

## SAS CONSOLES AND AUDIO NETWORKS

### SAS by Design

Sierra Automated Systems has established itself as an industry leader in providing mission critical audio consoles, switching and distribution systems serving broadcasters from all markets including major market partners such as CBS Radio Networks, Clear Channel Radio Networks, Premiere Radio, Ryan Seacrest Productions, NPR, ABC Radio Networks, Disney Radio Broadcast and Productions, Salem Radio Networks. SAS Products have always been designed with the philosophy that reliability is crucial to a broadcaster. Lost time is lost revenue. SAS has also listened to the operators, providing easy, intuitive work surfaces.



**Anywhere. Everywhere. On The Air.**

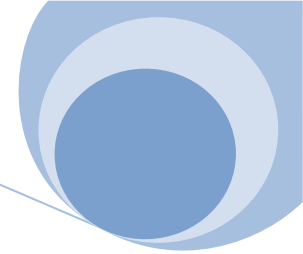
AP • CBS • WESTWOOD ONE  
CLEARCHANNEL • UNIVISION  
PALEY CENTER FOR BROADCASTING  
RADIO MARTI • CHICAGO PUBLIC RADIO  
NASCAR • JAMES MADISON UNIVERSITY

Our clients are a diverse group. Designing and installing systems that can handle their different audio and data routing demands requires an intense attention to detail. From simple standalone consoles to vast networks with speed-of-light IP connectivity and ZERO audio latency, our solutions need to be as flexible as their programming and production needs.

 **SIERRA  
AUTOMATED  
SYSTEMS**

20 years of listening. 20 years of innovation.

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## SAS Console Features



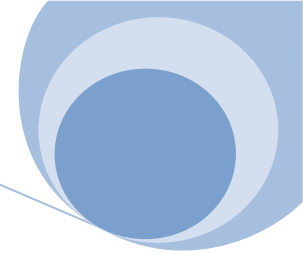
- Mainframe is passive – no processor. All electronics are on pluggable modules.
- Single fader modules, built on solid extruded chassis.
- Each module is independent with microprocessor and all support electronics on plug-in chassis.
- All modules are hot-swappable for ease of service
- Console connects to surface with Cat5 cable using multiple ports for enhanced reliability
- Magnetic reed switches are exceptionally reliable – only moving part is a magnet in the button
- LED pushbutton illumination – no light bulbs to replace
- All pushbuttons are easily to legend – custom names are simple to print and install
- All pushbuttons are programmable – Have as many Source Select or Bus Assign pushbuttons as you have physical buttons. Rubicon provides 10 buttons organized in one group of 2 and two groups of 4.
- SAS 32KD and RIOlink provide powerful mix engines, fully integrated provides zero-delay from microphone to headphone (no IP transport delays)
- Rubicon has the Multi-Function Display which provides the Operator with powerful programming of key parameters: Dial-up Source Select, Pan/Balance, Channel Mode (Stereo/Left only/Right only/Mono) Phase, External SAS Router Source Select, Record Bus Split, Send Bus Pre/Post/Levels, Mix-Minus Bus Master on-the-fly, Effects Parameter adjust
- Penny & Giles 100 mm Fader P&G faders are legendary for their reliability and feel with stainless steel guide rods and conductive plastic tracks.



- Automatic Mix-Minus can provide foldback to as many remote devices as you need, limited only by the mix resources you have in the router. Easy to add more outputs just by plugging in more output modules.
- OffLine Mix Bus makes it easy to communicate with telephones and remotes or make recordings while 'off-line'.
- Automatic IFB provides Interruptible FoldBack communications to remote devices directly from the Console Input Module that has the remote device on it's fader
- Eight character LED display for Active Source provides clear easy to read display with exceptionally long life. (No 'burn in' like OLED)
- Large On and Off pushbuttons with comfort guard. Easy for the operator to rest their fingers and operate the most critical buttons on the surface by feel.
- Show Control allows instant recall of show settings – great for recall of all console operating parameters. Included on Rubicon Console Control Module, optional module on Rubicon SL and M Class consoles.
- Monitor selections can be added to Speakers and/or Headset to allow monitoring of multiple feeds simultaneously – never miss a Cue.
- Separate Talkback and Cue busses for added flexibility
- Programmable meters allow on-the-fly selection of auxiliary feeds
- Real meter ballistics!  
True VU average LED bar with flying PPM dot (to IEC Specifications)

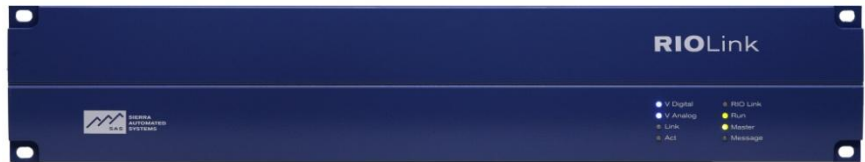






## Engine Features

- 32KD provides DSP mix engines on each output module
- All mix bus types supported: Pre/Post Switch, Pre/Post Fader
- Input Trim Gain, Crosspoint Connection Gain, DSP Output Gain and Analog Output Trim Gain
- 32KD provides built-in Silence Detect on each output module
- 32KD has optional Effects Module available to provide flexible EQ, Dynamics, Filtering and AGC. Effects can be assigned to Inputs, Outputs or Rubicon Console Modules.
- RIOlink connection provides 32 channels of bi-directional audio and full control over Cat5 cable or Fiber with zero-latency. Fiber provides electrical isolation, important in areas with high electrostatic interference or lightning activity
- RS-232 and TCP/IP connectivity to audio delivery systems for seamless integration
- SAS Automation included makes it easy to program any special pushbutton actions or even time-based events. Events can control SAS Network or even send communications to other systems such as satellite uplinks, recorders, etc.



- 32KD Mainframes connect together with Fiber using SAS Audio Network Interface (ANI). Systems can grow to over 6,000 in and out.



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- All 32KD Mainframes provide Dual Fully Redundant Power Supplies, each capable of supporting the full mainframe and each with separate AC line cords for connection to separate sources of AC – also important for uninterrupted operations.
- 32KD Mainframes have redundant Master Clock sources with dual mainframe busses – critical in a digital system.
- All Modules and Power Supplies are Hot-Swappable for ease of service
- 32KD Mainframe provides 32 independent busses, each supporting 32 audio channels for over 1,000 audio channel bandwidth in every frame.

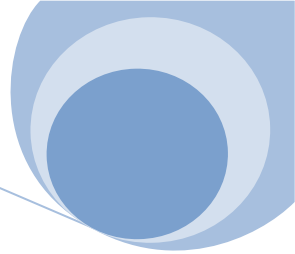


- Multiple I/O standards supported: Analog Audio, AES-3 Digital Audio, Audio over IP (ANI, Dante, AVB, AES-67), Remote Audio over IP (G.711, AAC)
- Distributed processing minimizes disruption due to single point of failure
- Fully integrated Intercom functions allows ease of communication throughout your facility and beyond.

*And Don't Forget the Studio Control Panels*

- SAS provides a broad selection of Mic Remote Controls, Monitor Selectors, Talkback Panels, Delay Control, Headphone Amplifiers, Meters, Mini-Mixers – All integrated, easy to operate and easy to install!





*Which Console Do I Need?*



Rubicon 32



Rubicon SL 32



iSL 20



M Class 20

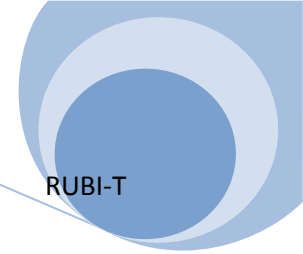


Rubi-T 12

The photos above and the chart on the following page will help you understand the Features of each Model.

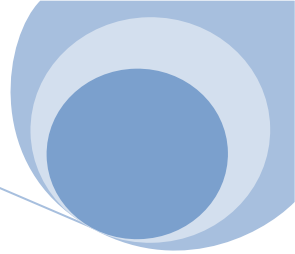
No matter which SAS Console you choose the operators will feel at ease moving from room to room. Primary operational controls are placed strategically for comfort and efficiency, making the operators job easier!





FEATURE	RUBICON	RUBICON SL	iSL	M CLASS	RUBI-T
Standard Frame Sizes (Slots)	8, 16, 24 32 & 40	8, 16, 24 & 32	12, 20 & 28	12, 20 & 28	3, 6, 9, 12 15 & 20
Max Source Select / Bus Buttons	10	5	5	4	4
Eight Character LED Display	Yes	Yes	Yes	Optional	Optional
Magnetic Reed Switches	Yes	Yes	Yes	-	Yes
Full Face LED Illumination	Yes	Yes	Yes	Yes	Yes
Custom Legendable Pushbuttons	Yes	Yes	Yes	Yes	Yes
Multi-Function Display Options	LCD	LED	LED	Optional	Optional
Source Select	Yes	Yes	Yes	Optional	Optional
Pan/Balance	Yes	Yes	Yes	Optional	Optional
Channel Mode (ST/L/R/M)	Yes	Yes	Yes	Optional	Optional
External SAS Router Select	Yes	Yes	Yes	Optional	-
Mix-Minus Master Bus Select	Yes	-	-	-	-
Send Bus Pre/Post & Level	Yes	-	-	-	-
Phase Reverse	Yes	-	-	-	-
Record Bus Split	Yes	-	-	-	-
Effects Parameter On-the-Fly	Yes	-	-	-	-
Off Line Bus for Remote Record	Yes	Yes	Yes	Yes	Yes
IFB - automatic	Yes	Yes	Yes	Yes	Yes
Cue	Yes	Yes	Yes	Yes	Yes
100 mm Penny & Giles Fader	Yes	Yes	Yes	Optional	Optional
On and Off Remote Control	Yes	Yes	Yes	Yes	Yes
Ready Light option for Off Sw	Yes	Yes	Yes	Yes	Yes
Max Monitor Select Buttons	12	8	8	8	8
Monitor Dial Up Select	Yes	Yes	-	-	Optional
Show Control	Yes	Optional	Optional	Optional	-
True VU/PPM Ballistic Meters	Yes	Yes	Yes	Yes	-
Separate Meter Pod with Pivot Meters	Yes	Yes	-	-	-
	1, 2, 4 or 5	1, 2, 4 or 5	1, 2, 3 or 4	1, 2 or 3	1





**Sierra Automated Systems & Eng. Corp. Customers**

Sierra Automated Systems & Engineering Corporation is the established leader in Radio Facility Studio and Central Switching systems with their superior technology. SAS serves all Radio Broadcasters from single station facilities to major networks such ESPN and CBS where a facility will house multiple Radio Stations and Network Distribution Centers with system sizes up to 6,000 Inputs and Outputs.

**A Partial Customer List**

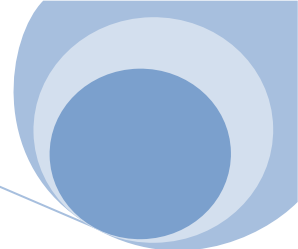
A partial list of clientele includes: ESPN Radio Networks, Radio Disney, CBS Radio Networks, CBS News Network, CBS/WestWood One/ DIAL Global Network origination and syndication centers, Clear Channel/Premiere Radio Networks, EIB Rush Limbaugh Studios, Radio One, Ryan Seacrest Productions, Salem Radio Networks, ABC Networks, ABC News Radio, NPR, WNYC Radio NY, and more.



*SAS Vice President Al Salci greets Client Ryan Seacrest at Studio Grand Opening in Dallas TX.*







**Contact Information**

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