NEPTUNE

The Neptune 6×2 Communicator is a 6 Input 2 Output low-cost SMS / GPRS communicator specifically designed For monitoring and control.

Features and Specifications

· 6 Digital input's and 2 relay output's
· SMS to up to 6 numbers.
· GPRS or SMS to Base Control Room number.
· Each Input can send two messages one for High and one for Low.
· Inputs can be configured normally High or Normally Low.
· Each input can have a debounce time from 1 second to 9999 seconds.
· Each Input can have a retrigger delay of from 1 Second to 9999 Seconds
· Inputs can be flagged to send to specific numbers. E.G Input 3 to only Cell Number 2.
· Each output can be programmed to switch On / Off or Pulse at various times of the day.
· Relay output pulse time can be set.
· All functions can be controlled by SMS as well as the timers.
· 10 to 16 VDC low current operation.
· Drop call relay operation from up to 400 numbers.
· Daily drop call log available via GPRS
· Google Earth Map position request available.

Email: michael@fineautomation.com Phone: 063 729 6838

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1. Important Information

- The Neptune can operate on either a **prepaid** or **contract SIM card.**
- When using a **prepaid SIM card**, an SMS showing the remaining balance will be sent every **1 to 30 days** as set by you.
- When using a **contract SIM card** the Neptune will send a **SMS health test** every **1 to 30 days** as set by you.
- The Neptune can handle **input voltages** from **0 to 30 VDC**.
- The Neptune has **2 relay or transistor outputs** that can either be commanded to **change state, latching or pulse non-latching** by an SMS to the Neptune or by programming the internal timers.
- The **relay output** is a **dry contact** rated at **1 Amp**. It can also handle **220 VAC at 500 mA**.

2. Applications of Neptune

Email: michael@fineautomation.com Phone: 063 729 6838

3. Inputs

3.1. Messaging Delay

- The **inputs** of the Neptune can be set to only **react after a pre-set delay time** of **between 1 and 9999 seconds.** This is useful for when a delay is needed between when the input is received and the message is sent.

- *For example, if the messaging time is set to 5 seconds, then a system will only send an SMS 5 seconds after the input has been received.*

3.2. Retrigger Delay

- The retrigger delay will **stop multiple messages from being sent** if the **input** should **constantly be changing state**. Once the input has changed and a message has been sent, then all further changes on this input will be **ignored** for the set period of time.

- The input retrigger delay can be set from **0001** (no retrigger delay) to **9999 seconds** delay.

- *For example, if you had a motion detector attached to the input and have set the retrigger delay to 0300 (5 minutes), the input will send a message when the detector is activated the first time, but should there be continuous movement and the detector is continuously activated, the input will ignore these changes for 5 minutes. Any changes in the input after 5 minutes will result in another message being sent.*

Messages and Settings

- Each input can **send 2 messages**, one for when it goes **high** and one for **low**.

- If you need only **one message**, for example only send message when the input goes high, the set all the flags of the other to **00000000**.

- The **flags** can be used so that **inputs only send messages to specific numbers**. For example, input 3 will send messages only to cell phone number 2.

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4. Outputs

4.1. Messages and Timers

- The Neptune **has 2 relay or transistor outputs** that can either be commanded to change state, **latching or pulse non-latching** by an **SMS** to the Neptune or by **programming** the internal timers.
- The open, closed or pulsed **messages can be programmed**.
- Each output has **2 closed, 2 open and 2 pulsed times** that can be programmed. Once programmed these times will operate the relays everyday including weekends and holidays.
- Relay output is a **dry contact change over** that is rated at **1 Amp.** This relay can also handle **220 VAC at 500 mA**.
- Also **available with hi-power transistor output** to drive large relays.

5. Battery Report

- The Neptune can send a message if the **battery or power goes below or above a set value.**
- The **default** is set to send **a low battery message at 10.8 VDC** and will send a **battery OK message if the voltage reaches above 12.5 VDC**.
- The **message can be changed** to anything you want.
- The **low and high voltage levels can be set to any value** required.
- The Neptune will operate from **9 VDC to 20 VDC** and must be supplied with at least **2 Amps** for the GSM peaks.
- A **power supply or charger with a battery** is needed.

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6. Drop Call Operation

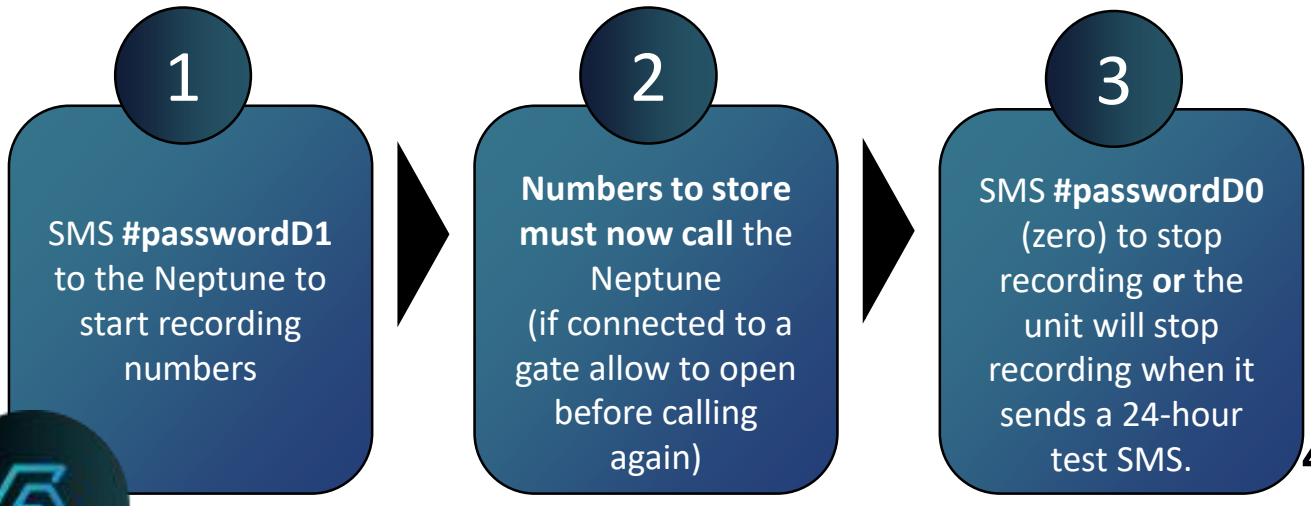
- The Neptune also has a **dial in drop call function** where up to **400 numbers** can be programmed into the unit. If any of those **recognized numbers call** the Neptune it will **activate relay one** to pulse.
- On a drop call the **Neptune will not SMS back to any number.**
- If a **GPRS number** is programmed into the Neptune it will **store all drop call numbers and times** and GPRS them back to the GPRS Server number at **11:00 PM each night** for record purposes. You can then email these records to whoever you need, whenever you like.

7. Programming

- There are **2 methods** of **programming** the drop call number into the Neptune if using for drop call gate operation.

7.1. Method One

- In this method the Neptune will **on receipt of an SMS Command, start to record all numbers calling it** and **if connected to a gate it will open the gate** on the drop call. All these numbers will then be stored in the Neptune.
- The **default password is 4321**. This can be changed if required.



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7.2. Method Two

- Numbers can also be added to the Neptune through the use of an SMS. Please see below instructions to add and delete numbers.
- The **default password is 4321**. This can be changed if required.

Add One Number

#passaddnum"+27831234567"

*NOTE: Take note of the ” at the beginning and end of the message and do not enter a ; at the end of the message

Add More Than One Number (Up To Six)

#passaddnum"+27831234567;+27831234567;+27821234567"

*NOTE: Take note of the ” at the beginning and end of the message and do not enter a ; at the end of the message

Delete One Number

#passdelnum"+27831234567"

*NOTE: Take note of the ” at the beginning and end of the message and do not enter a ; at the end of the message

Add More Than One Number (Up To Six)

#passdelnum"+27831234567;+27831234567;+27821234567"

*NOTE: Take note of the ” at the beginning and end of the message and do not enter a ; at the end of the message

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7.3. Programming Sheet

- Programming is done over the air (SMS) or via an EEPROM programmer and free software.
- Free programming is available for small quantity users from the manufacturer.
- Once installed with a working SIM card the Neptune will automatically communicate with the manufacturer's control Room.
- To Program the Neptune please call: 063 729 6838

Neptune Commands. #4321 is the default password.

Function Description	Function Char
Request Gprs Base Sms Base and SMSC numbers	#4321I
Request Cell 1 Cell2 Cell3 Cell 4 cell 5 cell 6	#4321J
Request Passwords Units Own number	#4321K
Request GPRS settings	#4321M
Request Gprs Attach Status	#4321G?
Set Gprs as main method of comms with SMS fallback	#4321G1
Set SMS as the only Method of Comms Default xxxxx	#4321G0
Request Health Rep time / Batt volts	#4321E
Request The status of Inputs 1 thu 4	#4321a
Request The Status of inputs 5 and 6	#4321b
Request Status of the Outputs	#4321R
Report Timer Values of Outputs 1 and 2	#4321*
Request Signal strenth	#4321T
Request Product Id and Software Version	#4321v
Output 1 Closed	#4321A1
Output 1 Open	#4321A0
Output 1 Pulsed	#4321A9
Output 2 Closed	#4321B1
Output 2 Open	#4321B0
Output 2 Pulsed	#4321B9
Airtime Request	#4321Z
Erase All Dropped Caller Numbers	#4321Y
Request Date and Time	#4321t
Start to store drop calls	#4321D1
Stop Drop call Storage default xxxxx	#4321D0
Inputs ON default xxxxxx	#4321O
Inputs OFF	#4321P
Log On xxxxx	#4321L1
Log Off Default xxxxxx	#4321L0
Get Lat and Long xxxxxx as per format for internet only works when GPRS is Used.	#4321F

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