OPERATING INSTRUCTIONS FOR

REMOTE ACCESS TO

GC PRO – HMI
Copyright © 2011 Teledyne Analytical Instruments

All Rights Reserved. No part of this manual may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any other language or computer language in whole or in part, in any form or by any means, whether it be electronic, mechanical, magnetic, optical, manual, or otherwise, without the prior written consent of Teledyne Analytical Instruments, 16830 Chestnut Street, City of Industry, CA 91749-1580.

Warranty

This equipment is sold subject to the mutual agreement that it is warranted by us free from defects of material and of construction, and that our liability shall be limited to replacing or repairing at our factory (without charge, except for transportation), or at customer plant at our option, any material or construction in which defects become apparent within one year from the date of shipment, except in cases where quotations or acknowledgements provide for a shorter period. Components manufactured by others bear the warranty of their manufacturer. This warranty does not cover defects caused by wear, accident, misuse, neglect or repairs other than those performed by Teledyne or an authorized service center. We assume no liability for direct or indirect damages of any kind and the purchaser by the acceptance of the equipment will assume all liability for any damage which may result from its use or misuse.

We reserve the right to employ any suitable material in the manufacture of our apparatus, and to make any alterations in the dimensions, shape or weight of any parts, in so far as such alterations do not adversely affect our warranty.

Important Notice

This instrument provides measurement readings to its user, and serves as a tool by which valuable data can be gathered. The information provided by the instrument may assist the user in eliminating potential hazards caused by his process; however, it is essential that all personnel involved in the use of the instrument or its interface, with the process being measured, be properly trained in the process itself, as well as all instrumentation related to it.

The safety of personnel is ultimately the responsibility of those who control process conditions. While this instrument may be able to provide early warning of imminent danger, it has no control over process conditions, and it can be misused. In particular, any alarm or control systems installed must be tested and understood, both as to how they operate and as to how they can be defeated. Any safeguards required such as locks, labels, or redundancy, must be provided by the user or specifically requested of Teledyne at the time the order is placed.

Therefore, the purchaser must be aware of the hazardous process conditions. The purchaser is responsible for the training of personnel, for providing hazard warning methods and instrumentation per the appropriate standards, and for ensuring that hazard warning devices and instrumentation are maintained and operated properly.

Teledyne Analytical Instruments, the manufacturer of this instrument, cannot accept responsibility for conditions beyond its knowledge and control. No statement expressed or implied by this document or any information disseminated by the manufacturer or its agents, is to be construed as a warranty of adequate safety control under the user’s process conditions.
# Table of Contents

Table of Contents ........................................................................................................ iii  
List of Figures .............................................................................................................. v  
Introduction .................................................................................................................. 1  
  1.1 Objective ........................................................................................................ 1  
  1.2 Overview ........................................................................................................ 2  
Operational Theory ..................................................................................................... 3  
Configuration ............................................................................................................. 4  
  3.1 Settings to Enable HMI VNC Server ...................................................... 4  
  3.2 Settings to Enable VNC Viewer on IPHONE ...................................... 6  
  3.3 Settings to Enable VNC Viewer on ANDROID PHONE ................... 7
List of Figures

Figure 1-1: Communication between HMI and Phone 1
Figure 1-2: VNC Protocol Communication via Internet 2
Figure 2-1: Server Access by the Client on Internal and External Networks 3
Figure 3-1: Password Authentication for Changing System Settings 4
Figure 3-2: Network Details for Server 5
Figure 3-3: Password Settings for VNC Server 5
Figure 3-4: VNC Client Configuration Screen on IPHONE 6
Figure 3-5: VNC Client Authentication on ANDROID PHONE 7
Figure 3-6: VNC Client Control Settings Screen on ANDROID PHONE 8
Introduction

1.1 Objective

The objective is to access and control the GC PRO touch screen display HMI5070TH using smart phones like IPHONE & ANDROID PHONES.

Figure 1-1: Communication between HMI and Phone
1.2 Overview

The operating instruction manual is prepared to define the set of procedures to access & control the GC PRO HMI on the smart devices like IPHONE, IPAD, ANDROID PHONES and NOTEBOOKS etc. The remote connection is achieved by the VNC client protocol applications available for smart phones.

Figure 1-2: VNC Protocol Communication via Internet
Operational Theory

The VNC Server is enabled on HMI5070TH display with Ethernet cable connected to its LAN port. The VNC client/viewer on the internal network can use the private IP address of the server, but the VNC client/viewer on the external network need to use the public IP address. However if private network has to be accessed by the VNC client from the external network, “port forwarding”/“net mapping” can be used as demonstrated in the following block diagram.

Figure 2-1: Server Access by the Client on Internal and External Networks
Configuration

3.1 Settings to Enable HMI VNC Server

To use the VNC connection in the GC PRO HMI, VNC server must be enabled in HMI5070TH display.

1. Apply power to the HMI and make sure that Ethernet cable is connected to LAN port.
2. Click the icon in the lower right-hand corner of the screen.
3. Select the Setting icon on the right side of the task bar.
4. Enter the password (default password is 111111).

![Password Authentication for Changing System Settings](image)

5. Click the Network tab and note the HMI IP address. Ensure the correct IP address, subnet mask & Gateway details are entered.
Remote Access to HMI

Teledyne Analytical Instruments

6. Select the rightmost tab “VNC Server tab” on the system settings. This tab can be hard to see. It appears as a tiny sliver beneath the firmware tab.

7. Click VNC login password to set the password used to login to the GC PRO HMI from the VNC application.
8. Select Start VNC.
9. Click Apply then click OK.
3.2 Settings to Enable VNC Viewer on IPHONE

1. Make sure Wi-Fi is enabled. The small pie icon must be shown in the status bar.
2. Run VNC client viewer application (current setup is tested with Mocha VNC lite).
3. Go to Configuration.

4. Enter the IP address of the HMI5070TH in the VNC IPHONE setting (Point 1).
5. Make sure that server port is 5900.
6. Insert the password (Point 3) of VNC server HMI5070TH.
7. Go back to VNC menu and click on connect button.
3.3 Settings to Enable VNC Viewer on ANDROID PHONE

The setup is tested using androidVNC client viewer. Install and open android-vnc-viewer on the ANDROID PHONE. In the connection configuration menu make the following settings.

1. Insert the Nickname (Optional)
2. Insert the VNC server password assigned in the HMI display (Check the Keep checkbox to store the password for future use).
3. Insert the IP address of VNC server HMI5070TH

![Figure 3-5: VNC Client Authentication on ANDROID PHONE](image)

4. Make sure that server port is 5900
5. Choose the Color Format
6. Local mouse pointer draws a small square cursor at the mouse position.
7. Force full-screen bitmap avoids breaking the large display into smaller tiles.
8. Click on Connect.