



# Clipsal C-Gate Server Application for C-Bus

## Using JAVA Applets

Release 1.0.0

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## Using Java Applets with Clipsal C-Gate

### Sample Applets for C-Gate

This example contains two sample Java applets to control a C-Gate server. The applets are:

#### CGateButton

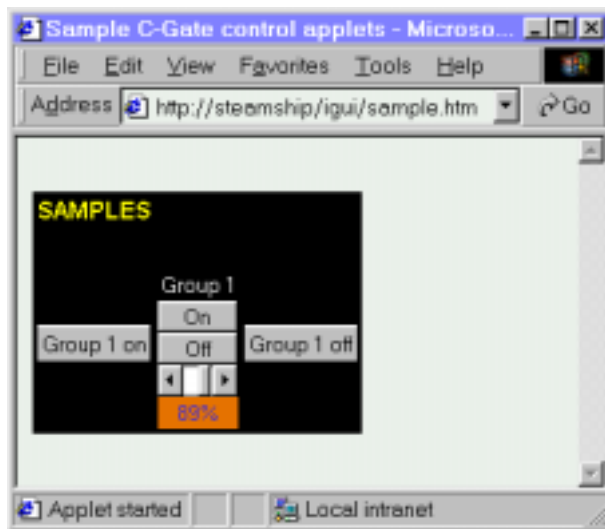
A simple applet that can be used to send a C-Gate command when the button is pushed. Any command can be sent when the button is pushed. This applet uses the CGateInterface class to perform the connection to the C-Gate server.

#### CGateApplet

An applet that provides:

- An on button to set a specified C-Bus Group ON.
- An off button to sets a specified C-Bus Group to OFF.
- A slider control that can be dragged and released. When released, the applet sends an immediate ramp command.
- A percentage and bargraph and colour display to show a level of a group or a terminal.

A sample HTML file, **sample.htm**, shows how the applets are defined in an HTML file.



The picture shows a CGateButton applet on the left, then a CGateApplet (named Group 1) in the centre, and another CGateButton applet on the right.

### Using the CGateButton Applet

To use this applet, you need to define an <APPLET> </APPLET> section in your HTML file. There are a number of parameters that are required to make the applet behave correctly:

- The **buttonname** parameter should be set to the name that you would like to appear on the button itself.
- The **command** parameter should be set to the command that will be sent to C-Gate when the button is pushed.
- The **cgatehost** parameter should be set to the hostname of the host where C-Gate is running. If this is the same as the computer that the web server is running on, use localhost or 127.0.0.1 for this parameter.
- The **cgateport** parameter should be set to the command interface port for C-Gate server. This should normally be set to **20023**, the default port used by the C-Gate server.

A sample of the full applet definition is shown below.

```
<applet code=CGateButton width=70 height=35 >
<param name=buttonname value="Group 1 on">
<param name=command value="on 1.1">
<param name=cgatehost value="localhost">
<param name=cgateport value="20023">
</applet>
```

### Using the CGateApplet Applet

To use this applet, you need to define an <APPLET> </APPLET> section in your HTML file. There are a number of parameters that are required to make the applet behave correctly:

- The **groupname** parameter should be set to the name that you would like to appear as the title for the Applet. This appears at the top of the Applet.
- The **cgatehost** parameter should be set to the hostname of the host where C-Gate is running. If this is the same as the computer that the web browser is running on, use localhost or 127.0.0.1 for this parameter.
- The **cgateport** parameter should be set to the command interface port for C-Gate server. This should normally be set to **20023**, the default port used by the C-Gate server.
- The **cbusgroup** parameter should be set to the address of the group that is to be controlled by the buttons and the slider in the applet.
- The **levelfrom** parameter should be set to the address of the group or terminal that the level shown in the coloured percentage display at the bottom of the applet. This can be a group such as 1.1, or a terminal such as #1.3.1.

A sample of the full applet definition is shown below. In this example, the CGate Applet is as shown in the picture above. The ON, OFF and slider control will change the level of network 1, group 1 (C-Gate address 1.1).

```
<applet code=CGateApplet height=100 width =50 >
<param name=groupname value="Group 1">
<param name=cgatehost value="localhost">
<param name=cgateport value="20023">
<param name=cbusgroup value="1.1">
<param name=levelfrom value="1.1">
</applet>
```

### How the Applets Work Together

All applets on the page work together. If any applet is clicked or changed, the applet will signal all other applets on the page. On receipt of the signal, all of the applets will update their status with the C-Gate server.

### Applet Security

The Java implementations in web browsers have security features designed to prevent malicious applets from performing unauthorised functions. In order for the applets to operate correctly, they must be allowed to open network connections to the C-Gate server.

Under Microsoft Internet Explorer 5, this involves:

- You must access the applets through a web server. Directly opening the files from the Windows Explorer will not allow the applets to make connections. Use the Personal Web Server product that ships with Windows or another web server package.
- Under the **Security** tab of **Internet Options** (Tools menu), you must make sure that the computer that your web server is running on is trusted. Select **Local Intranet** then **Sites**, then **Advanced**. Add the host name or IP address of your web server to the list. Then, in the Security Level box, click on **Custom Level** and under the **Java VM** list, select the **Custom** option. Click on **Java Custom Settings**, go to the **Edit Permissions** tab, and Select **Enable** for **Run Unsigned Content**. This is a complex process but executed properly will allow safe execution of these applets without compromising the security of your browser to other content.