

## APPLICATION NOTE

### XAN-001: Dual Map Banks on Rev B XEDES

**Description** Describes how to program and use dual map banks in the **XEDE** Processor (Rev B model only).

**Overview** *What is a map bank?*

A map bank is a collection of tuning maps stored in the **XEDE**. When you save a tuning program to disc, you are saving the current map bank. **XEDE** Rev B hardware supports 2 map banks, selectable by the user via a toggle switch.

*How many maps can I have?*

The **XEDE** can store up to 12 maps in total. This means a map bank can consist of up to 12 maps, but to use dual banks, they must be divided so the total number in both banks is 12 or less. It is easiest to have the same number of maps in each bank, as it is less confusing to the tuner.

*What maps must I have?*

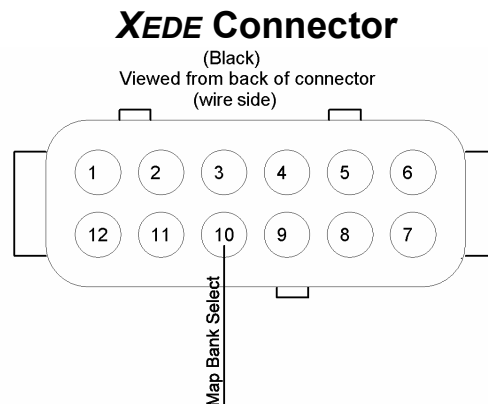
In each bank, there *must* be a tuning map for each intercepted signal for the vehicle to function correctly. For example, if the **XEDE** intercepts MAF, MAP, crank angle sensor, TPS, and Wastegate Solenoid drive (as in the WRX configuration), there must be at least a map for each of these. If you do not include a TPS map for example, the TPS output will be undefined, and will cause the vehicle to run poorly, if at all.

If there are no maps at all in a map bank, the standard set of signals (MAF, MAP, timing, TPS, wastegate) will be passed through unaltered, as if the **XEDE** was not there.

**Connections** *What wiring must be in place for this to work?*

In its default state, the **XEDE** uses map bank 0, as is the case with no bank switching wires connected. When the map bank switch is shorted to **XEDE** ground (0V), map bank 1 is loaded into memory.

The map bank switch pin is located in the BLACK **XEDE** connector, on pin 10. Grounds can be located in the GRAY connector, on pins 4 and 6 (splicing required). Do not use a chassis ground point for the ground connection as these can often be noisy enough to cause erroneous bank switching. For direct plug-in harnesses, these two wires are already supplied, and just need to be shorted together with a toggle switch to enable bank 1. (see diagram)



Use a toggle switch located on the dash or other convenient access point to short the bank switch pin to ground. You may want to conceal this switch if one of the banks is a valet mode or security program.

Programming *How do I program the banks?*

**QUICK START NOTE:** If starting with a new **XEDE** or one that has maps in bank 0 only, download the maps from bank 0, switch over to bank 1, and upload / burn the bank 0 maps in bank 1. Then tune each bank individually.

Each bank is programmed totally independently of the other, with the exception of the bank description, which is common to both.

If there are no maps in the currently enabled bank, the **XEDE** LED will turn red when vehicle power is turned on; this is normal, and lets the user know that the **XEDE** is performing no tuning function. In this state, a map bank can be uploaded and burned using **XMAP** or **XUPDATE** as per usual.

When changing from one valid bank to another, the **XEDE** LED will turn orange for a second or so while the new bank is loaded into memory, and then green to indicate a successful transfer. The current map bank status is displayed in the status bar of **XMAP**, if connected.

*To use and edit bank 0:* set the switch to bank 0 (wires NOT shorted together). All download, upload, tuning, and burning operations you do here will apply only to bank 0.

*To use and edit bank 1:* set the switch to bank 1 (wires shorted together). All download, upload, tuning, and burning operations you do here will apply only to bank 1.