



FAIRBANKS NORTH STAR BOROUGH DRY WOOD VS. WET WOOD BURN DEMONSTRATION

We all know that burning wet wood creates excessive smoke, but lets see real world comparisons...

LETS COMPARE

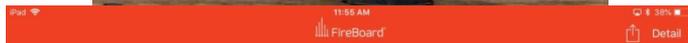
- ◉ 2 EPA Certified Stoves:
 - Model - Englander NC13, EPA tested to 2.6 gr/hr
- ◉ Local wood:
 - White spruce -
 - Dry wood was cut and split 3 years ago, 15% moisture content
 - Wet wood was cut early June, 29% moisture content
- ◉ Thermocouples added to base of stack for measuring temperatures
- ◉ Tested at FNSB Air Quality office, 9/18/2018

- Stoves were run side by side, using dry wood to get a hot bed of coals, allowing stoves to reach even temps of close to 700 Degrees.
- Two 4" split pieces of white spruce with 29% moisture content were added to the stove on the right.
- Two 4" split pieces of white spruce, 15% moisture content were added to the stove on the left.





WITHIN 6 MINUTES, THE STOVE WITH DRY WOOD HAS NO VISIBLE SMOKE AND STOVE TEMP IS 700 DEGREES. THE STOVE WITH WET WOOD IS SMOKING AWAY, AND STOVE TEMP HAS DROPPED TO 530 DEGREES.



AFTER 25 MINUTES THE DRY WOOD BURN IS HOLDING AT 610 DEGREES, WHILE THE WET WOOD BURN IS DOWN TO 384 DEGREES.

DRY WOOD SPEAKS FOR ITSELF

iPad

1:40 PM

6%

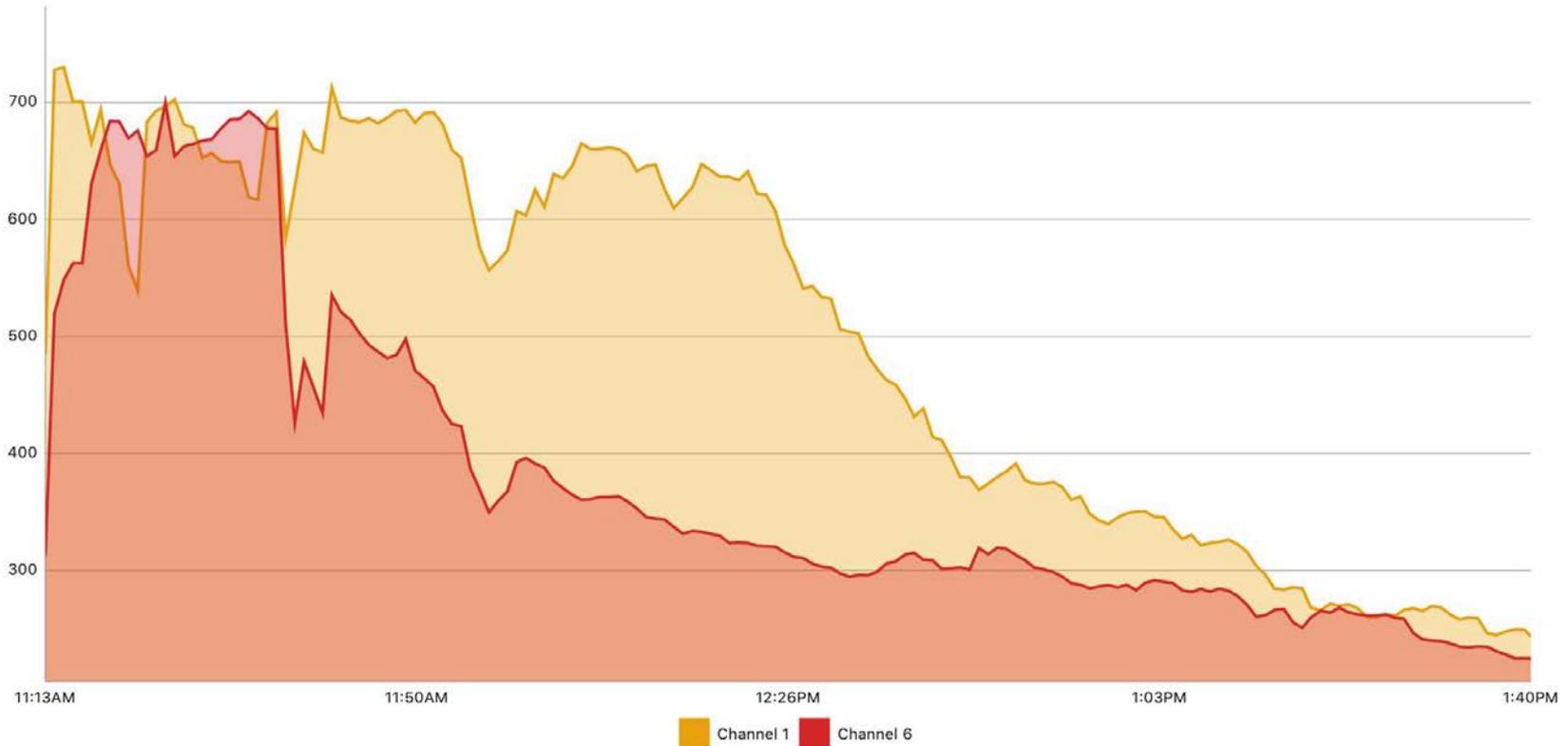
FireBoard

Detail

Channel 1
243.5°F

Channel 6
224.8°F

Latest Session Graph



Dashboard

Sessions

Devices

Account

Drive

LESSONS LEARNED

- Dry wood -
 - Heat output
 - Visible emissions



Proper storage



Improper storage

LESSONS LEARNED

⦿ Proper installation

- Draft - single or double wall, and stack height
- Follow manufacturers installation guide

