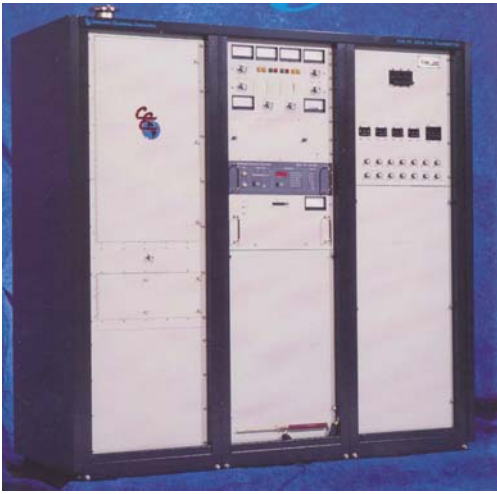


# Continental 816R2,3,4 and 5C



## Rated Power Output:

816R-2C: 21.5 kW  
816R-3C: 25 kW  
816R-4C: 27.5 kW  
816R-5C: 35 kW

## Power Consumption:

816R-2C: 33 kW nominal  
816R-3C: 40 kW nominal  
816R-4C: 42 kW nominal  
816R-5C: 54 kW nominal

## Frequency Range:

88 to 108 MHz, in 10 kHz steps

## Frequency Control:

Phase-locked loop frequency synthesis  
from high stability master oscillator

## Frequency Stability:

± 250 Hz

## Output Impedance:

50 ohms

## Output Connector:

3-1/8" EIA flange

## VSWR:

2:1, maximum

## Modulation Type:

Direct carrier frequency modulation

## Modulation Capability:

±150 kHz deviation

## Modulation Indication:

Digital LED display shows true peak  
level of modulating signal in 5%  
increments.

## Exciter:

Solid-state unit with variable output of  
5 to 50 watts; self-contained harmonic  
filter

## RF Harmonic Attenuation:

- 80 dB, minimum

## Power Supply Rectifiers:

Silicon

## Audio Input Impedance:

600 ohms, balanced

## Audio Input Return Loss:

30 dB or better

## Audio Input Level:

±1.0 dBm (6.93 V peak-to-peak) at  
600 ohms for ± 75 kHz deviation

## Audio Frequency Response:

± 0.5 dB; flat, 25, 50 or 75 microsecond  
pre-emphasis, 20 Hz to 15 kHz

## Total Harmonic Distortion:

0.08% maximum; 20 Hz to 15 kHz  
(Measured with spectrum analyzer)

## Intermodulation Distortion:

0.08% or less, 60 Hz/7 kHz, 4:1 ratio

## FM S/N Ratio (FM Noise):

75 dB minimum, below ± 75 kHz  
deviation at 400 Hz, measured within a  
20 Hz to 15 kHz bandwidth with 75  
microsecond de-emphasis

## Asynchronous AM S/N Ratio (AM Noise):

55 dB RMS below carrier; reference:  
100% AM modulation, full power, with  
75 microsecond de-emphasis, no FM

modulation

## Synchronous AM S/N Ratio

### (Incidental AM Noise):

50 dB below carrier; reference:  
100% AM modulation, full power, with  
75 microsecond de-emphasis, FM  
modulation ± 75 kHz at 400 Hz

## Composite Inputs:

Balanced, unbalanced and test

## Composite Input Impedance:

5,000 ohms, nominal

## Composite Input Level:

1.25 V RMS (3.54 V peak-to-peak) for  
±75 kHz deviation

## Composite Amplitude Response:

± 0.2 dB, 20 Hz to 1 00 kHz

## Composite Total Harmonic Distortion:

0.08% maximum

## Composite Intermodulation Distortion:

0.08% maximum; 60 Hz/7 kHz, 4:1 ratio

## Three SCA Inputs:

Balanced or unbalanced

## SCA Input Impedance:

15,000 ohms, nominal

## SCA Input Level:

Adjustable 1.25 V RMS for  
10% injection.

## SCA Amplitude Response:

± 0.3 dB, 40 kHz to 1 00 kHz

Most stereo performance parameters are  
determined primarily by the stereo generator  
used. The following parameters are  
influenced by the RF system. These  
specifications assume that a state-of-the-art  
stereo generator is used.

## Stereo Separation:

50 dB minimum; 50 Hz to 15 kHz (60 dB  
or better, 400 Hz to 7.5 kHz typical)

## Total Harmonic Distortion:

0.08% maximum; 50 Hz to 15 kHz  
(Measured with spectrum analyzer)

## Intermodulation Distortion:

0.08% maximum; 60 Hz/7 kHz, 4:1 ratio

## FM Noise:

- 72 dB referenced to 400 Hz, 75 kHz  
deviation. Measured with 75  
microsecond de-emphasis within a  
20 Hz to 15 kHz bandwidth

## Linear Crosstalk:

- 55 dB

Most SCA performance parameters are  
determined primarily by the SCA generator  
used. The following parameters are  
influenced by the RIF system. These  
specifications assume that a state-of-the-art  
SCA generator is used.

## Crosstalk, SCA to Main and Stereo

### (67 kHz and/or 92 kHz):

- 60 dB, SCA deviation 5 kHz; main  
75 microsecond de-emphasis

## Crosstalk, Main and Stereo to SCA

### (67 kHz and/or 92 kHz):

- 50 dB, main and stereo 75 kHz  
deviation; SCA reference deviation,  
5 kHz and 200 Hz modulation; SCA  
de-emphasis, 150 microsecond

## Crosstalk, SCA to SCA

### (67 kHz and/or 92 kHz):

- 50 dB, SCA reference deviation;  
5 kHz and 200 Hz modulation frequency,  
150 microsecond de-emphasis

## Power Source:

200 to 250 VAC; 60 Hz, three-phase;  
available transformer taps are 200, 210,  
220, 230, 240, 250 VAQ 50 Hz available  
on request

## Permissible Line Voltage Variation:

±5% (each phase voltage variation;  
within 5% of the average of all three  
phases)

## Filament Regulator:

±1% of optimum

## Operating Altitude:

7,500 ft (2,286 m) standard; optional to  
10,000 ft (3,048 m) with modification kit

## Ambient Temperature Range:

- 20°C to +50°C (- 4°F to + 122°F)

## Relative Humidity:

0 to 95%

Transmitter: (including directional coupler)

73" (1 85.5 cm) H

72" (1 83 cm) W

28" (71 cm) D

## Weight:

1,962 lbs (890 kg) nominal

## 35 kW External Plate Transformer:

46" (1 17 cm) H

35" (89 cm) W

24" (61 cm) D

## Weight:

901 lbs (409 kg) nominal