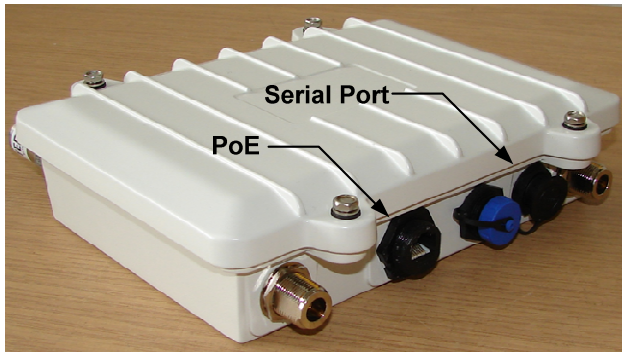


# EXÚPERY RADIOS, QUICK PROGRAMMING

## Section 2 Getting Started

### *WLAN radio connectors*



### *Connections and Power*

- Connect 2.4 GHz antennas or 50 ohm/5 watts dummy loads to the radio.
- Connect the radio to a Power Station box using an Ethernet cable with Ituner 8P8C connectors.
- Connect the Power Supply box to a PC using a crossover Ethernet cable with Amphenol connector or a regular crossover Ethernet cable.
- Connect the Power Supply to a 12 volts battery or regulated power supply.

### *Radio Management*

The WLAN radio unit can be configured using a Serial Terminal connection, Web Browser (HTTP) interface, or SSH client connection. Although all methods are comprehensive and powerful, the SSH client method provides more functionality.

### *Password*

The WLAN radio unit is pre-configured with the following default account and password. This user name and password will allow you to gain access via SSH and Serial Terminal; HTTP interface is not activated for our applications.

User	Password
root	4root4

Note: The unit is set to defaults defined by the responsible of the project. Don't change the password!

## **SSH client access**

- Download and install SSH Secure Shell Client 3.2.9. Search on the Internet for ftp download sites.
- Open SSH client program.
- Click in the Quick Connect button.
- Set host name with the IP 192.168.0.100, user name as root, port number 22 and Authentication Settings as Profile Settings.
- Introduce your password
- Radio unit root path will be appear, verify that you can access folders and files.
- Close SSH communications using the close connection icon when finish.

## **Configuring Exúpery radios**

- Use the “SSH client access” steps to connect to the radio unit.
- Change to the directory /etc

```
[root@wrap ~]# cd /etc
```

- Open rc.sysinit file with JOE text editor

```
[root@wrap ~]# joe rc.sysinit
```

- Insert you configurations between the after setting clock and clear temporally files lines (see example below). Don't forget take notes about modifications and leave a copy inside the respective radio transportation box. Radio settings examples can be found in the **configuration sets** section.

```
# Setting the clock
```

```
echo "Setting the clock..."
```

```
hwclock --hctosys
```

```
date
```

```
#Insert radio configurations here!!
```

```
# Clear temporary files
```

```
>/var/run/utmp
```

```
rm -f /var/lock/LCK*
```

```
rm -f /var/lock/subsys/*
```

```
rm -f /var/run/*.pid
```

```
rm -f /var/run/ftp.pids-all
```

exit 0

- Save the rc.sysinit file using CTRL K + X
- Reboot radio unit

```
[root@wrap ~]# reboot
```

Now the radio unit has the new configurations and is ready to use.

## Configuration Sets

This radio configuration sets are the basic configurations that you can use for a quickly network connection. Other parameters and settings can be included, read the chapter 1 of MadWifi manual.

Nomenclature:

<b><i>name</i></b>	Network name
<b><i>aaa.bbb.ccc.dddd</i></b>	IP address
<b><i>nnn</i></b>	Radio transmitting power in mili-watts

### ***Station mode***

```
# Setting Radio configurations
sbin/wlanconfig ath0 destroy
sbin/wlanconfig ath0 create wlandev wifi0 wlanmode sta
sbin/iwconfig ath0 essid name
sbin/iwpriv ath0 wds 1
sbin/ifconfig eth0 0.0.0.0 up
sbin/ifconfig ath0 0.0.0.0 up
sbin/brctl addbr br0
sbin/brctl addif br0 eth0
sbin/brctl addif br0 ath0
sbin/ifconfig br0 aaa.bbb.ccc.ddd netmask 255.255.255.0 up
sbin/iwconfig ath0 txpower nnnmW

# Preserve this owners for apache scripts.
chown -R nobody.root /etc/config/
```

```
chown nobody.root /etc/resolv.conf
chown nobody.root /etc/hosts
```

## ***Access Point mode***

```
# Setting Radio configurations
```

```
sbin/wlanconfig ath0 destroy
sbin/wlanconfig ath0 create wlandev wifi0 wlanmode ap
sbin/iwconfig ath0 essid name
sbin/iwpriv ath0 wds 1
sbin/ifconfig eth0 0.0.0.0 up
sbin/ifconfig ath0 0.0.0.0 up
sbin/brctl addbr br0
sbin/brctl addif br0 eth0
sbin/brctl addif br0 ath0
sbin/ifconfig br0 aaa.bbb.ccc.ddd netmask 255.255.255.0 up
sbin/iwconfig ath0 txpower nnnmW
```

```
# Preserve this owners for apache scripts.
```

```
chown -R nobody.root /etc/config/
chown nobody.root /etc/resolv.conf
chown nobody.root /etc/hosts
```

## ***Single Wireless Device AP Repeater mode***

```
sbin/wlanconfig ath create wlandev wifi0 wlanmode ap ath0
sbin/wlanconfig ath create wlandev wifi0 wlanmode sta nosbeacon ath1
sbin/iwconfig ath0 essid name
sbin/iwconfig ath1 essid name
sbin/iwpriv ath0 wds 1
sbin/iwpriv ath1 wds 1
sbin/ifconfig ath1 up
# Now, wait for association.
sbin/ifconfig ath0 up
```

```
sbin/ifconfig eth0 up
sbin/brctl addbr br0
sbin/brctl addif br0 eth0
sbin/brctl addif ath0
sbin/brctl addif ath1
sbin/brctl setfd br0 1
sbin/ifconfig br0 up
```

```
# Preserve this owners for apache scripts.
```

```
chown -R nobody.root /etc/config/
```

```
chown nobody.root /etc/resolv.conf
```

```
chown nobody.root /etc/hosts
```