



DX COMMUNICATIONS

A Division of Advanced Media Technologies, Inc.

Integrated Receiver/Descrambler

DIR-747



Vital Stats:

- Space saving 1 3/4" low profile design
- Full featured LCD display
- Microprocessor controlled with non-volatile memory
- Integrated VCRS[®] descrambling module with OSD
- Front panel controls including VCRS[®] video level control
- Front panel video test port
- Discriminator detector circuit provides unsurpassed performance in T.I. environments
- Selectable AGC or MGC
- Contact closure switching system permits alternate transponder and feed selection
- C-band and Ku-band compatible
- Video fine tuning in .5 MHz steps
- Field changeable IF bandpass filters available in 17, 24, 27, 30, or 36 MHz
- Selectable 950 - 1450 MHz or 900 - 1400 MHz IF frequency
- Optional V/H switching

DIR-747 Integrated Receiver/Descrambler Specifications

RF

Input Frequency	950 ~ 1450 MHz or 900 ~ 1400 MHz
2nd IF Frequency	130 MHz
Input Level	-60 dBm ~ -30 dBm
IF Bandwidth	30 MHz (standard) 17, 24, 27, 36 MHz (optional)

VIDEO - UNSCRAMBED

Output Level	1 V p-p adjustable (75 Ω , 21.5 MHz p-p deviation)
S/N	52 dB min. (CCIR weighted at 14 dB C/N)
Frequency Response	± 1 dB (50 Hz ~ 4.2 MHz)
Differential Gain	3% (APL 10 ~ 90%) typical
Differential Phase	3° (APL 10 ~ 90%) typical

SIGNAL TO VC

Signal Level	1 V p-p $\pm 10\%$
Frequency Response	± 0.5 dB (0.05 ~ 3.58 MHz) ± 0.75 dB (3.58 ~ 4.2 MHz)
C/L Delay	+ 25 ± 13 ns
C/L Gain	5 IRE max.
C/L Intermodulation	2 IRE max.
Differential Gain	3% (APL 10 ~ 90%) typical
Differential Phase	3° (APL 10 ~ 90%) typical
Line Time Distortion	5 IRE max.
Field Time Distortion	5 IRE max.

COMPOSITE BASEBAND

Bandwidth	50 Hz ~ 8 MHz, unclamped
Output Level	1 V p-p (75 Ω , 21.5 MHz p-p deviation)

AUDIO - UNSCRAMBED

Output Level	+17 dBm adjustable (600 Ω balanced, 150 kHz p-p deviation)
Subcarrier Frequency	5 ~ 8 MHz (10 kHz step frequency-synthesized tuning)
Harmonic Distortion	1.5% max
S/N	50 dB min. (at 14 dB C/N without video)
Frequency Response	± 1.5 dB (50 Hz ~ 15 kHz)

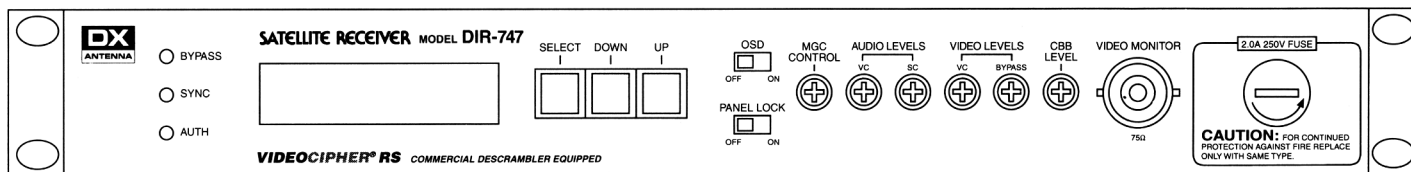
AUDIO - VC MODE

Output Level	+17 dBm adjustable (600 Ω balanced)
S/N	80 dB min.
Frequency Response	± 0.25 dB (20 Hz ~ 15 kHz)
Harmonic Distortion	0.25% max (1 kHz tone)
Isolation	80 dB min. (between right and left output) 80 dB min. (between subcarrier audio and module audio)
Mono Level Balance	± 0.25 dB

GENERAL

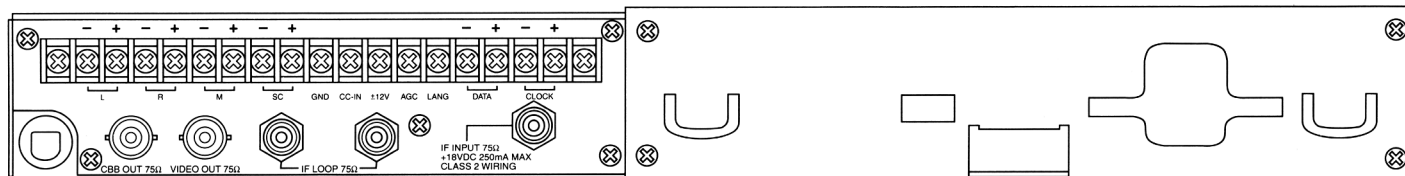
Power Input	115 V $\pm 10\%$ AC, 60 Hz, 40 W max.
DC Output for LNB and Downconverter	+18 VDC, 250 mA max.
Control Voltage Output for V/H Switch	-12/+12 VDC
Size	Standard 19" rack mountable 1 3/4" Height
Weight	15lbs.

*Specifications are subject to change without notice due to product improvements.
VideoCipher® is a registered trademark of Motorola.



Front Panel Features

- Full featured LCD display indicates:
 - C-band or Ku-band
 - Channel number
 - Ku-band transponder frequency
 - Signal level
 - AGC/MGC
 - Video fine tune frequency
- Audio subcarrier frequency
- Contact closure mode and memory
- LNB power on/off
- LCD backlight on/off
- Bypass/sync/auth descrambler status indicators
- Menu/control buttons
- VCRS OSD on/off switch
- Panel lock/unlock switch
- MGC level adjust
- VCRS audio level adjust
- Subcarrier audio level adjust
- VCRS video level adjust
- Bypass video level adjust
- Composite baseband level adjust
- Video test port (BNC)
- Fuse holder



Back Panel Features

- Audio output terminals
- Contact closure control terminals
- VCRs terminals (clock, data, language)
- AGC output terminal
- Composite baseband output terminal (BNC)
- Video output terminal (BNC)
- 130 MHz IF loop connectors
- IF input connector
- VCRS module port

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