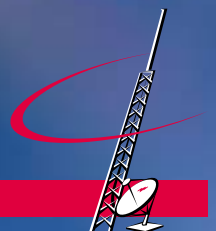


# Andrew CATV products

innovative head-end to last-mile system solutions  
from the world leader in cable technology



Connecting The Wireless World



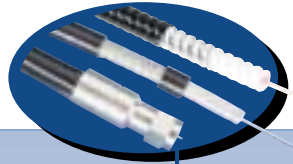
# Innovation

from the head end . . .  
*to the last mile*

Earth Station Antennas



Drop Cables and Connectors



Plenum Rated Cables and Connectors

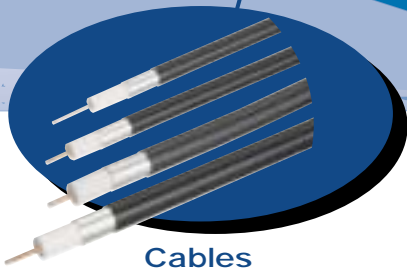


Connectors



CATV System Solutions

Cables



Prep Tools



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# Andrew: leading the industry in CATV innovations

## *Only from Andrew:*

### **Think outside the braid:**

Coral™ 75 is more drop cable for less

### **One-step excellence:**

Easiest-to-fit Twist-'n-Crimp connectors

### **The gold standard:**

HELIAX® plenum rated and  
standard drop cable systems

### **Low cost, best performance:**

highest quality braided drop cable

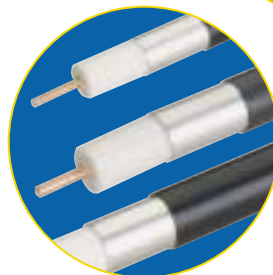
### **The strong one:**

HFC cable outlasts the competition

### **Faster is better:**

a full line of installation tools and accessories

Look at the forefront CATV and you'll see Andrew, providing MSOs with a suite of advanced technology, head-end to last-mile solutions that help improve the subscriber experience while lowering build out and replacement costs. And just as your customers look to you for leadership in delivering the latest technology and responsive service, you can look to Andrew – the leader in advanced cable design – for those same benefits.



# Gain the benefits of partnering with a World leader

You know Andrew - the world's RF experts and standard-bearers of innovation, quality, and service.

- Large project expertise, large project capacity
- Your partner in reducing costs
- Global availability: 21 locations, 57 countries

If you use a cell phone, watch television, surf the Internet, travel by air, or call long distance, you know Andrew. Andrew is a worldwide leader in the design, manufacture, and supply of communications equipment, systems, and services. Andrew products and services provide proven solutions to wireless and fixed-line telecommunications operators, Internet service providers, broadcasters, and CATV system designers and operators.





# Andrew

## Corrugated Cable Drop Systems

Andrew has developed a new high-performance drop cable system designed with a level of reliability required for successful high-end HFC network applications. These new cables – the “Corrugated Cable Drop System” – offer the following advantages over braided cable systems:

	Corrugated Cable Drop System	Conventional Braided
<b>Attenuation</b>	Lowest possible due to using high quality low loss tangent dielectric with high velocity and all solid copper or aluminum for current carrying surfaces.	High and unstable due to several factors including ultra-thin fragile aluminum foil tape and thin/fine aluminum braid wires that create an inconsistent RF current path. RF current path is undefined between aluminum/Mylar® tape and loose braid.
<b>SRL</b>	Lowest possible and stable due to perfectly controlled manufacturing tolerances.	Inherently high reflections due to inconsistent application of foil and braid with widely varying tolerances and tensions. Also has high propensity to change during and after installation.
<b>RF Shielding</b>	100% stoppage of RF ingress or egress due to continuous solid outer shield.	Highly unstable. The braid is only good for low frequency shielding due to thousands of small aperture holes designed in to the shield. The foil is only good for high frequencies due to its ultra-thin structure. The foil also is only good before the cable has been bent to any degree as severe cracking occurs in the aluminum/Mylar® foil structure when the cable is bent to any degree.
<b>Noise Generation</b>	No internal noise generated.	Braided cables are well known for generating distortions in the signal due to thousands of loose contacts between braid wires.
<b>DCR</b>	The DC resistance on solid copper versions are significantly lower due to larger center conductor and solid outer shield. Outer conductor alone is 75% lower than a standard shield braided cable.	DC resistance is higher due to smaller center conductor and inefficient aluminum braid wire and thin foil.
<b>Water Ingress</b>	Water is left completely out of cable due to solid continuous construction of outer conductor.	Water migrates easily up braid wire and cable has to be flooded to keep excess water out.
<b>Corrosion</b>	Complete cable sealing and solid copper outer conductor create cable with highest level of resistance to corrosion.	Water ingress in combination with loose aluminum braid wire and brass connector housing create natural environment for corrosion.

## Cable Construction

The Andrew Corrugated Cable Drop System cable is constructed with the highest grade of copper, aluminum, steel and plastics to produce a cable with ultimate RF performance over time.

- Jacket available in either a plenum or polyethylene rated material for overall protection.
- Center conductor is constructed as a copper-covered steel composite wire per ASTM B 452 for maximum RF signal transfer and required strength during connectorization.
- Center-conductor pre-coat is applied over the copper-clad steel wire to eliminate water ingress along the center conductor.
- Solid corrugated outer conductor is formed completely and continuously around the foam core for maximum protection from the environment, superior electrical, and mechanical performance.

### About Drop Cables

The drop cable system, cables and connectors from the tap to the customer equipment is the last critical part of the HFC network and surprisingly the portion that is least attended to from a system and component design stand point.

Drop cables, born out of the old style RG (Radio Grade) cables developed for the military in the 1940's, have basically gone unchanged. The cable served the industry well when the CATV systems were one-way analog low frequencies. Network technology is now quickly surpassing the performance squeezed out of that old-world cable design, with fiber getting closer to the home and less and less actives used. This is done to give as much "bandwidth with reliability" for the network. The conventional braided drop cable being used today has been brought into question for years as being proper and correct in compatibility to this new plant.



# Coral75™ Drop Cables

## Coral75

*the CATV industry's most innovative cable system solution*

New Coral75 aluminum corrugated coaxial cable from Andrew is a superior performing alternative to braided cable. With Coral75 cable, MSO system designers, engineers, and installers can improve system performance and lower system costs.

***Coral Delivers what braided cable can't:***

**Unchanged performance – even after repeat bends**

Ideal for supporting system service upgrades or new system buildouts, Coral75 cable's solid outer conductor provides a mechanical advantage that improves electrical performance. Coral provides a uniform electrical performance even after repeat bends – unlike braided cable, where performance degrades with each bend.

**“Twist-n-Crimp” connectors – industry's easiest to fit**

Speed and simplify replacement or new installations and improve performance with the industry's best connectors. Designed with captivated pins and simple twist and crimp installation, Coral connectors make a once complicated job faster, easier, and simpler – all while providing an improved electrical connection.

**100% RF shielding – lower system noise by design**

Coral means less system noise – for an improved subscriber experience. Coral cable protects against electromagnetic interface and radio frequency interference (EMI and RFI). Coral has no openings in the solid outer conductor – it's simply superior to wires and tape.

***More reasons Coral is better than braid!***

### **Lower IM**

Coral cable provides consistently lower IM due to its solid outer conductor. Braided cables exhibit high levels of IM generated from nonlinear materials and insufficient contact joints.

### **Weatherproof and durable**

For demanding last mile installs, Coral cables' rugged black polyethylene jacket provides abrasion resistance and environmental protection during and after installation. Unlike braided cables, Coral cables can be used outdoors without the fear of water migration.

### **Greater Flexibility**

Coral cable offers superior flexibility for demanding installs that require rebending or reverse bending. Coral is also easier to route than braided cable, because it holds its shape and can be pushed through tight spaces.





## Coral75™ Cable Specifications

### CD6 For Drop Cable Systems 75 Ohm Corrugated Cable

#### Cable Construction

Jacket	Black PVC, UL CATV
CD6-BVV	Black PE with Flooding Compound
CD6-BF	Black PVC with Messenger
CD6-BVM	Corrugated Aluminum
Outer conductor	Foam Polyethylene
Dielectric	Bare Copper-clad Steel Wire
Inner conductor	

#### Cable Dimensions

Diameter over jacket, inches (mm)	0.308 (7.8)
Jacket wall thickness, inches (mm)	0.027 (0.69)
Inner conductor O.D., inches (mm)	0.0415 (1.05)

#### Mechanical

Temperature ratings, operating	-40 to 80 deg. C
Messenger diameter, inches, (mm)	0.051 (1.3).
Messenger breaking strength, lbs (kg)	180 (82)

#### Electrical

Impedance, Ohms	75 +/- 3
Velocity, %	81
dc loop resistance, Ohms/1000ft (Ohms/km)	32.3 (106)
Inner dc resistance, Ohms/1000ft (Ohms/km)	28.7(94)
Outer dc resistance, Ohms/1000ft (Ohms/km)	3.6 (12)
dc withstand voltage, volts	1500 MIN.
Jacket spark, volts RMS	1500 MIN.
Insulation resistance, Mohms-kft	5000 MIN.

### CD11 For Drop Cable Systems 75 Ohm Corrugated Cable

#### Cable Construction

Jacket	Black PVC, UL CATV
CD11-BV	Black PE with Flooding Compound
CD11-BF	Black PVC with Messenger
CD11-BVM	Corrugated Aluminum
Outer conductor	Foam Polyethylene
Dielectric	Bare Copper-clad Steel Wire
Inner conductor	

#### Cable Dimensions

Diameter over jacket, inches (mm)	0.410 (10.4)
Jacket wall thickness, inches (mm)	0.027 (0.69)
Inner conductor O.D., inches (mm)	0.069 (1.75)

#### Mechanical

Temperature ratings, operating	-40 to 80 deg. C
Messenger diameter, inches, (mm)	0.072 (1.8)
Messenger breaking strength, lbs (kg)	365 (166)

#### Electrical

Impedance, Ohms	75 +/- 3
Velocity, %	84
dc loop resistance, Ohms/1000ft (Ohms/km)	12.3 (40.4)
Inner dc resistance, Ohms/1000ft (Ohms/km)	10.4 (34.1)
Outer dc resistance, Ohms/1000ft (Ohms/km)	1.9 (6.3)
dc withstand voltage, volts	1500 MIN.
Jacket spark, volts RMS	1500 MIN.
Insulation resistance, Mohms-kft	5000 MIN.

#### Coral CD6

#### Coral CD11

Frequency, MHz	dB/100ft	dB/100m	dB/100ft	dB/100m
5	0.52	(1.71)	0.26	(0.86)
55	1.44	(4.73)	0.87	(2.86)
211	2.85	(9.35)	1.74	(5.70)
250	3.11	(10.2)	1.90	(6.24)
300	3.41	(11.2)	2.09	(6.86)
400	3.96	(13.0)	2.43	(7.98)
450	4.21	(13.8)	2.58	(8.47)
550	4.67	(15.4)	2.87	(9.42)
750	5.51	(18.1)	3.38	(11.1)
1000	6.35	(20.9)	3.95	(13.0)

Maximum Attenuation at 68°F (20°C)

#### Connectors

CD6 Twist and Crimp F Connector  
CD11 Twist and Crimp F Connector

#### Type

Feed Thru  
Pin

#### Part Number

CD6F- T  
CD11F- TC



## Andrew HELIAX®

### Plenum Rated Drop Cables

provide exceptional mechanical and electrical performance needed for today's applications. The copper outer conductor provides a strong and durable design and is made with deeper corrugations for added flexibility. The cable is Plenum rated (CATVP) and is available in Series 6 and 11. The polyethylene dielectric has a low dielectric constant for superior attenuation while providing high crush strength.

- Lowest attenuation and exceptional performance
- Superflexible copper outer conductor design for easier installation
- Best shielding available – equivalent to hardline cable
- Quick and easy connector attachment with standard tools
- Intended for indoor use only



#### Connector Part Numbers

Pass through Pin – ACH6F  
Captivated Pin – ACH6F-C

## Coaxial Cable 75 Ohm Broadband HFC6P

### Cable Construction\*

Jacket:	
HFC6P-SCS	Blue Halogenated, Fire-retardant, Copper-clad Inner
HFC6P-SCU	Blue Halogenated, Fire-retardant, Solid Copper Inner
CSA classification	CSA type CMP-FT6
NEC classification	CATVP
Outer conductor	Corrugated Copper
Dielectric	Polyethylene Spline
Inner conductor	Copper-clad Steel Wire

### Mechanical Specifications\*

Diameter over jacket, inches (mm)	0.29 (7.37)
Jacket thickness	0.02 (0.51)
Diameter over outer conductor, inches (mm)	0.25 (6.35)
Diameter over inner conductor, inches (mm)	0.043 (1.1)
Tensile strength, lb (kg)	100 (45)
Flat plate crush strength, lb/in (kg/mm)	80 (1.4)
Minimum bending radius, inches (mm)	1 (25)
Bending moment, lb-ft (N-m)	1 (1.4)

### Environmental Specifications

Operating temperature	-40 to 85°C (-40 to 185°F)
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### Electrical Specifications\*

Impedance, ohms	75 ±2.0
Velocity,%	81
Peak power rating, kW	6
dc resistance, steel copper inner, ohms/kft (ohms/km)	26.7 (87.6)
dc resistance, solid copper inner, ohms/kft (ohms/km)	5.61 (18.4)
dc resistance, outer, ohms/kft (ohms/km)	2.0 (6.6)
Capacitance, pF/ft (pF/m)	16.5 (54.1)
dc breakdown, Volts	1,900
Insulation resistance, MOhm	100,000

### Maximum Attenuation

Standard conditions: VSWR 1.0, ambient temperature 20°C (68°F)

Frequency, MHz	dB/100ft	dB/100m
5	0.55	1.80
55	1.36	4.45
83	1.67	5.49
187	2.55	8.36
211	2.71	8.91
250	2.97	9.73
300	3.27	10.7
350	3.54	11.6
400	3.80	12.5
450	4.05	13.3
500	4.28	14.0
550	4.50	14.8
600	4.72	15.5
750	5.32	17.5
865	5.75	18.9
1000	6.22	20.4

\*Contact Andrew for additional cable constructions.

## Plenum Rated Cables

### Coaxial Cable 75 Ohm Broadband HFC11P

#### Cable Construction\*

Jacket:	
HFC11P-SCS	Blue Halogenated, Fire-retardant, Copper-clad Inner
HFC11P-SCU	Blue Halogenated, Fire-retardant, Solid Copper Inner
CSA classification	CSA type CMP-FT6
NEC classification	CATVP
Outer conductor	Corrugated Copper
Dielectric	Polyethylene Spline
Inner conductor	Copper-clad Steel Wire

#### Mechanical Specifications\*

Diameter over jacket, inches (mm)	0.415 (10.5)
Jacket thickness	0.02 (0.51)
Diameter over outer conductor, inches (mm)	0.375 (9.53)
Diameter over inner conductor, inches (mm)	0.066 (1.68)
Tensile strength, lb (kg)	150 (68)
Flat plate crush strength, lb/in (kg/mm)	1.8 (100)
Minimum bending radius, inches (mm)	1 (25)
Bending moment, lb-ft (N-m)	1.7 (2.3)

#### Environmental Specifications

Operating temperature	-40 to 85°C (-40 to 185°F)
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#### Electrical Specifications\*

Impedance, ohms	75 ±2.0
Frequency, maximum, MHz	1,000
Velocity, %	82
Peak power rating, kW	11.3
dc resistance, copper clad inner, ohms/kft (ohms/km)	11.9 (39.1)
dc resistance, solid copper inner, ohms/kft (ohms/km)	2.38 (7.81)
dc resistance, outer, ohms/kft (ohms/km)	1.52 (5.0)
Capacitance, pF/ft (pF/m)	52.2 (15.9)
Inductance, mH/ft (mH/m)	0.096 (0.31)
dc breakdown, Volts	2,600
Insulation resistance, MOhm	100,000

#### Maximum Attenuation

Standard conditions: VSWR 1.0, ambient temperature 20°C (68°F)

Frequency, MHz	dB/100ft	dB/100m
5	0.273	0.894
55	0.924	3.03
83	1.14	3.75
187	1.75	5.74
211	1.86	6.12
250	2.04	6.69
300	2.25	7.38
350	2.44	8.01
400	2.63	8.61
450	2.8	9.18
500	2.96	9.72
550	3.12	10.2
600	3.27	10.7
750	3.70	12.1
865	4.01	13.1
1000	4.34	14.3

\*Contact Andrew for additional cable constructions.



**Connector Part Numbers**  
Captivated Pin – ACH11F-C

**Andrew HELIAX® Polyethylene Drop Cables** provide exceptional mechanical and electrical performance needed for today's applications. The copper outer conductor provides a strong and durable design and is made with deeper corrugations for added flexibility. The polyethylene dielectric has a low dielectric constant for superior attenuation while providing high crush strength.

- Lowest attenuation and exceptional performance
- Superflexible copper outer conductor design for easier installation
- Best shielding available – equivalent to hardline cable
- Quick and easy connector attachment with standard tools



## Connector Part Numbers

Pass through Pin – FCA6F  
Captivated Pin – FCA6F-C

## Coaxial Cable 75 Ohm Broadband HFC6

### Cable Construction\*

Jacket	
HFC6V-VCS	Black Polyethylene, Outdoor, burial
HFC6V-VCUM	Black Polyethylene, Outdoor, Messenger, Solid Copper Inner
HFC6V-VCSM	Black Polyethylene, Outdoor, Messenger, Copper-clad Inner
CSA classification	CSA Type CM
NEC classification	CATV
Outer conductor	Corrugated Copper
Dielectric	Polyethylene Foam
Inner conductor	Copper-clad Steel Wire

### Mechanical Specifications\*

Diameter over jacket, inches (mm)	0.258 (6.55)
Jacket Thickness	0.2 (0.51)
Diameter over outer conductor, inches (mm)	0.218 (5.54)
Diameter over foam dielectric, inches (mm)	0.17 (4.4)
Diameter over inner conductor, inches (mm)	0.041 (1.04)
Minimum bending radius, inches (mm)	2.5 (63)
Bending moment, lb-ft (N-m)	0.5 (0.68)
Messenger wire	
Diameter, inches (mm)	0.051 (1.3)
Break strength, lb (kg)	180 (82)

### Environmental Specifications

Operating temperature, °C (°F)	-55 to 85 (-67 to 185) PE Jacket
--------------------------------	----------------------------------

### Electrical Specifications\*

Impedance, ohms	75 ±2.0
Velocity, %	83
dc resistance, solid copper inner, ohms/kft (ohms/km)	6.17 (20.2)
dc resistance, copper clad steel, ohms/kft (ohms/km)	29.4 (96.3)
Insulation resistance, MOhm	100,000

### Maximum Attenuation

standard conditions: VSWR 1.0, ambient temperature 20°C (68°F)

Frequency, MHz	dB/100ft	dB/100m
5	0.56	1.84
55	1.45	4.75
83	1.79	5.86
187	2.71	8.89
211	2.88	9.46
250	3.15	10.3
300	3.46	11.3
350	3.75	12.3
400	4.02	13.2
450	4.27	14.0
500	4.51	14.8
600	4.96	16.3
750	5.59	18.3
865	6.02	19.8
1000	6.51	21.3

\*Contact Andrew for additional cable constructions.

# Coaxial Cable 75 Ohm Broadband HFC11

## Cable Construction\*

Jacket:	
HFC11V-VCS	Black Polyethylene, Outdoor, Burial
HFC11V-VCU	Black Polyethylene, Outdoor, Solid Copper Inner
HFC11V-VCUM	Black Polyethylene, Outdoor, Messenger, Solid Copper Inner
HFC11V-VCSM	Black Polyethylene, Outdoor, Messenger, Copper Clad Inner
NEC classification	CATV
Outer conductor	Corrugated Copper
Dielectric	Polyethylene Foam
Inner conductor	Copper-clad Steel Wire

## Mechanical Specifications\*

Diameter over jacket, inches (mm)	0.345 (8.8)
Jacket thickness	0.02 (0.51)
Diameter over outer conductor, inches (mm)	0.305 (7.75)
Diameter over foam dielectric, inches (mm)	0.27 (6.7)
Diameter over inner conductor, inches (mm)	0.064 (1.63)
Minimum bending radius, inches (mm)	3 (75)
Bending moment, lb-ft (N-m)	1 (1.4)
Messenger wire	
Diameter, inches (mm)	0.072 (1.83)
Break strength, lb (kg)	365 (166)

## Environmental Specifications

Operating temperature	-55 to 85 °C (-67 to 185°F) PE Jacket
-----------------------	---------------------------------------

## Electrical Specifications\*

Impedance, ohms	75 ±2.0
Velocity, %	86
dc resistance, solid copper inner, ohms/100ft (ohms/km)	2.53 (8.30)
dc resistance, copper clad steel inner, ohms/100ft (ohms/km)	12.2 (39.9)
Insulation resistance, MOhm	100,000

## Maximum Attenuation

Standard conditions: VSWR 1.0, ambient temperature 20°C (68°F)

Frequency, MHz	dB/100ft	dB/100m
5	0.274	0.899
55	0.923	3.03
83	1.14	3.74
187	1.73	5.68
211	1.84	6.05
250	2.02	6.61
300	2.22	7.27
350	2.40	7.89
400	2.58	8.46
450	2.74	9.0
500	2.90	9.52
550	3.05	10.0
600	3.20	10.5
750	3.60	11.8
865	3.89	12.8
1000	4.21	13.8

\*Contact Andrew for additional cable constructions.



**Connector Part Numbers**  
Captivated Pin – FCA11F-C



## Cable Construction

### Center Conductor

The center conductor is solid copper-clad steel wire for maximum signal transfer at RF frequencies and excellent DC resistance.

The copper is metallurgically bonded for anti corrosion performance per the requirements of ASTM B 566, Class 10 A.

### Center Conductor Adhesive

A proprietary, specially designed adhesive is applied as a coating to the outer surface of the center conductor to keep moisture from the interior of the cable and to sustain overall cable mechanical integrity.

### Foam Dielectric

Polyethylene is foamed to micro-cell structures to achieve the highest level of signal transfer through the cable, while at the same time maintaining structural and environmental integrity in the cable.

### Base Shield - Tape

A laminated aluminum-polypropylene-aluminum tape is fully bonded to the foam dielectric to provide 100% coverage. Longitudinally applied over the core, the tape minimizes signal leakage.

### Second Shield - Braid

The second layer of shielding is braided 34 AWG aluminum wire. This important second layer improves shielding and is available in a variety of coverage options.

### Third Shield

The third layer is similar to the base layer. However, it is not bonded. This construction provides the enhanced shielding required in harsh environments.

### Jacket

High quality jacketing is used to protect the cable both from the rigors of installation and from the environment. A variety of jacketing materials are available, depending upon the application.

### Flooding Compounds

Flooding compounds are used between the outer shield and jacket for direct burial or conduit applications.

## Product Applications and Part Numbers

### Outdoor Aerial Installations

For standard outdoor aerial plant installations, two polyethylene jacketed cables are available: aerial and messenger. The aerial cable is designed to be pulled and lashed to a steel strand. Both are easily routed around corners and formed.

### Buried/Underground Installations

Cables designed to be direct buried or placed in conduit are constructed with a specially self-healing flooding compound designed to protect the cable from incidental nicks and cuts during placement.

### Connectors and Tools

These cables are manufactured for use with industry standard connectors, tools and all other cable construction-aiding devices.

A				Andrew HFC Braided Drop Cable
	6			Braided Cable Series 6
	11			Braided Cable Series 11
	59			Braided Cable Series 59
		60		60% Braided Coverage
		67		67% Braided Coverage
		90		90% Braided Coverage
		TS		67% Tri-Shield Coverage
			BV	Black PVC
			BF	Black PE with Flooding Compound
			BVM	Black PVC with Messenger

# Andrew HFC Braided Drop Cable Systems

## HFC Braided Cable for Drop Cable Systems

Andrew HFC Braided Drop Cable Systems are available in a variety of cable size, construction, and material types to support any application requirement. Andrew HFC Braided Drop Cable Systems feature high quality, low loss HFC braided cable.

## Connectors for Drop Cable Systems

Andrew Connectors for HFC Braided Cable are industry standard compression connectors designed for rapid, easy installation. The innovative use of O-rings in the connector design prevents water ingress, and can lead to significant increases in system performance and reliability.



## Series 6 Standard Shield 60% Braid

### Cable Construction

Jacket	A660-BV	Black PVC
	A660-BF	Black PE with Flooding Compound
	A660-BVM	Black PVC with Messenger
Outer conductor		Bonded Alum Foil + 60% Aluminum Braid
Dielectric		Foam Polyethylene
Inner conductor		Bare Copper-Clad Steel Wire

### Cable Dimensions

Diameter over jacket, inches (mm)	0.272 (6.91)
Jacket wall thickness, inches (mm)	0.030 (0.76)
O.D. over tape, inches (mm)	0.187 nominal (4.75 nominal)
Foam dielectric O.D., inches (mm)	0.180 (4.57)
Inner conductor O.D., inches (mm)	0.040 (1.016)

### Mechanical Specifications

Temperature ratings, operating	-40 to 80°C
Messenger diameter, inches (mm)	0.051 (1.3)
Messenger breaking strength, lbs (kg)	365 (166)

### Electrical Specifications

Characteristic impedance, Ohms	75
Velocity, %	85
dc loop resistance, Ohms/1000ft (Ohms/km)	46.2 (152)
dc withstand voltage, volts	1500 MIN.
Jacket spark, volts RMS	1500 MIN.
Insulation resistance, Mohms-kft	5,000 MIN.

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft	dB/100m
5	0.58	(1.90)
55	1.60	(5.25)
211	3.05	(10.00)
250	3.30	(10.82)
300	3.55	(11.64)
400	4.15	(13.61)
450	4.40	(14.43)
550	4.90	(16.08)
750	5.65	(18.54)
1000	6.55	(21.49)



Customer Service Center – Call Toll-Free North America 1-888-889-9485 • Brazil 0800-704-4175 • Visit us at: [www.andrew.com](http://www.andrew.com)

## Series 6 Tri-Shield 60% Braid

### Cable Construction

Jacket	
A6TS-BV	Black PVC
A6TS-BF	Black PE with Flooding Compound
A6TS-BVM	Black PVC with Messenger
Outer conductor	Bonded Foil + 60% Braid + Non-bonded Foil
Dielectric	Foam Polyethylene
Inner conductor	Bare Copper-clad Steel Wire

### Cable Dimensions

Diameter over jacket, inches (mm)	0.278 (7.06)
Jacket wall thickness, inches (mm)	0.030 (0.76)
O.D. over inner tape, inches (mm)	0.18 nominal (4.78 nominal)
Foam dielectric O.D., inches (mm)	0.180 (4.57)
Inner conductor O.D., inches (mm)	0.0403 (1.02)

### Mechanical Specifications

Temperature ratings, operating	-40 to 80°C
Messenger diameter, inches (mm)	0.051 (1.3)
Messenger breaking strength, lbs (kg)	180 (82)

### Electrical Specifications

Characteristic impedance, Ohms	75 ± 3
Velocity, %	85 nominal
dc loop resistance, Ohms/1000ft (Ohms/km)	43.0 (141)
dc withstand voltage, volts	1500 MIN.
Jacket spark, volts RMS	1500 MIN.
Insulation resistance, Mohms-kft	5,000 MIN.

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft	dB/100m
5	0.58	(1.90)
55	1.60	(5.25)
211	3.05	(10.00)
250	3.30	(10.82)
300	3.55	(11.64)
400	4.15	(13.61)
450	4.40	(14.43)
550	4.90	(16.08)
750	5.65	(18.54)
1000	6.55	(21.49)

## Series 6 Standard Shield 90% Braid

### Cable Construction

Jacket	
A690-BV	Black PVC
A690-BF	Black PE with Flooding Compound
A690-BVM	Black PVC with Messenger
Outer conductor	Bonded Alum Foil + 90% Aluminum Braid
Dielectric	Foam Polyethylene
Inner conductor	Bare Copper-clad Steel Wire

### Cable Dimensions

Diameter over jacket, inches (mm)	0.278 (7.06)
Jacket wall thickness, inches (mm)	0.030 (0.76)
O.D. over tape, inches (mm)	0.187 nominal (4.75 nominal)
Foam dielectric O.D., inches (mm)	0.180 (4.57)
Inner conductor O.D., inches (mm)	0.0403 (1.02)

### Mechanical Specifications

Temperature ratings, operating	-40 to 80°C
Messenger diameter, inches (mm)	0.051 (1.3)
Messenger breaking strength, lbs (kg)	180 (82)

### Electrical Specifications

Characteristic impedance, Ohms	75 ± 3
Velocity, %	85
dc loop resistance, Ohms/1000ft (Ohms/km)	46.2 (152)
dc withstand voltage, volts	1500 MIN.
Jacket spark, volts RMS	1500 MIN.
Insulation resistance, Mohms-kft	5,000 MIN.

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft	dB/100m
5	0.58	(1.90)
55	1.60	(5.25)
211	3.05	(10.00)
250	3.30	(10.82)
300	3.55	(11.64)
400	4.15	(13.61)
450	4.40	(14.43)
550	4.90	(16.08)
750	5.65	(18.54)
1000	6.55	(21.49)

## Series 11 Standard Shield 60% Braid

### Cable Construction

Jacket	
A1160-BV	Black PVC
A1160-BF	Black PE with Flooding Compound
A1160-BVM	Black PVC with Messenger
Outer conductor	Bonded Alum Foil + 60% Aluminum Braid
Dielectric	Foam Polyethylene
Inner conductor	Bare Copper-clad Steel Wire

### Cable Dimensions

Diameter over jacket, inches (mm)	0.395 (10.03)
Jacket wall thickness, inches (mm)	0.042 (1.07)
O.D. over tape, inches (mm)	0.287 nominal (7.29 nominal)
Foam dielectric O.D., inches (mm)	0.280 (7.11)
Inner conductor O.D., inches (mm)	0.064 (1.626)

### Mechanical Specifications

Temperature ratings, operating	-40 to 80°C
Messenger diameter, inches (mm)	0.072 (1.8)
Messenger breaking strength, lbs (kg)	365 (166)

### Electrical Specifications

Characteristic impedance, Ohms	75 ± 3
Velocity, %	85 nominal
dc loop resistance, Ohms/1000ft (Ohms/km)	21.5 (71)
dc withstand voltage, volts	1500 MIN.
Jacket spark, volts RMS	1500 MIN.
Insulation resistance, Mohms-kft	5,000 MIN.

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft	dB/100m
5	0.38	(1.25)
55	0.96	(3.15)
211	1.90	(6.23)
250	2.05	(6.72)
300	2.25	(7.38)
400	2.60	(8.53)
450	2.75	(9.02)
550	3.04	(9.97)
750	3.65	(11.97)
1000	4.35	(14.27)

## Series 11 Tri-Shield 60% Braid

### Cable Construction

Jacket	
A11TS-BV	Black PVC
A11TS-BF	Black PE with Flooding Compound
A11TS-BVM	Black PVC with Messenger
Outer conductor	Bonded Foil + 60% Braid + Non-bonded Foil
Dielectric	Foam Polyethylene
Inner conductor	Bare Copper-clad Steel Wire

### Cable Dimensions

Diameter over jacket, inches (mm)	0.400 (10.16)
Jacket wall thickness, inches (mm)	0.042 (1.07)
O.D. over inner tape, inches (mm)	0.287 nominal (7.29 nominal)
Foam dielectric O.D., inches (mm)	0.280 (7.11)
Inner conductor O.D., inches (mm)	0.064 (1.626)

### Mechanical Specifications

Temperature ratings, operating	-40 to 80°C
Messenger diameter, inches (mm)	0.072 (1.8)
Messenger breaking strength, lbs (kg)	365 (166)

### Electrical Specifications

Characteristic impedance, Ohms	75 ± 3
Velocity, %	85 nominal
dc loop resistance, Ohms/1000ft (Ohms/km)	18.8 (62)
dc withstand voltage, volts	1500 MIN.
Jacket spark, volts RMS	1500 MIN.
Insulation resistance, Mohms-kft	5,000 MIN.

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft	dB/100m
5	0.38	(1.25)
55	0.96	(3.15)
211	1.90	(6.23)
250	2.05	(6.72)
300	2.25	(7.38)
400	2.60	(8.53)
450	2.75	(9.02)
550	3.04	(9.97)
750	3.65	(11.97)
1000	4.35	(14.27)



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## Series 59 Standard Shield 67% Braid

### Cable Construction

Jacket	
A5967-BV	Black PVC
A5967-BF	Black PE with Flooding Compound
A5967-BVM	Black PVC with Messenger
Outer conductor	Bonded Alum Foil + 67% Aluminum Braid
Dielectric	Foam Polyethylene
Inner conductor	Bare Copper-clad Steel Wire

### Cable Dimensions

Diameter over jacket, inches (mm)	0.240 (6.10)
Jacket wall thickness, inches (mm)	0.032 (0.81)
O.D. over tape, inches (mm)	0.151 nominal (3.84 nominal)
Foam dielectric O.D., inches (mm)	0.144 (3.66)
Inner conductor O.D., inches (mm)	0.032 (0.813)

### Mechanical Specifications

Temperature ratings, operating	-40 to 80°C
Messenger diameter, inches (mm)	0.051 (1.6)
Messenger breaking strength, lbs (kg)	180 (82)

### Electrical Specifications

Characteristic impedance, Ohms	75 ± 3
Velocity, %	85 nominal
dc loop resistance, Ohms/1000ft (Ohms/km)	67.9 (223)
dc withstand voltage, volts	1500 MIN.
Jacket spark, volts RMS	1500 MIN.
Insulation resistance, Mohms-kft	5,000 MIN.

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft	dB/100m
5	0.86	(2.82)
55	2.05	(6.73)
211	3.80	(12.47)
250	4.10	(13.45)
300	4.45	(14.60)
400	5.10	(16.73)
450	5.40	(17.72)
550	5.95	(19.52)
750	6.97	(22.87)
1000	8.12	(26.64)

## Series 59 Tri-Shield 67% Braid

### Cable Construction

Jacket	
A59TS-BV	Black PVC
A59TS-BF	Black PE with Flooding Compound
A59TS-BVM	Black PVC with Messenger
Messenger	.051 inch steel
Outer conductor	Bonded Foil + 67% Braid + Non-bonded Foil
Dielectric	Foam Polyethylene
Inner conductor	Bare Copper-clad Steel Wire

### Cable Dimensions

Diameter over jacket, inches (mm)	0.245 (6.22)
Jacket wall thickness, inches (mm)	0.032 (0.81)
O.D. over inner tape, inches (mm)	0.151 nominal (3.84 nominal)
Foam dielectric O.D., inches (mm)	0.144 (3.66)
Inner conductor O.D., inches (mm)	0.032 (0.813)

### Mechanical Specifications

Temperature ratings, operating	-40 to 80°C
Messenger diameter, inches (mm)	0.051 (1.6)
Messenger breaking strength, lb (kg)	180 (82)

### Electrical Specifications

Characteristic impedance, Ohms	75 ± 3
Velocity, %	85 nominal
dc loop resistance, Ohms/1000ft (Ohms/km)	63.7 (209)
dc withstand voltage, volts	1500 MIN.
Jacket spark, volts RMS	1500 MIN.
Insulation resistance, Mohms-kft	5,000 MIN.

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft	dB/100m
5	0.86	(2.82)
55	2.05	(6.73)
211	3.80	(12.47)
250	4.10	(13.45)
300	4.45	(14.60)
400	5.10	(16.73)
450	5.40	(17.72)
550	5.95	(19.52)
750	6.97	(22.87)
1000	8.12	(26.64)



# Andrew Broadband

## HFC Coaxial Cables for CATV

Leveraging over sixty years of global experience supporting the telecommunications industry, Andrew introduces HFC coaxial cables. Manufactured locally on the same advanced-technology equipment as

world-renown HELIAX® coaxial cables, these 75-Ohm, foam coaxial cables are smooth-wall, solid outer conductor cables featuring exceptional quality and reliability and superior electrical performance.

75 Ohm High Performance Foam Coaxial Cables with Smooth-wall Solid Outer Conductor Cable for digital 2-way signal distribution through Hybrid Fiber Coax (HFC) Networks

Applications: digital 2-way CATV, broadband, Internet, video, or audio signal distribution through Hybrid Fiber Coax (HFC) networks.



- Local manufacture simplifies planning and logistics
- Buy-as-you-need ordering optimizes cash flow
- Globally proven Andrew reliability
- Superior electrical performance

Andrew HFC cables are constructed with the highest quality copper, aluminum, and polyethylene materials used in HELIAX products. The lowest loss and highest-grade foam polyethylene is applied over the center conductor. A smooth-wall solid aluminum outer conductor is applied over the foam along with a high-grade polyethylene jacket. These are combined through the highest technology processes, resulting in a coaxial cable with superior electrical, mechanical, and environmental resistance performance.

Andrew HFC cables are compatible with industry standard CATV connectors, tools and all other needed accessories. Using Andrew products for all your wireless and wired HFC applications helps to ensure overall system performance reliability.

Andrew has been designing, constructing, and delivering the highest level of coaxial cables and waveguide for communications system needed around the world. HELIAX cables are the worldwide standard for reliability, quality, innovation, and performance. This is due to extreme attention to detail in design, material selection, and manufacturing. Andrew equals performance and reliability!

# Cable Construction

## Center Conductor

The center conductor is solid copper-clad aluminum for maximum signal transfer at RF frequencies and excellent DC resistance characteristics for network powering.

The copper is metallurgically bonded for anti-corrosion performance per the requirements of ASTM B 566, Class 10 A.

Solid copper center conductor constructions are available for specialized low DC resistance requirements.

## Center Conductor Adhesive

A proprietary specially-designed adhesive is applied as a coating to the outer surface of the center conductor to keep moisture from the interior of the cable, and to sustain overall cable mechanical integrity.

## Foam Dielectric

Polyethylene, with the highest level of purity, is foamed to micro-cell structures to achieve the highest level of signal transfer through the cable while at the same time maintaining structural and environmental integrity in the cable.

## Outer Conductor

The outer conductor is formed around the foam dielectric with a solid, high electrical conductive aluminum alloy. This solid construction allows for maximum RF energy transfer, no RF signal leakage, excellent DC resistance properties, superior mechanical durability while completely sealing the interior of the cable.

## Outer Protective Jacket

The cable is protected with either a black weather-resistant polyethylene jacket for all outdoor applications or a fire-retardant riser (CATVR) rated jacket for in-building applications

## Bonding Agents

Specially formulated polyethylene blends are used in specific designs to achieve superior mechanical performance characteristics.

## Flooding Compounds

Flooding compounds are used between the aluminum outer conductor and jacket for direct buried or conduit applications.

## Industry Standards

The cables are designed, constructed and tested to meet both the:

- SCTE IPS-SP-100 specifications for trunk, feeder and distribution coaxial cable
- Bellcore GR-1399-CORE generic requirements for coaxial distribution cable

# Product Applications and Part Numbers

## Outdoor Aerial Installations

For standard outdoor aerial plant installations the standard polyethylene jacketed cable should be used. This cable is designed to be pulled and lashed to a steel strand. It is easily routed around corners and formed into necessary expansion loops for plant thermal expansion/contraction.

The polyethylene jacket is designed to protect the cable, both from the rigors of installation and the environment.

## Buried/Underground Installations

Cables designed to be direct buried or placed in conduit are constructed with a specially self-healing flooding compound designed to protect the cable from incidental nicks and cuts during placements.

## Connectors and Tools

These cables are manufactured to be used with industry standard connectors, coring tools, center-conductor stripping tools, expansion-loop forming tools and all other cable construction-aiding devices.

## Trunk Cable Part Numbering System

HFC	XXX									
		C								Cable outer diameter of outer conductor (in thousandths of an inch)
		S								Copper-clad aluminum center conductor
			A							Solid copper center conductor
			B							Aerial cable
				P						Buried cable (with self-healing flooding compound under jacket)
				R						Polyethylene jacket
					YYY					Riser rated jacket
										Messenger size (in thousandths of an inch)

## Examples

- HFC 500 CAP 109 - 0.500" cable diameter with copper-clad aluminum center conductor and a 0.109" diameter integrated messenger.
- HFC 860 CBP - 0.860" cable diameter with copper-clad aluminum center conductor and a flooded jacket for burial applications.

## HFC 500 Series Broadband Cable

### Cable Dimensions

	inches	mm
Center Conductor Diameter	0.109	(2.77)
Dielectric Diameter	0.450	(11.43)
Outer Conductor Thickness	0.025	(0.64)
Outer Conductor Diameter	0.500	(12.70)
Jacket Diameter	0.560	(14.22)
Jacket Thickness	0.030	(0.76)
Jacket Diameter for Buried Cable	0.570	(14.48)
Messenger Diameter	0.109	(2.77)

### Mechanical Specifications

	inches	cm
Minimum Bend Radius		
Unjacketed Cable	4	(10.2)
Jacketed Cable	3.5	(8.9)
Maximum Pulling Tension	300lb	(136kg)
Messenger Breaking Strength	1800lb	(816kg)

### Electrical Specifications

Impedance, ohms	75 ± 2
Velocity of Propagation, %	87
Capacitance, pF/ft (pF/m)	15.3 (50.2)
dc Resistance, ohms/1000ft (km) at 68°F (20°C)	

#### Copper-clad Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	1.35	(4.40)
Outer Conductor	0.37	(1.24)
Loop	1.72	(5.64)

#### Solid Copper Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.83	(2.72)
Outer Conductor	0.37	(1.24)
Loop	1.20	(3.96)

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft dB/100m	
5	0.16	0.52
55	0.54	1.77
211	1.09	3.58
250	1.20	3.94
270	1.24	4.07
300	1.31	4.30
330	1.38	4.53
350	1.43	4.69
400	1.53	5.02
450	1.63	5.35
500	1.73	5.68
550	1.82	5.97
600	1.91	6.27
750	2.16	7.09
870	2.35	7.71
1000	2.52	8.27

Cable Type Number	Application	Construction
HFC500-CA	Aerial	Unjacketed
HFC500-CAP	Aerial	PE jacket
HFC500-CAP-109	Aerial	PE jacket with messenger
HFC500-CBP	Underground	PE jacket with flood compound
HFC500-CAR	Riser Rated	Fire retardant jacket

## HFC 540 Series Broadband Cable

### Cable Dimensions

	inches	mm
Center Conductor Diameter	0.124	(3.15)
Dielectric Diameter	0.513	(13.03)
Outer Conductor Thickness	0.0135	(0.343)
Outer Conductor Diameter	0.540	(13.72)
Jacket Diameter	0.610	(15.49)
Jacket Thickness	0.035	(0.89)
Jacket Diameter for Buried Cable	0.620	(15.74)
Messenger Diameter	0.109	(2.77)

### Mechanical Specifications

	inches	cm
Minimum Bend Radius		
Unjacketed Cable	NA	NA
Jacketed Cable	4	(10.2)
Maximum Pulling Tension	220lb	(100kg)
Messenger Breaking Strength	1800lb	(816kg)

### Electrical Specifications

Impedance, ohms	75 ± 2
Velocity of Propagation, %	88
Capacitance, pF/ft (pF/m)	15.3 (50.2)
dc Resistance, ohms/1000ft (km) at 68°F (20°C)	

#### Copper-clad Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	1.02	(3.35)
Outer Conductor	0.59	(1.94)
Loop	1.61	(5.28)

#### Solid Copper Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.67	(2.20)
Outer Conductor	0.59	(1.94)
Loop	1.26	(4.13)

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft dB/100m	
5	0.14	0.46
55	0.47	1.54
211	0.95	3.12
250	1.03	3.38
270	1.07	3.51
300	1.13	3.71
330	1.19	3.91
350	1.23	4.04
400	1.32	4.33
450	1.40	4.59
500	1.49	4.89
550	1.56	5.12
600	1.64	5.38
750	1.85	6.07
870	2.00	6.56
1000	2.17	7.12

Cable Type Number	Application	Construction
HFC540-CAP	Aerial	PE jacket
HFC540-CAP-109	Aerial	PE jacket with messenger
HFC540-CBP	Underground	PE jacket with flood compound
HFC540-CAR	Riser Rated	Fire retardant jacket

## HFC 625 Series Broadband Cable

### Cable Dimensions

	inches	mm
Center Conductor Diameter	0.137	(3.48)
Dielectric Diameter	0.563	(14.30)
Outer Conductor Thickness	0.031	(0.79)
Outer Conductor Diameter	0.625	(15.88)
Jacket Diameter	0.685	(17.40)
Jacket Thickness	0.030	(0.76)
Jacket Diameter for Buried Cable	0.695	(17.65)
Messenger Diameter	0.109	(2.77)

### Mechanical Specifications

	inches	cm
Minimum Bend Radius		
Unjacketed Cable	5.0	(12.7)
Jacketed Cable	4.5	(11.4)
Maximum Pulling Tension	475lb	(215kg)
Messenger Breaking Strength	1800lb	(816kg)

### Electrical Specifications

Impedance, ohms	75 ± 2
Velocity of Propagation, %	88
Capacitance, pF/ft (pF/m)	15.3 (50.2)
dc Resistance, ohms/1000ft (km) at 68°F (20°C)	

#### Copper-clad Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.84	(2.76)
Outer Conductor	0.26	(0.75)
Total Loop	1.10	(3.51)

#### Solid Copper Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.56	(1.84)
Outer Conductor	0.23	(0.45)
Loop	0.79	(2.59)

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft	dB/100m
5	0.13	0.43
55	0.46	1.51
211	0.92	3.02
250	1.00	3.28
270	1.02	3.35
300	1.08	3.54
330	1.14	3.74
350	1.18	3.87
400	1.27	4.17
450	1.35	4.43
500	1.43	4.69
550	1.50	4.92
600	1.58	5.18
750	1.78	5.84
870	1.95	6.40
1000	2.07	6.79

Cable Type Number	Application	Construction
HFC625-CA	Aerial	Unjacketed
HFC625-CAP	Aerial	PE Jacket
HFC625-CAP-109	Aerial	PE Jacket with messenger
HFC625-CBP	Underground	PE Jacket with flood compound

## HFC 715 Series Broadband Cable

### Cable Dimensions

	inches	mm
Center Conductor Diameter	0.166	(4.22)
Dielectric Diameter	0.686	(17.42)
Outer Conductor Thickness	.0145	(0.38)
Outer Conductor Diameter	0.715	(18.16)
Jacket Diameter	0.785	(19.94)
Jacket Thickness	0.035	(0.89)
Jacket Diameter for Buried Cable	0.795	(20.19)
Messenger Diameter	0.188	(4.78)

### Mechanical Specifications

	inches	cm
Minimum Bend Radius		
Unjacketed Cable	NA	NA
Jacketed Cable	5	(12.7)
Maximum Pulling Tension	340lb	(154kg)
Messenger Breaking Strength	3900lb	(1768kg)

### Electrical Specifications

Impedance, ohms	75 ± 2
Velocity of Propagation %	88
Capacitance, pF/ft (pF/m)	15.3 (50.2)
dc Resistance, ohms/1000ft (km) at 68°F (20°C)	

#### Copper-clad Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.58	(1.90)
Outer Conductor	0.42	(1.38)
Loop	1.00	(3.28)

#### Solid Copper Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.38	(1.25)
Outer Conductor	0.42	(1.37)
Loop	0.80	(2.62)

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft	dB/100m
5	0.11	0.36
55	0.36	1.18
211	0.74	2.43
250	0.81	2.66
270	0.84	2.76
300	0.89	2.92
330	0.94	3.12
350	0.97	3.18
400	1.05	3.45
450	1.12	3.67
500	1.19	3.90
550	1.25	4.10
600	1.31	4.30
750	1.49	4.89
870	1.64	5.38
1000	1.75	5.74

Cable Type Number	Application	Construction
HFC715-CAP	Aerial	PE jacket
HFC715-CAP-188	Aerial	PE jacket with messenger
HFC715-CBP	Underground	PE jacket with flood compound

## HFC 750 Series Broadband Cable

### Cable Dimensions

	inches	mm
Center Conductor Diameter	0.167	(4.24)
Dielectric Diameter	0.678	(17.22)
Outer Conductor Thickness	0.036	(0.91)
Outer Conductor Diameter	0.750	(19.05)
Jacket Diameter	0.820	(20.83)
Jacket Thickness	0.035	(0.89)
Jacket Diameter for Buried Cable	0.830	(21.08)
Messenger Diameter	0.188	(4.78)

### Mechanical Specifications

	inches	cm
Minimum Bend Radius		
Unjacketed Cable	7	(17.8)
Jacketed Cable	6	(15.2)
Maximum Pulling Tension	675lb	(306kg)
Messenger Breaking Strength	3900lb	(1769kg)

### Electrical Specifications

Impedance, ohms	75 ± 2
Velocity of Propagation, %	89
Capacitance, pF/ft (pF/m)	15.3 (50.2)
dc Resistance, ohms/1000ft (km) at 68°F (20°C)	

#### Copper-clad Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.57	(1.87)
Outer Conductor	0.19	(0.68)
Loop	0.76	(2.49)

#### Solid Copper Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.37	(1.21)
Outer Conductor	0.19	(0.62)
Loop	0.56	(1.84)

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft dB/100m	
5	0.11	0.36
55	0.37	1.21
211	0.74	2.43
250	0.81	2.66
270	0.84	2.76
300	0.89	2.92
330	0.94	3.08
350	0.97	3.18
400	1.05	3.45
450	1.12	3.67
500	1.18	3.87
550	1.24	4.07
600	1.31	4.30
750	1.48	4.86
870	1.61	5.28
1000	1.74	5.71

Cable Type Number	Application	Construction
HFC750-CA	Aerial	Unjacketed
HFC750-CAP	Aerial	PE jacket
HFC750-CAP-188	Aerial	PE jacket with messenger
HFC750-CBP	Underground	PE jacket with flood compound

## HFC 860 Series Broadband Cable

### Cable Dimensions

	inches	mm
Center Conductor Diameter	0.203	(5.16)
Dielectric Diameter	0.828	(21.03)
Outer Conductor Thickness	0.016	(0.41)
Outer Conductor Diameter	0.860	(21.84)
Jacket Diameter	0.960	(24.38)
Jacket Thickness	0.050	(1.27)
Jacket Diameter for Buried Cable	.970	(24.63)
Messenger Diameter	0.188	(4.78)

### Mechanical Specifications

	inches	cm
Minimum Bend Radius		
Unjacketed Cable	NA	NA
Jacketed Cable	7	(17.8)
Maximum Pulling Tension	450 lb	(204kg)
Messenger Breaking Strength	3900 lb	(1768kg)

### Electrical Specifications

Impedance, ohms	75 ± 2
Velocity of Propagation, %	88
Capacitance, pF/ft (pF/m)	15.3 (50.2)
dc Resistance, ohms/1000ft (km) at 68°F (20°C)	

#### Copper-clad Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.406	(1.33)
Outer Conductor	0.318	(1.04)
Loop	0.724	(2.38)

#### Solid Copper Inner Conductor, ohms/1000ft (ohms/1000 km)

Inner Conductor	0.250	(0.82)
Outer Conductor	0.318	(1.04)
Loop	0.568	(1.86)

### Maximum Attenuation at 68°F (20°C)

Frequency, MHz	dB/100ft dB/100m	
5	0.09	0.30
55	0.32	1.05
211	0.64	2.10
250	0.70	2.30
270	0.72	2.36
300	0.76	2.49
330	0.80	2.63
350	0.83	2.72
400	0.88	2.89
450	0.95	3.12
500	1.00	3.28
550	1.06	3.48
600	1.10	3.61
750	1.24	4.07
870	1.41	4.62
1000	1.44	4.72

Cable Type Number	Application	Construction
HFC860-CAP	Aerial	PE jacket
HFC860-CAP-188	Aerial	PE jacket with messenger
HFC860-CBP	Underground	PE jacket with flood compound



Andrew CATV connectors use a three-piece connector design which provides independent seizing of the cable center and outer conductors. These connectors are designed for optimal performance in high bandwidth, two-way digital systems.

### Andrew CATV connectors

- Are designed specifically for Andrew cables and provide the optimum level of performance and reliability
- Meet the demands for today's digital services for the Internet and future telephony and data applications
- Are backward compatible with all industry standard cables
- Are designed and manufactured to the highest level of standards and use high quality materials and manufacturing processes
- Are compliant to all industry standards
- Are backed by over 60 years experience in RF design and manufacturing
- Are thoroughly tested and inspected – every connector goes through a stringent quality inspection process ensuring 100% reliability



### Materials and construction

- Manufactured from ASTM 6262 aluminum alloy with clear chromate conversion coating for excellent corrosion resistance
- Contact pins are brass with bright acid tin plating, providing excellent RF connectivity
- Ultraviolet and ozone resistant EPDM O-rings used for maximum durability
- O-ring seals at all joints provide maximum environmental protection

### Features

- Provides independent seizing of cable's center and outer conductors
- Eliminates the blind entry associated with most two-piece connectors, giving the installer full view of the cable's center conductor insertion into connector seizing mechanism
- Locates the support sleeve in the main body of the connector, minimizing the amount of "pull back" required to insert the cable into the connector
- Reduces possibility of corrosion – domed insulator at KS interface prevents moisture from collecting at the contact pin
- Permits connector re-use and prevents connector "lock up" with actuating mechanism that allows easy release of cable upon connector disassembly
- Eases identification with permanently marked part numbers

### Specifications

#### General

Meet SCTE interface specifications

Bandwidth:

dc to 1 GHz

Nominal Impedance:

75 ohms



# Andrew Trunk and Distribution Connectors for CATV cable

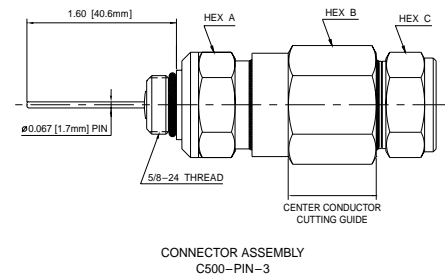
## 3-Piece Pin Connector

Andrew CATV Cable (Compatible with CommScope PIII and Times Fiber T-10)

	Type No.	Center Conductor	Outer Conductor	Body Hex (A)	Main Nut Hex (B)	Back Nut Hex (C)
HFC 500	C500-PIN-3	.109	.500	1-1/8	1-1/8	1
HFC 625	C625-PIN-3	.137	.625	1-1/4	1-1/4	1-1/8
HFC 750	C750-PIN-3	.167	.750	1-3/8	1-3/8	1-1/4

Andrew HFC (Compatible with CommScope-QR)

HFC 540	C540-PIN-3	.124	.540	1-1/8	1-1/4	1-1/8
HFC 715	C715-PIN-3	.166	.715	1-5/16	1-5/16	1-5/16
HFC 860	C860-PIN-3	.203	.860	1-1/2	1-5/8, dia. with 1-1/2 flats	1-1/2



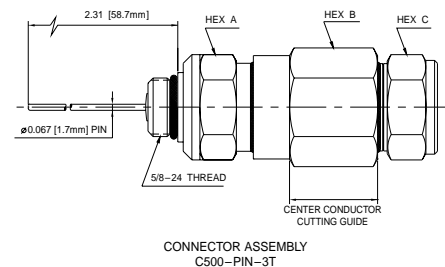
## 3-Piece Long Pin Connector

Andrew CATV Cable (Compatible with CommScope PIII and Times Fiber T-10)

	Type No.	Center Conductor	Outer Conductor	Body Hex (A)	Main Nut Hex (B)	Back Nut Hex (C)
HFC 500	C500-PIN-3T	.109	.500	1-1/8	1-1/8	1
HFC 625	C625-PIN-3T	.137	.625	1-1/4	1-1/4	1-1/8
HFC 750	C750-PIN-3T	.167	.750	1-3/8	1-3/8	1-1/4

Andrew CATV Cable (Compatible with CommScope-QR)

HFC 540	C540-PIN-3T	.124	.540	1-1/8	1-1/4	1-1/8
HFC 715	C715-PIN-3T	.166	.715	1-5/16	1-5/16	1-5/16
HFC 860	C860-PIN-3T	.203	.860	1-1/2	1-5/8, dia. with 1-1/2 flats	1-1/2



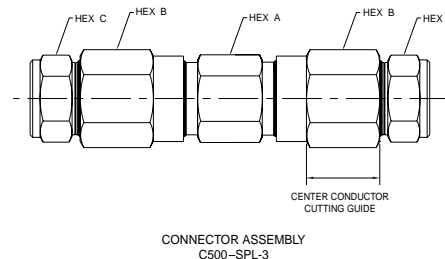
## 3-Piece Splice Connector

Andrew CATV Cable (Compatible with CommScope PIII and Times Fiber T-10)

	Type No.	Center Conductor	Outer Conductor	Body Hex (A)	Main Nut Hex (B)	Back Nut Hex (C)
HFC 500	C500-SPL-3	.109	.500	1-1/8	1-1/8	1
HFC 625	C625-SPL-3	.137	.625	1-1/4	1-1/4	1-1/8
HFC 750	C750-SPL-3	.167	.750	1-3/8	1-3/8	1-1/4

Andrew CATV Cable (Compatible with CommScope-QR)

HFC 540	C540-SPL-3	.124	.540	1-1/8	1-1/4	1-1/8
HFC 715	C715-SPL-3	.166	.715	1-5/16	1-5/16	1-5/16
HFC 860	C860-SPL-3	.203	.860	1-1/2	1-5/8, dia. with 1-1/2 flats	1-1/2



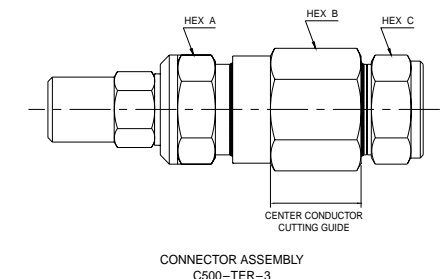
## 3-Piece Cable Terminator

Andrew CATV Cable (Compatible with CommScope PIII and Times Fiber T-10)

	Type No.	Center Conductor	Outer Conductor	Body Hex (A)	Main Nut Hex (B)	Back Nut Hex (C)
HFC 500	C500-TER-3	.109	.500	1-1/8	1-1/8	1
HFC 625	C625-TER-3	.137	.625	1-1/4	1-1/4	1-1/8
HFC 750	C750-TER-3	.167	.750	1-3/8	1-3/8	1-1/4

Andrew CATV Cable (Compatible with CommScope-QR)

HFC 540	C540-TER-3	.124	.540	1-1/8	1-1/4	1-1/8
HFC 715	C715-TER-3	.166	.715	1-5/16	1-5/16	1-5/16
HFC 860	C860-TER-3	.203	.860	1-1/2	1-5/8, dia. with 1-1/2 flats	1-1/2



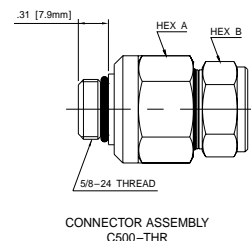
## Feed Thru Connectors

Andrew CATV Cable (Compatible with CommScope PIII and Times Fiber T-10)

	Type No.	Center Conductor	Outer Conductor	Body Hex (A)	Main Nut Hex (B)
HFC 500	C500-THR	.109	.500	1-1/8	1
HFC 625	C625-THR	.137	.625	1-1/4	1-1/8

Andrew CATV Cable (Compatible with CommScope-QR)

HFC 540	C540-THR	.124	.540*	1-1/4	1-1/8
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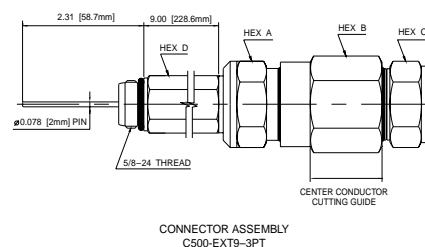


## Andrew Trunk and Distribution Connectors for CATV cable

### 3-Piece 9" Extension Long Pin Connector

Andrew CATV Cable (Compatible with CommScope PIII and Times Fiber T-10)

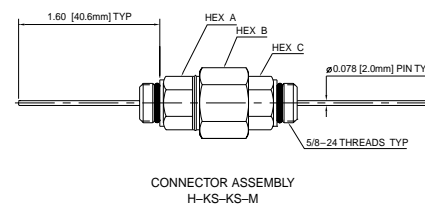
	Type No.	Center Conductor	Outer Conductor	Body Hex (A)	Main Nut Hex (B)	Back Nut Hex (C)
HFC 500	C500-EXT9-3PT	.109	.500	1-1/8	1-1/8	1
HFC 750	C750-EXT9-3PT	.167	.750	1-3/8	1-3/8	1-1/4



## Andrew Trunk and Distribution Adapters

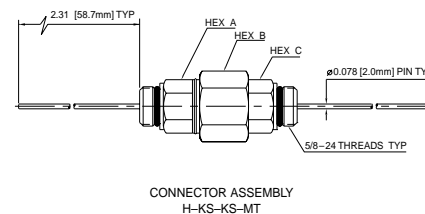
### Rotational Housing to Housing Pin Adapter

Type No.	Body Hex (A)	Main Nut Hex (B)	Back Nut Hex (C)
H-KS-KS-M	3/4	1-1/8	3/4



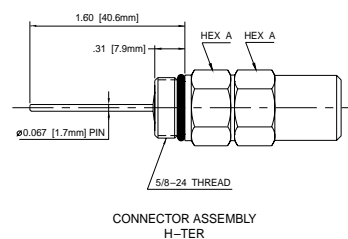
### Rotational Housing to Housing Long Pin Adapter

Type No.	Body Hex (A)	Main Nut Hex (B)	Back Nut Hex (C)
H-KS-KS-MT	3/4	1-1/8	3/4



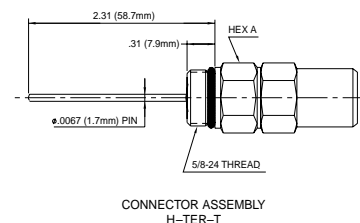
### Housing Pin Terminator Adapter

Type No.	Hex (A)
H-TER	3/4



### Housing Long Pin Terminator Adapter

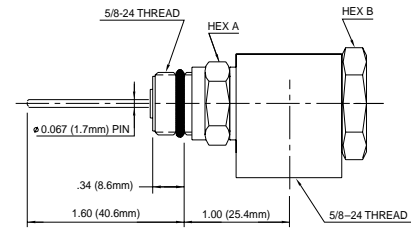
Type No.	Hex (A)
H-TER-T	3/4



# Andrew Trunk and Distribution Adapters

## 90 Degree Adapter

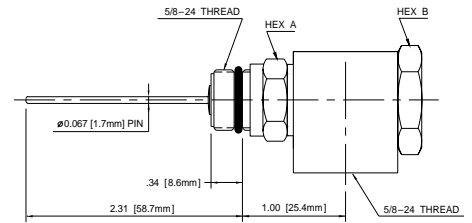
Type No.	Hex (A)	Hex (B)
CA-90-P	.75	1.00



CONNECTOR ASSEMBLY  
CA-90-P

## 90 Degree Long Pin Adapter

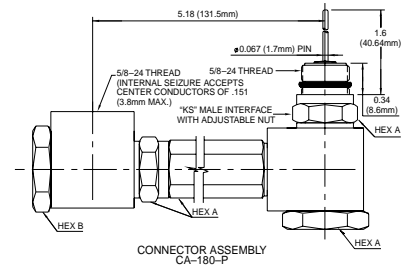
Type No.	Hex (A)	Hex (B)
CA-90-PT	.75	1.00



CONNECTOR ASSEMBLY  
CA-90-PT

## 180 Degree Adapter

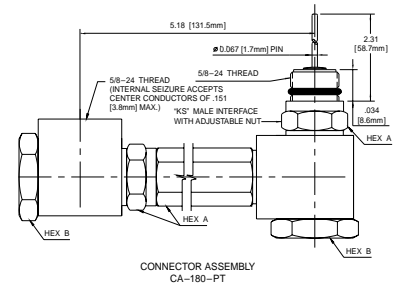
Type No.	Hex (A)	Hex (B)
CA-180-P	.75	1.00



CONNECTOR ASSEMBLY  
CA-180-P

## 180 Degree Long Pin Adapter

Type No.	Hex (A)	Hex (B)
CA-180-PT	.75	1.00



CONNECTOR ASSEMBLY  
CA-180-PT



Customer Service Center – Call Toll-Free North America 1-888-889-9485 • Brazil 0800-704-4175 • Visit us at: [www.andrew.com](http://www.andrew.com)

## Andrew Corstrip Tools

Type No.	Fits Andrew cable Type No.	Type No.	Fits Andrew cable Type No.	Type No.	Fits Andrew cable Type No.
<b>A500CT</b>	HFC500-CA HFC500-CAP HFC500-CAP-109 HFC500-CBP HFC500-CAR	<b>A625CT</b>	HFC625-CA HFC625-CAP HFC625-CAP-109 HFC625-CBP	<b>A750CT</b>	HFC750-CA HFC750-CAP HFC750-CAP-188 HFC750-CBP
				<b>A860CT</b>	HFC860-CAP HFC860-CAP-188 HFC860-CBP
<b>A540CT</b>	HFC540-CAP HFC540-CAP-109 HFC540-CBP HFC540-CAR	<b>A715CT</b>	HFC715-CAP HFC715-CAP-188 HFC715-CBP		

Andrew provides CATV installers with the fastest and most precise Corstrip tools in the industry. The high quality steel in the coring bits offers more cuts per dollar. These tools feature an adjustable center conductor stop for accurate center conductor lengths, eliminating guesswork and measuring. An inspection window visually confirms progress and completion. The stripping blade offers a spare cutting edge, trims the outer conductor on a taper, and eliminates the possibility of flaring and O-ring damage.

Andrew Corstrip tools strip the polyethylene jacket, core the dielectric, and strip the aluminum outer conductor on a taper.

### Center Conductor Cleaner

The fastest and safest way to remove dielectric and adhesive from all coaxial cables from .412 through super trunk. The scrapers are reversible and can be sharpened with a fine file. The handle is made of plated spring steel and has a comfortable plastic coating. Weighs. 5 oz.

Type No.	A190CC
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## Andrew CATV System Warranty

- ***Andrew HFC Broadband and CATV system products feature the following warranties:***



- ***Andrew CATV connectors have a one year warranty***
- ***Warranty periods are extended to 3 years for cable and connectors when installers have been trained by the Andrew Institute***

Limitations and exclusions may apply. Contact Andrew for full warranty details and provisions.

## Weights and Dimensions for HFC

CABLE TYPE NUMBER	CABLE		CABLE LENGTH PER REEL		REEL DIMENSIONS						REEL WEIGHT		LAGGING WEIGHT	
	lb/1000ft	kg/1000m	ft/reel	m/reel	(in)			(cm)			lb	kg	lb	kg
HFC500-CA	74	110	2400	732	35	18	18	88.9	45.7	45.7	77.2	35	23.15	10.5
HFC500-CAP	94	140	2400	732	35	18	18	88.9	45.7	45.7	77.2	35	23.15	10.5
HFC500-CAP-109	135	201	2400	732	50	24	20	127.0	61.0	50.8	163.2	74	33.08	15.0
HFC500-CBP	98	146	2400	732	35	18	18	88.9	45.7	45.7	77.2	35	23.15	10.5
HFC500-CAR	94	140	2400	732	35	18	18	88.9	45.7	45.7	77.2	35	23.15	10.5
HFC540-CAP	88	131	3700	1128	42	24	24	106.7	61.0	61.0	110.3	50	31.97	14.5
HFC540-CAP-109	128	190	3700	1128	42	24	24	106.7	61.0	61.0	110.3	50	31.97	14.5
HFC540-CBP	92	137	3700	1128	42	24	24	106.7	61.0	61.0	110.3	50	31.97	14.5
HFC540-CAR	88	131	3700	1128	42	24	24	106.7	61.0	61.0	110.3	50	31.97	14.5
HFC625-CA	114	170	2400	732	42	18	16.5	106.7	45.7	41.9	119.1	54	28.67	13.0
HFC625-CAP	139	207	2400	732	42	18	16.5	106.7	45.7	41.9	119.1	54	28.67	13.0
HFC625-CAP-109	179	266	2400	732	—	—	—	—	—	—	—	—	—	—
HFC625-CBP	143	213	2400	732	42	18	16.5	106.7	45.7	41.9	119.1	54	28.67	13.0
HFC715-CAP	140	208	3000	915	50	24	20	127.0	61.0	50.8	163.2	74	33.08	15.0
HFC715-CAP-188	226	336	3000	915	—	—	—	—	—	—	—	—	—	—
HFC715-CBP	144	214	3000	915	50	24	20	127.0	61.0	50.8	163.2	74	33.08	15.0
HFC750-CA	160	238	2500	762	50	24	24	127.0	61.0	61.0	119.1	54	35.28	16.0
HFC750-CAP	194	289	2500	762	50	24	24	127.0	61.0	61.0	119.1	54	35.28	16.0
HFC750-CAP-188	273	406	2500	762	—	—	—	—	—	—	—	—	—	—
HFC750-CBP	199	296	2500	762	50	24	24	127.0	61.0	61.0	119.1	54	35.28	16.0
HFC860-CAP	205	305	2700	823	50	24	24	127.0	61.0	61.0	209.5	95	32.41	14.7
HFC860-CAP-188	298	443	2700	823	—	—	—	—	—	—	—	—	—	—
HFC860-CBP	210	312	2700	823	50	24	24	127.0	61.0	61.0	209.5	95	32.41	14.7



All reels have hole o.d. 2" in the flange parallel with the hub o.d and in the external flange slot width 2" and 18" longer, allowing the connector connection in the end of the cable at electrical test pit.

## Weights and Dimensions for Drop Cables (1000 ft Standard Reels)

Cable Type	Flange (in)	Drum Diameter (in)	Transverse (in)	Flange (cm)	Drum Diameter (cm)	Transverse (cm)	Lb per 1,000 ft	Kg per 305 m	Total weight (cable and reel)	
									Lb	Kg
Series 6 PVC and Flooded	14	6	11	36	16	27	33	15	38	17
Series 6 Messenger	15	6	13	38	16	32	45	20	51	23
Series 6 Tri-shield	14	6	11	36	16	27	35	16	40	18
Series 6 Tri-shield Messenger	15	6	13	38	16	32	47	21	53	24
Series 11 PVC and Flooded	18	6	12	46	16	31	68	31	75	34
Series 11 Messenger	19	6	13	48	16	33	86	39	94	43
Series 11 Tri-shield	18	6	12	46	16	31	72	33	80	36
Series 11 Tri-shield Messenger	19	6	13	48	16	33	90	41	99	45
Series 59 PVC and Flooded	14	6	10	36	16	25	33	15	38	17
Series 59 Messenger	15	6	12	38	15.2	31	45	20	50	22
Series 59 Tri-shield	14	6	10	36	16	25	35	16	40	18
Series 59 Tri-shield Messenger	15	6	12	38	16	31	47	21	52	24



## Meeting the demand for communications expertise around the world . . .

Years of experience have demonstrated how installation issues are critical to long term system performance. As the demand for communications continues to grow, so too does the need for product knowledge and expertise to ensure quality installation, reliable coverage and peak performance. Recognizing this need, Andrew offers cutting-edge training on a continual basis to address new technologies, products, tools and improved installation methods.

The Andrew Institute has grown dramatically. Since it's beginning in 1993, more than 30,000 participants have attended Andrew Institute training worldwide. Recognized around the world as the industry leader, Andrew Institute provides quality, specialized training to customers worldwide.

Designers and planners turn to Andrew for communication system needs, whether it's product offerings or services, including the benefits from installation training. An expanded curriculum offering can help assure the success of system build outs. Andrew RF Communications Technology Training combined with our quality products delivers superior system performance, greater reliability, and improved cost control options.



### CATV Installation Training

CATV Installation Training is an integrated element of every CATV package. It provides a consistent, proven approach to CATV installation appropriate for audiences with all levels of experience – engineers, managers, technicians, and installers.

#### Course Outline

- **RF Basics:**  
communication fundamentals, wave dimensions, information transmission methods, coaxial cable and signal attenuation.
- **Coaxial Cable:**  
types, construction, features and benefits, transporting and storing.
- **The Basic CATV Distribution System:**  
components and their relationships to one another; plant layout.
- **Plant Installation:**  
overview of steps and installation flowcharts for pre-installation, aerial installation, subsurface installation, and duct and conduit.
- **Quality Installation Practices:**  
keys to customer satisfaction and the installers' role in assuring quality system performance.
- **Connectors and Connectorization:**  
types, uses, and mechanics.
- **Hands-on Activities:**

*Connectorization* – preparing tools; connectorization techniques for pin connectors, adapters, and splicing.

*Installation Process for Aerial Cable Placement* – reading the system design, preparing the site, installing messenger cable and coaxial cable, setting sag and tension, cable installation, expansion loops, and overlashing existing cable.

*Installation Process for Subsurface Cable Placement* – trenching, direct plowing (*pull-plowing*), vibratory plowing, boring, pulling cable through conduit/duct, splicing configurations, troubleshooting, and testing.

**Professional installation + Quality products =  
cost effective, reliable system performance**