



**EAGLE**  
COMTRONICS INC.

The logo features a stylized eagle head profile above the word "EAGLE" in a bold, sans-serif font. The letters "E" and "G" have horizontal bars extending from them. Below "EAGLE" is the text "COMTRONICS INC." in a smaller, all-caps sans-serif font.

*Dedicated to Quality...*



**PRODUCT CATALOG**



# Technology Excellence

# Innovation Leadership

## The Industry Leader

...driven by the spirit of innovation and excellence

Since 1975, Eagle Comtronics has been designing traps and filters that set the standard in the cable television industry. All Eagle products are a perfect blend of form and function. They are electrically engineered to deliver superior performance and mechanically engineered to outperform the competition in the toughest environmental conditions. Every product we manufacture is tested to the highest standards throughout production, so you consistently receive the best quality filter available in the industry.

That adds up to big value for cable operators.

While we are continuing to develop new and innovative products, we still put the most important part of our business - quality, service, and reliability - into each and every product we provide.

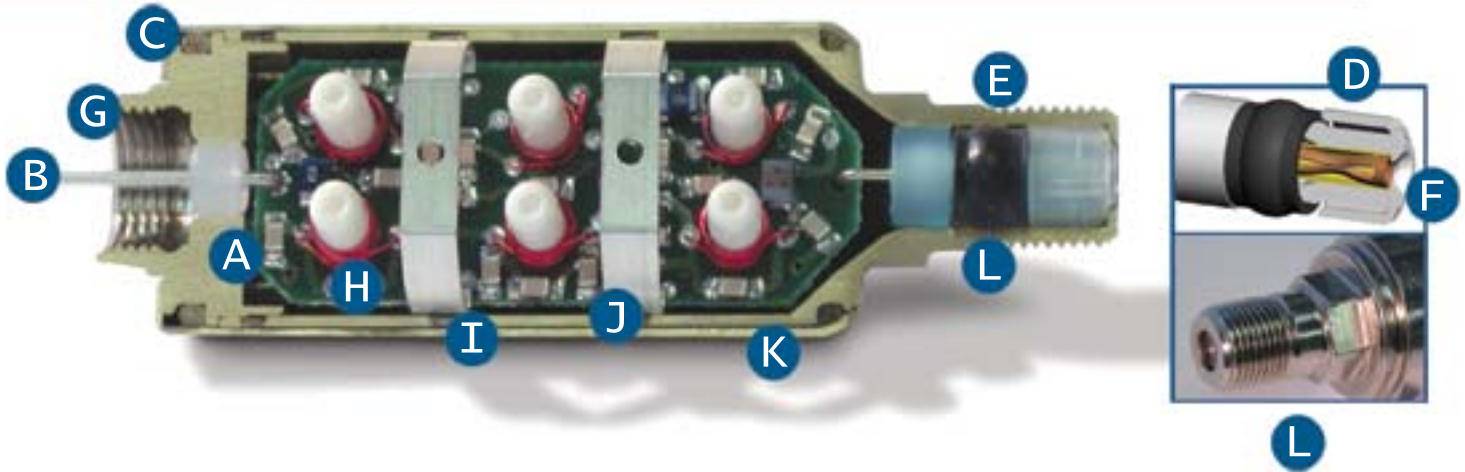
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# Eagle Elite Filters Exclusive Quality Features

THAT CLEARLY DISTINGUISH EAGLE FROM ALL THE REST...



## A. High Performance Compression Seal

Benefits: Excellent dielectric characteristics unlike other filters which use glass seals. Recessed for protruding rubber boots and metal sized for CamPort activation.

## B. RG6 (.040") Conductor with Chamfered Lead-In

(plated to resist corrosion) meets or exceeds SCTE specifications. Benefits: Doesn't tear tap rubber boot and is tapered to easily pass into a mating contact. Larger size means more contact tension for a solid gas free/oxidation free connection with mating contact. Designed to mate and perform with any "F" connector found in today's cable systems.

## C. Piston-type "O" ring seals with controlled compression

for ultimate sealing. Benefits: "O" ring gland is sized for controlled compression and sealing surfaces kept clean and smooth for ultimate sealing. This provides the best, most repeatable "O" ring seals possible.

## D. Multipoint Contact, Bridge Metal Design

for superior strength and contact with >200 grams retention force. The only F port contact that accepts RG59, RG6, and 7 series cable.

## E. Patented Advanced Dome Sealed Collet

Benefits: Provides superior electrical and mechanical characteristics for optimum performance, sealing, and reliability.

## F. Tapered and Circular Entry Guide

Benefits: Positive center conductor entry that accepts up to series-7 conductor (.051" max). Aids the installer by guiding center conductor for a quick, easy, and reliable installation.

## G. Patented Double "D" Sleeve

Benefits: Anti-rotation and excellent RF isolation. Eagle is the only manufacturer that provides a rigid mechanical interlock between the sleeve and housing for reliability, tamper resistance, and stability.

## H. Patented Shielded Single Circuit Board

Benefits: Reliable signal through path, providing consistent performance, match, and continuity throughout every unit and production run.

## I. Automated Soldering

Benefits: Provides unified construction with continuous ground for repeatable performance and field reliability. No borderline-intermittent contacts and grounding here. Solid contacts provide solid results.

## J. The Latest in Surface Mount Technology

manufacturing utilizes high performance temperature compensate capacitors developed exclusively for Eagle. Coupled with optimized coils and surface mount inductors, our circuits ensure frequency stability and sharper selectivity, even in the toughest environments.

Benefits: Superior environmental stability.

## K. High Security Crimped Outer Sleeve

with high copper content brass alloy for optimum environmental performance and sealing.

## L. Conventional Hex Drive

Providing ease of installation and reducing the number of tools needed.



# Eagle Elite Series

## Specifications:

**UPPER FREQUENCY RESPONSE:**  
< -1.5 dB typ. to 1000 MHz

**POWER PASSING:**  
90 VAC Cable Powering

**IMPEDANCE:** 75 Ohms

**CURRENT CAPACITY:**  
1.0 amp typ.

**RFI ISOLATION:** > -100 dB

**NOTCH DEPTH:**  
-60 dB typ.

**OPERATING TEMPERATURE:**  
-40°F to +140°F

**FREQUENCY STABILITY:**  
5 ppm/Degree Fahrenheit

**CONNECTORS:**  
Type F Female/Male  
per SCTE Specification  
IPS-SP-400/600

**FINISH:**  
Nickel Plated per  
QQ-N-290 Class 1 Grade G

**CORROSION RESISTANCE:**  
Per Mil-Std-14072D and  
SCTE IPS-TP-406,  
ASTM 368 Salt Fog Test

**ENVIRONMENTAL EXPOSURE:**  
Cycled at 95°F and 95%  
Relative Humidity

**SEAL:**  
withstands 30 psi

**SURGE:**  
6 KV Surge compliant per  
SCTE IPS-TP-210

## SINGLE CHANNEL NEGATIVE FILTERS

Negative filters are a passive device that remove a video signal from entering a non-subscribing cable customer's home. They are the most effective and economical method of pay television security in the world. The filter attenuates the video carrier of the specified channel to a point where there is no viewable picture on the television. Negative filters are the most commonly used method for pay television security.

“The most effective & economical method of pay television security in the world.”

### MODEL EMN

Truly the smallest 1 GHz trap in the industry. Measures 1.96".



### MODEL ESN

Ultra narrow filters for trapping above 450MHz. Measures 1.96".



### MODEL EMN, ESN Quality Features:

- Special patented circuits provide superior selectivity for narrow bandwidth, superior return loss and the lowest adjacent channel insertion loss available.
- Patented advanced sealed collet "Dome Seal" that provides superior electrical and mechanical characteristics for optimum performance, sealing and reliability.
- Multi-point contact with bridge metal design for superior strength and contact with >200 grams retention force. The only F port contact that accepts RG59, RG6, and 7 series cable.
- Only 1.96" in length for easier installation in small lockboxes & distribution panels.
- Patented Double "D" sleeve for anti-rotation and excellent RF isolation.
- RG6 (.040") conductor with chamfered lead-in (plated to resist corrosion) meets or exceeds SCTE specifications.
- High performance compression seal providing excellent dielectric characteristics recessed for protruding rubber boots and metal sized for campport activation.
- Patented shielded single circuit board providing consistent performance, match and continuity throughout every unit and production run.
- No need for add-on weather seals.

Eagle quality always endures, it's value and performance remains long after cost is forgotten.



## SINGLE CHANNEL POSITIVE FILTERS

A positive filter removes the jamming carriers and restores the video and audio to the subscriber of the paid premium channel. An encoder is placed at the head-end to scramble the channel by injecting dual jamming carriers between the video and audio carriers. This method of security is selected when the premium channel penetration is low.

### MODEL EMD

Measures 1.96".



### MODEL EE-2002 Encoder



## SIDEBAND INTERDICTION DECODING FILTERS

Eagle has developed and patented a second type of decoding system to minimize video loss. Unlike positive filters, the Sideband Interdiction Decoding System utilizes the channel's own sideband information as interdiction energy, extracting a narrow portion of the channel's own visual carrier sidebands to their original amplitude and phase, restoring the channel to near perfect condition with full frequency response, sharpness, and definition.

### MODEL SID

Use in higher frequencies, allowing you more channel flexibility. Measures 1.96".



### MODEL EE-3002 Encoder



### MODEL EMD, SID Quality Features:

- Special patented circuits provide superior selectivity for narrow bandwidth, superior return loss and the lowest adjacent channel insertion loss available.
- Patented advanced sealed collet "Dome Seal" that provides superior electrical and mechanical characteristics for optimum performance, sealing and reliability.
- Multi-point contact with bridge metal design for superior strength and contact with >200 grams retention force. The only F port contact that accepts RG59, RG6, and 7 series cable.
- Only 1.96" in total length for easier installation in small lockboxes and distribution panels.
- Patented Double "D" sleeve for anti-rotation and excellent RF isolation.
- RG6 (.040") conductor with chamfered lead-in (plated to resist corrosion) meets or exceeds SCTE specifications.
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- Patented shielded single circuit board providing consistent performance, match and continuity throughout every unit and production run.
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# Eagle Elite Series

## Specifications:

UPPER FREQUENCY RESPONSE:  
< -1.5 dB typ. to 1000 MHz

POWER PASSING:  
90 VAC Cable Powering

IMPEDANCE: 75 ohms

CURRENT CAPACITY:  
1.0 amp typ.

RFI ISOLATION: > -100 dB

NOTCH DEPTH:  
-60 dB typ.

OPERATING TEMPERATURE:  
-40°F to +140°F

FREQUENCY STABILITY:  
5 ppm/Degree Fahrenheit

CONNECTORS:  
Type F Female/Male  
per SCTE Specification  
IPS-SP-400/600

FINISH:  
Nickel Plated per  
QQ-N-290 Class 1 Grade G

CORROSION RESISTANCE:  
Per Mil-Std-14072D and  
SCTE IPS-TP-406,  
ASTM 368 Salt Fog Test

ENVIRONMENTAL EXPOSURE:  
Cycled at 95°F and 95%  
Relative Humidity

SEAL:  
withstands 30 psi

SURGE:  
6 KV Surge compliant per  
SCTE IPS-TP-210



The Industry Leader, driven by the spirit of innovation and excellence.

# The Industries Best Line Up and the World's Smallest Multi-Channel Negative Tier Traps

Multi-channel tier traps are becoming increasingly more popular to selectively control, block, or access groups (tiers) of pay television channels. The traps filter out selected frequencies, utilizing a passband that allows (or passes) the channels purchased by the subscriber, and a reject band that blocks the channels for subscribers who do not pay for them. No need for expensive headend equipment.

The latest technology in surface mount manufacturing utilizes high performance, temperature compensated capacitors developed exclusively for Eagle. Coupled with optimized coils and surface mount inductors, our circuits ensure frequency stability and superior selectivity even in the toughest environments. Fast, easy, installation due to the patent pending hex feature, which requires only a 7/16 wrench or an F-fitting installation tool. Also available in hexless configuration, for all tiers.

## MODEL EM

Measures 1.965".



## MODEL 6M, 8M, 10M

Measures 2.625".



“selectivity gets even smaller!”

## MODEL EZWT

The most advanced circuitry available today allows Eagle to enhance sharpness and increase stop band attenuation while continuing to reduce size and cost. Measures 2.625".



## DUAL COLLET MODEL

Eagle now offers the option to integrate dual female F connectors to any single channel or tier trap offered. This allows the installer to effectively jumper the filter away from the directional trap.

## MODEL EZDT

The most versatile combo trap available today. As tiering continues to grow in popularity, Eagle has eliminated the need to cascade traps. The EZDT has numerous possibilities for all your dual tiering needs. Measures 4.1".



### MODEL EM, 6M, 8M, 10M MODEL EZWT and EZDT Quality Features:

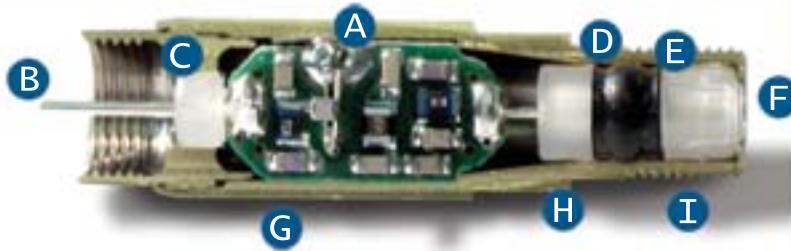
- Special patented circuits provide superior selectivity for narrow bandwidth, superior return loss, and the lowest adjacent channel insertion loss available.
- Patented advanced sealed collet "Dome Seal" that provides superior electrical and mechanical characteristics for optimum performance, sealing and reliability.
- Multi-point contact with bridge metal design for superior strength and contact with >200 grams retention force. The only F port contact that accepts RG59, RG6, and 7 series cable.
- Patented Double "D" sleeve for anti-rotation and excellent RF isolation.
- RG6 (.040") conductor with chamfered lead -in (plated to resist corrosion) meets or exceeds SCTE specifications.
- High performance compression seal providing excellent dielectric characteristics recessed for protruding rubber boots and metal sized for campport activation.
- Patented shielded single circuit board providing consistent performance, match and continuity throughout every unit and production run. No need for add-on weather seals.

Always The Guaranteed highest return loss & lowest insertion loss in the industry!



# Eagle Elite EZ Filters

*EZHP, EZLH, EZWHP Filter Series*



“The Industry’s Smallest!”

- A. Patented single shield circuit board** for reliable signal thru path, providing consistent performance.
- B. RG6 (.040") conductor** with chamfered lead-in plated to resist corrosion. Male Connector meets or exceeds SCTE specifications.
- C. High performance compression seal** with excellent dielectric characteristics recessed for protruding rubber boot and metal sized for CamPort activation.
- D. Patented advanced sealed collet** provides excellent dielectric characteristics for optimum performance and sealing.
- E. Multipoint contact with bridge metal** design for improved strength and retention.
- F. Tapered entry and circular metal entry guide** for positive center conductor entry.
- G. Patented Unified Construction** with continuous ground for repeatable performance and field reliability (RFI isolation > -100 db).
- H. 7/16" hex drive** for ease of installation (special tools not required).
- I. Female connector** meets or exceeds SCTE specifications.

## *EMLH, EZLH, EHP, EZHP, EMWHP & EZWHP Quality Features:*

- Special patented circuits provide superior selectivity for narrow bandwidth, superior return loss and the lowest adjacent channel insertion loss available.
- Patented advanced sealed collet "Dome Seal" that provides superior electrical and mechanical characteristics for optimum performance, sealing and reliability.
- Multi-point contact with bridge metal design for superior strength and contact with >200 grams retention force. The only F port contact that accepts RG59, RG6, and 7 series cable.
- Patented Double "D" sleeve for anti-rotation and excellent RF isolation.
- RG6 (.040") conductor with chamfered lead-in (plated to resist corrosion) meets or exceeds SCTE specifications.
- High performance compression seal providing excellent dielectric characteristics recessed for protruding rubber boots and metal sized for camport activation.
- Patented shielded single circuit board providing consistent performance, match and continuity throughout every unit and production run.
- No need for add-on weather seals.

## Eagle Elite Series

### Specifications:

**UPPER FREQUENCY RESPONSE:**  
< -1.5 dB typ. to 1000 MHz

**POWER PASSING:**  
90 VAC Cable Powering

**IMPEDANCE:** 75 Ohms

**CURRENT CAPACITY:**  
350 mA typ.

**RFI ISOLATION:** > -100 dB

**NOTCH DEPTH:**  
-50 dB typ.

**OPERATING TEMPERATURE:**  
-40°F to +140°F

**FREQUENCY STABILITY:**  
5 ppm/Degree Fahrenheit

**CONNECTORS:**  
Type F Female/Male  
per SCTE Specification  
IPS-SP-400/600

**FINISH:**  
Nickel Plated per  
QQ-N-290 Class 1 Grade G

**CORROSION RESISTANCE:**  
Per Mil-Std-14072D and  
SCTE IPS-TP-406,  
ASTM 368 Salt Fog Test

**ENVIRONMENTAL EXPOSURE:**  
Cycled at 95°F and 95%  
Relative Humidity

**SEAL:**  
withstands 30 psi

**SURGE:**  
6KV Surge compliant per  
SCTE IPS-TP-210



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## Specialized Data-Only Filters

In today's fast growing internet market, tier filters are being utilized by cable operators to offer "data only" or "modem only" services. These units are designed to remove the entire band of cable channels, passing only the data carriers.

### MODEL EMLH

Only 1.965" in total length for easier installation in small lockboxes, narrow pedestals and distribution panels.



### MODEL EZLH

The EZLH features a reduced diameter that easily fits inside congested security boxes and between tightly spaced tap ports, providing easier mounting on ground/splitter installations at the subscribers premises. Measures 1.825".



## Return Path High Pass Filters

A high pass filter attenuates ingress and noise in the sub-low portion of the cable network. Placed on a non-active return at the subscriber's drop, high pass filters effectively eliminate the major source of ingress in an HFC system, the customer's home, which is unmanageable. Realizing the fact that many installation locations are available, side of the house, tap ports, lock boxes and pedestals, Eagle Comtronics offers solutions to fulfill all your installation needs. Special low frequency models are available to block low frequency noise, commonly found in the 5-12 MHz band, while still passing the majority of the return band.

This enables significant noise reduction while maintaining DOCSIS compliance.

“Eagle Comtronics offers solutions to fit all of your installation needs”

### MODEL EZHP

The EZHP high pass filter features a reduced diameter that easily fits inside congested security boxes and between tightly spaced tap ports, providing easier mounting on ground/splitter installations at the subscribers premise. Measures 1.825".



## Return Path Window Filters

A window filter attenuates ingress and noise in the sub-low portion of the cable network. It is similar to a high-pass filter, with the added feature of a bandpass, which permits a return signal to pass from the subscriber to the cable operator. This allows the cable operator to offer digital set tops, modems, and telephony along with an excellent method of ingress suppression. Continuing to realize that many installation locations are available, side of the house, tap ports, lock boxes and pedestals, Eagle Comtronics offers solutions to fulfill all your installation needs.

### MODEL EMWHP

Only 1.965" in total length for easier installation in small lockboxes, narrow pedestals, and distribution panels.



### MODEL EZWHP

The EZWHP features a reduced diameter that easily fits inside congested security boxes and between tightly spaced tap ports, providing easier mounting on ground/splitter installations at the subscribers premise. Measures 1.825".





## EZAP - DC Blocking Attenuator Pads

### Specifications:

**ATTENUATOR VALUE:**  
-3 dB, -6 dB, -10 dB, -20 dB

**FREQUENCY RANGE:**  
5-1000 MHz

**RETURN LOSS:**  
-20 dB typ.

**IMPEDANCE:**  
75 Ohms

**ATTENUATION FLATNESS:**  
±0.4 dB (-3 dB, -6 dB, -10 dB)  
±0.75 dB (-20 dB)

Reduces RF signal strength across the full range by a set amount-Blocks DC Power-One Piece Design.



### Ordering Information:

EZAP-03

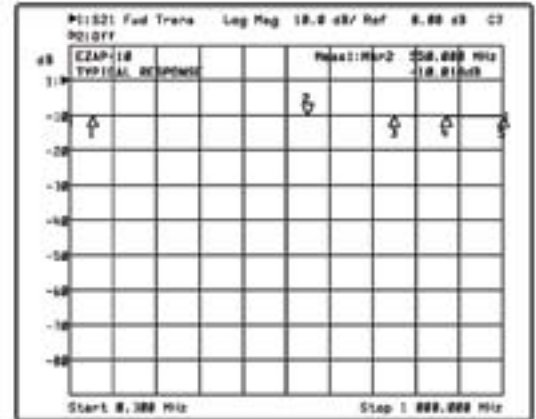
EZAP-06

EZAP-10

EZAP-20

\*\*Additional Values Available Per Request

**It's New!**



EZAP

## ECS - Cable Simulator

### Specifications:

**TILT VALUES AVAILABLE:**  
-3 dB, -6 dB, -9 dB,  
-12 dB, -15 dB, -18 dB

**UPPER FREQUENCY:**  
870 MHz

**INSERTION LOSS @ 55 MHz:**  
-0.5 dB typ.

**TILT VARIATION:**  
±0.8 dB

**IMPEDANCE:**  
75 Ohms

**TEMPERATURE RANGE:**  
-40°F to +140°F

A cable simulator will compensate for differential frequency losses across a length of cable by attenuating signal levels of higher frequencies until they equal signal levels of lower frequencies. The cable simulator is used in situations where there are excessive signal levels at the tap port and a short cable drop to the subscriber.



ECS

### Ordering Information:

ECS-tilt value-upper frequency

## EEQ - Equalizer

### Specifications:

**TILT VALUES AVAILABLE:**  
-2 dB, -4 dB, -6 dB, -8 dB,  
-10 dB, -12 dB, -14 dB,  
-16 dB, -18 dB, -20 dB,  
-22 dB, -24 dB, -26 dB,  
-28 dB, -30 dB

**UPPER FREQUENCY:**  
870 MHz

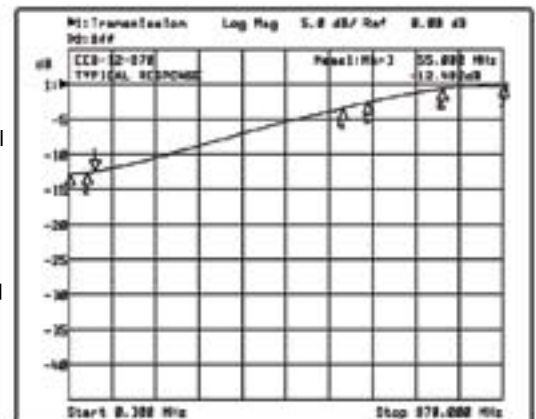
**INSERTION LOSS UPPER FREQUENCY:** -1 dB typ.

**TILT VARIATION:**  
±0.6 dB

**IMPEDANCE:**  
75 Ohms

**TEMPERATURE RANGE:**  
-40°F to +140°F

A drop equalizer will compensate for differential frequency losses across a length of cable by attenuating signal levels of lower frequencies until they equal signal levels of higher frequencies. Eagle offers two styles of drop equalizers with a variety of values. Model EEQ will balance the forward and return paths, allowing the signal level of the return source to be increased relative to ingress levels, which improves system reliability. Model EMLPEQ equalizes the lower frequencies of the forward path and has minimum insertion loss on the return path.



EEQ

### Ordering Information:

EEQ-tilt value-upper frequency



# EMLP42EQ - Lowpass Equalizer

## Specifications:

LOWPASS FILTER:  
EQUALIZER:

PASSBAND: 0-42 MHz

FREQUENCY RANGE:  
55-860 MHz, 55-1000 MHz

INSERTION LOSS: -2 dB typ.

TILT VALUES AVAILABLE:  
-2 dB, -4 dB, -6 dB, -8 dB,  
-10 dB, -12 dB, -14 dB

INSERTION LOSS UPPER  
FREQUENCY: -1 dB typ.

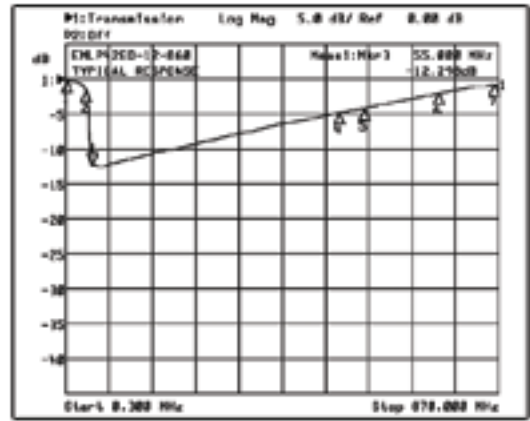
TILT VARIATION:  
±0.5 dB (860 MHz)  
±1.0 dB (1000 MHz)

IMPEDANCE: 75 Ohms

TEMPERATURE RANGE:  
-40°F to +140°F



Custom Cable  
Simulators &  
Equalizers  
available  
per request.



EMLP42EQ

### Ordering Information:

EMLP42EQ-tilt value-upper frequency  
of frequency range

## SECURITY SLEEVES



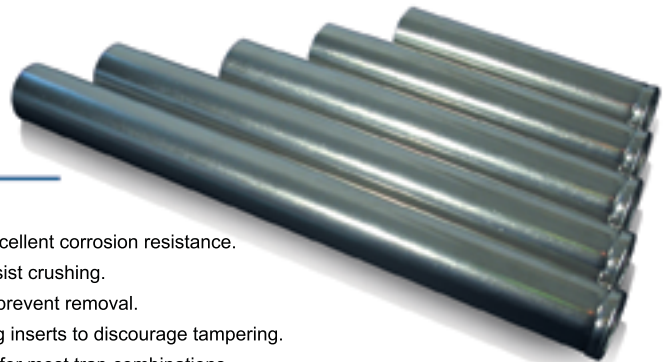
Model	Dimensions
SM-SS	1.4" long x 0.7" OD
3-SS-EZ	3.0" long x 0.7" OD

For use with all Pad Style Filters: 1.825"

## METAL SECURITY SHIELDS

### FEATURES:

- Nickel-plated brass for excellent corrosion resistance.
- .028" wall thickness to resist crushing.
- Reinforced spigot ring to prevent removal.
- Self-locking Split Brushing inserts to discourage tampering.
- Various lengths available for most trap combinations.



Model	Dimensions
2-SS	3.9" long x 0.9" OD
5-SS	5.0" long x 0.9" OD
2-SS-2	6.1" long x 0.9" OD
5-SS-2	7.9" long x 0.9" OD
5-SS-3	8.9" long x 0.9" OD

(includes one pair of split bushings) For spare split bushings, order Model 2-PT

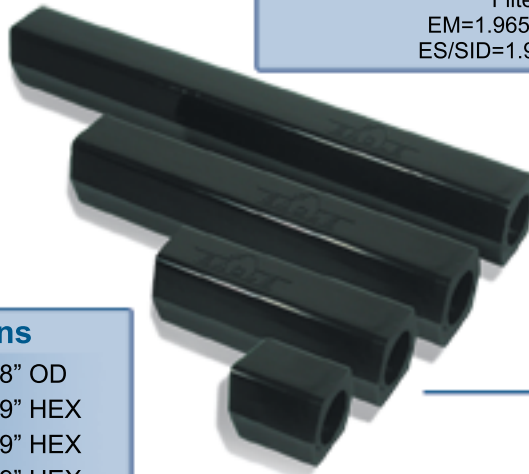
Filter lengths are as follows:

EM=1.965", 6M,8M=2.625", 10M=2.625",  
ES/SID=1.965", EZWT=2.625", EZDT=4.1"

Model	Dimensions
SP-SS	1.1" long x 0.8" OD
3-SS-P	3.0" long x 0.9" HEX
5-SS-P	5.0" long x 0.9" HEX
5-SS-P-2	7.4" long x 0.9" HEX

Filter lengths are as follows:

EM=1.965", 6M,8M=2.625", 10M=2.625",  
ES/SID=1.965", EZWT=2.625", EZDT=4.1"



## PLASTIC SECURITY SHIELDS

### FEATURES:

- Made from high-strength nylon.
- UV resistant for long life.
- Six-sided shape meshes with adjacent shield to discourage removal.
- Various lengths available for most trap combinations.



## INSTALLATION AND REMOVAL TOOLS FOR TRAP AND "F" FITTING

### MODEL 3-IT, 4-IT

#### FEATURES:

- Made from plated steel for long life.
- Spanner tips are stainless steel for durability.
- 7.5" convenient hand length.
- Accepts drop cable up to RG 6 in diameter.



### REMOVAL TOOL FOR SPLIT BUSHINGS

#### MODEL 2-RT


#### FEATURES:

- Made from nickel-plated brass for corrosion resistance.
- Rugged construction for long service life.
- Easy to use.



### COLOR TRAP LABELS AND SERIALIZATION

Color Code your traps according to your regular, special, premium and pay programs for easy identification and auditing.

<b>SOLID LABEL</b>	White	Black	Silver	Blue	Orange	Brown	Green	Gold	Red	Yellow	Purple	Teal	Pink
<b>DUAL COLOR LABEL</b>	Brown/ Blue	Yellow/ Brown	Black/ Yellow	Blue/ Black	Brown/ Red	Green/ Brown	Red/ Green	Gold/ Red	Green/ Yellow	Silver/ Brown	Brown/ Purple		
<b>STRIPED LABEL</b>	Red	Green	Blue	Orange	Custom Color and Bar Code Labels Also Available								

Eagle Comtronics offers a full complement of Thru-Color Labels for application onto Eagle Traps. The labels are made with a permanent, pressure sensitive adhesive on one side and are sized for easy application without overlap. Custom serialization of traps is available for theft, auditing, and identification purposes.

# Optimum Performance Trap Assembly

Eagle Comtronics now offers a Dual Collet trap assembly to solve any and every installation problem you may have. Eagle's unique design approach incorporates multiple tier filters in one compact package with integrated dual female F connectors.

This innovative design eliminates the need for cascaded filters and the resulting problem of multiple external connections. Uni-body constructed filters with integrated female F connectors, along with 7/16 hex drives, simplify installation and ensure that the filter is oriented properly for optimum electrical performance that only Eagle can offer.

Additional filter options are available on their own, with a jumper and F security shield installed, or as a complete package with a jumper, F security shield and trap security shield - all installed and separately bagged ready for installation. Security shields are available in plastic or metal.

## Features:

- Only Eagle has the patented single circuit board multi-channel filter design
- Solid uni-body construction
- All connections meet SCTE specifications
- 100% testing of every unit
- Optimum Return and Insertion Loss
- Manufactured in the USA

## The Solution to:

- Theft of filters
- Pedestal and aerial space at a premium
- Increased tap port damage





# EBWD - Brick Wall Deletion

## Specifications:

**CHANNELS:**  
T-Channels, 2 Through 117

**PASSBAND:**  
5-750 MHz (2-6)  
5-870 MHz (7-36, 95-99)  
5-1000 MHz (37-117)

**CHANNEL REJECTION:**  
-55 dB typ.

**ADJACENT CARRIER LOSS:**  
-3.0 dB typ.

**INSERTION LOSS:**  
-1 dB typ.

**TEMPERATURE RANGE:**  
32°F to 140°F

**IMPEDANCE:**  
75 ohms

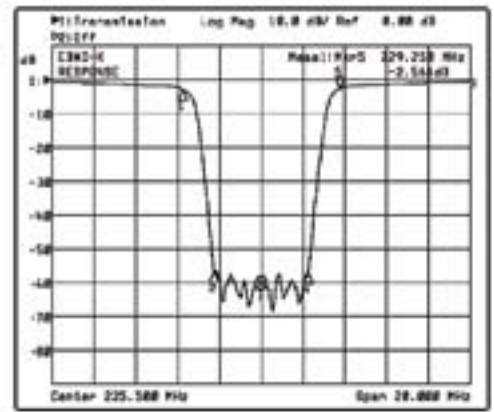
The EBWD series of Channel Deletion filters attenuate the entire channel from video to audio while preserving the adjacent channel carriers. This allows the reinsertion of a new channel or data signal without interference from the original signal.

### Application:

Removal of a selected channel or frequency to allow the reinsertion of a locally originated signal. Commercial Accounts, Schools, Hospitals, Hotels, Homeowners

### Features:

- Exceptional Low Insertion loss
- Extended High Frequency
- Temperature/Frequency Stable
- Passes Adjacent Channels
- Connectors "F" Type
- Rack Mount or Wall Mount Options
- Power Passing Available



Specifications subject to change without notice.

Industry's Premier Channel Deletion Filters.



•EBWD Wall Mount



•EBWD Rack Mount

### Multiple Channel Deletions Available

#### Ordering Information:

EBWD-XX or EBWD-XX-R or -W,  
R = Rack Mount, W = Wall Mount  
XX = Channel to be deleted and re-inserted.

# CD - Economical Channel Deletion Filter

## Specifications:

**CHANNELS:** 2 Through 6

**PASSBAND:** 5-870 MHz

**CHANNEL REJECTION:**  
-50 dB Min.  
(Video, Color, Audio)

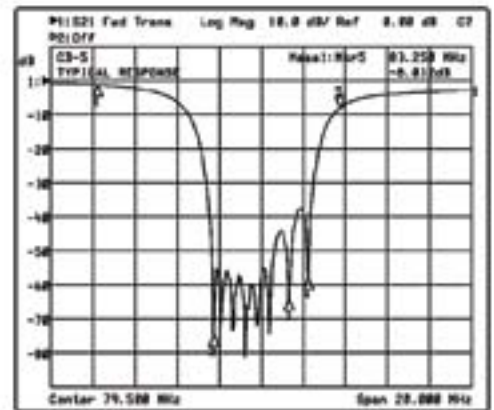
**ADJACENT CARRIER LOSS:**  
-5 dB typ.

**INSERTION LOSS:**  
-1 dB typ.

**TEMPERATURE RANGE:**  
32°F to 140°F

**IMPEDANCE:**  
75 Ohms

Removal of a selected channel or frequency to allow the reinsertion of a locally originated signal. Commercial Accounts, Schools, Hospitals, Hotels, Homeowners.



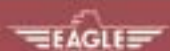
Specifications subject to change without notice.



•CD Rack Mount

#### Ordering Information:

CD-XX or CD-XX-R,  
R = Rack Mount  
XX = Channel to be deleted and reinserted.



## CI/ECI - Channel Insertion System

The Channel Insertion System allows the user to remove current channel programming and re-insert new programming onto the same channel. This is useful for hotels, motels, schools, and hospitals wanting to re-insert local programming onto the user's cable system. The CI uses the economical CD (channel deletion) and tubular style bandpass filter to keep the cost low. These can be used on channels 2-6 when the higher loss through the bandpass will not affect the channel performance or when a complete removal of the current signal is not necessary. The ECI uses a EBWD (brick wall deletion) and HBPF (helical bandpass filter) for use above channel 6 or when low loss is required from the bandpass filter.

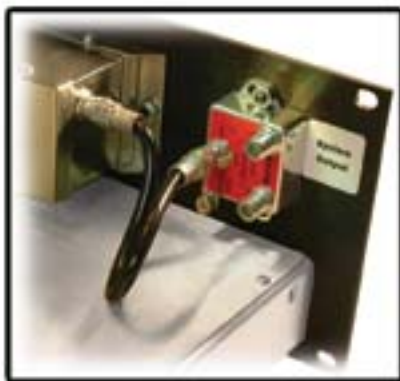
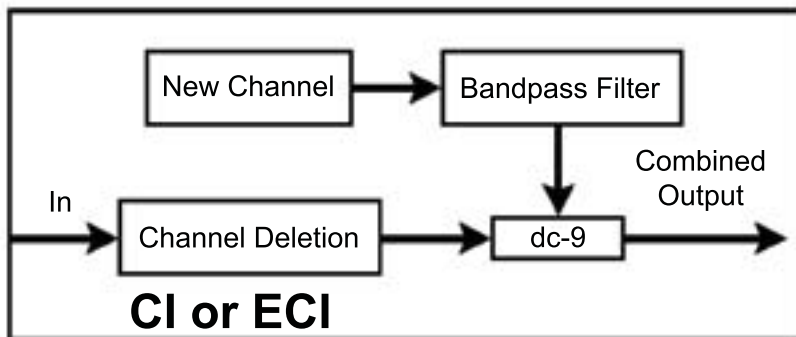
### Application:

The product has application in MDU, schools, hotels, motels, hospitals and business environments.

### Ordering Information:

CI-XX (Channels 2-6), ECI-XX (Channels 2-117)

XX = Channel to be deleted and re-inserted.



## BDS/EBDS - Batch Descrambler System

The Batch Descrambling System consists of a bandpass filter and a channel deletion filter. The unit allows the user to re-route an individual channel to a descrambler and then re-insert the descrambled signal back onto the user's cable system. This is useful for hotels, motels, schools, hospitals and other environments that require descrambling of a signal for mass distribution. The BDS uses the economical CD (channel deletion) and tubular style bandpass filter to keep the cost low. These can be used on channels 2-6 when the higher loss through the bandpass will not affect the channel performance or when a complete removal of the scrambled signal is not necessary. The EBDS uses a EBWD (brick wall deletion) and HBPF (helical bandpass filter) for use above channel 6 or when low loss is required from the bandpass filter.

### Application:

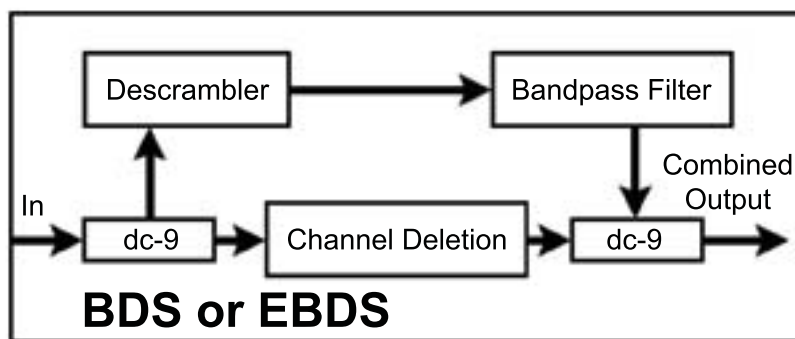
The product has applications in MDU, schools, hotel, motels, hospitals and business environments.

### Ordering Information:

BDS-XX (Channels 2-6),

EBDS-XX (Channels 2-117)

XX = Channel to be deleted and re-inserted.



## ECLP - Lowpass

Lowpass filters pass from DC to a desired cut off frequency with a minimal amount of insertion loss. Frequencies above the cut off are attenuated. There is a minimum frequency band between the passband and the stopband to allow for the transition.

### Specifications:

Model Number	Passband (MHz)	Stopband (MHz)
ECLP-4.2/4.5	0-4.2	4.5-1000*
ECLP-88/98	0-88	98-1000
ECLP-108/118	0-108	118-1000
ECLP-174/184	0-174	184-1000
ECLP-216/226	0-216	226-1000
ECLP-300/315	0-300	315-1000
ECLP-504/535	0-504	535-1000
ECLP-552/585	0-552	585-1000
ECLP-750/805	0-750	805-1000

\*-40 dB attenuation

Passband Insertion Loss: -1 dB typ.  
-4 dB typ. @ cutoff frequency

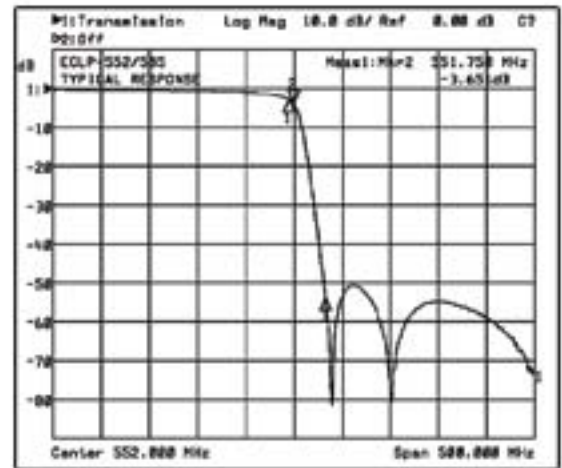
Stopband Attenuation: -50 dB

Temperature Range: -40°F to +140°F

Impedance: 75 ohms

Connectors: "F" Type

Rack Mount or Wall Mount Versions Available.



Specifications subject to change without notice



•ECLP Wall Mount



•ECLP Rack Mount

## EBWLP - Brick Wall Lowpass

The brick wall lowpass passes from 5 MHz to a desired cut off frequency with a minimal amount of insertion loss. By utilizing a sharp selective custom designed lowpass filter and combining it with a Brick Wall Deletion filter we create the sharpest lowpass network available. The very sharp cutoff characteristic of this filter allows the channels above the desired channel to be attenuated. When combining a Brick wall lowpass and a Brick wall highpass you can form an extremely sharp bandpass filter.

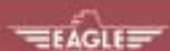


•EBWLP Wall Mount



•EBWLP Rack Mount

Custom Lowpass Available Per Request.



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## ECHP - Highpass

Highpass filters pass all frequencies above a desired cutoff frequency with a minimal amount of insertion loss.

There is a minimum frequency band between the passband and the stopband to allow for the transition.

### Specifications:

Model Number	Passband (MHz)	Stopband (MHz)
ECHP-4.5/4.2	4.5-1000	0-4.2*
ECHP-54/48	54-1000	0-48
ECHP-88/80	88-1000	0-80
ECHP-118/108	118-1000	0-108
ECHP-174/160	174-1000	0-160
ECHP-216/200	216-1000	0-200
ECHP-300/282	300-1000	0-282
ECHP-550/510	550-1000	0-510

\*-40 dB attenuation

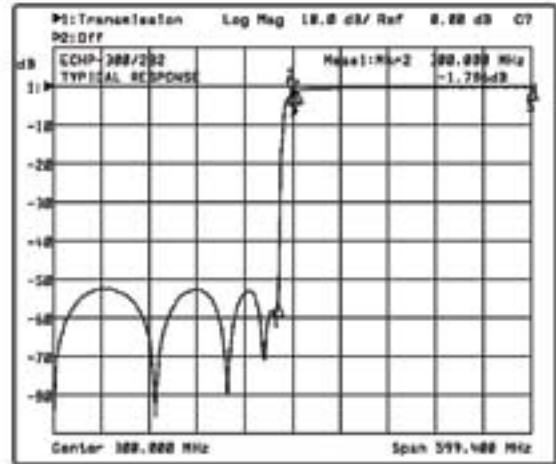
Passband Insertion Loss: -1 dB typ.  
-4 dB typ. @ cutoff frequency

Stopband Attenuation: -50 dB

Temperature Range: -40°F to +140°F

Impedance: 75 Ohms

Connectors: "F" Type



Specifications subject to change without notice

Rack Mount or Wall Mount Versions Available.



## EBWHP - Brick Wall Highpass

The brick wall highpass passes all frequencies above a desired cutoff frequency with a minimal amount of insertion loss. By utilizing a sharp selective custom designed highpass filter and combining it with a Brick Wall Deletion filter we create the sharpest highpass network available.

The very sharp cutoff characteristic of this filter allows the channels below the desired channel to be attenuated. When combining a Brick Wall highpass and a Brick wall lowpass you can form an extremely sharp bandpass filter.



Custom Highpass Available Per Request.

## ECBP - Bandpass

Bandpass filters pass a specific band of frequencies while attenuating below and above the passband.

### Application:

Typically used on the output of modulators or off air antenna's to help minimize spurious noise or harmonics in the system.

### Specifications:

**CHANNELS AVAILABLE:**  
T-Channels, TVIF-94

**PASSBAND**  
**INSERTION LOSS:**  
-3 dB typ. (TVIF, 2-36),  
-5 dB typ. (37-94)

**RETURN LOSS:** -18 dB

**REJECTION:**  
Channel Center  
±15 MHz

**ATTENUATION:**  
-20 dB (TVIF, 2-30),  
-18 dB (31-94)

**IMPEDANCE:**  
75 Ohms

**TEMPERATURE RANGE:**  
-40°F to +140°F

**Connectors:** "F" Type

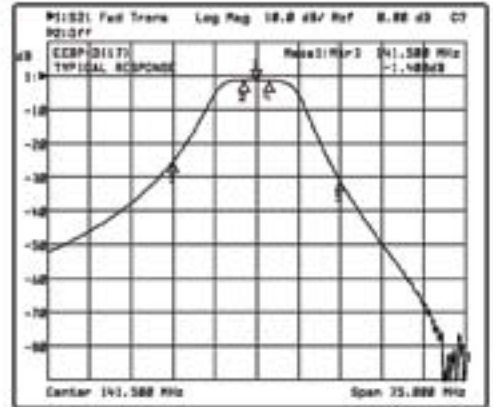
Rack Mount of Wall  
Mount Versions Available



•ECBP Wall Mount



•ECBP Rack Mount



Custom Bandpass Available Per Request.

**Ordering Information:** ECBP-XX-R or W, XX = Channel, R = Rack Mount, W = Wall Mount

## ECBS - Bandstop

Bandstop filters are designed to attenuate a particular band of frequencies and pass all frequencies below and above.

•ECBS Wall Mount



•ECBS Rack Mount

Custom Bandstops Available Per Request.



•ECNF Wall Mount

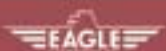


•ECNF Rack Mount

## ECNF - Notch Filter

Notch filters suppress a specific frequency or pilot carriers used in transmission systems.

Custom Notch Filter Available Per Request.



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## EDPF - Diplex Filter

Diplex filters are three port devices with a common port, a lowband port and a highband port. They are used to combine or isolate two different bands of frequencies. Models are available in a wide variety of crossover frequencies. Eagle's diplex filters are the sharpest available on the market.

### Specifications:

Model Number	Lowpass Passband (MHz)	Highpass Passband (MHz)
EDPF-4.2/4.5	0-4.2	4.5-10*
EDPF-30/45	0-30	45-1000
EDPF-30/54	0-30	54-1000
EDPF-42/54	0-42	54-1000
EDPF-65/85	0-65	85-1000
EDPF-120/150	0-120	150-1000

\*-30 dB isolation

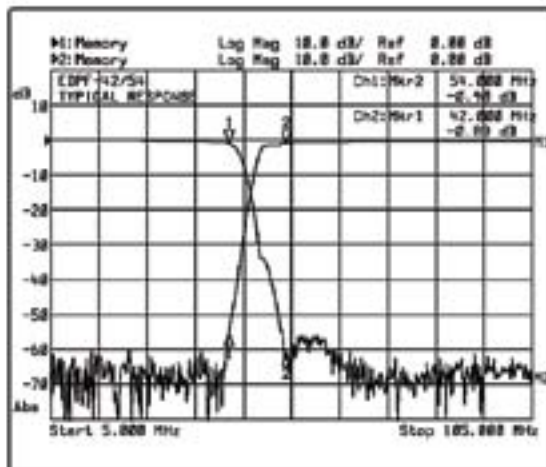
Insertion Loss: -1.0 dB typ.

Temperature Range: -40°F to +140°F

Isolation: -50 dB min.

Impedance: 75 Ohms

Connectors: "F" Type



Specifications subject to change without notice

Rack Mount up to 3 units  
or Wall Mount Versions Available

### Application:

Typically used in the headend to combine or separate the upstream and downstream signals. Also used with a variety of test equipment to isolate specific bands of frequency for testing and eliminate overload.



## The Lowest Passband Ripple In The Industry

## EFOD - Fiber Optic Diplex Filters

Fiber Optic Diplex Filters are used to split RF signals or recombine RF signals for fiber optic lasers. They are very sharp filters to reduce noise problems associated with lasers. We have included amplitude equalizers to reduce the insertion loss ripple that sharp cutoff filters typically have. These filters help to reduce noise and maintain a high level of signal integrity.



### Specifications:

CHANNELS AVAILABLE: 2-78

PASSBAND FREQUENCIES: 5-1000 MHz

INSERTION LOSS: -6.0 dB typ.

PASSBAND FLATNESS: ±0.3 dB typ.

GROUP DELAY: <20 ns per channel

STOP BAND REJECTION: >10 dB/15 MHz from band edge  
>50 dB/30 MHz from band edge

RETURN LOSS: ≥15 dB at Lo/Hi Ports

Custom Diplex Cross Overs Available Per Request.



## EFCC - Filtered Channel Combiner

The Eagle Filtered Channel Combiner is the premier forward spectrum combining network for today's Telecommunications Industry. Eagle's New Patent Pending passive combiner allows you to save up to -7dB of Insertion Loss in the headend over traditional splitter combining methods. Each input channel is routed through an individual bandpass filter. The filter removes out-of-band noise and spurious signals produced by the modulator and provides a high degree of isolation between modulators. This extensive filtering allows the combining of analog channels and digital carriers from many different sources onto a single output cable with reduced insertion loss and improved carrier to noise and MER. The EFCC is simply the best channel combiner available in the industry today. Let the New Eagle Filtered Channel Combiner help improve your total performance throughout the distribution system.

### Specifications:

#### BAND PASSED INPUT PORTS

##### INSERTION LOSS ANY INPUT TO THE COMBINED OUTPUT:

Channels 2-36, Channels 95-99 .....	-14.5 dB typ.
Channels 37-78 .....	-16.8 dB typ.
Channels 79-125 .....	-18.5 dB typ.

#### 4 AUXILIARY INPUT PORTS (NON BAND PASSED):

Input-to-output attenuation 5-1000 MHz -14 dB  $\pm$  1 dB  
(EX: "Digital Spectrum" or any other signal that may be required on the final output)

#### FLATNESS:

Any 6 MHz region within any Band < -0.5 dB  
Auxiliary Broad Band input 5-1000 MHz < -2.0 dB Total  
Any 6 MHz region .....

#### GROUP DELAY:

Any 6 MHz region within any Band < 10.0 nSec.

#### ISOLATION:

Adjacent Channel Isolation .....	-50 dB
Between any bands of different modules .....	-70 dB
Between different bands of same module .....	-50 dB

#### SURGE:

6KV Ring Wave Compliant  
-SCTE-TP-201 Test Procedure

#### MODELS:

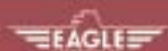
EFCC-330 .....	2RU
EFCC-550 .....	4RU
EFCC-800 .....	6RU

The premier forward spectrum combining network for today's Telecommunications Industry.



### Features:

- Low Insertion Loss
- Improve C/N and MER
- Easy Channel Identification
- Each Carrier Individually Bandpassed
- Removes Modulators Spurious Outputs and Harmonics



## Finally, A Low-Cost And Reliable Addressable Switch. EAGLE SMARTRAP™

Increase revenue by remotely controlling each individual subscriber tap port and eliminate unnecessary expensive truck rolls to disconnect delinquent accounts or reactivate all service. Works with existing plant. So, there is no need to replace existing taps already in service. Software is slave to current billing system for immediate billing.

### Cost-Saving Advantages:

- Change subscription tier without a truck roll.
- Immediate reduction in truck rolls for high churn areas.
- Off-premise management in difficult areas without physical access.
- Disconnect delinquent accounts OR reactivate all service instantly.
- Immediate billing with new subscribers.
- Works with existing plant - no need to replace taps already in service.
- Remotely Control Problem Areas like seasonal areas, high-theft locals or high-churn MDU's.



#### The Solution To Problem Areas:

- Apartment Buildings & Complexes.
- High Signal Theft Areas.
- Habitually Late Or Slow Pay Customers.
- University Campuses.
- High-Churn And Seasonal Communities.

The "Ultimate"  
Hardline Filter-  
Select Your  
Frequency.  
Clean Up Your  
Distribution.



### Specifications:

FREQUENCY RANGE: 5-1000 MHz

IMPEDANCE: 75 Ohms

INSERTION LOSS: -1.5 dB typ.

ISOLATION: > -60 dB thru 860 MHz

CONNECTORS: Type "F" female/male

DIMENSIONS: length: 3.465"; Diameter: .83"

POWER: 9 mA, 3.3 VDC

POWERING: From plant 40 thru 90 VAC cable powering areas.

HEADEND ENCODER: 1- $\frac{3}{4}$ " x 19" Rackmount  
120/230 VAC, 50/60 Hz Max subscriber count 64k

PILOT: FSK Modulated  $\pm 125$  KHz  
( $\pm 500$  KHz guardband) 88.5 MHz pilot carrier  
Minimum subscriber level = -10 dBmV

DATA: 5.25 kbps (approximately 10,800  
subscriber/minute globally addressed).  
37 DIN data port.

MANAGEMENT SYSTEM: Intel compatible, 128 MB RAM  
50 MB free hard drive space. windows 2000  
minimum required.

CONFIGURATIONS: A) On/Off, B) On/Off/Lowpass

## EHLF - Hardline Filter

EHLF Hardline enclosures allow many of Eagle's cylindrical products as well as custom products to become AC power passing when placed in the EHLF.

### Application:

Operators can install the EHLF in their distribution plant which will allow them to supply a selective frequency band to commercial buildings, hotel/motels and MDU's. When a highpass or bandstop filter is incorporated in the EHLF, you now have the capability to isolate areas from ingress. The EHLF can be used for technical training purposes when you need to simulate cable loss by placing a cable simulator in the EHLF. No need to use expensive reels of cable.

### Specifications:

TYPE: Single channel negative or positive, bandstop, bandpass, low or highpass filters, diplex filters, equalizers, cable simulators.

POWER PASSING: 15 amps @ 90 VAC

MECHANICAL SPECIFICATIONS: 90 degree opposed entries for pedestal or strand mounting (comes with integral strand clamp)  
2, 3 or 4 port models. Removable faceplate for easy access.

ENCLOSURE: Die cast aluminum

FINISH: Urethane painted for corrosion resistance.  
Mil-std-14072d

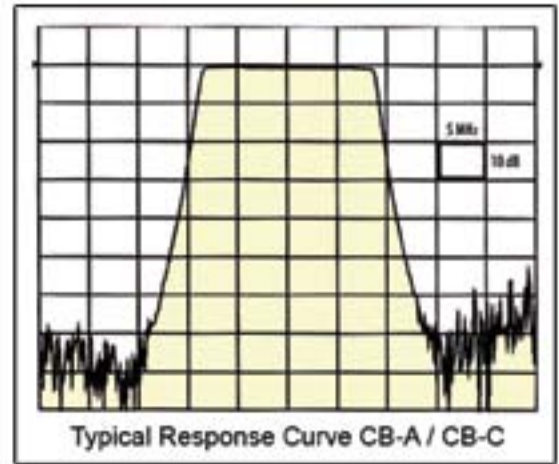
CONNECTORS:  $\frac{3}{8}$ "-24 Connections with KS pin type entry

DIMENSIONS: 5.81" long x 5.81" wide x 2.90" deep

Custom Designs Available.

## TVRO Interference Filters

C-band bandpass filters are designed for use in single and multifeed antenna applications. They are installed between a TVRO feedhorn and the LNA or LNB. They suppress out-of-band interference caused by navigational communications (radar) or commercial and military aircraft, as well as coastal and marine vessels operating above and below the C-band. By filtering at the C-band frequencies this will help prevent overload of the LNA and LNB and overall picture quality is improved.



Specifications subject to change without notice.



### Features:

- Low Insertion Loss
- Low Differential Group delay
- High Interference Rejections
- Lightweight, Low profile

### Specifications:

Model Number	CB-A	CB-C
PASSBAND:	3.7-4.2 GHz	same
INSERTION LOSS:	-0.5 dB typ. @ CF -0.75 dB roll off @ band edges	-0.4 dB typ. @ CF -0.5 dB roll off @ band edges
VSWR:	1.92:1 typ.	same
GROUP DELAY:	8 ns typ.	10 ns MAX.
REJECTION:	-23 dB @ 3.65/4.25 GHz -60 dB @ 3.55/4.35 GHz -70 dB @ 3.5/4.4 GHz	-25 dB -50 dB -60 dB
DIMENSIONS:	5- $\frac{3}{4}$ " L x 2- $\frac{3}{8}$ " H x 3- $\frac{1}{8}$ " D	same
FLANGES:	CPR 229 grooved-Input CPR 229 flat-output	same same
CONSTRUCTION:	Aluminum	Copper
WEIGHT:	1.3 lbs approx.	2.5 lbs approx.

## IF Filters

Notch filters can be used in the final IF stage to attenuate moderate Terrestrial Interference, and will often cure heavy TI, including intermittent "wipe outs." The most common notch filters are the singular fixed tuned for 60 MHz (TI-60) or 80 MHz (TI-80) to be used in the 70 MHz IF.

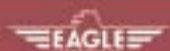


• TI-60



• TI-80

Other Final IF Filters Are Available Per Request.



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**1.315.622.3800 Fax**

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