



BEXT

LCR FM
*Outstanding
 Performance*
FM Composite Receiver
High Rejection Option

- 75 dB or better S/N
- Available for the 87.5-108 MHz FM band, can be custom ordered on any 108 -1000 MHz frequency
- Direct front panel programmability
- Superior MPX and SCA performance
- Excellent RF immunity receiver, designed to withstand the most hostile RF environments
- Excellent adjacent channel rejection
- 50 dB minimum stereo separation
- 0 -12V DC input for direct hook-up to back-up battery
- Ideal for translator applications in conjunction with one of the BEXT exciters and amplifiers
- Meets or exceeds all FCC and CCIR requirements
- Option 75: 75 kHz audio cutoff instead of standard 99 kHz; (will not pass 92 kHz SCA)
- Option HR: Higher Rejection of very strong adjacent channels

Frequency Range:

87.5 - 108 MHz (LCR FM)
 (Can be custom ordered on any 108 - 1000 MHz frequency)

Distortion, THD:

Stereo demod., decoded and de-emphasized
 30 Hz to 7.5 kHz: <0.05% (typ 0.025%) on "wide", <0.08% (typ 0.04%) on "medium", <0.15% (typ 0.06%) on "narrow"; at 1 kHz <0.02% (typ 0.01%) on "wide", <0.03% (typ 0.015%) on "medium", <0.05% (typ 0.025%) on "narrow"

Mono demodulated and de-emphasized:

30 Hz to 7.5 kHz: <0.1 % (typ 0.06%) at 1 kHz <0.04% (typ 0.02%)

Distortion, IMD:

Intermodulation at demodulated output, two tone with 1 kHz difference frequency:
 5-15 kHz, D2 <0.05%, D3 <0.1% 15-53 kHz, d2 <0.12%, d3 <0.3%

Stereo separation:

30 Hz to 15 kHz, >60 dB (typ 65) on "wide", >50 dB (typ 55) on "medium", >45 dB (typ 50) on "narrow"

Crosstalk:

50 dB or better, stereo subchannel to main channel or main channel to stereo subchannel

Signal to noise ratio:

80 dB (typ 85) with 75 kHz deviation and 400 Hz frequency modulation (mono) 75 dB (typ 80) with 75 kHz deviation, demodulated, de-emphasized left or right (stereo)

Composite amplitude response, models with 97 kHz audio cutoff:

±0.1 dB or less, 30 Hz - 53 kHz
 ±1 dB or less, 53 kHz - 75 kHz
 ±2 dB or less, 75 kHz - 100 kHz

Composite amplitude response, models with 75 kHz audio cutoff:

±0.1 dB or less, 30 Hz - 53 kHz
 ±2 dB or less, 53 kHz - 75 kHz

Data/subcarrier port (LCR STL only):

±5 dB or less, 100 - 200 kHz

Composite phase response:

±0.1° from linear phase, 0 Hz - 53 kHz

RF Input Connector/Impedance:

Type "N" female, 50 ohm

Frequency Programmability:

From front panel

Sensitivity:

Monaural (demodulated, de-emphasized):

5 µV for S/N > 50 dB
 15 µV for S/N > 60 dB (typ 9 µV)
 50 µV for S/N > 65 dB
 150 µV for S/N > 70 dB
 1.5 mV for S/N > 80 dB (typ 88 dB)

Composite (left or right channel, demodulated, de-coded, de-emphasized):

5 µV for S/N > 30 dB
 15 µV for S/N > 40 dB
 50 µV for S/N > 55 dB
 150 µV for S/N > 60 dB (typ 85 µV)
 mV for S/N > 75 dB (typ 80 dB)

Selectivity (static), with IF on "narrow":

5 dB IF bandwidth ±100 kHz
 20 dB IF bandwidth ±200 kHz
 50 dB IF bandwidth ±300 kHz
 Over 80 dB IF bandwidth ±400 kHz

Selectivity (static), with IF on "medium":

3 dB IF bandwidth ±100 kHz
 12 dB IF bandwidth ±200 kHz
 30 dB IF bandwidth ±300 kHz
 60 dB IF bandwidth ±500 kHz
 Over 80 dB IF bandwidth ±600 kHz

Selectivity, dynamic (admissible proximity/ratios of adjacent signals for unaffected performance):

With IF on "narrow" and 75 kHz audio cutoff:

At: Unwanted signal must be:
 0 kHz <-43 dB below desired signal
 100 kHz <-22 dB below desired signal
 200 kHz <+12 dB above desired signal
 300 kHz <+35 dB above desired signal
 400 kHz <+36 dB above desired signal

With IF on "narrow" and 97 kHz audio cutoff:

At: Unwanted signal must be:
 0 kHz <-43 dB below desired signal
 ± 100 kHz <-30 dB below desired signal
 + 200 kHz <+9 dB above desired signal
 ± 300 kHz <+32 dB above desired signal
 ± 400 kHz <+34 dB above desired signal

With IF on "medium" and 75 kHz audio cutoff:

At: Unwanted signal must be:
 0 kHz <-46 dB below desired signal
 100 kHz <-30 dB below desired signal
 200 kHz <-3 dB below desired signal
 300 kHz <+16 dB above desired signal
 400 kHz <+23 dB above desired signal

Receivers normally shipped with 97 kHz audio cutoff; 75 kHz audio cutoff on request, not field selectable, specify with order
 Note: Option HR allows withstanding of unusually strong RF fields within ±1 MHz (ex. without HR, 200 µV / -61 dBm of desired signal with 70 mV / -10 dBm of interfering signal MAX; ex. with HR, 60 µV / -71 dBm of desired signal with 224 mV 0 dBm of interfering signal MAX. Beyond 1 MHz, HR offers no advantages).

Multimeter:

four function diagnostic aid, peak and semi-peak modulation meter

Outputs:

four BNC's with + and - polarity available, balanced and unbalanced and a 6.3 mm jack female for headphones

IF 10.7 MHz:

BNC connector

Carrier detector:

BNC connector

All levels :

factory set for 3.5 Vp-p (1.237 Vrms / 4.1 dBm), adjustable -6 to +6 dB

Ambient Temperature Range:

0° to 40° C (32° to 104° F) [Operational from -20° to 50° C (-40° to 122° F)]

AC Input Power:

120 or 240 VAC
 50/60 Hz, 30 VA

DC Input Power:

12.5 V (±0.1 V) 2 A,
 10 mVp-p max ripple

Front Panel Size:

483 mm (19") W x 132 mm (5 1/4") H
 (3 standard rack spaces high)

Overall Depth: 483 mm (19")

Net Weight: 12 kg (26.4 Lbs)