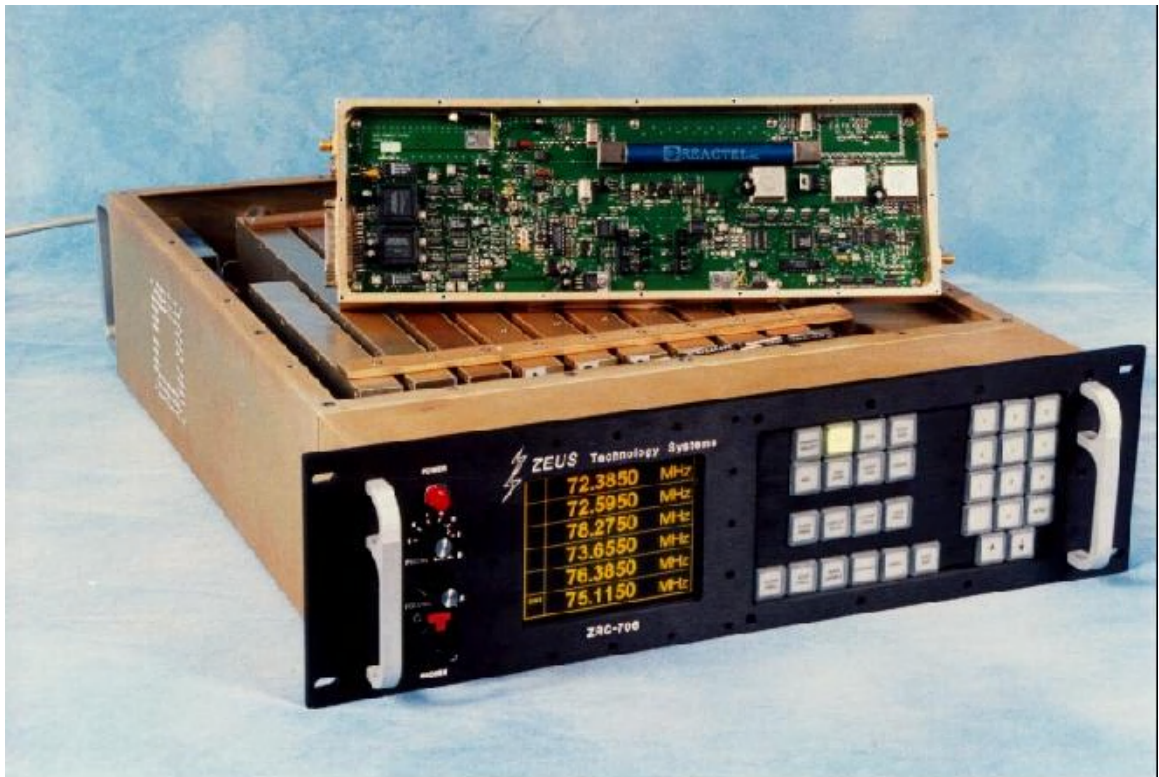




ZEUS Technology Systems, Inc.
Technical Data Sheet

ZRC-706L
Single Channel Per Carrier Receiver



ZRC-706L Single Channel per Carrier Receiver, with one Channel module displayed

DESCRIPTION

The ZRC-706L is a multichannel receiver / demodulator processing Single Channel Per Carrier (SCPC) signals in the 850 to 1750 MHz range, if working in the RF mode, or 47.5 to 92.5 MHz in the IF mode. Each ZRC-706L will simultaneously tune and demodulate six independent carriers within the input band, providing six audio channels out (300 – 3400 Hz), and carrier status. The ZRC-706L may be tuned manually via the front panel keypad and displays, or remotely under IEEE-488 interface control. Center tuning increments are 2.5 KHz steps with each current center frequency displayed in the corresponding 9- digit front panel indicator. Audio outputs

and Carrier Operated Relay connectors (both normally open, and normally closed) are provided in the rear panel for all channels along with the L-Band and 70 MHz IF input. The 70 MHz IF is returned to three additional connectors on the rear panel for use in cascading multiple receiver groups. The ZRC-706L will accept a 10 MHz external frequency reference input. Switch settings on the front panel allow for either local or remote operation and blanking of the front panel displays. Switch settings on the rear panel permit control of input source (RF or IF), downconverter source (either C- or K-band), and selection of frequency sense.

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GENERAL SPECIFICATIONS

Total Channels	6, independent
Control Interface	IEEE-488
Primary Power	120 / 240 VAC, selectable, 47 – 63 Hz
Operating Temperature	0 to +50 degrees C
Dimensions	Height: 5.22” Width: 19.0” Depth: 21”

RF / IF SPECIFICATIONS

Input Frequency Range (RF)	850 – 1750 MHz, continuous (frequency display readouts will indicate either “C” or “KU” frequency of SCPC channel frequency or 70 MHz IF frequency)
Output Frequency Range (IF)	70 MHz Center Frequency, 45 MHz Bandwidth
Input Frequency Range (IF)	70 MHz, 45 MHz Bandwidth
Input Signal Level	-85 to -10 dBm, operating; +30 dBm Survivable IF input; +20 dBm, Survivable RF input
Input Impedance	50 Ohms, nominal
Input VSWR	2:1, Max.
Image Rejection	80 dB, min.
IF Rejection	80 dB, min.
Conducted Emissions	-90 dBm, max. all frequencies
Noise Figure	12 dB, nominal
Tuning Time	1.0 Sec, typ. (to within 100 Hz of final frequency)
Tuning Step Size	2.5 KHz
AFC Range	+/- 5 KHz, nominal
Input Frequency, External Reference	10 MHz
Input Level, External Reference	-5 to +10 dBm

AUDIO SPECIFICATIONS

Audio Output Level	+10 dBm, Max. into 75 Ohms (2.45 V, p-p, internally adjusted)
Carrier Operated Relay	Programmable over a 32 dB range, in 0.5 dB steps, both normally open, and normally closed contacts available on rear panel terminal block
Audio Expander	3:1, 2:1, or linear, selectable
Pre-Detection Bandwidth	150 uSec, 75 uSec, or flat, selectable
De-Emphasis	10, 22.5, 30, and 75 KHz, 6 dB, nominal (per channel selectable from front panel, or remotely)
Audio Frequency Response	300 – 3,400 Hz, +/- 1 dB
Headphone Output	Level adjustable from 0 to 2.45 V p-p, 600 Ohms monaural, stereo; selectable per both channel selectable to left, right earphone(s) volume individually controlled