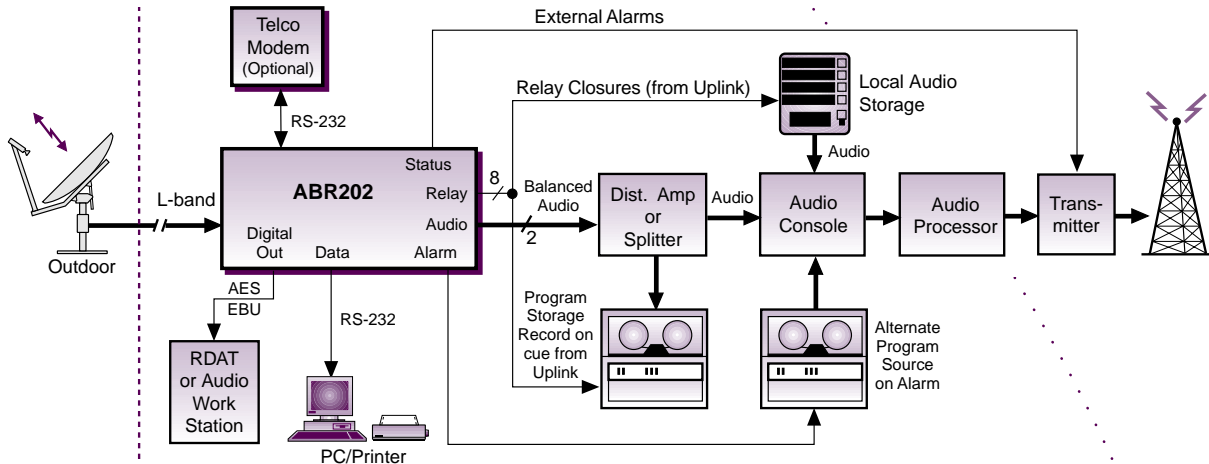


ABR202 Digital Audio Receiver



ABR202 Digital Audio Receiver table top model (shown) can be rack mounted using available 2RU tray



HIGHLIGHTS

- ▶ Digital audio satellite receiver for SCPC broadcast of audio, data, relay signals
- ▶ CD-quality, 20 kHz audio bandwidth at 96, 112, 128, 192, 256, or 384 kbps
- ▶ Select from multiple rates and modes through the network or at the downlink
- ▶ Configure for BPSK or QPSK and use worldwide on Ku- or C-band satellites
- ▶ Functionally compatible with industry standard ComStream ABR200

OVERVIEW

The ComStream ABR202 digital audio receiver is your solution for broadcasting audio by satellite. Applications include radio program and news distribution, point-of-purchase audio with advertising insertion, and data broadcast distribution.

The ABR202 continues the worldwide standard for digital audio transmission via satellite. Compared to alternative distribution networks, the ABR202 achieves satellite efficiency savings of 35 to 65%. These savings are realized through a combination of ComStream state-of-the-art digital satellite modem and receiver technologies utilizing ISO/MPEG audio compression.

You can take advantage of the multiple operating rates and modes described under "Key Features" to optimize your network for maximum audio or data quality and space segment savings.

Along with CD-quality audio, each ABR202 outputs RS-232 or RS-422 asynchronous data, receiver control signals, and cue signals (relay closures).

ISO/MPEG COMPRESSION

The ABR202 receiver uses the ISO/MPEG Layer II compression algorithm, an industry standard with international support and ongoing research for continuous improvements.

KEY FEATURES

- BPSK or QPSK operation at user-selectable rates of 64, 96, 112, 128, 192, 256, or 384 kbps
- Mono, dual-mono (stereo) or joint stereo modes using industry standard ISO/MPEG Layer II compression
- Quick channel access using SCPC/FDM allows quick, nearly transparent audio channel changes for receiving multiple channels
- Addressable for complete configuration and operation either from uplink via an in-band control channel or through the M&C port
- Control channel and remote control ports are 100% compatible with all ComStream audio network products
- Relay control port with eight contact closures for control of downlink equipment, each relay independently controlled at the uplink
- Seven TTL inputs for local channel changes and auxiliary equipment monitoring
- Asynchronous RS-232 data port operating at speeds of 300 to 9600 bps, providing simultaneous audio and background data
- Receiver operating software can be upgraded over the satellite link
- Built-in performance monitoring and automatic fault reporting with optional external telco modem
- Built-in audio, relay control, and data port diagnostics

ABR202 Digital Audio Receiver

SPECIFICATIONS

AUDIO PERFORMANCE

Frequency response	20 Hz to 20.0 kHz
Audio output channels	One or two
Compression technique	ISO/MPEG Layer II
Compression factor	12:1, 8:1, 6:1
Rates	64, 96, 128, 192, 256 kbps (BPSK) 64, 112, 128, 192, 256, 384 kbps (QPSK)
Data Rate Flexibility	Variable rate (1-bps resolution)
Modes	mono, dual mono (stereo), joint stereo
Total harmonic distortion	< 0.2% at 1 kHz
Dynamic range	> 90 dB
Analog sampling rate	48 kHz
Stereo phase deviation	< 1.0° for 0 to 10 kHz; < 3.0° for 10 to 20 kHz
Analog output levels	The analog output level of the ABR is set by the MPEG digital audio data received. The maximum analog output level is +18 dBu when terminated in 100K ohms. The output level tolerance is ±0.5 dB. The outputs are direct-coupled, active-balanced, and will drive as low as a 60-ohm load. The outputs may also be connected in an unbalanced (single-ended) configuration as long as output terminals are not connected directly to ground. The output level will be 6 dB lower in an unbalanced configuration. The analog audio outputs are protected against momentary short circuit. When the outputs are terminated in 600 ohms, a 0.7-dB output level reduction occurs. When the outputs are terminated in 150 ohms, a 2.9-dB output level reduction occurs.

PORTS

Audio Port	
Function	Balanced L and R analog audio output pair
Connector	DB-9 male
User Data Port	
Interface	Asynchronous RS-232
Data rates	300, 1200, 2400, 4800, and 9600 baud
Connector	DB-9 female
Monitor and Control Port	
Interface	Asynchronous RS-232 and RS-485 ComStream Packet Protocol
Connector	DB-9 female
Printer Data Port	
Interface	Asynchronous RS-232 and RS-422
Data rates	300, 1200, 2400, 4800, and 9600 baud
Connector	DB-25 female
Relay/Control Port	
Contact closures	Eight, Form A, individually controlled
Connector	DB-25 male
Status inputs	7 TTL
Auxiliary Port	
Connector	DB-15 female
Functions	Fault alarm relay contacts output, AGC voltage output
AES/EBU Port	
Connector	DB-15 female

L-BAND DEMODULATOR (INDOOR UNIT)

Input frequency	950 to 1700 MHz, F connector, 75 ohm
Demodulation type	BPSK or QPSK
FEC decoding	Sequential rate 1/2
Optional FEC decoding	Viterbi or concatenated Viterbi/Reed-Solomon
Audio threshold	5 dB E_b/N_0 (BPSK); 5.5 dB E_b/N_0 (QPSK)

LNB (OUTDOOR UNIT)

Input frequency range	10.95-11.7, 11.7-12.2, 12.25-12.75, 3.7-4.2 GHz
Output frequency range	950 to 1700 MHz
Local oscillator	DRO (BPSK) or PLL (QPSK)

AVAILABLE AUDIO RATES AND BANDWIDTHS

Rate (kbps)	Audio Mode	Bandwidth (kHz)	Audio Quality	Recommended User Data Rate*
64	Mono	8	AM	2400
64	Dual mono (stereo)	5	—	2400
64	Joint stereo	5	—	2400
96	Mono	20	CD	4800
96	Dual mono (stereo)	10	AM	4800
96	Joint stereo	10	AM	4800
112	Mono	20	CD	4800
112	Dual mono (stereo)	10	AM	4800
112	Joint stereo	20	CD	4800
128	Mono	20	CD	4800
128	Dual mono (stereo)	10	AM	4800
128	Joint stereo	20	CD	4800
192	Mono	20	CD	9600
192	Dual mono (stereo)	20	CD	9600
192	Joint stereo	20	CD	9600
256	Mono	20	CD	9600
256	Dual mono (stereo)	20	CD	9600
256	Joint stereo	20	CD	9600
384	Mono	20	CD	9600
384	Dual mono (stereo)	20	CD	9600
384	Joint stereo	20	CD	9600

* Maximum user data rate is 9600 baud for all audio rates, but lower data rates should be used with audio rates less than 128 kbps to prevent audio quality degradation.

DIMENSIONS/WEIGHT (INDOOR UNIT)

Size	7.5 cm (3 in) h, 41 cm (16 in) W, 24.5 cm (9.75 in) D
Weight	< 5.5 kg (12.1 lbs.)
Rack Mount	2RU tray (optional)

POWER (INDOOR UNIT)

Input voltage	85 to 265 VAC autosensing
Frequency	47 to 63 Hz
Consumption	45 watts true RMS power (typical)

ENVIRONMENTAL

Temperature	0 to +50°C (IDU, operating) -30 to +50°C (ODU, operating)
Humidity (Indoor Unit)	5 to 95% noncondensing (operating) 0 to 99% condensing (ODU, operating)
Safety/emissions	CE compliant; UL 1950, CSA 950, EN60950 / FCC Part 15B Class A, EN55022 Class B

Product and options subject to availability. Please consult your nearest ComStream representative or authorized ComStream distributor.



U.S.A./Canada/Headquarters: 10180 Barnes Canyon Road, San Diego, California 92121 USA Tel:+(1) 619.657.5416 Fax:+(1) 619.657.5404 **Latin America:** Miami, Florida USA Tel:+(1) 561.988.1210 Fax:+(1) 561.988.8290
Brazil: Sao Paulo Tel:+(55) 11.3048.4047 Fax:+(55) 11.3048.4049 **Colombia and Andean Region:** Bogotá Tel:+(57) 1 621.3651 Fax:+(57) 1 621.3681 **Venezuela:** Caracas Tel:+(58)2 952.4849 Fax:+(58)2 952.0468
Europe/Middle East/Africa: London UK Tel:+(44) 1.483.440.933 Fax:+(44) 1.483.440.876 **Russia:** Moscow Tel:+(7) 095.332.4069 Fax:+(7) 095.129.1733 **China:** Beijing Tel:+(86) 10.6.505.1384 Fax:+(86) 10.6.505.1389
Asia-Pacific: Jakarta, Indonesia Tel:+(62) 21.521.3295 Fax:+(62) 21.521.3343 **Internet World Wide Web:** <http://www.comstream.com>

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