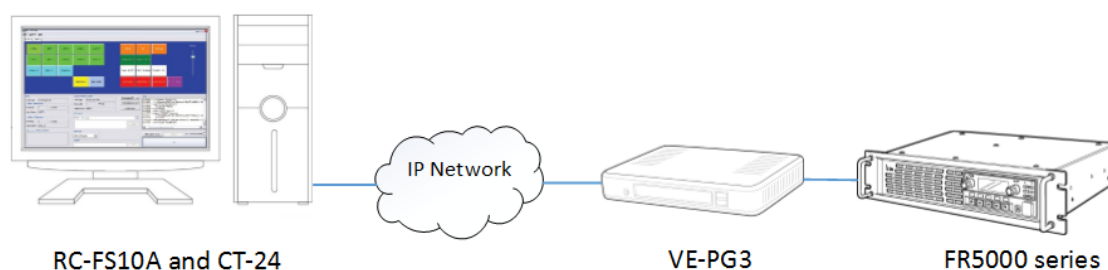


VE-PG3 Application Notes

RC-FS10A/CT-24 TO FR5000 SERIES (ANALOG MODE)

Introduction

This application allows you to communicate with a repeater using the RC-FS10A and VE-PG3.



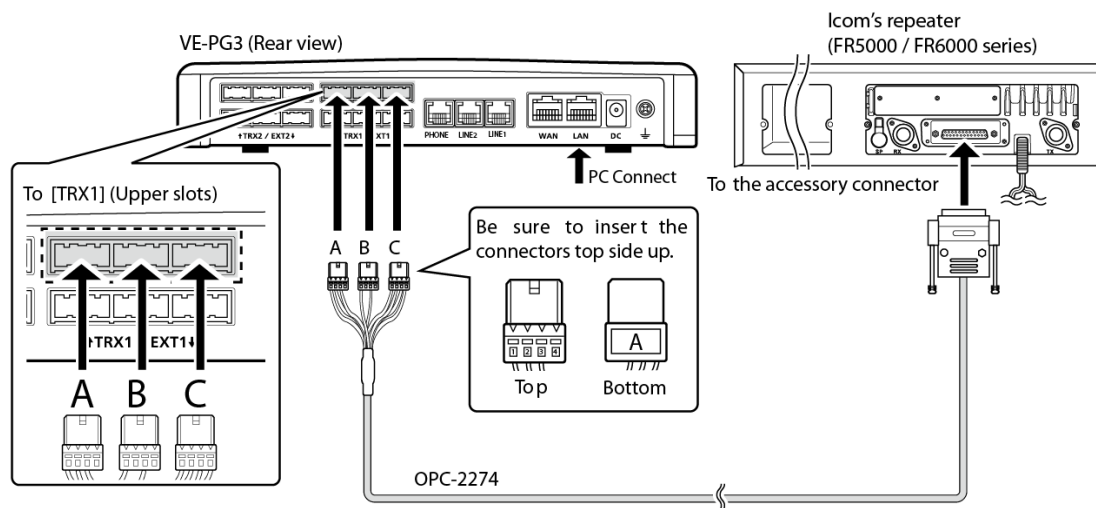
What You Will Need

- VE-PG3 RoIP Gateway
- IC-FR5000 or FR6000 repeater (set as analog)
- OPC-2275 cable (for connecting the VE-PG3 and the repeater)
- RC-FS10A software version 3.08 or greater
- CT-24 audio dongle (RC-FS10A)
- 1 or more CAT-5 Ethernet cables

How to Connect

Connect the VE-PG3, the repeater, and your computer as shown in the following diagram.

Note: Ensure that the radio and VE-PG3 are turned off before connecting.



Programming the FR5000

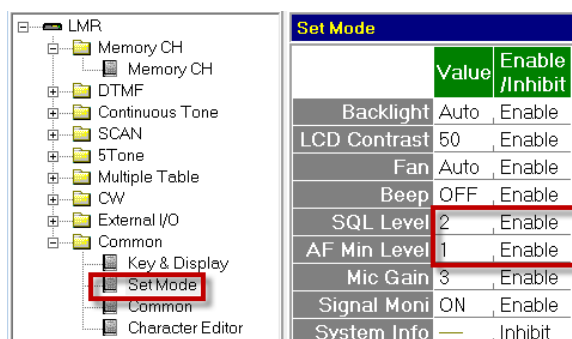
Program the repeater with the following in the Memory Channel:

- Add frequencies
- Set to **Repeat** in **Operation Mode**.
- Set the Power level in **RF PWR**.
- Set to **Analog** in **CH Type**.
- Set a tone if necessary in **TX C Tone**.



Program the following settings in the Set Mode:

- Set the appropriate squelch level in **SQL Level**.
- Set the **AF Min Level** to **1**.



Programming the VE-PG3

Before programming the VE-PG3, Icom always recommended restoring it to factory defaults.

Changing the IP Address

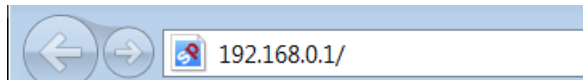
Note:

Your VE-PG3 will need to be connected as described in *How to Connect*.

You will need to change the IP address for each VEPG3 device to addresses that are determined by your network plan. Consult your IP professional to create a network plan.

Note: Your VE-PG3 will need to be connected as described in *How to Connect*.

1. Open your web browser. The default address is: 192.168.0.1.



2. Enter the newly assigned IP address of the VE-PG3 in the address field.
3. After pressing Enter, the Login Authentication window will appear.



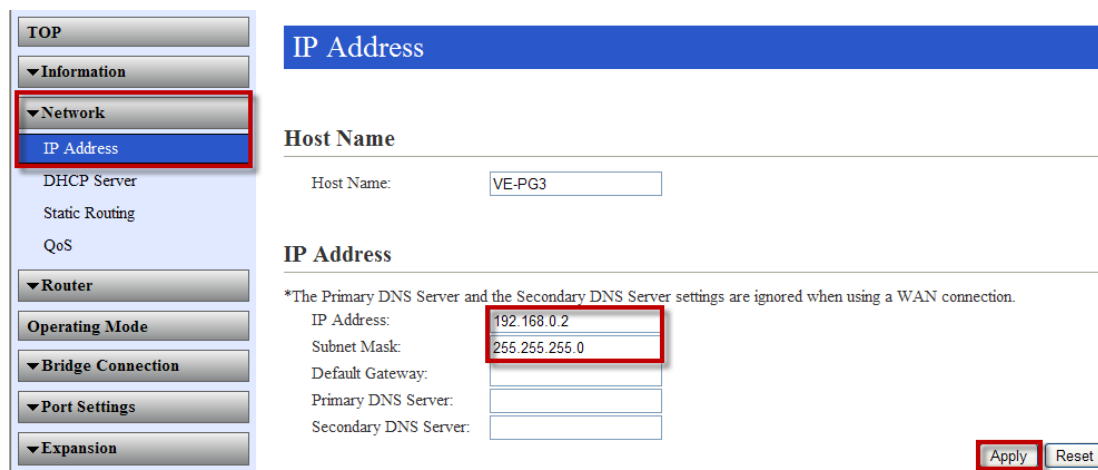
4. Enter the following (default) information:

- Username Admin
- Password Admin

Set a new IP address for your VE-PG3 according to your network plan.

5. Click **Network** and select **IP Address**.

6. Enter your VE-PG3 IP Address according to your network plan and click **Apply**.



IP Address

Host Name

Host Name:

IP Address

*The Primary DNS Server and the Secondary DNS Server settings are ignored when using a WAN connection.

IP Address:

Subnet Mask:

Default Gateway:

Primary DNS Server:

Secondary DNS Server:

7. Click Reboot to enter the new VE-PG3 IP Address.



IP Address

A reboot is required to apply all the new settings.

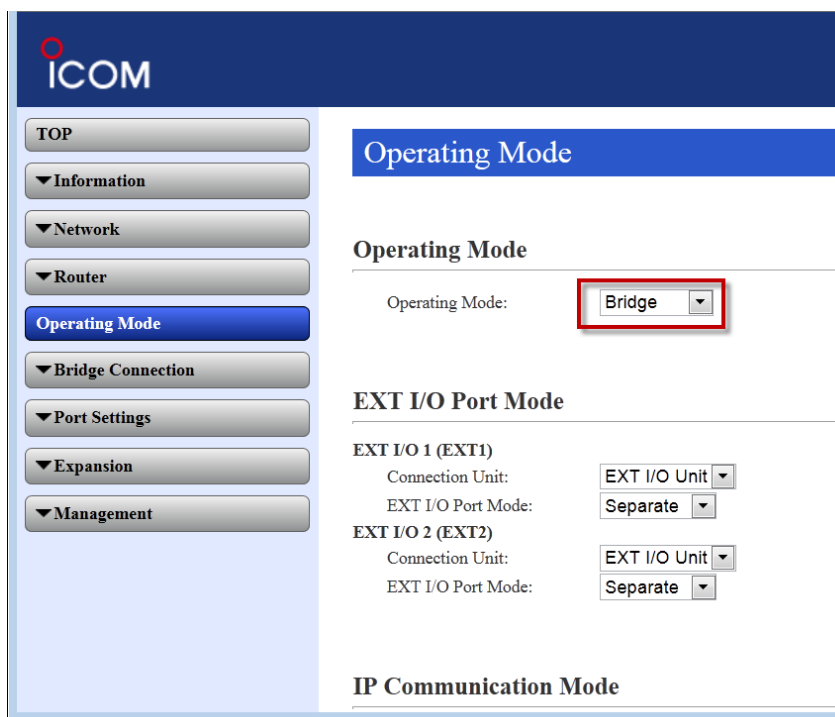
Host Name

Host Name:

Note: depending on your newly assigned IP address, your computer IP address may have to be changed to access the VE-PG3 again. Once you have rebooted, the login window will appear. Enter the username and password again.

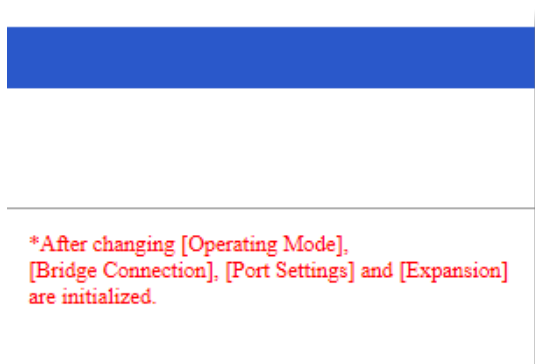
Programming the VE-PG3 Interface

1. Click **Operating Mode** on the far left side.
2. Set the **Operating Mode** to **Bridge** mode.



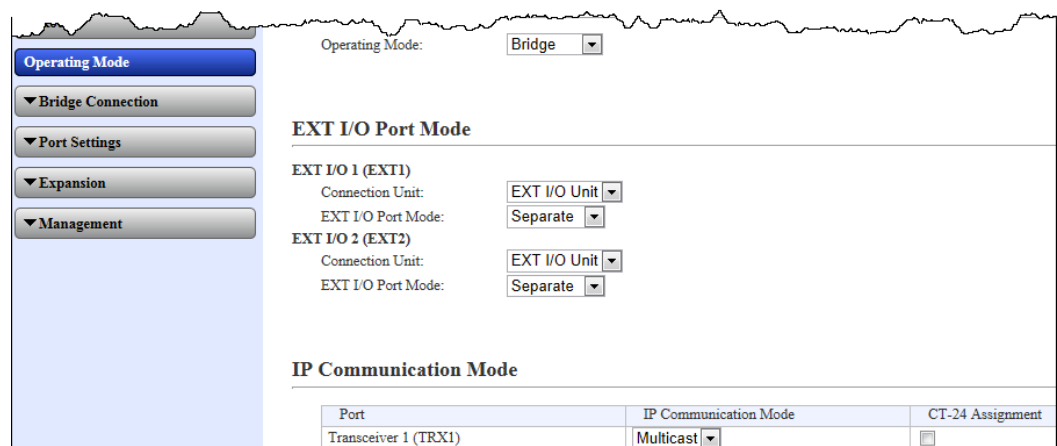
The screenshot shows the ICOM VE-PG3 web interface. On the left sidebar, the 'Operating Mode' button is highlighted in blue. The main content area has a blue header 'Operating Mode'. Below it, the 'Operating Mode' section shows a dropdown menu set to 'Bridge', which is highlighted with a red rectangular box. Below this, the 'EXT I/O Port Mode' section shows settings for EXT I/O 1 (EXT1) and EXT I/O 2 (EXT2), each with 'Connection Unit' and 'EXT I/O Port Mode' dropdowns. The 'EXT I/O Port Mode' for both is set to 'Separate'. At the bottom, the 'IP Communication Mode' section is visible.

The following window will appear.



The screenshot shows a warning message box with a blue header. The message text is:
*After changing [Operating Mode],
[Bridge Connection], [Port Settings] and [Expansion]
are initialized.

3. Set Transceiver 1 (TRX1) to **Multicast**.
4. Click the Bridge Connections tab and then Bridge Connection.



Operating Mode: Bridge

EXT I/O Port Mode

EXT I/O 1 (EXT1)
Connection Unit: EXT I/O Unit
EXT I/O Port Mode: Separate

EXT I/O 2 (EXT2)
Connection Unit: EXT I/O Unit
EXT I/O Port Mode: Separate

IP Communication Mode

Port	IP Communication Mode	CT-24 Assignment
Transceiver 1 (TRX1)	Multicast	☐

5. At **List of Bridge Connection Point Entries**, Verify all settings for Transceiver 1.

- Connection IP Address is already set to 239.255.255.1 (default)
- Port Number is set to 22510 (Connection/My Station)
- Voice Codec set to G.711u
- Connection Status to “During Transmit”

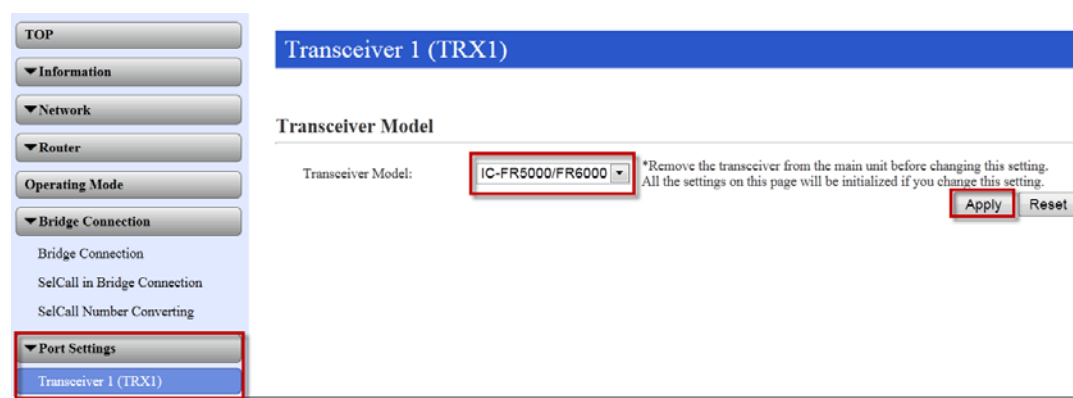
List of Bridge Connection Point Entries

Port Type	Connection IP Address	Port Number		Voice Codec	Connection Status
		Connection	My Station		
Transceiver 1 (TRX1)	239.255.255.1	22520	22520	G.711u	During transmit
Transceiver 2 (TRX2)	239.255.255.1	22510	22510	G.711u	During transmit

These settings are already programmed by default. Ignore TRX 2 settings since that port on the VE-PG3 is not being used.

6. Click **Port Settings** and then **Transceiver 1 (TRX1)**.

7. Select **IC-FR5000/FR6000** in the **Transceiver Model** drop-down box.



Transceiver 1 (TRX1)

Transceiver Model

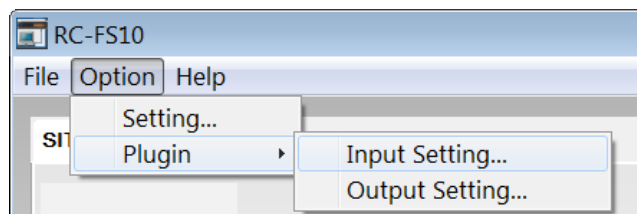
Transceiver Model: IC-FR5000/FR6000 *Remove the transceiver from the main unit before changing this setting. All the settings on this page will be initialized if you change this setting.

Apply Reset

8. Click **Apply**.

Programming the RC-FS10A Software

1. In the Menu bar, click **Options** -> **Plugin** (Input Setting / Output Setting).
2. Select the correct mic and speakers for the RC-FS10A.

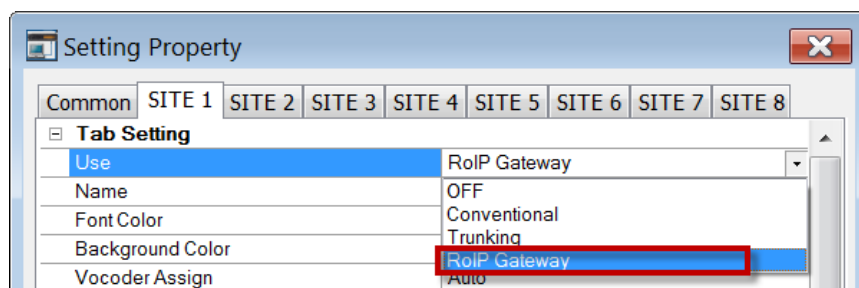


3. Click **Option**->**Setting** to login.

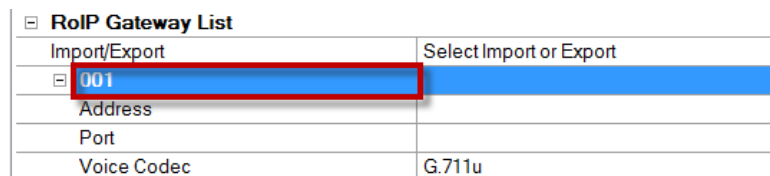
User Name: **super_user**

Password: **super_user**

4. Click **SITE 1** tab and select **Tab Setting** by clicking on the "+" sign.
5. Select **ROIP Gateway**.



6. Double-click **RoIP Gateway List**, and then double-click **001**.



7. Enter IP **239.255.255.1**.
8. Enter **22510** for **Port** number.
9. Be sure **Voice Codec** is set to **G.11u**.

Note: All these settings should match the VE-PG3 connection settings.

RoIP Gateway List	
Import/Export	Select Import or Export
001	
Address	239.255.255.1
Port	22510
Voice Codec	G.711u

10. Go to the **Function Setting** tab and select a "Group" key.

Function Setting	
01	
Function	NONE
Name	Individual
Font Color	Group
Background Color	Selective Call
RoIP Gateway	All Call
Destination Prefix ID	NONE

11. Go down to **Network Settings**.

12. Select your computer's Network (LAN) card in the **Network Adapter** field.

13. Leave Unicast Port at default.

14. Enter "1" in the **Multicast TTL** field.

15. Enter "239.255.255.1" in the **Multicast Address** field.

16. Set **Multicast Port** to 22510.

Note: All these settings should match the VE-PG3 connection settings.

Network Setting	
Network Adapter	Realtek PCIe GBE Family Controller 172...
Unicast Port	21500
Multicast TTL	1
Multicast Address	239.255.255.1
Multicast Port	22510

OK Cancel

17. Click ok.

Service Start will show up under LOG Screen if all settings and programming is done correctly

LOG	
05/21 10:53:25	- RC-FS10 Ver 3.08
05/21 10:53:26	- RC-FS10 Start [RoIP Mode]
05/21 10:53:26	- <<<<< SERVICE START [Site:1]>>>>>
05/21 11:31:40	- RC-FS10 Start [RoIP Mode]
05/21 11:31:40	- <<<<< SERVICE START [Site:1]>>>>>
05/21 11:31:59	-> Voice [CallType:Group, DestAddress
05/21 11:32:02	-> Release

To Make a Call:

Click the Group button and then the PTT button on the RC-FS10A dashboard.