

## Project

**Name**  
David Montalbetti & Kathy Ramsey

**Location**  
Salt Spring Island, BC

**Completion Date**  
December 2014

## The Team

**HVAC Contractor**  
Salish Sea Heating & Ventilation Ltd.  
Salt Spring Island, BC

**HVAC Distributor**  
Refrigerative Supply  
Victoria Branch

## Fujitsu Equipment

- (1) AUU9RLF Compact Cassette
- (1) UTG-CCGF Cassette Grille
- (2) AGU9RLF Floor Mount
- (5) ASU7RLF1 Wall Mount
- (1) UTY-DMMUM Central Remote Control
- (1) UTP-PU03A Branch Box
- (2) UTP-PU03B Branch Boxes
- (2) UTP-SX248A Separation Tube Assemblies
- (1) AOU48RLXFZ1 Condensing Unit



## A Green Solution

As purchased, The Montalbetti/Ramsey Residence was a 1965 sq. ft. 2 bed, 2 bath rustic home with a half-crawlspace and a large unfinished walkout basement. Built in the mid-70's on 1.5 acres fronting scenic St. Mary Lake on Salt Spring Island, BC; a small gulf island community notable for its mild Mediterranean-like climate nestled as it is in the Straight of Georgia between the large rain-shadow of Vancouver Island, and the Lower Mainland.

### Design Challenge

In order to accommodate the four teens in the Montalbetti/Ramsey family, the recently purchased home was slated for a major lower floor renovation, with roughly 600 sq. ft. of unfinished basement to be converted into 3 bedrooms, an office and utility room. The original vintage oil-furnace was loud, inefficient, and expensive to operate. It's large, ugly ductwork took up valuable space at the basement ceiling, and would have required upsizing and bulkheads to convert to a traditional heat pump system.

### Solution

Eager to upgrade their new home with "green" technology, and wanting to get rid of the oil furnace and ductwork altogether while still utilizing modern, efficient, heat pump-based technology, the Montalbetti/Ramseys were impressed with the prospects of individual zone control, a cooling mode, ultra-quiet operation, and contemporary indoor and outdoor equipment design, the Fujitsu HFI was an obvious choice.



*A compact cassette was installed in the upstairs living room while wall mounts were installed in the newly created bedrooms on the lower level.*



### Results

Installation was a tightly-coordinated effort with the electricians and the general contractor. First the oil furnace, tank, and ductwork were removed and sent to Salt Spring Metal Recycling. As the interior rooms were framed up in the basement, individual line sets and drains were roughed in and routed back to the crawlspace where the branch boxes and plumbing are located. The furnace chimney chase was used for a line set from the upstairs living room ceiling cassette unit. The upper master bedroom and

dining room received floor units. All the other zones were handled with indoor wall units. A small concrete pad was poured for the outdoor unit, and everything was wired back to a central controller in the upstairs hallway. The system has been operating flawlessly after the addition of almost 8lbs of R410A and proper commissioning.

The Montalbetti/Ramseys have been very pleased with the efficient, simple and quiet operation of their new HFI system. The quiet solitude of their lakefront property has been preserved, as has their relationship with their new neighbors. Where before they were getting about 70 cents of heat for every dollar spent, they now enjoy almost 3 dollars of heat for every dollar spent, as well as the option to cool and dehumidify in the summer. Since approximately 93% of BC Hydro's power is derived from clean, renewable hydroelectric dams, they feel really good about their contribution to the reduction of associated greenhouse gas emissions.

*High efficient 9,000 BTU/h floor mount models were installed in the dining room and master bedroom. Floor mount systems are great for applications where wall space is limited.*



*Five 7,000 BTU/h wall mounted models were installed in the newly created bedrooms and office space in the lower level. The entire system can be controlled by one Central Remote Controller located in the upstairs hallway.*



***Before the installation the homeowners were getting about 70 cents of heat for every dollar spent, they now enjoy almost 3 dollars of heat for every dollar spent.***