Neptune JF02 SMS GPRS Communicator.

Features and Specifications.

- 6 Digital inputs and 2 relay outputs
- 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.

The Neptune can operate on Pre Paid or Contract SIM cards and when used on Pre Paid will SMS balance daily or can be set to SMS balances every from 1 to 30 days.
If Contract SIM is used the Neptune will SMS a Health Test also settable from every 1 to 30 days.

INPUTS MESSAGE AND FUNCTIONALITY PROGRAMMING.

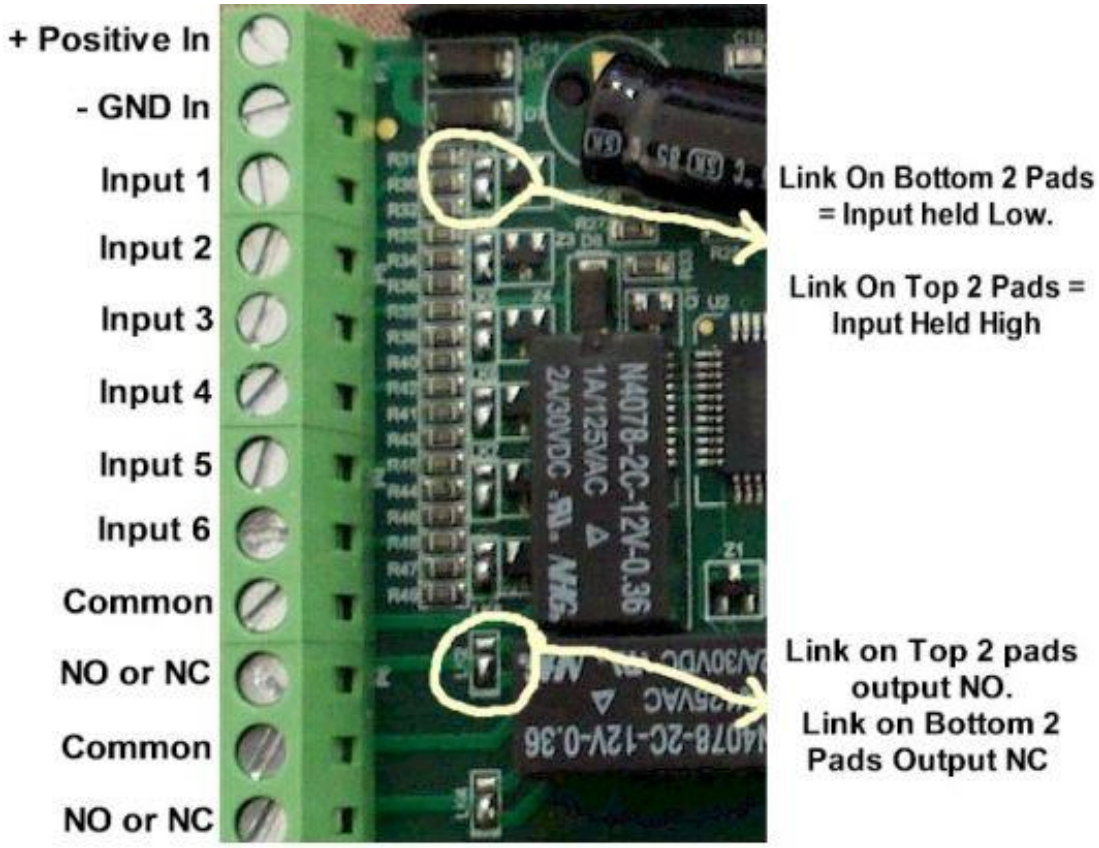
Inputs can handle 0 to 30 VDC
A Low is anything under 1 VDC and a High is anything above 3 VDC.

INPUT DEBOUNCE DELAY.
The inputs can be set to only react after a preset debounce time of between 1 and 9999 seconds, This is useful for when a delay is needed before the message is sent E.G Mains on and Off.

INPUT RETRIGGER DELAY.
The Inputs Retrigger delay can be set from 0001 which is no retrigger delay to 9999 seconds retrigger delay. The Retrigger delay is a delay that will stop multiple messages from being sent if the input should constantly change state. Once the input has changed and the Message has been sent then all further changes on this input will be ignored for the set period.

I.E. if you connect a wired Passive infra red detector to the input and set the time delay to 0300 = 5 minutes, the input will send the message when the passive is activated the first time but should there be continuous movement and the passive is activated continuously then the input will ignore the changes for 5 minutes, any change after the 5 minutes will result is another message been sent and the 5 minute timer once again stopping messages from being sent.

Using solder links the Inputs of the Neptune can be set to be normally high and have to be pulled down to send a message or normally low and then the input must be pulled high to send a message.



Input Messages and settings.
Each input can send 2 messages, one for when it goes high and one for low, If only one is needed E.G Panic then the other is programmed with the Flags all set to 00000000.

Using the Flags Inputs can be flagged to send to specific numbers. E.G Input 3 to only Cell Number 2.

Battery Report.
The Neptune can send a message if the battery or power goes below or above a set value, the value is normally set to send a low battery at 10.8 VDC and will send a battery OK if the voltage Is above 12.5 VDC. The Message can also be changed to any text. Battery Laag etc. Also the Voltages can be programmed to any Low and High Voltage.

The Neptune will operate from 9 VDC to 20 VDC and must be supplied with at least 2 Amps for the GSM peaks, A good Power supply or charger with Battery is needed.

OUTPUT TIMERS and MESSAGES.
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 rated at 1 Amp this relay can also handle 220 VAC at 500 mAmps.
Also Available with Hi Power Transistor Output to drive Large Relays.

DROPPED CALL RELAY OPERATION.
The Neptune also has a dial in drop call function where up to 400 numbers can be programmed into the unit and if any one of those numbers calls the Neptune and the number is recognized the Neptune will activate relay one to pulse. This can be used to open gates and doors ETC.

On a drop call the Neptune will not SMS back to any number, however if a GPRS number is programmed into the Neptune it will store all drop call numbers and their times and GPRS them back to the GPRS Server number at 11 PM each night for record purposes. These records can then be emailed every day or on the 1st and 15th of the Month.

When using the Neptune for Dropped call Gate operation there are now 2 methods of programming the drop call number into the Neptune.
The Neptune will on receipt of an SMS Command start to log / 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 command is to start recording is #passD1 Where pass is the password programmed into the Neptune.

The Neptune will stop Recording the numbers when it sends a 24 hour test or on receipt of the SMS command to stop recording.

The command to stop recording is #passD0

The Second method is as follows. Up to 6 Numbers can be programmed into the Neptune at a Time. Use the User password set above.
To do this yourself please use the following Format of an SMS and send to the Neptune.

#passaddnum"+27831234567" for 1 number or
#passdelnum"+27831234567;+27831234567;+27821234567" please note the " at the beginning and end of the numbers and also do not add a ; at the end of the last number. Pass is the password set above.

To delete a number or numbers use below.

#passdelnum"+27831234567" for 1 number or
#passdelnum"+27831234567;+27831234567;+27821234567" please note the " at the beginning and end of the numbers and also do not add a ; at the end of the last number. Pass is the password set above.

Programming

All Programming is done Over the Air (SMS) or via an EEPROM programmer and free software.

Free programming is available for small qty 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 the control room on 012 6544837 or 0784568288.

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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