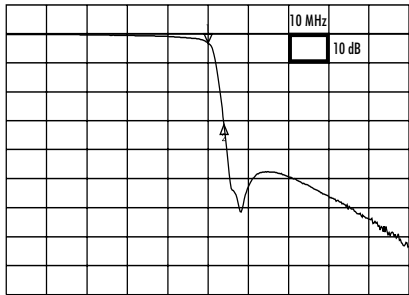


# Lowpass & Highpass Filters

## 3322 Headend Lowpass Filters



3322



Typical Frequency Response of 3322-4.2-1

### 3322 Series & other related models

Lowpass filters pass the lower segment of the TV spectrum below a prescribed cut-off frequency. The higher band segment above the cut-off frequency is suppressed. These filters are AC/DC passing.

Model	Passband (MHz)	Insertion Loss at Cut Off (Max.)	Stopband (MHz)	Stopband Rejection (Min.)
5060	0-1.2	4.5 dB	1.7-5	30 dB
3322-4.2-2*	0-4.2	4.5 dB	5-600	40 dB
3322-4.2-1*	0-4.2	4.5 dB	4.5-1000	30 dB
3322-5	0-5	4.5 dB	6-600	40 dB
3322-(A)S	5-46	3.0 dB	55-450	40 dB
3322-(A)L	54-88	3.0 dB	102-700	40 dB
3322-(A)F	54-108	3.0 dB	124-805	40 dB
3322-(A)M	54-156	3.0 dB	174-963	40 dB
3322-(A)HH	54-216	3.0 dB	230-983	35 dB
3322-(A)H	54-300	3.0 dB	400-1206	40 dB
3322-W/CC	54-300	3.0 dB	312-550	30 dB
3322-806/860	50-806	4.0 dB	860-1000	40 dB

### Mechanical Specifications:

Baseplate Dimensions: 4" x 1.5"

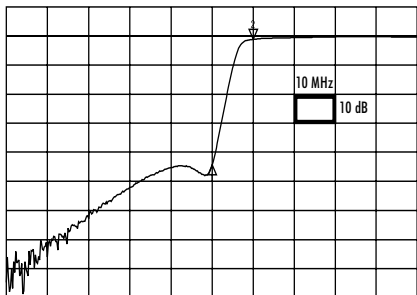
Connectors: 75 ohm - Type "F"

\*Custom units can be ordered in a delay equalized version.

## 3378 Headend Highpass Filters



3378



Typical Frequency Response of 3378-U

### 3378 Series

Highpass filters pass frequencies above the cut-off frequency, and suppress lower frequencies. Highpass filters are not AC/DC passing.

Model	Passband (MHz)	Insertion Loss at Cut Off (Max.)	Stopband (MHz)	Stopband Rejection (Min.)
3378-4.2/4.5	4.5-10	4.5 dB	0-4.2	30 dB
3378-4.5/5	5-100	4.5 dB	0-4.5	40 dB
3378-4.5/5.8	5.8-50	4.5 dB	0-4.5	50 dB
3378-L	51-450	3.0 dB	0-46	40 dB
3378-2S/4V	67.25-550	3.0 dB	0-59.75	40 dB
3378-83.25/88	88-550	3.0 dB	0-83.25	50 dB
3378-169/187	187-750	3.0 dB	0-169	40 dB
3378-S	235-1000	3.0 dB	0-216	40 dB
3378-U	415-1000	4.0 dB	0-375	40 dB
3378-500/550(50)	550-750	4.0 dB	0-500	50 dB

### Mechanical Specifications:

Baseplate Dimensions: 4" x 1.5"

Connectors: 75 ohm - Type "F"

Order From:



Toll Free: 800-423-2594

www.multicominc.com

multicom@multicominc.com

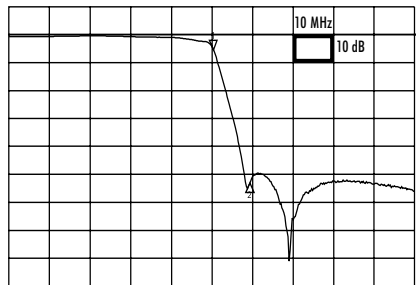
# CABLE PRODUCTS CATALOG

## Low Cost Tiering Lowpass & Highpass Filters

### 5KLP Low Cost Tiering Lowpass Filters



5KLP-216



Typical Frequency Response of 5KLP-216

### 5KLP Series

These tubular, weatherized lowpass filters are low cost alternatives to the 3322 headend series where higher passband loss is acceptable. Their resistance to moisture and temperature extremes makes them suitable for pole mounting.

<u>Model</u>	<u>Insertion Loss (Approx.)</u>	<u>Passband (MHz)</u>	<u>Stopband (MHz)</u>	<u>Rejection (Approx.)</u>
5KLP-60	5.0 dB	5-60	67 to 800	50 dB
5KLP-66	5.0 dB	5-66	71.75 to 900	50 dB
5KLP-72	5.0 dB	5-72	79.5 to 1,000	50 dB
5KLP-82	5.0 dB	5-82	89.5 to 940	50 dB
5KLP-88	5.0 dB	5-88	121.25 to 1,000	50 dB
5KLP-108	3.0 dB	5-108	121.25 to 900	50 dB
5KLP-174	6.0 dB	5-174	187.25 to 1,000	50 dB
5KLP-216	6.0 dB	5-216	229.25 to 1,000	50 dB
5KLP-245	8.0 dB	5-240	260 to 1,000	50 dB
5KLP-300	6.0 dB	5-300	319.25 to 1,000	50 dB
5KLP-380	3.0 dB	5-378	409.25 to 1,000	50 dB
5KLP-450(8)	3.0 dB	5-450	469.25 to 1,000	50 dB
5KLP-550(8)	4.0 dB	5-551.75	571.25 to 1,000	50 dB

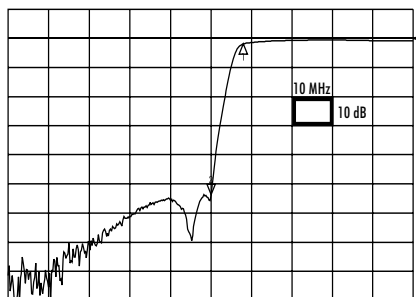
### Mechanical Specifications:

Connectors: 75 ohm - Type "F" - Male/Female

### 5KHP Low Cost Tiering Highpass Filters



5KHP-174



Typical Frequency Response of 5KHP-174

### 5KHP Series

These tubular, weatherized highpass filters are low cost alternatives to the 3378 headend series where higher passband loss is acceptable. Their resistance to moisture and temperature extremes makes them suitable for pole mounting. These filters are not AC/DC passing.

<u>Model</u>	<u>Insertion Loss (Approx.)</u>	<u>Passband (MHz)</u>	<u>Stopband (MHz)</u>	<u>Rejection (Approx.)</u>
5KHP-55	3.0 dB	55-450	0-50	50 dB
5KHP-55(4)	1.0 dB	55.25-750	0-42	50 dB
5KHP-61	5.0 dB	61-450	0-56	50 dB
5KHP-67	5.0 dB	67-450	0-60	50 dB
5KHP-77	5.0 dB	77-550	0-70	50 dB
5KHP-4/5	3.0 dB	77.25-550	0-67.25	50 dB
5KHP-83	5.0 dB	83-450	0-76	50 dB
5KHP-88	3.0 dB	88-500	0-78	50 dB
5KHP-120	3.0 dB	121-500	0-107	50 dB
5KHP-174	3.0 dB	175-550	0-163.25	50 dB
5KHP-216	5.0 dB	217-600	0-206	50 dB
5KHP-300	3.0 dB	301-600	0-278	50 dB

### Mechanical Specifications:

Connectors: 75 ohm - Type "F" - Male/Female

Order From:



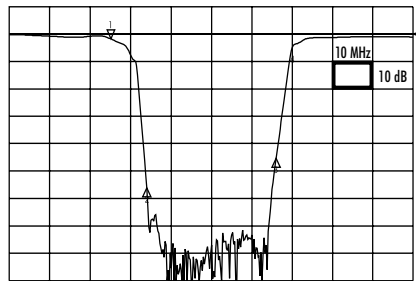
Toll Free: 800-423-2594  
 www.multicominc.com  
 multicom@multicominc.com

# Multichannel Notch Filters

## 3367 Wideband Notch Filter



3367-A/I



Typical Frequency Response of 3367-A/I

### 3367 Series

These filters suppress wide, contiguous bands within the VHF spectrum. They suppress several channels to block viewing or for insertion of new programming where a guardband is allowed. These units are AC/DC passing.

Model	Stopband (MHz)	Rejection (Min.)	Passband (MHz)		Insertion Loss (Max.)
			Lower	Upper	
3367-2/6	54-88	50 dB	0-47.75	108-550	4 dB
3367-5/6	76-88	50 dB	0-54	108-750	4 dB
3367A-5	77-82	50 dB	0-71.75	88-750	4 dB
3367-FM	88-108	40 dB	0-83.25	115.25-300	4 dB
3367-FMC	93-108	30 dB	0-88.00	116.25-750	4 dB
3367-103/107	103-107	50 dB	0-93	117-400	4 dB
5325-108/169.25	108-169.25	40 dB	0-91	175.25-300	4 dB
3367-A/E	121.25-145.25	45 dB	0-108	151.25-750	4 dB
3367-A/I	121.25-169.25	45 dB	0-108	175.25-420	4 dB
3367-B/G	127.25-157.25	50 dB	0-108	175.25-750	4 dB
3367-C/G	133.25-157.25	50 dB	0-108	175.25-750	4 dB
3367-C/H	133.25-163.25	50 dB	0-121.25	175.25-750	4 dB
3367-7/13	175.25-211.25	45 dB	0-167.75	223.25-750	4 dB
3367-K/N	223.25-241.25	40 dB	0-215.75	251.95-750	4 dB
3367-L/U	229-283	40 dB	0-216	301-500	4 dB

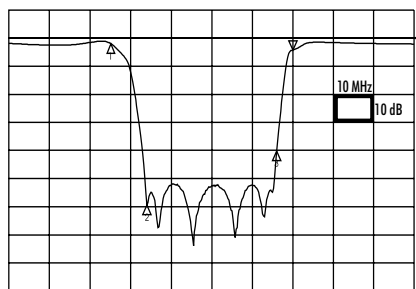
### Mechanical Specifications:

Baseplate Dimensions: 4" x 1.5"  
Connectors: 75 ohm - Type "F"

## 5KMT Wideband Tiering Filters



5KMT-(A/I)



Typical Frequency Response of 5KMT-A/I

### 5KMT Series

Type 5KMT multichannel tiering notch filters are mass produced for low cost, quantity use. See the table for standard models in production. For quantity applications, we can produce your special filter in this style at economical prices. These filters are suitable for pole mounting.

Model	Stopband (MHz)	Rejection (Typ.)	Passband (MHz)		Insertion Loss
			Lower	Upper	
5KMT-PC	72.25-74.6	20 dB	5-71.75	77-550	3 dB Typ.*
	72.5-74.4	30 dB			
5KMT-FM	92-104	50 dB	5-88	112-550	3 dB Typ.
5KMT-A/G	121-157.25	50 dB	5-108	175-500	3 dB Typ.
5KMT-A/H	121.25-163.25	50 dB	5-108	169-450	3 dB Typ.**
5KMT-A/I	121-164	50 dB	5-108	175-450	3 dB Typ.**
5KMT-7/13	175-212	50 dB	5-168	217-450	3 dB Typ.**
5KMT-L/V	233-290	50 dB	5-217	299-450	4 dB Typ.***

\* 8 dB at 71.75 MHz  
\*\* 4-6 dB Typ. at 108 MHz  
\*\*\* 8 dB Typ. at 167.75 and 5 dB Typ. at 217.25

### Mechanical Specifications:

Connectors: 75 ohm - Type "F" - Male/Female

Order From:



Toll Free: 800-423-2594  
www.multicominc.com  
multicom@multicominc.com

# "Brickwall" Single TV Channel Deletion Filters

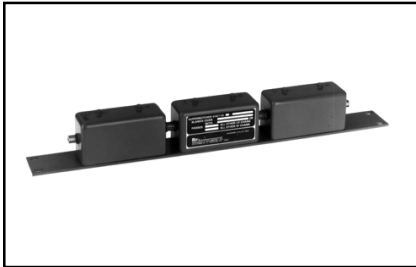
## 3271 For Sub and Low Bands



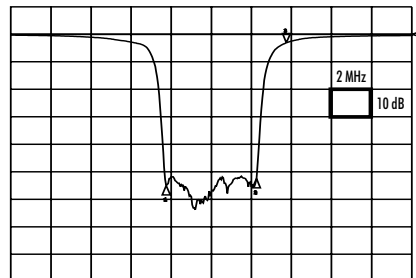
3271Sub-T7



Typical Frequency Response of 3271Sub-T7



3271AA-2



Typical Frequency Response of 3271AA-2

### 3271 Series

The 3271 series of deletion filters attenuate the entire channel spectrum from video carrier to aural carrier to allow reinsertion of new information without interference.

The 50 dB continuous suppression from video carrier to aural carrier has been found more than ample for reinsertion. Attenuation drops sharply at channel edges to preserve upper and lower adjacent channels. Models 3271Sub-T7 to T13 and 3271AA -2 to 6 are temperature stable at 20° to 120° F.

All models are at AC/DC passing. 1 amp Max.

Special assemblies of several channel deletion filters are available for:

- Suppressing contiguous channel blocks (see model 7964 on page 25.)
- Suppressing several non-contiguous channels (see model 6971 on page 25.)
- Spectrum splitting "Brickwall" highpass or lowpass filters (see model 6211 on page 24.)

<u>Model Number</u> <u>Sub/Low Band</u>	<u>Freq. Range</u> <u>(MHz)</u>	<u>Adj. Carrier</u> <u>Insertion Loss</u>
3271Sub-Channels T7 to T13	5.75-47.75	5 dB
3271AA-Channels 2 to 6	54-88	4 dB

<u>Channels</u>	<u>Upper Passband*</u> <u>Limit (MHz)</u>	<u>Insertion Loss</u> <u>(Approx.)</u>
T7 to T13	750	2.0 dB
2 to 6	500	1.0 dB

\*Can be extended to 1 GHz with external passband extender (Model 10500 see page 21.)

### Mechanical Specifications:

3271Sub-band Baseplate Dimensions: 6" x 2.25"

3271AA Baseplate Dimensions: 19" x 1.75"

Connectors: 75 ohms - Type "F"

**See Page 21 for Options and Ordering Information.**

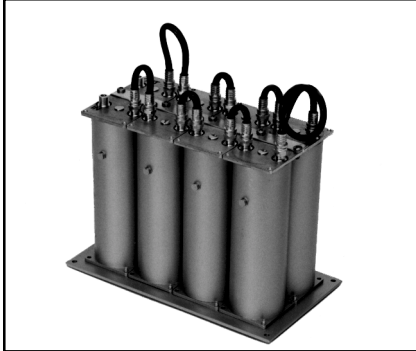
Order From:



Toll Free: 800-423-2594  
 www.multicominc.com  
 multicom@multicominc.com

# "Brickwall" Single TV Channel Deletion Filters

## 3271 For Mid./High/Super/Hyper



3271

**Select Models pass up to 1 GHz without an external passband extender.**

### 3271 Series

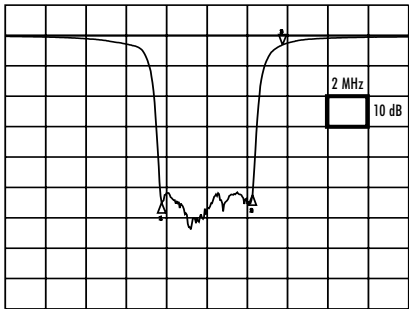
The 3271 series of deletion filters attenuate the entire channel spectrum from video carrier to aural carrier to allow reinsertion of new information without interference.

The 50 dB continuous suppression from video carrier to aural carrier has been found more than ample for reinsertion. Attenuation drops sharply at channel edges to preserve upper and lower adjacent channels.

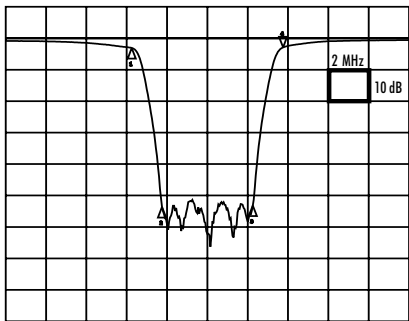
All models are AC/DC passing. 1 amp Max.

Special assemblies of several channel deletion filters are available for:

- Suppressing contiguous channel blocks (see model 7964 on page 25.)
- Suppressing several non-contiguous channels (see model 6971 on page 25.)
- Spectrum splitting "Brickwall" highpass or lowpass filters (see model 6211 on page 24.)
- Temperature for standard models: 50° F to 90° F.
- Temperature compensated models are available for -20° F to 120° F.



Typical Frequency Response of 3271ABM-I



Typical Frequency Response of 3271ABH-13

<u>Model Number</u>	<u>Freq. Range (MHz)</u>	<u>Adjacent Carrier Insertion Loss (Max.)</u>
3271ABM-Channels A-2 to I	108-174	3 dB
3271ABH-Channels 7 to 13	174-216	3 dB
3271ABS-Channels J to W	216-300	4 dB
3271ABY-Channels AA to YY	300-450	5 dB
3271ABY-Channels AAA to RRR	450-564	6 dB Approx.

<u>Channels</u>	<u>Upper Passband Limit (MHz.)</u>	<u>Insertion Loss (Approx.)</u>
A-2 to A	550*	1.5 dB
B to F	750*	1.5 dB
G to 9	850*	1.0 dB
10 to ZZ	1000	1.0 dB

\*Can be extended to 1 GHz with external passband extender (see model 10500 on page 21.)

### Mechanical Specifications:

3271ABM, 3271ABH, 3271ABS & 3271ABY Baseplate Dimensions: 9" x 5" A 19" x 7" rack panel is available upon request.

Temperature compensated models Baseplate Dimensions: 11" x 5"

Connectors: 75 ohms - Type "F"

**See Page 21 for Options and Ordering Information.**

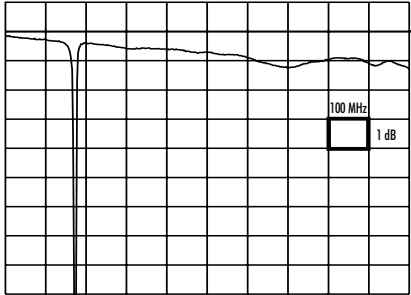
Order From:



Toll Free: 800-423-2594  
 www.multicominc.com  
 multicom@multicominc.com

# "Brickwall" Single TV Channel Deletion Filters

## Passband up to 1GHz



Typical Frequency Response of 3271ABH-13 showing an upper passband to 1 GHz.

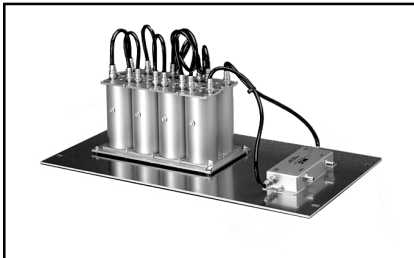
### Options:

- (S1 or S2) 12 volt activated switch. See p. 22 Switchable Option (Model 8197)
- (P) 15 Amp. AC/DC power bypass - see p. 22 Power Passing Option (Model 7100)
- Weatherized Housing:
  - Option A (F connectors and no strand mount)
  - Option B (F connectors with strand mount)
  - Option C (Stinger entries and no strand mount)
  - Option D (Stinger entries with strand mount)
- Retuning to non-standard channel formats and other channel bandwidths
- 10500 passband extender (see below).

### Ordering Information:

3271(X)-(Channel)  
 X - Designates SUB  
 AA  
 ABM  
 ABH  
 ABY

## 10500 Passband Extender



3271 with 10500 Passband Extender

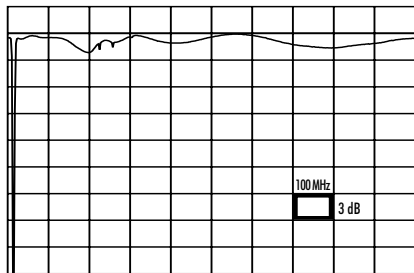
### Passband Extender

The Model 10500, 1 GHz module, is used to extend the passband of any channel deletion filter or filter network to 1 GHz. Typical insertion loss is less than 1 dB. The "extender" is custom tuned with your channel elimination network. The low loss response across the extended band permits increased channel capacity to 1 GHz.

### Specifications

(Passband extender only)

Passband loss: ..... 3 dB Max.  
 1 dB Typical



Typical Frequency Response of 3271 with 10500

### Mechanical Specifications

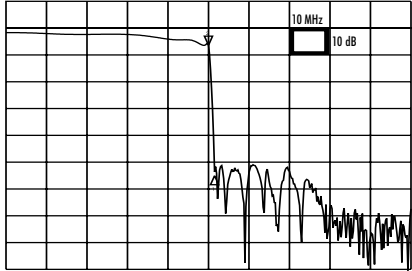
Connectors: 75 ohm - Type "F" - (female)  
 Panel mounted with deletion filter(s).  
 Weatherized housing available.

Order From:

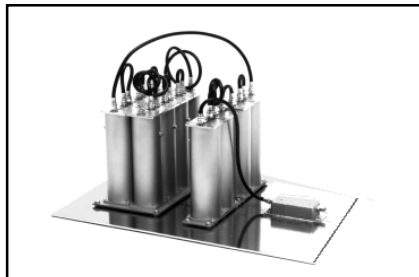


Toll Free: 800-423-2594  
 www.multicominc.com  
 multicom@multicominc.com

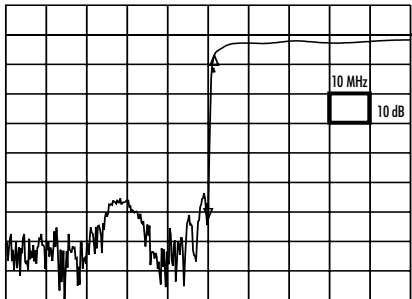
## "Brickwall" Lowpass & Highpass Filters



6211LP-50/51: Lowpass filter splits the spectrum between channels 50 & 51



6211LP or 6211HP



6211HP-24/25: Highpass filter splits the spectrum between channels 24 & 25

**Description:**

These made to order filters divide the entire TV spectrum into two regions: passband and stopband without sacrificing a channel as a guardband. "Brickwall" lowpass and highpass filters are often used to suppress a block of channels for reinsertion of other programming.

**Lowpass Example:**

The unit consists of a sharp lowpass filter and a tuned deletion filter, 6211LP-(50)/(51). It passes all channels through 50 with 50 dB suppression on 51 and up. The assembly has a sharp lowpass filter and a specially tuned deletion filter, 3271ABY-51, to give the "Brickwall" interface between channels 50 and 51.

**Highpass Example:**

The unit consists of a sharp highpass filter and a tuned deletion filter, 6211HP-(24)/(25). Suppression is 50 dB suppression on channel 24 and below. It passes channel 25 to at least channel 61. Consists of a series assembly of a highpass filter and a specially tuned deletion filter 3271ABY-24 to give the "Brickwall" interface between channels 24-25.

Any interface channel (2-61) may be customer specified.

<b>6211LP/HP Channels</b>	<b>Band Edge Insertion Loss (Max.)</b>	<b>Stopband Rejection (Min.)</b>
2 to W	5.5 dB	50 dB
AA to QQ	6.5 dB	50 dB
RR to NNN	7.5 dB	50 dB
OOO to RRR	8.5 dB	50 dB

**Mechanical Specifications:**

Baseplate Dimensions: 19" x 8.75"

Connectors: 75 ohm - Type "F"

Other impedances and connectors can be supplied to order.

**Ordering Information:**

Lowpass

6211 LP - XX/YY

XX = Highest channel passed

YY = First channel in stopband

Highpass

6211 HP - XX/YY

XX = Highest channel in stopband

YY = Lowest channel passed

Order From:



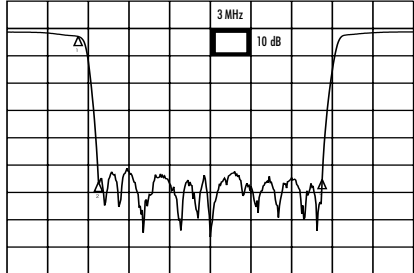
Toll Free: 800-423-2594

www.multicominc.com

multicom@multicominc.com

## Special Deletion Networks

### Contiguous & Non-contiguous Multichannel Deletion Filters



Response of 3 channel 7964-A/C

#### 7964 (Contiguous) Series

Filter networks for suppressing an arbitrary number of contiguous channels are supplied to order. For only a few channels, a series connection of individual channel deletion filters is used. For a large number of contiguous channels, a special network is used. Its components consist of a "Brickwall" lowpass and highpass filter and a pair of specially designed bandsplitters. For an intermediate number of contiguous channels, two single channel deletion filters establish the "Brickwall" ends while a less selective network deletes the middle of the specified stopband.

#### Specifications:

Due to the custom nature of these products, specifications must be quoted.

#### Mechanical Specifications:

Baseplate dimensions: varies based on frequencies.

Connectors: 75 ohm - Type "F"

Other impedances and connectors can be supplied to order.

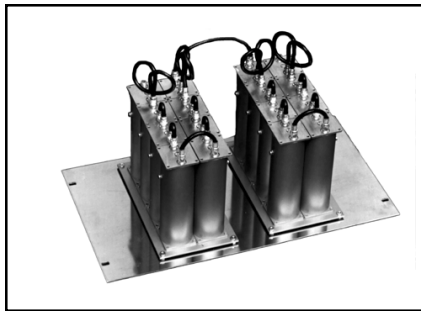
#### Ordering Information:

7964-XX/YY (Upper Passband)

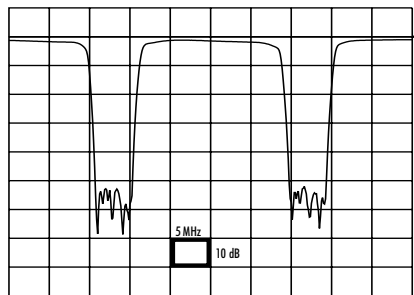
XX - First channel to be deleted

YY - Last channel to be deleted

(Upper Passband) - Highest channel to be passed.



Typical 7964 & 6971 configuration



Response of 6971-(2)-8,12

#### 6971 (Non-Contiguous) Series

When channels are scattered in the TV spectrum, individual channel deletion filters are connected in series. Where two or more of the channels cluster together, contiguous techniques are used to minimize the number of single channel deletion filters.

#### Specifications:

Due to the custom nature of these products, specifications must be quoted.

#### Mechanical Specifications:

Baseplate dimensions: varies based on frequencies.

Connectors: 75 ohm - Type "F"

Other impedances and connectors can be supplied to order.

#### Ordering Information:

6971(N)-XX/YY/ZZ (Upper Passband)

N - Number of channels to be deleted

XX/YY/ZZ - Designates channels to be deleted.

(An unlimited number of channels can be deleted.)

(Upper Passband) - Highest channel to be passed.

Order From:



Toll Free: 800-423-2594

www.multicominc.com

multicom@multicominc.com

## Negative Trapping For Channel Security



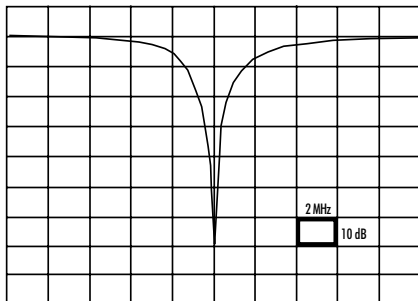
The "Fastrap" Series

### The "Fastrap" Series

The "Fastrap" (Fast Delivery) series includes negative traps for channels 2 to 59, U.S. standard channels, HRC, inverted or offset. Traps are also available for European channels.

### "Fastrap" Applications:

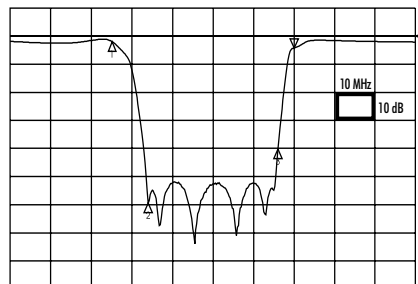
- CATV, MATV & SMATV Systems
- Hospitals & Nursing Homes
- Private Video Systems in Institutions & Businesses
- Motels, Hotels & Apartments
- LAN (Local Area Networks)



Response of 5KV-7 Negative Trap for Channel 7



5KMT-A/I-Midband Suppression Filter



Response of 5KMT-A/I-Midband Suppression Filter

### Typical Response

5KV Negative Traps	Notch Depth	Lower Aural	Upper Video	High Freq. & Loss dB
Channel 2 to 6	65 dB	5.0 dB	1.0 dB	1.5 @ 500
Channel A-2 to I	65 dB	8.0 dB	1.2 dB	1.5 @ 600
Channel 7 to 13	65 dB	10.0 dB	1.5 dB	1.5 @ 600
Channel J to P	65 dB	14.0 dB	1.5 dB	1.0 @ 600
Channel Q to W	65 dB	20.0 dB	2.5 dB	1.0 @ 600
Channel AA to OO*	65 dB	30.0 dB	7.0 dB	1.0 @ 600
Channel PP to WW	65 dB	16.0 dB	3.0 dB	1.0 @ 600

\*For channels above OO, please inquire.

### "Fastrap" Varieties:

- Single Channel Negative Traps
- Band Suppression Filters For Trapping Multiple Contiguous Channels
- Lowpass and Highpass Tiering Filters
- Special Subscriber Multichannel Networks
- Positive Traps
- Traps & Filters For Eliminating Interference In Cable Television Systems Caused By:
  - Paging Transmitters
  - Mobile Radio
  - Citizens Band (CB) Radio
  - FM Broadcasts
  - TV Stations

### Mechanical Specifications:

Connectors: 75 ohm - Type "F" - Male/Female

**Additional Information on the "Fastrap" Series is available in a separate catalog ("Fastrap" Catalog Vol.1 No.2.) Please feel free to request your copy today!**

Order From:



Toll Free: 800-423-2594  
 www.multicominc.com  
 multicom@multicominc.com