

# XPS-RC

## *XPS Remote Control*



**Newport®**  
Experience | Solutions

## USER'S MANUAL

### FIRMWARE V1.0.0

*For Motion, Think Newport™*

# Warranty

Newport Corporation warrants that this product will be free from defects in material and workmanship and will comply with Newport's published specifications at the time of sale for a period of one year from date of shipment. If found to be defective during the warranty period, the product will either be repaired or replaced at Newport's option.

To exercise this warranty, write or call your local Newport office or representative, or contact Newport headquarters in Irvine, California. You will be given prompt assistance and return instructions. Send the product, freight prepaid, to the indicated service facility. Repairs will be made and the instrument returned freight prepaid. Repaired products are warranted for the remainder of the original warranty period or 90 days, whichever occurs last.

## Limitation of Warranty

The above warranties do not apply to products which have been repaired or modified without Newport's written approval, or products subjected to unusual physical, thermal or electrical stress, improper installation, misuse, abuse, accident or negligence in use, storage, transportation or handling.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. NEWPORT CORPORATION SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE PURCHASE OR USE OF ITS PRODUCTS.

First printing 2005

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# EU Declaration of Conformity

## XPS



Year  mark affixed: 2011

### EC Declaration of Conformity

**The manufacturer:**

MICRO-CONTROLE Spectra-Physics,  
1 rue Jules Guesde ZI. Bois de l'Epine - BP189  
F-91006 Evry FRANCE

**Hereby declares that the product:**

Description: "XPS"

Function: Universal High-Performance Motion Controller/Driver

Type of equipment: Electrical equipment for measurement, control and laboratory use

- complies with all the relevant provisions of the Directive 2004/108/EC relating to electro-magnetic compatibility (EMC).
- complies with all the relevant provisions of the Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits (Low Voltage)

- was designed and built in accordance with the following harmonised standards:

NF EN 61326-1:2006 « Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements »

NF EN 55011:2007 Class A

NF EN 61000-3-2:2006 + A1:2009 + A2:2009 « Electromagnetic compatibility (EMC) – Part 3-2: Limits - Limits for harmonic current emissions »

NF EN 61010-1:2001 « Safety requirements for electrical equipment for measurement, control and laboratory use – Part 1: General requirements »

- was designed and built in accordance with the following other standards:

NF EN 61000-4-2

NF EN 61000-4-3

NF EN 61000-4-4

NF EN 61000-4-5

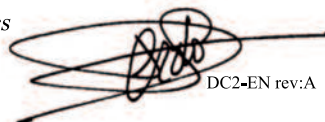
NF EN 61000-4-6

NF EN 61000-4-11

**Date : 10/06/2011**

Dominique DEVIDAL  
Quality Director

*MICRO-CONTROLE Spectra-Physics  
Zone Industrielle  
F-45340 Beaune La Rolande, France*



DC2-EN rev:A

# Preface

## Confidentiality & Proprietary Rights

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### Reservation of Title

The Newport Programs and all materials furnished or produced in connection with them ("Related Materials") contain trade secrets of Newport and are for use only in the manner expressly permitted. Newport claims and reserves all rights and benefits afforded under law in the Programs provided by Newport Corporation.

Newport shall retain full ownership of Intellectual Property Rights in and to all development, process, align or assembly technologies developed and other derivative work that may be developed by Newport. Customer shall not challenge, or cause any third party to challenge, the rights of Newport.

### Preservation of Secrecy and Confidentiality and Restrictions to Access

Customer shall protect the Newport Programs and Related Materials as trade secrets of Newport, and shall devote its best efforts to ensure that all its personnel protect the Newport Programs as trade secrets of Newport Corporation. Customer shall not at any time disclose Newport's trade secrets to any other person, firm, organization, or employee that does not need (consistent with Customer's right of use hereunder) to obtain access to the Newport Programs and Related Materials. These restrictions shall not apply to information (1) generally known to the public or obtainable from public sources; (2) readily apparent from the keyboard operations, visual display, or output reports of the Programs; (3) previously in the possession of Customer or subsequently developed or acquired without reliance on the Newport Programs; or (4) approved by Newport for release without restriction.

## Sales, Tech Support & Service

---

### North America & Asia

Newport Corporation  
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#### Service, RMAs & Returns

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### Europe

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e-mail: uk@newport.com

#### Technical Support

e-mail: tech\_europe@newport.com

#### Service & Returns

Tel.: +33 (0)2.38.40.51.55

## Service Information

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The user should not attempt any maintenance or service of the XPS-RC Remote Control beyond the procedures outlined in this manual. Any problem that cannot be resolved should be referred to Newport Corporation. When calling Newport regarding a problem, please provide the Tech Support representative with the following information:

- Your contact information.
- System serial number or original order number.
- Description of problem.
- Environment in which the system is used.
- State of the system before the problem.
- Frequency and repeatability of problem.
- Can the product continue to operate with this problem?
- Can you identify anything that may have caused the problem?

## Newport Corporation RMA Procedures

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Any XPS-RC Remote Control being returned to Newport must have been assigned an RMA number by Newport. Assignment of the RMA requires the item serial number.

## Packaging

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XPS-RC Remote Control being returned under an RMA must be securely packaged for shipment. If possible, reuse the original factory packaging.



# XPS-RC







## XPS Remote Control

### 1.0 Introduction

XPS-RC Remote Control is a wired remote graphic control panel for the XPS controller enabling computer-independent motion and basic system diagnostic. It has a 3.8" touch screen interface and 6 permanent push buttons.



The functions of the 6 permanent push buttons are the following:

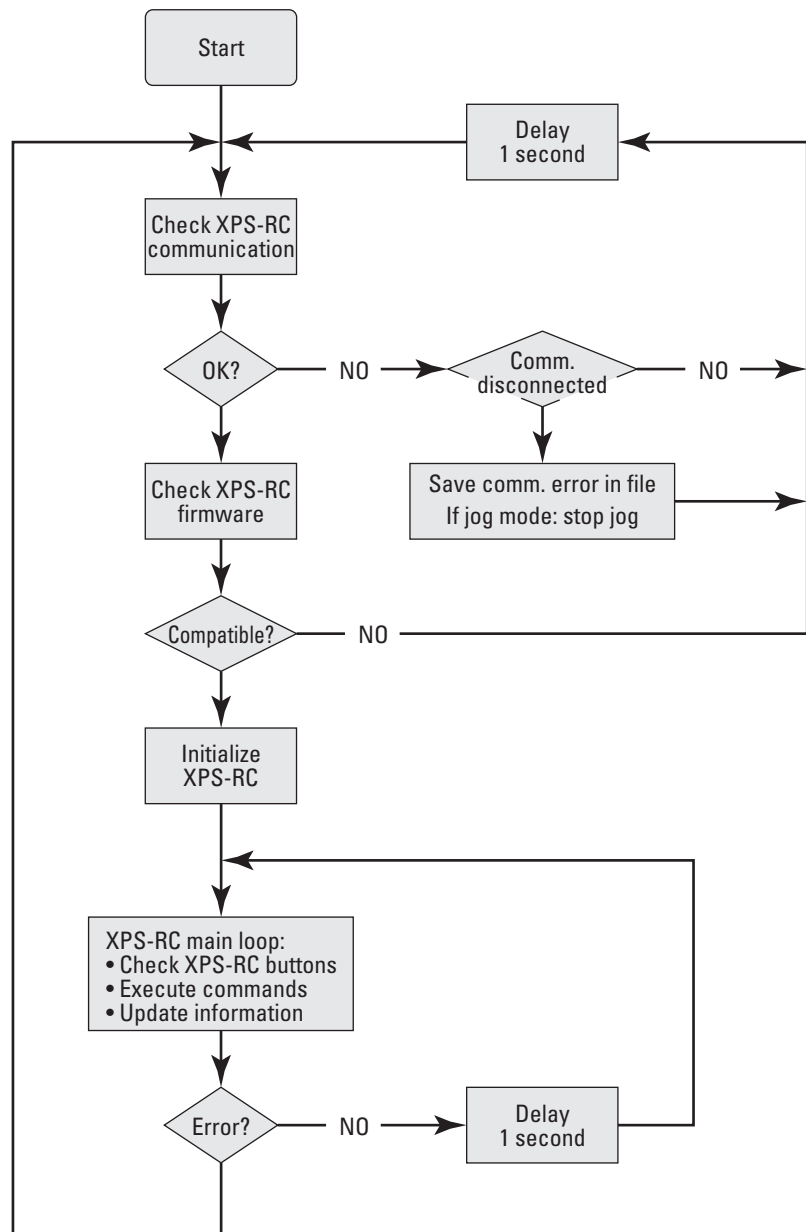
-  Kill all (Reset all groups of positioners and put them to NOT INIT. state).
-  Kill current group (reset the current group and put it to NOT INIT. state).
-  Change selected positioner up.
-  Change selected positioner down.
-  Return to previous screen.
-  Go to main screen.

The XPS-RC remote control controls the XPS through a combination of different screen, screen dependent touch field and the above mentioned permanent push buttons. The different screens are:

- **Initialization screen:** This screen appears when the RC is powered up and remains until the controller recognizes the remote control and starts communication with it.
- **POSITION screen:** Displays the current positions of all positioners, an error indicator for each positioner, an indicator for the selected positioner and the name of the selected positioner.
- **JOG screen:** Allows jogging a positioner.

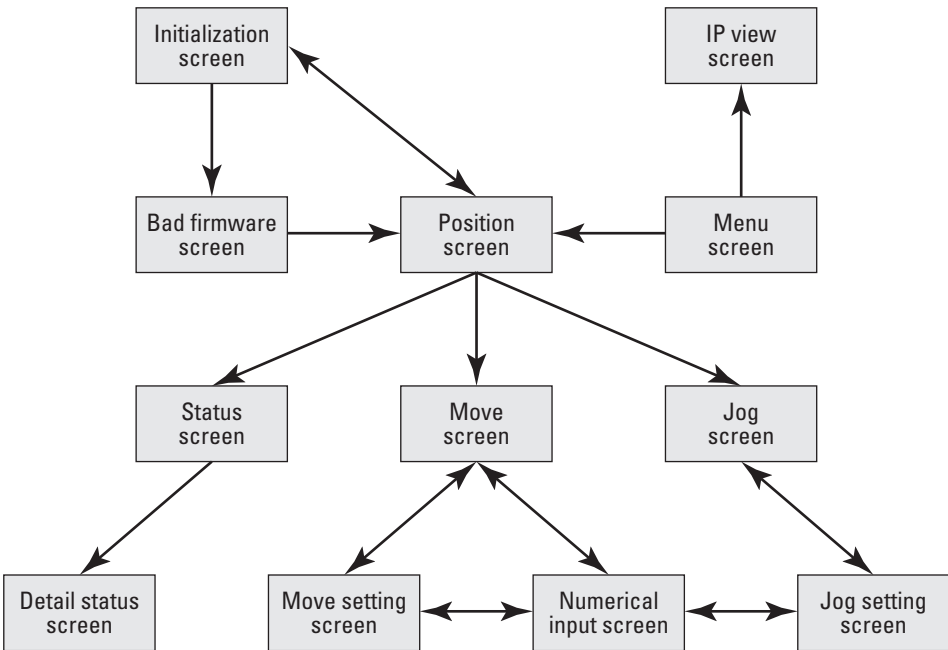
- **Move screen:** Allows moving a positioner to predefined positions and by incremental steps of various length.
- **JOG SETTINGS screen:** Allows setting a new value for the jog velocity.
- **MOVE SETTINGS screen:** Allows setting a new value for velocity and acceleration.
- **Main screen:** Allows choice between the POSITION screen and View IP Configuration screen (more options to come).
- **View IP configuration screen:** Displays the controller IP address, the subnet mask, the controller name and the DNS suffix (in the case of DHCP IP address).
- **STATUS screen:** Displays the status of the selected group and the error status of the selected positioner.

## 2.0 Startup and Error Recovery Process





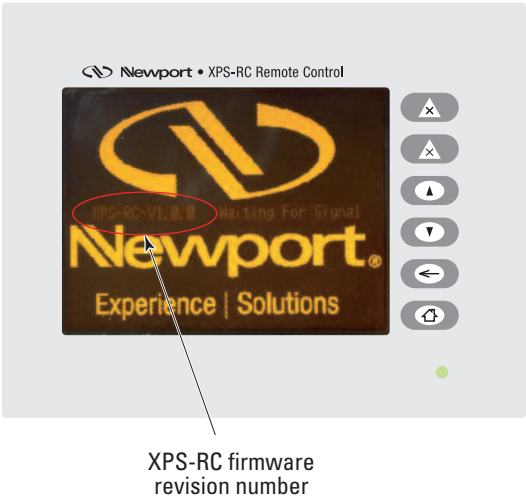
3.0 Remote Control Screen Tree



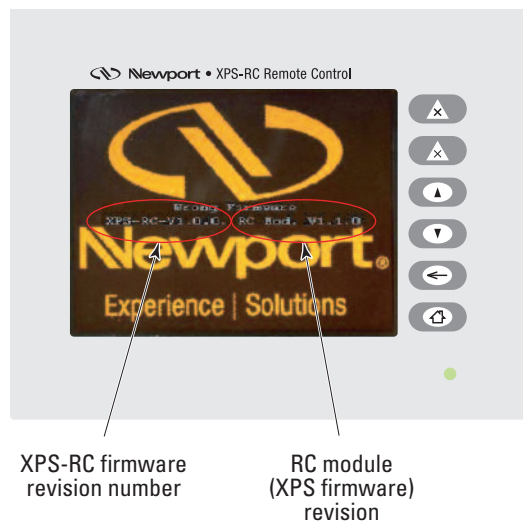
4.0 XPS-RC Screens

4.1 Initialization Screen

When the remote control is connected to the XPS controller, the following screen appears until the XPS starts communication with the XPS-RC.



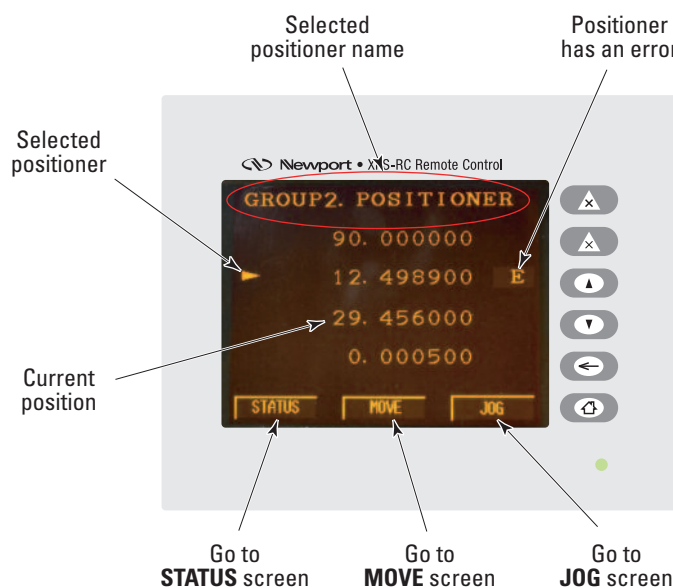
Once the XPS has checked the firmware compatibility of the connected XPS-RC, the following screen appears in case the XPS-RC's firmware is not compatible with the firmware of the XPS controller.



## 4.2 POSITION Screen

The POSITION screen is the default screen that appears when both firmware revisions are compatible.

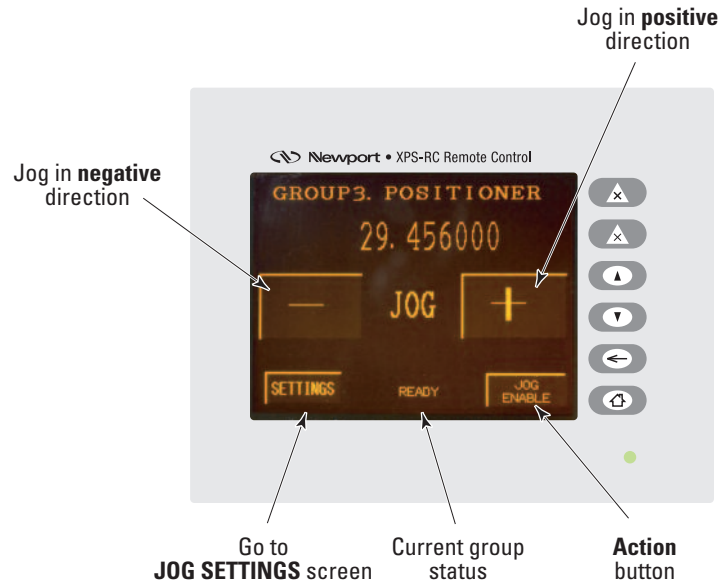
The displayed values are the current positions. Depending on the configuration of the XPS controller, the number of displayed positions varies from 1 to 8.



The XPS-RC remote control position display is limited to positions between -2147.483648 and 2147.483648. If the position to display is outside this range, the displayed value will be one of these limits.

### 4.3 JOG Screen

When the user presses the JOG button in the POSITION screen, the following screen appears:

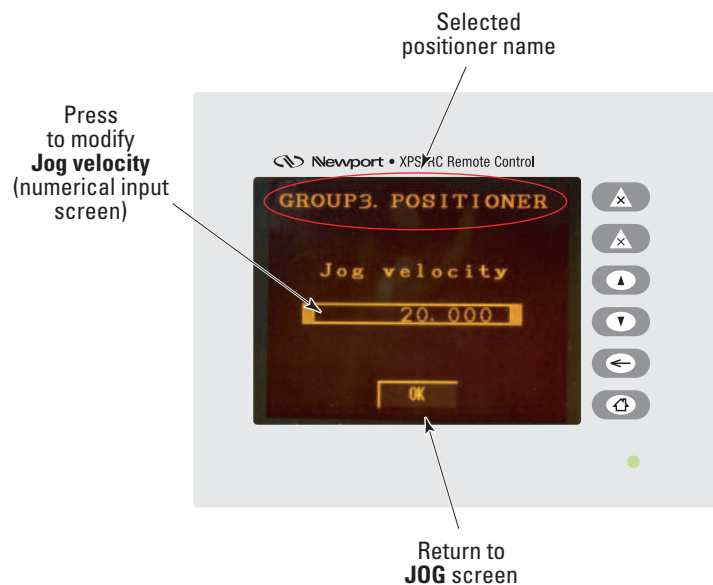


The Action button (JOG ENABLE on the screen shot) proposes an action depending on the current group status. For example if the current group status is NOT INIT., it suggests to initialize the group (INIT.). Refer to the group state diagrams in the XPS programmer's manual for detailed information.

The possible actions are: INIT., HOME, JOG ENABLE and JOG DISABLE.

The JOG + and JOG - buttons are only enabled when the current group status is JOG.

### 4.4 JOG SETTINGS Screen



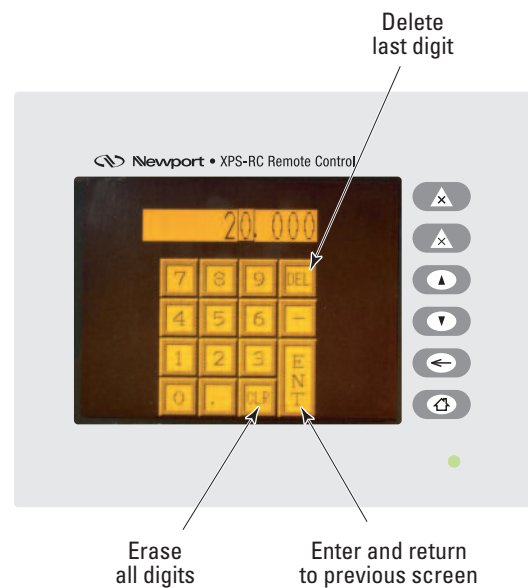
In the JOG SETTINGS screen, the current jog velocity is displayed. To change it, press the numeric value and enter the new value through the numerical input screen. When done, press OK to return to the JOG screen.

Changes to the jog velocity get only applied when the following conditions are true:

- The jog velocity does not exceed the XPS-RC maximum manageable velocity value ( $0.001 * 2^{32} = 4294967.296$ ).
- The jog velocity does not exceed the current selected positioner maximum velocity.
- The jog velocity does not exceed half of the current selected positioner maximum acceleration (to assure jog acceleration time (from 0 to jog velocity)  $\leq 0.5$  s).

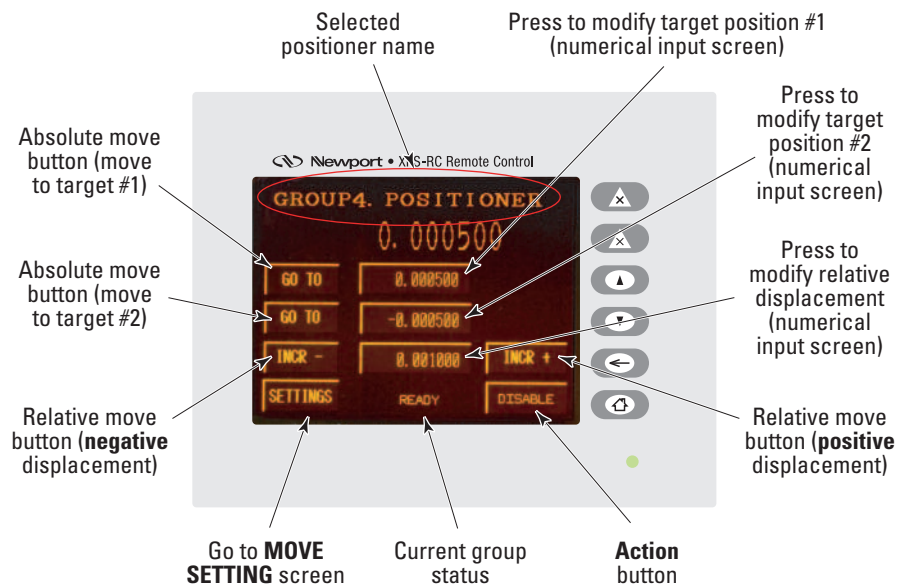
#### 4.5 Numeric Input Screen

This screen is used for setting new values, like position, velocity or acceleration.



#### 4.6 MOVE Screen

When the user presses the MOVE button in the POSITION screen, the following screen appears:





The Action button (JOG ENABLE on the screen shot) proposes an action depending on the current group status. For example if the current group status is NOT INIT. it suggests to initialize the group (INIT.). Refer to the group state diagrams in the XPS programmer's manual for detailed information.

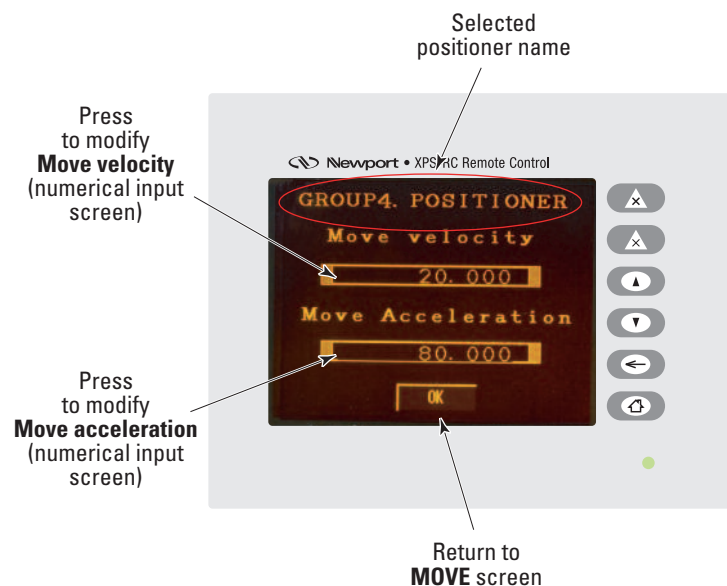
The possible actions are: INIT., HOME, JOG ENABLE and JOG DISABLE.

The GO TO, INCR + and INCR - buttons are only enabled when the current group status is READY. During a motion all buttons are disabled.

Changes to the displacement and target positions get only applied when the position value does not exceed the XPS-RC maximum manageable position value ( $10^{-6} * 2^{31} = 2147.483648$ ).

Furthermore, changes to the target position get only applied when the target position value stays in the zone limited by the current selected positioner minimum and maximum travel limits. If the new target position exceeds one of these limits, it will be automatically limited to the maximum/minimum addressable position.

#### 4.7 MOVE SETTINGS Screen



In the MOVE SETTINGS screen, the current move velocity and acceleration are displayed. To change any of them, press the desired numeric value and enter the new value through the numerical input screen. When changes are done press the OK button to return to the MOVE screen.

Changes to the Move velocity get only applied when the following conditions are true:

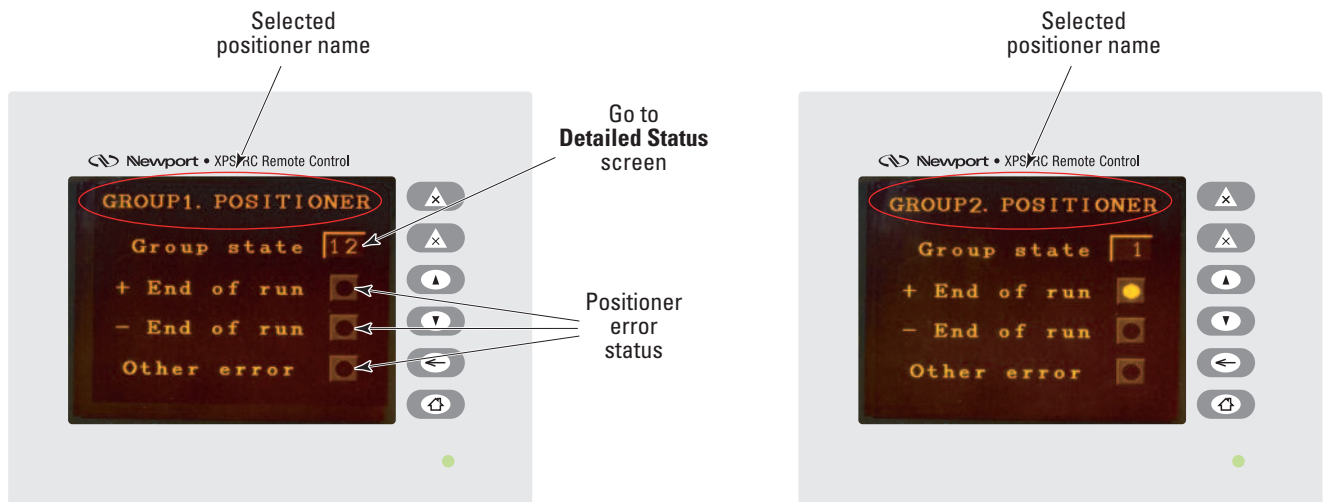
- The Move velocity does not exceed the XPS-RC maximum manageable velocity value ( $0.001 * 2^{32} = 4294967.296$ ).
- The Move velocity does not exceed the current selected positioner maximum velocity.

Changes to the Move acceleration get only applied when the following conditions are true:

- The Move acceleration does not exceed the XPS-RC maximum manageable acceleration value ( $0.001 * 2^{32} = 4294967.296$ ).
- The Move acceleration does not exceed the current selected positioner maximum acceleration.

#### 4.8 STATUS Screen

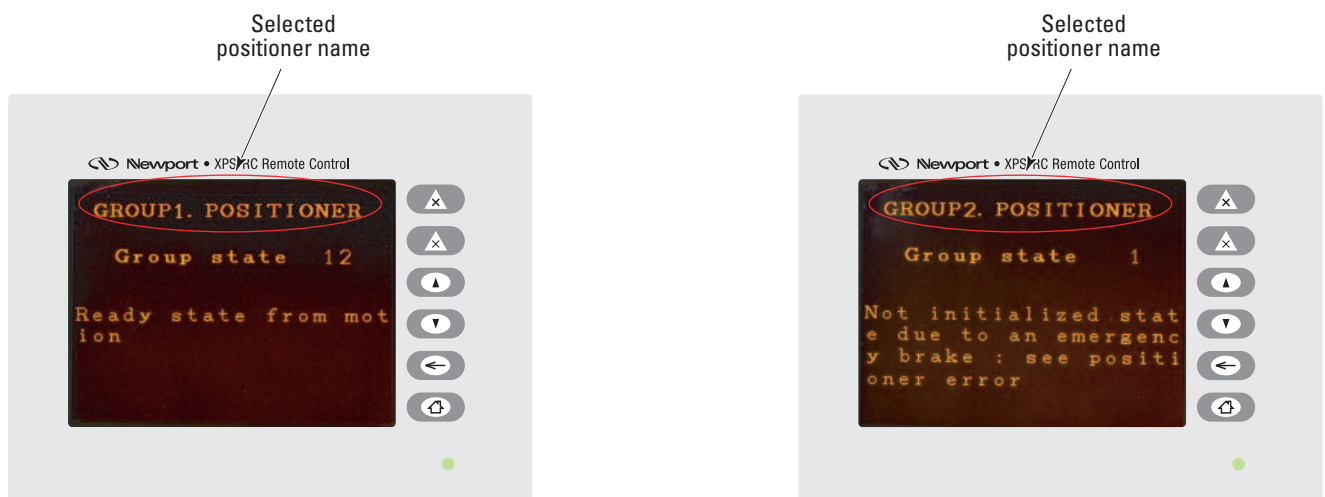
When the user presses the STATUS button in the POSITION screen, the following screen appears:



Three lines + End of Run, - End of Run and Other error show some of the possible positioner errors. In case of "Other error" further error debugging using the XPS software utilities is needed.

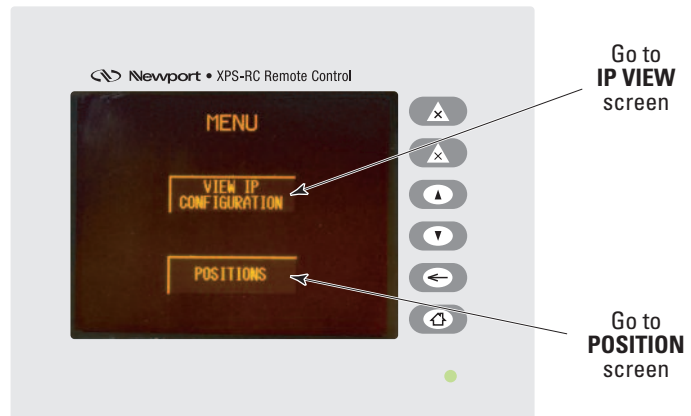
The Group state line displays the current group state number. To know its meaning, press directly on the displayed number to open the Detailed Status screen.

#### 4.9 Detailed Status Screen



#### 4.10 MENU Screen

This screen appears when pressing the "add Home symbol of F6 button".



Press on the POSITIONS button to open the POSITION screen, or press on the VIEW IP CONFIGURATION buttons for the IP VIEW screen.

#### 4.11 IP VIEW Screen

When the IP address of the controller is provided by a DHCP server (dynamic IP address), the following screen appears:



Otherwise, in case of a fixed controller IP address, the following screen appears:





## 5.0 Maintenance and Service

### 5.1 Enclosure Cleaning

The XPS-RC remote control should only be cleaned with a lightly dampened cloth or sponge with a soapy water solution. Do not use an acetone or alcohol solution, this will damage the finish of the enclosure.

### 5.2 Obtaining Service

The XPS-RC remote control contains no user serviceable parts. To obtain information regarding factory service, contact Newport Corporation or your Newport representative. Please have the following information available:

- Instrument model number (on front panel).
- Instrument serial number (on rear panel) or original order number.
- Description of the problem.

If the instrument is to be returned to Newport Corporation, you will be given a Return Number, which you should reference in your shipping documents.

Complete a copy of the Service Form as represented on the next page and include it with your shipment.

## Your Local Representative

Fax: \_\_\_\_\_

Return authorization #: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Serial #: \_\_\_\_\_

Reasons of return of goods (please list any specific problems): \_\_\_\_\_

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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