How to...

SPIRENT HELP SHEETS

**This help sheet explains how
to control the GSS6400 remotely.**

The sheet covers both:
GSS6400 GPS and GSS6400 GPS/GLONASS systems.

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GSS6400 is easy to use and offers great flexibility with the option to control from the front Panel or remotely over the network. GSS6400 allows you to automate your test process as:

• You can VNC into the system for additional flexibility

• You can remotely control the unit using HTTP Post messages

This application note focuses on HTTP post method to control GSS6400 remotely.

Controlling the GSS6400 using HTTP

The GSS6400 has a built in web server which allows you to manually control the unit from a remote web browser, but what if you want to automate the process?

One way of doing this is by sending HTTP POST and HTTP GET messages to the web server to provide the same data that would be sent from the web browser.

There are a number of different web pages that are used to control and display the status of the GSS6400, for example play.cgi controls the playback file selection and start. Each page has a particular data format for the required data as shown below.

play.cgi

http://192.168.2.9/play.cgi   // change the IP address to the unit's address

Function: Start playback

Method: POST

Data: all fields must be present

Field	Value	Description
offset	number of seconds	offset from start of file
rfif	"RF" or "IF"	playback at RF or IF
filename	ASCII filename	name of file within the /home/spirent/Data directory

fields are separated by &

e.g. offset=0&rfif=RF&filename=STR4500-127dBm.dat

stop.html

http://192.168.2.9/stop.shtml   // change the IP address to the unit's address

Function: Stop playback/record

Method: GET

Data: none

attenuator_handler.cgi

http://192.168.2.9/attenuator_handler.cgi   // change the IP address to the unit's

address

Method: POST

Function: Change attenuation level

Data: all fields must be present

Field	Value	Description
attenuation	dB	Attenuation value in dBs
referrer	"null"	Set to null

fields are separated by &

e.g. attenuation=16&referer=null

record.cgi

http://192.168.2.9/record.cgi   // change the IP address to the unit's address

Function: Start data recording

Method: POST

Data: all fields must be present

Field	Value	Description
rec	record mode	0=GPS, 1=GPS+Glonass, 2=Glonass,

e.g. rec=1

status.shtml

http://192.168.2.9/status.shtml // change the IP address to the unit's address

Function: Request Status

Method: GET

Data: none

Return: Data as shown in the config web page, but with html code removed e.g.

GSS6400 STATUS

IP Address: 192.168.2.9

CPU: Geode(TM) Integrated Processor by AMD PCS

CPU Speed: 498.062 MHz

Software: Version 11.04.04

Memory Free/Total: 329240/   500128 kB

Disk Free: 310GB

LCD Contrast: 50%

Attenuation: 3 dB

Battery Level: 100 % Charger ON

Serial Logging: 9600 baud Timestamp OFF

Timezone: GMT-1 (ahead of GMT)

Status: STOPPED 00:00:00

Last updated: Thu May 5 14:46:19 2011

Example VB program

A simple example VB 2005 Express program has been created to show how to create and send the HTTP POST messages. The program allows the user to change the attenuation value and send it to the unit. The program also has a built in web browser to show that the value has been received and updated. The config page is shown after a value is sent.

By default the IP address is set to the IP address 192.168.2.10, but can be changed by the user to the correct address. The source code is shown below.

```vb
Public Class Form1
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
Button1.Click
        Dim URL As String
        Dim Flags As Long
        Dim TargetFrame As String
        Dim PostData() As Byte
        Dim Headers As String
        Dim StringData As String
        Dim Attenuation As String
        Dim IPaddress As String
        Attenuation = TextBox1.Text ' Get the attenaution value entered by the user
        IPaddress = TextBox2.Text   ' Get the IP address
        URL = "http://" & IPaddress & "/attenuator_handler.cgi" ' The attenuation handler address
        Flags = 0
        TargetFrame = ""
        StringData = "attenuation=" & Attenuation & "&refer=null" ' create the HTTP POST data
        ' VB creates a Unicode string by default so we need to
        ' convert it back to Single byte character set.
        PostData = System.Text.Encoding.ASCII.GetBytes(StringData)
        Headers = "Content-Type: application/x-www-form-urlencoded\r\n"
        WebBrowser1.Navigate(URL, TargetFrame, PostData, Headers)
        ' POST the data
    End Sub

Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load
        Dim URL As String
        TextBox1.Text = "0"                    'Set deafult attenaution to zero
        TextBox2.Text = "192.168.2.10"         ' Set default IP address
End Sub
Private Sub TextBox2_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles TextBox2.TextChanged
        Dim IPaddress As String
        Dim URL As String
        IPaddress = TextBox2.Text   ' Get the IP address
        URL = "http://" & IPaddress & "/config.shtml"     ' The GSS6400 Config Page as default
        WebBrowser1.Navigate(URL)                  ' Open the page
End Sub
End Class
```

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