Installation & User Guide

PACIFIC RESEARCH & ENGINEERING

Oasis™

Broadcast Console

Oasis-08: PRE99-1500-08 (configurable console)
PRE99-1500-08A (preconfigured, analog)

Oasis-12: PRE99-1500-12 (configurable console)
PRE99-1500-12A (preconfigured, analog)

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Manual 75-58

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Designed by Pacific Research & Engineering – PR&E®

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Publication Information

Trademarks

IMPORTANT NOTICE:

In early 2017 PR&E (Pacific Research and Engineering) was acquired by Wheatstone Corporation of New Bern, North Carolina, from GatesAir Incorporated of Quincy, Illinois (formerly Harris Broadcast). Pursuant to this, Wheatstone now offers legacy technical documentation and owner/installation manuals for PR&E products from its pre.com website. As legacy documents however, references may be made within to historical GatesAir or Harris Broadcast technical support, copyrights, and/or trademarks. It is important to note that all technical support for PR&E products is now available solely from Wheatstone Corporation, its employees and designated official dealerships.

If you require support or information in addition to the technical file downloads available from pre.com, please contact techsupport@wheatstone.com, or call Wheatstone at +1.252.638-7000 (weekdays 9-5pm eastern standard time USA) for assistance. *References to other support sites or contact information contained within these legacy documents (i.e., GatesAir or Harris Broadcast) are no longer valid.*

Manual Revisions

A = Initial release; B = Technical corrections, added revised photos; C = Added configurable console info; D = Added Harris Broadcast info;
E = Added GatesAir logo and updated contact information, numbered each Figure and Table; F = Added VistaMax source selector info.
G = Added unbalanced output connection photo

Safety Instructions

1. **Read All Instructions.** Read all safety and operating instructions before operating the product.

2. **Retain All Instructions.** Retain all safety and operating instructions for future reference.

3. **Heed All Warnings.** You must adhere to all warnings on the product and those listed in the operating instructions.

4. **Follow All Instructions.** Follow all operating and product usage instructions.

5. **Heat.** This product must be situated away from any heat sources such as radiators, heat registers, stoves, or other products (including power amplifiers) that produce heat.

6. **Ventilation.** Slots and openings in the product are for ventilation. They ensure reliable operation of the product and keep it from overheating. Do not block or cover these openings during operation. Do not place this product into a rack unless proper ventilation is provided and the manufacturer's recommended installation procedures are followed.

7. **Water and Moisture.** Do not use this product near water such as a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool or the like.

8. **Attachments.** Do not use any attachments not recommended by the product manufacturer as they may cause hazards.

9. **Power Sources.** You must operate this product using the type of power source indicated on the marking label and in the installation instructions. If you are not sure of the type of power supplied to your facility, consult your local power company.

10. **Grounding and Polarization.** This product is equipped with a polarized AC plug with integral safety ground pin. Do not defeat the safety ground in any manner.

11. **Power Cord Protection.** Power supply cords must be routed so that they are not likely to be walked on nor pinched by items placed upon or against them. Pay particular attention to the cords at AC wall plugs and convenience receptacles, and at the point where the cord plugs into the product.

12. **Lightning.** For added protection for this product, unplug it from the AC wall outlet during a lightning storm or when it is left unattended and unused for long periods of time. This will prevent damage to the product due to lightning and power line surges.

13. **Overloading.** Do not overload AC wall outlets, extension cords, or integral convenience outlets as this can result in a fire or electric shock hazard.

14. **Object and Liquid Entry.** Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short out parts, which could result in a fire or electric shock. Never spill liquid of any kind on the product.

15. **Accessories.** Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult and serious damage to the product. Any mounting of the product must follow manufacturer's installation instructions.

16. **Product and Cart Combination.** Move this product with care. Quick stops, excessive force, and uneven surfaces may cause the product and the cart combination to overturn.

17. **Servicing.** Refer all servicing to qualified servicing personnel.

18. **Damage Requiring Service.** Unplug this product from the wall AC outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the AC cord or plug is damaged.
    b. If liquid has been spilled or objects have fallen into the product.
    c. If the product has been exposed to rain or water.
    d. If the product does not operate normally (following operating instructions).
    e. If the product has been dropped or damaged in any way.
    f. When the product exhibits a distinct change in performance. This indicates a need for service.

19. **Replacement Parts.** When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

20. **Safety Check.** Upon completion of any repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

21. **Cleaning.** Do not use liquid or aerosol cleaners. Use only a damp cloth for cleaning.

Hazard and Warning Label Identification

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: SHOCK HAZARD - DO NOT OPEN
AVIS: RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE ANY COVER OR PANEL. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THE PRODUCT TO RAIN OR MOISTURE.

The **Exclamation Point symbol**, within an equilateral triangle, alerts the user to the presence of important operating and maintenance (servicing) instructions in product literature and instruction manuals.

The **Lightning Flash With Arrowhead** symbol, within an equilateral triangle, alerts the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

NOTE: The VM Family of equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1 – INTRODUCING OASIS

The GatesAir Oasis console is a compact, countertop, radio broadcast and production console. Two frame sizes, with eight audio control channels (Oasis-08) or twelve audio control channels (Oasis-12) are available. Each audio control channel (Fader Channel) can select between two audio sources (A and B). The selected audio source can be assigned to any combination of two Program buses, one Telco (Phone) Offline bus, and Cue.

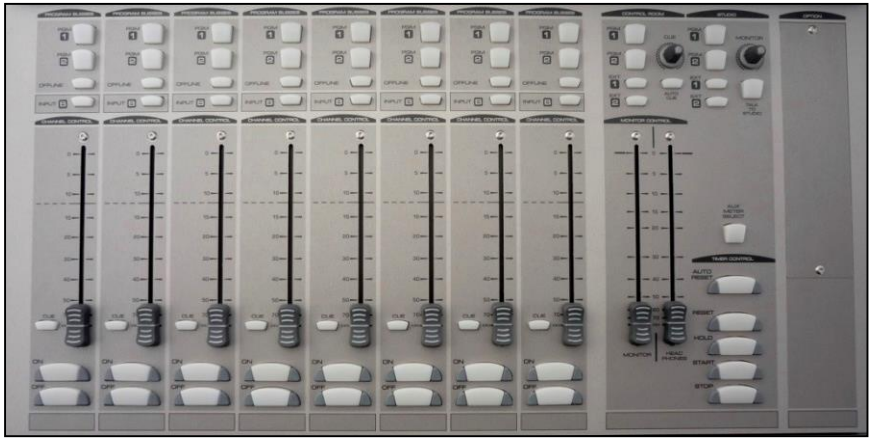


Figure 1-1 Oasis-08 Control Surface

Each Fader Channel has a 100 mm fader and illuminated buttons for Channel Off, Channel On, Cue, Input Source select, and bus select (for Offline, Program 2, and Program 1). To the right of the eight or twelve Fader Channels are the Monitor Controls (monitor source selection buttons and level controls) for the Control Room and a Talk Studio.

All of the controls are on a single control surface (the Oasis-08 control surface is shown in Figure 1-1), which is hot-pluggable for rapid field replacement with minimal interruption to operations. The control surface plugs into a motherboard using one short red CAT5 cable which supplies power (+12 VDC) and carries control data. Since no audio flows through the control surface, and because the button settings and fader settings are maintained in the DSP, in an emergency the control surface could be entirely unplugged and swapped out during a live broadcast without interrupting any audio being mixed by the console.

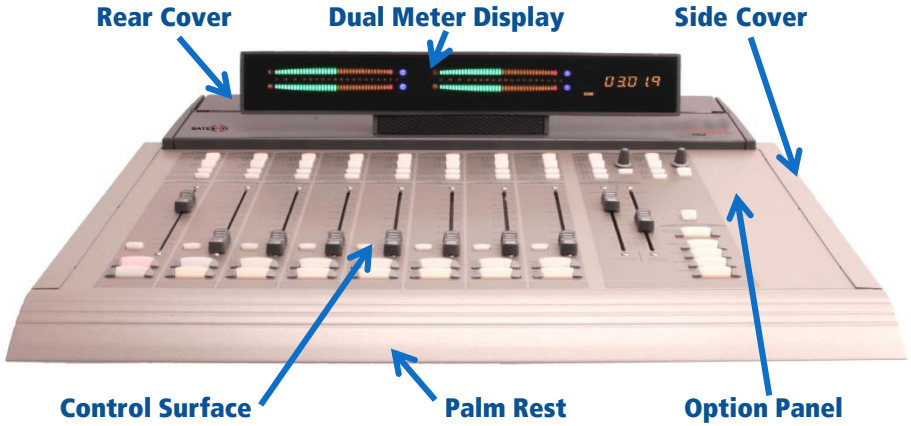


Figure 1-2 Oasis-08 Main Parts

AUDIO AND LOGIC CARDS

Audio inputs and logic interfaces are on separate hot-pluggable cards, inserted into a motherboard, located below the meter display, from the rear of the console. All of these cards' connections are hidden, in normal use, by a rear cover located behind the Dual Meter Display (Figure 1-2).

Analog-only Oasis consoles (PRE99-1500-08A or PRE99-1500-12A) have audio and logic cards pre-installed in all slots. Configurable Oasis consoles (PRE99-1500-08 or PRE99-1500-12) do not include any audio or logic cards as standard items—each is sold as a separate sales line item, in order to custom configure the console, so there may not be a logic card installed in every logic card slot.

Each Audio card and Logic card services four Fader Channels (faders 1 – 4, faders 5 – 8, or faders 9 – 12). Each audio card has eight inputs, one for each A and B source for the four faders that card services. Logic cards only have four logic connectors, one per fader channel that it services, which can be associated with either the A or B source on each fader.

The Oasis-08 console has two audio card slots and two logic card slots. The Oasis-12 console has three audio card slots and three logic card slots. The audio and logic cards are all hot-pluggable to allow for quick swapping

of a card for service, or for adding or changing card types as input signal requirements change. Four types of audio cards are available: Mic Preamp; Analog Input; Digital Input; USB Input.

A **Mic Preamp Card** is typically installed in the audio card slot for Faders 1 – 4. It has four balanced low-noise mic preamps (with switchable 48-volt Phantom power) plus four stereo line-level inputs (balanced +4 dBu or unbalanced -10 dBv signals). Additional Mic Preamp cards can be installed in the console, if required. When separate mic processors are used an Analog or Digital input card is installed for Faders 1 – 4.

An **Analog Input Card** has eight stereo analog inputs for balanced +4 dBu or unbalanced -10 dBv signals. The card connectors are labeled as Input 1 and Input 2 for Channels 1 – 4. The default console settings assign Input 1 to be the A Source and Input 2 to be the B Source on each Fader Channel. The A and B assignments can be swapped in the Oasis Control Center software application (Oasis app, covered in Section 3) in order to custom configure the console settings.

A **Digital Input Card** has eight AES/EBU balanced inputs. In most cases, S/PDIF signals can also connect to these inputs. The connectors are labeled like the Analog Input cards with each pair of Channel inputs labeled as Input 1 and Input 2 with default settings of inputs 1 as the A sources and inputs 2 as the B sources for the four Fader Channels.

The **USB Input Card** has one USB connector and four AES/EBU connectors. The USB connector supports four stereo audio playback channels, with logic, to be received from a digital delivery system with compatible drivers (vendors like Audio-Vault and Wide Orbit have supporting drivers as of the writing of this manual).

A **Logic I-O Card** has four logic connectors. Each connector has four discrete logic inputs (channel on, channel off, cough / cue, and talk / ready) and two discrete logic outputs (on and off tally or start and stop pulse). When an audio source is set as a microphone (its input is set to mute the CR or Studio) then mic logic is assigned automatically (input logic is channel on/off, cough, talk; output logic is tallies).

Line sources are those inputs that do not mute the control room or studio. They are assigned to use line logic (input logic is channel on/off, cue, ready; output logic is start/stop pulses). Note that ready logic, which controls the lighting of the channel off button, is not active with the default settings. The Oasis app must be used to turn the Ready feature on for a particular source signal. The Logic card connectors are assigned to the A source input on each Fader Channel by default. Use the Oasis app to change the logic to be used with a B source input.

The Oasis console supports two Telco or 4-wire device inputs, when the optional **Telco Upgrade Kit** is installed. The console automatically generates two mix-minus outputs to feed these two 4-wire devices. From the factory, the default inputs assigned to the two Telco devices is Input 2 on the last two faders in the console. The Telco inputs can be changed to any input source on channel 5 or above using the Oasis app. The two Telco devices have unique mix-minus / IFB outputs on the Main card.

Note that the mix-minus outputs are only active when Telco 1 or 2 is the active source on a Fader Channel. This also holds true for the dedicated analog Telco Record output, on the console's Main card, and the digital Telco Record output that can be set to feed the main card's USB connector. This output is typically connected to the computer running the phone editor software like VoxPro®, TRx Phone Recorder®, etc.

MONITOR CONTROLS

To the right of the Fader Channel controls are the Monitor Controls for the control room and an associated talk studio. These board operator controls include monitor source selectors and fader level controls for the room monitor and board operator headphones; monitor source selection and rotary pot control for studio monitor level; talkback button to talk to the studio; Event Timer control buttons; and a source select button for stepping through the various sources that can feed the Auxiliary meter.

DUAL METER DISPLAY

A Dual Meter Display (Figure 1-3) is above and behind the control surface. It contains an Event Timer, two stereo audio meters, and a cue speaker. The left meter shows Program 1. The right or Auxiliary meter can show: Program 2, External 1, External 2, or Cue. A name tag, to the right of the Auxiliary meter, lights to indicate the currently displayed signal.

Figure 1-3 Dual Meter Display

OPTION PANEL

A removable blank panel, on the right side of the Monitor Control section of the control surface (Figure 1-2), can be removed to install an optional VistaMax source selector (PRE99-1376-2) or an Oasis 8x1 RLS (Remote Line Selector) control panel. The VistaMax source selector can control source selection to one destination (like an Oasis channel) with six hot source buttons, or manually control six destinations (like several Oasis channels, the External input, plus in-room recording devices).

The 8x1 RLS is a passive (relay-switched), eight-by-one source selector that connects to any one channel or to an external monitor input.

A blue CAT5 cable, plugged into a chassis coupler, is located below this panel which plugs into either the VistaMax source selector or the 8x1 RLS control panel.

If a VistaMax Source Selector or Oasis 8x1 RLS is not installed, the blank panel can be used to create a removable custom control panel for a Profanity Dump button, a door lock release, or other control button or indicator.

INPUT AND OUTPUT CONNECTORS

All of the audio and logic connections on the console cards use *Phoenix Contact* Combicon board-mounted connectors with mating plugs. Four Combicon connector sizes are used on the Oasis console: 3-terminal for mic inputs and digital audio signals; 6-terminal for balanced stereo analog audio signals; 10-terminal for channel Logic I-O; and 12-terminal for Control Room Logic I-O and Studio Logic I-O. The mating connectors are supplied in the installation kits that come with the console and with the individual Audio and Logic I-O cards.

OASIS SPECIFICATIONS

GatesAir reserves the right to change specifications without notice or obligation.

Test Conditions:

- Fully configured console, with Mic Preamp, Analog, and Logic I-O cards
- FSD = Full Scale Digital, +24 dBu
- Analog outputs measured with 200 k ohm load
- Total Harmonic Distortion (THD+N) measured at +23 dBu, using a 632.5 Hz, or a swept signal, with a 400-20 kHz bandpass filter
- 0 dBu corresponds to 0.775 volts RMS—regardless of the circuit impedance, as measured on a 600 ohm circuit.
- Noise specs measured using a 22 Hz -20 kHz bandwidth. A 30 kHz bandwidth increases the noise measurement by 1.7 dB.

Mic Inputs (low-impedance, balanced)

Source Impedance: 150 – 600 ohm, balanced (tested using 40 ohms)
Nominal Input Level: -45 dBu, nominal
Input Range: -72 to -21 dBu, in 3 dB steps (set using the Oasis app)
Equivalent Input Noise: -108 dBu

Analog I-O (Inputs & Outputs: +4 dBu, balanced)

Input Impedance: >40 k ohms, balanced
Nominal Input Levels: +4 dBu (balanced) or -10 dBm (unbalanced), selected using the Oasis app, plus level trim in 3 dB steps
Maximum Input Level: +24 dBu
Output Source Impedance: <3 ohms balanced
Output Load Impedance: 1 k ohms minimum
Nominal Output Level: +4 dBu
Maximum Output Level: +24 dBu
Conversions: A/D 24-bit, Delta-Sigma, 128x oversampling; D/A 24-bit, Delta-Sigma, 128x oversampling
Latency: <1.6 ms, analog input to analog output

Digital I-O (AES/EBU Inputs & Outputs)

Reference Level: -20 dB FSD = +4 dBu
Signal Format: AES-3, S/PDIF (inputs only)
AES-3 Input Compliance: 24-bit (uses sample rate conversion to support incoming sample rates of 8 – 96 kHz)
AES-3 Output Compliance: 24-bit
Output Sample Rates: switchable, 44.1 kHz or 48 kHz
Processing Resolution: 24-bit

Audio Frequency Response

Analog Input to Analog Output: +0.3 dB/-0.0 dBr, 20 Hz to 20 kHz

Audio Dynamic Range (referenced to FSD)

Analog Input to Analog Output: 103 dB, 106 dB "A" weighted
Analog Input to Digital Output: 107 dB

Audio Crosstalk Isolation

Adjacent Analog Inputs or Outputs: >105 dB, 20 Hz to 20 kHz

Audio Total Harmonic Distortion + Noise

Analog Input to Analog Output: <0.002%, 1 kHz, +23 dBu input
Analog Input to Digital Output: <0.005%, 1 kHz, +23 dBu input
Digital Input to Digital Output: <0.0002%, 1 kHz, -1 db FSD input
Digital Input to Analog Output: <0.002%, 1 kHz, -1 db FSD input

Logic I-O

Logic Inputs & Outputs: Opto-isolated and floating, or referenced to internal +5 VDC via DIP switch

Console Dimensions

Oasis-08: 5.5" x 22.0" x 17.25" (H, W, D)

Oasis-12: 5.5" x 28.4" x 17.25" (H, W, D)

Power Supply

Type: External, in-line style, with plug-in DC cord

AC input: Detachable IEC cord

Input: 100-240 VAC, 50/60 Hz

Output: +12 VDC @ 4 amps

Power Requirements

Oasis-08: <21 watts at 120 VAC / 60 Hz

Oasis-12: <24 watts at 120 VAC / 60 Hz

Environment

Ambient Temperature: Less than 40°C

Cooling: Convection cooled, no fans

GATESAIR WARRANTY STATEMENT

Each Oasis console carries a standard manufacturer's warranty of **15 months** from the *date of shipment* of the device from GatesAir.

To view or download the current GatesAir Standard Warranty Policy Statement for either domestic (USA) or international locations, please visit this GatesAir web page:

http://www.gatesair.com/services/technical-support/warranties.aspx

2 - INSTALLATION

The Oasis console is 17.25" deep x 5.5" tall. The Oasis-08 is 22" wide. The Oasis-12 is 28.5" wide. The Oasis is convection cooled for completely silent operation, and is suitable for use in air studios, production rooms, voice tracking rooms, newsrooms, and talk studios.

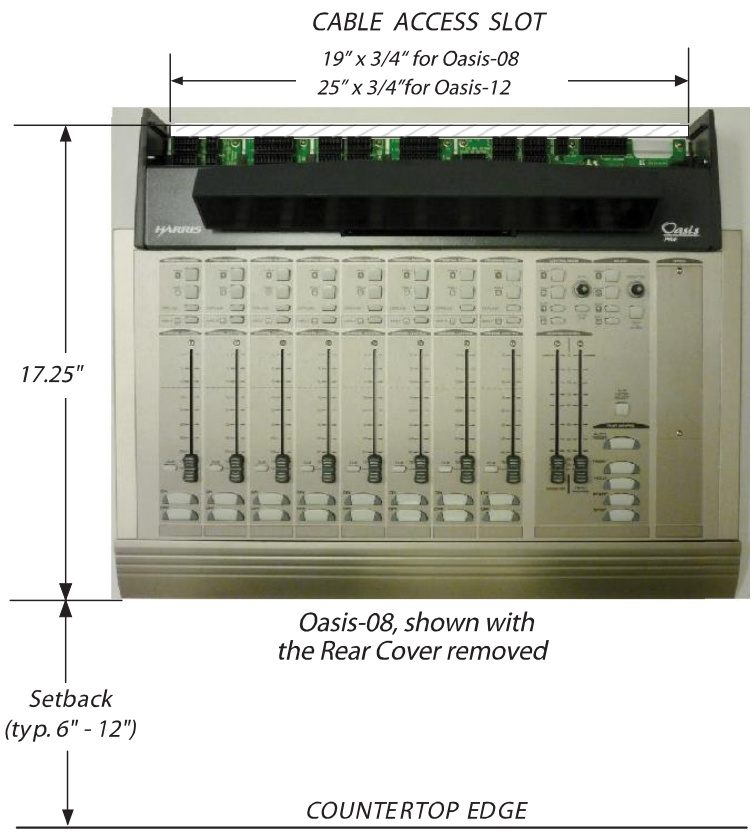


Figure 2-1 Positioning the Oasis on the Countertop

PREPARING THE COUNTERTOP

All cables plug into the Oasis Audio, Logic I-O, and Main cards from the rear of the console. These cables typically reach the console through a countertop "cable access slot" which is cut the width of the console's rear cover (Figure 2-1). The cutout is hidden, in normal usage, by this rear cover. When a cutout is not made, the cabling must be fanned out so it fits below the rear cover. A 1" gap, between the bottom of the rear cover and the countertop, is filled with a brush material that splays over the cables when the rear cover is closed or installed.

Cable Access Slot & Securing the Console

To cleanly route cabling into the console a cable access slot should be cut through the countertop. The slot is 19" x ¾" for an Oasis-08 or 25" x ¾" for an Oasis-12. Set the console into position and use the closed rear cover to mark a line on the countertop. Move the console, then mark a second line parallel to the first line, but ¾" towards the board operator position, to create a 19" x ¾" (or a 25" x ¾") rectangle. Use a ¾" drill bit to drill out each end of this rectangle and then use a router or jigsaw to cut out the material to form the cable access slot. Leave both ends of the slot rounded to prevent future cracking when using laminated surfaces.

Since the Oasis console just sits on top of the countertop, for security and to keep it from sliding or moving, it can be fastened to the countertop (Figure 2-2). To do this, the control surface must be lifted up or removed:

1. Pop off the two Side Covers (on either side of the control surface)

2. Remove the six #1 Phillips screws that are revealed

3. Set the console into its normal usage position.

4. Lift up the front of the control surface (tabs along the rear edge go into the chassis allowing it to be angled up about 45°, depending upon how tightly the red CAT5 cable is tie-wrapped), so the countertop can be marked through the

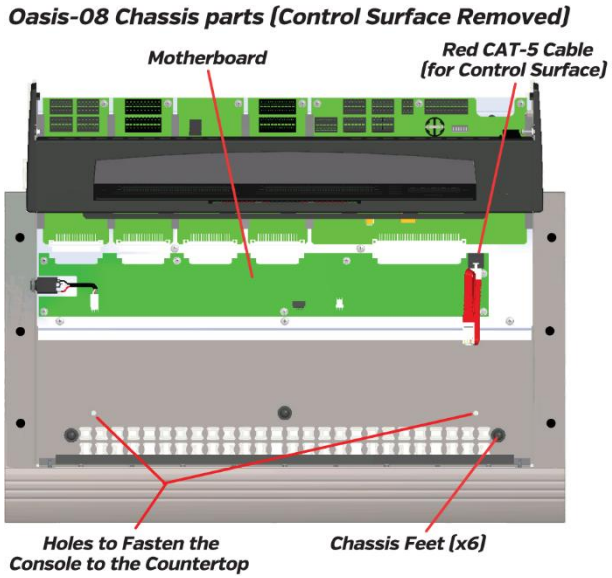


Figure 2-2 Fastening Oasis to the Countertop

two chassis holes. NOTE: The control surface can be completely removed by cutting one of the tie-wraps holding the red CAT5 cable so it can be unplugged from either end.

5. Set the console aside. If the console is fastened to a laminate-over-wood surface, drill two 1/8" pilot holes into the material, then use a 3/16" drill bit to drill just through the laminate (to prevent laminate cracking). To attach the console to a Corian and similar solid surface, drill two 3/16" holes through the material.

6. Set the console into place. Lift up the control surface to attach the console (this may require assistance when the control surface is not removed). On a laminate countertop, use two #8 wood screws; on a solid surface countertop, use two #8 bolts, washers, and lock washers. **NOTE: Do not deform the metal chassis when tightening the screws.**

7. Set the control surface back onto the Oasis chassis. Refasten the six mounting screws then snap on the two cosmetic side panels.

CONNECTING THE WIRING

To facilitate console installation, GatesAir recommends using a wire list, with all console connections to/from all peripheral devices listed. Identify and create labels for each end of every audio and logic cable. List these connections in a master facility wiring logbook to ease installation, future system wiring or equipment changes, and system troubleshooting.

Audio cabling to or from the console should always be run with the maximum practical distance from all AC mains wiring within the cabinetry. The console's 12-volt power cord carries only DC voltage so audio wiring can run parallel to or even be tie wrapped to this cable without problem.

To ease installation, cabling to the console is normally tie wrapped to the bottom of the countertop near the cable access slot. Leave about an eight-inch service loop on each cable to allow wiring to be broken out. Individual wires go into Combicon plugs (included with the console and optional Input cards) which plug into Combicon connectors on the console cards. Excess cabling (e.g., the service loops) will hang down into the cabinet or cable tray. Fold the audio and logic wires snuggly over the plugs and connectors, arranging the cables to loosely hang down thru the cable access slot.

Outside of wire strippers, the only tool required to attach the wiring to the Combicon plugs is a small flat blade screwdriver (like a "Greenie"). As shown in Figure 2-5, a Greenie is used to press on the orange tab to open the spring-loaded latch for that terminal. Each terminal consists of an orange tab and round wire hole with a spring-loaded wire latch at the bottom.

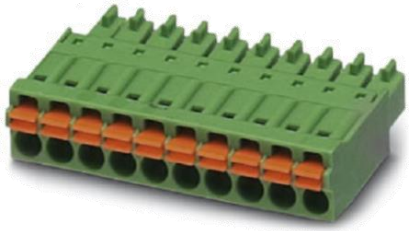


Figure 2-3 Combicon Plug

Press on the orange tab while inserting the prepared wire into the hole. Releasing the orange tab locks that wire into the terminal. A slight tug on the wire will verify it's properly latched in the terminal.

To prepare the cabling, strip back the audio and logic cable jackets about 1.5" (37 mm) in order to separate out the individual wires and to ease cable routing through the cable access slot. Strip back individual wires about 3/8" (10 mm). If shielded cable is used, the shield should be covered by clear tubing to insulate it with about 3/8" (10 mm) of shield wire left exposed at the end. Use shrink tubing, placed over the cut end of the jacket and the clear plastic tubing, to hold the tubing in place.

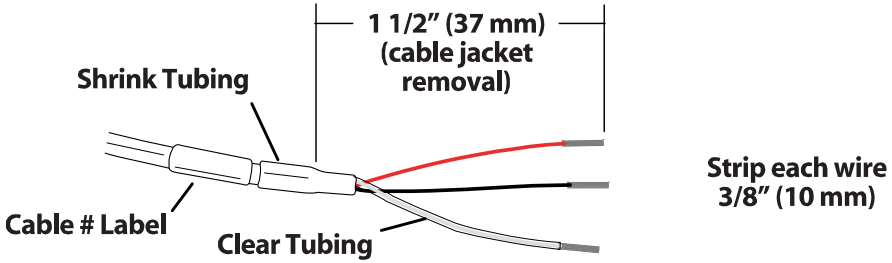


Figure 2-4 Audio and Logic Wiring Preparation

To ease inserting the wires into the Combicon plugs, a small tabletop vise, like the Home Depot model 69997 (about $17.00 USD) can hold the Phoenix Combicon to ease pressing down the orange tab while inserting the wire (Figure 2-5). Plugs can also be inserted into audio or logic card connectors to hold the plug as wires are inserted and locked into the plug.

All Oasis analog inputs and outputs are designed for balanced +4 dBu signals. In most cases, only the Plus (+) and Minus (-) terminals are connected using single-pair UTP cable (DataMax 5100 or similar) for balanced audio connections. The exceptions to this practice, of using UTP cable, are for microphone cables and room monitor outputs going to powered monitor speakers. These type of connections still requires using shielded cable.

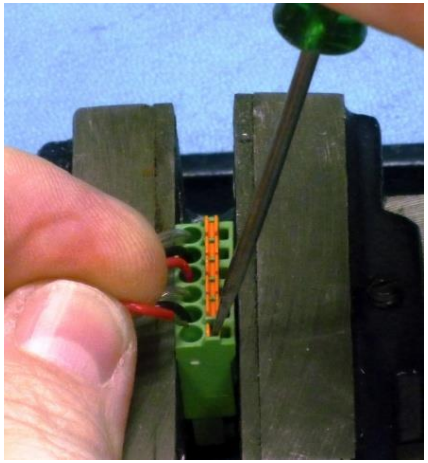


Figure 2-5 Wiring a Combicon Plug

To connect an unbalanced stereo device to an **Oasis input**, connect the two signal wires to the high (+) terminals (3 and 6). Connect the shield or ground wire to one shield terminal (1 or 4). To minimize noise, tie the two low (-) terminals (2 and 5) to ground (1 and 4) using short jumper wires. In Figure 2-6a, the common wire (BLK) goes to terminal 1, Left Shield (or ground) which is tied to terminal 2, Left Low (-). Terminal 4, right shield, is also tied to terminal 5, Right Low (-).

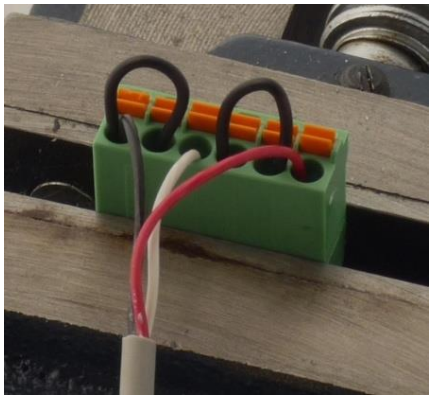


Figure 2-6a Input Wiring from an Unbalanced Device

When an unbalanced device is connected, use the Oasis app (Inputs tab) to set the input to *Consumer Level*. An automatic gain boost is applied to compensate for the unbalanced device's nominal signal level of -10 dBv on that audio input, thus eliminating the need for a "signal match" box.

When an **Oasis output** connects to an unbalanced stereo device, only connect the two high (+) and a Shield terminal (as shown in Figure 2-6b).

The two low (-) terminals are not used on an unbalanced output. Do not connect these terminals to GND as that can damage the output card!

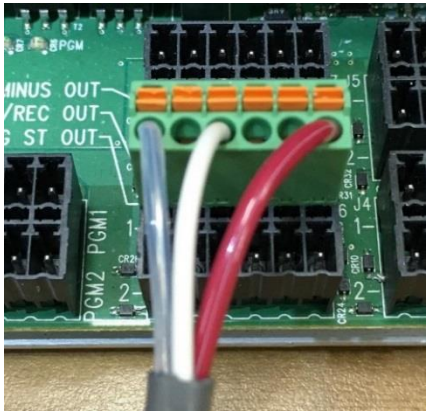


Figure 2-6b Output Wiring to an Unbalanced Device

Combicon Plugs

The Combicon plugs for the Main card connectors (ten 6-terminals, two 3-terminals, and two 12-terminals) are included in an Oasis installation kit. The plugs for each Mic Preamp card (four 3-terminals and four 6-terminals), Analog Input card (eight 6-terminals), Digital card (eight 3-terminals), USB card (four 3-terminals), and Logic I-O card (four 10-terminals) are packaged separately (in an installation kit for each card).

The four sizes of Oasis audio and logic Combicon plugs are summarized in Figure 2-7. For additional connection details see the GatesAir customer document 71-1501, Audio Input card connections; GatesAir doc 71-1506, Logic I-O card connections; GatesAir doc 71-1500-1, Oasis Quick Guide; and GatesAir doc 71-1500-2, Oasis step-by-step installation guide. All of these Oasis documents can be downloaded from the GatesAir Customer Portal.

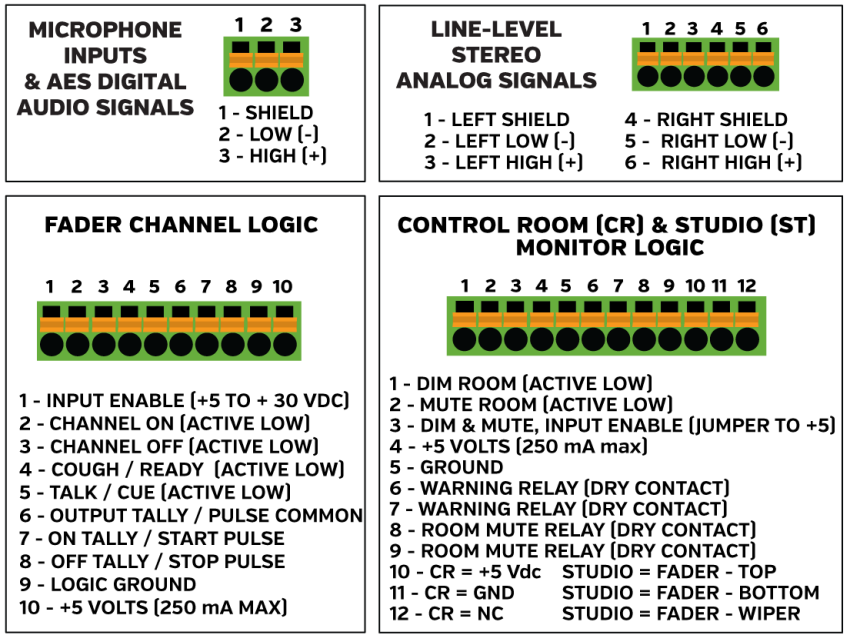


Figure 2-7 Combicon Plug Types and Their Signals

Removing the Rear Cover

To ease wiring, remove the Oasis console's rear cover. Note that two rear covers have been used on the Oasis consoles: the original hinged rear-cover and a snap-on cover.

To remove the hinged cover, open the rear cover to loosen the left-hand hinge screw until that end of the cover can be lifted up and slid off the right-hand hinge pin. NOTE: the screw remains captive in the threaded standoff, but there are two white plastic bushings that will be loose on each hinge. These must be kept in a safe place and then put back in-place so the hinged rear cover can be properly reattached after wiring is completed.

To remove a snap-on cover, which is held in place using two snap-on plastic ball & sockets, pull the rear cover away from the console chassis. To reattach the rear cover, snap the two plastic balls back into their chassis sockets.

Figure 2-8 Removing the Rear Cover

CONSOLE POWER

The Oasis console is powered by a 12-volt in-line power supply, included with the console. It works with AC mains from 100 to 240 VAC, 50/60 Hz. There is no redundant supply capability for Oasis.

The supply's DC output cord plugs into a standard DC power jack on the Main card (+ is on the inner terminal and GND is on the outer terminal). The supply comes with a detachable USA-type AC cord with an IEC connector. When the Oasis is installed internationally, the AC mains cord will need to be replaced with one matching the local AC mains outlet.

A plastic-coated metal strain relief tab is fastened to the Main card mounting screw behind the DC Power Connector. Plug in the DC cord then fold the strain relief tab around the DC cord, leaving a service loop in the cord, as shown in Figure 2-9.

Note that there is no power switch on an Oasis console since it is designed for continuous 24 / 7 operation.

If power must be removed from the console, unplug the AC cord from the AC mains outlet. Leave the DC cord connected at all times for proper operation.

Figure 2-9 DC Power & USB Connections

VISTAMAX LINK CONNECTOR

There is an RJ45 connector on the Main card, between the DC Power and USB connectors (Figure 2-9). This is **not** an Ethernet connection. It is only used to interconnect the Oasis console with a VistaMax audio management system Hub card Facet. This "Link connection" is not active unless a Network & Dual Telco upgrade kit (PRE99-1444-22) is installed.

The network upgrade kit allows the Oasis console to be directly linked into a VistaMax audio management system so that audio and logic signals can be routed directly to any Fader channel and to either External Input. Logic outputs from all faders plus the two audio buses, the two mix-minus signals and the Telco Record audio can be routed from the Oasis console.

IBUTTON SOCKET

Several upgrade kits are available, or planned, to expand the Oasis console's operating abilities. Each upgrade is activated by installing a specific iButton (a hardware device that looks like a coin battery) to unlock the optional features included with that upgrade. An iButton socket is located on the Main card just behind the two Monitor Logic connectors (Figure 2-10).

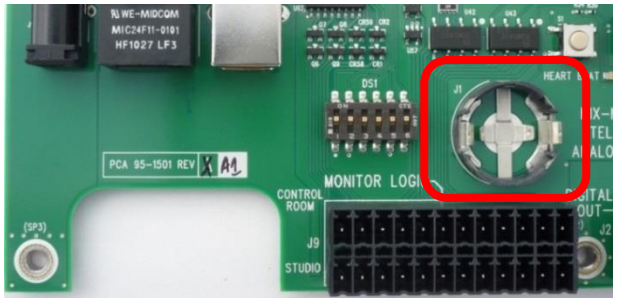


Figure 2-10 Main Card, iButton socket

CARD CONFIGURATION SWITCHES

A 6-position setup switch on the Main card near the iButton (Figure 2-10) does not have any assigned functions at this time and all switches should be set off (all set toward the logic connectors).

Mic Preamp cards have a 4-position switch to turn +48 V phantom power on for any mic input. Logic I-O cards have an 8-position setup configuration switch. GatesAir customer docs: 71-1501 Input cards and 71-1506 Logic I/O cards, detail how to set these switches.

The Dual Display has a 6-position setup switch (located behind the black meter mesh below the meters) to set the following parameters (parameter when set off / parameter when set on):

1. Peak and Average metering (default) / Average-only metering
2. 2 second peak LED hold (default) / No Peak LED hold
3. Blue Peak LED turn-on level (both 3 and 4 off = -6 dBFS, default setting)
4. Blue Peak LED (3 on/4 off = -4, 4 on/3 off = -2, both on = 0 dBFS)
5. Spare switch position
6. Timer Running: .1 sec not shown / .1 sec shown (default)

To access the dual display setup switches, remove two #1 Phillips screws near each end of the rear of the Dual Display housing. Remove the plastic faceplate to reveal the display board. Pull the display board forward slightly (to clear its five plastic standoffs) and then lift it up to access the six-position switch. For further information see page 26 in the Service section of this manual.

3 – CONSOLE SETUP

The Oasis console ships with factory-default configuration settings which should work fine for most installations. If any settings require changes, the Oasis Control Center app, running on any Win XP (SP3) through Windows 10 PC, is used to make the changes. The Oasis application (Oasis App) can be downloaded from the GatesAir Customer Portal.

THE DEFAULT CONFIGURATION

The Oasis console comes preconfigured so it's ready to use right out of the box. Here are the factory-default parameter settings:

Mic Preamp Card Settings: All four mic inputs are set as Control Room mics (e.g., the CR Monitor output mutes when the mic channel is on and is assigned to PGM 1 or 2). All four Line inputs are set for stereo, balanced line level (nominal +4 dBu), with no monitor muting.

FADER CHANNEL 1: A source = Mic 1; B source = Line 1
FADER CHANNEL 2: A source = Mic 2; B source = Line 2
FADER CHANNEL 3: A source = Line 3; B source = Mic 3
FADER CHANNEL 4: A source = Line 4; B source = Mic 4

Analog Line Input Card Settings: All eight inputs on each card are set as stereo, balanced line level (nominal +4 dBu), with no monitor muting.

FADER CHANNEL 5: A source = Line In 1; B source = Line In 2
FADER CHANNEL 6: A source = Line In 1; B source = Line In 2
FADER CHANNEL 7: A source = Line In 1; B source = Line In 2 *
FADER CHANNEL 8: A source = Line In 1; B source = Line In 2 **

FADER CHANNEL 9: A source = Line In 1; B source = Line In 2
FADER CHANNEL 10: A source = Line In 1; B source = Line In 2
FADER CHANNEL 11: A source = Line In 1; B source = Line In 2 *
FADER CHANNEL 12: A source = Line In 1; B source = Line In 2 **

* With the Two Telco upgrade, Line In 2 on Channel 7 on Oasis-08 (channel 11 on Oasis-12) is set as Telco 1.

** With the Two Telco upgrade, Line In 2 on Channel 8 on Oasis-08 (channel 12 on Oasis-12) is set as Telco 2.

Logic I-O Card Settings:
Logic is assigned to the A source on each fader channel.

When the source is a microphone (a room mute is active), then the input logic is: on, off, cough, talk; and the output logic is: on tally, off tally.

When the source is a line input, then the input logic is: on, off, cue, ready; and the output logic is: start pulse, stop pulse (200 ms closures).

Optional logic settings (timer reset, fader start, ready, etc.) are not assigned.

Main Card Settings:
Control Room Monitor Mode = Stereo
Control Room Output 1 = CR Monitor output
Control Room Output 2 = Host Headphone output
Operator Headphones = AutoCue L, Mon on R
Cue = Talkback Interrupts Cue & Cue is displayed in the Aux Meter
Studio Monitor Mode = Stereo
Studio Output 1 = Studio Monitor output
Studio Output 2 = Host Headphone output
Remote Studio Monitor Fader = not enabled
Telco Auto Foldback = Off
Offline bus = Pre-Fader
Main USB = Audio input is unassigned; Audio output is Telco Record
PGM Digital Outputs = 44.1 kHz sample rate

OASIS CONTROL CENTER APPLICATION

Oasis console configuration settings are changed using the Oasis Control Center software application (Oasis app). This application can be downloaded from the GatesAir Customer Portal:
http://support.gatesair.com/

You must be a registered user to access the GatesAir Customer Portal. If you aren't a current user, click on Register Now? on the support site log-in page to create a new user account. The access info will be emailed to you.

The Oasis app file is in a zipped folder (Oasis App v26) listed on the Oasis page. From the Support home page, click on Studio Products, then click on Oasis. Scroll down the list of articles and click on Oasis App v26. Click the link (Oasis app v26.zip) to download the folder. Within the zipped folder are the Oasis app **.msi** installer file; a USB driver installer; a readme text file about installing the programs; standard console configuration files for the Oasis-08 (and Oasis-08A) and the Oasis-12 (and Oasis-12A) consoles; and configuration files to set the console for mono or stereo output operation.

Installing the Oasis Control Center Application

The Oasis Control Center application (the Oasis app) is typically installed on an engineering department laptop PC. To use the program, the PC must be connected to the Oasis console using a USB Host cable (PC USB port > Oasis Main board USB port).

The installer program (Oasis_deploy.msi) is typically supplied in zipped folder (Oasis app vxx.zip), with the xx indicating the build number of the software release. The program can be installed directly from the zipped folder or by dragging the .msi file to the desktop. Double-click the .msi file icon to install the app. Accept the default settings.

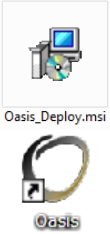


Figure 3-1 Oasis app icons

After installation there will an Oasis app shortcut icon on the desktop (Figure 3-1) and a new Start Menu item under: Start > Programs > Harris Corp > Oasis.

Before starting the Oasis app for the first time, connect a USB Host cable from the PC's USB port to the console's Main card USB connector (Figure 3-2). A "Found New Hardware" dialog box will pop up the first time an Oasis console is connected. Select Search automatically for the drivers. Once the drivers are installed, start the Oasis app. After it starts another "Found new Hardware" window pop-ups for the USB serial control driver. Again select Search automatically to install the driver. The Oasis app is now ready to use.

Figure 3-2 USB Host connection, Main card

Using the Oasis App

The Oasis app opens with the Information tab displayed. A status line along the bottom of the tab shows the revision of the Oasis app. A "Connected" indication shows that the computer is properly communicating with the console. The Information tab is divided into three sections: Oasis Information; Configuration Files; Firmware Update.

The Oasis Information section lists the Main Card's serial number, the firmware revision on that card, and the type of Input and Logic cards installed in the card slots.

The Configuration Files section is where the console's current configuration settings can be saved to the laptop PC as a back-up, or so the configuration settings can be uploaded to additional consoles, duplicating the settings from the currently connected console. The console's configuration settings are stored as an .xml database. The default configuration files, which are pre-loaded into the Oasis-08 and Oasis-12 consoles at the factory (the file names are Oasis08_default.xml and Oasis12_default.xml) are included with the Oasis app download if the consoles ever need to be returned to their default settings.

Figure 3-3 The Oasis App, Information Tab

To return a console to the default settings, in the Configuration Files section, click the search button (…) to open a Find File dialog box to locate the appropriate .xml file. Click *Open* to load the file (its name appears in the Configuration File entry box). To upload the configuration settings in that file to the console, click the *Execute* button.

Note: The changes take effect immediately so the console must not be on-air during this procedure since active audio sources could be affected.

If you have set up a console and want to duplicate the settings for additional consoles, the current console settings can be saved by typing in a name (e.g. on-air, production, newsroom, etc.) into the Configuration File entry box. When you type in the entry box, the *Save* button becomes active. Click it to open a Save File dialog box to select the folder to save the configuration file. The program adds .xml to the file name.

The Firmware Update section of the tab is used to update the console's firmware which is stored in flash memory. This flash memory can be rewritten, or updated, using the Oasis app. When updated firmware is made available, a new firmware file (in a zipped folder) can be downloaded from the GatesAir Customer Portal (see page 25) along a text file outlining how to upload the file, what new features are available, etc.

Input Tabs

There are two Input tabs when the Oasis app is connected to an Oasis-08 console (Inputs 1 – 4 and Inputs 5 – 8) and three tabs when connected to an Oasis-12 (Inputs 1 – 4, Inputs 5 – 8, and Inputs 9 – 12). Each Input tab has four panels showing the parameter settings for the eight audio inputs for those four channels (i.e., the inputs on one audio card and its associated logic card).

The top of each panel shows a Channel ID, which can be edited, if desired, to identify each fader channel in the Oasis app. Below the channel ID are the two inputs for that fader and their A/B source assignments. The inputs are normally Input 1 and Input 2, the two physical inputs on the audio card for that fader, but there are other inputs that can be assigned instead (USB, Telco 1, and Telco 2), on certain faders.

For most channels, Input 1 is the A source and Input 2 is the B source. These can be swapped by clicking *Swap*. In the illustration, clicking *Swap* would set Input 1 (Mic) as the B source and Input 2 (Line) as the A source for this fader. Note that the two inputs' position within the tab does not change, just A and B source identifications are swapped.

The signal mode section sets whether the audio input is mono or stereo. On a Mic Preamp card, the microphone inputs are fixed as mono (set to *L as mono*). For Line inputs, the default setting is *Stereo Line*. If the source signal is mono, and is plugged into the left channel of the input connector, then select *L as Mono*. When a mono signal is plugged into the right channel of the input connector, then select *R as mono*. For a two-channel source, like a call recorder, where left and right are two separate signals which should be summed to mono, select *L+R as Mono* to get a mono sum of that two-channel input source.

Checking the *Inactive* box turns off that input source. When the board operator tries to select an Inactive source (either A or B), the Input select button blinks four times to indicate it cannot be changed since that source is inactive. This function is often used with the board operator mic fader, which would be set as the A source. The B source is then set *Inactive* so the only source available on that fader is A.

The *Split to Next* selection is a special function that separates an incoming stereo input so the left channel goes to this fader and the right channel goes to the next fader giving you independent fader level control for the left and right channels.

Figure 3-4 One Panel of an Inputs Tab

Level Adjust

Click Level Adjust to open the level adjustment panel. This panel shows the input level controls for each input on all four faders. Hover over the level marker and a pop-up box shows the current gain setting and the setting range, as shown in the middle adjustment panel (Figure 3-5).

When an unbalanced device is connected, checkmark the *Consumer Level* box, as shown below for the left-most fader. This boosts the input gain to bring the 300 mV level of an unbalanced "consumer" audio signal up to equal the 1.2 V level from a balanced device. Note that *Consumer Level* cannot be selected when the input is a Microphone, and that it will not affect the USB input (which also does not have any level adjustment).

To manually set the input level, click/drag the level marker to the right (for gain) or left (for trim). Each mark indicates a 3 dB change. The best way to adjust the levels is to set the Aux meter to show Cue. With the source playing back "normal level" audio, turn on Cue for that fader, then adjust the gain control so the signal peaks fall in the -10 to -4 range (occasional blue LEDs lighting up is OK). You do not want to see any red LEDs light up since that would indicate the level is too hot.

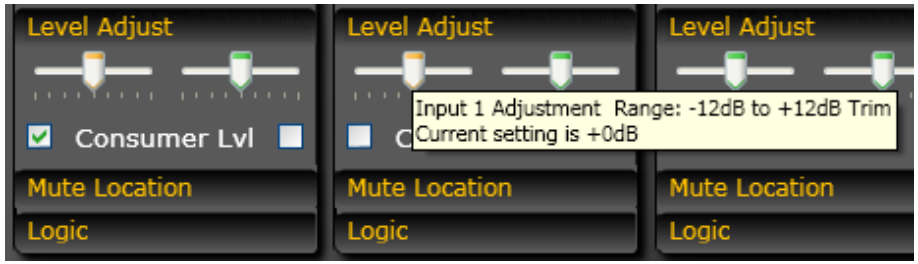


Figure 3-5 Level Adjust Controls on an Inputs Tab

You can alternately set the level using the PGM 1 meter by setting the console fader to nominal (the -12 setting, where the dashed line goes across the control surface). Click/drag the Level Adjust control using the same criteria as for monitoring the signal using the cue meter. When the input level is set correctly, the cue level and the PGM 1 level will be identical with the channel fader set to its -12 or nominal position.

Mute Location

Click Mute Location to open the Mute Location panel for all four faders, as shown on the next page.

All microphone inputs have a default setting of *Mute CR*, which mutes the control room monitor output when that mic is active (its channel is on and assigned to a PGM bus).

Figure 3-6 Mute Location Panel Controls on an Inputs Tab

When a mic is in a talk studio (or another location that's fed by the studio monitor output), select *Mute Studio* to mute the studio monitor output when that mic is active (channel is on and assigned to a PGM bus).

Selecting *Don't Mute* means that no monitor outputs mute when that source is active (its channel is on and assigned to a PGM bus). Line, Telco, and USB inputs have *Don't Mute* as their default setting.

Logic

Clicking Logic opens the Logic Settings panel for all four faders (Figure 3-7). There are two Local I/O radio buttons which set (and indicate) which input is associated with the logic commands: when the left radio button is active (the default setting) Input 1 is associated with the logic connector. When the right radio button is active, Input 2 is associated with the logic connector (as shown in the middle logic pane in Figure 3-7).

In most cases, no additional logic settings are required since the input and output logic is defined by the type of input connected: On a Line input (any input set for *Don't Mute*) the incoming logic commands are: Channel On, Channel Off, Cue, and Ready. The outgoing logic is: Start Pulse and

Figure 3-7 Logic Settings panel on an Inputs Tab

Stop Pulse. Note that the Ready input does require an additional logic setting. When the *Ext > Ready* box is checked, as shown in the middle logic panel in Figure 3-7, the Ready command is used to both turn off the channel and control illumination of the Off button.

On a Mic input (any input assigned to *Mute CR* or *Mute Studio*), the incoming logic commands are Channel On, Channel Off, Cough, and Talk. The outgoing logic is: On Tally and Off Tally. Note that the Talk command is Talk to CR when *Mute Studio* is assigned or Talk to Studio when *Mute CR* is assigned.

The logic settings with square check boxes affect the logic connector's input or output functions, except for the *Timer Enable* and *Fader Start* check boxes: *Timer Enable*, when checked, sends a timer reset command to the Event Timer when that source is active and its channel is turned on; *Fader Start*, when checked, uses the fader movement to turn the channel on and off. When the fader is moved up from full off, the channel turns on. When the fader is moved down to full off, the channel turns off. Note that the channel on and off buttons still control the channel even when *Fader Start* is active. Both of these logic commands may be assigned to both Input 1 and Input 2, if desired.

The remaining logic settings affect the remote logic functionality. Which column of check boxes is active is set by the Local I/O setting's green button. The default setting sets all logic to the left column.

Ignore Commands (*Ignore Cmds*) allows output-only Line logic to be set up. When checked, the channel ignores all incoming logic commands.

External Ready (*Ext > Ready*) allows a remote device to control the lighting of the channel off button. Although important in the days of cart machines to identify whether a cart was cued, ready, or had already played, it is most often used today by digital playback systems to indicate channel status.

No S/S is only used on line inputs. When checked it changes the normal logic outputs (200 ms Start and Stop Pulses) to instead be sustained on and off tallies. Note that this setting has no effect on mic logic outputs, which are always set for sustained on and off tally logic.

External Start/Stop (Ext > S/S), when checked, sends start and stop pulses out with both local on/off and with remote on and off commands. The default setting, unchecked, only sends out start or stop pulses with local on/off.

Multiple Start/Stop (Multi S/S), when checked, causes a start pulse to be output each time the channel on button is pressed, and a Stop Pulse to be output each time the channel off button is pressed. When unchecked, one start or stop command is output when the channel state changes (one start pulse when changing from channel off to channel on; one stop pulse when changing from channel on to channel off).

Utilities Tab

The Utilities tab has multiple sections for setting the parameters for the Control Room Monitor (Figure 3-8), Studio monitor (Figure 3-9), the Telco devices (Figure 3-10), the digital Program outputs (Figure 3-11), and the Main card's USB connection and External monitor selection (Figure 3-12).

Control Room Monitor Section

There are two control room monitor outputs (Output 1 and Output 2). Each can be set as a room monitor output; a host headphone output; or a guest headphone output. The default setting is room monitor on *Output 1* and Host headphone on *Output 2*. The only difference between the Host and Guest HP is that the Host HP adds talk to control room, whereas the Guest HP does not hear talk to control room. The monitor source is the same for all three outputs, being set on the control surface Control Room monitor select buttons.

The mode for the monitors and headphone outputs is set in the *Monitor Mode* pane. The default setting is *Stereo*. Selecting *L+R as Mono* changes all control room monitor and headphone outputs to mono sum.

The *Operator Headphones* pane sets how the operator headphones (which plug into a TRS jack on the left side of the console) react to cue. The default setting (*AutoCue L, Mon on R*) puts cue into the left ear and sums the monitor source into the right ear, when the control surface AutoCue button is lit (active), and cue is active on a channel. If this feature is not desired, select *AutoCue Defeat* to disable the AutoCue button on the control surface (pressing the button will blink it four times).

When the Oasis is in a production room, it may be desirable to have stereo cue in the headphones. In this case, select *AutoCue L&R*. When cue is active (and the AutoCue button is lit) the monitor audio is replaced in the operator headphones with stereo cue.

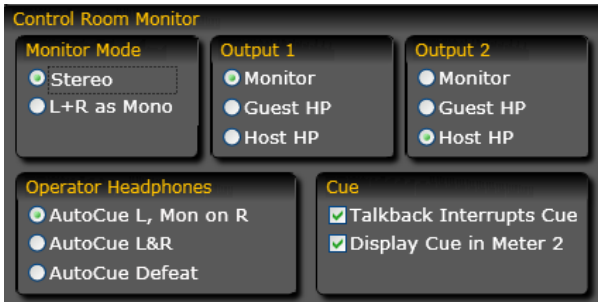


Figure 3-8 Utilities Tab, Control Room Monitor Section

Studio Monitor Section

There are two studio monitor outputs (Output 1 and Output 2). Each can be set as a room monitor output; a host headphone output; or a guest headphone output. The default setting is room monitor on *Output 1* and Host headphone on *Output 2*. The only difference between Host and Guest HP is that the Host HP adds talk to studio, whereas the Guest HP does not hear talk to studio. The monitor source is the same for all three outputs, being set on the control surface Studio monitor select buttons.

The mode for the monitors and headphone outputs is set in the *Monitor Mode* pane. The default setting is *Stereo*. Selecting *L+R as Mono* changes all studio monitor and headphone outputs to be a mono sum.

To control the level of the studio monitor speakers from the studio, check mark *Enable Remote Studio Monitor Fader*. This turns off the control surface studio monitor pot, activating the Studio Logic input so a studio-mounted fader or pot can be used to control the level of the studio monitor speakers.

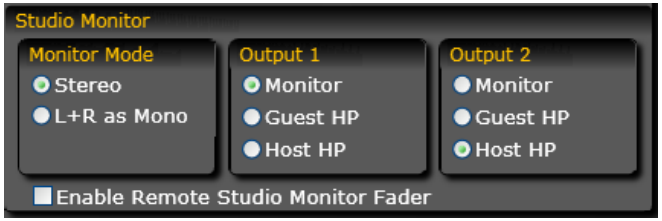


Figure 3-9 Utilities Tab, Studio Monitor Section

Telco 1 & 2 Section

When a Telco Option iButton is installed, two of the console inputs can be defined as a "Telco Input". A Telco input identifies that audio as coming from a "4-wire" device (e.g., a phone hybrid, ISDN interface, Comrex Access or Matrix, etc.), which has both an incoming signal and an outgoing or return audio signal, called the mix-minus, which must always be minus that device's incoming audio signal.

The *Telco 1 & 2 [Option Enabled]* pane contains the Telco input settings. The *Telco Channels* section is where you set which inputs have the two Telco sources (hybrids, ISDNs, codecs, 2-ways, etc.). If only one Telco input will be used, set Telco 2 to <None>. The default setting is Input 2 on the last two fader channels (channels 7 and 8 on an Oasis-08; channels 11 and 12 on an Oasis-12). To switch the input, or to remove a Telco input altogether, click the down arrow and choose a listed input (Figure 3-10).

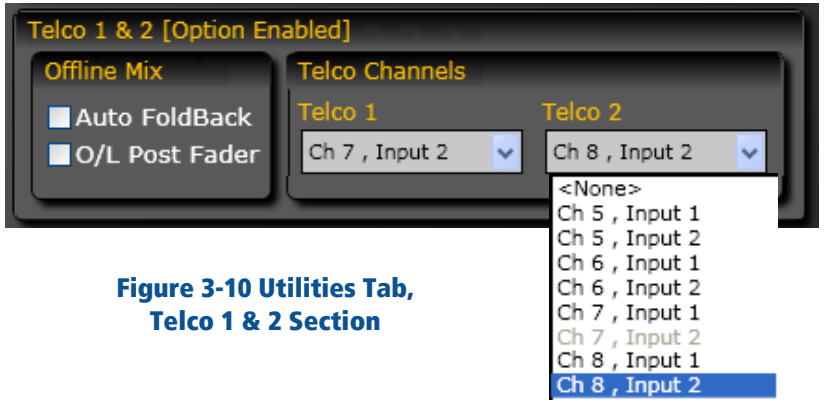


Figure 3-10 Utilities Tab, Telco 1 & 2 Section

The *Offline Mix* section assigns two global settings used by both Telco fader channels. *O/L Post Fader* sets whether the Offline bus is derived pre-fader or post-fader. The default setting is pre-fader (unchecked). When *O/L Post Fader* is checked, the offline bus is fed post-fader.

The default setting for *Auto FoldBack* is unchecked. This setting means the bus that is feeding the mix-minus output is not affected by the Telco channel state. This is the most common setting, and the easiest to use. If a Telco channel is assigned to Offline, then that is the mix-minus return audio source. When Offline is not selected, then PGM 1 is the mix-minus audio source. But, if it is not selected, then PGM 2 feeds the mix-minus output. If no bus is selected, then there is no mix-minus audio (except for talkback). The bus that's feeding the mix-minus output, for each Telco channel, is identified by a winking assignment button (either Offline, PGM 1, or PGM 2).

When *Auto FoldBack* is checked, the mix-minus output switches between Offline and PGM 1 (or PGM 2). While the Telco channel is off, the Offline bus goes to the mix-minus output. When the Telco channel is turned on, the mix-minus switches to PGM 1 (or PGM 2, if PGM 1 is not assigned). *Auto FoldBack* is typically used when a caller or a remote is going live to air and they are not using the mix-minus signal for an audience feed.

Auto FoldBack allows the board operator to easily talk to the remote during commercial breaks, through the Offline bus. Then, when going back live, the mix-minus automatically switches to PGM 1 again, allowing the remote to hear the on-air signal (minus themselves, of course).

Digital Output Sample Rate Section

This section allows the sample rate to be set on the two digital PGM outputs. The default setting for both outputs is *44.1 kHz*. Click the radio button to switch either the *Program 1* or *Program 2* output to use a *48 kHz* output sample rate.

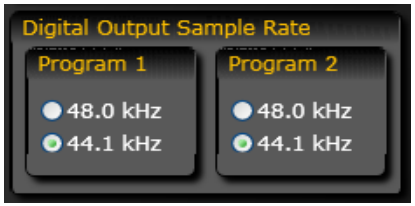


Figure 3-11 Utilities Tab, Digital Output Sample Rate Selection

External Inputs and Output Section

The main board's USB connector is dual purpose: not only does it connect a PC running the Oasis app to the console to set up the operating parameters for the console, it also allows any audio device with a USB connection to playback and/or record a stereo audio signal.

As with the Telco 1 and 2 input selection, the *USB Audio Assignment* can be set as *Input 1* or *Input 2* on any non-microphone channel (typically, channels 5 and above). Likewise, the outgoing *USB Audio Source* can be set to feed Program 1, Program 2, Mix-Minus 1, Mix-Minus 2, or Telco Record to a USB audio recorder.

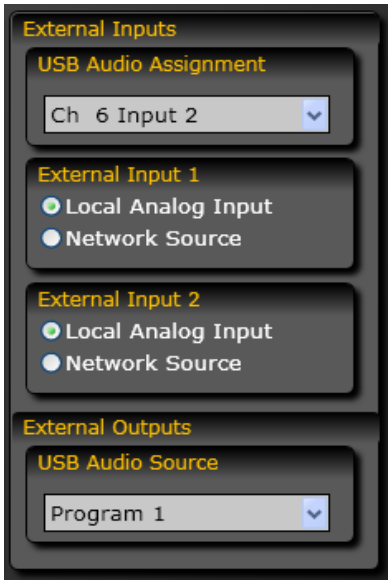


Figure 3-12 Utilities Tab, External Input & Output Selections

When the Oasis console is networked with a VistaMax audio management system, the *External Input 1* and *External Input 2* sections will be shown since there are now two sources for the two control surface External Monitor buttons. The *Local Analog Input* is the Main card connector signal. *Network Source* is a routed signal from the VistaMax system. When networking is not enabled on the Oasis console, there will be a blank area between the USB Audio Assignment and USB Audio Source.

Firmware & Software Updates

GatesAir may periodically issue firmware revisions for the Oasis cards and/or software revisions for the Oasis app. The updated code will be made available on the GatesAir customer portal (the site address and access information is listed on page 25).

The Oasis app, Information tab (Figure 3-13) is used to view the current firmware revision of the console (Firmware Revision display box, circled in the Oasis Information section) and the Oasis app build version (circled at the bottom of the tab).

To update the firmware, the new firmware code must be downloaded to the laptop computer that is connected to the console and running the Oasis app. The Firmware Update entry box has a search button (. . .). Click this button to open a standard Windows dialog box to locate the firmware update package file. The firmware update will be downloaded and installed as a zipped folder.

The Oasis app is also distributed in a zipped folder. To update it, the current Oasis app must be uninstalled using Windows Control Panel *Programs and Features*. The updated version can then be installed directly from the zipped folder by double-clicking its .msi file.

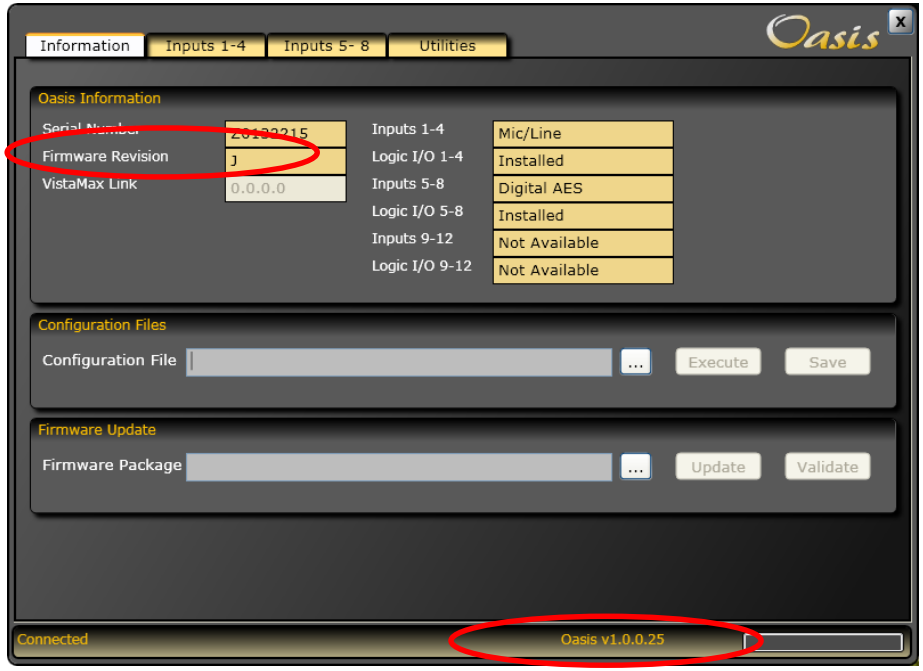


Figure 3-13 The OCC App Information Tab

4 – OASIS USE, APPLICATIONS, AND OPTIONS

This section presents an in-depth user guide to the Oasis console, highlighting some of the typical applications. Some of the optional features available for the Oasis console are also covered.

USING THE OASIS CONSOLE

Oasis console operation is identical between the Oasis-08, Oasis-08 Analog-only, Oasis-12, and Oasis-12 Analog-only consoles. The only difference between the models is in the number of channel faders and the type of input cards installed, neither of which affect actual console usage.

Channel Source Selection

Each fader channel has two possible sources: A and B. The A source is active when the channel Input select button is not lit (Figure 4-1). The B Source is active when the Input button is lit.

Figure 4-1 A/B Source Selection

To change the active source, press the Input button while the channel is off. If the source was A then the button lights up to indicate the B source is now active.

Note: If the Input button is pressed while the channel is on, that channel is automatically turned off before the input source is changed.

If the Input button rapidly flashes four times when pressed, it indicates that no alternate source is available on that fader. This is most often used on the board operator mic channel, but could be set on any channel with a dedicated source.

Which audio input is assigned to the A and B sources can be identified by placing a P-Touch® label in the space provided below each channel's off button (Figure 4-2)

Figure 4-2 A/B Source Identification

Bus Assignment

Each fader channel is assigned, or unassigned, to the three Oasis mix busses (PGM 1, PGM 2, and Offline) by pressing the bus buttons. A lit button indicates the channel is assigned to that bus. An unlit button indicates the channel is not assigned to that bus.

The two program busses (PGM 1 and PGM 2) are identical. Both are post fader and post channel switching. In other words, to hear the channel audio on either assigned bus, the channel must be assigned (the PGM 1 or PGM 2 button is lit), the channel must be turned on, and the fader must be "potted up."

Typically, in an air studio, PGM 1 is your on-air signal. Thus any channel assigned to PGM 1 would go to air. PGM 2 is often used simultaneously to feed select channels to a recorder. This allows the console to be used to time-shift record a satellite feed or do voice tracking, even while it is on-air. PGM 2 can alternately be used to create a network or Internet feed which requires a slightly different set of program elements from those feeding air.

In a production room or a news edit station, PGM 1 is typically connected to the main production or news recorder. In a newsroom or a talk studio, the PGM bus might also connect to an air console fader channel so that the host can mix the mics or so a news announcer can go live from the newsroom, controlling the mix of playback actualities and their mic.

The Offline bus is very different from the two PGM busses since its audio is always pre-channel switching, which means that the channel audio goes to the assigned Offline bus even when that channel is off. Also, the Offline bus is only used with "Telco" devices (e.g., phone callers, live remotes, traffic services, etc.). A Telco device has both an incoming audio signal that appears on a fader channel as well as a return audio signal which must always be minus the incoming audio to prevent audio feedback. The console automatically creates a "mix-minus" return signal for each Telco device regardless of whether the source is the Offline or one of the PGM busses. Note that the mix-minus audio signal is also called an IFB (Interruptible Fold Back) or Telco return signal.

One or two Telco devices can be connected to the Oasis. If there are no Telco devices connected to the console, the Offline bus is not used.

Telco Operation

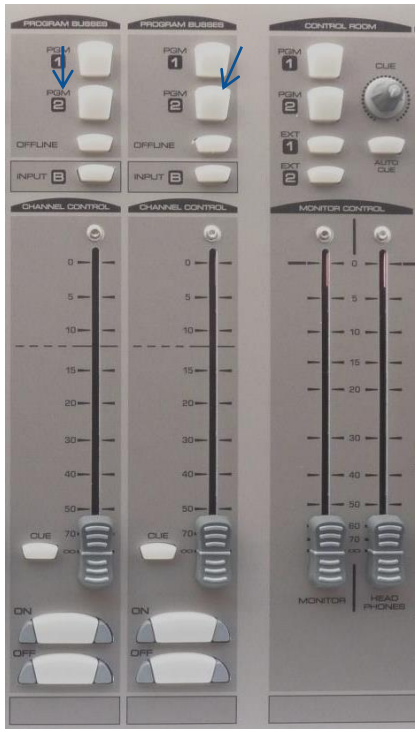
The mix-minus audio being sent to the two Telco devices is independently derived from the Offline, PGM 1, or PGM 2 bus. The bus going to each Telco device is identified by a winking bus assignment button on that Telco fader channel. If the Offline bus button is winking, then that Telco device (a caller or remote) is hearing all of the other channels assigned to the Offline bus. When the PGM 1 button is winking, then that caller or remote is hearing the main air signal, minus themselves of course, even if they are also on-air.

The Offline bus is normally used to allow "hand's free" call answering. To do this, assign the caller's channel to Cue and make sure that only the board operator mic channel and the caller's channel are assigned to the Offline bus. Note that the caller's Offline button "winks" to indicate it's the bus being sent to the caller. Answer the call using the phone set. Talk to the caller using the board operator mic. The caller is heard in the cue speaker (and in the board op headphones if the AutoCue button is lit).

Note there are two console setup parameters that affect Telco operation, so operation may differ if the default settings are not being used. The Offline bus can be used pre-fader or post-fader. The default setting is pre-fader. In the default setting, any channel assigned to the Offline bus is heard by the caller or remote—even when that channel is turned off and the fader is "potted down." When the Offline bus is set for post-fader Offline, the channel fader has to be "potted up" in order for the caller or remote to hear channels assigned to the Offline bus.

Another setting, called Auto Foldback, also affects the mix-minus audio signals. The default setting (Auto Foldback is off) means that the mix-minus bus selection is not affected by the Telco channel's on/off state. When Offline is assigned, then it is going to the mix-minus. If it's not selected, then PGM 1 goes to the caller or remote. If it's not assigned, then PGM-2 goes to the caller or remote.

Telco 1 **Telco 2**

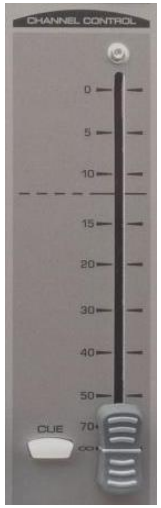


Default Telco Inputs:
the B Sources on the last two faders

When Auto Foldback is active, the two Telco channels independently toggle between sending the Offline bus to the mix-minus outputs when that Telco channel is off, and PGM 1 to the mix-minus output when that Telco channel is on (If PGM 1 is not assigned, then PGM 2 is sent to the mix-minus output instead.).

The default channel inputs for the two Telco signals are the B sources on the last two channel faders (Telco 1 is channel 7B and Telco 2 is channel 8B in the Oasis-08; Telco 1 is channel 11B and Telco 2 is channel 12B in an Oasis-12).

Fader Control



The channel faders control the audio level going to the PGM 1 and PGM 2 buses (and the offline bus level if the Offline Post-Fader setting is used). The level range goes from full off (when the fader is set to the ∞ symbol, as shown at right) to adding up to 12 dB of gain to the signal when the fader is at the 0 indication.

The nominal, or unity gain, setting is identified by the dashed line on the control surface. This is where the fader should normally be set. If the channel is assigned to both the cue bus and to PGM 1, and the fader is set to nominal, then the cue meter level and the PGM 1 meter level will be identical.

Dual Meter Display

The left level meter is dedicated to displaying the PGM 1 level. The signal being shown on the right, or Auxiliary, meter is controlled by the Aux Meter Select button. It can display: PGM 2; EXT 1 (external monitor input 1); EXT 2 (external monitor input 2); or Cue. The active signal name is identified next to the Aux meter (cue is shown in the illustration).

PGM 1 (left meter) **AUX (right meter)**

The console may be configured to automatically display cue levels in the Aux meter whenever cue is active. If the console is not configured for this feature, to view the cue levels use the Aux Meter Select button to select Cue.

Room Monitor Controls

The Monitor section of the Oasis control surface has the source selector and room monitor controls for the control room and one studio.

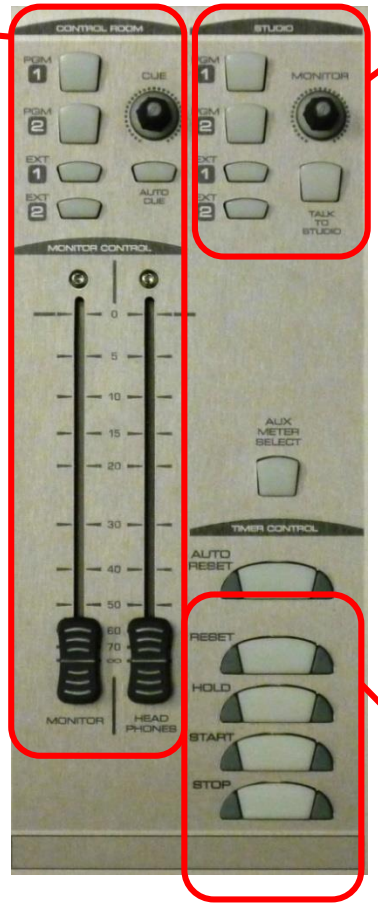
Control Room

The *Control Room* section has four source select buttons (PGM 1, PGM 2, EXT 1, EXT 2) which set which one of those signal feeds the control room monitor speakers and the control room headphone outputs (board operator and host or guests).

The Cue pot controls the level of the cue speaker located below the Dual Meter Display. The cue speaker is active when any channel's cue button is lit. Note that the cue speaker mutes when a control room mic is turned on.

Just below the cue pot is the AutoCue button. When lit, cue is also sent to the board operator headphones. When unlit, cue does not go to the board operator headphones. The headphone cue audio is either set to go to both ears (stereo cue) or to be sent split, where cue goes to one ear and the monitor source audio is summed into the other ear. Split cue is the default setting and is typically used in air studios. Note: if AutoCue blinks four times when pressed it indicates that feature is disabled (an Oasis app setting).

Cue can also automatically go to the Aux meter (there is an Oasis app parameter that sets this option). The default setting does not switch the aux meter when cue is active. To view the cue levels, press the Aux Meter Select button until the Cue label is lit next to the right-hand Auxiliary meter.



Monitor Controls

The left-hand fader controls the level of the control room monitor speakers. The right-hand fader controls the volume of the board operator's headphones.

Note that the board operator's headphones plug into a 1/4" TRS jack, located on the console's left side, roughly in-line with the Channel Control labels on the control surface.

The Control Room monitor speakers and the cue speaker are automatically muted (and an on-air warning light can be triggered), whenever a control room microphone is turned on and assigned to either PGM bus. The active Control Room monitor source selector button winks to indicate the Control Room is muted.

Studio

The *Studio* section allows control of the monitor source and speaker levels for a separate talk studio, news room, producer location, call screener, or other external location (like a performance studio)—anywhere that a microphone, connected to the console, would need monitor speaker muting when a studio mic is live.

The four source select buttons (PGM 1, PGM 2, EXT 1, EXT 2) set which signal feeds the studio monitor speakers and the studio host or studio guest headphone output.

The volume of the studio monitor speakers can be controlled by the rotary pot, or by a studio-mounted level control. When a studio-mounted control is used, the control surface pot is not active.

The Studio monitor speakers are automatically muted (and a studio warning light can be triggered), whenever a studio microphone is turned on and assigned to either PGM bus. The active studio monitor source selector button winks to indicate the Studio is muted.

Any control room microphone can individually talk to the studio monitors and the studio host headphones, if they have a mic remote control panel. The board operator can press the Talk to Studio button in order to talk to the Studio using their microphone.

Event Timer

The *Event Timer* section controls an elapsed-time event timer in the Dual Meter Display. When the *Auto Reset* button is not lit, the Event Timer is under manual control of the four buttons (Start, Stop, Hold, and Reset).

To reset the timer to 00:00.0 and stop it, press the *Reset* and *Stop* buttons together. To start the timer, press the *Start* button. To stop the timer, press the *Stop* button. To view an elapsed time while the event timer continues to run, press and hold the *Hold* button to view that time. Releasing the *Hold* button jumps the timer to the current elapsed time. Press the *Reset* button to reset the timer to 00:00.0. If the timer is running, it will continue to run, counting up from 00:00.0.

When *Auto Reset* is lit, the Event Timer can also be reset to 00:00.0, and will start counting up, when a fader channel is turned on. Which channel sources have this capability is assigned by engineering during console configuration using the Oasis app.

OASIS APPLICATIONS

The Oasis console is most often used in an air studio to control the audio going to a transmitter and/or streaming to the internet. In almost all cases, the PGM 1 bus is going to the air chain and hence is the air signal. PGM 2 can simultaneously be used to create a different console mix for a syndication feed or go to a recorder or mic skimmer.

When the console is in an air studio, and there is no separate talk studio connected to the console, the Studio controls can be "repurposed" for other uses. One typical use for the Studio controls is to control the monitor source going to host and guest headphones in the control room. The two Studio outputs would be set for Host and Guest Headphones. Since the studio monitor output would not be used, the monitor level control would not be used in this application. The board operator can now switch between the control room monitor sources as required without affecting the audio going to the host and guest headphones since their source is set by the Studio Monitor controls. This also gives the board operator the ability to talk into the host headphones using the Talk to Studio button.

The Studio selector and the two studio outputs could alternately be used to connect the console to a newsroom or to a sports bullpen that goes live to air if there is no associated talk studio. The microphones in that room would be set as "studio mics" (so they mute the studio monitor output when on). In this application, the board operator can also talk back to the host headphone output for the talent in the newsroom or sports studio. If studio monitor speakers are not required, then the two studio outputs could be set as host and guest headphone outputs.

Network Origination

Flagship stations for sports teams often need to have a second output from their main air signal to function as a regional sports network feed. This output is typically identical to their broadcast signal except it does not have local commercial spots and liners. It may also require adding special signal tones or other logic.

Creating this secondary network is easily done by using PGM 1 as your main broadcast output and PGM 2 as your network feed. As long as the digital playback system is setup to consolidate local spots and station liners on separate faders, then those faders can be unassigned from PGM 2, whereas the national spots playback fader(s) and the game liners and the play-by-play remote inputs would be assigned to both PGM buses.

Production Usage

In a production studio, PGM 1 is typically the main record input to an in-room computer running Pro Tools®, Audition®, or other digital editing system. The easiest way to get audio in and out of a computer is to connect it to the Oasis Main card's USB connection. The USB connection is then set up using the Oasis app. The Oasis app's Utilities tab has a *USB Audio Assignment* section where the USB signal is assigned to go to a channel (typically Input 2 on channel 5 and above). The *USB Audio Source* sets which bus (PGM 1, PGM 2, etc.) is being sent to the computer.

Typically, the USB output is set for PGM 1 and the USB audio from the computer is set to any available fader channel. The USB playback channel is then assigned only to PGM 2. The PGM 2 bus would be the playback monitor, while PGM 1 is the record monitor.

Voice Tracking

Using the Oasis to do voice tracking is easily done in a production room where the mic channel would be assigned to both PGM 1 and PGM 2. No other inputs on the console would be assigned to PGM 1. The channel (or channels) with track playback are assigned only to PGM 2. The talent then monitors PGM 2 to hear both the playback track(s) and their mic.

When voice tracking is done on an on-air console, you must use AutoCue so that the cue bus feeds the operator headphones. Assign the talent mic to PGM 2 (and un-assign it from PGM 1!). No other channels should be assigned to PGM 2. Put the playback audio channel(s) into cue and monitor PGM 2 in the control room. The console should be set to use split cue so playback audio goes into one ear while the mic is in the other ear.

Call Recording

Most Oasis consoles have Auto Foldback turned off (the default setting in the Oasis app). This means the mix-minus bus assignment on the two Telco faders do not toggle between offline and a PGM bus as the Telco channel is turned on and off. This is the desired mode of operation for recording interviews, phone-in requests, and contest winners for later broadcast.

In most applications, the desired audio going to the Telco Recorder (regardless of whether it's a Shortcut®, VoxPro®, or an old school reel-to-reel deck) has the talent's microphone on one channel and the caller on the other channel, allowing them to be individually edited (unless that reel-to-reel deck is still used!). The Offline bus is designed to do this since it feeds the Telco Record output with the caller on one channel and the talent (actually any channel on the Offline bus) on the other channel.

To record a caller, setup the console so that only the caller's channel and the talent's microphone channel are assigned to the Offline bus. Verify the

caller channel's Offline button is winking to indicate that Offline is both going to the caller and is the audio going to the Telco Record output.

Note that the Telco Record output can be Offline, PGM 1, or PGM 2, depending upon which bus assignment buttons are set on the two Telco channels. Because the two Telco channels may be set differently, one or the other Telco channel may have a "blinking" bus button rather than a "winking" button. This indicates that Telco channel is not going to the record bus. Since the Telco Record output is selected in this priority: Offline, PGM 1, PGM 2, if one Telco is assigned to Offline and the other is not, then only the Telco assigned to the Offline bus will be recorded.

OASIS UPGRADE OPTIONS

There are several upgrade or expansion options available for the Oasis console.

Oasis Dual Telco Upgrade

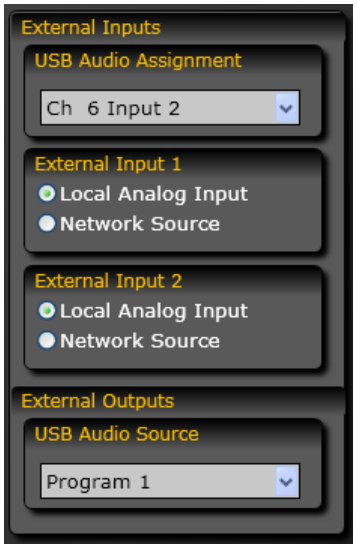
The Oasis console can have two input sources defined as Telco 1 and/or Telco 2 with the Dual Telco upgrade kit. The Telco 1 and 2 sources can come from any type of 4-wire device (hybrid, ISDN, codec, two-way radio, etc.). A 4-wire device simply means it has both an incoming audio signal (the Telco 1 or Telco 2 source) as well as a return audio feed (the Telco 1 or Telco 2 mix-minus output). The Telco 1 & 2 mix-minus outputs are only active when a Dual Telco upgrade kit is installed.

To determine if the Dual Telco upgrade is installed, open the Oasis app to the Utilities tab. In the lower left corner is the Telco 1 & 2 settings section. If the section title shows: *Telco 1 & 2 [Option Enabled]*, as shown below, then the Dual Telco upgrade is installed and active.

Preconfigured Oasis consoles (PRE99-1500-08A and PRE99-1550-12A) include the Dual Telco upgrade kit. In the custom configuration consoles the Dual Telco upgrade kit (PRE99-1444-21) is an optional sales order line item.

Oasis Networking with Dual Telco Upgrade

This upgrade kit (PRE99-1444-22) activates the VistaMax Link connection (the RJ45 jack between the power connector and the USB port on the Main board) as well as Dual Telco functionality.



To identify that the Network & Dual Telco upgrade kit is installed, open the Oasis app to the Utilities tab. The right side of the Utilities window has the External Inputs section. If there are External Input 1 and External Input 2 sections, to select between the Local Analog Input and a Network Source, this indicates the Network and Dual Telco upgrade kit is installed.

If there is a blank space, instead of the two External Input sections, the Network & Dual Telco upgrade is not installed.

Oasis 8x1 Remote Line Selector

The Oasis 8x1 RLS (PRE99-1518) is an eight-input one-output audio source selector. It can switch between eight analog inputs to an Oasis analog input or switch between eight digital signals and an Oasis digital input.

The RLS has two parts: a 1RU rack panel with ten RJ45 connectors (eight audio inputs; one switched audio output; one control connection) and an eight-button RLS selector panel which is installed in the Oasis control surface in place of the blank panel on the right of the Monitor controls. The 8X1 RLS is typically used with one fader channel to expand the inputs available to the Oasis console but it could also be used to feed a recorder input or other destination.

The RJ45 audio connectors (the eight audio inputs and switched output) are wired per the StudioHub+ wiring format. This format allows standard straight-thru CAT5 cables to carry one pair of balanced analog audio signals or one stereo AES digital signal.

StudioHub+ adapters can be used to convert the CAT5 cable into two balanced XLR or TRS connectors, a pair of unbalanced RCA connectors, to pigtails, etc. Information on the various StudioHub+ adapters that are available can be found on the StudioHub website: http://www.studiohub.com.

5 - SERVICE INFORMATION

All Oasis consoles are designed to yield many years of trouble-free 24/7 operation, which is why there's no power switch on the console. If an Oasis console does require service, this section covers servicing, including information on obtaining service help, technical documentation, and replacement parts.

PARTS AND REPAIR SERVICES

There are only a handful of field-replaceable parts on an Oasis console, each of which is listed in this section. Most cards and assemblies are not readily field-serviceable due to the extensive use of surface-mount components. It is recommended that assemblies, or their individual circuit boards, be returned to GatesAir or an authorized service center for repair.

Oasis technical information (Quick Guides, selected schematics, software and firmware revision information, wiring diagrams, application notes, and service bulletins) is always available for downloading from the GatesAir Customer Portal: `www.GatesAir.com`. To use the GatesAir Customer Portal you must be a registered user.

Most GatesAir technical documentation and schematics are PDF files, so Acrobat Reader 6.0, or later, is required.

Parts Ordering and Repair Services

Replacement circuit boards and assemblies can be purchased through a GatesAir sales representative or the GatesAir parts department in Quincy, Illinois. Parts phone: 217.221.7500; email: servicepartsreq@gatesair.com.

To expedite the ordering process, and to ensure the correct parts are ordered, use the GatesAir Product Number when ordering. Some circuit boards and assemblies may have long lead times, so order spares accordingly.

Circuit boards and assemblies returned to GatesAir for service, exchange, or credit must have an RMA (Return Material Authorization) tracking number issued prior to their return. Items received without an RMA number written on the shipping label side of the packaging may be delayed or subject to additional handling fees.

To request an RMA number, call 217.221.7164 or email a request to: repair@gatesair.com.

For installation and other technical support on your Oasis console, contact the GatesAir Technical Support department at 217.222.8200 or send an email to: tsupport@gatesair.com.

Replacement Parts

GatesAir studio product parts typically have a PRE prefix in front of the standard part number. Part numbers listed without a PRE prefix are typically not field repair parts and thus are normally not stocked but may still be available for as long as the Oasis console is in production. All items are ordered through the Parts department.

Oasis Console Replacement Parts

GatesAir #	*Description or Use*
PRE24-174-1	Rotary volume control, 10k
PRE32-710-1	Knob, Fader
PRE32-725	Knob, rotary volume control
PRE50-30	12-volt power supply w/AC cord
PRE90-1500-08	Control surface assembly, Oasis-08
PRE90-1500-12	Control surface assembly, Oasis-12
PRE90-1502	Meter assembly, with cable
PRE90-1872-6	Headphone jack, with cable
PRE90-1873-2	Cue speaker, with cable
PRE90-2131-1	CAT5 cable, red, 1-foot
PRE95-1044	Fader assembly
PRE95-1501	Main & Output card
PRE95-1509	Motherboard, Oasis-08
PRE95-1510	Motherboard, Oasis-12
PRE99-1502	Mic Preamp card
PRE99-1503	Analog Input card
PRE99-1506	Logic I-O card

Installation Parts

Each Oasis console includes one 76-1500 installation kit with the Oasis Main card's Combicon plugs. Each Audio Input and Logic I-O card has its own installation kit.

A 76-1502 kit comes with a Mic Preamp card. A 76-1503 kit comes with the Analog Input card. A 76-1504 comes with a Digital Input card. A 76-1506 kit comes with a Logic I-O card.

76-1500 Console Install Kit

GatesAir #	*Description*	*Qty*
15-708	6-terminal Combicon connector	10
15-713	3-terminal Combicon connector	2
15-923	12-terminal Combicon connector	2
71-1500-1	Oasis Console Quick Guide	1
71-1500-2	Oasis Installation Quick Guide	1

76-150x Audio and Logic Card Install Kits

GatesAir #	*Description*	*Qty in: -1502*	*-1503*	*-1504*	*-1506*
15-708	6-term Combicon connector	4	8	-	-
15-713	3-term Combicon connector	4	-	8	-
15-924	10-term Combicon connector	-	-	-	4
71-1501	Oasis Input Card Quick Guide	1	1	1	-
71-1506	Oasis Logic Card Quick Guide	-	-	-	1

OASIS CONSOLE SERVICE

An Oasis console contains seven primary assemblies: the lower chassis; the motherboard; the Control Surface; the Dual Meter Display; the Main card; two or three Logic I-O cards; and two or three Audio Input cards. Except for the lower chassis assembly, each of the other assemblies can be readily field replaced by a station engineer—in many cases even while the console is powered and actively being used.

The lower chassis has the motherboard mounted to it, vertically across the middle of the chassis. There are no active components on the motherboard, but there are a few termination resistors.

The Control Surface plugs into a motherboard RJ45 connector (J1) with a single short red CAT5 cable. This cable is tie-wrapped at both the control surface end and to the floor of the chassis. To remove the control surface you must cut one of the tie-wraps to allow the CAT5 cable to be unplugged from either end.

The Control Surface can be "hot-plugged" (unplugged or plugged in while the console is powered). The button settings are maintained when changing out the Control Surface, but when a replacement panel is plugged in, all fader and pot positions will update. So, if the console is active you must make sure the new Control Surface faders are set to similar positions as on the panel being replaced, otherwise there could be large changes in volume when the new panel is plugged in.

The board operator headphone jack cable plugs into a keyed 3-terminal Molex connector (J4) on the motherboard, as does the cue speaker (J3). The cue speaker is mounted on a slide-in support into the lower chassis, directly below the dual meter display. It

The Dual Meter Display plugs into the motherboard using a 10-wire ribbon cable which plugs into J2 on the motherboard. The Dual Display can be unplugged or plugged in while the console is powered, and is on-air, without causing any signal interruptions.

Each audio card (Main, Logic I-O, and Audio Input) plugs into the motherboard from the rear of the console. Each Input and Logic I-O card is hot-pluggable. The Main card has the DC power input connector on it so we recommend that power be unplugged from the AC mains outlet before unplugging the Main card for service.

Tools Required

The Oasis console uses metric screws, most of which can be fastened or removed using a standard #1 Phillips screwdriver. The hex head screws, which fasten the faders and RLS option panel, require a 2 mm hex driver (a 5/64" hex driver will also work). A small flat blade screwdriver (like a "Greenie") is needed to press the orange tabs when installing or removing wires from the Combicon plugs.

Control Surface Test Mode

The control surface has a test mode that can be entered at power up. It is available to select for about three seconds, after the Timer Control buttons light up when power is first applied. To enter test mode press the Event Timer *Start* button. This will turn off all Control Surface button LEDs, except for the Start button.

To check the control surface buttons, press each button once to light up the button. A second press turns the button LED off.

The faders and rotary pots are also checked in test mode. One button lights to indicate which fader or pot is actively being moved (or was last moved): for the eight or twelve channel faders, the B Input button on that channel lights up; for the Cue pot, the AutoCue button lights; for the Studio monitor pot the Talk to Studio button lights; for the Monitor fader the CR Ext 2 button lights; for the Headphones fader the Studio Ext 2 button lights.

While moving one fader or pot, observe the top row of buttons (the PGM 1 select buttons). They light to show the hex value of the control voltage created by moving the fader or pot. Typically, no buttons are lit (although the left-most one or two buttons may be lit) when the pot or fader is set to full off. As it is moved up to full on, the PGM 1 buttons will light in left-to-right patterns as the control voltage increases. When the fader or pot is at maximum (full clockwise or at the 0 mark for faders), typically all PGM 1 buttons will be lit. Observing the PGM 1 buttons as the fader or pot is

slowly adjusted can identify whether its element is working properly or is intermittent, open, or noisy.

To exit test mode, press the Event Timer *Start* and *Stop* buttons together.

Status lights

One red heartbeat LED is on the Main card (blinking roughly twice a second) which indicates the Main card is operating normally. If this LED is lit solid or is not lit, it indicates an error condition on the Main card. If this occurs, unplug the AC cord and wait at least five seconds, then power up the console again to see if the error condition is cleared.

The RJ45 connector has two integral LEDs (green and yellow). These will be unlit unless the optional Network upgrade iButton is installed and the Oasis console is linked to a VistaMax system, then the RJ45 LEDs will both be lit solid, which indicates the VistaMax Link connection is good.

Swapping the Control Surface

The Control Surface plugs into the Oasis motherboard using a single red CAT5 cable. If it is unplugged while the console is powered, all of the current bus assignment settings, monitor selections, channel on/off settings, and the fader and pot settings, are maintained. This means that a panel could be swapped, even while the console remains on-air, without causing any audio interruptions.

The only consideration, when swapping a control surface "hot," is that the faders and pots must be set to the same settings as on the original control surface. When the new panel is plugged in, the fader and pot positions are detected and read, updating the levels they control. If they are set close to the original panel's positions, there will be no or minimal level changes when the new panel is plugged in. If they do not match, then that control will cause either a jump or a cut in volume. All button settings remain set as on the original panel.

To swap an Oasis control surface:

1. Pop off the Side Covers (one on each side of the control surface).
2. Use a #1 Phillips screwdriver to remove the six flathead Phillips screws (three per side) revealed by removing the Side Covers.
3. Lift and angle up the front edge of the Control Surface just enough to cut a tie-wrap holding the red CAT5 cable to the control surface. Unplug the CAT5 cable from the Control Surface. When the optional 8x1 RLS control panel, or other control panel is installed in the Option panel position, unplug its CAT5 cable as well.
4. If an Option panel is installed, move it to the replacement Control Surface.
5. If the Control Surface is being replaced "hot" make sure the faders and pots on the replacement control surface are set to the same positions as on the original control surface. This is not important if the console is off-air, thus the faders and pots can be set to full off.
6. Insert the Control Panel's tabs into the lower chassis openings below the Dual Meter Display at about a 45° angle, then plug the red CAT5 cable into the replacement control surface (and, if applicable, the CAT5 cable to the RLS control panel).
7. Set the control surface into place on the chassis and fasten the control surface to the chassis using the screws removed in step 2.
8. Snap on the two side covers removed in step 1.

Swapping Input Cards

Any Audio input or Logic I-O card can be "hot swapped" without causing any program bus noise or other operational issues. The replacement cards assume the original card's settings so no Oasis app changes are required. However, since there are eight audio inputs on each audio card verify that none of these inputs are in-use before unplugging a card from an active console!

Audio input cards are physically wider than Logic I-O cards, thus they cannot be accidentally plugged into a Logic I-O card slot. Conversely, the Logic I-O cards are narrower than the Audio cards. Thus a Logic I-O could be plugged into an Audio card slot even though the card does not come close to fitting the card guides. Plugging a Logic I-O card into an audio slot will not damage the card or console, but it should not be done since this could allow the card to contact the chassis, which could damage components.

To swap out an Oasis Audio or Logic I-O card:

1. Remove the rear cover to ease accessing the cards. See page 11 for an illustration on removing the flip-up rear cover.
2. Verify that each audio or logic cables plugged into the audio or logic card being removed are properly labeled before unplugging all cables from the card.
3. Use a #1 Phillips screwdriver to remove the single card retaining screw.
4. Unplug the card and slide it out of the chassis.
5. Slide the replacement card into the card guides, firmly plugging it into the motherboard.
6. Refasten the retaining screw removed in step 3. Note that this is especially important on Mic Preamp cards since the phantom power

will not work properly if this screw is not in place. On the other cards not installing this screw may cause static noises in the audio.

7. Plug the audio or logic cables back into the connectors on the card.
8. Reinstall the rear cover.

Swapping the Dual Meter Display Board

The Dual Meter Display sits above the audio and logic cards, just behind the Control Surface. It's physically mounted to the chassis just above the cue speaker.

To remove the display board, remove the two Phillips screws from the back of the display housing, near each end of the housing. These two long screws fasten the black display faceplate to the housing. Remove the faceplate to reveal the display board, which sets on five plastic standoffs.

To remove the display board, lift the board off the standoffs using the event timer displays and the left meter assembly, angling it forward in order to clear the housing.

Dual Display Service

If you only need to change a setup switch setting, set the display board's ribbon connector onto the lower display housing, as shown in the photo.

The Dual Display 6-position setup switch sets the following parameters for the meters and timer display:

#	Switch set to Off	Switch set to On
1 -	Peak and Average meter display	Average-only meter display
2 -	Peak LEDs hold for two seconds	Peak LEDs are not held
3 -	Blue Peak LED turn-on level	*
4 -	Blue Peak LED turn-on level	*
5 -	Spare switch position	-
6 -	.1 sec not shown while counting	Shows .1 sec while counting

* Switch 3 and 4 set off = Blue LEDs on at -6 dBFS
Switch 3 set on and 4 set off = Blue LEDs on at -4 dBFS
Switch 3 set off and 4 set on = Blue LEDs on at -2 dBFS
Switch 3 and 4 set on = Blue LEDs turn on at 0 dBFS

If the Dual Meter Display board is being replaced, unplug the ribbon cable plugged into J1. This cable can be "hot plugged." Note that this cable is only long enough to slightly extend past the bottom of the display housing.

Before plugging in the replacement board, set the switches on the replacement board to match the settings on the defective board.