

Model 3905C/3916C

Plug-In Filter Card Chassis

- **Filter Types:** Elliptical, Butterworth and Bessel
- **Roll-Off Rates:** up to 115dB/Octave
- **5 or 16 Plug-In Filter Cards**
- **Non-Volatile Memory**
- **Input and Output Gain**
- **All Channel Mode**
- **Amplify Only and By-Pass Modes**
- **Fully GPIB Programmable**
- **Overload Detectors**
- **Power-Up Self-Test**



DESCRIPTION

The Models 3905C and 3916C are Programmable Multi-channel Filter Systems which can be configured with many types of filter cards; Elliptical filters for anti-aliasing, Butterworth filters for clean filtering in the frequency domain, and Bessel filters which provide superior or pulse or complex signal filtering. Filter cards that provide selectable frequency cutoffs as low as 0.01Hz and as high as 25.6MHz with roll-off rates of 24dB to 115dB/octave make each System unique to any application. The System concept was designed with the user in mind, providing ease of operation, flexibility and performance.

SYSTEM CONFIGURATIONS

Two mainframes are available, the Model 3905C and the Model 3916C. The 3905C accommodates up to 5 plug-in filter cards in only 3" of rack spacing. Both front and rear panel input and output BNC connectors are standard, permitting convenient bench top or rack mounting use. The 3916B accommodates up to 16 plug-in filter cards for the larger system user; and used with the Model 34A filter card will give the user a maximum of 32 channels of filtering in one mainframe. Changing or adding cards to either mainframe is accomplished with no modifications to the System.

mainframe incorporates an GPIB interface, for remote programming, power supply, microprocessor, front panel keyboard, displays and indicators. Extra large, independent

keyboard, displays and indicators. Extra large, independent displays are provided for input and output gain, cutoff frequency, channel selection and overload detection. These independent displays present all the most pertinent information simultaneously for maximum operator convenience.

ADDITIONAL FEATURES

Overload detectors assist the user in detecting excessive input signals or incorrect gain settings with some filter cards. There are three selectable modes: non-latching, that monitors all channels and displays the first channel to have an overload; latching, that maintains the overload display until the overload is cleared; and no indication.

The System also provides an "amplifier only" or "by-pass" mode for applications that require no filtering of the input signal. In the amplifier only mode, both the input and output gains are available, by-passing the filtering circuits, giving the user the ability to amplify very low signals if desired. In the by-pass mode, the input is connected to the output, by-passing the amplifier and filtering circuits.

The next few pages give detailed specifications of each filter card available for the Model 3905C and 3916C, along with a wide range of applications each System will provide.

CHASSIS SPECIFICATIONS

Specifications apply at 25°C ±5°C.

Capacity:

Model 3905C: 5 plug-in filter cards.

Model 3916C: 16 plug-in filter cards.

Memory: Memory is non-volatile, battery-backed CMOS.

Model 3905C: 85 selectable storage locations for complete instrument operating conditions.

Model 3916C: 25 selectable storage locations for complete instrument operating conditions.

Overload Modes: Three selectable modes; non-latching, monitors all channels and displays the first channel to have an overload; latching, maintains the overload display until it is cleared, and no indication.

Overload Indicators: LEDs for input and output. Gain display flashes when overload occurs on displayed channel.

Self-Test Diagnostics: Microprocessor checks unit upon power-up. Display indicates failure mode.

Displays: 7 segment, green LED; 0.5" high.

Remote Programming: IEEE-488.1 interface. Subsets: SH1, AH1, T6, L4, SR1, RL1, PP1, DC1, DT0, C0, E1.

Operating Temperature: 0°C to 45°C.

Isolation to Chassis: ±200Vdc.

Storage Temperature: -20°C to 70°C.

Power Requirements: 90-132,180-264 volts ac, 50-60Hz.

Model 3905C: 20 watts.

Model 3916C: 25 watts.

Dimensions and Weights:

Model 3905C: 3.5" (9cm) high, 17.25" (43.8cm) wide, 18.38" (50.2cm) deep; 10 lbs (4.6kg).

Model 3916C: 8.75" (22.1cm) high, 17" (43.2cm) wide, 19.5" (49.6cm) deep; 31 lbs (14kg).

Add 1.75 lbs (0.8kg) for each filter card.

Accessories: 6 foot, 3 terminal line cord, operating manual.

OPTIONS

Rack Mounting Kit: Permits the installation of the Model 3905B and 3916C into a standard 19" rack spacing.

Model 3905C: Part no. RK-317.

Model 3916C: Part no. RK-817, includes rack mount slides.

Filter Extender Card: Part No. 39AME Filter Extender Card permits any filter card to be extended from the mainframe during calibration or repair.

Extended 1 Year Warranty: Part No. (3905C) EW3905C, (3916C) EW3916C.

OPTIONAL ACCESSORIES

CAB-010: GPIB Cable with Connectors, 2-Meters

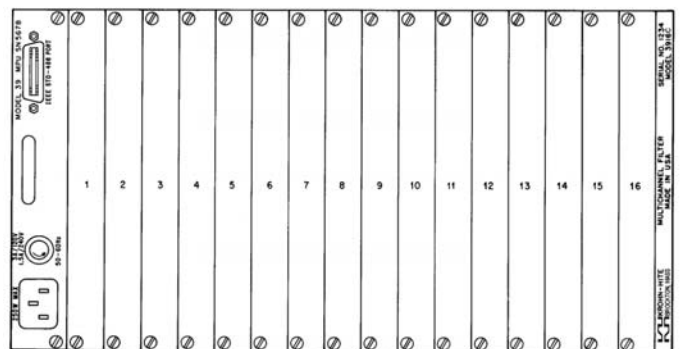
CAB-011: GPIB Cable with Connectors, 1-Meters

CAB-025: Cable, BNC, 3ft, Low Noise

Specifications subject to change without notice.



Model 3905C Rear Panel View



Model 3916C Rear Panel View