Backup Reset and Upgrade

Configuration Backup

You can create a backup of your configuration in the web GUI by first clicking `Advanced Settings` in the bottom left-hand corner of the page, and then navigating to `system -> backup/flash firmware` and clicking `Generate Archive`.

Firmware Upgrades

The Mesh Rider OS can be upgraded Over the Air (OTA) or from the Ethernet ports, using either the Web GUI or the Linux console.

Linux Console Method

1. Copy firmware from PC to the module:

   ```
   scp firmware-sysupgrade.bin root@<IP ADDRESS>:/tmp/
   ```

2. Login to Mesh Rider Radio with `ssh root@<IP ADDRESS>`

3. Use the sysupgrade command to update the firmware.

   ```
   root@smartradio:~# sysupgrade -v /tmp/firmware-sysupgrade.bin
   ```

4. Wait until the update is complete. DO NOT CYCLE THE POWER SUPPLY UNTIL THE FIRMWARE HAS BEEN UPDATED!

Web GUI Method

1. Enter the following into the address bar of your browser

   ```
   https://<IP ADDRESS>/cgi-bin/luci/admin/system/flashops
   ```

2. At the bottom of the page, de-select the "keep settings" button

3. In the "image" field, click browse and select your firmware image

4. Click Flash Image

5. After the system has verified the image, click Proceed

Factory Resetting

Configuration backup, restoration and factory resetting can be performed by navigating to the page `system -> backup/flash firmware`. If you have modified your network configuration such that you can no longer access it, you can also factory reset the radio without network access. Factory reset differs from radio to radio.

In general, the factory reset pin should be pressed or pulled to ground for between 5 and 30 seconds (no more than 30 seconds and no less than 5 seconds). Factory reset only works after the device has fully booted up. Power up the device and wait for assurance, wait for 3 minutes for the radio to fully boot. The location of the factory reset switch is described below.

Note that if the device cannot be restored to its factory reset state using this method, then it is possible that the device needs to be repaired by Doodle Labs. Contact tech_support@doodlelabs.com.

Multiband Wearable and OEM

The Multiband Wearable and OEM radios include Turbo and Power buttons. The Multiband OEM's buttons are accessible via the HID breakout board. Hold down the Turbo and Power buttons together for more than 5 seconds to factory reset.

mini/nano-OEM (-2L)

The -2L mini/nano-OEM Radios includes a reset wire on the main connector which should be pulled to ground following the recommended timing.

Wearable Radio (-2K)

Unplug the Wearable Radio. Hold down the power button and then power the radio. Hold the power button down for between 10 and 20 seconds and then let it go. Wait for the radio to factory reset.

Embedded Radio (-2J-*M)

Look for a pin hole on the front side of the unit. Insert a pin through the hole and press the tactile switch following the recommended timing.

External Radio (-2J-*E)

The External radio includes a reset pin inside the box which should be pressed following the recommended timing.

Embedded Radio (-2H)

The -2H radio includes a reset wire on the main connector which should be pulled to ground following the recommended timing.

Configuration Copy

Simply restoring a configuration of another radio to a different one can make the two radios incompatible with each other as there are several settings which are unique to each radio like the IP addressing and security keys. Doodle Labs has created a Configuration Clone tool to quickly distribute a radio configuration to multiple radios. The tool currently only works over the command line. In order to use it,

1. SSH into the radio

2. To see a list of options, run

```
root@smartradio:~# configclone.sh --help
usage: configclone.sh <ACTION>
ACTIONs:
-b)  create_backup
-r)  restore_backup
-c)  cleanup
-k)  do not overwrite conflicting parameters during restore
-o)  overwrite conflicting parameters during restore

output on create_backup: /tmp/backup.tar.gz
input on restore_backup: /tmp/backup.tar.gz
```

Running `configclone.sh -b` will create a backup (`/tmp/backup.tar.gz`) which can then be copied to other radios (scp to `/tmp/backup.tar.gz`) and restored with `configclone.sh -r`. During the backup and restore phases, the radio will ask questions to help you to resolve potential configuration conflicts. You can skip all questions in the restore phase by running it with the `-k` or `-o` options.