 11, 12, 13, 15, 16).

-
-
- | | |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAUTION! | <ol style="list-style-type: none">1. DO NOT use solvent- or oil-based cleaners, abrasives or wire brushes to remove accumulations of dirt as these damage the protective surfaces. To clean mechanical surfaces, use only detergent-based cleaners.
2. External electrical connection ports should only be cleaned with a semi-stiff brush or a clean, dry air supply. |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
-
-

Adjustments

Other than periodically checking the head fixings (8), no other adjustments are required.

Parts List

The following list includes the main assemblies and optional accessories. For further information regarding repair or spare parts, please contact Vinten Radamec or your local Vinten Radamec distributor.

For information on-line, visit our website at

www.vintenradamec.com.

Main assemblies

Vinten Radamec HPM options:

Vinten Radamec HPM (Vector 950E mounting)V3851-1009

Vinten Radamec HPM (Vision 250E mounting)V3851-1032

Associated assemblies or options

Power supply unitV3851-1031

Vinten Radamec PDAV4015-0002

PDA cableV3990-5036

Canon lens cable (20-pin virtual port).....V3980-5014

Fujinon lens cable (20-pin EXP port, encoder and serial).....V3980-5020

Canon/Fujinon lens cable (12-pin port).....V3980-5029

Head encoders cableV3980-5006

Vector 950E pan and tilt headV4004-0001

Vision 250E pan and tilt head3793-3

Adapter ring kit 3354-900SP

Quattro-SE pedestal, with large steering ring and moulded steering indicatorsV3851-0001

Quattro-SE pedestal, with large steering ring and rivet steering indicatorsV3851-0002