

FUJITSU

CASE STUDY

**AIRSTAGE™**

Harvest Bible Chapel

Elgin, IL

**Project Name**

Sound and Control Room;  
Harvest Bible Chapel

**Location**

Elgin (Chicago), IL

**Completion Date**

July 2, 2013

**The Team****Owner**

Harvest Bible Chapel  
Ministries; Chicago, IL

**HVAC Contractor**

Sherman Mechanical Inc.;  
Cary, IL

**Fujitsu Manufacturer's  
Representative**

Gunn and Pegelow, Inc.;  
Libertyville, IL

**HVAC Distributor**

Plumb Supply Company;  
Des Moines, IA

## Fujitsu VRF: The Star Performer

Harvest Bible Chapel is a non-denominational, Evangelical Christian mega church with seven campuses in the greater Chicago area. It was founded on September 18, 1988. The Elgin campus has 400+ capacity auditorium used for their worship services and other productions. Associated with the auditorium is a state of the art sound and video control room where they create, edit, and broadcast various programs. They also record choir and other audio presentations.

**Design Challenge**

The existing building used to be the head quarters for a major corporation and sold the building to Harvest Bible Ministries. It utilizes a centrifugal chilled water plant and natural gas fired hot water heating system. The problem is that the existing system could not respond fast enough to the heating or cooling needs of the sound and control room. The spring and fall proved particularly difficult because the centrifugal plant was not always in operation and the hydronic economizer/cooling tower could not provide water at a low enough temperature to keep the electronic equipment cool.

**Why Fujitsu Was Chosen**

Sherman Mechanical Inc. recommended the Airstage V-II Variable refrigerant system to match the peaks and valleys of the recording studios as well as the main control room. They realized that the application needed the precise control of Airstage, plus needed the ability to run the piping a long distance to place an indoor unit in the "Green Room" where featured guests or performers were waiting to go on stage. The load was calculated and it was determined that it would fluctuate from 12% to 100% in as short a time as one hour depending on how much of the control room equipment was in operation.

**The Results**

From the moment the Airstage system was placed in operation, the sound and videocontrol technicians watched the temperature LED read-outs drop from the blistering 88-90 degF to a very comfortable 75 degF. Tom Brant, HBC Recording technician, is pleased. "Our equipment is operating faster and with less stress and we can keep our performers in the recording studios comfortable – all at the same time. Something we could never do before!"



## Airstage Equipment List: Series: V-II

(1) AOUA96RLBV V-II Heat pump  
Outdoor Unit

(1) ASUA7RLAV Compact  
Wall Mount Indoor Units

(1) ASUB18RLAV Wall Mount  
Indoor Units

(4) ASUB24RLAV Wall Mount  
Indoor Units

(6) UTY-RNKU Wired Remote  
Controller

(1) UTR-BP180X Separation Tubes  
(Indoor Capacity Total 91MBH to 180MBH)

(1) UTR-H1806L Header

(1) UTY-ASGX Service Tool



• ISO9001  
• ISO14001

### Fujitsu General America, Inc.

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