

# ARC-15B

Advanced Radio Console family

ARC-15B **\$3,495 msrp**

## a very low cost, professional, Radio console for On-air Radio, Internet Radio, & Podcasting



The ARC-15 is a general purpose console that meets the needs for most On Air Radio & Radio Production studio applications. Channel One is a high performance mic channel while channels 2-5 are selectable as mic or line inputs. Channel 15 is an advanced telephone interface to an external hybrid for Live callers or an Off-line contest call. Seven stereo line input channels easily handle the other audio sources, such as CD players, found in most studios. Channel fourteen is selectable as either a Windows PC USB interface or an unbalanced stereo consumer level input. Windows software for Live On Air, Automation, & Production is provided standard. With 5 million operation, LED lighted, switches; long life faders; and electronic switching of all audio signal paths; the ARC-15 is a rugged, reliable, and versatile console for professional Radio studio applications.

- Two stereo Program output mixes (with mono mixdowns) plus Monitor, Headphone, and Cue systems
- Fifteen input source channels (plus optional 16 in x 3 out stereo remote select switcher)
  - Two high performance mic channels with optional 48V phantom power
  - Seven stereo line channels (model ARC-10U: unbalanced -10dBu, ARC-10BP: balanced +4dBu)
  - Channel 14 is selectable as either a PC computer sound card channel for Play and Record or a consumer stereo input
  - One telco / phone hybrid input channel for fast Live or Off-line telephone interface (hybrid required)
- Real VU meters for Program and Audition buses
- Headphone system with stereo amp for 8 ohm (or Hi-Z) headphones
- Cue-talkback system with built-in amplifier and speaker
- Input channel logic for Remote channel on-off-tally and source start-stop
- Provides monitor audio and logic for a Studio /Announce booth
- Optional 16 x 3 stereo switcher for remote input select... handles large studio jobs



**powerful, flexible, easy to install, and low cost**

# Operational features

## Lighted switches

5 million operation, LED lighted switches

## VU Meters

REAL VU meters for accurate ballistics for BOTH the Program & Audition buses

## Cue speaker & Volume

for cueing audio and Talkback from a Studio

## Headphones

follows the control room selector switch. The amp drives Hi-Z & 8 ohm headphones

## Control Room Monitor

Selectable between an external (air) input, the Program bus, and the Audition bus. The output is line level for external powered speakers

## 1-5 Mic channels

For normal on air talent or a Host and Guest talk format. Channel one features a 'Talk' button to talk to the 'Studio monitor' if a separate talk studio is used.

## Line channels

For CD players, MP3 players, and other analog sources.

## PC channel

When connected to a Windows PC (via a USB cable) running Arrakis Xtreme software, the channel On-off button will start and stop playback of audio from the PC.

## Phone channel

The phone channel works with an external hybrid (user supplied) through both audio and logic connections. Turn the Cue button on to listen off-line to the caller. Push the Talk switch to use the Control room mic to talk off-line to the caller. To place the caller on air just select a bus and turn the channel on.

## Studio Monitor Audio Output & Control

The ARC-15 supports a Talk studio through the Logic connector on the rear of the console. The studio monitor audio follows the control room monitor select switch or may be internally jumper selected to be dedicated to the Program or Audition bus. For flexibility, channel On-off logic with tally is provided for the five mic channels. Talkback audio is sent to the studio from Mic 1 by pushing the 'Talk' switch. An audio input to the console cue system is used for the studio to talk back to the control room. The ARC-15 fully supports sophisticated Control Room with Talk Studio applications.



# Key features

The ARC-15 console is designed specifically for On air broadcast, Internet radio, and Podcast applications. The 1-5 mic channels support a host and guest talk format. The phone channel is perfect for a live on air talk segment or Off-line contests. The PC sound card channel with logic provides easy access to PC audio files for play or recording. Last, the stereo line channels easily handle the number of other audio sources (such as CDs, DATs, MDs, MP3s, etc) found in the average modern studio. The Program bus has both a balanced +4dBu output and an unbalanced (-)10dBu output plus a mono mixdown of the stereo signal. The ARC-15 is a powerful, flexible, reliable, and low cost solution for your radio studio needs.

### Easy to install

Fully connectorized with XLRs, RCA phono jacks, RJ45s, etc., the ARC-15 is easy to install with off the shelf cables.

### Rugged and reliable

Professional throughout, with multi-million operation LED lighted switches and electronic audio switching, the ARC-15 is ideal for demanding environments.

### 1-5 mic channels for Host and Guest in the Control room or Studio

Channels one- five are very high quality mic preamps (with optional 48V phantom power) for talk applications in the control room itself.

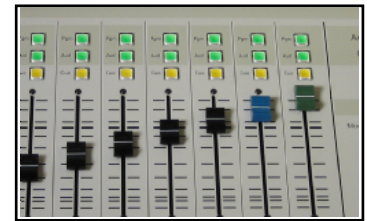
### Telephone Channel for Live On Air Talk or Off-line Contests

Channel fifteen is a dedicated telephone channel that easily connects to an external telephone hybrid. The caller can talk to you through the Cue system while a Talkback button enables the Control Room mic to talk off-line to the caller. Just select the Air or Recording bus then turn the channel on. What could be easier?

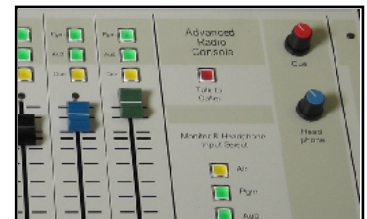
### Built-in PC sound card on Channel 14 for Play & Record

The ARC-15 contains a built-in, Windows compatible, USB sound card on Channel 14 for USB connection to a PC. A serial (or USB with adapter) connection between the console and PC provides a control logic interface for starting and stopping playback on the PC. Arrakis Digilink-Xtreme software will recognize the ARC-15 console and operate in the 'free' ARC mode to provide 'Live On Air' features that are ideal for broadcast, internet, or podcast style radio applications. For the ultimate in Automation, Digilink-Xtreme software (optional) provides complete hard disk based automation features for the ARC-15.

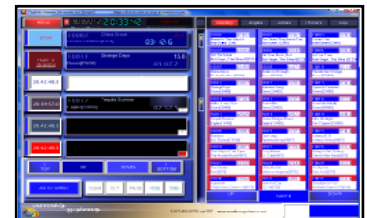
LED lighted electronic switching



an easy to use Telephone channel



powerful software for PC options



Fully connectorized for easy installation



# Software Features

The ARC-15 merges the console and PC into a single integrated play and record studio. The PC and the console are linked together via USB cable. Audio played from the PC plays through channel fourteen on the console. The channel fourteen on-off button starts and stops audio playback on the PC. The Audition bus output from the console can be recorded directly in digital to the PC.

### Digilink-Xtreme (basic Arc Console mode) software for the ARC

This software is provided standard with ARC model consoles. It is designed for Live On Air play, basic automation, & radio production. It is specifically designed to be easy to use!

- 500 event Play List for assembling a show (play lists may be created, saved to file, and then reloaded for playback)
- Start & stop the Play List by turning console channel nine on and off
- Cue audio files through the console while playing On Air (uses PC sound card for 2nd play)
- Jingle box supports playing any 3 of up to 300 carts at the touch of a button
- Set the fade parameters on Songs for perfect crossfades in the Play List
- Record the console Audition bus mix direct to the PC
- Phoner recorder / editor for recording callers
- supports up to 1,000 audio files in the Library
- much much, more...



### Digilink-Xtreme (Advanced ARC console mode) Software (optional)

For the ultimate in sophisticated Radio Automation, advanced Digilink-Xtreme software for the ARC-15 provides complete hard disk based automation features: cart rotations, start & kill dates, timed events, a one week automation schedule, & much more. Unlike standard Xtreme for satellite automation which includes the 'Bridge' routing switcher, Xtreme for the ARC-15 uses the console for audio playback & recording. Where satellite based automation selects between multiple satellite network audio feeds, Xtreme for the ARC-15 plays entirely from audio files stored on the hard disk. This makes Xtreme for the ARC-15 ideal for hard disk file based automation for broadcast radio, internet radio, podcasting, and church applications. Digilink-Xtreme (Advanced ARC console mode) is provided under the Arrakis 'Xtreme Solutions' program which includes software, phone training, phone & email support, and software upgrades for a low monthly fee. The program requires no contract, may be canceled at any time, and is less than the monthly cost of most cell phone, cable TV, & wideband internet services.

- Supports large libraries with many thousands of audio files
- Cart rotations, start & kill dates, timed events, overschedule with drops, & much more...
- Automate up to a Week in advance with up to 100 events per hour
- Voice track automated hours quickly and easily
- Music Scheduling with 20 categories, unlimited format hours, back to back limitations, more
- 'X-sched' traffic software for a separate traffic office is standard with Xtreme
- Arrakis 'X-Edit-Pro' production software is 'Free' with the Solutions Program
- 'Xtreme-studios' software for PC only News rooms and Remotes is standard with Xtreme

**Download Xtreme from the Arrakis website and try it out ([www.arrakis-systems.com](http://www.arrakis-systems.com))**

# Technical features

The ARC-15 console by Arrakis Systems inc. is the culmination of > 25 years of leadership in the design of analog and digital Radio consoles and > 15 years as the leader in hard disk automation for Radio.

### Mechanical

Switch type:	momentary, 5 million operation, for all front panel switches
Switch illumination:	LED, no incandescent lamps to burn out
Linear Fader type:	conductive plastic for highest possible resolution and life, 30,000 cycles
Rotary Fader type:	conductive plastic for highest possible resolution and life, 15,000 cycles
Rotary fader attachment:	ribbon cable to a plug on the motherboard
PC boards:	single motherboard
IC sockets:	one IC is surface mounted, all of the rest are socketed for ease of service
VU meters:	true VU ballistics

### Electronic

Audio switching:	electronic switching with CMOS ICs for ultra high performance and reliability (no switches to clean)
Audio level adjust:	for the ultimate in audio performance, audio is passed through the linear and rotary faders
Operational amplifiers:	NE5532
Mic preamp:	SSM2019, high performance IC with 1.5dB noise figure and .01% THD at gain = 100
Phantom power:	48VDC, with optional external power supply
Logic ICs:	advanced CMOS logic for high noise immunity

### Logic

Muting (On air light):	logic level output, Muted = +12VDC, Not-muted = ground, 50mA max current Requires a custom, relay isolated, interface circuit to drive an on air light
Channel On-off Tally:	On & Off switches: momentary, SPST, dry contact closure. Tally LED: logic level, requires a driver transistor or IC driver
Channel Source control:	logic level output, On = +12VDC, Off = ground, 20mA max current Requires a custom interface for the specific source device
Circuit diagrams:	refer to the ARC-15 manual for typical circuit schematics

## Back panel for ARC-15

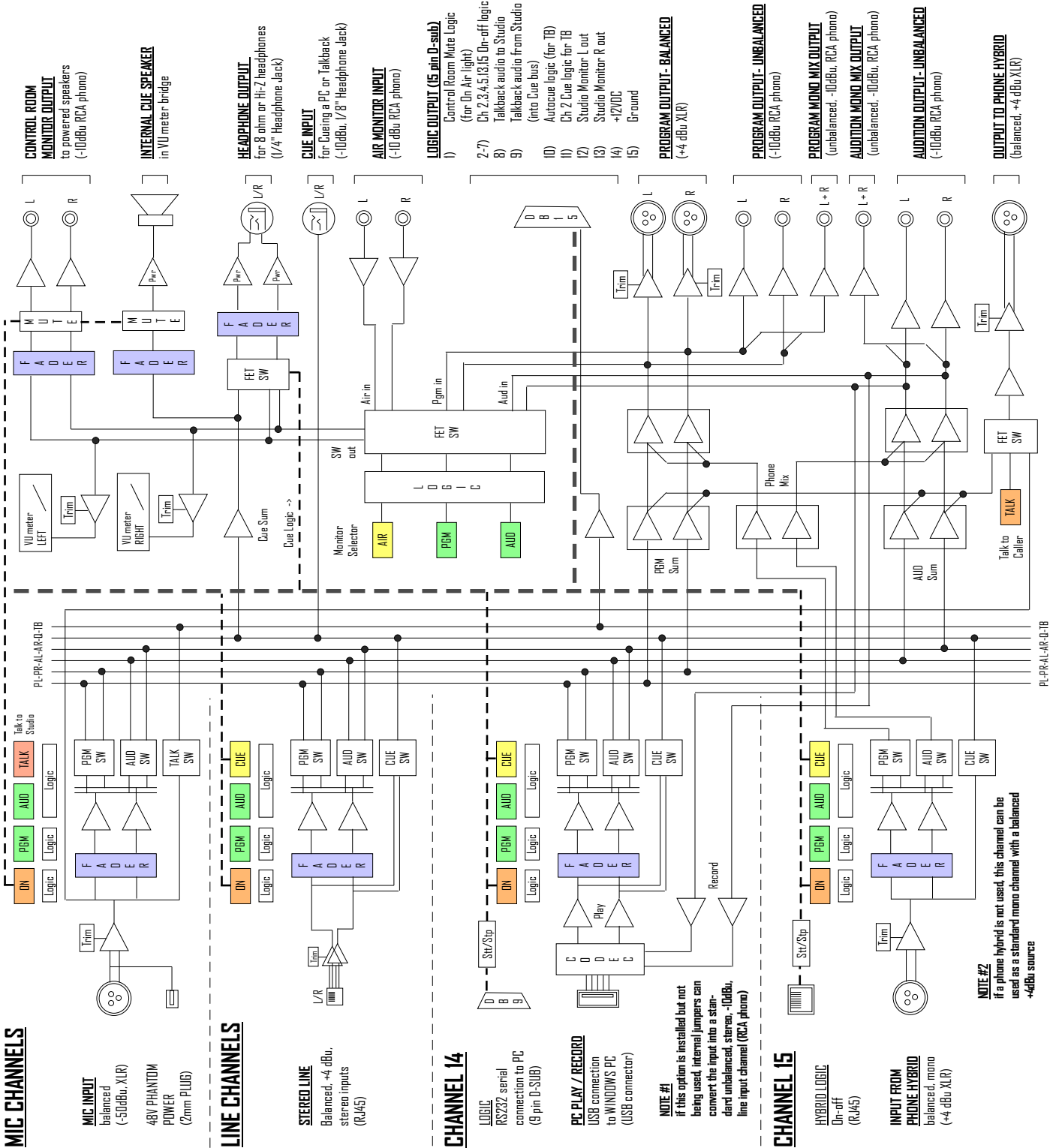


Note: all XLR inputs and outputs feature multi-turn trimpot level adjust

RJ45 balanced audio connectors

# Electronic Block Diagram

## OUTPUTS / MONITORING



## INPUT CHANNELS

## ARC-15 console

### Electronic Specifications

#### Stereo Line Input

Freq Response-	+(-).5dB 20-20kHz
S/N-	-82dB typ, +8dBu in, +8 dBu out
THD-	.01% typ, +8dBu in, +8 dBu out
CMRR-	-75dB typ 1kHz
Max Input-	+23dBu, balanced

#### Mono Mic Input

Freq Response-	+(-).5dB 20-20kHz
EIN-	-115dBu typ, -50dBu in, +8 dBu out
THD-	.05% typ, -50dBu in, +8 dBu out
CMRR-	-60dB typ 1kHz

#### Impedances

Mic Input-	> 2000 ohms
Line Input-	> 10000 ohms
Outputs-	< 100 ohms

#### System

Max Output-	+23dBu balanced
Stereo Separation-	-75dB typ 1KHz
Pgm to Aud XTalk-	-80dB typ 1KHz
	-70dB typ 20kHz
Cue to Pgm XTalk-	-90dB typ 1KHz
	-75dB typ 20kHz

On Air Light Logic: 12VDC/ground logic, 50mA max

#### POWER SUPPLY

110vac - 220 VAC, 50-60 hz, autosensing  
Certified: UL, CE, CS, CB  
External inline module: 3"W x 5 3/4"L x 1 3/4"D

#### PHYSICAL SPECIFICATIONS

Dimensions - Depth - 15",  
Height - 6",  
Width- 33"

### Remote Selector (option) \$995 msrp

#### 16 x 3 stereo routing switcher

- Add 16 stereo inputs to your ARC-15 console
- Balanced stereo with Trimpot adjust for all inputs
- 3 stereo outputs for 3 console channels
- Windows PC controlled for ease of use



Ideal for adding more inputs to your ARC-15 console such as network feeds, remotes, etc. This option gives the ARC-15 console the capacity to handle big studio jobs.

For ease of use, the ARC-16SW switcher is even controlled by the same PC as is connected to your ARC-15 console.



### Products and accessories

ARC-15BP	fifteen channel ARC console	\$3,495 msrp
ARC-16SW	16in X 3 out stereo routing switcher (PC controlled)	\$995 msrp
ARC-48V	48V phantom power option for all models	\$69 msrp
ARC-HYB	RJ45 Logic Cable for JK Audio Broadcast Host Hybrid	\$29 msrp
ARC-XLR	RJ45 to dual XLR cable for ARC-10BP (10 ft)	\$29 msrp
ARC-SOL-XT	Xtreme Solutions Program Automation for ARC-10	\$75/month

Warranty: 1 year limited

Specifications subject to change without notice

**ARRAKIS**  
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6604 Powell St, Loveland Colorado 80538 Voice 970-461-0730  
web: www.arrakis-systems.com