# Digital Snake and Monitor Mixing System Aboard Carnival Cruises



*The* Carnival Fantasy *has had an Aviom system in place for more than three years.*

**APPLICATION**

Digital Snake/Monitor Mixing System

**MARKET SEGMENT**

Performance Spaces

**LOCATION**

Miami, FL

**PRODUCT LINES**

Pro16®
Pro64®

**PRODUCTS**

2  6416m Mic Input Modules

2  6416Y2 A-Net Interface Cards

1  RCI Remote Control Interface

1  MCS Mic Control Surface

1  ASI A-Net Systems Interface

2  A-16D Pro A-Net Distributors

10  A-16II Personal Mixers

**TESTIMONIAL**

"The Aviom system has proven to be robust and reliable, and the Pro64 digital snake gives us the ability to fully integrate the monitor mixing system and the remote control features of the mic pre."

**James Keaton**
*Sound Designer for Carnival Cruise Lines*

**FEATURES AND BENEFITS**

Simplicity of setup

Reliability of the products in a difficult environment

Ease of interfacing with the Yamaha® console

Reduced maintenance burden

**INSTALLATION DETAILS**

Carnival Cruise Lines has been using Aviom's Pro16® Personal Mixers on board its fleet of 22 ships for several years. When James Keaton, Carnival's sound designer, decided to replace the heavy copper wiring in the designs for the fleet's new ships and to begin retrofitting some of the existing ones to Cat-5 cable, he chose Aviom Pro64® digital snakes for the shows on board.

Carnival's newest ship, the twenty-third in its fleet, was the first ship to be outfitted with the new setup. The Pro64 digital snake was crucial to the launch of the *Carnival Splendor*, which features the 1,500-seat Spectacular show lounge that hosts revues such as "The Beat."

While most of the ships have one moveable bandstand outfitted with the Aviom gear, the *Carnival Splendor*, future ships, and the ships to be retrofitted will actually have two complete systems. Each of the new systems includes two 6416m Mic Input Modules on stage that connect to two 6416Y2 A-Net® Interface Cards in the Yamaha® PM5D console. Sixteen monitor feeds are sent from front of house to stage on the same Cat-5 cable. These channels are routed through an ASI A-Net Systems
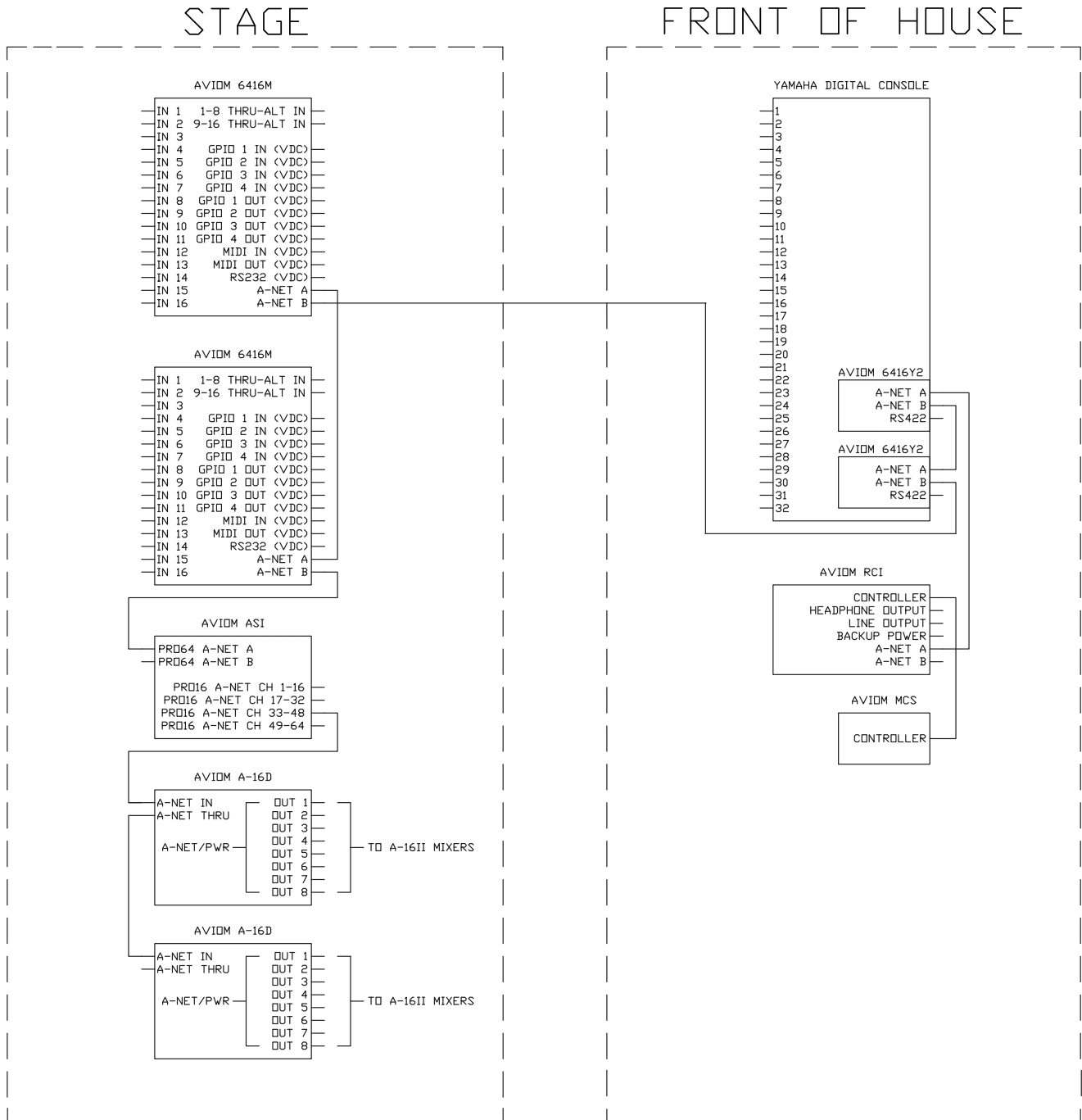
Interface to convert the Pro64 signal to Pro16 for the band's 10 A-16II Personal Mixers used for monitor mixing. Two A-16D Pro A-Net Distributors are also used on stage to distribute power and A-Net to the band's Personal Mixers.

Not only does the transition to a digital system running on Cat-5 cable significantly streamline the ships' setups and reduce maintenance needs, it also makes setup for each show much simpler since all that's required is running one Cat-5 cable.

Keaton chose Pro64 not only for its simplicity and the ease with which it can interface with the Yamaha console but also because he knew he could rely on A-Net. Average life for a product that would last 10 years on land is about two years at sea, according to Keaton. But Keaton is making an Aviom digital snake the standard on the ships because he was impressed by the reliability of the products. Aviom's products have performed well on board despite the unique power requirements of the environment. According to Keaton, the plan with this design is to "set it and forget it" for the next five years.

*System diagram on reverse*

STAGE                    FRONT OF HOUSE

AVIOM 6416M

| IN 1 | 1-8 THRU-ALT IN |
| IN 2 | 9-16 THRU-ALT IN |
| IN 3 | |
| IN 4 | GPIO 1 IN (VDC) |
| IN 5 | GPIO 2 IN (VDC) |
| IN 6 | GPIO 3 IN (VDC) |
| IN 7 | GPIO 4 IN (VDC) |
| IN 8 | GPIO 1 OUT (VDC) |
| IN 9 | GPIO 2 OUT (VDC) |
| IN 10 | GPIO 3 OUT (VDC) |
| IN 11 | GPIO 4 OUT (VDC) |
| IN 12 | MIDI IN (VDC) |
| IN 13 | MIDI OUT (VDC) |
| IN 14 | RS232 (VDC) |
| IN 15 | A-NET A |
| IN 16 | A-NET B |

AVIOM 6416M

| IN 1 | 1-8 THRU-ALT IN |
| IN 2 | 9-16 THRU-ALT IN |
| IN 3 | |
| IN 4 | GPIO 1 IN (VDC) |
| IN 5 | GPIO 2 IN (VDC) |
| IN 6 | GPIO 3 IN (VDC) |
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| IN 8 | GPIO 1 OUT (VDC) |
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| IN 10 | GPIO 3 OUT (VDC) |
| IN 11 | GPIO 4 OUT (VDC) |
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| IN 13 | MIDI OUT (VDC) |
| IN 14 | RS232 (VDC) |
| IN 15 | A-NET A |
| IN 16 | A-NET B |

AVIOM ASI

PRO64 A-NET A
PRO64 A-NET B

PRO16 A-NET CH 1-16
PRO16 A-NET CH 17-32
PRO16 A-NET CH 33-48
PRO16 A-NET CH 49-64

AVIOM A-16D

| A-NET IN | | OUT 1 |
| A-NET THRU | | OUT 2 |
| | | OUT 3 |
| A-NET/PWR | | OUT 4 |
| | | OUT 5 |
| | | OUT 6 |
| | | OUT 7 |
| | | OUT 8 |

TO A-16II MIXERS

AVIOM A-16D

| A-NET IN | | OUT 1 |
| A-NET THRU | | OUT 2 |
| | | OUT 3 |
| A-NET/PWR | | OUT 4 |
| | | OUT 5 |
| | | OUT 6 |
| | | OUT 7 |
| | | OUT 8 |

TO A-16II MIXERS

YAMAHA DIGITAL CONSOLE

1
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AVIOM 6416Y2

A-NET A
A-NET B
RS422

AVIOM 6416Y2

A-NET A
A-NET B
RS422

AVIOM RCI

CONTROLLER
HEADPHONE OUTPUT
LINE OUTPUT
BACKUP POWER
A-NET A
A-NET B

AVIOM MCS

CONTROLLER

*This 32x16 digital snake between the stage and front of house utilizes two 6416Y2 A-Net Interface Cards and two 6416m Mic Input Modules and integrates a Pro16® monitor mixing system using an ASI A-Net Systems Interface. Two of these systems are on board Carnival's new ship.*

A·NET