



2010 ANNUAL REPORT

STATEMENT OF CAPITAL EXPENDITURES AND MAJOR EQUIPMENT EXPENDITURES

AUGUST 30, 2010

Statement of Major Capital Equipment and Expenditures

Actual 2009

Funds were designated for the purchase of Digital converters in the amount of \$110,020 and High Definition converter boxes in the amount of \$687,150. An additional \$125,650 was designated for Digital Video Recorders (DVR) and \$1,852,125 for HD DVRs. Total projected converters expenditures are \$2,774,945.

Projected 2010

Comcast plans to designate approximately \$305,450 for network extensions and rebuilding of the internal wiring within designated multi dwelling units in the City of Alexandria. In addition, funds will be designated for the purchase of Digital converters in the amount of \$75,000 and High Definition converter boxes in the amount of \$281,275. Funds in the amount of \$1,520,150 will be designated for HD DVRs. Total projected converter expenditures are \$2,181,875.



2010 ANNUAL REPORT

CONSTRUCTION PLAN

AUGUST 30, 2010

CONSTRUCTION UPDATE

Through June 30, 2010 the construction department has designed, constructed and activated .11 miles of cable plant that included both coaxial and fiber hardline.

The Headend has been working on the deployment of additional HD channels for the customers

DOCSIs 3.0 has been implemented providing 105 Mpbs Internet service

Video On Demand hours were increased to 20,000 hours

Deployment of Comcast Digital Voice service continues to grow.



2010 ANNUAL REPORT

COMCAST OFFICERS AND BOARD OF DIRECTORS

AUGUST 30, 2010

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\$17.11

13.972.800

3,081,900

+0.08

\$16.06

Compast Investor Relations Home > Corporate Governance > Director and Executive Officer Ownership

Director and Executive

Officer Ownership

Executive Officers

Board of Directors

Committee Composition and

Charters

Audit Committee Chaner

Compensation **Committee Charter**

Governance and **Directors Nominating** Committee Charter

Finance Committee Charter

Articles of Incorporation

By-Laws

Corporate Governance Guidelines

Code of Ethics and **Business** Conduct

Director and Executive Officer Ownarehig

Statement on Political and Trade Association Activity

Corporate Responsibility Report

Contact the Board

Shares Beneficially Owned

The table below indicates the number of shares beneficially owned by directors and officers as of February 28, 2009, as detailed in the Comcast Corporation's 2009 Proxy Statement. Please see the 2009 Proxy Statement for a more detailed explanation of these holdings

	Table		01 4		Last Trade \$16.06
	Total Sharee Beneficially Owned	Class A	Claas A Special	Class B	08/31/10 2:36 PM ET
	Michael J. Angelakis	356,472	-	• ·	: Detailed Quotes
:	S. Decker Anstrom	75,011	2,400	•	
	Kenneth J. Bacon	70,504	-	•	Tools
	Arthur R. Block	413,310	963, 157	•	
	Sheldon M. Bonovitz	59,864	209,323		Briefcase
i	Edward D. Breen	40,442	-	•	Email Alerts
	Julian A. Brodsky	443,431	5,301,325	•	RSS Feeds
:	Slephen B. Burke	1,976,769	4,536,509	-	Mobile Investor
	David L. Cohen	1,817,433	759,956	•	Download Library
	Joseph J. Collins	151,442			
	J. Michael Cook	83,619	3,450	-	Comcast's New
i	Gerald L. Hassell	16,014	-	-	Content Joint
	Jeffrey A. Honickman	84,155	10,192	-	Venture
	Brian L. Roberts	3,354,083	22,570,731	9,444,375	Get More Information
	Raiph J. Roberts	2,481,726	6,189,616	-	
i	Dr. Judith Rodin	72,740	-	•	
i	Michael Sovem	81,186	•	-	What's New
:	All directors and executive officers as a group (18 persons)	12,0Q8,969	41,419,648	9,444,375	Form 4 (Statement, Of Changes Of Beneficial

Non-Employee Director Stock Ownership Policy

Last Revised: February 23, 2010

Purpose:

To provide a guideline for the ownership of Comcast Corporation Common Stock by non-employee directors of the Company.

Policy Statement:

It is the Company's policy to require that all non-employee directors of Comcast Corporation meintain a significant ownership position in Comcast Corporation publicly traded Common Stock, as defined in the guideline set forth herein.

I. Ownership Guideline

Non-employee directors will be required to own Comcast Corporation Common Stock equal in value to at least five (5) times a director's annual retainer.

II. Ownership Defined

Ownership (for purposes of meeting the guideline) will be determined by summing the following amounts:

i. 100% of the market velue of stock owned (1) directly by the non-employee director or his or her spouse, (2) jointly by the non-employee director and his or her spouse and/or his or her children, and (3) indirectly by a trust for the benefit of the non-employee director, his or her spouse and/or his or her minor children

ii. 100% of the market value of the non-employee director's Oeferred Stock Units under the Company's Deferred Stock Option Plan

iii. 80% of the market value of the non-employee director's Stock Fund under the Company's Deferred Compensation Plan

w. 60% of the difference between the market price and the exercise price of the non-employee director's vested stock options under the Company's Stock Option Plans. (Note: A sale of a call covered by shares or vested options will be deemed a sale of the underlying shares or options and will therefore reduce the

Last Trade 08/31/10 2:36 PM ET Detailed Quotes Volume Change

Last Trade

A A font

CMCSA

Volume

Change

s New

Statement, Of Of Beneficial Ownership) D8/04/2010

Comcast Declares Quarterly Dividend 07/26/2010

Q2 2010 Comcast Corporation Earnings Conference Call 07/28/2010

View All

Comcast Investor Relations - Director and Executive Officer Ownership

 Our Company
 number of owned WRFR

 Stock Performance
 Corporate

 Shareholder Services
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 Investor News
 Request

 Events & PresentationsIII. Valuation
 Dg& Map

number of owned SR&R&Sor vested options for purposes of this PolicyTail Alerts Corporate Governance RSS Feeds

v. 60% of the mation salue effected wissted and defended under the Climbranyle Request lowestor Information Privacy Statement III. Valuation Date Man Press Room

Ownership as of any date for purposes of determining compliance with the guideline, will be calculated based on the closing price of the applicable class of stock as of the trading date prior to the date of determination.

IV. Grace Period

A non-employee director will be allowed a grace period to meet the guideline in full, from the date of initial election or appointment to the Board of Directors through the fifth December 31st thereafter, as set forth below (the "Grace Period"). For non-employee directore serving as of the original effective date of this Policy, November 1, 2003 shall be deemed to be such date. The Grace Period may be extended, and the required minimum holdings percentage may be reduced, at the discretion of the Governance and Directors Nominating Committee.

Non-employee directors may satisfy the guideline in part over the course of the Grace Period, as follows:

December 31st Following Initial Election or Appointment	Required Minimum Holdings as a Percent of Guideline
1st	20%
2nd	40%
3rd	60%
4th	80%
5lh and Thereafter	100%

V. Compliance

A non-employee director will annually certify whether or not he or she is in compliance with this Policy both (i) as of December 31 each year and (ii) as of each date (if any) during each year on which the nonemployee director sold or otherwise disposed of stock. Certifications will be provided to the Cable Division's Vice President - Compensation and Benefits using the Comcast Corporation Non-Employee Director Stock Ownership Policy Compliance Certification Form. A non-employee director is not required to purchase or otherwise acquire shares to come in to compliance with this Policy. The Governance and Directors Nominating Committee may determine that a non-employee director shall be deemed to be in compliance with this Policy in cases where any non-compliance occurs as a result: (a) solely or primarily of a decline of the market price of the stock; (b) of transections made pursuant to hardship exceptions; (c) of a bona fide gift; and/or (d) of a diversification election made with respect to stock deferred under the Company's Restricted Stock Plan.

VI. Non-Compliance

A non-employee director will not be permitted to sell stock until his or her holdings meet the applicable minimum requirement, and then only to the extent that the director's remaining holdings do not fall below the applicable minimum requirement. Bona fide gifts and diversification elections made with respect to stock deferred under the Company's Restricted Stock Plan shall not be deemed to be dispositions hereunder.

VII. Hardship Provision

Hardship exceptions may be made at the discretion of the Chair of the Governance and Directors Nominating Committee.

VIII. Administration and Interpretation

The Governance and Directors Nominating Committee reserves the right to interpret, change, amend, modify or terminate this Policy at any time.

Back to Top

Employee Stock Ownership Policy

Adopted: May 19, 2010

Purpose:

To provide a guideline for the ownership of Concest Corporation Common Stock by the Company's named executive officers under Securities and Exchange Commission rules, Section 16 executive officers and non-executive employee directors.

Policy Statement:

It is the Company's policy to require that its named executive officers, Section 16 executive officers and non-executive employee directors each maintain a significant ownership position in Comcast Corporation Common Stock, as defined in the applicable guideline set forth herein.

t. Ownership Guideline

The named executive officers, Section 16 executive officers and non-executive employee directors will be expected to own Concest Corporation Common Stock based on the following applicable guideline:

Position

Guideline

Chief Executive Officer, President and Chairman of the At least 5 times base salary Board of Directors

Comcast Investor Relations - Director and Executive Officer Ownership

Chief Operating Officer; Corporate Division Executive Vice Presidents; Non-executive employee directors All other named executive officers and Section 16 executive officers

At least 3 times base salary

At least 1.5 times base salary

Additional employees or categories of employees may be designated as being subject to this Policy from time to time by the Governance and Directors Nominating Committee of the Board of Directors.

II. Ownership Defined

Ownership (for purposes of meeting the applicable guideline) will be determined by summing the following amounts:

i. 100% of the market value of Comcast Corporation Common Stock owned(1) directly by the employee or his or her spouse, (2) jointly by the employee and his or her spouse and/or his or her children, and (3) indirectly by a trust for the benefit of the employee, his or her spouse and/or his or her minor children.

ii. 100% of the market value of the employee's Deferred Stock Units under the Company's Deferred Stock Option Plan

iii. 100% of the market value of Comcast Corporation Common Stock credited to the employee's account under the Company's Employee Stock Purchase Plan. (Note: Employees are required under this Policy to retain shares of Comcast Corporation Common Stock credited to his or her brokerage account under the Employee Stock Purchase Plan for a period of one hundred eighty (180) days from the date credited. Thereafter, any such shares may be disposed in accordance with law and this Policy).

iv. 60% of the market value of the employee's Stock Fund under the Company's Deferred Compensation Plan.

v. 60% of the difference between the market price and the exercise price of the employee's vested stock options under the Company's Stock Option Plans. (Note: A sale of a call covered by shares or vested options will be deemed a sale of the underlying shares or options and will therefore reduce the number of owned shares or vested options for purposes of this Policy).

vi. 60% of the market value of Comcast Corporation Common Stock owned in the Company's Retirement-Investment (401(k)) Plan

vii. 60% of the market value of Comcast Corporation Common Stock vested and deferred under the Company's Restricted Stock Plan.

III. Veluation Date

Ownership as of any date for purposes of determining compliance with the applicable guideline will be calculated based on the closing price of the applicable class of Corncast Corporation Common Stock es of the trading date prior to the date of determination. For this purpose, the closing price of the Class B Common Stock will be deemed to be the closing price of the Class A Common Stock or Class A Special Common Stock, whichever is lower.

IV. Grace Period

A subject employee will be allowed a grace period to meet the applicable guideline in full, from the date the employee first becomes subject to the Policy through the sixth December 31st thereafter, as set forth below (the "Grace Period"). The Grace Period may be extended, and the required minimum holdings percentage indicated below may be reduced, at the discretion of the Governance and Directors Nominating Committee

Subject employees may satisfy the guideline in part over the course of the Grace Period, es follows:

December 31st Following Date Employee First Becomes Subject to Policy	Required Minimum Holdings as a Percent of Guidsline
2nd	20%
3rd	30%
4th	50%
5th	70%
6th and thereafter	100%

V. Compliance

A subject employee will annually certify whether or not he or she is in compliance with this Policy both: (i) as of December 31 prior to the year of the year in which the certification is made; end (ii) as of each date (if any) during the year prior to the year in which the certification is made on which the employee sold or otherwise disposed of stock. Certifications will be provided to the Cable Division's Vice President - Compensation and Benefits using the Comcast Corporation Employee Stock Ownership Policy Compliance Certification Form. A subject employee is not required to purchase or otherwise acquire shares to come in to compliance with this Policy. The Governance and Directors Nominating Committee may determine that a subject employee shall be deemed to be in compliance with this Policy in cases where any non-compliance occurs as a result: (a) solely or primarity of a decline of the market price of the stock; (b) of transactions made pursuant to hardship exceptions; (c) of a bona fide gift; and/or (d) of a diversification election made with respect to stock deferred under the Company's Restricted Stock Plan.

VI. Non-Compliance

If a subject employee is not in compliance with this Policy, then he or she will not be permitted to self or otherwise dispose of stock until hie or her holdings meet the applicable minimum requirement, and then only

Comcast Investor Relations - Director and Executive Officer Ownership

to the extent that the employee's remaining holdings do not fall below the applicable minimum holding requirement. Bona fide gifts and diversification elections made with respect to stock deferred under the Company's Restricted Stock Plans shall not be deemed to be dispositions hereunder.

VII. Hardship Provision

Hardship exceptions, upon the recommendation of senior management, may be made: (i) with respect to named executive officers, by the Chair of the Governance and Directors Nominating Committee; and (ii) with respect to all other subject employees, by the Corporate Division Executive Vice President having responsibility for administration.

VIII. Administration and Interpretation

The Governance and Directors Nominating Committee reserves the right to interpret, change, amend, modify or terminate this Policy at any time.

Back to Top

Comcast Executive Officers

Brian L. Roberts*

Chairman and CEO, Comcast Corporation

Brian L. Roberts, 51, has served as a director since March 1988, as our President since February 1990, as our Chief Executive Officer since November 2002 and as our Chairman of the Board since May 2004. As of December 31, 2009, Mr. Roberts had sole voting power over approximately 33% of the combined voting power of our two classes of voting common stock. He is a son of Mr. Ralph J. Roberts. Mr. Roberts is also a director of Comcast Holdings Corporation and the National Cable and Telecommunications Association, the principal trade association of the cable television industry, and he is Chairman of CableLabs, the cable industry's research and development organization.

"Brian Roberts does not participate in any committees.

Michael J. Angelakis

Chief Financial Officer

Comcast Corporation

Michael J. Angelakis serves as Chief Financial Officer for Comcast Corporation, one of the nation's leading providers of entertainment, information and communication products and services. Mr. Angelakis is responsible for all corporate development, strategic planning, investor relations, internal reporting, external reporting, taxation, and other financial administrative matters at Comcast Corporation, as well as other oversight responsibilities.

Prior to joining Comcast in 2007, Mr. Angelakis served as Managing Director and as a member of the Management and Investment Committees of Providence Equity Partners, one of the leading private equity firms investing in communications and media companies around the world. Before joining Providence Equity Partners in 1999, Mr. Angelakis was President and Chief Executive Officer of State Cable TV Corporation and Aurora Telecommunications, LLC. He also served as Vice President at Manufacturers Hanover Trust Company in New York, where he oversaw one of the bank's media and communications portfolios. Additionally, Mr. Angelakis spent several years in London developing Manufacturers Hanover's acquisition finance and merchant banking activities throughout Western Europe. In 2009, Mr. Angelakis was named among America's Best CFOs by *Institutional Investor* magazine for the second consecutive year.

Mr. Angelakis is a graduate of Babson College and the Owner/President Management Program at the Harvard Business School. He serves as a Trustee of Babson College and is on the board of Big Brothers Big Sisters of America.

Stephen B. Burke

Chief Operating Officer, Comcast Corporation

Steve Burke joined Comcast in 1998 as President of Comcast Cable and has been a driving force in the Company's growth from a cable industry leader to one of the nation's leading providers of entertainment, information and communication products and services. Under Mr. Burke's leadership, Comcast has become the largest cable company, largest residential internet service provider, third largest phone company in America and recently launched a wireless business. In addition to overseeing the Company's products and services, Mr. Burke oversees Comcast's programming networks, advertising and Comcast Interactive Media.

Since his arrival at Comcast, Mr. Burke has led Comcast to leadership in multiplatform video entertainment distribution, including the Company's industry changing video on demand platform and online video offerings. Comcast's On Demand service, which was introduced in 2003, now offers more than 17,000 choices a month and has had over 15 billion customer views since launch. Mr. Burke has been praised for leading the highly successful integration of AT&T Broadband with Comcast.

Before joining Comcast, Mr. Burke served with The Walt Disney Company as President of ABC Broadcasting. Mr. Burke joined The Walt Disney Company in January 1986, where he helped to develop and found The Disney Stores. In 1992, he moved to Euro Disney S.A., where, as President and Chief Operating Officer, he helped to lead a comprehensive restructuring effort.

Mr. Burke serves on the Board of Directors for Berkshire Hathaway Inc. and J.P. Morgan Chase & Co., and he is the Chairman of The Children's Hospital of Philadelphia – rated the #1 children's hospital by U.S. News & World Report in 2009.

Mr. Burke, 52, is a Phi Beta Kappa graduate of Colgate University and earned an MBA from the Harvard Business School. He lives in Haverford, PA, with his wife and five children.

David L. Cohen

Executive Vice President Comcast Corporation

David L. Cohen is Executive Vice President of Comcast Corporation, one of the nation's leading providers of entertainment, information and communication products and services. Mr. Cohen has a broad portfolio of responsibilities, including corporate communications, government affairs, public affairs, corporate administration, and serves as senior counselor to the CEO. Before assuming this position in July of 2002, Mr. Cohen served as a partner in and Chairman of Ballard Spahr Andrews & Ingersoll, LLP, one of the 100 largest law firms in the country.

A native of New York, Mr. Cohen graduated from Swarthmore College in 1977 with a BA and with a JD from the University of Pennsylvania Law School (summa cum laude) in 1981. From January 1992 to April 1997, Mr. Cohen served as Chief of Staff to the Honorable Edward G. Rendell, the Mayor of the City of Philadelphia. As detailed in the book *A Prayer for the City*, written by Pulitzer-Prize winning author Buzz Bissinger, Mr. Cohen played a critical coordinating role in significant budgetary and financial issues, in economic development activities, in collective bargaining negotiations, and in a wide variety of other policy and operational issues relating to the city.

Mr. Cohen serves as Chairman of both the Board of Directors and the Executive Committee of the Greater Philadelphia Chamber of Commerce, and as a member of the CEO Council for Growth. Mr. Cohen also serves as Chairman of the Trustees of the University of Pennsylvania and its Executive Committee. Mr. Cohen also serves as a member of the Trustee Board and the Executive Committee of Penn Medicine (an umbrella governance structure overseeing both the University of Pennsylvania Health System and the University's School of Medicine). Mr. Cohen serves as a national trustee of City Year and is Chair of the Governance Committee and a member of the Executive Committee. He also serves on the national board of the National Urban League and as a member of the Corporate Advisory Board of the National Council of La Raza. In addition, Mr. Cohen serves as the Vice Chair of the Board of Directors of the Jewish Federation of Greater Philadelphia. Mr. Cohen is a former Chair of the United Way of Southeastern Pennsylvania, former Co-Chair of the 2003 Resource Development Campaign for the United Way of Southeastern Pennsylvania, former Chair of the Southeastern Pennsylvania Chapter of the American Red Cross, former Co-Chair of Philadelphia 2000, the Host Committee for the 2000 Republican National Convention, and the former Co-Chair of the Host Committee for the National Conference of Volunteerism and Service.

Mr. Cohen has received numerous awards for his civic and charitable activities, including the Americanism Award of the Anti-Defamation League (1993), the Philadelphia Commission on Human Relations Clarence Farmer Service Award (1997), the Community Legal Services Champions Award (1997), the Philadelphia Bar Medal (1997), the Variety Club Gold Heart Humanitarian Award (1998), the Philadelphia Hospitality Vision for Philadelphia Award (1999), the American Red Cross Citizen of the Year Award (1999), the Police Athletic League Award (2001), the United Way's Citizen Volunteer of the Year Award (2002), the City Year Philadelphia Lifetime of Idealism Award (2004), National Cable Television Association, Vanguard Award for Leadership and Impact in the Cable Industry (2005), the American Red Cross Celebration of Volunteers Award (2006), the Association of Cable Communicators President's Award (2007), the President's Volunteer Service Award (2007), MS Society Hope Award (2007), the Drexel Business Leader of the Year Award (2008), the National Urban League of Philadelphia Business Leader of the Year Award (2008), the Philadelphia Business Journal Minority Business Leader Award (2009), and the Annual Northwest Philadelphia Community Appreciation Awards Trailblazing Footsteps Award (2009). Mr. Cohen also was awarded an Honorary Doctor of Laws degree from Drexel University in June of 1997.

Mr. Cohen, 55, lives in Philadelphia with his wife and their two sons.

Arthur R. Block, Esq.

Senior Vice President, General Counsel and Secretary Comcast Corporation

Arthur Block has served as Senior Vice President, General Counsel, and Secretary since 2000. He is the Company's chief legal officer, overseeing Comcast's legal and corporate governance functions. Mr. Block has been with Comcast since 1989; during this time, he has served as the lead in-house attorney for Comcast's mergers, acquisitions, and financings.

Prior to joining Comcast, Mr. Block was a partner in the Corporate Department of the Philadelphia law firm Wolf, Block, Schorr and Solis-Cohen, which he joined in 1978.

Mr. Block currently serves as Vice Chair of the Site Board of City Year Greater Philadelphia and as the Chair of the Finance Committee of the Board of Managers of Moore College of Art and Design.

Mr. Block received his B.S. in economics from the University of Pennsylvania's Wharton School of Business in 1975, and his J.D. from the University of Michigan Law School in 1978.

Lawrence J. Salva

Senior Vice President, Chief Accounting Officer and Controller Comcast Corporation

Lawrence J. Salva serves as Senior Vice President, Chief Accounting Officer, and Controller for Comcast Corporation. As Chief Accounting Officer, Mr. Salva is responsible for external financial and management reporting. As Corporate Controller, he is responsible for corporate accounting and corporate internal controls, risk management, and support of the corporate financial planning and analysis functions.

Prior to joining Comcast in January 2000, Mr. Salva was a partner with PricewaterhouseCoopers for over 12 years, where he held various positions of increasing responsibility. Following the merger of Coopers & Lybrand and Pricewaterhouse in 1998, Mr. Salva was named as the national technical accounting consulting partner and regional risk management partner for PwC's Southeast Region. Mr. Salva also served as a Professional Accounting Fellow with the U.S. Securities and Exchange Commission's Office of the Chief Accountant.

Mr. Salva served as Chairperson of the Committee on Corporate Reporting, the senior technical committee of FEI, through June 2007 and continues as a member of its Executive Subcommittee. He is a member of the Standing Advisory Group of the Public Company Accounting Oversight Board and a member of the Board of Directors of the Rowan University Foundation. In 2006, Mr. Salva was named to *Business Finance* magazine's top 60 influencers list, and to *Treasury and Risk* magazine's "100 Most Influential People in Finance" list.

Mr. Salva graduated summa cum laude with a Bachelor of Arts degree from Glassboro State/Rowan University in 1977. He is a CPA in Pennsylvania and is a member of the AICPA, PICPA, and Financial Executives International.

Comcast Board of Directors

S. Decker Anstrom

S. Decker Anstrom, 59, has served as a director since June 2001. From January 2002 to December 2008, Mr. Anstrom served as a director and President and Chief Operating Officer of Landmark Communications, Inc., a privately held multimedia company, the assets of which, prior to September 2008, included The Weather Channel. From August 1999 to December 2001, Mr. Anstrom served as President and Chief Executive Officer of The Weather Channel.

Kenneth J. Bacon

Kenneth J. Bacon, 55, has served as a director since November 2002. Mr. Bacon has served as the Executive Vice President of Housing and Community Development at Fannie Mae since July 2005 and as Senior Vice President of Multifamily Investment at Fannie Mae since 2000. From January 2005 to July 2005, he served as the interim Executive Vice President of Housing and Community Development. Mr. Bacon is a member of the Executive Leadership Council and a director of the Corporation for Supportive Housing.

Sheldon M. Bonovitz

Sheldon M. Bonovitz, 72, has served as a director since March 1979. Mr. Bonovitz is currently Chairman Emeritus of Duane Morris LLP, a law firm. From January 1998 to December 2007, he served as Chairman and Chief Executive Officer of Duane Morris. Mr. Bonovitz is a director of eResearchTechnology, Inc. He is also Chairman of Philadelphia's Children First Fund, a trustee of the Dolfinger-McMahon Charitable Trust and the Christian R. and Mary F. Lindbach Foundation and a member of the board of trustees of The Barnes Foundation, The Curtis Institute of Music, the Free Library of Philadelphia Foundation and the Philadelphia Museum of Art. He is a founder of the Foundation for Self-Taught American Artists, is the Foundation's President and serves on the Foundation's Board of Trustees.

Edward D. Breen

Edward D. Breen, 54, has served as a director since June 2005. Since July 2002, Mr. Breen has served as Chairman and Chief Executive Officer of Tyco International Ltd. ("Tyco International"). From January 2002 to July 2002, Mr. Breen served as President and Chief Operating Officer of Motorola, Inc.; from January 2001 to January 2002, he served as Executive Vice President and President of Motorola's Networks Sector; and from January 2000 to January 2001, he served as Executive Vice President and President of Motorola's Networks Sector; and from January 2000 to January 2001, he served as Executive Vice President and President of Motorola's Broadband Communications Sector. Mr. Breen is also a director of Tyco International.

Julian A. Brodsky

Julian A. Brodsky, 76, has served as a director since March 1969 and has been an employee of Comcast since 1964. Since May 2004, he has served as our non-executive Vice Chairman. From May 1987 to May 2004, he served as our Vice Chairman. In addition, he is a director of Amdocs Ltd., RBB Fund, Inc. and the Philadelphia Chamber Music Society, a trustee and Vice Chairman of the Philadelphia Museum of Art and a director emeritus of The Cable Center.

Joseph J. Collins***

Joseph J. Collins, 65, has served as a director since October 2004 and has been our Presiding Director since May 2010. Mr. Collins currently serves as the Chairman of Aegis, LLC. From August 2001 to December 2003, he served as Chairman and Chief Executive Officer of AOL Time Warner Interactive Video. From 1989 to August 2001, Mr. Collins served as Chairman and Chief Executive Officer of Time Warner Cable.

*** Presiding Director (Presides at private sessions of the independent directors).

J. Michael Cook

J. Michael Cook, 67, has served as a director since November 2002. Mr. Cook is a director of International Flavors & Fragrances, Inc. and is a Trustee of the Scripps Research Institute. Mr. Cook is also Chairman Emeritus of the board of Catalyst, Chairman of the Accountability Advisory Panel to the Comptroller General of the United States, an emeritus member of the Advisory Council of the Public Company Accounting Oversight Board (PCAOB) and a member of the Accounting Hall of Fame. Mr. Cook was also named one of the Outstanding Directors in America by Director's Alert in 2002 and is a past member of the National Association of Corporate Directors' Blue Ribbon Commission on Corporate Governance.

Gerald L. Hassell

Gerald L. Hassell, 58, has served as a director since May 2008. He is President of The Bank of New York Mellon ("BNYM"). Prior to the merger of The Bank of New York Company, Inc. and Mellon Financial Corporation in July 2007, Mr. Hassell was President of The Bank of New York Company, Inc. and The Bank of New York. Mr. Hassell is on BNYM's Board of Directors. He is also Chairman of the Board of Visitors of The Fuqua School of Business at Duke University, a member of the Board of Visitors of Columbia University Medical Center, a member of The Financial Services Roundtable and Financial Services Forum, Vice Chairman of Big Brothers/Big Sisters of New York, and a member of the boards of the New York Philharmonic, The Economic Club of New York and The National September 11 Memorial & Museum.

Jeffrey A. Honickman

Jeffrey A. Honickman, 53, has served as a director since December 2005. He has served since 1990 as the Chief Executive Officer of Pepsi-Cola & National Brand Beverages, Ltd., a bottling and distribution company, which includes among its affiliates Pepsi-Cola Bottling Company of New York, Inc. and Canada Dry Bottling Companies from New York to Virginia. He is also the Vice President and Secretary of Antonio Origlio Inc., a beverage distributor based in Philadelphia, Pennsylvania, which does business as Origlio Beverages. He currently serves on the board of directors of the American Beverage Association and the Pepsi-Cola Bottlers Association. Mr. Honickman is a member of the board of trustees of Germantown Academy. He also serves on the board of governors of St. Joseph's University Academy of Food Marketing, the board of trustees of the National Museum of American Jewish History, and the Dean's Advisory Council of the Drexel University College of Business and Administration.

Brian L. Roberts*

Brian L. Roberts, 51, has served as a director since March 1988, as our President since February 1990, as our Chief Executive Officer since November 2002 and as our Chairman of the Board since May 2004. As of December 31, 2009, Mr. Roberts had sole voting power over approximately 33% of the combined voting power of our two classes of voting common stock. He is a son of Mr. Ralph J. Roberts. Mr. Roberts is also a director of Comcast Holdings Corporation and the National Cable and Telecommunications Association, the principal trade association of the cable television industry, and he is Chairman of CableLabs, the cable industry's research and development organization.

*Brian Roberts does not participate in any committees.

Ralph J. Roberts

Ralph J. Roberts, 90, our Founder, has served as a director since March 1969 and is Chairman Emeritus of the Board. He served as the Chair of the Executive and Finance Committee of the Board, now the Finance Committee of the Board, from November 2002 until December 2008. From March 1969 to February 1990, Mr. Roberts served as our President, and from November 1984 to November 2002, he served as our Chairman of the Board. He is the father of Mr. Brian L. Roberts.

*Ralph J. Roberts does not participate in any committees.

Dr. Judith Rodin

Dr. Judith Rodin, 65, has served as a director since November 2002. She is President of the Rockefeller Foundation. From 1994 to 2004, Dr. Rodin served as President of the University of Pennsylvania, as well as a professor of psychology and of medicine and psychiatry at the University of Pennsylvania. She also serves as a director of AMR Corporation and Citigroup Inc.

Michael I. Sovern

Michael I. Sovern, 78, has served as a director since November 2002. Mr. Sovern is Chairman of Sotheby's. He is also President Emeritus and Chancellor Kent Professor of Law at Columbia University where he served as President for 13 years. He is President and a director of The Shubert Foundation and a director of The Shubert Organization. He is also a director of Sotheby's.



2010 ANNUAL REPORT

COMCAST ALEXANDRIA STAFF AUGUST 30, 2010

SURNAME	NAME	POSITION
Abney	Drake	Technical Supervisor
Addison	Rodney	Warehouse
Aderoju	Adedotun	Comm Tech
Agbebe	Mathias	Comm Tech
Agyare	Ernest	Comm Tech
Anbar	Fawaz	Comm Tech
Anderson	Jomar	Comm Tech
Arnold	Troy	Comm Tech
Ashley	Terrell	Comm Tech
Baggatts	Ronald	Comm Tech
Bannister	Christopher	Comm Tech
Battle	James	Comm Tech
Bent	Conroy	Comm Tech
Booker	Jamil	Comm Tech
Boston	Na Shaun	Comm Tech
Bowie	Robert	Comm Tech
Bravo	Frederico	Comm Tech
Britt	Kinnie	Comm Tech
Brown	Darrel	Network Tech
Bruce-Konuah	Wallace	Comm Tech
Bryant	Andrew	Comm Tech
Burch	John	Network Tech
Calderon	Omar	Operations Supervisor
Canedo	Luis	Comm Tech
Carlos	Eduardo	Comm Tech
Carter	Louis	Comm Tech
Castellon	Gustavo	Construction Coordinator
Castellon	Bismarck	Network Tech
Chisley	Anthony	Comm Tech
Clark	Michael	Technical Supervisor
Davis	Francis	Comm Tech
Dawson	Francisco	Technical Supervisor
Delgaldillo	Caroline	Payment Center Rep
Dorsey	Marvin	Comm Tech
El-Nakeeb	Gehad	Technical Supervisor
Evans	Robert	Comm Tech
Evans	Jason	Comm Tech
Ferguson	Michael	Headend Tech
Forson	Robert	Network Tech
Franco	Javier	Comm Tech
Francois	Eric	Network Tech
Franklin	Maurice	Comm Tech
Gidey	Fesseha	Comm Tech
Gilson	Davin	Network Tech
Gladden	Earl	Comm Tech
Gleaton	Renita	Check-in Rep
Gonzalez	Frank	Comm Tech
Green	Don	Network Tech
Hakim	Muzamil	
	Ernest	Comm Tech
Hamner		Comm Tech
Harmon	Gregory	Network Tech



Confidential Proprietary Information



Freddie Jermaine Erik Curtis Gareth Ephraim Dwuane Marcus Robert Ray Rafael Valeriy Crystal Teme DeVaughn Bineyam Miriam Kenneth Reggie Antonise Tyree David Donald	Comm Tech Comm Tech Direct Sales Supervisor Comm Tech Comm Tech Comm Tech Headend Lead Comm Tech Technical Supervisor Telephony Engineer Warehouse
Erik Curtis Gareth Ephraim Dwuane Marcus Robert Ray Rafael Valeriy Crystal Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Comm Tech Direct Sales Supervisor Comm Tech Comm Tech Headend Lead Comm Tech Technical Supervisor Telephony Engineer
Curtis Gareth Ephraim Dwuane Marcus Robert Ray Rafael Valeriy Crystal Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Direct Sales Supervisor Comm Tech Comm Tech Headend Lead Comm Tech Comm Tech Comm Tech Network Tech Supervisor Comm Tech Comm Tech
Gareth Ephraim Dwuane Marcus Robert Ray Rafael Valeriy Crystal Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Comm Tech Comm Tech Headend Lead Comm Tech Comm Tech Network Tech Supervisor Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Ephraim Dwuane Marcus Robert Ray Rafael Valeriy Crystal Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Comm Tech Headend Lead Comm Tech Comm Tech Network Tech Supervisor Comm Tech Comm Tech Comm Tech Comm Tech Comm Tech Comm Tech Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Dwuane Marcus Robert Ray Rafael Valeriy Crystal Teme DeVaughn Bineyam Miriam Kenneth Reggie Antonise Tyree David	Headend Lead Comm Tech Comm Tech Network Tech Supervisor Comm Tech Technical Supervisor Telephony Engineer
Marcus Robert Ray Rafael Valeriy Crystal Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Comm Tech Comm Tech Network Tech Supervisor Comm Tech Comm Tech Network Tech Comm Tech Comm Tech Comm Tech Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Robert Ray Rafael Valeriy Crystal Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Comm Tech Network Tech Supervisor Comm Tech Comm Tech Network Tech Comm Tech Comm Tech Comm Tech Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Ray Rafael Valeriy Crystal Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Network Tech Supervisor Comm Tech Comm Tech Network Tech Comm Tech Technical Supervisor Telephony Engineer
Rafael Valeriy Crystal Teme DeVaughn Bineyam Miriam Kenneth Reggie Antonise Tyree David	Comm Tech Comm Tech Network Tech Comm Tech Comm Tech Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Rafael Valeriy Crystal Teme DeVaughn Bineyam Miriam Kenneth Reggie Antonise Tyree David	Comm Tech Network Tech Comm Tech Comm Tech Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Crystal Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Network Tech Comm Tech Comm Tech Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Crystal Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Comm Tech Comm Tech Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Teme DeVaughn Bineyam Miríam Kenneth Reggie Antonise Tyree David	Comm Tech Comm Tech Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
DeVaughn Bineyam Miriam Kenneth Reggie Antonise Tyree David	Comm Tech Comm Tech Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Bineyam Miríam Kenneth Reggie Antonise Tyree David	Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Miriam Kenneth Reggie Antonise Tyree David	Payment Center Rep Comm Tech Technical Supervisor Telephony Engineer
Kenneth Reggie Antonise Tyree David	Comm Tech Technical Supervisor Telephony Engineer
Reggie Antonise Tyree David	Technical Supervisor Telephony Engineer
Antonise Tyree David	Telephony Engineer
Tyree David	
David	
	Comm Tech
	Comm Tech
Franklin	Comm Tech
	Quality Control Tech
	Technical Supervisor
	Warehouse
	Comm Tech
	Payment Center Rep
	Comm Tech
	Network Tech
	Comm Tech
	Local origination Supervisor
	Comm Tech
	Warehouse
	Comm Tech
	Payment Center Rep
	Comm Tech
	Payment Center Rep
	Comm Tech
	Comm Tech
	Business Services Rep
	Sales Manager
	Headend Tech
	Comm Tech
	Warehouse Lead
Jerome	Local Origination Producer
	Patrick Theoplis Larae Throdore Michale Todd Robert Timothy Juan David Alexander Ronald Derek Jamie Brian Delonte Regina David Yolanda Joshua Anthony Michael Mohamed Mark Sol Joyce



Confidential Proprietary Information

Omard	Kenneth	Quality Control Tech
Onifade	John	Comm Tech
Onuma	Kalu	Comm Tech
Palmore	Daria	Check-In Rep
Pena	Cynthia	Payment Center Rep
Pesantes	Gina	Check-In Rep
Pesantes	Nicholas	Comm Tech
Pettaway	Dwayne	Comm Tech
Pheney	Carlton	Headend Tech
Porras	Brandi	Network Tech
Portillo	Oscar	Network Tech
Powell	Larod	Network tech
Queen	Jovan	Comm Tech
Racine	Mira	Comm Tech
Ransome	Virgie	Comm Tech
Regis	Darius	Comm Tech
Roberts	Samantha	Payment Center Rep
Rodriguez	Angel	Comm Tech
Romero	Carla	Check-in Rep
Salazar	Richard	Comm Tech
Sanjines	Martin	Comm Tech
Schuldt	Jeffrey	Headend Tech
Schuler	Marie	Director of Govt & Community Affairs
Seeman	Tracy	HR Manager
Sesay	Alpha	Comm Tech
Sherrod	Phillip	Comm Tech
Skelton	Donald	Check-In Rep
Smothers	Darrin	Network Tech
Snyder	Travis	Comm Tech
Sorto	William	Comm Tech
Stevens	Terrence	Warehouse
Sykes	Ronald	Comm Tech
Teklu	Dawit	Comm Tech
Tesfai	Joseph	Comm Tech
Thomas	Larry	Comm Tech
Thompson	Lavaliais	Comm Tech
Thorne	Rudo	Comm Tech
Thorton	Charles	Comm Tech
Tolley	Cynthia	Telephony Engineer
Vaca	Ricardo	Comm Tech
	Ronald	Comm Tech
Valentine		
Vargas	Jorge	Warehouse Network Tech
Vasconcelos	Gustavo	Comm Tech
Vaughn	Anthony	
Vest	Morrelo	Technical Supervisor
Wasikye	Mathias	Headend Tech
Watterworth	Stephen	Comm Tech
Webb	Kelvin	Technical Manager
White	Ronald	Comm Tech
Wilkins	Brian	Comm Tech
Williams	Jeannette	Comm Tech
Williams	Curtis	Comm Tech



Confidential Proprietary Information



Woods	Douglas	Comm Tech	
Wooley Wray	Deandre	Comm Tech	
Wray	Joseph	Comm Tech	
Young	Lloyd	Comm Tech	

Comcast.

2010 ANNUAL REPORT

COMCAST CABLE TELEVISION CHANGES AUGUST 30, 2010



CHANNEL CHANGES

July 1, 2009 - June 30, 2010

August 2009

• Launched NFL Network on Channel 733 as a Digital Starter Service, HD, Channel 246, Launched the NFL Network HD on Channel 246 as a Digital Starter Service

September 2009

• *ESPNU*, Channel 730, will be added to Comcast's Digital Classic Service and the Sports Entertainment Package.

December 2009

- PBS Kids Sprout on channel 128 moved from Digital Preferred to Digital Starter Service
- Style on Channel 118 moved from Digital Preferred to Digital Starter Service
- ESPNews migrated from Channel 102 to Channel 719

May 2010

• The Sports Overflow Channel, Channel 77 which airs MASN2 events will no longer default to C-Span2; ESPNews replaced it as the default channel

June 2010

- Launched WFDC Univision HD on Channel 794 as a Limited Basic Service
- Launched WMDO Telefutura HD on Channel 795 as a Limited Basic Service
- Launched WMDO LATV on Channels 270 and 599 as a Limited Bais Service
- WMDO Telefutura on Channel 15 migrated from an analog to digital format; it remains a Limited Basic Service



2010 Comcast ALEXANDRIA Customer Surveys

Trend Overview

- Viewership of several types local Government programming significantly increased in 2010.
- o Interest in community-oriented programs increased significantly.
- While Alexandrians had a renewed interest in local programming, the Community Bulletin Board lost viewership.
- Comcast customer service and quality of services delivered to subscribers remained strong and sew improvement based on the scores of the 2010 survey.



Comcast

2010 Comcast ALEXANDRIA Customer Surveys

Viewership of local Government programming turned around to significantly increase in 2010 (based on the segment of customers that view local access channels).

		5.00	UR THEB - ACCESS CHAINNELS		
2010 Saure		20).	Have you ever welletes an Assantite City Council meeting?	2000	CHANNE PROVE 2008
78.75%	125		YES	58.9%	18.9%
21.29%	ы		2 MO	40.1%	-18.9%
0.0%	0		DKANAGA		
	160		Totzi Rasponses		
		greff	INF TWO - ACCESS CHARMELS		
2010 Num		24).	Have you over wellefood a Planning Commission meeting?	2000	CHANNEL FROM 2006
58.23%	90		AG2	38.5%	18.7%
43.75%	70		l NO	63.5%	-19.7%
0.0%	0		DIVINAGA		
	160		Total Responses		
	Sec. 13. 20	Atian			
			IN TWO-ASCERS CHANNELS		
2010 Same		24).	Have you over welleted a Deard of Zoning Appeals meeting?	2000	Canada Filose 2000
45.9%	n		YES	34.7%	10.9%
\$4.4%				#8.3%	-10.9%
0.0%	1) Divinivga		
	160		Total Responses		

.

(comcast

2010 Comcast ALIEXANDRIA Customer Surveys

Interest in community-oriented programs increased significantly.

		<u>S</u> G	OR TWO-ACCESS CHARMES		
2010 Seam		2).	Have you over welched a Deard of Architectural Review - Pasiar-Gray District meeting?	2008	CINNER FROM 2000
31.9%	51		Yes	18.2%	
68.1%	100		1 NG	80.8%	-12.7%
0.0%	0		DIVMVGA		
	160		Total Responses		
		89	ON THE + ACCESS CHANNELS	and the State	
2018 Seen		16 .	Have you over welched a School Bourd maching?	2009	FINCE 2000
\$7.5%	Ħ		YES	38.3%	18.2%
42.5%			2 MO	61.7%	-18.2%
0.0%	0	i	I DKAMADA		
	160		Total Responses		
		SECT	ON TWO - ACCESS CHANNELS		
		_	Wands you be interested in specific programming which highlights City services, programs and/or		
2018 Sour		.	propuls?	2009	FROM 2000
87. 8%	702		YES	17.8%	66.5%
12.4%				82.3%	-46.9%
0.0%	0	l	DKANAVQA		0.0%
	801		Total Responses		0.6%

in spite of Alexandrians renewed interest in local programming, the Community Bulletin Board lost viewership.

		TTON THERE - COMPART COMMANITY TELEVISION CHANNEL BR		
3810 Segm	\$	Have you over weighted the Community Bullatin Search on Charant 69 from 10:09 am is 5:38 am daily?	2000	Change Photo 2000
46.2%		1 YES	55.4%	-16.2%
54.8%		2 110	44.9%	16.2%
0.0%	0	O DKANA/DA		
	124	Total Responses		

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Comcast

2010 Comcast ALEXANDRIA Customer Surveys

Interest in local programs of various types increased by viewers of the Comcast Community Television Channel.

		গ্রহা	NA THREE - COMPART COMMAINITE TELEVISION CHANNEL 68 - INTERSIF		
2010 Scare		364.	Civic/International Status?	2338	CINNISE FROM 2008
62.1%	n	1	YES	44.6%	17. 3%
37.9%	47	:	10	55.4%	-17.5%
0.9%	0	(DKMA/GR		
	124		Total Responses		
			er Three - Compast Commitmert Television Channel, 60 - Interest		
2010 Scene		344	Entertainment Shows?	2598	CHANGE FROM \$500
70.2%	17	1	YES	48.1%	21.1%
23.9%	37	:	NO	50.9%	-21.1%
0.9%	0	(DICHARDIA		
	124		Total Responses		
			n Three - Conscast community television channel on - interest?		
2010 Scave		34,	Carrent Lecel Brents?	2398	CHANGE FROM SING
43.9%	104	1	YES	51.9%	32.1%
16.1%		1	MD	49.2%	-32.1%
0.0%	0	(DK/MA/DA		
	124		Total Responses		

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(Comcast

2010 Comcaet ALEXANDRIA Customer Surveys

Customers that reported interactions remained at similar levels to 2009 with Comcast in the office and on the phone. Satisfaction with the quality of service increased moderately, and Comcast scores remain respectable. The customers that reported in-office visits scored quality even higher.

		SECTIO	DH FOUR - SERVICE TO SUBSCRIBERS		
2010 Same		1).	Have you over called the cable company for any reason other than initiality perviout	2005	CIVANSE PHOM 2008
66.0%	5.20	1	YES	67.0%	-1. D%
34,0%	272	2	NO	33.0%	1.0%
0.8%	0	0	DKANAGA		
	801		Total Responses		
		Section	91 Pour - Service TD Subscribers		
2114 Same		10).	Was your cult anawarud willion a reasonable partod of langt	2000	CHANGE FROM 2000
79.0%	421		YES	78.0%	0.7%
(18.076 20.4%				21.1%	-0.7%
0.9%		-	DKANAA	4.1.1.7 0	
	529	-	Total Responses		
		E same	W FOUR - SERVICE TO SUBSCRIBERS		
2010 Same		11).	Wen the parame with where you applie contactor?	2000	CHANGE FROM 2008
			_	,	•
94.3% £.7%		-	YE3 1NO	92.0% 8.0%	2.4% -2.4%
0.0%				0.010	-242
0.010	529	•	Total Responses		
			W FULA - SERVICE TO SUBSCRIBERA		
2010 Supre		14).	Was your quistles a prelim reading?	2000	Charge PROM 2000
78.9%	417	t	Yes	73.5%	5.3%
21.2%	112	2	140	24.5%	-3.3%
0.0%	0	0	DIVISAGA		
0.6%	0 529	0	Divisive Total Responses		

(comcast

2010 Comcast ALEXANDRIA Customer Surveys

11 (A)			n Four-Service to Subschlerige		
2010 Scere		1.	Here you over visited the toole Command Office?	2098	CHANGE PHOM 3008
62.3%	400	1	Y63	60.6%	1.7%
37.7%	302	2	140	38.4%	-1.7%
0.0%	0	0	DICHINYOA		
	801		Total Responses		
the Rest of State of State of State of State	noutlingsit		na sa	a and the second second	
		ंग	NI FOUNT - SERVICE TO BUBBCHIBERS.		
20% Borry		14	Were you callelied with the quality of service you received?	2000	CHANNEL FROM 2000
75.0%	801	1	YES	67.5%	7.5%
25.0%	259	1	H0	38.9%	-7.5%
0.0%	0	(DIVINATION		
	801		Total Responses		
		SET	on four-service to subschiefing		
2010 Scom		14.	Were you askelled with the quality of service you received?	2005	CHANGE FROM 2000
		•••••	NAME TO THE 480 ACTUAL VIETORS IN Sec 4 18.		
82.4%	416		YES	88.1%	1.3%
16.4%	63	i ;	2 100	17.5%	-1.3%
0.0%	0		I DIZANA DA		
	499		Total Responses		

Service to subscriber scores sew some strong improvements since 2009 measurements.

	5	Ś.	Dir Föhn - Senvice To Subschwerze		
2010 Days	_	a .	Listing a scale from 5 to 8, with 9 meaning "entranety disprinting" and 5 meaning "entranety self-fluid," piones solved froe mariter that best represents your satisfication with the failencing analysis container aspecto of Sir system.	2001	Change from some
	painis.				
3.964	3191	₿.	INSTALLATION OF CABLE IN YOUR HOME	3.614	8.3%
4.179	3347	Ŋ.	PICTURE QUALITY	1.798	8.1%
4.112	3294	¢	SOUND GUALITY	3.631	6.8%
3.018	2002	4	NEAPCINE TO INCLUDES OR PROBLIME	1.341	7.6%
4.075	3364	а,	NUMBER OF CHANNELS PROVIDE	1.000	5.1%
3.846	3086	Ą.	Overval, cuetoner service	1540	7.7%
3.968			average score	3.067	7.4%

Xfinity

2010 Comcast Cable Television Subscriber Survey Alexandria, Virginia

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SURVEY METHODOLOGY

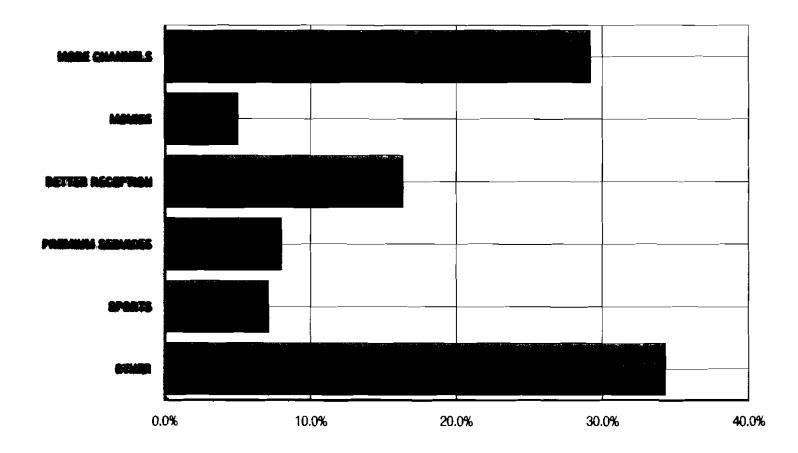
All of the following charts and graphs are based on responses from a structured phone survey conducted with a random probability sample of 801 Alexandria active cable television customers. Calling began on August 11th and was completed August 17th, 2010. Calls were placed during a mix of daytime and evening hours on weekdays as well as daytimes on Saturdays.

All surveys were completed from Q7's fully supervised calling center. Prior to the beginning of data collection, all surveyors were trained specifically on each survey question and its response set. At least once per shift, each surveyor was monitored on-line while conducting an actual survey. Some of the questions asked were based on previous versions of the same study completed in earlier years.

In order to generate a random probability of households, the calling list provided to Q7 was randomized prior to outbound dialing. The completed sample response includes 801 customers. This sample size will generate data useful in making business decisions based on commonly accepted statistical norms at the 95% confidence level with a margin of error of +/-3.44%, assuming an overall population of approximately 65,000.



What is the major reason(s) you subscribe to cable television at this time?



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What is the major reason you subscribe to cable television at this time? "Other" answers...

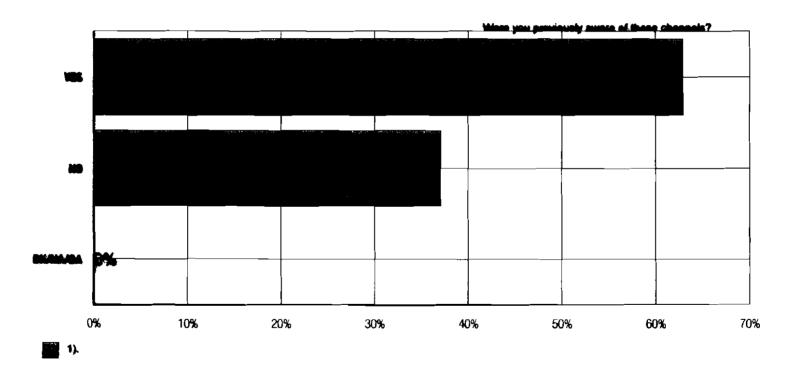
	· ·
Internet service	Q
Like Comcast / Dan't like other providers	
Deutle Play	
Double Play	11
Good Service	9
HOIV	5
Less Expensive Option	4
DMR	2
Quality Programming	
DeKehle	
Reliable	



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Comcast currently has five access channels; The City Government Access Channel on Channel 70, The Educational Access Channels on 71,72, 73 and The Community Channel on Channel 69.

Were you previously aware of these channels?

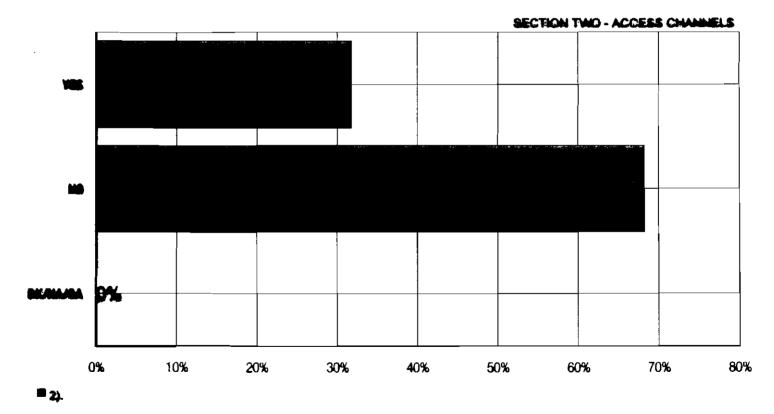


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Channel 70 is the local government access channel which provides brief announcements about upcoming government meetings and events, and broadcasts live City Council meetings, Planning Commission meetings, Board of Zoning Appeals meetings, and Board of Architectural Review meetings.

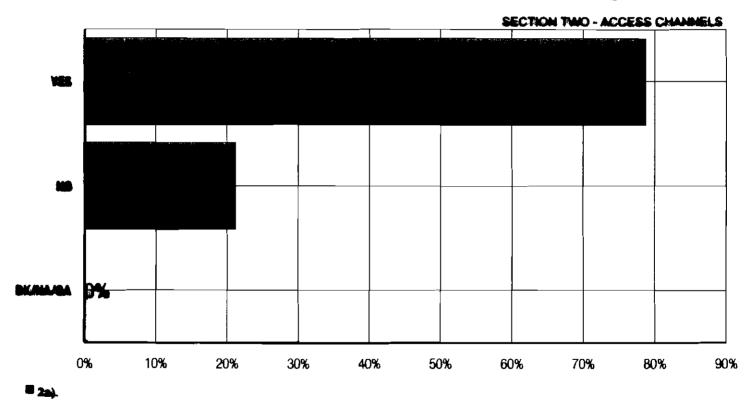
Do you watch Channel 70 programming?



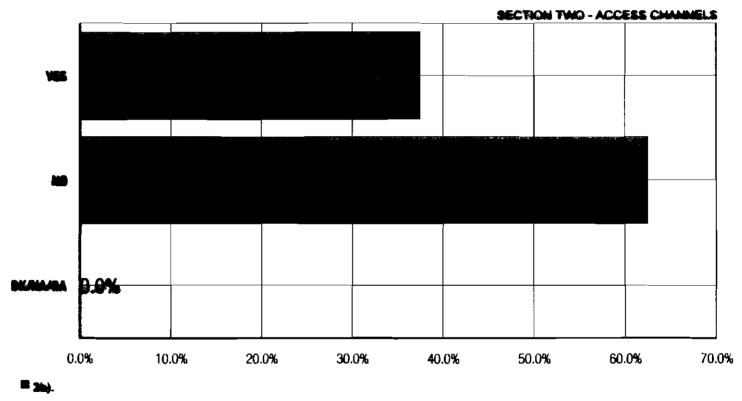
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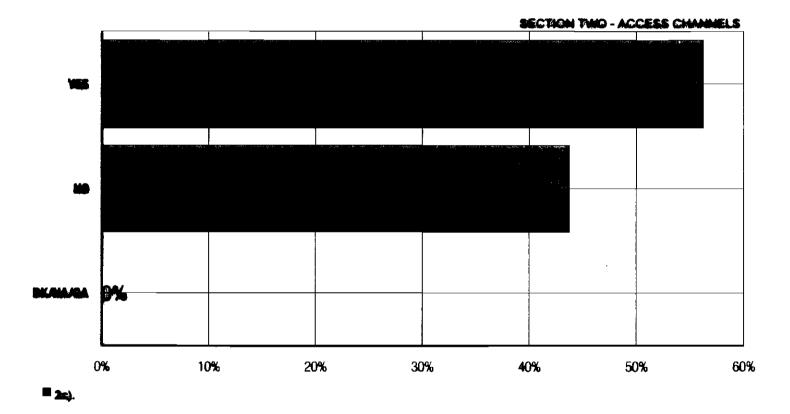
Have you ever watched an Alexandria City Council meeting?



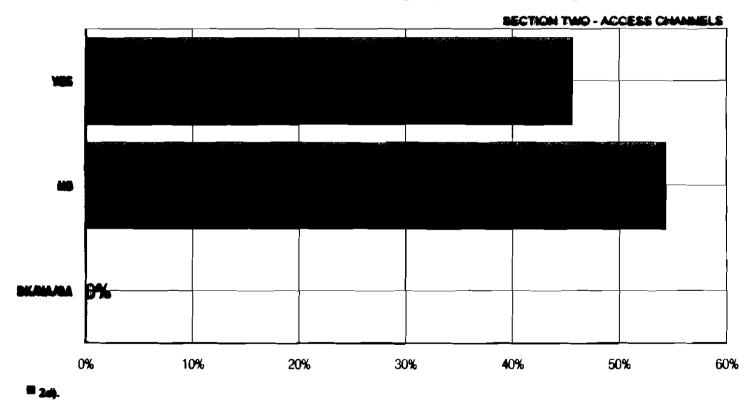
Have you ever watched a Saturday public hearing?



Have you ever watched a Planning Commission meeting?

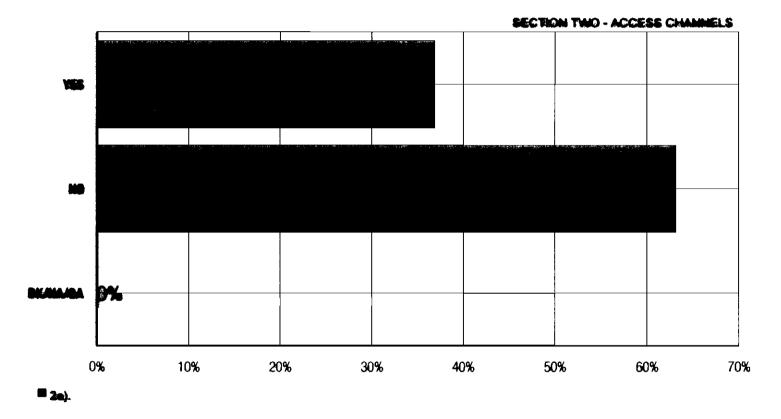


Have you ever watched a Board of Zoning Appeals meeting?



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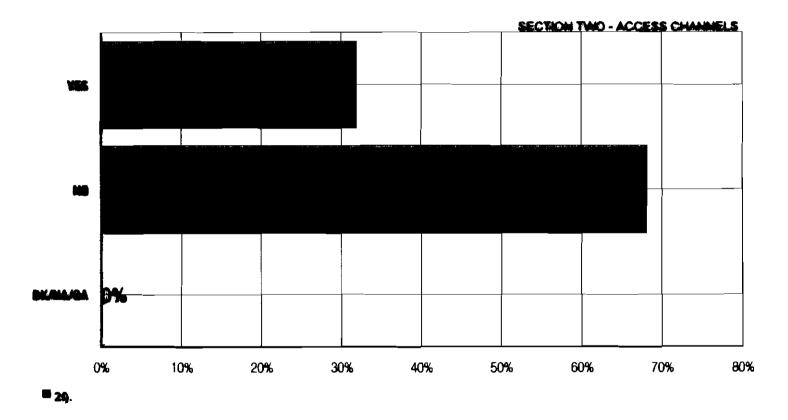
Have you ever watched a Board of Architectural Review - Old and Historic District meeting?



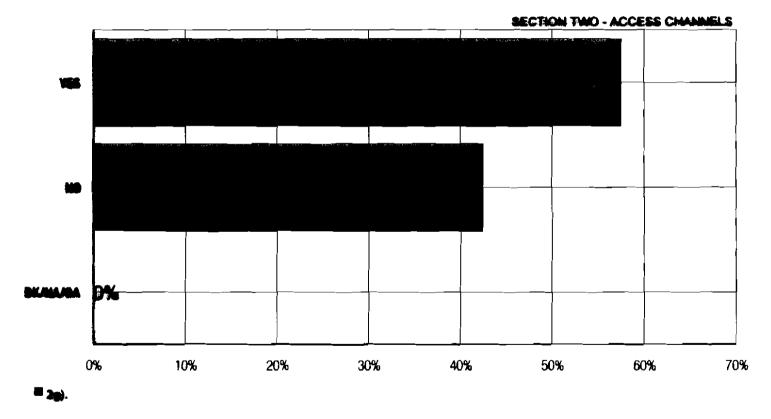
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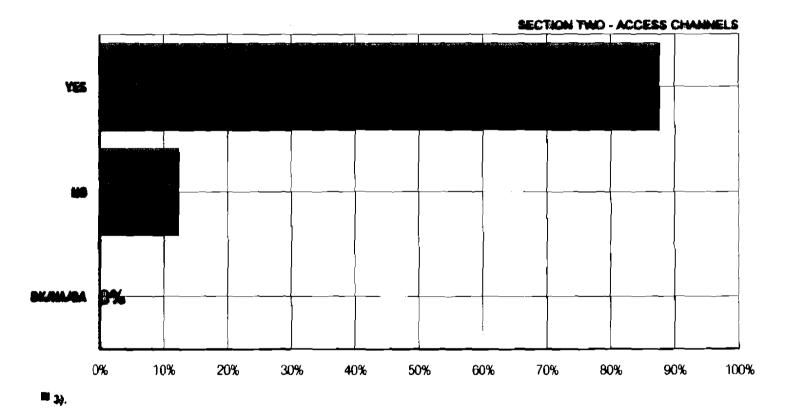
Have you ever watched a Board of Architectural Review -Parker-Gray District meeting?



Have you ever watched a School Board meeting?



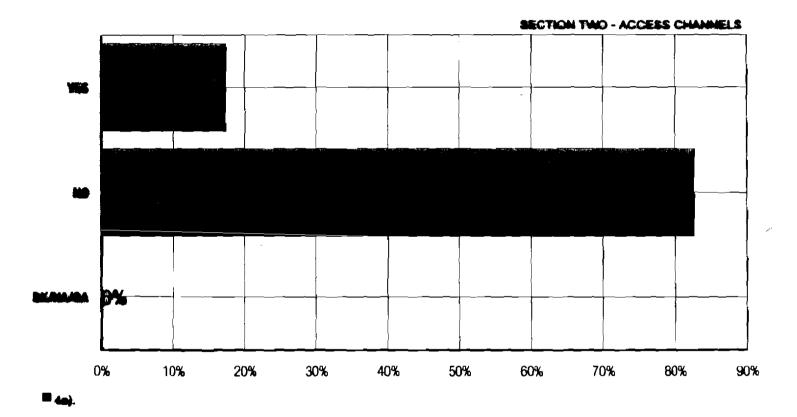
Would you be interested in specific programming that highlights City services, programs or projects?





Channels 71, 72 and 73 are the educational access channels. Channel 72 broadcasts telecourses from Northern Virginia Community College. Channel 73 broadcasts telecourses from George Mason University and Channel 71 for cable ready TV's is used by the Alexandria City Public School System.

Have you ever watched the telecourses sponsored by Northern Virginia Community College?

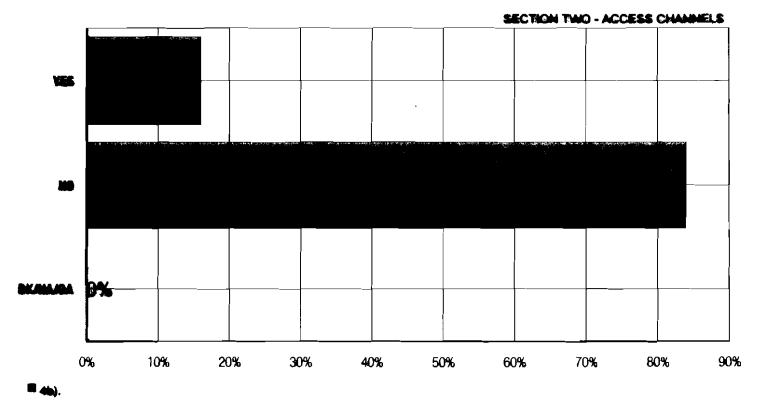




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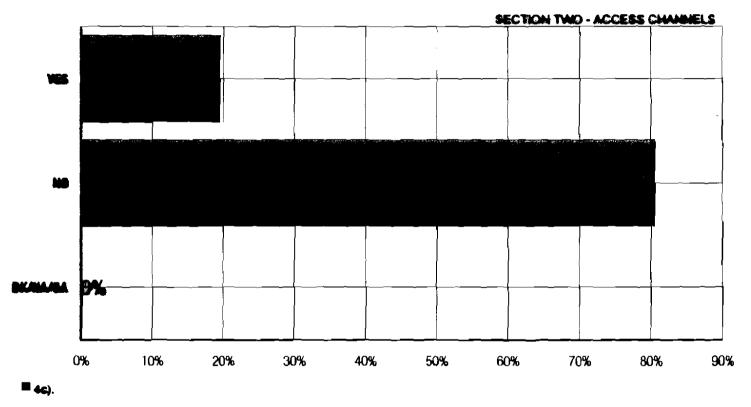
Have you ever watched the telecourses sponsored by George Mason University?



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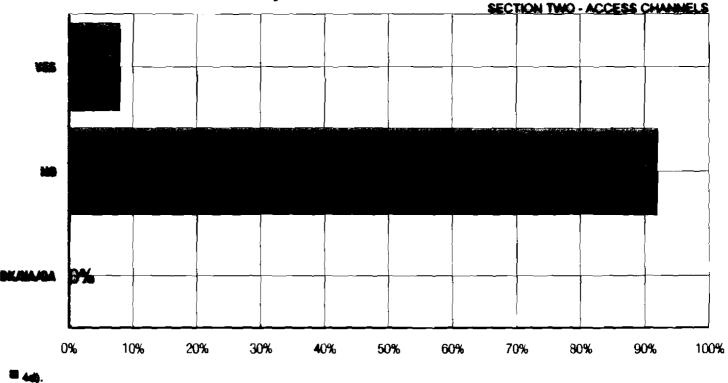
Have you ever watched any of the programming sponsored by the Alexandria City Public School?



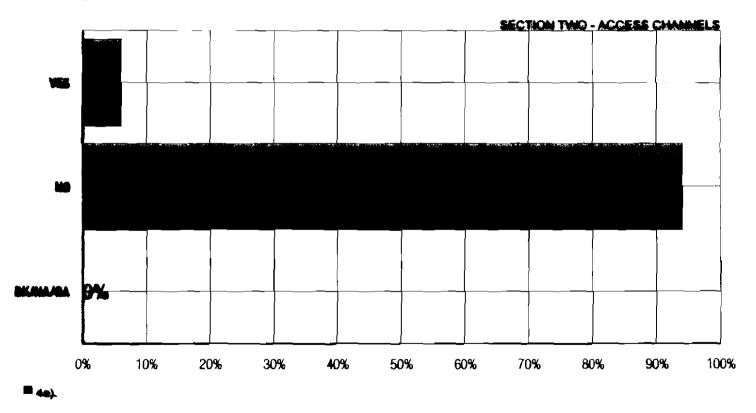
Comcast.

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Do you presently have children enrolled in the Alexandria Public School System?



Instructional programming can also be seen on MHZ Channels 192 through 197. Have you ever watched instructional programming sponsored by MHZ Channels 192 through 197?

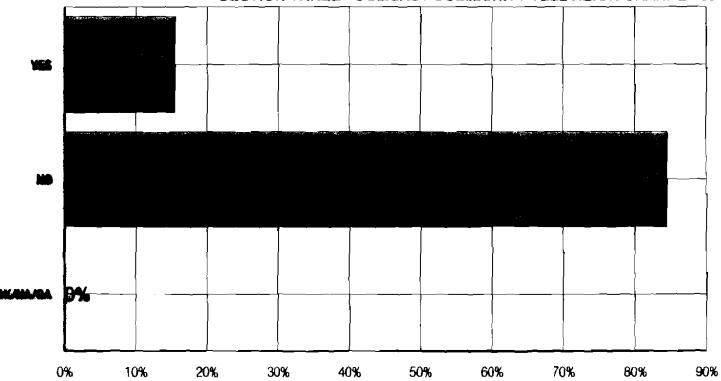


Comcast.

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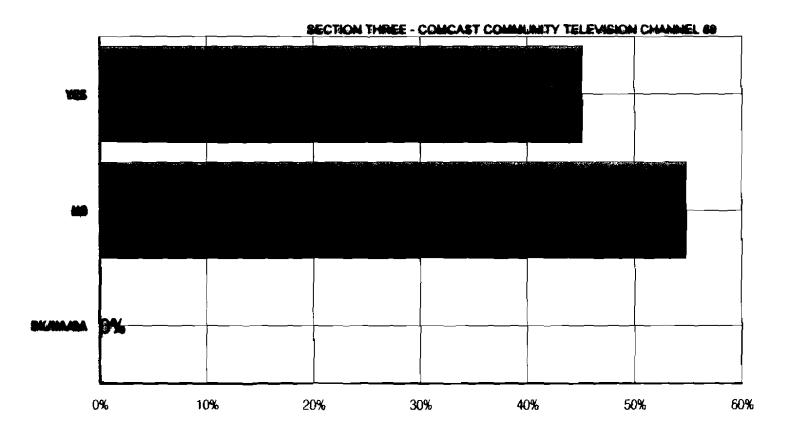
Comcast produces local programming as a public service to Alexandrians. These programs are shown on Channel 69 in the evenings during the week and on the weekends.

Have you ever watched the programming on Channel 69?



SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69

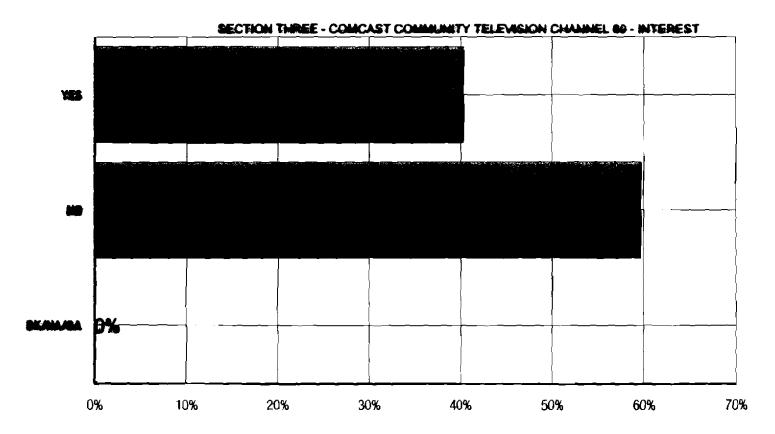
Have you ever watched the Community Bulletin Board on Channel 69 from 10:00 am to 5:30 am daily?



Comcast.

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Are you interested in any of the following categories of programming that are currently shown on Channel 69... Local high school sports?

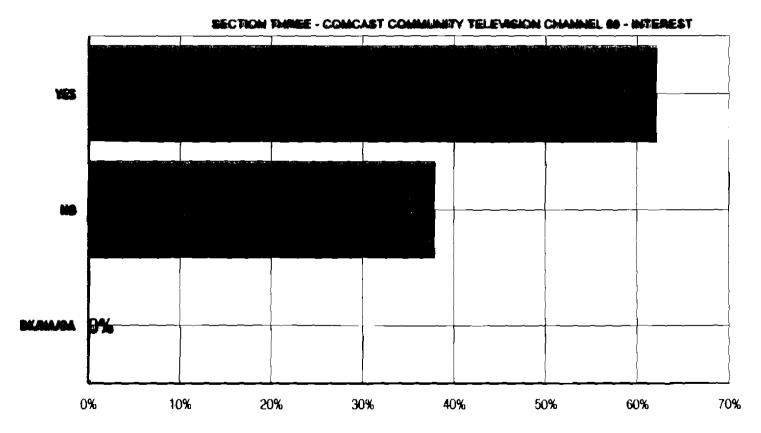


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Are you interested in any of the following categories of programming that are currently shown on Channel 69...

Civic/Informational Shows?

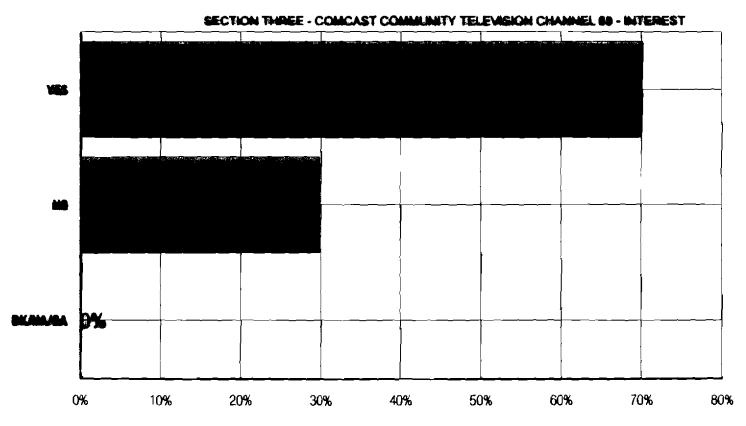


Comcast.

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Are you interested in any of the following categories of programming that are currently shown on Channel 69...

Entertainment Shows?

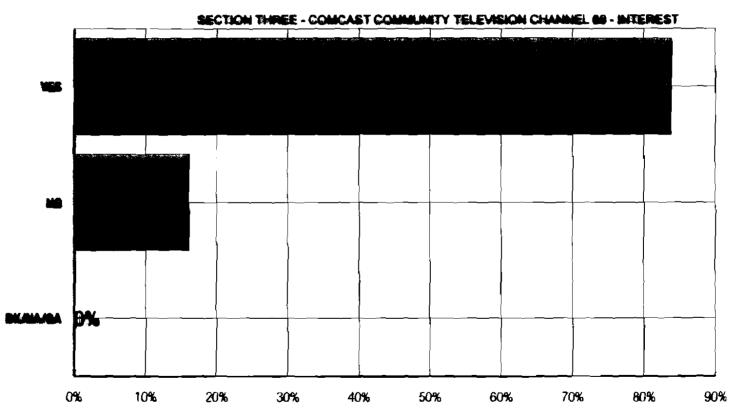


Comcast.

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Are you interested in any of the following categories of programming that are currently shown on Channel 69...

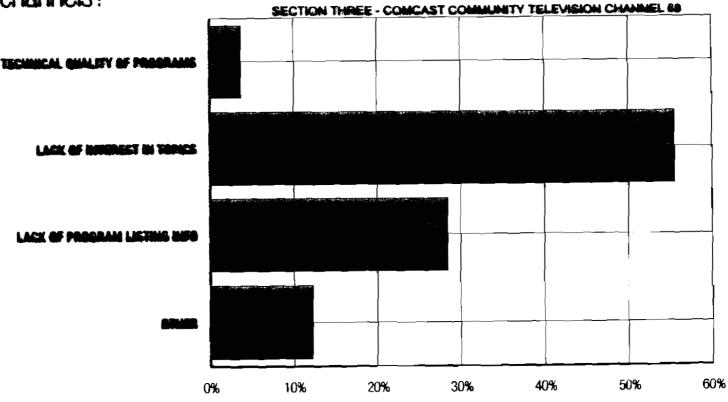
Current Local Events?



Comcast.

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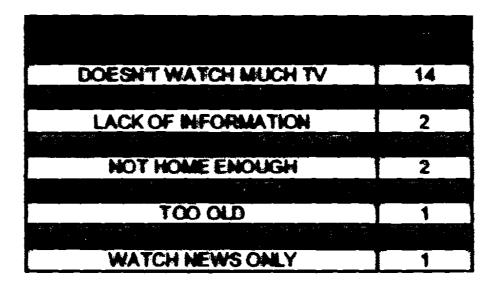
What are the biggest obstacles to your watching more programs on the PEG channels?





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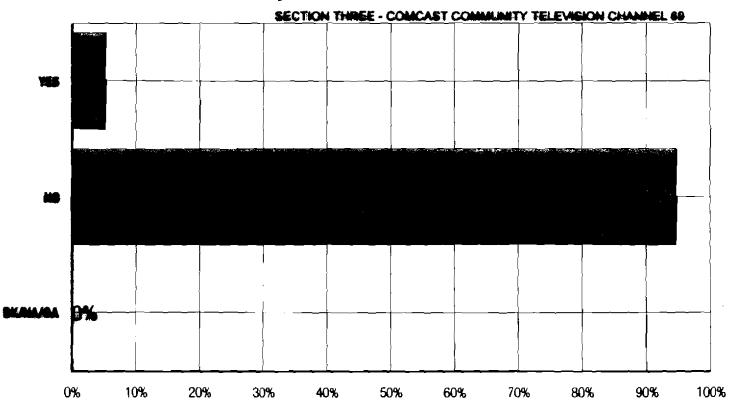
What are the biggest obstacles to your watching more programs on the PEG channels? 'Other' answers...





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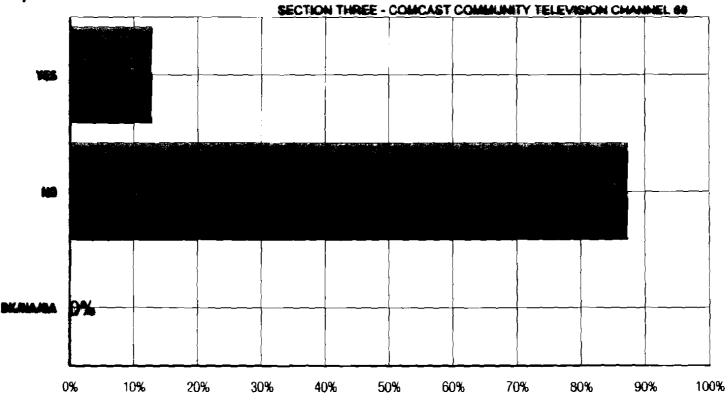
Have you ever considered producing a show on the Community Channel?



Comcast.

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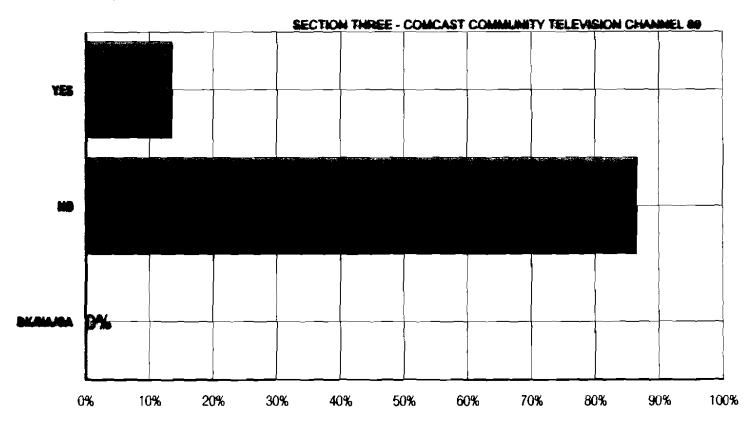
Are you aware that Comcast conducts Community Programming Volunteer Operations classes in television production for a nominal fee?



Comcast.

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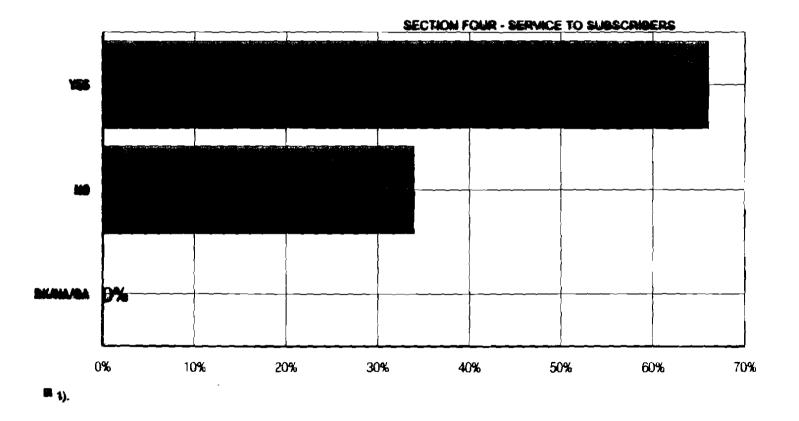
Would you be interested in taking such a class?



Comcast.

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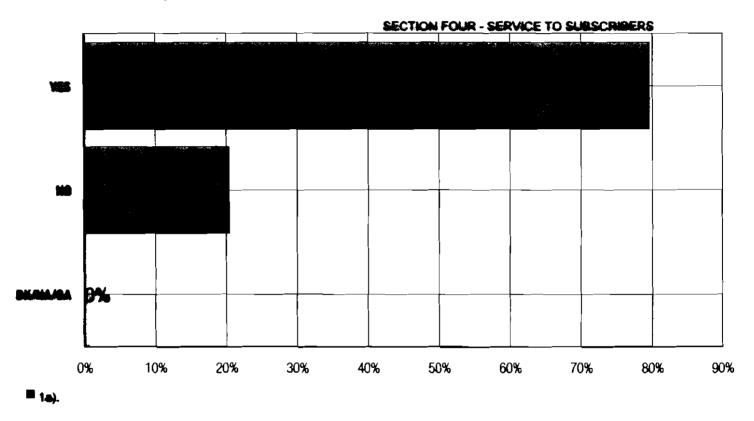
Have you ever called the cable company for any reason other than initiating service?



Comcast.

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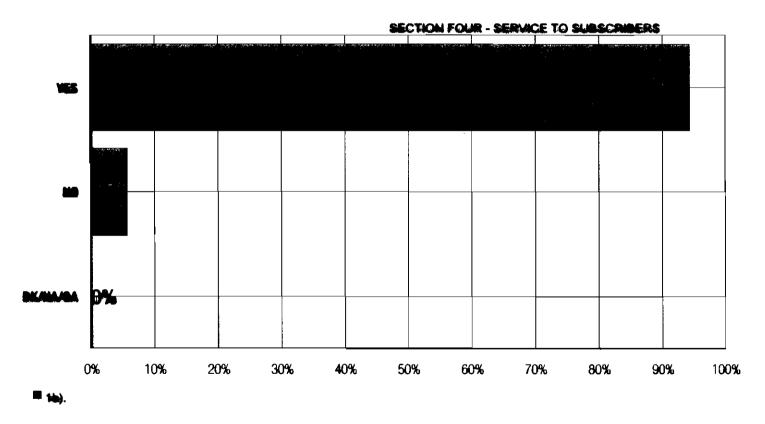
Was your call answered within a reasonable period of time?





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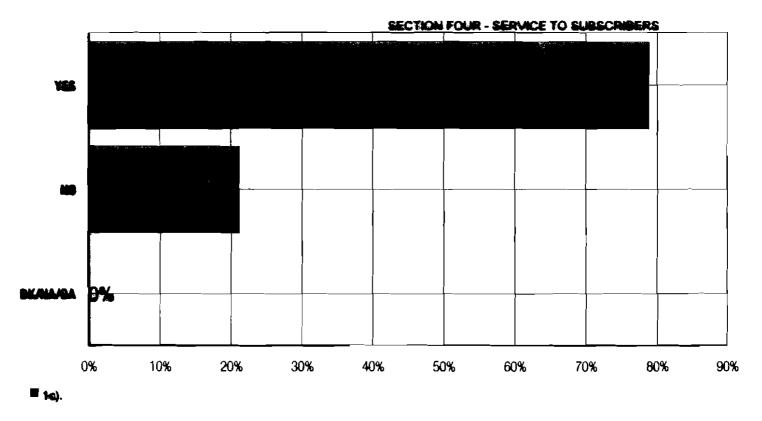
Was the person with whom you spoke courteous?





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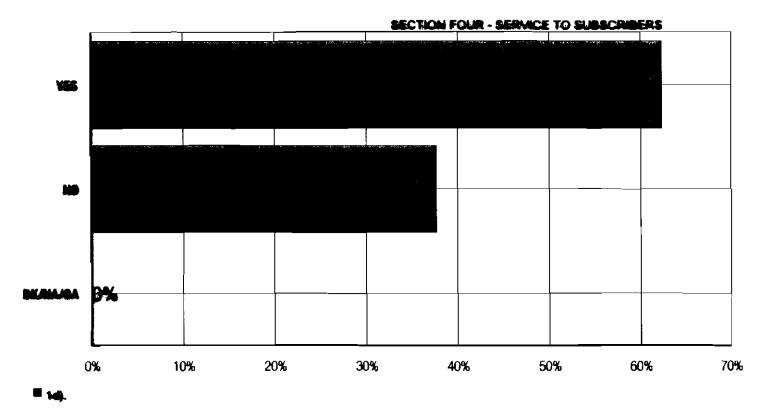
Was your question or problem resolved?





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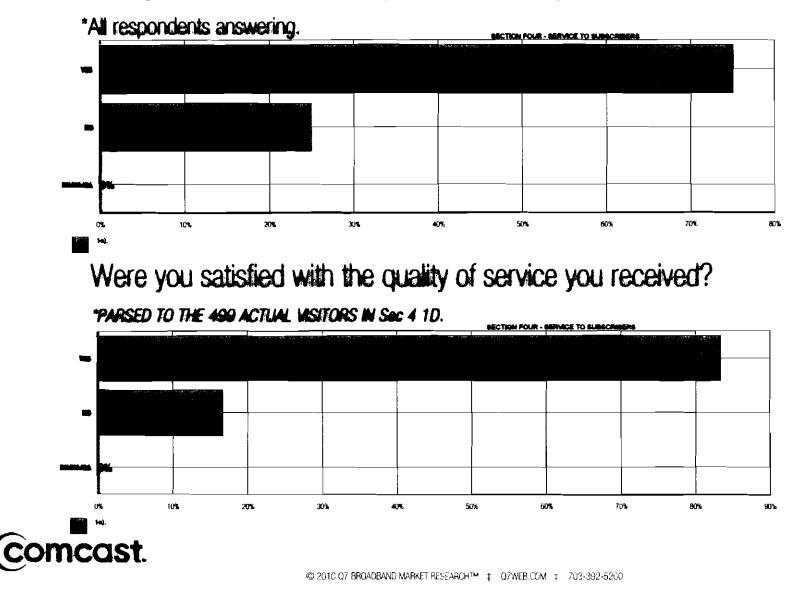
Have you ever visited the local Comcast Office?



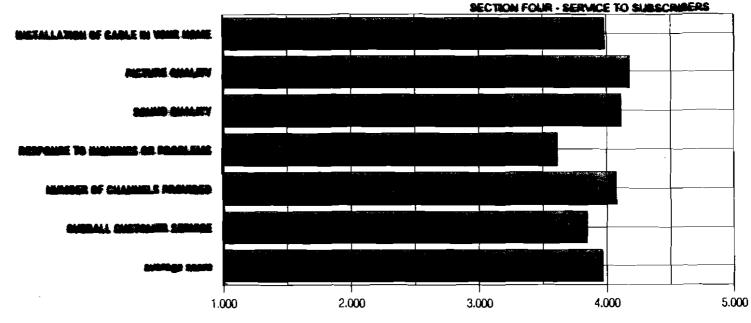
Comcast.

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Were you satisfied with the quality of service you received?



Using a scale from 1 to 5, with 1 meaning "extremely dissatisfied" and 5 meaning "extremely satisfied," please select the number that best represents your satisfaction with the following customer service aspects of the system.

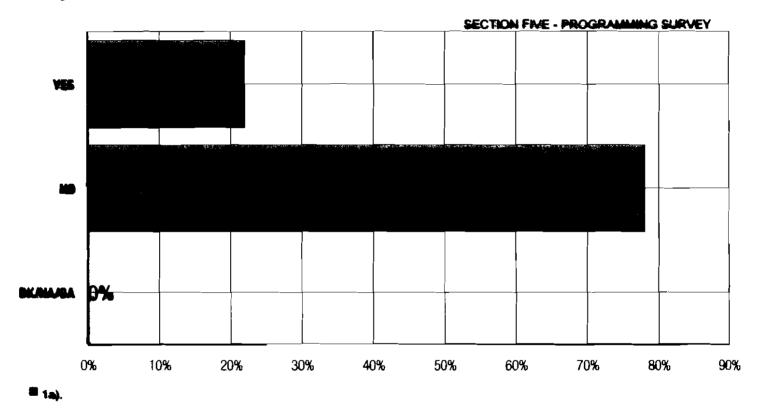


2)



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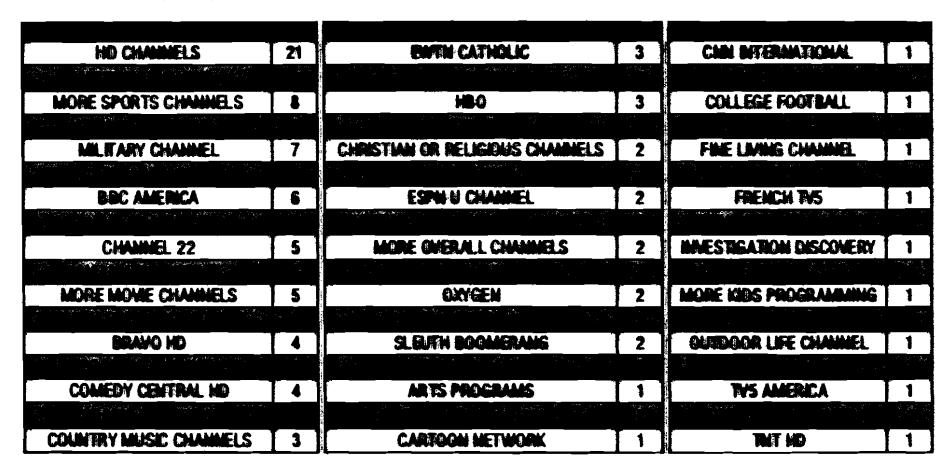
Are there any channels that are not presently offered that you or others in your household would like to see added to our system?





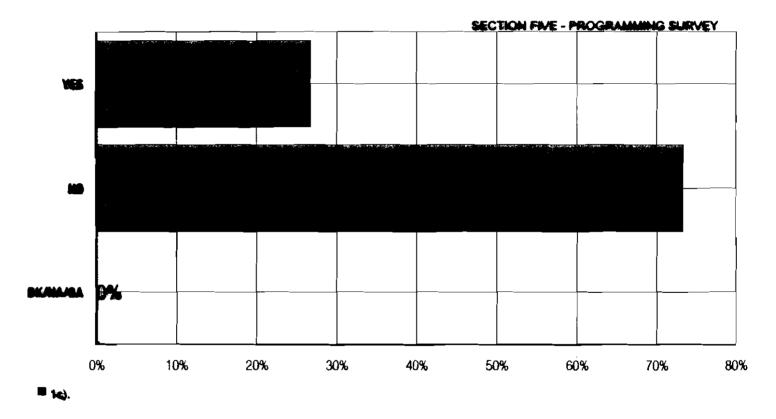
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1b). If yes, which channel(s) would you like to see added to the system?



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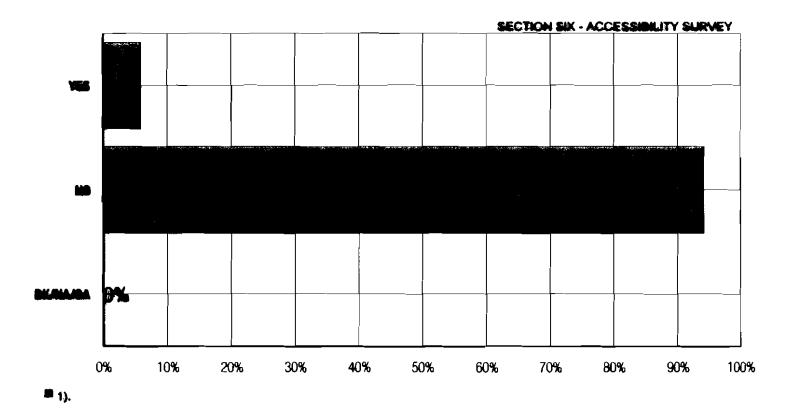
If Comcast added the new channels that you would like to see, would you be willing to pay more for the service?





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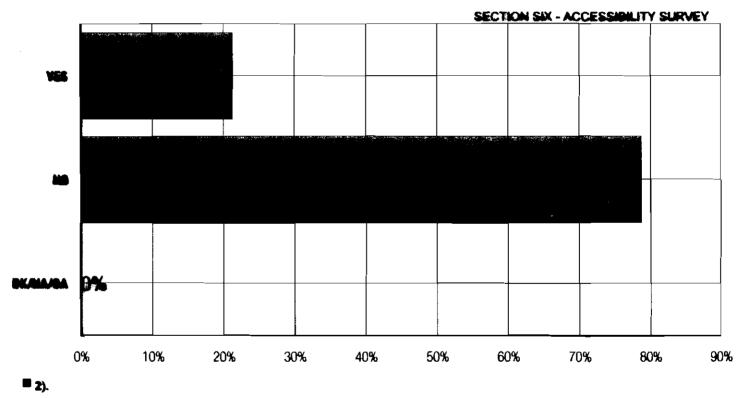
Are there any persons in your household with hearing or vision disabilities which interferes with their enjoyment of cable TV?





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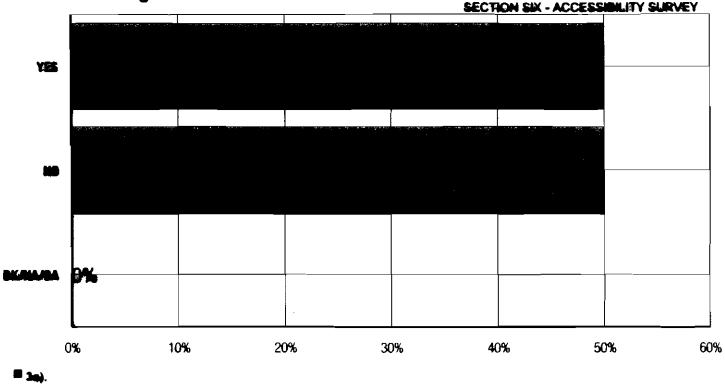
Are there any persons in your household with mobile, manual or dexterity impairments that would interfere with their ability to use cable TV controls?





Have any of these disabilities or impairments affected this person's ability to:

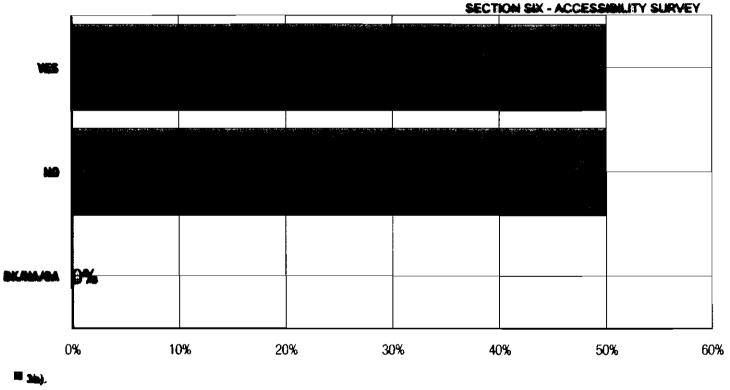
Access/change channels on cable?



Comcast.

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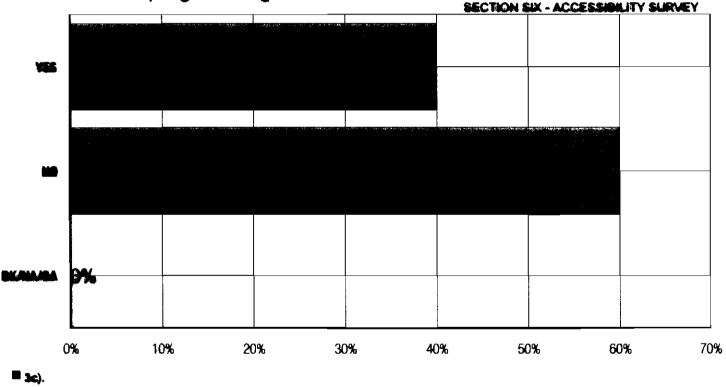
Have any of these disabilities or impairments affected this person's ability to: Discuss a bill with Comcast?



Comcast.

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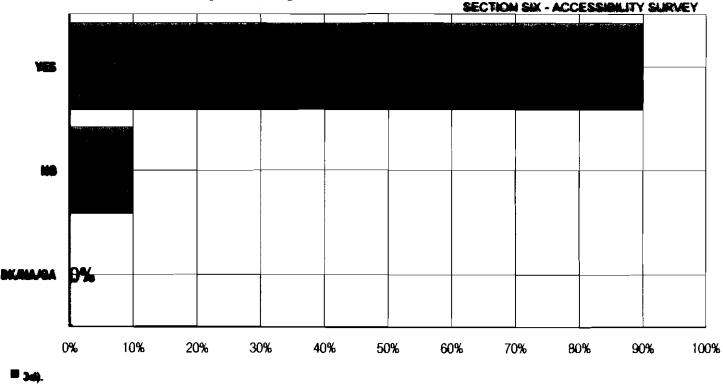
Have any of these disabilities or impairments affected this person's ability to: Find out what programming is on cable?





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Have any of these disabilities or impairments affected this person's ability to: Understand the dialog on programs?



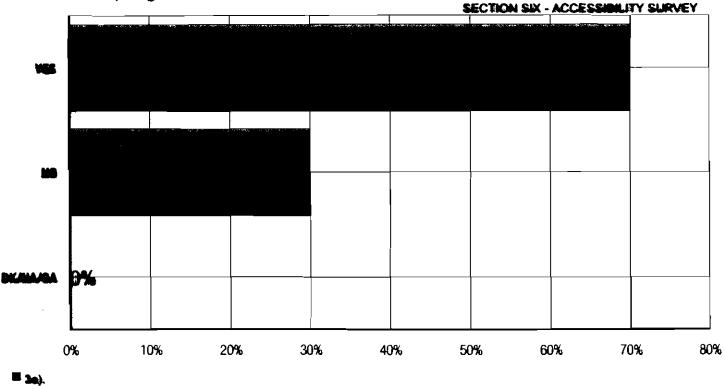


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46

Have any of these disabilities or impairments affected this person's ability to:

Follow the program on cable?





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Section Six - Accessibility Survey - Question 3f.

Have any of these disabilities or impairments affected this person's ability to: Other ... respondent comment detail.

No responses.



PAGE 1





2010 Comcast Alexandria Survey

Total

801 Surveys

SECTION ONE - BACKGROUND INFORMATION

1). What is the major reason you subscribe to cable television at this time?

29.213%	234	1 MORE CHANNELS
---------	-----	-----------------

- 4.994% 2 MOVIES 40
- 16.355% 131 **3 BETTER RECEPTION**
- 7.990% **4 PREMIUM SERVICES** 64
- 7.116% 57 **5 SPORTS**
- 34.332% 275 6 OTHER
- 100.000% 801 **Total Responses**

SECTION TWO - ACCESS CHANNELS

SECTION TWO - ACCESS CHANNELS

- Were you previously aware of these channels? 1).
- 62.921% 504 1 YES

37.079% 297 2 NO

- 0.000% 0 DK/NA/OA 0
 - 801 **Total Responses**

SECTION TWO - ACCESS CHANNELS

Channel 70 is the local government access channel which provides brief announcements about upcoming government meetings and events, and broadcasts live City Council meetings, Planning Commission meetings, Board of Zoning Appeals meetings, and Board of Architectural Review meetings. Do you watch Channel 70 programming?

- 31,746% 160 **1 YES**
- 2 NO 68.254% 344
- 0.000% 0 DK/NA/OA 0

2).

504 **Total Responses**

SECTION TWO - ACCESS CHANNELS

2a). Have you ever watched an Alexandria City Council meeting?

- 78.750% 126 1 YES
- 21.250% 34 2 NO
- 0.000% 0 0 DK/NA/OA







PAGE S

Comcast



2010 Compact Alexandria Survey

160 Total Responses

SECTION TWO - ACCESS CHANNELS

2b). Have you ever watched a Saturday public hearing?

- 37.500% 60 1 YES
- 62.500% 100 2 NO
- 0.000% 0 0 DK/NA/OA

160 Total Responses

SECTION TWO - ACCESS CHANNELS

2c). Have you ever watched a Planning Commission meeting?

- 56.250% 90 1 YES
- 43.750% 70 2 NO
- 0.000% 0 0 DK/NA/OA

160 Total Responses

SECTION TWO - ACCESS CHANNELS

2d). Have you ever watched a Board of Zoning Appeals meeting?

45.625%	73	1 YES
45.025%	73	1 YES

- 54.375% 87 2 NO
- 0.000% 0 0 DK/NA/OA
 - 160 Total Responses

SECTION TWO - ACCESS CHANNELS

- Have you ever watched a Board of Architectural Review Old and 2e). Historic District meeting?
- 36.875% 59 1 YES
- 63.125% 101 2 NO
- 0.000% 0 0 DK/NA/OA
 - 160 Total Responses

SECTION TWO - ACCESS CHANNELS

Have you ever watched a Board of Architectural Review - Parker-Gray 2f). District meeting?

- 31.875% 51 1 YES
- 68.125% 109 2 NO



PAGES





2010 Comcast Alexandria Survey

- 0.000% 0 0 DK/NA/OA
 - 160 Total Responses

SECTION TWO - ACCESS CHANNELS

- 2g). Have you ever watched a School Board meeting?
- 57.500% 92 1 YES
- 42,500% 68 2 NO
- 0.000% 0 0 DK/NA/OA
 - 160 Total Responses

SECTION TWO - ACCESS CHANNELS

- Would you be interested in specific programming which highlights City 3). services, programs and/or projects?
- 87.640% 702 1 YES
- 12,360% 99 2 NO
- 0.000% 0 0 DK/NA/OA
 - 801 Total Responses

SECTION TWO - ACCESS CHANNELS

Channels 71, 72, and 73 are the educational access channels. Channel 72 broadcasts telecourses from Northern Virginia Community College. Channel 73 broadcasts telecourses from George Mason University and Channel 71 for cable

4). ready TVs is used by the Alexandria City Public School system.

Have you ever watched the telecourses sponsored by Northern Virginia 4a). Community College?

- 17.353% 139 1 YES
- 82.647% 662 2 NO

0.000% 0 0 DK/NA/OA

801 Total Responses

SECTION TWO - ACCESS CHANNELS

Have you ever watched the telecourses sponsored by George Mason 4b). University?

- 15.980% 128 1 YES
- 84.020% 673 2 NO
- 0.000% 0 0 DK/NA/OA

801 Total Responses

PAGE 4

Comcast



2010 Comcast Alexandria Survey

SECTION TWO - ACCESS CHANNELS

Have you ever watched any of the programming sponsored by the 4c). Alexandria City Public Schools?

19.476%	156	1 YES
---------	-----	-------

	- · -	
80.524%	645	2 NO

0.000% 0 0 DK/NA/OA

801 Total Responses

SECTION TWO - ACCESS CHANNELS

Do you presently have children enrolled in the Alexandria Public School 4d). System?

- 7.990% 64 1 YES
- 92.010% 737 2 NO
- 0.000% 0 0 DK/NA/OA

801 Total Responses

SECTION TWO - ACCESS CHANNELS

Instructional programming can also be seen on MHZ2/channels 192 through 197. Have you ever watched instructional programming sponsored by MHZ2/channels 4e). 192 through 197?

5.993%	48	1 YES
94.007%	753	2 NO
0.000%	0	0 DK/NA/OA
	201	Total Peen

801 Total Responses

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69

Comcast produces local programming as a public service to Alexandrians. These programs are shown on Channel 69 in the evenings during the week and on the weekends.

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69

- 1). Have you ever watched the programming on Channel 69?
- 15.481% 124 1 YES
- 84.519% 677 2 NO
- 0.000% 0 0 DK/NA/OA
 - 801 Total Responses







2010 Comcast Alexandria Survey

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69

Have you ever watched the Community Bulletin Board on Channel 69

2). from 10:00 am to 5:30 am daily?

45.161% 56 1 YES

- 54.839% 68 2 NO
- 0.000% 0 0 DK/NA/OA

124 Total Responses

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69

Are you interested in any of the following categories of programming 3). that are currently shown on Channel 69?

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69 - INTEREST

- 3a). Local high school sports?
- 40.323% 50 1 YES
- 59.677% 74 2 NO
- 0.000% 0 0 DK/NA/OA
 - 124 Total Responses

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69 - INTEREST 3b). Civic/Informational Shows?

- 62.097% 77 1 YES
- 37.903% 47 2 NO
- 0.000% 0 0 DK/NA/OA
 - 124 Total Responses

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69 - INTEREST 3c). Entertainment Shows?

- 70.161% 87 1 YES
- 29.839% 37 2 NO
- 0.000% 0 0 DK/NA/OA
 - 124 Total Responses

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69 - INTEREST 3d). Current Local Events?

83.871% 104 1 YES



PAGE 6

omcast



2010 Comcast Alexandria Survey

- 20 2 NO 16.129%
- 0.000% 0 0 DK/NA/OA
 - 124 **Total Responses**

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69 What are the biggest obstacles to your watching more programs on the 3aa). PEG channels?

- **1 TECHNICAL QUALITY OF PROGRAMS** 3.745% 30
- 2 LACK OF INTEREST IN TOPICS 55.556% 445
- 28.464% 228 **3 LACK OF PROGRAM LISTING INFO**
- 98 12.235% 4 OTHER
 - 801 **Total Responses**

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69 Have you ever considered producing a show on the Community

3bb). Channel?

5.243%	42	1 YES
94.757%	759	2 NO
0.000%	0	0 DK/NA/OA
		· _

801 **Total Responses**

SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69

Are you aware that Comcast conducts Community Programming Volunteer Operations classes in television production for a nominal 3cc). fee?

- 12.734% 102 1 YES
- 87.266% 699 2 NO
- 0.000% 0 0 DK/NA/OA

801 **Total Responses**

> SECTION THREE - COMCAST COMMUNITY TELEVISION CHANNEL 69 3dd). Would you be interested in taking such a class?

13.483%	108	1 YES
86.517%	693	2 NO
	•	o Duanta i

- 0 DK/NA/OA 0.000% 0
 - 801 **Total Responses**

PAGE 7





2010 Comcast Alexandria Survey

SECTION FOUR - SERVICE TO SUBSCRIBERS

SECTION FOUR - SERVICE TO SUBSCRIBERS

- Have you ever called the cable company for any reason other than initiating 1). serivce?
- •
- 66.042% 529 1 YES
- 33.958% 272 2 NO
- 0.000% 0 0 DK/NA/OA

801 Total Responses

SECTION FOUR - SERVICE TO SUBSCRIBERS

1a). Was your call answered within a reasonable period of time?

79.584%	421	1 YES
20.416%	108	2 NO

0.000% 0 0 DK/NA/OA

529 Total Responses

SECTION FOUR - SERVICE TO SUBSCRIBERS

1b). Was the person with whom you spoke courteous?

94,329%	499	1 YES
5.671%	30	2 NO
0.000%	٥	0 DK/NA/OA

529 Total Responses

SECTION FOUR - SERVICE TO SUBSCRIBERS

1c). Was your question or problem resolved?

- 78.828% 417 1 YES
- 21.172% 112 2 NO
- 0.000% 0 0 DK/NA/OA
 - 529 Total Responses

SECTION FOUR - SERVICE TO SUBSCRIBERS

- 1d). Have you ever visited the local Comcast Office?
- 62.297% 499 1 YES
- 37.703% 302 2 NO
- 0.000% 0 0 DK/NA/OA
 - 801 Total Responses

PAGE (

Comcast



2010 Comcast Alexandria Survey

SECTION FOUR - SERVICE TO SUBSCRIBERS

1e). Were you satisfied with the quality of service you received?

75.031%	601	1 YES
---------	-----	-------

24.969% 200 2 NO

0.000% 0 0 DK/NA/OA

801 Total Responses

SECTION FOUR - SERVICE TO SUBSCRIBERS

Using a scale from 1 to 5, with 1 meaning "extremely dissatisfied" and 5 meaning "extremely satisfied," please select the number that best represents your satisfaction with the following customer service aspects of the system.

2). aspects of the sy

Rew points

3.984 3191	a) .	INSTALLATION OF CABLE IN YOUR HOME
4.179 3347	b) .	PICTURE QUALITY
4.112 3294	C) .	SOUND QUALITY
3.615 2896	d) .	RESPONSE TO INQUIRIES OR PROBLEMS
4.075 3264	e) .	NUMBER OF CHANNELS PROVIDED
3.845 3080	f).	OVERALL CUSTOMER SERVICE
3.968		average score
		SECTION FIVE - PROGRAMMING SURVEY

SECTION FIVE - PROGRAMMING SURVEY

Are there any channels that are not presently offered that you or others

- 1a). in your household would like to see added to our system?
- 21.973% 176 1 YES

78.027% 625 2 NO

0.000% 0 0 DK/NA/OA

801 Total Responses

SECTION FIVE - PROGRAMMING SURVEY

1b). If yes, which channel(s) would you like to see added to the system? PLEASE SEE DATA SHEET

SECTION FIVE - PROGRAMMING SURVEY

If Comcast added the new channels that you would like to see, would

- 1c). you be willing to pay more for the service?
- 26.705% 47 1 YES



9465 6

comcast



2010 Comcast Alexandria Survey

- 2 NO 73.295% 129
- 0.000% 0 DK/NA/OA ۵
 - 176 **Total Responses**

SECTION SIX - ACCESSIBILITY SURVEY

SECTION SIX - ACCESSIBILITY SURVEY

- Are there any persons in your household with hearing or vision 1).
 - disabilities which interferes with their enjoyment of cable TV?
- 1 YES 5.868% 47
- 94.132% 754 2 NO
- 0.000% 0 0 DK/NA/OA
 - 801 **Total Responses**

SECTION SIX - ACCESSIBILITY SURVEY

Are there any persons in your household with mobile, manual or dexterity impairments that would interfere with their ability to use cable 2). TV controls?

21.277%	10	1 YES
78.723%	37	2 NO

- 0.000% 0 0 DK/NA/OA
 - 47 **Total Responses**

SECTION SIX - ACCESSIBILITY SURVEY

3). Have any of these disabilities or impairments affected this person's ability to:

SECTION SIX - ACCESSIBILITY SURVEY

- 3a). Access/change channels on cable?
- 50.000% 5 1 YES
- 50.000% 5 2 NO
- 0.000% 0 0 DK/NA/OA
 - 10 **Total Responses**

SECTION SIX - ACCESSIBILITY SURVEY

3b). Discuss a bill with Comcast?

50.000%	5	1 YES
---------	---	-------

50.000% 5 2 NO







PAGE 10

Comcast



2010 Comcast Alexandria Survey

- 0.000% 0 0 DK/NA/OA
 - 10 Total Responses

SECTION SIX - ACCESSIBILITY SURVEY

- 3c). Find out what programming is on cable?
- 40.000% 4 1 YES
- 60.000% 6 2 NO
- 0.000% 0 0 DK/NA/OA
 - 10 Total Responses

SECTION SIX - ACCESSIBILITY SURVEY

- 3d). Understand the dialog on programs?
- 90.000% 9 1 YES
- 10.000% 1 2 NO
- 0.000% 0 0 DK/NA/OA
 - 10 Total Responses

SECTION SIX - ACCESSIBILITY SURVEY

- 3e). Follow the program on cable?
- 70,000% 7 1 YES
- 30.000% 3 2 NO
- 0.000% 0 0 DK/NA/OA
 - 10 Total Responses

SECTION FOUR - SERVICE TO SUBSCRIBERS

- 1e). Were you satisfied with the quality of service you received?
- *****PARSED TO THE 499 ACTUAL VISITORS IN Sec 4 1D.
- 83.367% 416 1 YES
- 16.633% 83 2 NO
- 0.000% 0 0 DK/NA/OA
 - 499 Total Responses





2010 ANNUAL REPORT

PLANT REPORT FCC PROOF OF PERFORMANCE CLI FLY OVER SERVICE CALL REPORT OUTAGE REPORT

AUGUST 30, 2010





FCC Technical Standards Tests

System Alexandria, VA Test Date Summer 2009



Region/Area: Beltway Filename: FCC POP Filing Template.doc Template Author: Greg Harmon Print Date: 3/5/09 Last Save Date: 8/18/2009 3:33:00 PM Comments:



Table of Contents

Chapter 1 - Test Qualifications	1-1
Chapter 2 – Scheduling, Requirements, and Methodology	2-1
FCC Proof of Performance	2-1
Twenty-four Hour Signal Variation Test	2-1
Color Testing	2-1
FCC Public Inspection File	2-2
Test Location Guide and Summary	2-4
Analysis of Test Results	2-4
Failure Action Plan	2-4
Proof Specifications – Comcast and FCC	
Channels Required for Testing	2-6
Chapter 3 - Test Equipment List	3-1
Chapter 4 – Headend, Hubs, Test Point List	4-1
Requirements	4-1
Headend Information	4-1
Field Test Point Information	4-2
Chapter 5 - Channel Carriage List Error! Bookmark no	t defined.
Chapter 6 - Description of Test Procedures	6-1
Carrier to Noise	6-1
Coherent Disturbances	6-2
Hum	6-4
In-channel Frequency Response (amplitude characteristics)	
Frequency Measurement	6-7
Carrier Level Measurements	6-8
Twenty-Four Hour Carrier Level Measurements	
Chapter 7 - Manufacturer's Tap Specifications or Tap Port Isolation Tests	7-1
Chapter 8 – Headend/Hub Tests Results	8-1
Most Recent Color Test	
Chapter 9 - Test Point Tests Results	
Chapter 10 – Summaries	10-1
Narrative	10-1

Chapter 1 - Test Qualifications

FCC Part 76.601.1 An identification of the instruments, including the makes, model numbers, and the most recent date of calibration, a description of the procedures utilized, and a statement of the qualifications of the person performing the tests shall also be included.

Person Responsible for Testing:

Greg Harmon / Brandi Porras

Industry Experience:

25 Years in CATV industry

Technical Certifications:

NCTI - Senior Master Technician (Greg)

Additional Comments:

Chapter 2 – Scheduling, Requirements, and Methodology

FCC Proof of Performance

- Two Proofs must be completed each calendar year
- The time period between any two proofs must not exceed seven months
- All repairs and retesting must be completed before the filing deadline

Twenty-four Hour Signal Variation Test

- Two twenty-four hour tests must be completed each year, one in January and one in July
- Initial repeat testing on failed twenty-four hour tests must be completed by February 10th or August 10th respective to each test period
- It is the general manager's responsibility to insure that the twenty-four hour tests have been completed and passed by the end of February and again by the end of August

Color Testing

• Color tests must be completed tri-annually for chrominance-luminance delay inequality, differential gain, and differential phase



FCC Public Inspection File

This page addresses FCC Public Inspection File requirements only for documentation typical processed by technical staff. It does not address the political file, sponsorships, EEO, or children's programming.

The following paragraphs are excerpts from FCC rules followed by comments and interpretations.

§ 76.305 Records to be maintained locally by cable system operators for public inspection

(a) *Records to be maintained*. The operator of every cable television system having 1,000 or more subscribers shall maintain for public inspection a file containing a copy of all records which are required to be kept by § 76.207 (political file); 76.221(f) (sponsorship identifications); 76.79 (EEO records available for public inspection); 76.225(c) (commercial records for children's programming); 76.601(c) (proof-of-performance test data); 76.601(e) (signal leak-age logs and repair records) and § 76.701(h)(records for leased access).

(1) A record shall be kept of each test and activation of the Emergency Alert System (EAS) procedures pursuant to the requirement of part 11 of this chapter and the EAS Operating Handbook. These records shall be kept for three years.

(2) [Reserved]

(b) Location of records. The public inspection file shall be maintained at the office which the system operator maintains for the ordinary collection of subscriber charges, resolution of sub-scriber complaints, and other business or at any accessible place in the community served by the system unit(s) (such as a public registry for documents or an attorney's office). The public inspection file shall be available for public inspection at any time during regular business hours.

(c) The records specified in paragraph (a) of this section shall be retained for the period specified in §§ 76.207, 76.221(f), 76.79, 76.225(c), 76.601(c), and 76.601(e), respectively.

(d) *Reproduction of records*. Copies of any material in the public inspection file shall be available for machine reproduction upon request made in person, provided the requesting party shall pay the reasonable cost of reproduction. Requests for machine copies shall be fulfilled at a location specified by the system operator, within a reasonable period of time, which in no event shall be longer than seven days. The system operator is not required to honor requests made by mail but may do so if it chooses.

Comments

Insure that your FCC public inspection file is well organized, and professionally maintained.

Insure all EAS tapes that document all tests and activations of the EAS system are kept in the file. Moreover, any other documentation of EAS

activity is suggested. (correspondence with local authorities, maintenance records, etc.)

§ 76.614 CLI Filing Information

Cable television operators transmit-ting carriers in the frequency bands 108–137 and 225-400 MHz shall provide for a program of regular monitoring for signal leakage by substantially covering the plant every three months. The incorporation of this monitoring program into the daily activities of existing service personnel in the discharge of their normal duties will generally cover all portions of the system and will therefore meet this requirement. Monitoring equipment and procedures utilized by a cable operator shall be adequate to detect a leakage source which produces a field strength in these bands of 20 mV/m or greater at a distance of 3 meters. During regular monitoring, any leakage source which produces a field strength of 20 mV/m or greater at a distance of 3 meters in the aeronautical radio frequency bands shall be noted and such leakage sources shall be repaired within a reasonable period of time. The operator shall maintain a log showing the date and location of each leakage source identified, the date on which the leakage was repaired, and the probable cause of the leakage. The log shall be kept on file for a period of two (2) years and shall be made available to authorized representatives of the Commission upon request.

[50 FR 29400, July 19, 1985]

Comments

Leakage logs must be kept in the FCC public inspection file. It is suggested that monthly LES 320s, annual flyover 320s, and other related documentation also be filed.

Note that these records must be kept for five (5) years.

§ 76.601 Proof of Performance Filing Information

(c) The operator of each cable television system shall conduct complete performance tests of that system at least twice each calendar year (at intervals not to exceed seven months), unless otherwise noted below, and shall maintain the resulting test data on file at the operator's local business office for at least five (5) years. The test data shall be made available for inspection by the Commission or the local franchiser, upon request. The performance tests shall be directed at determining the extent to which the system complies with all the technical standards set forth in § 76.605(a) and shall be as follows: (refer to rules)

Comments

Note that POP records must be kept for five (5) years.

Test Location Guide and Summary

Headend

- Visual, aural, offset frequency counts on all channels
- Visual and aural carrier levels on all channels
- Hum tests on all channels
- Color tests

Field Test-points

- Visual, aural, offset frequency counts on all channels thru 100' drop; test channels thru converter
- Visual and aural carrier levels on all channels thru 100' drop; test channels thru converter
- Twenty-four hour (6 month) variation tests thru 100' drop (must be done in January and July and represent warmest and coolest time of day)
- In-channel response on test channels thru converter
- Visual Carrier to Noise (C/N) on test channels, thru 100' drop, thru converter
- Coherent Disturbances (CSO, CTB, other) on test channels, thru 100' drop, thru converter
- Hurn on tests channels, thru 100' drop, thru converter

Analysis of Test Results

• The person responsible for the tests must analyze and evaluate the test results and formulate an action plan to address any failures immediately

Failure Action Plan

- Repair and re-testing before the filing and reporting deadline is essential
- Repair and re-testing should be given top priority, same as a major outage
- Failures that are impossible to repair before the reporting and filing deadline (end of February or August respectively) require a written action plan to address the problem submitted to the regional engineer



Proof Specifications – Comcast and FCC

+/- 25 KHZ	
+/- 25 KHZ	·+···
	+/- 25 KHZ
+/- 3 KHZ	+/- 5KHZ_
+/- 1 KHZ	+/- 5 KHZ
6 dbmv @ 100 ft.	3 dbmv @ 100 ft.
10 TO 17 db	10 TO 17 db
3 db	3 db
15 db	10 db / 0-300 MHZ
	11 db / 301-400 MHZ
······································	12 db / 401-500 MHZ
	13 db / 501-600 MHZ
	14 db / 601-700 MHZ
	15 db / 701-800 MHZ
<u>i na se e i e i di di di</u>	42 alt and an
43 db and over (passes)	43 db and over (passes)
or design spec	
	<u>and a state of the state of th</u>
2%	3%
	<u>188</u> 0 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993
+/- 1 db @ HEADEND	
+/- 2 OVERALL	+/- 2 db
	61 db
	51 db
45 db	40 db
<20 uv/m @ 10 feet	<20 uv/m @ 10 feet
	<64
	+/- 1 KHZ 6 dbmv @ 100 ft. 10 TO 17 db 3 db 15 db 43 db and over (passes) or design spec 2% +/- 1 db @ HEADEND +/- 2 OVERALL 51 db

* Audio Frequency Norm-- Between 4.495 and 4.505





Channels Required for Testing

Each test point must be tested for aural frequency offset, carrier to noise, CSO, CTB, discrete beats, in-channel response, and hum on the following number of channels based on system bandwidth.

Also test two (digital QAM) channels for digital power and constellation uniformity (this is not required, but highly recommended)

Number of Channels	Up to XX MHz (system analog bandwidth)
5	216
66	300
77	400
8	500
9	600
10	700
11	800
12	900

Note: test channel requirement is based on analog bandwidth, not full bandwidth. This is typically 550 MHz in upgraded systems requiring nine (9) test channels.

Select channels where the programmer provides multi-burst VITS for in-channel response testing, otherwise a VITS generator will be required.

This system utilizes < 550 MHz analog bandwidth; 9 test channels will be used for the tests.

Chapter 3 - Test Equipment List

FCC Part 76.601.1 An identification of the instruments, including the makes, model numbers, and the most recent date of calibration, a description of the procedures utilized, and a statement of the qualifications of the person performing the tests shall also be included.

Manufacturer	Model Number	Most Recent Calibration	Serial Number
нр	8591c	09-04-08	3916A04384
Acterna (Wavtek)	4040D	07-29-08	4240082
	SDA-5000	09-04-08	0413408
Com Sonics	101129-001	N/A	C5F1906419C5
Scientific Atlanta	8511300	N/A	GF505BFDN
			
			-i

Notes:



Chapter 4 – Headend, Hubs, Test Point List

Requirements

- Headends up to 12,500 subscribers require six test points
- Headends from 12,501 to 25,000 subscribers require seven test points
- Headends from 25,001 subscribers require eight test points
- Add one test point for each additional 12,500 subscribers
- Microwave links require at least one test point
- Fiber links to remote hubs need to be represented by at least one of the total system test points
- Headend tests are also required at hubs, i.e. frequency counts on all channels, color tests, etc.

Headend Information

Headend Name: Sterling Headend

Headend Address: 45750 ELMWOOD CT. STERLING VA. 20166

Headend Phone Number(s): (703) 430-6826 voice, XXX-XXX EAS Override.

Headend Coordinates: N 39 deg 00 min 45 seconds, W 77 deg 24 min 59 sec

Hubs: 2

FCC Tower Registration Number: N/A

FCC TVRO Registration Number: E6617EA

FCC Commercial Radio License Number: KNIG-884 (9912A048704) **EAS System(s):** (2) MEGAHERTZ EAS4, SAGE EAS ENDEC

EAS Log Locations: Current activity log at headend. Tape originals in headend technician's files, copies made monthly and placed in Technical file.

EAS FIPS Codes Serviced By Headend: 51107

EAS Stations Monitored: LP1 (WTOP 103.5), LP2 (WABD 99.8), NOAA (163.425)

Alerts Processed: Termination, Monthly Test, Weekly Test (log), Tornado Warning, Flood Warning, Severe Thunderstorm Warning, Winter Storm Warning, Blizzard Warning, *Local Government Override Provided



Field Test Point Information

Test Point ID: TP1Address: 85 S. Bragg StHeadend: AlexandriaHub:Pole Number:Cascade: NodeLaser Number:Node Number: AX047Tap Value:Print Number: H-1Notes:

Test Point ID: TP#2

Headend: Alexandria

Hub:

Pole Number: Cascade: Node Laser Number: Node Number: AX043

Tap Value: Print Number: H-1

Notes:

Address: Tower Ct. & S. Whitting St.



Test Point ID: TP #3

Address: 1 N. Donelson St. Headend: Alexandria Hub: Pole Number: Cascade: Node Laser Number: Node Number: AX113 Tap Value: Print Number: H-5 Notes:

Test Point ID: TP #4

Address: Kenwood St. & Fern St. Headend: Alexandria Hub: Pole Number: Cascade: Node Laser Number: Node Number: AX295 Tap Value: Print Number: E-6 Notes:

Test Point ID: TP# 5

Address: 1121 Allison St. Headend: Alexandria Hub: Pole Number: Cascade: Node Laser Number: Node Number: AX356 Tap Value: Print Number: E-7 Notes:

Test Point ID: TP # 6 Address: 901 N. Kemper St. Headend: Alexandria Hub: Pole Number: Cascade: Node Laser Number: Node Number: AX155 Tap Value: Print Number: G-4 Notes:

...,ť

Test Point ID: TP # 7Address: 528 Bellvue Pl.Headend: AlexandriaHub:Pole Number:Cascade: NodeLaser Number:Node Number: AX487Tap Value:Print Number: G-10Notes:

Test Point ID: TP # 8

Address: 5109 Gardner Dr. Headend: Alexandria Hub: Pole Number: U/G Cascade: Node Laser Number: Node Number: AX520 Tap Value: 20/8 Print Number: No Print Notes:

Test Point ID: TP # 9 Address: 418 Bashford Ln. Headend: Alexandria Hub: Pole Number: U/G Cascade: Node Laser Number: Node Number: AX486 Tap Value: 20/8 Print Number: G-10 Notes:





4-4

Test Point ID: TP # 10

Address: 5465 Colfax Ave. Headend: Alexandria Hub: Pole Number: Cascade: Node Laser Number: Node Number: AX192 Tap Value: Print Number: C-3 Notes:

Test Point ID: TP # 11

Address: 2357 N. Early St. Headend: Alexandria Hub: Pole Number: Cascade: Node Laser Number: Node Number: AX290 Tap Value: Print Number: E-5

Notes:

Test Point ID: TP # 12 Address: Headend

Headend: Alexandria Hub: Pole Number: Cascade: Laser Number: Node Number: Tap Value: Print Number; Notes:





Chapter 5 - Channel Carriage List

Include all DTV/DOCSIS channels/allocations including reverse frequencies (attach DTV list)

		Description of Primary				
	Channel	Programming	ĺ	Tiering	1	Off
	Class &	Network Affiliate, PEG	{	Basic,	Origination City	Air
Channel	Grade	Local, Weather, Ed Access, etc	Call Sign	Pay, etc	(Local, Satellite, etc)	Chari
23-27 MHz	N/A	DOCSIS Upstream Data	N/A	N/A	N/A	N/
2	<u> </u>	WGN	WGN	BASIC	CRAN	c
3	lb	WBDC		BASIC	CRAN	c
4	lb	NBC NETWORK AFFILIATE	WRC	BASIC	CRAN	C
5	lb	FOX NETWORK AFFILIATE	WTTG	BASIC	CRAN	C
6	1	QVC	QVC	BASIC	CRAN	c
74.00Mhz		CONVERTER DATA	N/A	N/A	CRAN	c
A-5/95 Ae		Reserved for In-House Cameras			CRAN	<u>c</u>
A-4/96 Ae		Digital QAM	Multiple	TIER	CRAN	c
A-3/97 Ae	1	Digital QAM	Multiple	TIER	CRAN	c



A-2/98 Ae	1	Reserved for in-house cameras	LO	BASIC	CRAN	<u>c</u>
A-1/99 <u>Ae</u>	· ·	Digital QAM	Multiple	TIER_	CRAN	C
A/14 Ae	1	UNIVISION	UNIV	BASIC	CRAN	c
B/15 Ae	1	TELEFUTURA	WMDO	BASIC	CRAN	c
C/16 Ae	1	TELEMUNNDO	WZDC	BASIC	CRAN	c
D/17_	(PAX DC	WPXW	BASIC	CRAN	c
E/18	1	ABC-FAMILY	FAM	BASIC	CRAN	c
F/19	la	PB\$		BASIC	CRAN	<u> </u>
G/20		WDCA 20	WDCA	BASIC	CRAN	c
H/21		Digital QAM	Multiple	TIER	CRAN	c
1/22	1	Digital QAM	Multiple	TIER	UET	UE
7	lb	ABC NETWORK AFFILIATE	WJLA	BASIC	CRAN	с
8	di	NEWS CHANNEL 8	NEWSCO 8	BASIC	CRAN	c
9	ib	CBS NETWORK AFFILIATE	WUSA	BASIC	CRAN	c
10	lb		CSN	BASIC	CRAN	С
11	lb	ESPN	ESPN	BASIC	CRAN	C
12	lb	ESPN2	ESPN2	BASIC	CRAN	C
13	lb	USA	USA	BASIC	CRAN	
J/23	1	HSN	HSN	BASIC	CRAN	C
K/24	1	Digital QAM	Multiple	TIER	CRAN	C
L/25 Ae	1	Digital QAM	Multiple	TIER	CRAN	c
M/26 Ae		PBS NETWORK AFFILIATE	WETA	BASIC	CRAN	c
N/27 Ae	1	WEATHER CHANNEL	TWC	BASIC	CRAN	c
0/28 Ae	/	HEADLINE NEWS	HN	BASIC	CRAN	C
P/29 Ae		CNN	CNN	BASIC	CRAN	
Q/30 Ae	1	MSNBC	MSNBC	TIER	CRAN	C
R/31 Ae		CNBC	CNBC	TIER	CRAN	
S/32 Ae	1	FOX NEWS	FNC	TIÊR	CRAN	C
T/33 Ae	 	FX_	FX_	TIER	CRAN	
U/34 Ae		SPIKE	SPIKE	BASIC	CRAN	
V/35 Ae	1	TBS	TBS	TIER	CRAN	C
W/36 Ae	1		TNT	BASIC	CRAN	C
AA/37 Ae	1	Digital QAM	Multiple	TIER	CRAN	c
BB/38 Ae		A&E	A&E_	BASIC	CRAN	c
CC/39 Ae		BRAVO	BRAVO	BASIC_	CRAN	c
DD/40 Ae	1	Digital QAM	Multiple	BASIC	CRAN) C
EE/41 Ae		TCM	TCM_	BASIC_	CRAN _	- c
FF/42 Ae		TV LAND	TVLAND	BASIC	CRAN	c
GG/43 Ae	1	NICKELODEON	NICK	BASIC	CRAN	c
HH/44 Ae		DISNEY	DISNEY	BASIC	CRAN	T c
11/45 Ae	1	Digital QAM	Multiple	TIER	CRAN	C





JJ/46 Ae	<u> </u>	ANIMAL PLANET	ANIML	BASIC	CRAN	<u>c</u>
KK/4 <u>7 Ae</u>		TLC	TLC	BASIC	CRAN	c
LL/48 Ae	1	DISCOVERY	DISC	BASIC	CRAN	C
MM/49 Ae	1	DISCOVERY HEALTH	DISCH	BASIC	CRAN	_
NN/50 Ae	<u> </u>		LIFE	BASIC	CRAN	c
00/51 Ae	ļ	SCI-FI	SCIFI	BASIC	CRAN	c
PP/52 Ae	<u> </u>	H <u>GTV</u>	HGTV	BASIC	CRAN	c
QQ/53 Ae	1	TV ONE	TVONE	BASIC	CRAN	c
RR/54	1	FOOD NETWORK	FOOD	BASIC	CRAN	c
SS/55	I	Digital QAM	Multiple	BASIC	CRAN	c
TT/56	1	E!	E	BASIC	CRAN	c
UU/57			VH1	BASIC	CRAN	c
VV/ <u>58</u>	1	Digital QAM	Multiple	BASIC	CRAN	C
WW/59	1		MTV	BASIC		
XX/60	1	ВЕТ	BET	BASIC	CRAN	
YY/61	1	COMDEY CENTRAL	COMDEY	BASIC	CRAN	
ZZ/62	1	MASN	MASN	BASIC	CRAN	0
AAA/63			SPEED	BASIC	CRAN	
88B/64	1		OLN	BASIC	CRAN	C
CCC/65	1	GOLF CHANNEL	GOLF	BASIC	CRAN	C
DDD/66	1	Digital QAM	Multiple	TIER	CRAN	
EEE/67	1	TRAVEL CHANNEL	TRVL	BASIC	CRAN	
FFF/68	1		Multiple	BASIC	UET	UE
GGG/69	4	LOCAL ORIGINATION	CCTV	BASIC	FIBER	
HHH/70	Î Î	Alexandria Government Channel	GOVT	BASIC	FIBER	L
71	IV	Alexandria Public Schools	APS	BASIC	FIBER	L
72	IV	Northern VA Community College	EDUC	BASIC	FIBER	L
73	IV	George Mason University	GMU	BASIC	FIBER	L
74	IV		Multiple	TIER	CRAN	C
75	IV	Digital QAM	Multiple	TIER	UET	UE
76	łV		CSPAN	BASIC	CRAN	C
77	IV	CSN+/Masn2	CSN+	BASIC	CRAN	c
78	IV	Digital QAM	Multiple	TIER		UE
79	IV	Digital QAM	Multiple	TIER	CRAN	C
80	IV	Digital QAM	Multiple	TIER	CRAN	С
81	IV	Digital QAM	Multiple	TIER	CRAN	с
82	IV	Digital QAM	Multiple	TIER	CRAN	c
83	īv	Digital QAM	Muttiple	TIER	CRAN	c
84	IV	Digital QAM	Multiple	TIER	CRAN	c
85	IV .	Digital QAM	Multiple	TIER	UET	UE
86	IV	 Digital QAM	Multiple	TIER	CRAN	С





87	IV	Digital QAM	Multiple	TIER		C
88	<u>IV</u>	Digital QAM	Multiple	TIER	UET	UET
89	IV	Digital QAM	Multiple	TIER	CRAN	c
90	<u>ıv</u>	Digital QAM	Multiple		CRAN	C
91	<u>IV</u>	Digital QAM	Multiple	TIER_	CRAN	c
92	IV	DIGITAL QAM	MULTIPLE	TIER	UET	UET
93	_iv [MULTIPLE	TIER	CRAN	C
94	IV	DIGITAL QAM	MULTIPLE	TIER		c
100	IV	DOCSIS Downstream Data	N/A	N/A	N/A	N/A
101	IV	DOCSIS Downstream Data	N/A	N/A	N/A	N/A
102	IV	DOCSIS Downstream Data	N/A	N/A	<u>N/A</u>	N/A
103	<u>IV</u>	DOCSIS Downstream Data	N/A	<u>N/A</u>	<u>_N/A</u>	N/A
104	IV		MULTIPLE	TIER	UET	UET
105	iv		MULTIPLE	TIER	CRAN	с
106	IV		MULTIPLE	TIER		c
107	IV		MULTIPLE	TIER	CRAN	с
108	IV		MULTIPLE	TIER	CRAN	C
109	IV		MULTIPLE	TIER	CRAN	c
110			MULTIPLE	TIER	CRAN	C
111	IV	DIGITAL QAM	MULTIPLE	TIER	CRAN	C
112	IV		MULTIPLE	TIER	CRAN	C
113	IV		MULTIPLE	TIER	CRAN	c
114	1V		MULTIPLE	TIER	<u>UE</u> T	UET
115	IV		MULTIPLE	TIER	UET	υετ
116	IV		MULTIPLE	TIËR	CRAN	c
117	<u>IV</u>		MULTIPLE	TIER	UET	UET
118	N I	DIGITAL QAM	MULTIPLE	TIER	UET	UET



Chapter 6 - Description of Test Procedures

FCC Part 76.601.1 An identification of the instruments, including the makes, model numbers, and the most recent date of calibration, a description of the procedures utilized, and a statement of the qualifications of the person performing the tests shall also be included.

Note: Subscriber terminal is interpreted as the output of the set-top converter (all tests)

Carrier to Noise

FCC Requirement

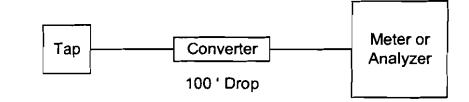
76.605 a 7 Carrier to Noise Ratio

"The ratio of RF visual signal level to system noise shall be as follows:

As of June 30, 1995, shall not be less than 43 decibels."

Area Specifics

- The signal level input must be high enough to insure the test equipment internal noise is not hindering carrier to noise readings.
- When using a signal level meter, the typical input level is 20 dBmv, or as stated in the operator's manual.



System Specific Notes:

Coherent Disturbances

Composite Triple Beat, Composite Second Order Beat, Discrete Beat Measurement

FCC Requirement

76.605 a 8 i, ii

Coherent Disturbances

"The ratio of visual signal level to the rms amplitude of any coherent disturbances such as intermodulation products, second and third order distortions or discrete-frequency interfering signals not operating on proper offset assignments shall be as follows:

The ratio of visual signal levels to coherent disturbances shall not be less than 51 decibels for noncoherent channel cable television systems, when measured with modulated carriers and time averaged; and

the ratio of visual signal level to coherent disturbances which are frequency-coincident with the visual carrier shall not be less than 47 decibels for coherent channel cable systems, when measured with modulated carriers and time averaged."

Area Specifics

The important thing to keep in mind about Coherent Disturbance tests is that it includes more than CSO and CTB. Automated CSO/CTB measurements are fine for some things but should not be used for proofs. The reason is that automated routines perform measurements only at the common CSO/CTB frequencies (that's at the visual carrier, +/- 750 kHz, and +/- 1.25 MHz for the standard channel plan in the US).

Because a narrow resolution bandwidth filter and heavy video filtering is used for the test, it is necessarily slow. If you use automated techniques, you can have the channel out of service for longer than necessary and get the wrong numbers!

Carriers leaking out of the headend or ingress are common examples of coherent disturbances that would not be measured using automatic CSO and CTB procedures. For example, the local oscillator in the modulator or processor seven channels down from the channel under test might get into the system. This causes a color beat in the picture of the channel under test. It would not be measured using automated methods.

Fortunately, CD tests can be run properly, accurately, and quickly using semi-automated or manual methods.

Performing coherent disturbance tests properly, accurately, and quickly.

Don't use automated methods that only measure CSO and CTB. The key is to use manual or semi-automated methods that allow the operator to select the disturbance(s), if any, to be measured. This allows a check across the entire channel and measurement of only the largest disturbance(s). If no disturbances are visible, the channel can be returned to service immediately.

For one popular analyzer, this is the difference between having the channel out of service for more than 90 seconds (and still not doing a thorough test), and having it off for 10 seconds and doing the test properly! When disturbances are found, the largest one can be measured first, and assuming it meets the requirements, the channel can be returned to service in less than 30 seconds.

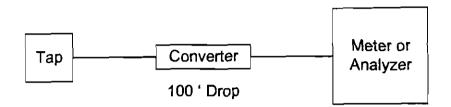
If you run coherent disturbance tests at the tap instead of at the output of a converter (get your "good engineering practices" statement ready), consider alternatives to using tunable preselector filters. It's very easy to make mistakes with tunable filters, especially when looking for signals across the entire channel bandwidth. Remember, the reason for the filter is to minimize intermodulation distortion (such as CSO and CTB) produced in the spectrum analyzer. With many of the newer analyzers, you don't need the filter if you keep the analyzer's input level in the 5 dBmV to 10 dBmV range. Alternatively, use a fixed tuned filter that is several channels wide. For example, a 100 MHz wide filter effectively reduces the number of channels to 16, dramatically reducing the likelihood of significant beats being generated in the analyzer.

• The input to the spectrum analyzer must be sufficient to overcome the noise of the test equipment (typically 20 dBmv or manufacturer's recommendation)





- The input to the spectrum analyzer must be sufficiently band-passed to prevent overloading in the spectrum analyzer.
- If a set top converter is used for band-passing, it must not have automatic gain control or frequency circuits. Base band converters cannot be used to measure composite beats.



System Specific Notes:

Hum Low Frequency Distortion Measurements

FCC Requirement

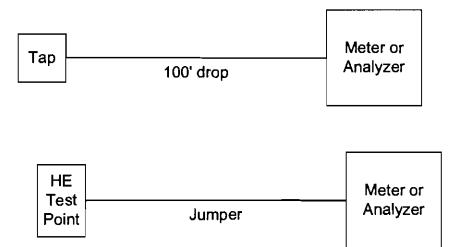
76.605 a 10

Hum

"The peak to peak variation in visual signal level caused by undesired low frequency disturbances (hum or repetitive transients) generated within the system, or by inadequate low frequency response, shall not exceed 3 percent of the visual signal level. Measurements made on a single unmodulated carrier may be used to demonstrate compliance with this parameter at each test location."

Area Specifics

- Insure that there is sufficient level to meet the test equipment requirement for an accurate measurement.
- Always measure low-frequency distortions to 1 kHz. Just sixty and one-twenty cycles will not cover switching power supplies.
- Measure all channels at headend



System Specific Notes:

