# CONEX-AGP

## *Agilis-P Controller with Encoder Feedback*


# Applet Manual

**V2.0.x**

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# CONEX-AGP
# Agilis-P Controller with Encoder Feedback

## 1.0 Introduction

### 1.1 Purpose

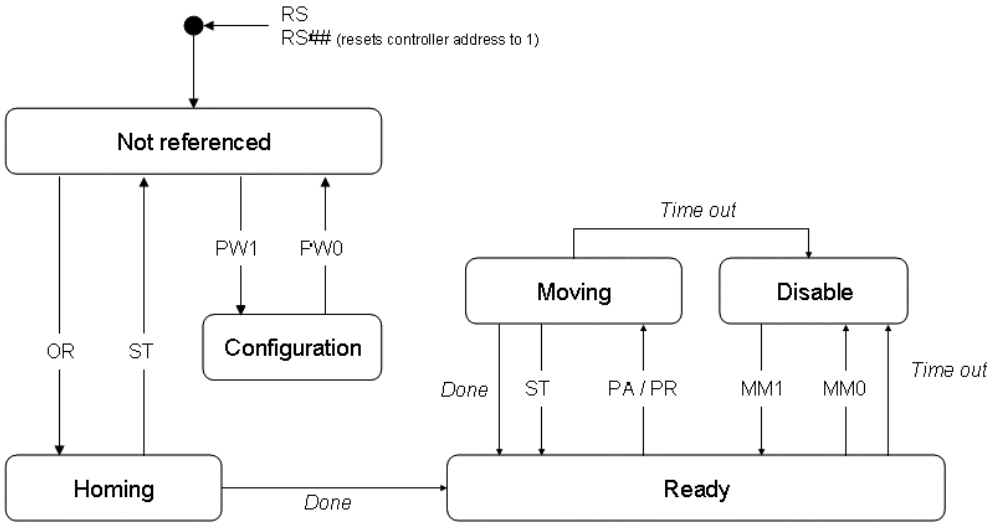
The purpose of this document is to provide instructions on how to use the CONEX-AGP Applet.

### 1.2 Overview

The CONEX-AGP Applet is a software application that has a graphical user interface (GUI) which allows the user to interact with the CONEX-AGP controller with encoder feedback. An applet can be built to run as an MDI child window executing along side zero or more other applets within the NStruct Instrument Manager application, or it can be built to run as a standalone single window application.

## 1.3 Controller State Diagram

The CONEX-AGP controller is defined by the following state diagram.




**Controller's LED display:**

NOT REFERENCED: If everything is OK then SOLID ORANGE.

NOT REFERENCED: If no parameters then SOLID RED.

CONFIGURATION: SLOW BLINKING RED.

READY: SOLID GREEN.

DISABLE: SLOW BLINKING GREEN.

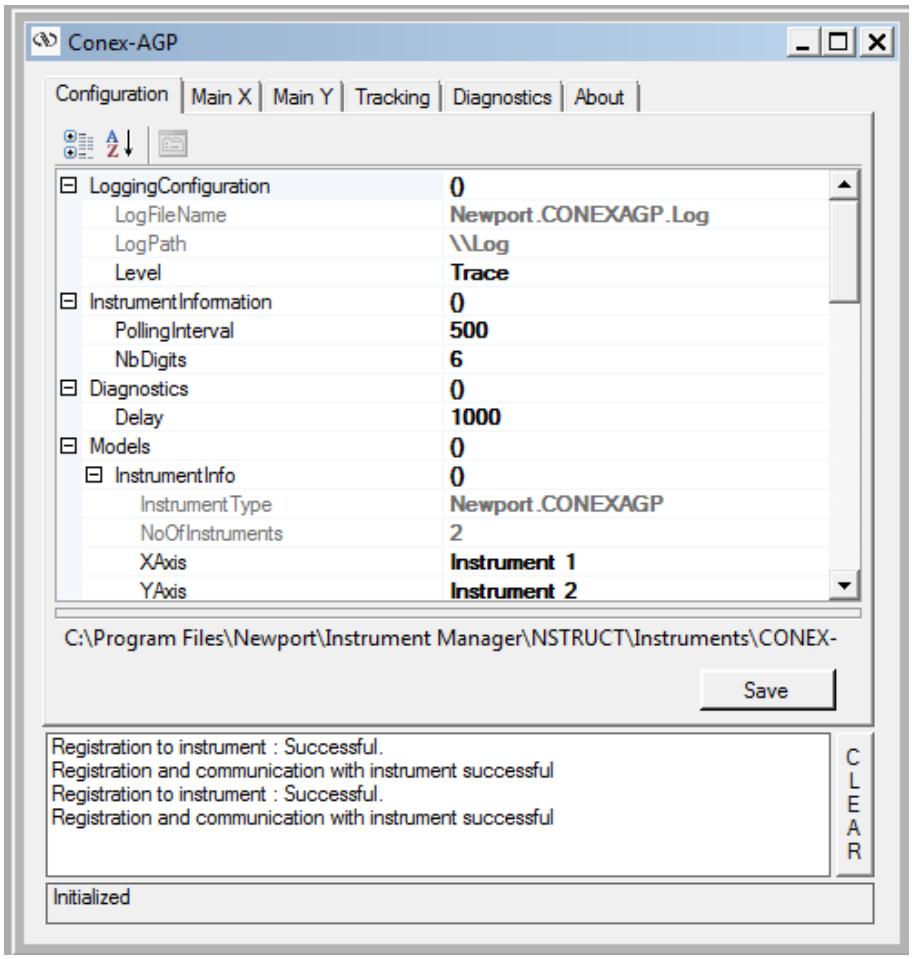
HOMING: FAST BLINKING GREEN.

MOVING: FAST BLINKING GREEN.

# 2.0 User Interface

## 2.1 Configuration

The Configuration tab allows the user to view and / or change information related to the logging configuration and the instrument settings. Read only values are displayed for the log file name and the log file path. The logging level may be changed to any of the settings in the drop-down list on the right hand side. Trace is the most detailed of the settings and when this setting is selected the applet logs everything. Critical Error is the least detailed of the settings and when this setting is selected the applet will only log errors that are defined to be critical.




The polling interval defines the number of milliseconds between each time the applet polls the CONEX-AGP for the latest information. The user may change the polling interval by entering a value.

The **Save** button allows to save the current settings to the configuration file.

## Configurable settings

The following table describes all the settings that can be change by the user.

| Parameter | Description | Values | Default |
|---|---|---|---|
| **LoggingConfiguration** | | | |
| Level | Logging level.<br>Trace is the most detailed of the settings and when this setting is selected the applet logs everything. Critical Error is the least detailed of the settings and when this setting is selected the applet will only log errors that are defined to be critical. | Trace<br>Detail<br>Equipment Message<br>Info<br>Warning<br>Error<br>Critical Errror | **Trace** |
| Permission | Access permission | A HexBinary | |
| **InstrumentInformation** | | | |
| PollingInterval | The polling interval defines the number of milliseconds between each time the applet polls the instrument for the latest information. | An Integer | **500** |
| NbDigits | Number of fractional digits after the decimal point. | An Integer | **6** |
| **Models\InstrumentInfo** | | | |
| XAxis | XAxis defines the instrument for X axis. | Instrument 1<br>Instrument 2<br>None | **Instrument 1** |
| YAxis | YAxis defines the instrument for Y axis. | Instrument 1<br>Instrument 2<br>None | **Instrument 2** |
| CommunicationChannel | The communication channel | USB | **USB** |
| **MemorizedPosition** | | | |
| MaxItem | MaxItem defines the maximum number of memorized positions by the applet. | | **5** |
| Positions | The list of the memorized position. The format is "Name of position #1;X position #1;Y position #1;Name of position #2;X position #2;Y position #2…" | | |
| **TrackingConfiguration** | | | |
| XDirection | The axis direction for X axis. | Normal<br>Inverse | **Normal** |
| YDirection | The axis direction for Y axis. | Normal<br>Inverse | **Normal** |
| StartedSensibility | The started sensibility defines the zoom level of the tracking panel after applet launching. | An Integer (1<20) | **4** |
| MinimumAmplitudeX | The minimum amplitude for X axis. | A Double | **0.001** |
| MaximumAmplitudeX | The maximum amplitude for X axis. | A Double | **20** |
| MinimumAmplitudeY | The minimum amplitude for Y axis. | A Double | **0.001** |
| MaximumAmplitudeY | The maximum amplitude for Y axis. | A Double | **20** |
| IncrementalStep | The maximum incremental step when the tracking is in incremental displacement mode. | A Double | **0.05** |
| **MouseConfiguration** | | | |
| EnterPositionTracking | Activate the tracking mode. | MouseButton/MouseEvent* | **Middle/Click** |
| ExitPositionTracking | Desactivate the tracking mode. | MouseButton/MouseEvent* | **Middle/Click** |
| SelectXaxis | Select/Unselect X axis. | MouseButton/MouseEvent* | **Left/Click** |
| SelectYaxis | Select/Unselect Y axis. | MouseButton/MouseEvent* | **Right/Click** |
| IncreaseSensibility | Increase the zoom level of the tracking panel. | MouseButton/MouseEvent* | **Middle/Wheel up** |
| DecreaseSensibility | Decrease the zoom level of the tracking panel. | MouseButton/MouseEvent* | **Middle/Wheel down** |
| MemorizeCurrentPosition | Save the current positions. | MouseButton/MouseEvent* | **Left/Double-Click** |

This table describes mouse parameters for the MouseConfiguration section.

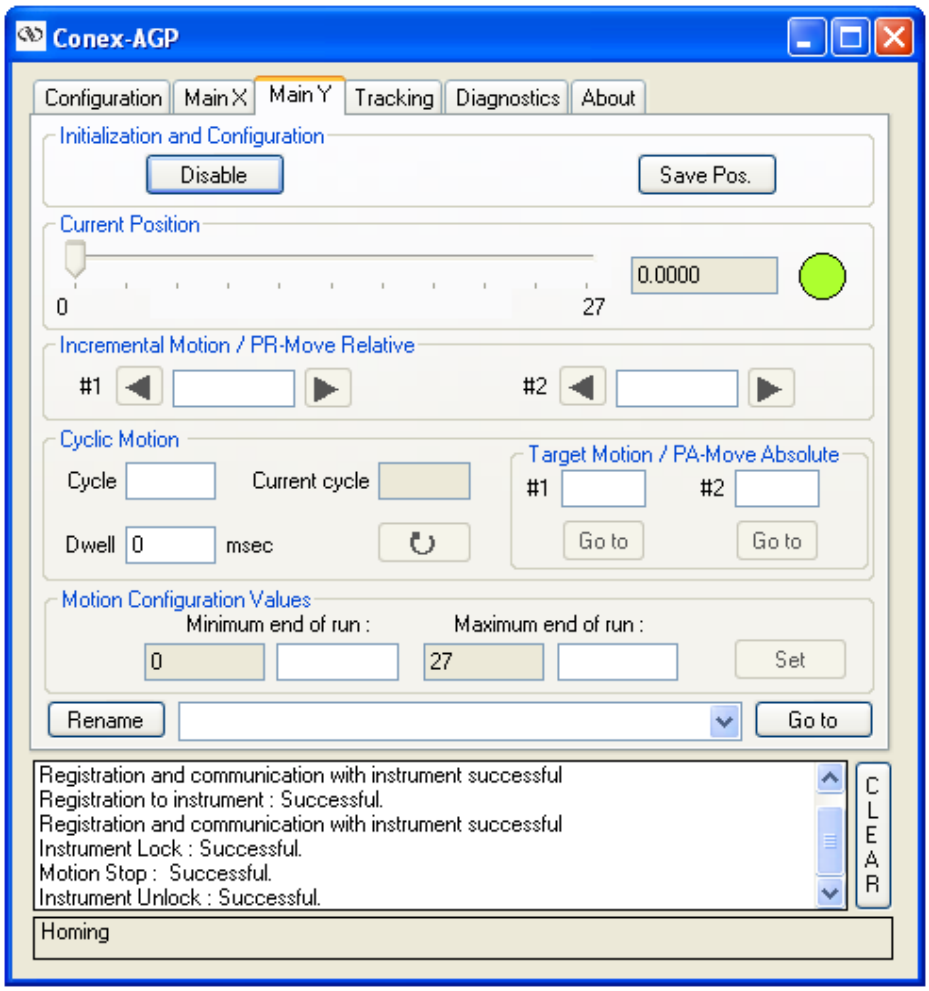
| *MouseButton/MouseEvent | | | |
|---|---|---|---|
| | The mouse parameters for triggering the action | | |
| MouseButton | The selected mouse button. | None<br>Left<br>Right<br>Middle<br>XButton1<br>Xbutton2 | |
| MouseEvent | The event mouse on the selected mouse button. | None<br>Click<br>Double-Click<br>Wheel Down<br>Wheel Up<br>Down<br>Up | |

## 2.2 Main

The Main tab displays the main controls in the applet like a virtual front panel. It is updated each time the polling interval timer expires.

One Main tab by axis:

1. Main X
2. Main Y




**“Initialization and Configuration”**

In the “Initialization and Configuration” area, the first button allows to execute the next enable command to change the controller status. To see the different controller states, refer to the controller state diagram. The second button “Save Pos.” allows memorizing the current positions (X and Y) in the combo box. As soon as a new position is memorized, this is displayed in the trace.

**“Current Position”**

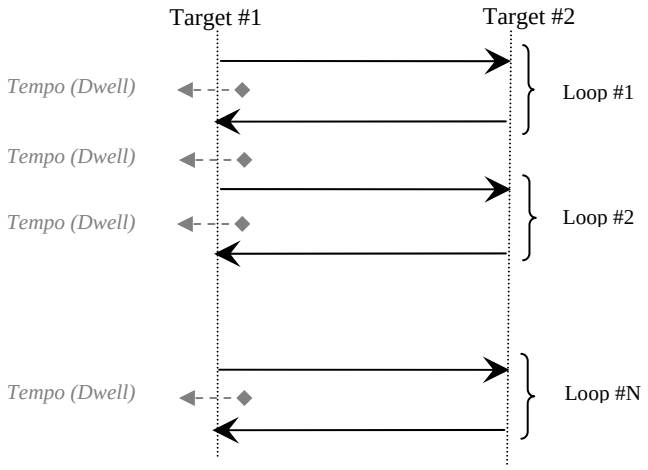
In the “Current Position” area, the current position X (or Y) is displayed in a text box and visualize in a slider. The slider limits are defined with the ends of run. A led shows the current controller state. When you move the mouse over the led, the controller state is displayed in an information balloon.

**“Incremental Motion / PR-Move Relative”**

In the “Incremental Motion / PR-Move Relative” area, two steps can be defined. For each step, a relative move can be performing in the negative direction or a positive direction.

**“Cyclic Motion” and “Target position / PA-Move Absolute”**

In the “Cyclic Motion” area, a motion cycle is configured with a number of cycles (Cycle) and a temporization time in milliseconds (dwell). The motion cycle gets the defined target positions from the “Target position / PA-Move Absolute’ area to perform the cycle.




In the “Target position / PA-Move Absolute” area, two target positions can be defined. The “Go to” button allows executing the absolute move to go to the specified target position.

**“Motion Configuration Values”**

In the “Motion Configuration Values”, the current ends of run are displayed in a disabled text box: “Minimum end of run” and “Maximum end of run”. These ends of run can be modified and saved with the “Set” button.

**Memorised positions**

The combo box allows memorizing the positions get by the “Save Pos.” button. Each of these positions can be renamed or deleted. To execute an abosulte move to go to one of these memorized positions, select one item of the combo box and click on “Go to” button. When the mouse moves over to the combo box, the positions of the selected memorized position are showed in an information balloon.

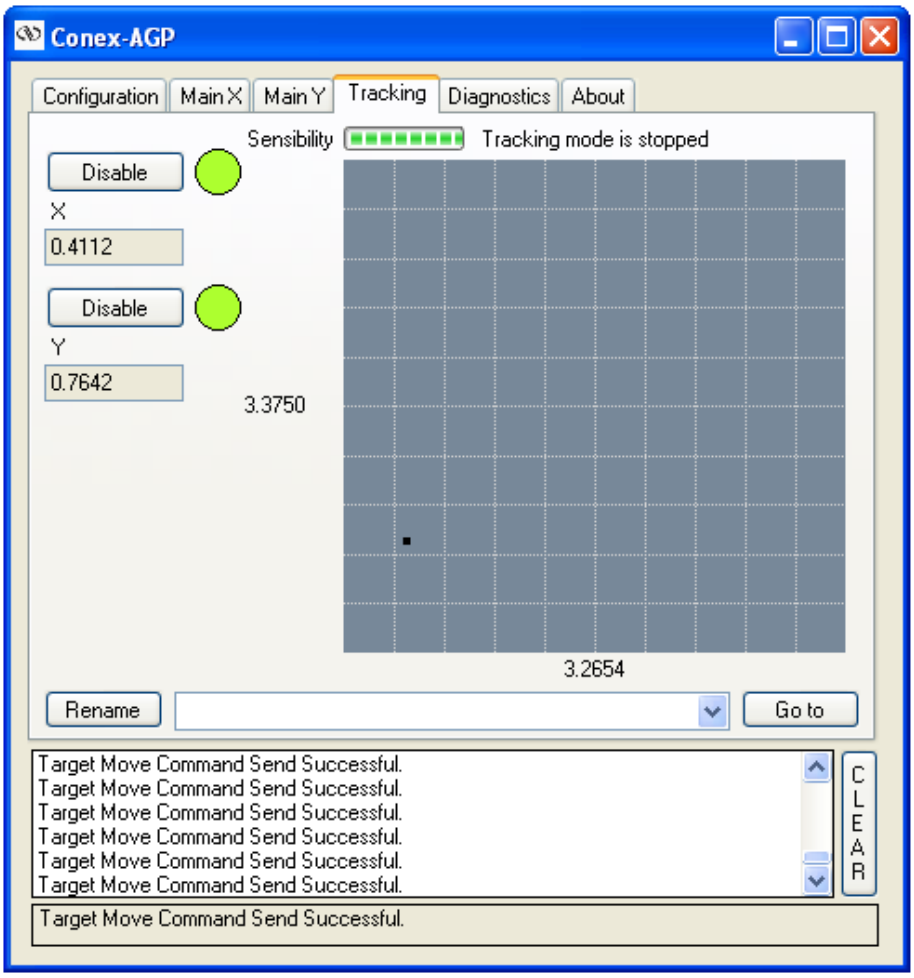
**Rename a memorized position:** Select an item of the combo box, edit the position name to change it and click on the “Rename” button to save the new position name.

**Delete a memorized position:** Select an item of the combo box, click right on the mouse and select the “Delete” menu to delete the selected memorized position.

## 2.3 Tracking

The Tracking tab allows entering in the position tracking mode. The tracking position mode uses the mouse.

**In the tracking mode, the cursor is confined in the tracking position area.**




The button allows executing the next enable command to change the controller status. Its name changes in relation to the controller state. To see the different controller states, refer to the controller state diagram.

A led shows the current controller state. When you move the mouse over the led, the controller state is displayed inside an information balloon.

Two text box allow displaying the current positions (X and Y)

The combo box allows memorizing the positions with a mouse double-click. Each of these positions can be renamed or deleted. To execute an abosulte move to go to one of these memorized positions, select one item of the combo box and click on “Go to” button. When the mouse moves over to the combo box, the positions of the selected memorized position are showed in an information balloon.

**Rename a memorized position:** Select an item of the combo box, edit the position name to change it and click on the “Rename” button to save the new position name.

**Delete a memorized position:** Select an item of the combo box, click right on the mouse and select the "Delete" menu to delete the selected memorized position.

## Tracking panel and mouse

The current position is represented by a black spot.

The amplitudes (X and Y) are defined with the ends of run.

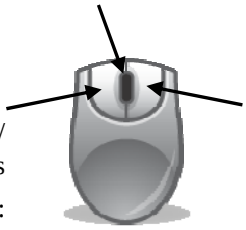
First click (middle mouse button) allows entering in the tracking mode and the mouse cursor position is attached to the current position. As soon as the tracking mode is activated, the cursor is represented by a **hand** and the CONEX-AGP goes to the TRACKING state. Next, each mouse move generates a displacement command. The second click (middle mouse button) exits the tracking mode.

The wheel button allows increasing or decreasing the sensibility.

A right double-click allows memorizing the current positions (X and Y) in the combo box. Each new memorized position is displayed in the trace.

## Default mouse configuration:

**One click**: Enter / Exit the tracking position mode.
**Roll up:** increase zoom factor
**Roll down:** decrease zoom factor



**One click**:
Select **X** axis only / Reselect XY axes

**Double click**:
Memorise the current position

**One click**:
Select **Y** axis only / Reselect XY axes

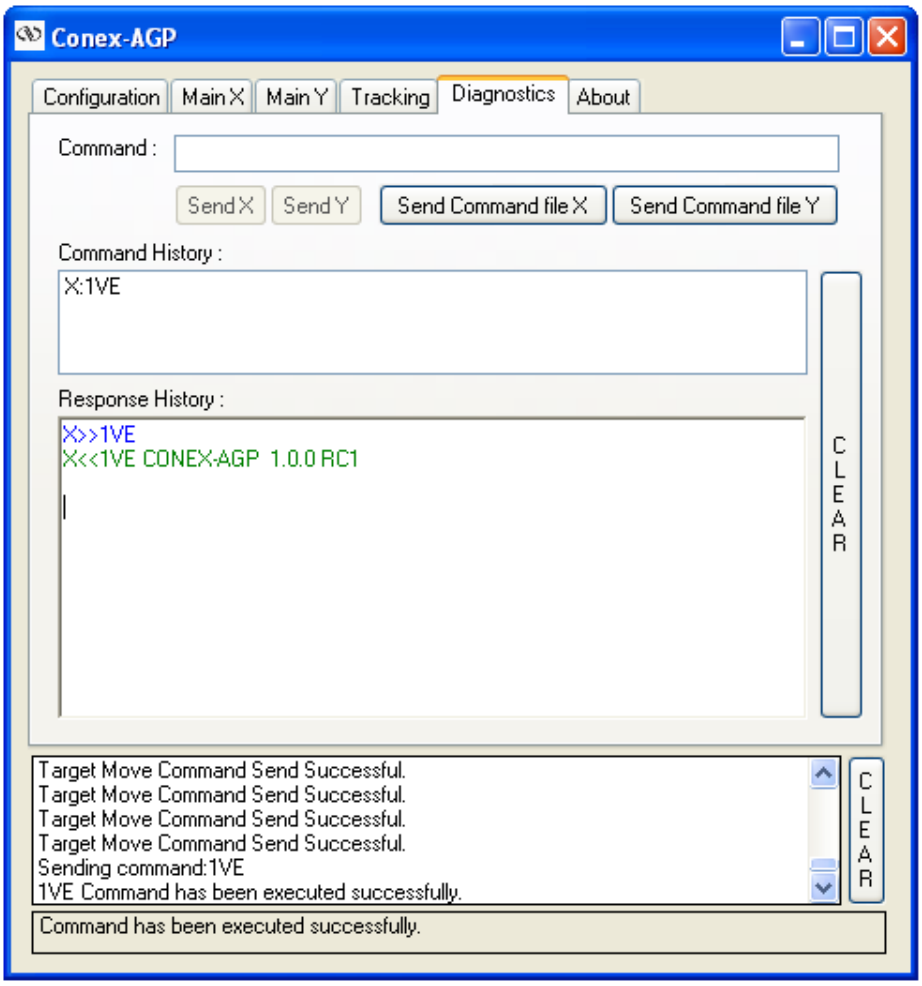
**NOTE**

**The mouse configuration can be modified in the "Configuration" tab.**

## 2.4 Diagnostics

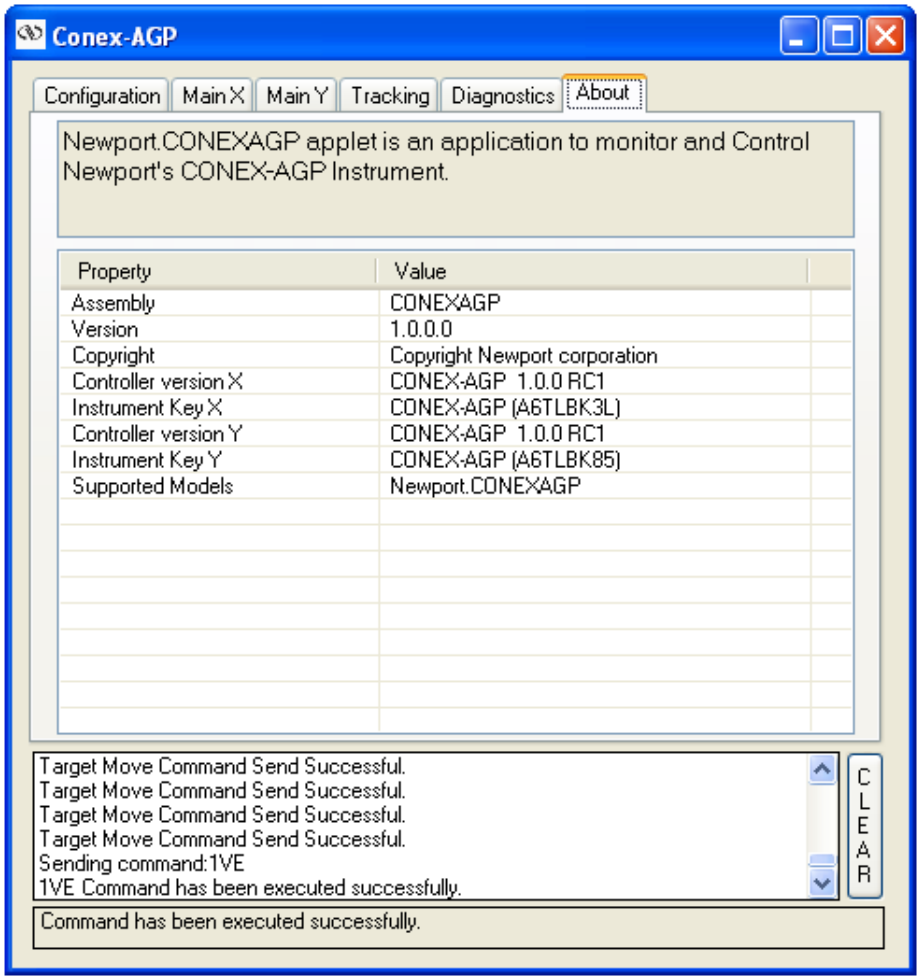
The Diagnostics tab allows the user to enter instrument commands and to view the history of commands sent and responses received. This list of commands and the syntax of each command can be found in the user's manual for the instrument.

A file of commands can be sent line by line to the instrument with the "Send Command file" button.



## 2.5 About

The About tab allows to display information about the applet and the connected instrument. It displays the applet name, version, and copyright information. It also displays the instrument model, instrument key (serial number) and firmware version for X and Y axes.



# Service Form

**Your Local Representative**

Tel.: _____

Fax: _____

Name: _____

Company: _____

Address: _____

Country: _____

P.O. Number: _____

Item(s) Being Returned: _____

Model#: _____

Return authorization #: _____
*(Please obtain prior to return of item)*

Date: _____

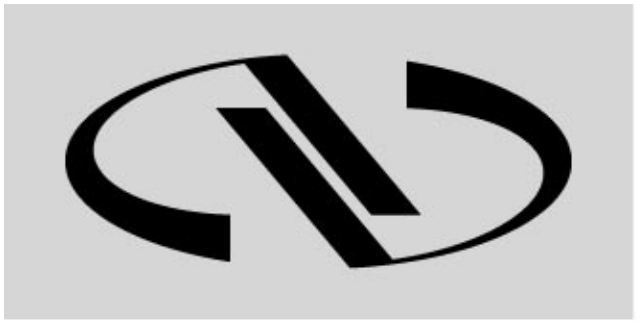
Phone Number: _____

Fax Number: _____

Serial #: _____

Description: _____

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



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