CENTRO 8

CONTROL CENTER
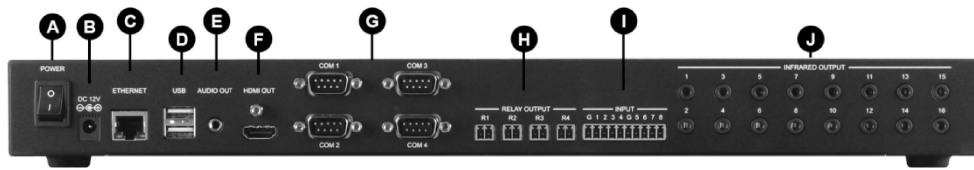
OPERATIONAL / PROGRAMMING MANUAL

Overview:

Please observe basic electrical safety precautions whilst installing and operating this equipment.

Acceptable Use:

The Centro processor has been designed for use in general purpose automation applications. It is **not** suitable for use in applications where any failure of the equipment to operate might lead to property damage, injury or death.

Physical Connections (Rear):

- A: Power On/Off switch
- B: 12V DC Power connection
- C: 10/100 Ethernet network connection
- D: USB Connections
- E: Stereo Audio output (line level)
- F: HDMI video output
- G: 4 x RS232 COM ports
- H: 4 x low voltage relays
- I: 8 x volt free inputs
- J: 16 x individually addressable Infra-Red outputs

Getting Started – powering up

The first step is to power on the unit, with the Ethernet cable plugged in to your wired network, and the HDMI lead connected to a display screen. When the unit has powered up, you should see a DemoPad logo, together with the unit's IP address and subnet mask displayed.

First Time Use – Configure the processor

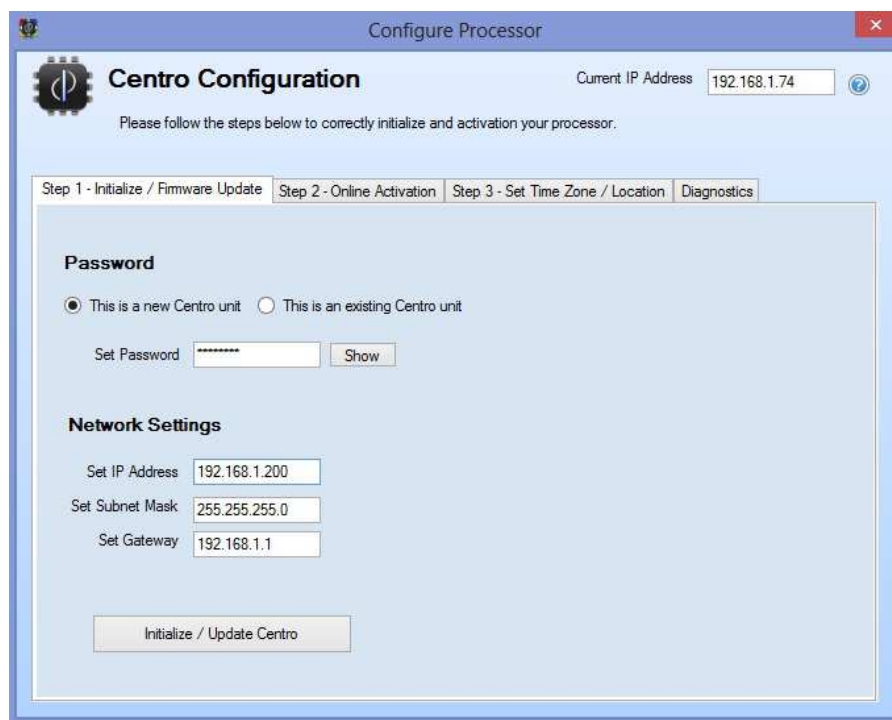Load up the DemoPad designer software, and select 'New Processor' from the 'Devices' menu, shown below:

A new procesor will be listed in the project navigation tree view. You may rename the processor if you wish.

The processor will initially boot up using DHCP to obtain its IP address. You will need to change this to a static IP address, enter the IP address you would like the unit to have in the top menu. Also, if you wish to make use of the processor's internal memory for system variables, tick the box 'Store Checked Variables Centrally'. Then click the 'Configure' option.

Configuration Steps

Step 1 – Initialize the Centro:

Here you should enter a password for the Centro. If this is the first time a connection has been made to the Centro, tick 'This is a new Centro unit' and enter a password for the unit. If you are updating the Centro's firmware, tick 'This is an existing Centro unit' and enter the password used previously.

Ensure the 'Set IP Address' / subnet mask / gateway information is correct, and enter the Centro's current IP address (displayed on the HDMI display screen) in the top right of the window. Now click 'Initialize / Update Centro'. The software will now attempt to connect to the Centro's current IP address, set the password (if a new unit) and alter the network settings from DHCP to the static settings you have entered. It will also upload the latest Centro firmware automatically to the device, and reboot the processor.

When the unit reboots, the new static IP address should appear on your display screen.

Step 2: Activate the Processor

Before the Centro will operate, you are required to verify the unit online. No personal information is collected during this process. Simply click the activation button to continue. You must be connected to both the Centro processor, and the internet for this procedure to be successful. Once completed, you will not need to perform this operation again, unless you attempt to upload a different project to this unit. In that case, simply re-activate the processor using the same button. There are no limits to the number of projects which can be loaded onto a Centro processor, but each time a new project is loaded to a specific Centro, the project needs to be activated online with the new Centro connected.

Step 3: Time Zone

Set the time zone and the latitude / longitude of the Centro. This is used for detemining the sunrise / sunset times, and for correct operation of timed events.
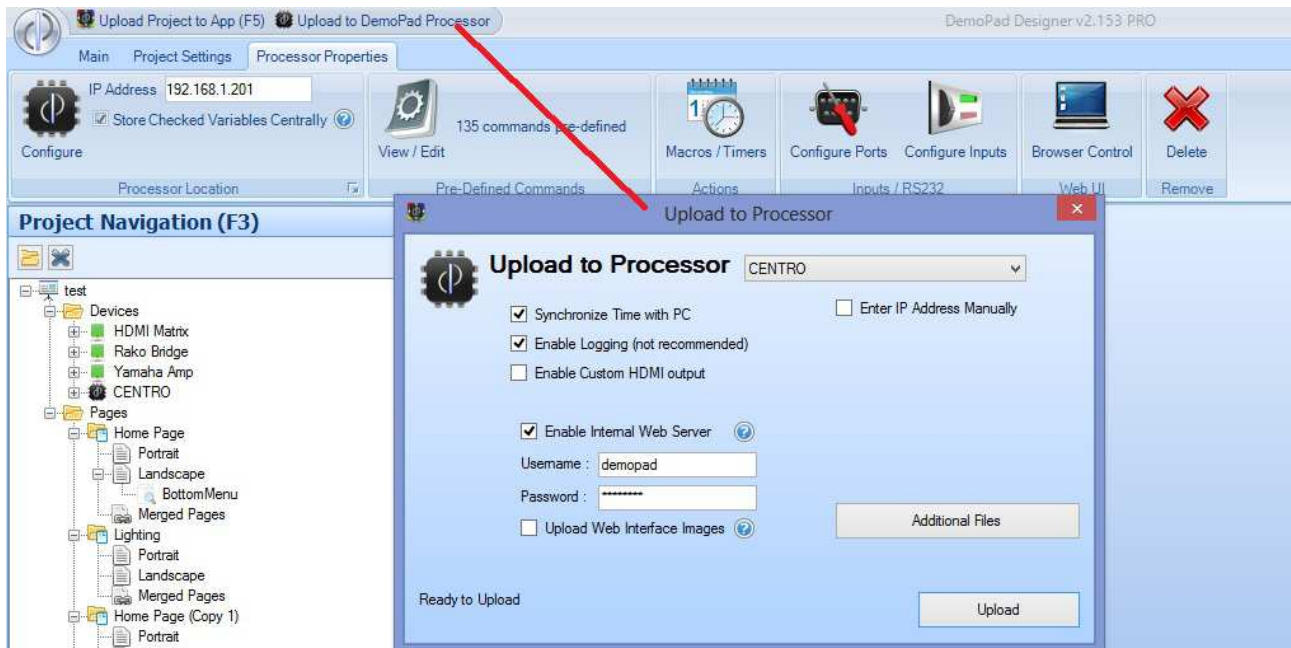
Uploading to the Processor

In the same way that a project must be uploaded to the iOS/Android app, the project must also be uploaded to the CENTRO processor. This process is similar to uploading to the app – click on 'Upload to DemoPad Processor', select the processor (entering the IP address manually if required) and click 'Upload'.

Synchronize Time with PC: ensures that the time of the Centro matches your PC's time. Note this will not alter the time zone of the processor.

'Enable Logging' should only be selected if you are asked to do so by a DemoPad support team member.

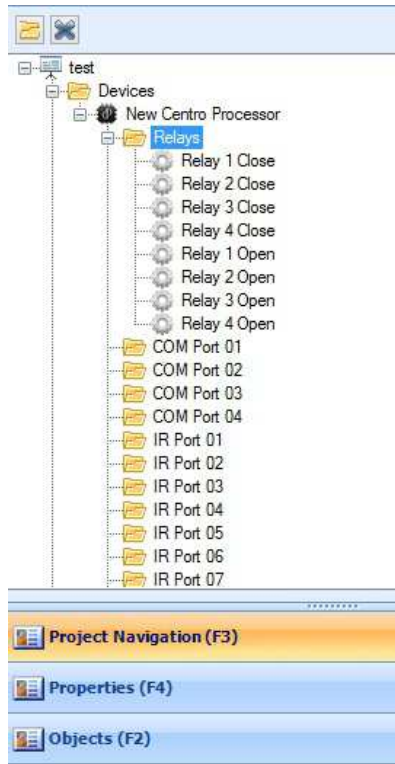Enable Custom HDMI output: changes the default image displayed out of the HDMI output to one of your choice – by using the Additional Files to upload images & including a 'launch web page' action in a processor macro to specify the file to display.

If you are not using the built in Web Server for the user interface or file storage, you can disable this. If you are using the web user interface, you can decide whether to upload all the web inteface images. Turning this option off will speed up the upload process.

Basic Operations:

Using the Relay Outputs

When the processor is added to the system, several commands and command folders are automatically added to the unit (see below). Relay commands are automatically added, and you can insert these commands onto your GUI buttons in the normal way, and upload to test.

Sending IR Commands – Ports 1-16

To send an IR command, similar to the COM ports, simply place the IR command into the corresponding "IR Port xx" folder within the pre-defined commands folder. The folder that the command is in determines which IR port it will emit from.

You can enter IR commands in any of the following formats, and the software will convert automatically for use with the processor:

Pronto Raw Hex (codes start with "0000")
Global Cache format (codes start with "sendir")
Keene Electronics format (codes start with "K")

Configuring the COM Ports

From the processor menu, choose 'Configure Ports' and enter the appropriate information for each COM port.

This information should match the equipment you are attempting to control – please refer to the

equipment manual for details.
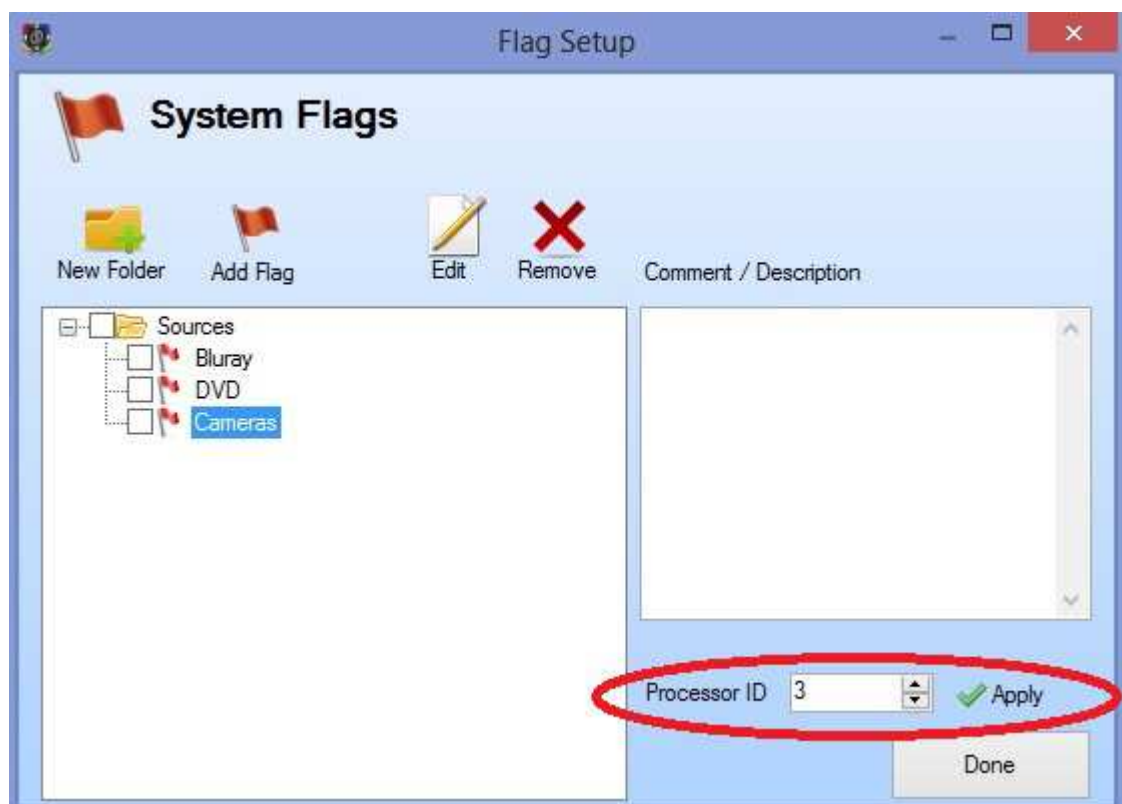
Sending Data out of the COM Ports

To send specific commands out of a particular COM port, simply add the command in the pre-defined commands module to the appropriate COM port folder. Be sure to include any command suffix characters that may be required, eg \x0D\x0A.

It is also important to configure the COM ports to ensure that the baud rate etc matches the equipment you are attempting to control.

Handling Flags / Numbers / Labels Centrally

The CENTRO processor is capable of storing some, or all, of your project variables (flags, numbers, labels) centrally. This means that whenever one of the variables change, all connected devices are notified of the change. YOU MUST TICK EACH FLAG / NUMBER / LABEL THAT YOU WISH TO BE STORED CENTRALLY.
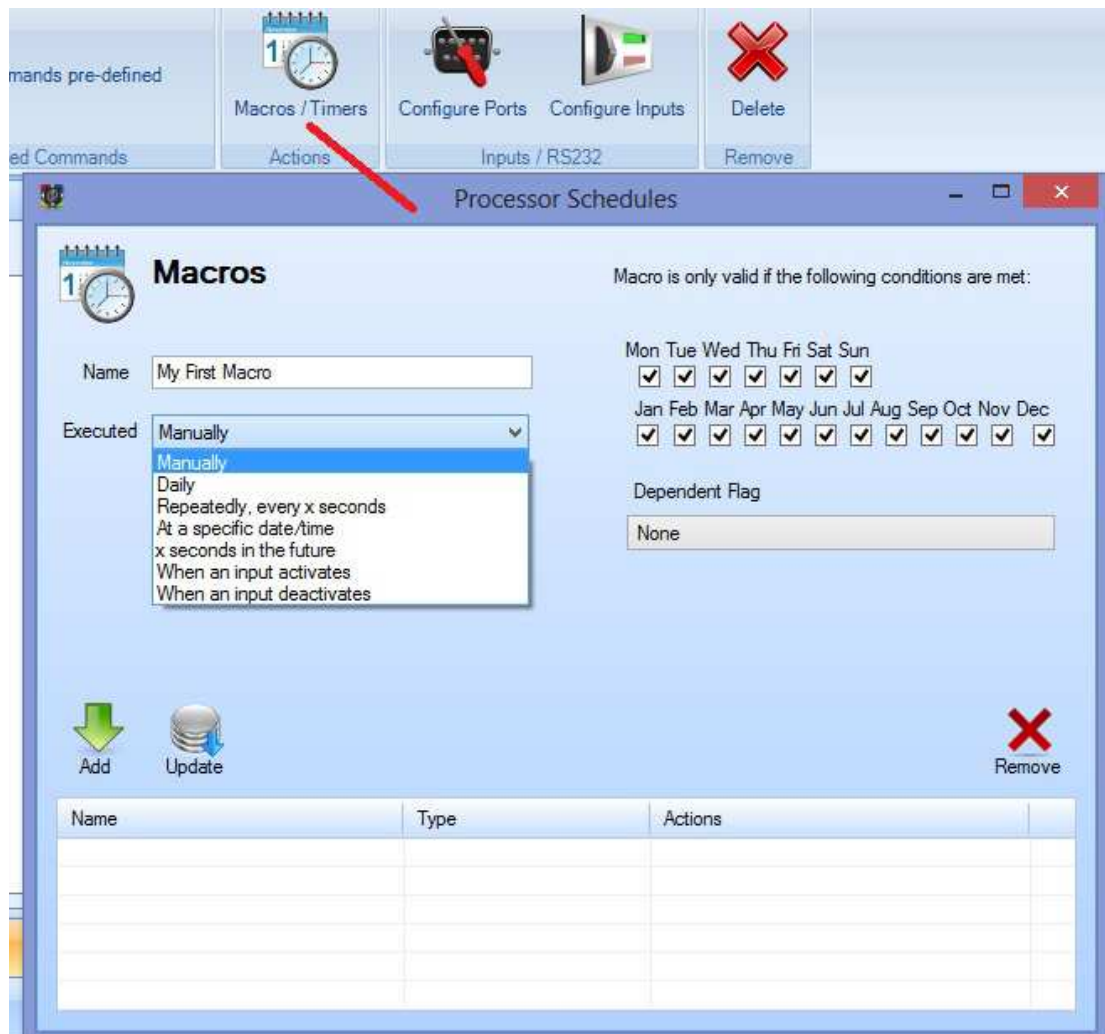
In order to ensure that variables (perhaps spread over several iOS/Android projects) are kept in sync, all variables require a unique 'Processor ID' (see below).

MACROS / TIMERS

The CENTRO is capable of executing sets of commands (macros) at certain times, either automatically, or in response to requests from iOS/Android devices.

To create a new macro, select the Macros/Timers option and give the macro a name. Macros can be activated (use the drop down list to select):

Manually
For example when a button is pressed on an iOS/Android device)

Daily
If a macro executes every day, you can choose a specific time each day (eg 3pm), or specify a time to execute before or after the sunrise or sunset – for example 30 minutes before sunset each day.

Repeatedly, every x seconds
You can specify that a macro executes continuously every x seconds, minutes, or hours – from the time the project is uploaded to the processor.

At a specific date/time
You can specify a certain date and time that a macro will execute. The macro will only execute once.

X seconds in the future

This is a delayed manual macro activation – for example a button might be pressed on an iOS/Android device, then 30 minutes later the macro will be executed. This allows a greater time delay than inidividual actions provide in the action editor.

When an input activates / deactivates
The CENTRO unit has 8 voltage free digital inputs – to which you can connect all types of sensors, switches etc. When one of these inputs activates or deactivates, a macro can be executed. Typical uses are a PIR detector which might activate a light, or sound file.

Macro Conditions

Once you have entered a name for the macro, and the macro type, you can also decide on which days / months the macro will execute (this setting will not affect your ability to manually activate a macro).

Similarly, you can specify a Flag which must be ON or OFF for the macro to execute.

Macro Actions

Once you have added the macro, it will appear in the list of macros. Double click the macro in the list to enter the macro actions, in a similar fashion to adding actions for UI buttons.

Playing Sounds

The CENTRO has a stereo audio line out which can be used for playing sound files, in a similar way to the apps. Simply choose 'play a sound' in the actions of a macro, and select the sound file from your computer. This will automatically be uploaded to the CENTRO when you perform the project upload.

Altering the HDMI output

The CENTRO is capable of changing the content which is shown on the HDMI output. This content is shown using the built in web browser of the unit. Simply use the 'launch web page' action type within a macro, and enter the filename of the image you would like to show (and ensure the file exists on the Centro using the Additional Files section of the upload screen). This action type, like any other, can be part of a timed macro, so the content can change periodically if you wish.

Further Information

Further information can be obtained from www.demopad.com