PENDING PETITION MEMO

Date: ~~5/26/2004~~ 10/29/2004

TO : Office of ~~Telecommunications~~ files

FROM: CENTRAL OPERATIONS

UTILITY: TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE

SUBJECT: 04-V-0661

Petition of the Village of Otego, Otsego County for Approval of Temporary Operating Authority for its Franchise with Time Warner Entertainment-Advance/Newhouse.

PETITION OF TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE FOR APPROVAL OF THE RENEWAL OF ITS FRANCHISE WITH THE VILLAGE OF OTEGO, OTSEGO COUNTY, INITIAL FRANCHISE DOCKET #10149.

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TIMOTHY E. THAYNE

*ALSO ADMITTED IN PENNSYLVANIA
**ALSO ADMITTED IN MASSACHUSETTS
***ALSO ADMITTED IN FLORIDA

October 25, 2004

Hon. Janet Hand Deixler, Secretary
NYS Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

04-V-0661

Re: Franchise Renewal-Time Warner Cable- Binghamton Division with Village of Otego, NY

Dear Secretary Deixler:

As the attorneys for the Binghamton Division of Time Warner Cable in connection with the above-referenced matter, we are herewith filing an original and four (4) copies of the following:

1. R-2 Application, dated June 10, 2003, with Proof of Service on February 3, 2004;
2. Affidavit of Publication of Application for Franchise Renewal, dated March 9, 2004;
3. Municipal Resolution granted renewal, dated September 13, 2004, with annexed Affidavit of Posting of Notice of Public Hearing, dated October 19, 2004;
4. Fully-executed copy of Franchise Renewal Agreement, dated September 13, 2004; and
5. Copy of latest annual test data compiled for this part of the Division's CATV system

We hereby request approval by the Commission of this application pursuant to Section 222 of the Public Service Law.

Sincerely,

Gordon E. Thompson

GET/amg
Enclosures
Cc: 1.) Hon. Bettie O. Bennett, Village Clerk (w/copy of Encs)
2.) Time Warner Cable – Binghamton Division, Attn: David J. Whalen (w/out copy of Encs.)

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the matter of application of **TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE PARTNERSHIP (TWEAN)** for renewal of its Certificate of Confirmation and Cable Television Franchise in the Village of Otego, Otsego County, New York.

1. The exact legal name of the applicant is **Time Warner Entertainment-Advance/Newhouse Partnership.**

2. The applicant does business under the name **Time Warner Cable (Oneonta), 123 Corporate Drive, Oneonta, New York 13820.**

3. Applicant's telephone number are:

(607) 644-0025 **Time Warner Cable (Division Office)**
120 Plaza Drive
Suite D
Vestal, New York 13850

(607) 432-0514 **Time Warner Cable (Oneonta)**
123 Corporate Drive
Oneonta, New York 13820

4. & 5. The applicant serves the following municipalities from the same headend or from a different headend in the same or adjacent counties; the number of subscribers in each of the communities as of January 2001 are:

Town of Afton	215	Village of Afton	332
Town of Bainbridge	454	Village of Bainbridge	535
Town of Butternuts	50	Town of Columbus	
Village of Cooperstown	972	Town of Coventry	
Town of Davenport	621	Town of Delhi	249
Village of Delhi	642	Town of Edmeston	220
Town of Exeter	110	Town of Franklin	182
Village of Franklin	161	Village of Gilbertsville	152
Town of Guilford	465	Town of Harpersfield	5
Town of Hartwick	462	Village of Hobart	156
Town of Kortright	2	Town of Laurens	392
Village of Laurens	105	Town of Maryland	404
Town of Masonville	124	Town of Meredith	125
Town of Middlefield	91	Town of Milford	586

Village of Milford	216	Town of Morris	106
Village of Morris	219	Town of New Berlin	264
Village of New Berlin	421	Town of Norwich	17
City of Oneonta	3,785	Town of Oneonta	1,609
Town of Otego	349	Village of Otego	358
Town of Otsego	408	Town of Oxford	174
Village of Oxford	541	Town of Pittsfield	58
Town of Richfield	102	Village of Richfield Springs	519
Town of Sidney	341	Village of Sidney	1,525
Town of South Meredith		Town of Springfield	137
Town of Stamford	137	Village of Stamford	426
Town of Unadilla	616	Village of Unadilla	402
Town of Walton	326	Village of Walton	1,178
Town of Worcester	564		

6. The following signals are regularly carried by the Oneonta cable system: **(see attached channel card).**

7. The Applicant does provide channel capacity and video production facilities for local origination. During the past twelve (12) months, the Applicant has provided approximately 1,200 hours of locally originated programming of all types including PEG access.

8. The current monthly rates for service in the Oneonta system are: **(see attached).**

9. During the past twelve (12) months, the applicant has placed the following miles of new cable television plant in operation in the following municipalities:

Town of Afton	.00	Village of Afton	.00
Town of Bainbridge	.00	Village of Bainbridge	.00
Town of Butternuts	.00	Town of Colunbus	
Village of Cooperstown	.00	Town of Coventry	
Town of Davenport	.20	Town of Delhi	.00
Village of Delhi	.00	Town of Edmeston	.00
Town of Exeter	.00	Town of Franklin	.00
Village of Franklin	.00	Village of Gilbertsville	.00
Town of Guilford	.00	Town of Harpersfield	.00
Town of Hartwick	.00	Village of Hobart	.00
Town of Kortright	.00	Town of Laurens	.10
Village of Laurens	.00	Town of Maryland	.00
Town of Masonville	.00	Town of Meredith	.00
Town of Middlefield	.00	Town of Milford	.00
Village of Milford	.00	Town of Morris	.00
Village of Morris	.00	Town of New Berlin	.00
Village of New Berlin	.00	Town of Norwich	.00

City of Oneonta	.10	Town of Oneonta	.10
Town of Otego	.00	Village of Otego	.00
Town of Otsego	.20	Town of Oxford	.00
Town of Pittsfield	.00	Town of Richfield	.00
Village of Richfield Springs	.00	Town of Sidney	.00
Village of Sidney	.00	Town of Springfield	.10
Town of Stamford	.00	Village of Stamford	.00
Town of Unadilla	.20	Village of Unadilla	.00
Town of Walton	.00	Village of Walton	.00
Town of Worcester	.00		

10. The company has previously submitted to the New York State Public Service Commission its technical plan to rebuild the system to 750 MHZ which was completed by end of 2000.

11. (A) The Applicant has previously filed with the New York State Public Service Commission its current Statement of Assessment pursuant to Section 817 of the Executive Law.

(B) The Applicant previously filed with the New York State Public Service Commission its current Annual Financial Report.

12. State and describe below any significant achievements and/or improvements that took place with respect to system operation during the past twelve (12) months.

_____

_____

_____

13. No event or change has occurred during the past twelve (12) months which has had, or could have, a significant impact upon Applicant's ability to provide cable television services.

WHEREFORE, the Applicant, Time Warner Cable, requests that the New York State Public Service Commission grant this application and approve renewal of the Village of Otego Certificate of Confirmation and Franchise Renewal Agreement.

Dated: 6-10-03

By: _____

David J. Whalen
Vice President of Public and Governmental Relations
Time Warner Cable - Binghamton Division

STATE OF NEW YORK }
Village of Otego SS.:
County of Otsego }

VERIFICATION

I, Todd L. Martin, being duly sworn, depose and say that:

(1) I am Director of Governmental and Public Affairs for Time Warner Cable - Binghamton Division and I am familiar with the business operations of said company.

(2) This Application was prepared by me or under my direct supervision.

(3) All of the statements and information contained herein are true and accurate to the best of my knowledge and belief.

Todd L. Martin
Director of Governmental and Public Affairs
Time Warner Cable - Binghamton Division

SWORN TO BEFORE ME THIS

10th **DAY OF** June
2003

NOTARY PUBLIC

CLAUDIO DIROSA
Notary Public, State of New York
No. 01DI5061871
Residing in Broome County
My Commission Expires June 17, 20 06

Oneonta Service Fees
Rates & Services

Effective January 2003

	Per Month
A. Cable Service:	
Lifeline:	$ 9.50
Standard Cable (includes Lifeline)	$39.67
Additional Outlet:	No Charge
Additional Outlet Digital Services:	$0-2.99
B. Premium Singles:	
Home Box Office	$ 9.50
Cinemax:	$ 9.50
Showtime:	$ 9.50
STARZ!:	$ 9.50
C. Premium Packages:	
Premium Double: HBO, Cinemax or Showtime	$12.95
Premium Triple: HBO, Cinemax, Showtime	$18.00
Premium Home Run: HBO, Cinemax, Showtime, and STARZ!:	$23.25
Note: Above packages include a free installation of one additional outlet.	
D. Digital Services:	
Prime Choice:	$ 6.95
Movie Choice:	$ 6.95
Maximum Choice (includes Prime Choice and Movie Choice):	$ 6.95/$7.95
Sports Tier:	$ 4.95
International Tier:	$ 4.95
Multicultural Tier (includes Zee TV and TV Asia):	$19.95
Galaxy (includes Standard Cable, Maximum Choice, all Premium Channels and Road Runner).	$109.95
E. Equipment Charges: (plus tax as applicable)	
Digital Converter:	$ 6.60
Remote (requires converter):	$ .35
Service Protection Plan:	$ .79
F. Installation Charges (plus tax as applicable):**	
New Installation, Standard Cable/Lifeline:	$45.86
Installation, Wire-in, Standard Cable:	$31.81
Installation of Additional Sets:	$31.74 (each)
Installation of Primary Sets with Primary Install:	$19.89 (each)
Upgrades, Downgrades, Reconnects, Relocates, Maintenance/Service Calls or Any Other Service Requiring a Truck Roll:	$23.47
Change of Service (office change):	$ 1.99
Hourly Service Charge (for non-standard installation and non-system related service calls	$37.62 (plus materials)

The foregoing rates to not include franchise fees which can range from 0-5% depending on the community in which you live, FCC regulatory fees of several cents per month, or state sales tax (where applicable).

*Package requires a Digital Converter.
**Charges apply to standard residential installations. Downgrade charges are generally assessed when a customer changes from Standard to Lifeline service. Other Downgrade charges and Maintenance/Service Call charges may be assessed when a trip to the subscriber's premises is requested or required due to damages caused by customer or neglect or non-cable related problems or service.

Lifeline required for all service levels.
Rates apply to Standard Residential Accounts only.

Time Warner Cable - Oneonta
123 Corporate Drive
Oneonta, NY 13820
(607) 432-0500
(800) 426-3396

Oneonta Channel Guide

Effective January 2003

STANDARD CABLE (Includes Lifeline)
2 WKTV-2 (Utica, NBC)*
3 WBNG-12 (Binghamton, CBS)*
4 Pax TV*
6 WPNY-31 (Utica, UPN)*
7 WUTR-20 (Utica, ABC)*
8 WSKG-4 (Binghamton, PBS)*
9 WFXV-33 (Utica, FOX)*
10 WICZ-40 (Binghamton, FOX)*
11 WBU (Utica, WB)*
12 WCNY-24 (Syracuse PBS)*
13 WIXT-9 (Syracuse, ABC)*
14 ESPN: 24 Hour Sports
15 CNN: 24 Hour News
16 ABC Family Channel
17 USA Network
18 MTV: Music Television
19 QVC: Home Shopping
20 HGTV: Home & Garden Television
21 TNN: The National Network
22 TNT: Turner Network Television
23 Public Access*
24 HSN: Home Shopping Network*
25 WGN 9 (Chicago, IND)*
26 WRGB -6 (Schenectady, CBS)*
27 WISF -15 (Oneonta, IND)/WPIX News*
28 The Golf Channel
29 Bravo
30 CMT: Country Music Television
31 TCM: Turner Classic Movies
32 Comedy Central
33 National Geographic
34 Hallmark Channel
35 VH-1: Video Hits One
36 Nickelodeon
37 Lifetime Network
38 TBS
39 CNBC: Business News
40 The Weather Channel
41 The Discovery Channel
42 A & E
43 fX
44 E!
45 CNN: Headline News
46 Court TV
47 C-Span: Government Channel
48 The Food Network
49 TV Guide Channel
51 Disney Channel
52 EWTN
53 YES Network
54 BET: Black Entertainment
55 SOAPNET
56 MTV2
57 History Channel
58 The Learning Channel
59 Cartoon Network
60 MSG: Madison Square Garden
61 WE: Women's Entertainment
62 MoviePlex
63 ESPN2: Sports
64 Lifetime Movie Network
65 Fox Sports New York
66 AMC: American Movie Classics
67 Animal Planet
68 PIN/C-Span 2
69 MSNBC
71 TV Land
73 Sci- Fi Channel
74 The Travel Channel
75 Oxygen
76 ShopNBC
77 Fox News
78 Outdoor Life Network

*Denotes Lifeline

PROOF OF SERVICE

I, David J. Whalen, Vice President of Public Affairs for Time Warner Cable - Binghamton Division, hereby certify that I have, this 3rd day of February 2004 by first class mail, postage prepaid, delivered an original Application for Franchise Renewal, for the Village of Otego, Otsego County, State of New York, to Mayor, PO Box 105, Otego, NY 13825. Copies of this same Application for Franchise Renewal have been sent by first class mail, postage prepaid to:

New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

David J. Whalen
Vice President of Public and Governmental Relations
Time Warner Cable - Binghamton Division

SWORN TO BEFORE ME THIS

3RD **DAY OF** FEB

2004

NOTARY PUBLIC

SUSAN M. ECKHARDT
Notary Public, State of New York
No. 4967655
Residing in Broome County
My commission expires 06-04-06

STATE OF NEW YORK, SS
COUNTY OF OTSEGO

LEGAL NOTICE
PLEASE TAKE NOTICE that the Time Warner Entertainment-Advance/Newhouse Partnership, d/b/a Time Warner Cable-Binghamton Division, has filed an application for renewal of its Cable Television Franchise in the Village of Otego, County of Otsego, New York.
The application and all comments filed relative thereto are available for public inspection at the Village Clerk's Office during normal business hours. Interested persons may file comments on the application with the Clerk, at the Village Hall, 4 River Street, Otego, New York, 13825.
Dated: February 25, 2004
TIME WARNER CABLE

Diane Belsky of West Laurens NY in said County, being duly sworn, deposes and says that she is the Credit Manager for the newspaper called The Daily Star, printed and published at Oneonta, NY aforesaid, and that the advertisement of which the annexed is a printed copy, has been published in the said newspaper on the 2nd & 9th day(s) of March 2004

Diane Belsky

Sworn to before me the 9th
Day of March 2004.

Debra A. Balantic
Notary Public

DEBRA A. BALANTIC
Notary Public, State of New York
No. 01BA4852171
Qualified in Otsego County
Commission Expires February 18, 2006

STATE OF NEW YORK
Village of Otego
County of Otsego

In the Matter of the Renewal of the Cable Television Franchise Held by **TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE PARTNERSHIP** in the Town of Otego, Otsego County, New York.

RESOLUTION

An application has been duly made to the Board of the Village of Otego, Otsego County, New York, by **TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE PARTNERSHIP ("Time Warner")**, a partnership organized under the laws of the State of New York doing business at 120 Plaza Drive, Suite D, Vestal, New York 13850, and holder of one (1) cable television franchise in the /village of Otego for the approval of an agreement that shall supercede all pre-existing franchise agreements and shall renew Time Warner's cable television franchise for an additional ten (10) years commencing September 13, 2004. The Franchise Renewal Agreement would bring the franchise into conformity with certain provisions of the Federal Cable Communications Policy Act of 1984, as amended, and certain court rulings.

A public hearing was held in the Village of Otego, New York on August 9, 2004 at 6 P.M. and notice of the hearing was published in the Daily Star on July 31, 2004.

NOW, THEREFORE, the Board of the Village of Otego finds that:

1. Time Warner has substantially complied with the material terms and conditions of its existing franchise and with applicable law; and

2. The quality of the Time Warner service, including signal quality, response to customer complaints and billing practices has been in light of community needs; and

3. Time Warner has the financial, legal and technical ability to provide these services, facilities and equipment as set forth in its proposal attached; and

4. Time Warner can reasonably meet the future cable-related community needs and interests, taking into account the cost of meeting such needs and interests. and Time Warner has agreed, via Mr. Whalen, to remove its poles in the Village of Otego as soon as possible.

BE IT FURTHER RESOLVED that the Board of the Village of Otego hereby renews the cable television franchise of Time Warner in the Village of Otego for ten (10) years commencing September 13, 2004 and expiring September 13, 2014.

BE IT FURTHER RESOLVED that the Board of the Village of Otego hereby confirms that this Franchise Renewal Agreement replaces all original and pre-existing franchises granted and all amendments thereto.

The foregoing having received a yes vote was thereby declared adopted.

Dated: September 13, 2004.

Village of Otego Clerk

STATE OF NEW YORK
COUNTY OF OTSEGO, SS

NOTICE OF PUBLIC HEARING

Time Warner Cable
Franchise Renewal
for
Village of Otego

PLEASE TAKE NOTICE that preliminary to negotiations between the Board of the Village of Otego and Time Warner Cable for the renewal of the existing franchise to operate a cable television system in the Village of Otego, the Board will conduct a public hearing at its Municipal Offices located at 4 River St., Otego, New York on August 9, 2004 at 6PM for the purpose of:

1. Identifying the future cable-related community needs and interests; and
2. Reviewing the performance of Time Warner Cable under its franchise during the current franchise.

Dated: July 27, 2004

Bettie O Bennett
Village of Otego Clerk

Diane Belsky of West Laurens NY in said County, being duly sworn, deposes and says that she is the Credit Manager for the newspaper called The Daily Star printed and published in Oneonta NY aforesaid, and the advertisement of which the annexed is a printed copy, has been published in the said newspaper in the

31ST

day(s) of July 20 04

Diane Belsky

Sworn to before me the 19th
Day of October 2004

Debra C Balantic
NOTARY PUBLIC

DEBRA A. BALANTIC
Notary Public, State of New York
No. 01BA4852171
Qualified in Otsego County
Commission Expires February 18, 2006

CABLE TELEVISION
FRANCHISE RENEWAL AGREEMENT

VILLAGE OF OTEGO

THIS AGREEMENT, executed in triplicate this 13 day of September, 2004 by and between the VILLAGE OF OTEGO, (hereinafter referred to as the Municipality) by the Mayor acting in accordance with the authority of the duly empowered local governing body, (hereinafter referred to as the Board) and TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE PARTNERSHIP, a New York General Partnership, organized and existing under the laws of the State of New York, the local place of business of which is located at P.O. Box 2086, Binghamton, NY 13902, hereinafter referred to as "Time Warner Cable."

WITNESSETH

WHEREAS, Pursuant to the Municipal Law of the Board has the exclusive power on behalf of the Municipality to grant franchises providing for or involving the use of the Streets (as defined in Section 1 hereof) and to give the consent of the Municipality to any franchisee for or relating to the occupation of the Streets; and

WHEREAS, Pursuant to the Communications Act of 1934, as amended, (the "Communications Act") the Board has the authority to grant cable television franchises and renewals thereof on behalf of the Municipality and whereas the Board and Time Warner Cable pursuant to said Federal Law and pursuant to applicable State laws and the regulations promulgated thereunder, have complied with the franchise procedures required of Municipalities and cable operators in the grant of cable television franchises or their renewal; and

WHEREAS, The Municipality has conducted negotiations with Time Warner Cable and has conducted one or more public hearings on Time Warner Cable's franchise renewal proposal affording all interested parties due process including notice and the opportunity to be heard; said deliberations included consideration and approval of Time Warner Cable's technical ability, financial condition and character; said public hearing also included consideration and approval of Time Warner Cable's plans for constructing and operating the cable television system; and

WHEREAS, Following such public hearings and such further opportunity for review, negotiations and other actions as the Board deemed necessary and that is required by law, the Board decided to renew Time Warner Cable's franchise as provided hereinafter; and

WHEREAS, The Board, in granting this franchise renewal, embodied in the agreement the results of its review and any negotiations with Time Warner Cable and has determined that said franchise agreement and Time Warner Cable respectively, fulfills and will fulfill the needs of the Municipality with respect to cable television service and complies with the standards and requirements of the New York State Public Service Commission ("NYSPSC");

NOW, THEREFORE, In consideration of the foregoing clauses, which clauses are hereby made a part of this franchise agreement, and the mutual covenants and agreements herein contained, the parties hereby covenant and agree:

SECTION 1 - DEFINED TERMS

Unless the context clearly indicates that a different meaning is intended:

(a) "Basic Service" means any service tier which includes the retransmission of local broadcast signals.

(b) "Board" means the Board of Trustees of the Municipality.

(c) "Cable Television Service" means

(1) The one way transmission to Subscribers of Video Programming, or other programming service, and

(2) Subscriber interaction, if any, which is required for the selection or use of such Video Programming, or other programming service.

(d) "Cable Television System" means a facility, consisting of a set of closed transmission paths, including (without limitation) fiber optic wires or lines, and associated signal generation, reception and control equipment that provides Cable Television Service to multiple subscribers within a community.

(e) "Time Warner Cable" means Time Warner Cable Entertainment-Advance/Newhouse Partnership.

(f) "Effective Date" of this agreement shall be that date subsequent to confirmation of the Franchise, by the New York State Public Service Commission ("NYSPSC") agreed to by the parties, which date is (calendar date).

(g) "Franchise" means the grant or authority given hereunder to Time Warner Cable to construct and operate a Cable Television System in the Municipality in accordance with the terms hereof.

(h) "FCC" means the Federal Communications Commission, its designees and any successor thereto.

(i) "Gross Revenues" means all revenues actually received by and paid to Time Warner Cable by subscribers residing within the Municipality for Cable Television Service purchased by subscribers on a regular, recurring monthly basis.

(j) "May" is permissive.

(k) "Municipality " means the Village of Otego. Wherever the context shall permit, Board, Council and Municipality shall be used interchangeably and shall have the same meaning under this Franchise.

(l) "NYSPSC" means New York State Public Service Commission.

(m) "Person" means an individual, partnership, association, corporation, joint stock company trust, corporation, or organization of any kind.

(n) "Service Tier" means a category of Cable Television Service provided by Time Warner Cable over the Cable Television System for which a separate rate is charged for such category by Time Warner Cable.

(o) "Shall" or "will" are mandatory.

(p) "Streets" means the surface of, as well as the space above and below, any and all streets, avenues, highways, boulevards, concourses, driveways, bridges, tunnels, parks, parkways, waterways, docks and public grounds and waters within or belonging to the Municipality.

(q) "Subscriber" means any person lawfully receiving any Cable Television Service in the Municipality provided over the Cable Television System.

(r) "Video Programming" means any and all programming services provided by, or generally considered comparable to programming provided by a television broadcast station.

SECTION 2 - CONSENT TO FRANCHISE AND CONDITION PRECEDENT

(a) The Municipality hereby grants to Time Warner Cable the non-exclusive right to construct, erect, operate and maintain a Cable Television System and to provide Cable Television Service within the Municipality as it now exists and may hereafter be changed, and in so doing to use the Streets of the Municipality by erecting, installing, constructing, repairing, replacing, reconstructing, maintaining and retaining in, on, over, under, upon and across any and all said Streets such facilities (e.g., poles, wires, cables, conductors, ducts, conduits, vaults, pedestals, manholes, amplifiers, appliances, attachments and other property) as is deemed necessary or useful by Time Warner Cable, for the operation of its cable system. Additionally, the Municipality, insofar as it may have the authority to so grant, hereby authorizes Time Warner Cable to use any and all easements dedicated to compatible uses, such as electric, gas, telephone or other utility transmissions, for the purposes of erecting, installing, constructing, repairing, replacing, reconstructing, maintaining and retaining in, on, over, under, upon and across such easements such facilities of the Cable Television System as is deemed necessary or useful by Time Warner Cable, for the operation of its cable system. Upon request by Time Warner Cable and at Time Warner Cable's sole expense, the Municipality hereby agrees to assist Time Warner Cable in gaining access to and using such easements.

(b) Nothing in this Franchise shall limit the right of Time Warner Cable to transmit any kind of signal, frequency, or provide any type of service now in existence or which may come into existence and which is capable of being lawfully transmitted and distributed by those facilities owned and operated by Time Warner Cable. The provision by Time Warner Cable of any service other than cable service shall be subject to all applicable laws and regulations and to any right the Municipality may have to require fair and reasonable compensation for Time Warner Cable's use of the rights-of-way to provide such service, provided that such requirement is non-discriminatory and competitively neutral.

(c) Without waiver or restriction of the rights available to the parties hereto under applicable law, this Franchise and the attachments hereto constitute the entire agreement between the parties and supersede any and all prior cable television agreements and other agreements or instruments by or between the parties hereto or their predecessors in interest as well as all rights, obligations and liabilities arising thereunder concerning or in any way relating to Cable Television Service.

(d) In the event the Municipality grants to any other Person (being referred to as "Grantee" in the below quoted paragraph) a franchise, consent or other right to occupy or use the Streets, or any part thereof, for the construction, operation or maintenance of all or part of a cable television system or any similar system or technology, the Municipality shall insert the following language into any such franchise, consent or other document and/or promptly pass a resolution, conditioning the use of the Streets or any part thereof by any such Person, as follows:

> "Grantee agrees that it will not move, damage, penetrate, replace or interrupt any portion of the Cable Television System of Time Warner Cable without the prior written consent of Time Warner Cable. Grantee shall indemnify Time Warner Cable against any damages or expenses incurred by Time Warner Cable as a result of any removal, damage, penetration, replacement or interruption of the services of Time Warner Cable caused by the Grantee." As used immediately above in the above quoted paragraph, the term "Time Warner Cable" shall mean Time Warner Cable Entertainment-Advance/Newhouse Partnership, as defined in this Franchise, and its successors, assigns and transferees.

(e) This Franchise is non-exclusive. Any grant of a subsequent franchise shall be on terms and conditions which are not more favorable or less burdensome than those imposed on Franchisee hereunder.

As used in this Section, the phrase, "occupancy or use of Streets," or any similar phrase, shall not be limited to the physical occupancy or use thereof but shall include any use above or below the Streets by any technology including but not limited to infrared transmissions.

SECTION 3 - APPROVAL OF COMPANY BY MUNICIPALITY

(a) This Franchise is subject to and complies with all applicable Federal and State laws and regulations, including, without limitation, the rules of the NYSPSC concerning franchise standards. The Municipality hereby acknowledges and agrees that this Franchise has been entered into by it in accordance with and pursuant to the Communications Act of 1934, as amended, 47 U.S.C. Sec. 521 et seq. (hereinafter referred to as the "Communications Act"). The Municipality hereby represents and warrants that this Franchise has been duly entered into in accordance with all applicable local laws. The Municipality hereby acknowledges that it, by duly authorized members thereof, has met with Time Warner Cable for the purposes of evaluating Time Warner Cable and negotiating and consummating this Franchise.

(b) In a full and public proceeding, affording due process, the Municipality has considered and approved Time Warner Cable's technical ability and character and has considered and found adequate Time Warner Cable's plans for constructing and operating the cable system.

SECTION 4 - FRANCHISE TERM

The term of this Franchise shall be ten (10) years.

SECTION 5 - ASSIGNMENT OR TRANSFER OF FRANCHISE

(a) Time Warner Cable shall not transfer this Franchise to any person, firm, company, corporation or any other entity without the prior written consent of the Municipality, which consent shall not be unreasonably withheld or denied.

(b) In the event that the Municipality refuses to grant such consent, it shall set forth specific reasons for its decision in writing by municipal resolution.

(c) Notwithstanding the above, this Section 5 shall not be applicable and no prior approval shall be required if Time Warner Cable shall transfer this Franchise to any of its principal partners, to any parent, subsidiary or affiliate of any of the principal partners of Time Warner Cable, or to any other firms or entities controlling, controlled, by or under the same common control as Time Warner Cable.

SECTION 6 - REVOCATION

(a) The Municipality may revoke this Franchise and all rights afforded Time Warner Cable hereunder in any of the following events or for any of the following reasons:

(i) Time Warner Cable fails after sixty (60) days written notice from the Municipality to substantially comply or to take reasonable steps to comply with a material provision of this Franchise. Notwithstanding the above, should Time Warner Cable comply or take said reasonable steps to comply within said sixty days notice, the Municipality's right to revoke this Franchise shall immediately be extinguished; or

(ii) Time Warner Cable is adjudged a bankrupt; or

(iii) Time Warner Cable knowingly and willfully attempts or does practice a material fraud or deceit in its securing of this Franchise.

(b) Notwithstanding the above, no revocation shall be effective unless and until the Municipality shall have adopted an ordinance setting forth the cause and reason for the revocation and the effective date thereof, which ordinance shall not be adopted until the expiration of one hundred twenty (120) days from the date of delivery of written notice to Time Warner Cable specifying the reasons for revocation and an opportunity for Time Warner Cable to be fully and fairly heard on the proposed adoption of such proposed ordinance. If the revocation as proposed therein depends on a finding of fact, such finding of fact shall be made by the Municipality only after an administrative hearing providing Time Warner Cable with a full and fair opportunity to be heard, including, without limitation, the right to introduce evidence, the right to the production of evidence and the right to question witnesses. A transcript shall be made of such hearing. Time Warner Cable shall have the right to appeal any such administrative decision to a state or federal district court as Time Warner Cable may choose and the revocation shall not become effective until any such appeal has become final or the time for taking such appeal shall have expired.

SECTION 7 - INDEMNIFICATION & INSURANCE

(a) Time Warner Cable shall indemnify and hold harmless the Municipality from all liability, damage and reasonable cost or expense arising from claims of injury to persons or damage to property occasioned by reason of any conduct of Time Warner Cable its employees or agents undertaken pursuant to this Franchise. The Municipality shall promptly notify Time Warner Cable of any claim for which it seeks indemnification; afford Time Warner Cable the opportunity to fully control the defense of such claim and any compromise, settlement, resolution or other disposition of such claim, including by making available to Time Warner Cable all relevant information under its control.

(b) Time Warner Cable shall as of the Effective Date of this Franchise obtain liability insurance in the minimum amount set forth within and shall furnish to the Municipality evidence of such liability insurance policy or policies, in the form of a certificate of insurance naming the Municipality as an additional named insured, which policy or policies or replacements thereof shall remain in effect throughout the term of this Franchise; said policy and replacements shall be in the combined amount of Two Million Dollars ($2,000,000.00) for bodily injury and property damage issued by a company authorized to do business in New York State. In addition, Time Warner Cable shall carry Worker's Compensation insurance for its employees in such amounts as is required by the laws of the State of New York. The insurance coverage herein referred to above may be included in one or more policies covering other risks of Time Warner Cable or any of its affiliates, subsidiaries or assigns.

SECTION 8 - USE OF EXISTING POLES AND LOCATION OF UNDERGROUND FACILITIES

(a) Time Warner Cable hereby agrees that when and wherever it deems it economical and reasonably feasible, it shall enter into agreements with telephone or electric or other utilities (collectively "utilities") for the use of said utilities' poles or conduit space whereby said utilities shall provide use of and access to said poles or conduit space by Time Warner Cable for Time Warner Cable's lines and other equipment. Notwithstanding the above, where necessary to service Subscribers and where attachment to the pole(s) or conduit space of utilities is not economically reasonable or otherwise feasible, Time Warner Cable may erect or authorize or permit others to erect any poles or conduit space or any other facilities within the Streets of the Municipality pursuant to the issuance by the Municipality of any necessary authorizations which shall not be unreasonably withheld or delayed.

(b) Subject to the provisions of sub-paragraph (c) below, in such areas of the Municipality where it or any sub-division thereof shall hereafter duly require that all utility lines be installed underground, Time Warner Cable shall install its lines underground in accordance with such requirement.

SECTION 9 - RELOCATION OF PROPERTY

(a) Whenever the Municipality shall require the relocation or reinstallation of any property of Time Warner Cable in or on any of the Streets of the Municipality as a result of the relocation or other improvements by the Municipality of any such Streets, it shall be the obligation of Time Warner Cable on written notice of such requirement to remove and relocate or reinstall such property as may be reasonably necessary to meet the requirements of the Municipality. In the event any other person, including a public utility, is compensated for similar relocation or reinstallation then in such case Time Warner Cable shall be similarly compensated.

(b) Time Warner Cable shall, on request of a person holding a building or moving permit issued by the Municipality, temporarily raise or lower its wires or other property or relocate the same temporarily so as to permit the moving or erection of buildings. The expenses of any such temporary removal, raising or lowering of wires or other property shall be paid in advance to Time Warner Cable by the person requesting the same. Time Warner Cable shall be given in such cases not less than five (5) working days prior written notice in order to arrange for the changes required.

SECTION 10 - USE & INSTALLATION

(a) Time Warner Cable or any person authorized by Time Warner Cable to erect, construct or maintain any of the property of Time Warner Cable used in the transmission or reception of Cable Television Service shall at all times employ due care under the facts and circumstances and shall maintain and install said property of Time Warner Cable in accordance with commonly accepted methods and principles in the cable television industry so as to prevent failures and accidents likely to cause damage or injury to members of the public. All Cable Television System equipment shall conform to those standards of the National Electrical Code and the National Board of Fire Underwriters which exist at the time said equipment is installed and replaced.

(b) Time Warner Cable agrees to install all Cable Television System equipment in a manner to reasonably minimize interference to be expected with the usual use of the Streets and in no event shall any such Cable Television System equipment be located so as to substantially and regularly interfere with the usual public travel on any Street of the Municipality. Time Warner Cable shall construct and maintain its cable system using materials of good and durable quality and shall perform all work involved in the construction, installation, maintenance and repair of the cable system in a safe, thorough and reliable manner. Time Warner Cable shall promptly repair or replace any municipal property damaged or destroyed by Time Warner Cable so as to restore it to serviceable condition.

(c) Whenever Time Warner Cable or any person on its behalf shall cause any injury or damage to public property or Street, by or because of the installation, maintenance or operation of the Cable Television System equipment, such injury or damage shall be remedied as soon as reasonably possible after the earlier of notice to Time Warner Cable from the Municipality or after Time Warner Cable becomes aware of the same, in such fashion so as to restore the property or Street to serviceable condition. Time Warner Cable is hereby granted the authority to trim trees upon and overhanging the Streets of, and abutting private property, (i.e., in the public way) in the Municipality to the extent it reasonably deems necessary so as to prevent the branches or growths from coming in contact with the wires, cable and other equipment of Franchisee's Cable Television System.

SECTION 11 - CONTINUOUS SERVICE

Time Warner Cable shall continue to provide cable service to all subscribers who meet their obligations to Time Warner Cable with respect to such service. Time Warner Cable shall not, without the written consent of the Municipality abandon its cable television system or any portion thereof in such a way as would limit its ability to continue to provide cable service to all subscribers without the written consent of the Municipality.

SECTION 12 - FRANCHISE AREA AND LINE EXTENSION

Time Warner Cable shall comply with the requirements for construction of cable television plant and provision of cable television services as set forth in Section 595.5 of the Rules of the NYSPSC.

SECTION 13 - OPERATION AND MAINTENANCE

(a) Time Warner Cable shall contract and maintain its cable system using materials of good and durable quality and shall perform all work involved in the construction, installation, maintenance and repair of the cable system in a safe, thorough and reliable manner.

(b) Time Warner Cable shall maintain and operate its cable television system at all times in compliance with the duly promulgated and lawful provisions of Section 596 of the Rules and Regulations of the NYSPSC and the technical requirements set forth by the FCC. Time Warner Cable shall maintain staffing levels and support equipment to assure that telephone inquiries are handled promptly in order to minimize busy signals and hold time. Time Warner Cable shall have, at all times, a person on call able to perform minor repairs or corrections to malfunctioning equipment of the cable system. Time Warner Cable shall respond to individual requests for repair service no later than the next business day. System outages, and problems associated with channel scrambling and switching equipment, shall be acted upon promptly after notification. Time Warner Cable shall maintain a means to receive repair service requests and notice of system outages at times when its business office is closed. The Municipality shall have the right and authority to request an inspection or test performed, all at the Municipality's expense. Time Warner Cable shall fully cooperate in the performance of such testing.

(c) Throughout the term of this Franchise, Franchisee's Cable Television System shall have a minimum channel capacity of seventy-eight (78) channels.

SECTION 14 - RATES

Time Warner Cable shall not illegally discriminate against individuals in the establishment and application of rates and charges for Video Programming or other communication services available to generally all subscribers.

SECTION 15 - SERVICE TO PUBLIC FACILITIES, ACCOUNTABILITY PROVISIONS AND INSPECTION OF RECORDS

(a) At the request of the Municipality, Time Warner Cable shall provide and maintain a single service outlet and basic service to any school, police station, firehouse and municipally owned building which is occupied for governmental purposes, provided the connection point is no further than two hundred feet (200') from the closest feeder line of the Cable Television System. All such connections shall be above ground except where all utility lines and cables in the area are underground. The Municipality shall not extend such service to additional outlets, without the express written consent of Time Warner Cable. In addition to current free service, Time Warner will provide one (1) additional modem for Road Runner service at the Village Fire Department.

(b) Municipality, upon reasonable notice and during normal business hours, shall have the right to inspect all books, records, maps, plans, financial statements and other like materials of Time Warner Cable which are pertinent to Time Warner Cable's compliance with the terms and conditions of this Franchise.

(c) Municipality and Time Warner Cable agree that Time Warner Cable's obligations hereunder are subject to any applicable law, including laws regarding the privacy of information regarding subscribers.

(d) Municipality will maintain the confidentiality of any information obtained pursuant to this provision to the extent permitted by law, provided Time Warner Cable has advised Municipality of the confidential nature of the information. In the event that the Municipality receives request for the disclosure of such information with which it, in good faith, believes it must under law comply, then the Municipality will give Time Warner Cable notice of such request as soon as possible prior to disclosure in order to allow Time Warner Cable to take such steps as it may deem appropriate to seek judicial or other remedies to protect the confidentiality of such information.

SECTION 16 - PUBLIC, EDUCATIONAL AND GOVERNMENTAL ACCESS CHANNELS

Time Warner Cable shall comply with the standards for public, educational and governmental (PEG) access channels as set forth in Section 595.4 of the Rules of the NYSPSC.

SECTION 17 - ADDITIONAL SUBSCRIBER SERVICES

(a) Payment for equipment provided by Time Warner Cable to subscribers and the installation, repairs, and removal thereof shall be paid in accordance with Time Warner Cable's standard and customary practices and applicable rules and regulations of the FCC.

(b) Notice of Time Warner Cable's procedures for reporting and resolving billing disputes and Time Warner Cable's policy and the subscribers rights in regard to "personally identifiable information," as that term is defined in Section 631 of the Communications Act, will be given to each subscriber at the time of such person's initial subscription to the Cable Television System services and thereafter to all subscribers as required by Federal or State law.

(c) Time Warner Cable shall offer to, and shall notify in writing, the subscribers of the availability of locking program control devices which enable the subscriber to limit reception of obscene or indecent programming in the subscriber's residence.

(d) In accordance with the applicable requirements of Federal and State laws, Time Warner Cable shall provide written notice of any increases in rates or charges for any Cable Television Service.

(e) The Administrator, as the case may be, for the Municipality for this Franchise shall be the Mayor of the Municipality. The Administrator is responsible for the continuing administration of the Franchise on behalf of the Municipality. All correspondence and communications between Time Warner Cable and the Municipality pursuant to this Franchise shall be addressed by Time Warner Cable to the Administrator.

(f) It is agreed that all Cable Television Service offered to any subscribers under this Franchise shall be conditioned upon Time Warner Cable having legal access to any such subscriber's dwelling units or other units wherein such service is provided.

(g) Time Warner Cable shall comply with the Customer Service Consumer Protection Standards set forth in Sections 590 and 596 of the Rules and Regulations of the NYSPSC.

(h) At least once each year, Time Warner Cable shall provide notice to each subscriber of its procedures for reporting and resolving subscriber complaints.

SECTION 18 - FRANCHISE FEES

(a) Time Warner Cable shall pay the Municipality an amount equal to 5% of Time Warner Cable's Gross Revenues received by Time Warner Cable directly from subscribers for cable services purchased by subscribers on a recurring monthly basis.

(b) There shall be applied as a credit against the Franchise Fee the aggregate of: (i) any taxes, fees or assessments of general applicability imposed on Time Warner Cable or any subscribers, or both, which are discriminatory against Time Warner Cable or any subscribers, (ii) any non-capital expenses incurred by Time Warner Cable in support of the PEG access requirements of this Franchise and (iii) any fees or assessments payable to the NYSPSC which when combined with all other fees and credits would exceed 5% of gross revenues. Time Warner Cable shall have the right to apply franchise fees paid as a credit against special franchise assessments pursuant to Section 626 of the New York State Real Property Tax Law.

(c) Payment of the franchise fee shall be due quarterly within sixty (60) days of the end of the company's quarter. Time Warner Cable shall submit to the Municipality, along with the payment of said fees, a report showing reasonable detail the basis for the computation thereof.

SECTION 19 - SEVERABILITY, GOVERNING LAW, POLICE POWERS REQUESTS FOR AUTHORIZATION AND NON-DISCRIMINATION

(a) Should any provision of this Franchise be held invalid by a court or regulatory agency of competent jurisdiction, the remaining provisions of this franchise shall remain in full force and effect.

(b) To the extent not inconsistent with or contrary to applicable federal law, the terms of this Franchise shall be governed and construed in accordance with the laws of the State of New York. The parties hereby acknowledge and agree that any provisions of this Franchise or any existing or future State or local laws or rules that are inconsistent with or contrary to any applicable Federal law, including the Cable Act, as the same may be amended, are and shall be prohibited, preempted and/or superseded to the extent of any inconsistency or conflict with any applicable Federal laws.

(c) In addition to the provisions contained in this Franchise and in existing applicable ordinances, the Municipality may adopt such additional regulations as it shall find necessary in the exercise of its police power, provided, however, that such regulations are reasonable and not materially in conflict with the privileges granted in this Franchise.

(d) Time Warner Cable shall file requests for any necessary operating authorization with the NYSPSC and the FCC within sixty (60) days from the date the Franchise is awarded by the Municipality.

(e) Time Warner Cable will not refuse to hire or employ, nor bar or discharge from employment, nor discriminate against any person in compensation or in terms, conditions or privileges of employment because of age, race, creed, color, national origin or sex.

SECTION 20 - NOTICE

All notices required herein shall be in writing and shall be deemed delivered when received by United States certified mail, return receipt requested, or on the date of delivery to addressee when sent by express mail, or overnight, or hand delivered to the parties and locations as specified below. Both Time Warner Cable and Municipality may change where notice is to be given by giving notice to the other.

When notices sent to Time Warner Cable:

Time Warner Cable
Attention: Division President
120 Plaza Dr., Suite D
Vestal, New York 13850
Telephone: (607) 644-0025
Facsimile: (607) 644-1501

When notices sent to Municipality:

Village of Otego
Attention: Mayor
P.O. Box 105
Otego, NY 13825

SECTION 21 - FORCE MAJEURE

In no event, and notwithstanding any contrary provision in this Franchise, shall this Franchise be subject to revocation or termination, or Time Warner Cable be subject to penalty or prejudice or in any way liable for non-compliance with or delay in the performance of any obligations hereunder, where its failure to cure or take reasonable steps to cure is due to reason of strike, Acts of God, acts of public enemies, order of any kind of a government of the United States of America or of the State or any of their departments, agencies, political subdivisions; riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, tornadoes, volcanic activity, storms, floods, washouts, droughts, civil disturbances, explosions, partial or entire failure of utilities or any other cause or event not reasonably within the control of Time Warner Cable. Time Warner Cable shall not be deemed to be in violation or default during the continuance of such inability and Time Warner Cable shall be excused from its obligations herein during the course of any such events or conditions and the time specified for performance of Time Warner Cable's obligations hereunder shall automatically extend for a period of time equal to the period of the existence of any such events or conditions and such reasonable thereafter as shall have been necessitated by any such events or conditions.

SECTION 22 - RIGHTS OF ENFORCEMENT

Nothing contained in this Franchise is intended to or shall confer any rights or remedies on any third parties to enforce the terms of this Franchise.

SECTION 23 - FURTHER ASSURANCES

The Municipality shall, without further consideration, execute and deliver such further instruments and documents and do such other acts and things as Time Warner Cable may reasonably request in order to effect and confirm this Franchise and the rights and obligations contemplated herein.

SECTION 24 - INTEGRATION

This Franchise supersedes all prior negotiations between the parties hereto and shall be binding upon and inure to the benefit of the parties hereto and each of their respective successors and permitted assigns. This Franchise may be amended (except as otherwise expressly provided for herein) only by agreement in writing signed by duly authorized persons on behalf of both parties. To the extent required by State law, amendments hereto shall be confirmed or approved by the NYSPSC.

This Franchise may be executed in one or more counterparts, all of which taken together shall be deemed one (1) original.

The headings of the various Sections of this Franchise are for convenience only, and shall not control or affect the meaning or construction of any of the provisions of the Franchise.

The rights and remedies of the parties pursuant to this Franchise are cumulative and shall be in addition to and not in derogation of any rights or remedies which the parties may have with respect to the subject matter of this Franchise.

Additionally, during the term of the franchise, should Time Warner grant to any municipality, within the Oneonta system, material conditions that exceed those granted to the Village of Otego, the village shall have the right, with written request, to engage in amendment proceedings to take advantage of those same material conditions.

SECTION 25 - NO JOINT VENTURE

Nothing herein shall be deemed to create a joint venture or any agency or employment relationship between the parties, and neither party is authorized to nor shall either party act toward any third parties or to the public in any manner which would indicate any such relationship with the other.

IN WITNESS WHEREOF, the parties hereto have executed this agreement this 13 day of September, 2004.

TIME WARNER ENTERTAINMENT-
ADVANCE/NEWHOUSE PARTNERSHIP

By: _____
Gordon Harp

Title: President

MUNICIPALITY:
VILLAGE OF OTEGO

By: _____
Name

Title: Mayor

TIME WARNER CABLE
BINGHAMTON DIVISION

CATV

Proof - of - Performance Tests

System Name: ONEONTA

Plant Mileage: 716.81 **As of** February 1, 2001

Basic Subscribers: 23103 **As of** February 1, 2001

System Bandwidth: 750 MHz **As of** February 1, 2001

Number of Channels Tested: 11

Number of Test Points: 7

Test Start Date: Feb 12, 2001

Test Completion Date: Feb 20, 2001

TIME WARNER CABLE--BINGHAMTON DIVISION

SYSTEM NAME: ONEONTA DATE: Feb 06, 2001

FCC TESTING SUMMARY

Changes Since Last Proof of Performance:

1.) Addition of digital channels (550-750).
2.) Addition of channels 75,76,77 and 78 to lineup.
3.) Channel 56 no longer PPV, now MTV2.
4.) Max no longer channel mapped ChA-1 to Ch72.
5.) Two feeds out of headend defined as Otsego and Delaware feeds.

Test Results:

The requirement to drop and insert channels at remote hub sites due to distant signal copyright issues and FCC "must carry" rules has created a situation making it only marginally possible to comply with the maximum 3 dBmv difference in video carriers between adjacent channels in isolated instances, despite our best efforts to obtain or retune channel dropping traps to the sharpest cutoff possible.

Miscellaneous:

Note that the system was being upgraded from 550 MHz to 750 MHz during the last testing period. No comparison can be determined between then and now because of the temporary rigging of the system during that time period. Apr 2000-Jan 2001.

TIME WARNER CABLE--BINGHAMTON DIVISION

SYSTEM NAME: Oneonta-Otsego Feed **DATE:** 02/06/2001

ACTUAL CHAN	CARRIER FREQ	CONV CHAN	TYPE	SCRAM "Y"	VITS "Y"	CALL LTR	PROG SOURCE
2	55.2500	2	TV			WKTV-2	OFF-AIR
3	61.2500	3	TV			WBNG-12	OFF-AIR
4	67.2500	4	TV			PAX	SATELLITE
5	77.2500	5	TV	Y		HBO	SATELLITE
6	83.2500	6	TV			WPNY-31	OFF-AIR
A-5	91.2500						
A-4	97.2500						
A-3	103.2500						
A-2	109.2750						
A-1	115.2750						
A	121.2625	14	TV			ESPN	SATELLITE
B	127.2625	15	TV			CNN	SATELLITE
C	133.2625	16	TV			FAM	SATELLITE
D	139.2500	17	TV			USA	SATELLITE
E	145.2500	18	TV			MTV	SATELLITE
F	151.3210	19	TV			QVC	SATELLITE
G	157.2500	20	TV			HGTV	SATELLITE
H	163.2500	21	TV			TNN	SATELLITE
I	169.2500	22	TV			TNT	SATELLITE
7	175.2500	7	TV			WUTR-20	OFF-AIR
8	181.2500	8	TV			WSKG-46	OFF-AIR
9	187.2500	9	TV			WFXV-33	OFF-AIR
10	193.2500	10	TV			WICZ-40	OFF-AIR
11	199.2500	11	TV			WBU	SATELLITE
12	205.2500	12	TV			WCNY-24	OFF-AIR
13	211.2500	13	TV			WIXT-9	OFF-AIR
J	217.2500	23	TV			CBB/PA	SUNY - FIBER
K	223.2500	24	TV			HSN	SATELLITE
L	229.2625	25	TV			WGN	SATELLITE
M	235.2625	26	TV			WRGB-6	OFF-AIR
N	241.2625	27	TV			WISF-15	OFF-AIR
O	247.2625	28	TV	Y		GOLF	SATELLITE
P	253.2625	29	TV	Y		ESPN Classic	SATELLITE
Q	259.2625	30	TV	Y		CMT	SATELLITE
R	265.2625	31	TV	Y		TCM	SATELLITE
S	271.2625	32	TV	Y		COMEDY CENTF	SATELLITE
T	277.2625	33	TV	Y		HBO Signiture	SATELLITE
U	283.2625	34	TV			ODYSSEY	SATELLITE
V	289.2625	35	TV			VH-1	SATELLITE
W	295.2625	36	TV			NICK	SATELLITE
AA	301.2625	37	TV			LIFETIME	SATELLITE
BB	307.2625	38	TV			TBS	SATELLITE
CC	313.2625	39	TV			CNBC	SATELLITE
DD	319.2625	40	TV			TWC	SATELLITE
EE	325.2625	41	TV			DISCOVERY	SATELLITE
FF	331.2750	42	TV			A&E	SATELLITE
GG	337.2625	43	TV			fX	SATELLITE
HH	343.2625	44	TV			EI	SATELLITE
II	349.2625	45	TV			CNN HN	SATELLITE
JJ	355.2625	46	TV			COURT	SATELLITE
KK	361.2625	47	TV			C-SPAN	SATELLITE
LL	367.2625	48	TV			TV FOOD	SATELLITE
MM	373.2625	49	TV			TV GUIDE	SATELLITE
NN	379.2625	50	TV	Y		HBO Plus	SATELLITE
OO	385.2625	51	TV	Y		DISNEY	SATELLITE
PP	391.2625	52	TV	Y		More MAX	SATELLITE
QQ	397.2625	53	TV			SNEAKPREVUE	SATELLITE
RR	403.2500	54	TV	Y		in-DEMAND 1	SAT PPV
SS	409.2500	55	TV	Y		in-DEMAND 2	SAT PPV
TT	415.2500	56	TV			MTV2/The Box	SATELLITE
UU	421.2500	57	TV			HISTORY	SATELLITE
VV	427.2500	58	TV			TLC	SATELLITE
WW	433.2500	59	TV			CARTOON	SATELLITE
XX	439.2500	60	TV			MSG	SATELLITE
YY	445.2500	61	TV	Y		fXM	SATELLITE
ZZ	451.2500	62	TV			ENCORE PLEX	SATELLITE
63	457.2500	63	TV			ESPN2	SATELLITE
64	463.2500	64	TV	Y		CNN / SI	SATELLITE
65	469.2500	65	TV			FOX Sports NY	SATELLITE
66	475.2500	66	TV			AMC	SATELLITE
67	481.2500	67	TV			ANIMAL PLANET	SATELLITE
68	487.2500	68	TV			PIN/SAH/CSPAN2	SATELLITE
69	493.2500	69	TV			MSNBC	SATELLITE
70	499.2500	70	TV	Y		SHOWTIME	SATELLITE
71	505.2500	71	TV			TV Land	SATELLITE
72	511.2500	72	TV	Y		Cinemax	SATELLITE
73	517.2500	73	TV			SCI FI	SATELLITE
74	523.2500	74	TV			TRAVEL	SATELLITE
75	529.2500	75	TV	Y		BRAVO	SATELLITE
76	535.2500	76	TV			Valuevision	SATELLITE
77	541.2500	77	TV			FoxNews	SATELLITE
78	547.2500	78	TV			Outdoor Life Net	SATELLITE

TIME WARNER CABLE--BINGHAMTON DIVISION

SYSTEM NAME: Oneonta-Delaware Feed **DATE:** 02/06/2001

ACTUAL CHAN	CARRIER FREQ	CONV CHAN	TYPE	SCRAM "Y"	VITS "Y"	CALL LTR	PROG SOURCE
2	55.2500	2	TV			WBGH-8	MICROWAVE
3	61.2500	3	TV			WBNG-12	OFF-AIR
4	67.2500	4	TV			PAX	SATELLITE
5	77.2500	5	TV			HBO	SATELLITE
6	83.2500	6	TV			WPNY-31	OFF-AIR
A-5	91.2500						
A-4	97.2500						
A-3	103.2500						
A-2	109.2750						
A-1	115.2750						
A	121.2625	14	TV			ESPN	SATELLITE
B	127.2625	15	TV			CNN	SATELLITE
C	133.2625	16	TV			FAM	SATELLITE
D	139.2500	17	TV			USA	SATELLITE
E	145.2500	18	TV			MTV	SATELLITE
F	151.3210	19	TV			QVC	SATELLITE
G	157.2500	20	TV			HGTV	SATELLITE
H	163.2500	21	TV			TNN	SATELLITE
I	169.2500	22	TV			TNT	SATELLITE
7	175.2500	7	TV			WIVT-34	OFF-AIR
8	181.2500	8	TV			WSKG-46	OFF-AIR
9	187.2500	9	TV			WFXV-33	OFF-AIR
10	193.2500	10	TV			WICZ-40	OFF-AIR
11	199.2500	11	TV			WB00	SATELLITE
12	205.2500	12	TV			WCNY-24	OFF-AIR
13	211.2500	13	TV			WXT-9	OFF-AIR
J	217.2500	23	TV			CBB/PA	SUNY - FIBER
K	223.2500	24	TV			HSN	SATELLITE
L	229.2625	25	TV			WGN	SATELLITE
M	235.2625	26					
N	241.2625	27	TV			WISF-15	OFF-AIR
O	247.2625	28	TV	Y		GOLF	SATELLITE
P	253.2625	29	TV	Y		ESPN Classic	SATELLITE
Q	259.2625	30	TV	Y		CMT	SATELLITE
R	265.2625	31	TV	Y		TCM	SATELLITE
S	271.2625	32	TV	Y		COMEDY CENT	SATELLITE
T	277.2625	33	TV	Y		HBO Signiture	SATELLITE
U	283.2625	34	TV			ODYSSEY	SATELLITE
V	289.2625	35	TV			VH-1	SATELLITE
W	295.2625	36	TV			NICK	SATELLITE
AA	301.2625	37	TV			LIFETIME	SATELLITE
BB	307.2625	38	TV			TBS	SATELLITE
CC	313.2625	39	TV			CNBC	SATELLITE
DD	319.2625	40	TV			TWC	SATELLITE
EE	325.2625	41	TV			DISCOVERY	SATELLITE
FF	331.2750	42	TV			A&E	SATELLITE
GG	337.2625	43	TV			fX	SATELLITE
HH	343.2625	44	TV			E!	SATELLITE
II	349.2625	45	TV			CNN HN	SATELLITE
JJ	355.2625	46	TV			COURT	SATELLITE
KK	361.2625	47	TV			C-SPAN	SATELLITE
LL	367.2625	48	TV			TV FOOD	SATELLITE
MM	373.2625	49	TV			TV GUIDE	SATELLITE
NN	379.2625	50	TV	Y		HBO Plus	SATELLITE
OO	385.2625	51	TV	Y		DISNEY	SATELLITE
PP	391.2625	52	TV	Y		More MAX	SATELLITE
QQ	397.2625	53	TV			SNEAKPREVUE	SATELLITE
RR	403.2500	54	TV	Y		in-DEMAND 1	SAT PPV
SS	409.2500	55	TV	Y		in-DEMAND 2	SAT PPV
TT	415.2500	56	TV			MTV2/The Box	SATELLITE
UU	421.2500	57	TV			HISTORY	SATELLITE
VV	427.2500	58	TV			TLC	SATELLITE
WW	433.2500	59	TV			CARTOON	SATELLITE
XX	439.2500	60	TV			MSG	SATELLITE
YY	445.2500	61	TV	Y		fXM	SATELLITE
ZZ	451.2500	62	TV			ENCORE PLEX	SATELLITE
63	457.2500	63	TV			ESPN2	SATELLITE
64	463.2500	64	TV	Y		CNN / SI	SATELLITE
65	469.2500	65	TV			FOX Sports NY	SATELLITE
66	475.2500	66	TV			AMC	SATELLITE
67	481.2500	67	TV			ANIMAL PLANET	SATELLITE
68	487.2500	68	TV			PIN/SAH/CSPAN2	SATELLITE
69	493.2500	69	TV			MSNBC	SATELLITE
70	499.2500	70	TV	Y		SHOWTIME	SATELLITE
71	505.2500	71	TV			TV Land	SATELLITE
72	511.2500	72	TV	Y		Cinemax	SATELLITE
73	517.2500	73	TV			SCI FI	SATELLITE
74	523.2500	74	TV			TRAVEL	SATELLITE
75	529.2500	75	TV	Y		BRAVO	SATELLITE
76	535.2500	76	TV			Valuevision	SATELLITE
77	541.2500	77	TV			FoxNews	SATELLITE
78	547.2500	78	TV			Outdoor Life Net	SATELLITE

TIME WARNER CABLE–BINGHAMTON DIVISION

SYSTEM NAME: Oneonta-Delaware Feed @ Sidney **DATE:** 02/06/2001

ACTUAL CHAN	CARRIER FREQ	CONV CHAN	TYPE	SCRAM "Y"	VITS "Y"	CALL LTR	PROG SOURCE
2	55.2500						
3	61.2500						
4	67.2500						
5	77.2500						
6	83.2500						
A-5	91.2500						
A-4	97.2500						
A-3	103.2500						
A-2	109.2750						
A-1	115.2750						
A	121.2625						
B	127.2625						
C	133.2625						
D	139.2500						
E	145.2500						
F	151.3210						
G	157.2500						
H	163.2500						
I	169.2500						
7	175.2500						
8	181.2500						
9	187.2500						
10	193.2500						
11	199.2500						
12	205.2500						
13	211.2500						
J	217.2500						
K	223.2500						
L	229.2625	25	TV			WGN	dropped to Oxford
M	235.2625	28	Channel dropper			CBB/PA	Fiber*
N	241.2625						
O	247.2625						
P	253.2625						
Q	259.2625						
R	265.2625						
S	271.2625						
T	277.2625						
U	283.2625						
V	289.2625						
W	295.2625						
AA	301.2625						
BB	307.2625						
CC	313.2625						
DD	319.2625						
EE	325.2625						
FF	331.2750						
GG	337.2625						
HH	343.2625						
II	349.2625						
JJ	355.2625						
KK	361.2625						
LL	367.2625						
MM	373.2625						
NN	379.2625						
OO	385.2625						
PP	391.2625						
QQ	397.2625						
RR	403.2500						
SS	409.2500						
TT	415.2500						
UU	421.2500						
VV	427.2500						
WW	433.2500						
XX	439.2500						
YY	445.2500						
ZZ	451.2500						
63	457.2500						
64	463.2500						
65	469.2500						
66	475.2500						
67	481.2500						
68	487.2500						
69	493.2500						
70	499.2500						
71	505.2500						
72	511.2500						
73	517.2500						
74	523.2500						
75	529.2500						
76	535.2500						
77	541.2500						
78	547.2500						

TIME WARNER CABLE--BINGHAMTON DIVISION

SYSTEM NAME: Oneonta-Delaware Feed @ Delhi **DATE:** 02/06/2001

ACTUAL CHAN	CARRIER FREQ	CONV CHAN	TYPE	SCRAM "Y"	VITS "Y"	CALL LTR	PROG SOURCE
2	55.2500						
3	61.2500						
4	67.2500						
6	83.2500						
A-5	91.2500						
A-4	97.2500						
A-3	103.2500						
A-2	109.2750						
A-1	115.2750						
A	121.2625						
B	127.2625						
C	133.2625						
D	139.2500						
E	145.2500						
F	151.3210						
G	157.2500						
H	163.2500						
I	169.2500						
7	175.2500						
8	181.2500						
9	187.2500						
10	193.2500						
11	199.2500						
12	205.2500						
13	211.2500						
J	217.2500	23	Channel dropper			CBB/PA	SUNY D - FIBER
K	223.2500						
L	229.2625						
M	235.2625						
N	241.2625						
O	247.2625						
P	253.2625						
Q	259.2625						
R	265.2625						
S	271.2625						
T	277.2625						
U	283.2625						
V	289.2625						
W	295.2625						
AA	301.2625						
BB	307.2625						
CC	313.2625						
DD	319.2625						
EE	325.2625						
FF	331.2750						
GG	337.2625						
HH	343.2625						
II	349.2625						
JJ	355.2625						
KK	361.2625						
LL	367.2625						
MM	373.2625						
NN	379.2625						
OO	385.2625						
PP	391.2625						
QQ	397.2625						
RR	403.2500						
SS	409.2500						
TT	415.2500						
UU	421.2500						
VV	427.2500						
WW	433.2500						
XX	439.2500						
YY	445.2500						
ZZ	451.2500						
63	457.2500						
64	463.2500						
65	469.2500						
66	475.2500						
67	481.2500						
68	487.2500						
69	493.2500						
70	499.2500						
71	505.2500						
72	511.2500						
73	517.2500						
74	523.2500						
75	529.2500						
76	535.2500						
77	541.2500						
78	547.2500						

TIME WARNER CABLE--BINGHAMTON DIVISION

SYSTEM NAME: Oneonta-Otsego Feed @ New Berlin **DATE:** 02/06/2001

ACTUAL CHAN	CARRIER FREQ	CONV CHAN	TYPE	SCRAM "Y"	VITS "Y"	CALL LTR	PROG SOURCE
2	55.2500						
3	61.2500						
4	67.2500						
5	77.2500						
6	83.2500						
A-5	91.2500						
A-4	97.2500						
A-3	103.2500						
A-2	109.2750						
A-1	115.2750						
A	121.2625						
B	127.2625						
C	133.2625						
D	139.2500						
E	145.2500						
F	151.3210						
G	157.2500						
H	163.2500						
I	169.2500						
7	175.2500						
8	181.2500						
9	187.2500						
10	193.2500						
11	199.2500						
12	205.2500						
13	211.2500						
J	217.2500						
K	223.2500						
L	229.2625		Channel dropper				
M	235.2625	26	Channel dropper			CBB/PA	Character Generator
N	241.2625						
O	247.2625						
P	253.2625						
Q	259.2625						
R	265.2625						
S	271.2625						
T	277.2625						
U	283.2625						
V	289.2625						
W	295.2625						
AA	301.2625						
BB	307.2625						
CC	313.2625						
DD	319.2625						
EE	325.2625						
FF	331.2750						
GG	337.2625						
HH	343.2625						
II	349.2625						
JJ	355.2625						
KK	361.2625						
LL	367.2625						
MM	373.2625						
NN	379.2625						
OO	385.2625						
PP	391.2625						
QQ	397.2625						
RR	403.2500						
SS	409.2500						
TT	415.2500						
UU	421.2500						
VV	427.2500						
WW	433.2500						
XX	439.2500						
YY	445.2500						
ZZ	451.2500						
63	457.2500						
64	463.2500						
65	469.2500						
66	475.2500						
67	481.2500						
68	487.2500						
69	493.2500						
70	499.2500						
71	505.2500						
72	511.2500						
73	517.2500						
74	523.2500						
75	529.2500						
76	535.2500						
77	541.2500						
78	547.2500						

TIME WARNER CABLE--BINGHAMTON DIVISION

SYSTEM NAME: ONEONTA **DATE:** 02/06/2001

NON-VIDEO SERVICES

CARRIER FREQ	DESCRIPTION	BANDWIDTH	PROG SOURCE
72.6752	DATA		DIST LEARNING
74.1000	DATA		TRILITHIC FWD
108.2000	DATA		SA DIGITAL
111.0000	DATA		DIGITAL FWD
Ch (A-1)	DATA		ROADRUNNER FWD
74.9000	DATA		TRILITHIC FWD *
111.0000	DATA		SA DIGITAL**
			* IN OUTSIDE HUBS
			Cooperstown
			New Berlin
			Sidney
			Delhi
			** IN OUTSIDE HUBS
			Delhi
			Sidney

TIME WARNER CABLE
BINGHAMTON DIVISION

DATE: 02/06/2001

Proof - of - Performance Test

System Name: *ONEONTA*

Statement of Qualifications

Employee Name:	*GERALD R. HENRY* Title: *REGIONAL ENGINEER*
System:	*ONEONTA*
Qualifications:	Education: High School, A.A.S. Electrical, Various trade related schools and seminars. Work: Lockheed Electronics-2 Yrs., Raycomm-2Way- 2Yrs., CATV 30 years experience all aspects of coaxial / fiber CATV

Employee Name:	*DAVID A. KULZE* Title: *ENGINEERING TECH*
System:	*ONEONTA*
Qualifications:	Education: High School, U.S. Navy Avionics School, Various trade related schools and seminars. Work: U.S. Navy Aviation Electronics - 4 Yrs., CATV 28 Yrs. experience all aspects of coaxial / fiber CATV

Employee Name:	*BRIAN MILLER* Title: *ENGINEERING TECH*
System:	
Qualifications:	Education: High School, U.S. Navy Avionics School, Hartwick College -2Yrs., Various trade related schools and seminars. Work: U.S. Navy Aviation Electronics -4Yrs., CATV 17 Yrs. experience all aspects of coaxial / fiber CATV

Employee Name:	*Donald Reed* Title: *ENGINEERING TECH*
System:	*ONEONTA*
Qualifications:	Education: High School, U.S. Air Force, Various trade related schools and seminars. Work: CATV 19 Yrs. experience all aspects of coaxial / fiber CATV

Time Warner Cable

CATV

Proof-of- Performance Test

Test Equipment Listings

System Name: ONEONTA

DATE: 02/06/2001

TEST EQUIPMENT

Equipment Description	Model #	Manufacturer	Serial#	Calibration
Signal Level Meter	WWG SDA-5000	Wavetek	1311442	2001 new
Signal Level Meter	WWG SDA-4040D	Wavetek	1210900	2001 new
Signal Level Meter	WWG SDA-4040D	Wavetek	1341442	2001 new
Signal Level Meter	WWG SDA-4040D	Wavetek	1341443	2001 new
Spectrum Analyzer	2710	Tektronix	B021999	91
NTSC Signal Generator	V 1.1	Tektronix	B010288	12/92
Generator SW/SIG	1801-C	Wavetek	8482003	9/90
Tuneable Bandpass Filter	5 VF-55/110	Wavetek	9787-1	
Tuneable Bandpass Filter	5 VF-110/220	Wavetek	9788-1	
Tuneable Bandpass Filter	5 VF-190/375	Wavetek	9789-1	
Convertor Addressable	SA8600	Scientific Atlanta	HD591KFLZ	
Spectrum Analyzer	8591C	HP	3829A02763	11/98

TIME WARNER CABLE
BINGHAMTON DIVISION

Terminal Isolation Test

System Name: ONEONTA

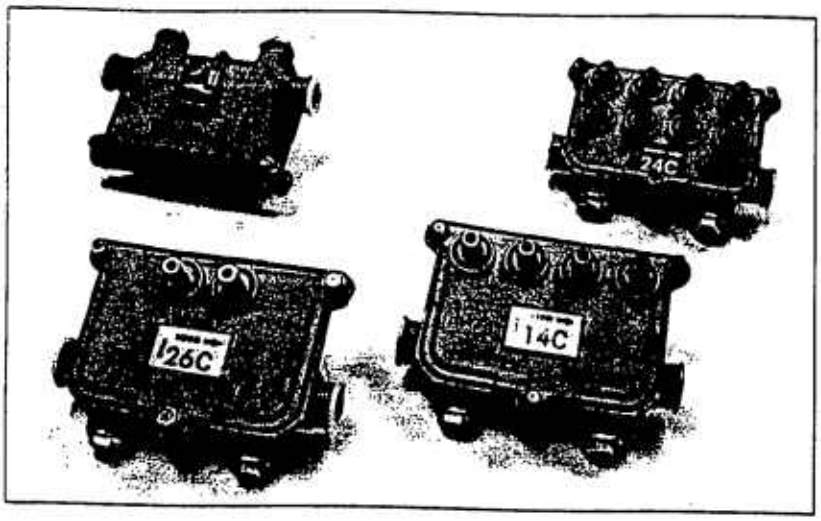
Date: 02/06/2001

The terminal isolation provided to each subscriber terminal shall not be less than 18 decibels. In lieu of periodic testing, the cable operator may use specifications provided by the manufacturer for the terminal isolation equipment to meet this standard.

Instructions:

Attach a copy of the manufacturer's specifications covering all directional taps used in the system. The specification sheet must show the minimum tap-to-tap isolation. In lieu of a specification sheet, attach a letter from the manufacturer(s) certifying that the directional taps used in the system do exhibit a minimum tap-to-tap isolation of 18dB.

Conventional Multi-Taps



9000-C Series

The 9000-C series 1 GHz conventional multi-tap taps off part of its input RF signal but allows the rest of that signal to pass through. It divides the tapped-off signal into multiple outputs.

- Optional continuous AC and RF power passing circuits eliminate downstream service interruptions when face plates are removed.
- 90° rotating seizure mechanism makes installation easy.
- F-port capacitors eliminate hum modulation that can originate at the subscriber home.
- Environmental coating provides excellent corrosion resistance.
- Dual gaskets keep RF signals pure and protect the circuitry from extreme environments.

A multi-tap is a combination of a directional coupler and splitters arranged to produce a specific value or signal loss, from the multi-tap's input to its tap ports.

Philips' 9000-C series 1 GHz multi-taps are available in two - way, four-way, and eight-way models, offering two, four, and eight tap ports respectively. We've created a compact tap which fits easily into a 6-inch pedestal.

Our 9000-C series multi-taps all share these standard features:

- 1 GHz bandwidth capacity,
- brass SCTE F-ports with drip lips and rubber boots,
- RFI and weather gaskets,
- network power capacity of 90 VAC, 0 to 60 Hz,
- strip gauges and heat-shrink ridges for easy installation,
- numbered ports for easier subscriber audits,
- 6.5 KV surge resistance meets ANSI/IEEE C62.41-1991 Class B, 6500 V surge and 12-amp current handling capability,
- interchangeable face plates, and
- face plates fit in 8000 series housings for easy upgrade to 1 GHz.

The aluminum die-cast housing is pressure tested to 10 psi and is coated with a protective finish, which provides excellent corrosion resistance. Rubber boots inside the brass SCTE F-ports help keep the 9000-C series multi-taps water-resistant. A single alloy at contact points eliminates the galvanic couple and corrosion that accompanies aluminum-to-brass connections. So, by connecting the brass SCTE F-port to a brass F-connector, you can eliminate a weak link in your network.

All F-ports have a capacitor that blocks hum modulation that can originate in the subscriber home. This capacitor also provides additional protection from transients traveling on subscriber drop cables.

Order the 9000T-PWR-FI power bypass assembly option to prevent interruptions in power and RF service when face plates are removed. Also, order the 9000-USB-PBT for easy aerial to underground interconnections.

Conventional Multi-Taps

Worst Case Specifications* — 9800-C Eight-Way Series

	9812	9815	9818	9821	9824	9827	9830	9833	9836	Units
Tap Value	12.0	15.5	18.0	21.0	24.0	27.0	30.0	33.0	36.0	dB
Bandwidth					10-1000					MHz
Color Code	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Tolerance										
10-19 MHz	1.7	2.0	1.5	2.5	2.5	2.5	2.5	2.5	2.5	± dB
20-899 MHz	1.8	2.0	1.5	1.5	1.5	1.5	1.5	1.8	1.8	± dB
900-1000 MHz	2.3	2.5	1.9	2.4	2.1	2.1	1.9	2.1	2.3	± dB
Insertion Loss (max.)										
10 MHz	—	3.8	1.9	1.2	1.0	0.8	0.5	0.5	0.5	dB
30 MHz	—	3.5	1.5	1.0	0.9	0.7	0.4	0.4	0.4	dB
54 MHz	—	3.5	1.6	1.0	0.8	0.7	0.4	0.4	0.4	dB
112 MHz	—	4.0	1.9	1.2	0.9	0.8	0.6	0.6	0.6	dB
150 MHz	—	4.0	1.9	1.2	0.9	0.8	0.6	0.6	0.6	dB
186 MHz	—	4.1	2.0	1.3	1.0	0.8	0.6	0.6	0.6	dB
222 MHz	—	4.1	2.0	1.3	1.0	0.8	0.6	0.6	0.6	dB
330 MHz	—	4.2	2.1	1.4	1.0	0.8	0.6	0.6	0.6	dB
400 MHz	—	4.3	2.2	1.4	1.0	0.8	0.7	0.7	0.7	dB
450 MHz	—	4.4	2.2	1.4	1.0	0.8	0.7	0.7	0.7	dB
550 MHz	—	4.5	2.3	1.3	1.1	0.9	0.8	0.8	0.8	dB
600 MHz	—	4.7	2.4	1.4	1.1	1.0	0.9	0.9	0.9	dB
750 MHz	—	5.1	2.8	1.6	1.3	1.2	1.2	1.2	1.2	dB
862 MHz	—	5.3	3.2	1.8	1.6	1.3	1.4	1.4	1.4	dB
1000 MHz	—	5.4	3.9	2.3	1.8	1.4	1.4	1.4	1.4	dB
Flatness (max.)										
10-1000 MHz	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	± dB
Tap-to-Out Isolation (min.)										
10-29 MHz	—	21	24	27	30	34	34	36	38	dB
30-749 MHz	—	27	30	32	34	38	40	42	44	dB
750-899 MHz	—	25	28	30	33	36	38	40	41	dB
900-1000 MHz	—	25	28	28	33	34	36	38	39	dB
Tap-to-Tap Isolation (min.)										
10-29 MHz	20	20	20	20	20	20	20	20	20	dB
30-449 MHz	25	25	25	25	25	25	25	25	25	dB
450-749 MHz	23	23	23	23	23	23	23	23	23	dB
750-1000 MHz	20	20	20	20	20	20	20	20	20	dB
Return Loss In (min.)										
10-29 MHz	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	16	16	16	16	16	16	16	16	16	dB
Return Loss Out (min.)										
10-29 MHz	—	17	17	17	17	17	17	17	17	dB
30-599 MHz	—	18	18	18	18	18	18	18	18	dB
600-899 MHz	—	17	17	17	17	17	17	17	17	dB
900-1000 MHz	—	16	16	16	16	16	16	16	16	dB
Return Loss Tap (min.)										
10-29 MHz	16	16	16	16	16	16	16	16	16	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	dB
600-1000 MHz	16	16	16	16	16	16	16	16	16	dB
Hum Modulation @ 8 amps (max.)										
10-49 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	dB
50-599 MHz	—	-70	-70	-70	-70	-70	-70	-70	-70	dB
600-749 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	dB
750-1000 MHz	—	-60	-60	-60	-60	-60	-60	-60	-60	dB
RFI Isolation	Exceeds FCC requirements									
Current (max.)	0	2	12	12	12	12	12	12	12	amps
Voltage Passing Capacity (min.)										
0 to 60 MHz	90	90	90	90	90	90	90	90	90	VAC
Surge Rating	ANSI/IEEE C62.41-1991, Class B, 2500 Volts									

*All specifications are subject to change without notice.

PHILIPS

Nominal Performance*

9800-C Eight-Way Series

	9812	9815	9818	9821	9824	9827	9830	9833	9836	Units
Tap Value	12.0	15.5	18.0	21.0	24.0	27.0	30.0	33.0	36.0	dB
Bandwidth					10-1000					MHz
Color Code	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Insertion Loss (Input/Output)										
10 MHz	—	3.5	1.4	1.1	0.9	0.7	0.3	0.3	0.3	dB
30 MHz	—	3.4	1.3	0.9	0.7	0.6	0.3	0.3	0.3	dB
54 MHz	—	3.4	1.3	0.9	0.7	0.5	0.3	0.3	0.3	dB
112 MHz	—	3.8	1.7	1.0	0.8	0.7	0.4	0.5	0.4	dB
150 MHz	—	3.8	1.7	1.0	0.8	0.7	0.4	0.5	0.4	dB
186 MHz	—	3.9	1.8	1.0	0.8	0.7	0.4	0.5	0.4	dB
222 MHz	—	3.9	1.8	1.1	0.8	0.7	0.4	0.5	0.4	dB
330 MHz	—	4.0	1.9	1.1	0.8	0.7	0.5	0.5	0.5	dB
400 MHz	—	4.1	2.0	1.1	0.8	0.7	0.5	0.5	0.5	dB
450 MHz	—	4.1	2.0	1.1	0.9	0.7	0.6	0.6	0.5	dB
550 MHz	—	4.2	2.0	1.1	0.9	0.7	0.6	0.6	0.6	dB
600 MHz	—	4.5	2.2	1.2	0.9	0.8	0.7	0.7	0.6	dB
750 MHz	—	4.9	2.6	1.3	1.0	0.9	0.8	0.8	0.8	dB
862 MHz	—	5.0	2.9	1.5	1.2	1.1	1.0	1.0	1.0	dB
1000 MHz	—	5.2	3.5	1.7	1.2	1.1	1.1	1.1	1.1	dB
Tap Loss										
10-19 MHz	10.7	13.8	17.8	19.4	22.3	25.5	28.8	32.2	34.5	dB
20-899 MHz	11.3	14.7	18.4	20.6	24.3	26.7	30.4	32.8	35.6	dB
900-1000 MHz	13.0	16.7	18.8	20.7	25.1	27.8	30.4	33.2	36.3	dB

*All specifications are subject to change without notice.

Conventional Multi-Taps

Worst Case Specifications* — 9400-C Four-Way Series

	9408	9411	9414	9417	9420	9423	9426	9429	9432	9435	Units
Tap Value	8.0	11.5	14.5	17.0	20.0	23.0	26.0	29.0	32.0	35.0	dB
Bandwidth	10-1000										MHz
Color Code	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Tolerance											
10-19 MHz	1.5	1.5	1.5	2.1	1.9	2.2	2.5	2.5	2.3	1.9	±dB
20-899 MHz	1.5	2.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	±dB
900-1000 MHz	1.5	2.5	2.3	2.2	2.0	1.9	1.7	1.6	1.8	2.0	±dB
Insertion Loss (max.)											
10 MHz	—	3.6	1.9	1.2	1.0	0.8	0.5	0.4	0.4	0.4	dB
30 MHz	—	3.5	1.5	0.9	0.8	0.7	0.4	0.3	0.3	0.3	dB
54 MHz	—	3.5	1.5	0.9	0.8	0.7	0.4	0.3	0.3	0.3	dB
112 MHz	—	4.0	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
150 MHz	—	4.1	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
186 MHz	—	4.1	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
222 MHz	—	4.2	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
330 MHz	—	4.3	1.9	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
400 MHz	—	4.3	1.9	1.0	1.0	0.9	0.6	0.6	0.6	0.6	dB
450 MHz	—	4.3	2.0	1.1	1.1	0.9	0.7	0.7	0.7	0.7	dB
550 MHz	—	4.4	2.0	1.1	1.1	0.9	0.7	0.7	0.7	0.7	dB
600 MHz	—	4.7	2.1	1.2	1.1	0.9	0.7	0.7	0.7	0.7	dB
750 MHz	—	5.1	2.4	1.4	1.1	1.0	0.8	0.8	0.8	0.8	dB
862 MHz	—	5.2	2.9	1.6	1.4	1.3	1.1	1.1	1.1	1.1	dB
1000 MHz	—	5.4	3.3	1.8	1.6	1.5	1.2	1.2	1.2	1.2	dB
Flatness (max.)											
10-1000 MHz	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	±dB
Tap-to-Out Isolation (min.)											
10-29 MHz	—	20	21	22	27	30	34	34	36	38	dB
30-749 MHz	—	24	27	30	33	36	38	40	42	44	dB
750-899 MHz	—	22	25	28	31	34	36	38	40	42	dB
900-1000 MHz	—	22	25	28	31	34	36	38	40	42	dB
Tap-to-Tap Isolation (min.)											
10-29 MHz	20	20	20	20	20	20	20	20	20	20	dB
30-449 MHz	25	25	25	25	25	25	25	25	25	25	dB
450-749 MHz	23	23	23	23	23	23	23	23	23	23	dB
750-1000 MHz	20	20	20	20	20	20	20	20	20	20	dB
Return Loss In (min.)											
10-29 MHz	17	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	17	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Return Loss Out (min.)											
10-29 MHz	—	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	—	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	—	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	—	16	16	16	16	16	16	16	16	16	dB
Return Loss Tap (min.)											
10-29 MHz	16	16	16	16	16	16	16	16	16	16	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Hum Modulation @ 8 amps (max.)											
10-49 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
50-599 MHz	—	-70	-70	-70	-70	-70	-70	-70	-70	-70	dB
600-749 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
750-1000 MHz	—	-60	-60	-60	-60	-60	-60	-60	-60	-60	dB
RFI Isolation	Exceeds FCC requirements										
Current (max.)	0	12	12	12	12	12	12	12	12	12	amps
Voltage Passing Capacity (min.)											
0-60 Hz	90	90	90	90	90	90	90	90	90	90	VAC
Surge Rating	ANSI/IEEE C62.41-1991, Class B, 2500 Volts										

*All specifications are subject to change without notice.

PHILIPS

Nominal Performance*

9400-C Four-Way Series

	9408	9411	9414	9417	9420	9423	9426	9429	9432	9435	Units
Tap Value	8.0	11.5	14.5	17.0	20.0	23.0	26.0	29.0	32.0	35.0	dB
Bandwidth					10-1000						MHz
Color Code	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Insertion Loss (In/Out)											
10 MHz	—	3.5	1.3	1.0	0.9	0.6	0.3	0.3	0.3	0.3	dB
30 MHz	—	3.4	1.3	0.7	0.7	0.6	0.3	0.3	0.3	0.3	dB
54 MHz	—	3.4	1.3	0.7	0.7	0.6	0.3	0.3	0.3	0.3	dB
112 MHz	—	3.8	1.7	0.9	0.8	0.7	0.5	0.5	0.5	0.5	dB
150 MHz	—	3.8	1.7	0.9	0.8	0.7	0.5	0.5	0.5	0.5	dB
186 MHz	—	3.9	1.8	0.9	0.9	0.7	0.5	0.5	0.5	0.5	dB
222 MHz	—	3.9	1.8	0.9	0.9	0.7	0.5	0.5	0.5	0.5	dB
330 MHz	—	4.0	1.8	0.9	0.9	0.7	0.5	0.5	0.5	0.5	dB
400 MHz	—	4.1	1.8	1.0	0.9	0.8	0.5	0.6	0.6	0.5	dB
450 MHz	—	4.1	1.8	1.0	0.9	0.8	0.5	0.6	0.6	0.5	dB
550 MHz	—	4.2	1.9	1.0	0.9	0.8	0.6	0.6	0.6	0.6	dB
600 MHz	—	4.4	2.1	1.1	0.9	0.8	0.6	0.6	0.7	0.6	dB
750 MHz	—	4.7	2.6	1.3	1.1	1.0	0.9	0.8	0.8	0.8	dB
862 MHz	—	4.8	3.0	1.6	1.3	1.1	1.1	1.0	1.0	1.0	dB
1000 MHz	—	4.9	3.6	1.8	1.3	1.1	1.1	1.0	1.0	1.0	dB
Tap Loss											
10-19 MHz	6.9	10.3	14.5	15.8	19.4	22.1	24.9	27.9	31.0	34.2	dB
20-899 MHz	7.2	10.7	14.7	17.6	21.0	23.6	26.3	29.2	32.2	35.3	dB
900-1000 MHz	8.2	12.8	15.0	18.2	20.7	23.2	26.0	29.1	32.0	35.2	dB

*All specifications are subject to change without notice.

Conventional Multi-Taps

Worst Case Specifications*

9200-C Two-Way Series

	9204	9208	9211	9214	9217	9220	9223	9226	9229	9232	Units
Tap Value	4.0	8.5	11.0	14.0	17.0	20.0	23.0	26.0	29.0	32.0	dB
Bandwidth					10-1000						MHz
Color Code	Black	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	
Tolerance											
10-19 MHz	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	± dB
20-899 MHz	1.5	2.0	1.5	1.5	1.5	1.6	1.5	1.5	2.0	1.8	± dB
900-1000 MHz	2.0	2.0	1.5	2.0	1.6	1.7	1.7	2.0	2.0	2.0	± dB
Insertion Loss (max.)											
10 MHz	—	3.6	1.9	1.0	1.0	0.8	0.5	0.5	0.4	0.4	dB
30 MHz	—	3.1	1.5	0.8	0.8	0.7	0.5	0.4	0.3	0.3	dB
54 MHz	—	3.3	1.5	0.8	0.8	0.7	0.4	0.4	0.3	0.3	dB
112 MHz	—	3.3	1.8	1.0	0.9	0.8	0.5	0.5	0.5	0.5	dB
150 MHz	—	3.3	1.8	1.0	0.9	0.8	0.5	0.5	0.5	0.5	dB
186 MHz	—	3.4	1.9	1.0	0.9	0.8	0.5	0.5	0.5	0.5	dB
222 MHz	—	3.5	1.9	1.0	1.0	0.8	0.5	0.5	0.5	0.5	dB
330 MHz	—	3.6	2.0	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
400 MHz	—	3.7	2.1	1.1	1.0	0.9	0.7	0.7	0.6	0.6	dB
450 MHz	—	3.8	2.1	1.1	1.0	0.9	0.7	0.7	0.6	0.6	dB
550 MHz	—	3.9	2.1	1.2	1.1	0.9	0.7	0.7	0.7	0.7	dB
600 MHz	—	4.1	2.4	1.4	1.2	1.0	0.8	0.8	0.8	0.8	dB
750 MHz	—	4.7	3.0	1.6	1.4	1.2	1.0	1.0	0.9	0.9	dB
862 MHz	—	5.0	3.5	1.8	1.6	1.4	1.2	1.2	1.1	1.1	dB
1000 MHz	—	5.5	4.1	2.0	1.8	1.6	1.4	1.3	1.3	1.3	dB
Flatness (max.)											
10-1000 MHz	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	± dB
Tap-to-Out Isolation (min.)											
10-29 MHz	—	20	20	20	24	29	30	34	34	36	dB
30-749 MHz	—	22	24	26	30	33	36	38	40	42	dB
750-899 MHz	—	20	22	25	28	31	34	36	38	40	dB
900-1000 MHz	—	20	22	24	28	31	34	36	38	40	dB
Tap-to-Tap Isolation (min.)											
10-29 MHz	20	20	20	20	20	20	20	20	20	20	dB
30-449 MHz	25	25	25	25	25	25	25	25	25	25	dB
450-749 MHz	23	23	23	23	23	23	23	23	23	23	dB
750-1000 MHz	20	20	20	20	20	20	20	20	20	20	dB
Return Loss In (min.)											
10-29 MHz	17	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	17	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Return Loss Out (min.)											
10-29 MHz	—	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	—	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	—	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	—	16	16	16	16	16	16	16	16	16	dB
Return Loss Tap (min.)											
10-29 MHz	16	16	16	16	16	16	16	16	16	16	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Hum Modulation @ 8 amps (max.)											
10-49 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
50-599 MHz	—	-70	-70	-70	-70	-70	-70	-70	-70	-70	dB
600-749 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
750-1000 MHz	—	-60	-60	-60	-60	-60	-60	-60	-60	-60	dB
RFI Isolation	Exceeds FCC requirements										
Current (max.)	0	[illegible]	12	12	12	12	12	12	12	12	amps
Voltage Passing Capacity (min.)											
0-60 MHz	90	[illegible]	90	90	90	90	90	90	90	90	VAC
Surge Rating	ANSI/IEEE C62.41-1991, Class B, 2500 Volts										

*All specifications are subject to change without notice.

PHILIPS

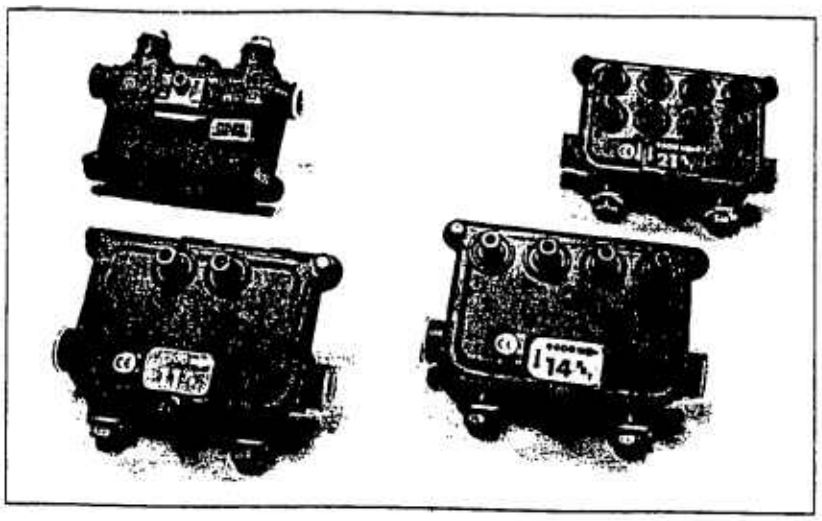
Nominal Performance*

9200-C Two-Way Series

	9204	9208	9211	9214	9217	9220	9223	9226	9229	9232	Units
Tap Value	4.0	8.5	11.0	14.0	17.0	20.0	23.0	26.0	29.0	32.0	dB
Bandwidth	10-1000										MHz
Color Code	Black	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	
Insertion Loss (In/Out)											
10 MHz	—	2.8	1.3	1.0	0.9	0.7	0.3	0.3	0.3	0.3	dB
30 MHz	—	2.8	1.3	0.8	0.7	0.6	0.3	0.3	0.3	0.3	dB
54 MHz	—	2.8	1.3	0.7	0.7	0.6	0.3	0.3	0.3	0.3	dB
112 MHz	—	3.2	1.7	0.9	0.8	0.7	0.5	0.5	0.4	0.4	dB
150 MHz	—	3.2	1.7	0.9	0.8	0.7	0.5	0.5	0.4	0.4	dB
186 MHz	—	3.2	1.7	0.9	0.8	0.7	0.5	0.5	0.4	0.4	dB
222 MHz	—	3.3	1.7	0.9	0.9	0.8	0.5	0.5	0.5	0.5	dB
330 MHz	—	3.4	1.8	0.9	0.9	0.8	0.5	0.5	0.5	0.5	dB
400 MHz	—	3.4	1.9	1.0	0.9	0.8	0.6	0.6	0.5	0.5	dB
450 MHz	—	3.4	1.9	1.0	0.9	0.8	0.6	0.6	0.5	0.5	dB
550 MHz	—	3.5	1.9	1.0	0.9	0.8	0.6	0.6	0.5	0.6	dB
600 MHz	—	3.8	2.1	1.1	1.0	0.9	0.6	0.6	0.6	0.6	dB
750 MHz	—	4.3	2.5	1.2	1.2	1.0	0.8	0.8	0.7	0.8	dB
862 MHz	—	4.5	2.8	1.4	1.3	1.1	0.9	0.9	0.9	1.0	dB
1000 MHz	—	4.8	3.5	1.6	1.3	1.1	1.0	1.0	1.0	1.1	dB
Tap Loss											
10-19 MHz	3.4	7.7	10.8	13.7	15.7	18.4	21.2	24.4	27.2	30.5	dB
20-899 MHz	3.7	8.0	11.1	14.9	17.4	20.0	22.6	25.5	28.1	31.2	dB
900-1000 MHz	5.2	9.6	11.0	15.2	17.0	20.0	23.2	26.5	29.1	32.8	dB

*All specifications are subject to change without notice.

Power Bypass Multi-Taps



9000-PBT Series

The 9000-PBT series 1 GHz multi-tap taps off part of its input RF signal but allows the rest of that signal to pass through. It divides the tapped-off signal into multiple outputs.

- Continuous RF signal and AC power bypass circuit eliminates downstream service interruptions when face plates are removed.
- 90° rotating seizure mechanism makes installation easy.
- F-port capacitors eliminate hum modulation that can originate at the subscriber home.
- Environmental coating provides excellent corrosion resistance.
- Dual gaskets keep RF signals pure and protect the circuitry from extreme environments.

A multi-tap is a combination of a directional coupler and splitters arranged to produce a specific value or signal loss, from the multi-tap's input to its tap ports.

Philips 9000-PBT series 1 GHz multi-taps are available in two-way, four-way and eight-way models, offering two, four, and eight tap ports respectively. We've created a compact tap which fits easily into a 6-inch pedestal.

Our 9000-PBT series multi-taps all share these standard features:

- 1 GHz bandwidth capacity,
- brass SCTE F-ports with drip lips and rubber boots,
- interchangeable face plates,
- strip gauges and heat-shrink ridges for easy installation.
- 5 KV surge resistance meets ANSI/IEEE C62.41-1991 Class B, 2500 V surge and 10-amp current-handling capability,
- network power capacity of 90 VAC, 0 to 60 Hz,
- easily upgraded to telephony with F-port powered 9000T-FP or twisted pair 9000T-TP face plates, and
- face plates fit in 8000 series housings for easy upgrade to 1 GHz.

The aluminum die-cast housing is pressure tested to 10 psi and coated with a protective finish, which provides excellent corrosion resistance. Rubber boots inside the brass SCTE F-ports help keep the 9000 series multi-taps water resistant. A single alloy at contact points eliminates the galvanic couple and corrosion that accompanies aluminum-to-brass connections. So, by connecting the brass SCTE F-port to a brass F-connector, you can eliminate a weak link in your network.

All F-ports have a capacitor that blocks hum modulation that can originate in the subscriber home. This capacitor also provides additional protection from transients traveling on subscriber drop cables.

The power bypass assembly, located in the housing, prevents interruptions in power and RF service when face plates are removed. The 10-amp current rating (for assembly) meets future system requirements.

Power Bypasss Multi-Taps

Worst Case Specifications* 9800-PBT Eight-Way Series

	9812	9815	9818	9821	9824	9827	9830	9833	9836	Units
Tap Value	12.0	15.5	18.0	21.0	24.0	27.0	30.0	33.0	36.0	dB
Bandwidth					10-1000					MHz
Color Code	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Tolerance										
10-19 MHz	1.7	2.0	1.5	2.5	2.5	2.5	2.5	2.5	2.5	± dB
20-899 MHz	1.8	2.0	1.5	1.5	1.5	1.5	1.5	1.8	1.8	± dB
900-1000 MHz	2.3	2.5	1.9	2.4	2.1	2.1	1.9	2.1	2.3	± dB
Insertion Loss (max.)										
10 MHz	—	3.8	1.9	1.2	1.0	0.8	0.5	0.5	0.5	dB
30 MHz	—	3.5	1.5	1.0	0.9	0.7	0.4	0.4	0.4	dB
54 MHz	—	3.5	1.6	1.0	0.8	0.7	0.4	0.4	0.4	dB
112 MHz	—	4.0	1.9	1.2	0.9	0.8	0.6	0.6	0.6	dB
150 MHz	—	4.0	1.9	1.2	0.9	0.8	0.6	0.6	0.6	dB
186 MHz	—	4.1	2.0	1.3	1.0	0.8	0.6	0.6	0.6	dB
222 MHz	—	4.1	2.0	1.3	1.0	0.8	0.6	0.6	0.6	dB
330 MHz	—	4.2	2.1	1.4	1.0	0.8	0.6	0.6	0.6	dB
400 MHz	—	4.3	2.2	1.4	1.0	0.8	0.7	0.7	0.7	dB
450 MHz	—	4.4	2.2	1.4	1.0	0.8	0.7	0.7	0.7	dB
550 MHz	—	4.5	2.3	1.3	1.1	0.9	0.8	0.8	0.8	dB
600 MHz	—	4.7	2.4	1.4	1.1	1.0	0.9	0.9	0.9	dB
750 MHz	—	5.1	2.8	1.6	1.3	1.2	1.2	1.2	1.2	dB
862 MHz	—	5.3	3.2	1.8	1.6	1.3	1.4	1.4	1.4	dB
1000 MHz	—	5.4	3.9	2.3	1.8	1.4	1.4	1.4	1.4	dB
Flatness (max.)										
10-1000 MHz	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	± dB
Tap-to-Out Isolation (min.)										
10-29 MHz	—	21	24	27	30	34	34	36	38	dB
30-749 MHz	—	27	30	32	34	38	40	42	44	dB
750-899 MHz	—	25	28	30	33	36	38	40	41	dB
900-1000 MHz	—	25	28	28	33	34	36	38	39	dB
Tap-to-Tap Isolation (min.)										
10-29 MHz	20	20	20	20	20	20	20	20	20	dB
30-449 MHz	25	25	25	25	25	25	25	25	25	dB
450-749 MHz	23	23	23	23	23	23	23	23	23	dB
750-1000 MHz	20	20	20	20	20	20	20	20	20	dB
Return Loss In (min.)										
10-29 MHz	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	16	16	16	16	16	16	16	16	16	dB
Return Loss Out (min.)										
10-29 MHz	—	17	17	17	17	17	17	17	17	dB
30-599 MHz	—	18	18	18	18	18	18	18	18	dB
600-899 MHz	—	17	17	17	17	17	17	17	17	dB
900-1000 MHz	—	16	16	16	16	16	16	16	16	dB
Return Loss Tap (min.)										
10-29 MHz	16	16	16	16	16	16	16	16	16	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	dB
600-1000 MHz	16	16	16	16	16	16	16	16	16	dB
Hum Modulation @ 8 amps (max.)										
10-49 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	dB
50-599 MHz	—	-70	-70	-70	-70	-70	-70	-70	-70	dB
600-749 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	dB
750-1000 MHz	—	-60	-60	-60	-60	-60	-60	-60	-60	dB
RFI Isolation	Exceeds FCC requirements									
Current (max.)	0	10	10	10	10	10	10	10	10	amps
Voltage Passing Capacity (min) 0 to 60 Hz.	90	90	90	90	90	90	90	90	90	VAC
Surge Rating	ANSI/IEEE C62.41-1991, Class B, 2500 Volts									

*All specifications are subject to change without notice.

PHILIPS

Power Bypass Multi-Taps

Nominal Specifications* 9800-PBT Eight-Way Series

	9812	9815	9818	9821	9824	9827	9830	9833	9836	Units
Tap Value	12.0	15.5	18.0	21.0	24.0	27.0	30.0	33.0	36.0	dB
Bandwidth					10-1000					MHz
Color Code	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Insertion Loss (input/output)										
10 MHz	—	2.6	1.4	0.8	0.5	0.5	0.4	0.3	0.4	dB
30 MHz	—	2.5	1.3	0.7	0.4	0.4	0.3	0.3	0.3	dB
54 MHz	—	2.4	1.2	0.6	0.4	0.3	0.3	0.3	0.3	dB
70 MHz	—	2.6	1.4	0.8	0.6	0.4	0.3	0.3	0.3	dB
112 MHz	—	2.9	1.7	1.0	0.8	0.5	0.4	0.4	0.4	dB
150 MHz	—	2.9	1.7	1.0	0.8	0.5	0.4	0.4	0.4	dB
186 MHz	—	2.9	1.8	1.0	0.8	0.5	0.4	0.4	0.4	dB
222 MHz	—	3.0	1.8	1.1	0.8	0.5	0.4	0.4	0.4	dB
330 MHz	—	3.0	1.9	1.1	0.8	0.5	0.4	0.4	0.4	dB
400 MHz	—	3.1	1.9	1.2	0.8	0.6	0.5	0.5	0.5	dB
450 MHz	—	3.1	1.9	1.2	0.8	0.6	0.5	0.5	0.5	dB
550 MHz	—	3.3	2.0	1.2	0.9	0.6	0.5	0.5	0.5	dB
600 MHz	—	3.5	2.1	1.3	0.9	0.7	0.7	0.7	0.7	dB
750 MHz	—	3.9	2.4	1.5	1.1	0.8	0.7	0.8	0.7	dB
862 MHz	—	4.1	2.7	1.7	1.3	0.9	0.8	0.8	0.8	dB
1000 MHz	—	4.3	3.0	2.2	1.7	1.1	1.0	1.0	1.0	dB
Tap Loss										
10-29 MHz	11.0	15.3	17.9	21.4	24.1	25.9	28.8	31.7	34.7	dB
20-899 MHz	11.3	15.1	17.6	21.1	23.7	26.9	30.1	32.5	35.6	dB
900-1000 MHz	12.5	16.2	18.7	21.9	24.2	27.4	30.3	33.0	36.3	dB

*All specifications are subject to change without notice.

Power Bypass Multi-Taps

Worst Case Specifications* 9400-PBT Four-Way Series

	9408	9411	9414	9417	9420	9423	9426	9429	9432	9435	Units
Tap Value	8.0	11.5	14.5	17.0	20.0	23.0	26.0	29.0	32.0	35.0	dB
Bandwidth	10-1000										MHz
Color Code	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Tolerance											
10-19 MHz	1.5	1.5	1.5	2.1	1.9	2.2	2.5	2.5	2.3	1.9	± dB
20-899 MHz	1.5	2.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	± dB
900-1000 MHz	1.5	2.5	2.3	2.2	2.0	1.9	1.7	1.6	1.8	2.0	± dB
Insertion Loss (max.)											
10 MHz	—	3.6	1.9	1.2	1.0	0.8	0.5	0.4	0.4	0.4	dB
30 MHz	—	3.5	1.5	0.9	0.8	0.7	0.4	0.3	0.3	0.3	dB
54 MHz	—	3.5	1.5	0.9	0.8	0.7	0.4	0.3	0.3	0.3	dB
112 MHz	—	4.0	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
150 MHz	—	4.1	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
186 MHz	—	4.1	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
222 MHz	—	4.2	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
330 MHz	—	4.3	1.9	1.0	1.0	0.9	0.6	0.6	0.6	0.6	dB
400 MHz	—	4.3	2.0	1.1	1.1	0.9	0.7	0.7	0.7	0.7	dB
450 MHz	—	4.3	2.0	1.1	1.1	0.9	0.7	0.7	0.7	0.7	dB
550 MHz	—	4.4	2.1	1.2	1.1	0.9	0.7	0.7	0.7	0.7	dB
600 MHz	—	4.7	2.4	1.4	1.1	1.0	0.8	0.8	0.8	0.8	dB
750 MHz	—	5.1	2.9	1.6	1.4	1.3	1.1	1.1	1.1	1.1	dB
862 MHz	—	5.2	3.3	1.8	1.6	1.5	1.2	1.2	1.2	1.2	dB
1000 MHz	—	5.4	4.0	2.2	1.8	1.6	1.4	1.3	1.3	1.3	dB
Flatness (max.)											
10-1000 MHz	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	± dB
Tap-to-Out Isolation (min.)											
10-29 MHz	—	20	21	22	27	30	34	34	36	38	dB
30-749 MHz	—	24	27	30	33	36	38	40	42	44	dB
750-899 MHz	—	22	25	28	31	34	36	38	40	42	dB
900-1000 MHz	—	22	25	28	31	34	36	38	40	42	dB
Tap-to-Tap Isolation (min.)											
10-29 MHz	20	20	20	20	20	20	20	20	20	20	dB
30-449 MHz	25	25	25	25	25	25	25	25	25	25	dB
450-749 MHz	23	23	23	23	23	23	23	23	23	23	dB
750-1000 MHz	20	20	20	20	20	20	20	20	20	20	dB
Return Loss In (min.)											
10-29 MHz	17	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	17	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Return Loss Out (min.)											
10-29 MHz	—	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	—	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	—	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	—	16	16	16	16	16	16	16	16	16	dB
Return Loss Tap (min.)											
10-29 MHz	16	16	16	16	16	16	16	16	16	16	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Hum Modulation @ 8 amps (max.)											
10-49 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
50-599 MHz	—	-70	-70	-70	-70	-70	-70	-70	-70	-70	dB
600-749 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
750-1000 MHz	—	-60	-60	-60	-60	-60	-60	-60	-60	-60	dB
RFI Isolation	Exceeds FCC requirements										
Current (max.)	0	10	10	10	10	10	10	10	10	10	amps
Voltage Passing Capacity (min) 0 to 60 Hz	90	90	90	90	90	90	90	90	90	90	VAC
Surge Rating	ANSI/IEEE C62.41-1991, Class B, 2500 Volts										

*All specifications are subject to change without notice.

Power Bypass Multi-Taps

Nominal Performance*

9400-PBT Four-Way Series

	9408	9411	9414	9417	9420	9423	9426	9429	9432	9435	Units
Tap Value	8.0	11.5	14.5	17.0	20.0	23.0	26.0	29.0	32.0	35.0	dB
Bandwidth					10-1000						MHz
Color Code	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Insertion Loss (input/output)											
10 MHz	—	3.2	1.4	0.7	0.5	0.4	0.4	0.3	0.3	0.3	dB
30 MHz	—	3.2	1.3	0.6	0.4	0.4	0.3	0.3	0.3	0.3	dB
55 MHz	—	3.2	1.2	0.6	0.4	0.4	0.3	0.3	0.3	0.3	dB
70 MHz	—	3.5	1.4	0.8	0.6	0.6	0.3	0.3	0.3	0.3	dB
112 MHz	—	3.7	1.6	0.9	0.8	0.7	0.4	0.4	0.4	0.4	dB
150 MHz	—	3.7	1.6	0.9	0.8	0.7	0.4	0.4	0.4	0.4	dB
186 MHz	—	3.8	1.6	0.9	0.8	0.7	0.4	0.4	0.4	0.4	dB
222 MHz	—	3.8	1.6	0.9	0.8	0.7	0.4	0.4	0.4	0.4	dB
330 MHz	—	3.9	1.7	1.0	0.8	0.7	0.5	0.5	0.5	0.5	dB
400 MHz	—	4.0	1.8	1.0	0.8	0.7	0.5	0.5	0.5	0.5	dB
450 MHz	—	4.0	1.8	1.0	0.8	0.7	0.5	0.5	0.5	0.5	dB
550 MHz	—	4.1	1.9	1.1	0.9	0.8	0.6	0.5	0.5	0.6	dB
600 MHz	—	4.4	2.0	1.2	0.9	0.8	0.6	0.6	0.6	0.6	dB
750 MHz	—	4.6	2.4	1.4	1.1	1.0	0.8	0.8	0.7	0.8	dB
862 MHz	—	4.5	2.8	1.5	1.3	1.1	0.9	0.9	0.8	0.9	dB
1000 MHz	—	4.4	3.4	2.0	1.7	1.6	1.1	1.0	0.9	1.1	dB
Tap Loss											
10-19 MHz	6.8	10.7	14.9	17.5	20.2	23.3	25.4	28.3	31.4	34.4	dB
20-899 MHz	7.2	10.5	14.9	17.2	19.8	22.8	26.1	29.1	32.0	35.0	dB
900-1000 MHz	8.6	13.3	15.7	17.7	20.7	23.8	25.9	29.5	32.2	34.9	dB

*All specifications are subject to change without notice.

Power Bypass Multi-Taps

Worst Case Specifications* 9200-PBT Two-Way Series

	9204	9208	9211	9214	9217	9220	9223	9226	9229	9232	Units
Tap Value	4.0	8.5	11.0	14.0	17.0	20.0	23.0	26.0	29.0	32.0	dB
Bandwidth					10-1000						MHz
Color Code	Black	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	
Tolerance											
10-19 MHz	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	± dB
20-899 MHz	1.5	2.0	1.5	1.5	1.5	1.6	1.5	1.5	2.0	1.8	± dB
900-1000 MHz	2.0	2.0	1.5	2.0	1.6	1.7	1.7	2.0	2.0	2.0	± dB
Insertion Loss (max.)											
10 MHz	—	3.6	1.9	1.0	1.0	0.8	0.5	0.5	0.4	0.4	dB
30 MHz	—	3.1	1.5	0.8	0.8	0.7	0.5	0.4	0.3	0.3	dB
54 MHz	—	3.3	1.5	0.8	0.8	0.7	0.4	0.4	0.3	0.3	dB
112 MHz	—	3.3	1.8	1.0	0.9	0.8	0.5	0.5	0.5	0.5	dB
150 MHz	—	3.3	1.8	1.0	0.9	0.8	0.5	0.5	0.5	0.5	dB
186 MHz	—	3.4	1.9	1.0	0.9	0.8	0.5	0.5	0.5	0.5	dB
222 MHz	—	3.5	1.9	1.0	1.0	0.8	0.5	0.5	0.5	0.5	dB
330 MHz	—	3.6	2.0	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
400 MHz	—	3.7	2.1	1.1	1.0	0.9	0.7	0.7	0.6	0.6	dB
450 MHz	—	3.8	2.1	1.1	1.0	0.9	0.7	0.7	0.6	0.6	dB
550 MHz	—	3.9	2.1	1.2	1.1	0.9	0.7	0.7	0.7	0.7	dB
600 MHz	—	4.1	2.4	1.4	1.2	1.0	0.8	0.8	0.8	0.8	dB
750 MHz	—	4.7	3.0	1.6	1.4	1.2	1.0	1.0	0.9	0.9	dB
862 MHz	—	5.0	3.5	1.8	1.6	1.4	1.2	1.2	1.1	1.1	dB
1000 MHz	—	5.5	4.1	2.0	1.8	1.6	1.4	1.3	1.3	1.3	dB
Flatness (max.)											
10-1000 MHz	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	± dB
Tap-to-Out Isolation (min.)											
10-29 MHz	—	20	20	20	24	29	30	34	34	36	dB
30-749 MHz	—	22	24	26	30	33	36	38	40	42	dB
750-899 MHz	—	20	22	25	28	31	34	36	38	40	dB
900-1000 MHz	—	20	22	24	28	31	34	36	38	40	dB
Tap-to-Tap Isolation (min.)											
10-29 MHz	20	20	20	20	20	20	20	20	20	20	dB
30-449 MHz	25	25	25	25	25	25	25	25	25	25	dB
450-749 MHz	23	23	23	23	23	23	23	23	23	23	dB
750-1000 MHz	20	20	20	20	20	20	20	20	20	20	dB
Return Loss In (min.)											
10-29 MHz	17	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	17	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Return Loss Out (min.)											
10-29 MHz	—	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	—	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	—	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	—	16	16	16	16	16	16	16	16	16	dB
Return Loss Tap (min.)											
10-29 MHz	16	16	16	16	16	16	16	16	16	16	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Hum Modulation @ 8 amps (max.)											
10-49 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
50-599 MHz	—	-70	-70	-70	-70	-70	-70	-70	-70	-70	dB
600-749 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
750-1000 MHz	—	-60	-60	-60	-60	-60	-60	-60	-60	-60	dB
RFI Isolation	Exceeds FCC requirements										
Current (max.)	0	10	10	10	10	10	10	10	10	10	amps
Voltage Passing Capacity (min) 0 to 60 Hz.	90	90	90	90	90	90	90	90	90	90	VAC
Surge Rating	ANSI/IEEE C62.41-1991, Class B, 2500 Volts										

*All specifications are subject to change without notice.

Power Bypass Multi-Taps

Nominal Performance*

9200-PBT Two-Way Series

	9204	9208	9211	9214	9217	9220	9223	9226	9229	9232	Units
Tap Value	4.0	8.5	11.0	14.0	17.0	20.0	23.0	26.0	29.0	32.0	dB
Bandwidth					10-1000						MHz
Color Code	Black	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	
Insertion Loss (input/output)											
10 MHz	—	2.7	1.3	0.6	0.5	0.4	0.3	0.3	0.3	0.3	dB
30 MHz	—	2.7	1.2	0.6	0.4	0.4	0.3	0.3	0.3	0.3	dB
55 MHz	—	2.6	1.2	0.6	0.4	0.3	0.3	0.3	0.3	0.3	dB
70 MHz	—	2.9	1.4	0.7	0.6	0.4	0.3	0.3	0.3	0.3	dB
112 MHz	—	3.1	1.6	0.9	0.8	0.5	0.4	0.4	0.4	0.4	dB
150 MHz	—	3.3	1.6	0.9	0.8	0.5	0.4	0.4	0.4	0.4	dB
186 MHz	—	3.3	1.6	0.9	0.8	0.5	0.4	0.4	0.4	0.4	dB
222 MHz	—	3.3	1.6	0.9	0.8	0.5	0.4	0.4	0.4	0.4	dB
330 MHz	—	3.3	1.6	1.0	0.8	0.5	0.5	0.4	0.4	0.5	dB
400 MHz	—	3.4	1.7	1.0	0.8	0.6	0.5	0.5	0.5	0.5	dB
450 MHz	—	3.4	1.7	1.0	0.8	0.6	0.5	0.5	0.5	0.5	dB
550 MHz	—	3.5	1.8	1.0	0.8	0.6	0.5	0.5	0.5	0.5	dB
600 MHz	—	3.6	1.9	1.1	0.9	0.7	0.6	0.6	0.6	0.6	dB
750 MHz	—	3.9	2.2	1.3	1.1	0.9	0.8	0.7	0.8	0.8	dB
862 MHz	—	4.1	2.4	1.4	1.3	1.0	0.8	0.8	0.8	0.9	dB
1000 MHz	—	4.0	2.9	1.8	1.7	1.1	1.0	0.9	0.9	1.0	dB
Tap Loss											
10-19 MHz	3.4	7.6	11.3	14.8	17.1	19.6	22.3	25.2	28.3	31.3	dB
20-899 MHz	3.6	7.5	11.2	14.7	16.6	20.3	23.0	25.9	28.8	31.7	dB
900-1000	4.5	9.2	12.1	15.0	17.0	21.0	23.7	27.2	29.7	32.9	dB

*All specifications are subject to change without notice.

TIME WARNER CABLE
BINGHAMTON DIVISION

Converter Specifications

System Name: ONEONTA

Date: 02/06/2001

All testing done at the end of a 100ft drop cable (RG-6) without a converter. Converter specification sheets are attached for "After Converter" numbers, if so desired.

Instructions:

Attach a copy of the manufacturer's specifications covering all converters used in the system. The specification sheet must show the converters carrier- to-noise (C/N) and distortion figures.

Infrared Programmable Set-Top Terminal
Model 8529

Easy Set-Up

The Model 8551-555 Subscriber Options Transmitter (SOT) is used to program the Model 8529 Set-Top Terminal's non-volatile memory. Using the keypad on this infrared transmitting device, an operator selects channel authorizations, a barker channel, frequency line-up (standard, HRC, IRC, or EIA), parental control or remote control enable/disable. Once entered, these settings can be stored in the Subscriber Options Transmitter, and identified as tiers of service. By pointing the transmit wand and pressing the button, the infrared signal then programs the set-top terminal for the service tier. The SOT is capable of programming a single Model 8529 Set-Top Terminal or an entire rack. Only the Subscriber Options Transmitter can alter a Model 8529 Set-Top Terminal's non-volatile memory.

Easy to Use

The Model 8529 Set-Top Terminal features subscriber-definable electronic parental control, which allows a subscriber to define the channels that are to be locked out until the control code is entered. With this feature, the responsibility of parental guidance is taken out of the cable operator's hands.

The Model 8529 Set-Top Terminal is also easy for subscribers to use. A single row of five keys on the front of the terminal accepts incremental channel changes and parental authorization code entries. The subscriber can also change which channels are subject to parental control. The optional hand-held remote control duplicates all terminal key functions and adds the ability to directly access any channel and to program/recall up to fifteen channels in favorite channel memory. This adds to the convenience of the remote control transmitter so the cable operator can enjoy increased penetration of remotes. A clearly written subscriber operating guide is included with every Model 8529 Set-Top Terminal.

Specifications

Environmental

Temperature
  0°C to 45°C
Relative humidity
  5% to 95%

Electrical

Input bandwidth
  54 MHz to 550 MHz
Number of channels
  80 channels
Output channels
  3 or 4, set at factory
Channel frequency response
  ±2 dB
Gain
  0 dB, min
  5 dB, typical
Output level
  15.5 dBmV, max
Noise figure
  12 dB, typical
Return loss
  Input
    7 dB, min on tuned channel (54 MHz to 440 MHz)
    5 dB, min on tuned channel (440 MHz to 550 MHz)
  Output
    11 dB, min
Isolation input/output
  60 dB
Spurious response
  Input
    -37 dBmV (up to 550 MHz)
  Output
    -57 dBc (in channel)

Reliable, High-Quality Technology

Subscribers will benefit from the set-top terminal's reliable, high-quality design. The infrared remote control provides convenient direct channel entry and favorite channel recall. Quality Automatic Frequency Control (AFC) ensures improved tuning stability and frequency accuracy. The product is covered by Scientific-Atlanta's three-year limited warranty and 99% reliability guarantee.

Frequency accuracy
  ±100 kHz
AC input range
  115 V ac ±10%
Power consumption
  7 W, typical
Surge protection
  AC: Spark gaps and transformer isolation
  RF: Inductor shunt to ground
Distortion at 15 dBmV; 80 channel load
  Flat input
    Second order: -57 dB
    Cross modulator: -57 dB
    Composite triple beat: -57 dB
Input level
  -7 dBmV to +20 dBmV

Mechanical

Dimensions
  7 in. W X 4.85 in. D X 2 in. H
Weight
  2 lbs
Keyboard type
  5 keys
Display type
  2-Digit LED 0.57 in. H X 0.40 in. W (per digit)

Order Information

- Model 8529-300 Set-Top Terminal with channel 3 output
- Model 8529-400 Set-Top Terminal with channel 4 output
- Model 8550-175 Remote Control
- Model 8551-555 Subscriber Options Transmitter

Specifications and product availability subject to change without notice.

Subscriber

Addressable Set-Top Terminal
Series 8580

Specifications

Environmental
Temperature
0°C to 45°C
Relative humidity
5% to 95%

Electrical
Input bandwidth
54 MHz to 550 MHz
Number of channels
82 with single cable
128 with optional dual cable
Output channel
3 or 4
Channel frequency response
±2 dB
Gain
8 dB, typical
Output level (meets FCC Part 15-H)
8.5 dB, typical
14 dB, max
Noise figure
8.7 dB, typical
Return loss
Input
7 dB (54 MHz to 440 MHz) minimum on tuned channel
5 dB (440 MHz to 550 MHz) minimum on tuned channel
Output
11 dB, min
Isolation input/output
60 dB
Spurious response
Input
-37 dBmV (up to 570 MHz)
Output
-57 dBmV in channel
Frequency accuracy
±100 kHz
AC input
115 V
Power consumption
9 W, typical
Surge protection
AC: Spark gaps and transformer isolation
RF: Inductor shunt to ground
Distortion at +15 dBmV, 78 channel load
Flat input, second order: -57 dB
(-57 dB 54 MHz to 440 MHz)
(-55 dB 440 MHz to 550 MHz)
Cross modulation: -57 dB
Composite triple beat: -57 dB
Input level
-7 dBmV to +20 dBmV

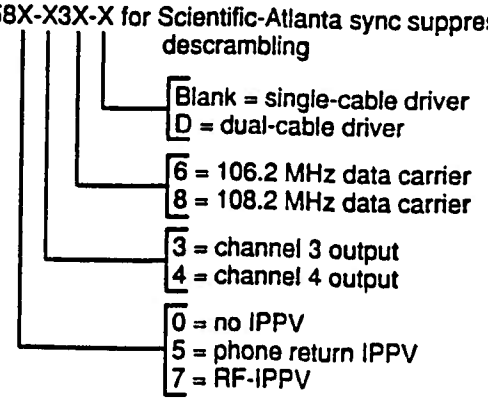
Mechanical
Dimensions
9.2 in. L x 6.9 in. W x 2.1 in. H
Weight
3.3 lbs
Keyboard type
6 keys (front access)
Display type
LED, 2.3 in. L x 0.57 in. H

Telephone Return IPPV Module Specifications
Complies with FCC Part 68
Ringer equivalence
0.00
Interface to telephone line
RJ-11C standard telephone jack
Surge protection
Dual MOVs and Zener diodes

RF Return IPPV Module Specifications
Frequency range
15.45 MHz to 17.75 MHz
Modulation rate
20 kb/s
Modulation technique
BPSK
Maximum output power
+55 dBmV

Order Information

- Model 858X-X3X-X for Scientific-Atlanta sync suppression descrambling



- Model 8550-175 for remote control

Specifications and product availability subject to change without notice.

Scientific-Atlanta, Inc.
Our customers are the winners.
United States: 4386 Park Drive, Box 105027, Atlanta, GA 30348, Telephone 404-441-4100, TWX 810-766-4912, Telex 0542898
Europe: Home Park Estate, Kings [illegible]

Subscriber

Addressable Set-Top Terminal with On-Screen Display
Model *8600*

Specifications

Environmental
Temperature
0°C to 45°C
Relative humidity
5% to 95%

Electrical
Input bandwidth
54 MHz to 550 MHz
Number of channels
82 with single cable
99 with optional dual cable
Output channel downloadable
3 or 4
Output level
9.0 dBmV, typical
Noise figure
8.7 dB (including baseband circuitry)
Return loss
Input
8 dB
Output
12 dB
Spurious response
Output
-60 dBc in channel
Frequency accuracy
±100 kHz max
Frequency stability
±100 kHz max
Input
105 V to 125 V
Power consumption
12 W max
Surge protection
AC
Spark gaps and transformer isolation
RF
Inductor shunt to ground
Distortion at +15 dBmV, 78 channel load
Flat input, second order
-60 dB
Cross modulation
-60 dB
Composite triple beat
-60 dB
Input level
-7 dBmV to +20 dBmV
Audio distortion
THD 1%
Audio signal-to-noise
50 dB

Mechanical
Dimensions
9.2 in. L x 7.0 in. W x 2.4 in. H
Weight
3.6 lbs
Keyboard type
11 keys (front access)
Display type
LED, two segments
On-screen 10-line by 24-column character display

IPPV Module Specifications

Telephone Return
Complies with FCC Part 68
Ringer equivalence
0.00
Interface to telephone line
RJ-11C standard telephone jack
Surge protection
Dual MOVs and Zener diodes

RF Return
Frequency range
15.45 MHz to 17.75 MHz
Modulation rate
20 kbps
Modulation technique
BPSK
Maximum output power
+55 dBmV

Ordering Information

- Model 8600-SSNN Standard Set-Top Terminal
- Model 8600-SSNT Set-Top Terminal with Telephone IPPV Module
- Model 8600-SSNR Set-Top Terminal with RF IPPV Module
- Model 8650-E0 Remote Control

Unless otherwise noted, specifications are typical.

Specifications and product availability are subject to change without notice.

EXPLORER® 2000
Digital Home Communications Terminal

EXPLORER 2000 DHCT Specifications

Introduction

This section contains operating and other specifications for the EXPLORER 2000 Digital Home Communications Terminal (DHCT).

Electrical Overstress Protection

The EXPLORER 2000 DHCT withstands the following electrical currents without damage:

- hits at 3.5 kV to the RF and AC input ports
- 10 hits of 15 kV from a 150 pF capacitor through a 150 ohm series resistor on all external ports

RF and Baseband Output Performance

The following table provides output measurements based on a **+15 dBmV** Input signal.

Item	Output
Cross modulation distortion (XMOD)	-54 dBc
Composite second order distortion (CSO)	-54 dBc
Composite triple beat distortion (CTB)	-55 dBc

Frequency Resolution

Frequency assignments comply with *STD, HRC,* and *IRC* frequency lineups.

Channel	Steps
QAM (digital)	250 kHz
NTSC (analog)	62.5 kHz

Continued on next page

Power

Item	Power
Consumption	35 Watts maximum
AC Input	Standard residential AC line voltage of 103.5 V AC to 126.5 V AC at 60 Hz
AC Outlet	Supplies 400 Watts maximum at the AC input line voltage. User controls on/off function through EXPLORER 2000 DHCT interface.

Analog Channel RF Input

Item	Specification
Connector	Threaded female F-connector
Frequency range	54 MHz to 860 MHz
RF input level	0 dBmV to +15 dBmV (meets NTSC specs)
Functional operation without damage	-7 dBmV to +20 dBmV (minimum)
Input return loss	7 dB minimum
Noise figure	<12 dB at maximum gain
C/N (at input)	57 dB minimum (meets all specs) 40 dB minimum (minimum)

Continued on next page

Digital Channel Input

Item	Specification
Frequency range	54 MHz to 869 MHz
Input return loss	7 dB minimum
Noise figure	<12 dB at maximum gain
Modulation technique	ITUJ.83 Annex A 64 QAM and 256 QAM
Transmission rate	• Approximately 30 Mbps at 64 QAM • Approximately 40 Mbps at 256 QAM
Transport	DAVIC structure - convolutional de-interleaving and Reed Solomon FEC with T=8
Average private data rate	3 Mbps (from QAM demodulated input to DRAM)
Private data format	per MPEG-2 (ISO/IEC 13818)

RF Input Levels

Item	Modulation Rate	Level
Typical for BER after FEC $<10^{-9}$	64 QAM	-20 dBmV to +14 dBmV
	256 QAM	-14 dBmV to +14 dBmV
Meets specifications of BER after FEC $<10^{-4}$	64 QAM	-15 dBmV to +14 dBmV
	256 QAM	-9 dBmV to +14 dBmV
C/N (at input) - to meet BER at input levels above	64 QAM	>32 dB in 6 MHz BW
	256 QAM	>38 dB in 6 MHz BW

Continued on next page

Digital Audio

Item	Specification
Data rate	384 Kbps maximum
Formats	• MPEG-1 • Layer 2 • 2 channel Musicam • AC-3
Supported sampling rates	• 32 kHz • 48 kHz • 44.1 kHz

Computer Generated Audio

The EXPLORER 2000 DHCT supports the following computer audio sampling rates:

- 8 kHz
- 11.025 kHz
- 22.05 kHz
- 24 kHz
- 32 kHz
- 44.1 kHz
- 48 kHz

Continued on next page

Baseband Audio Output

Category	Item	Specification
General	Connector	2 female RCA-type phono jacks: • Right channel - red insulation • Left channel - white insulation
	Output level	1.3 V p-p ± 10% with 10 kΩ load
	Output impedance	600 Ω nominal
	Mute	-50 dB
ResApp Controlled	Volume control	30 steps from 0 dB (maximum volume) to -63 dB nominal
Analog service (BTSC selected)	Frequency response	50 Hz to 10 kHz ± 2 dB
	Stereo channel separation	• 25 dB at 3 kHz • 15 dB at 10 kHz
	Total harmonic distortion	1 kHz <3.5%
	Signal-to-noise ratio	• > 45 dB A-weighted • 25 kHz L+R deviation at 1 kHz
Analog service (SAP selected)	Frequency response	100 Hz to 8 kHz ± 2 dB
	Total harmonic distortion	1 kHz < 3.0%
Digital service	Frequency response	20 Hz to 20 kHz ± 1.0 dB
	Signal to noise ratio	• >80 dB A-weighted • >80 dB at 1 kHz (dynamic range)
	Total harmonic distortion - 20 Hz to 20 kHz bandwidth	< 0.2% at 1 kHz
	Stereo channel separation	> 80 dB at 1 kHz

Continued on next page

Baseband Video Output

Item	Specification
Connector	Female RCA type with yellow insulation
Output	1.0 V p-p ± 10% at 75 Ω nominal
Frequency response - 220 kHz to 3.75 MHz (can change based on FCC part 76)	± 3 dB p-p
S/N with input +5 dBmV, input C/N 57 dB min. (55-550 MHz)	42 dB minimum unweighted
S/N with input +5 dBmV, input C/N 57 dB min. (55-860 MHz)	41 dB minimum unweighted

RF Output

Item	Specification
Connector	F type
Frequency	• Channel 3 - 61.25 MHz • Channel 4 - 67.25 MHz (channels are switchable)
RF output level	• +9 ± 4.5 dBmV Video • ± 13.5 ± 3.5 dBc Audio
Frequency response - 220 kHz to 3.75 MHz (can change based on FCC part 76)	± 3 dB p-p
Return loss	10 dB minimum
S/N with input +5 dBmV, input C/N 57 dB min. (55-550 MHz)	42 dB minimum unweighted equivalent to a 49 dB C/N, assuming 7 dB correction factor
S/N with input +5 dBmV, input C/N 57 dB min. (550-850 MHz)	41 dB minimum unweighted equivalent to a 48 dB C/N, assuming 7 dB correction factor

Continued on next page

S-Video Output

Part	Function
Connector	4-position mini-DIN
S/N with input +5 dBmV, input C/N 57 dB min. (55-550 MHz)	42 dB minimum unweighted
S/N with input +5 dBmV, input C/N 57 dB min. (550-860 MHz)	41 dB minimum unweighted
Output levels	• Y: 1 V p-p ± 10% • C: 0.29 V p-p ± 10%

Forward Control Channel RF Input

Item	Specification
Modulation technique	Differential QPSK
Frequency	70 MHz to 130 MHz agile in 250 kHz steps
Transmission rate	1.544 Mbps
Channel bandwidth	1 MHz
Channel spacing	1 MHz
Adjacent channel performance (data)	Meets BER performance at +6 dBc 1.00 MHz from center
Mode	Continuous
Transmission format	DS1 extended Superframe - 53 byte ATM cells with AAL5 layer T=1 Reed Solomon
RF input level	-16 dBm VRMS to +15 dBm VRMS (6 dB to 16 dB below NTSC video)
BER performance at C/N=18 dB (in 772 kHz BW) at RF level above	< 10^{-9} after Reed Solomon

Continued on next page

Reverse Control and Interactive Channel RF Output

Item	Specification
Modulation technique	Differential QPSK
Frequency	8 MHz to 26.5 MHz
Channel bandwidth	1 MHz
Channel step size	50 kHz
Forward error correction	Shortened Reed Solomon (59,53), T=3
Mode	Burst mode
Transmission rate	256 Kbps or 1.544 Mbps (maximum burst rate)
Transmission format	53 byte ATM cells
Channel sharing protocol	Slotted ALOHA, TDMA and Reservation
Maximum RF output level	Variable +55 dBm VRMS minimum
C/N0, 2 MHz from carrier (Output level >40 dbm VRMS)	120 dB/Hz
Spurious output (5-42 MHz)	-45 dBC
Channel tuning time	< 5 mS

Memory Configuration

Memory Type	Capacity
CPU DRAM	4 MB standard, MB expandable to 16 MB at factory
CPU Flash	2 MB
CPU ROM	2 MB
Decompression/Graphics SDRAM	2 MB (shared by CPU for application processing)
CPU EEPROM	16 kb

Continued on next page

Eagle Graphics/Video Processing Specifications

Item	Specification
Video resolution	Up to 720 x 480 VGA
Graphics resolution	Up to 640 x 480 VGA non-interlaced
Color graphics display mode	256 or 65,000
Graphics features	• Video scaling and capturing • Alpha blending • 8 or 16 bit color • Square and round pixel display • Anti-flutter filter • Anti-aliasing fonts • Supports transparent, translucent, and opaque graphics and overlays

Environmental Specifications

Item	Specification
Operational temperature range	0°C to 40°C (32°F to 104°F)
Humidity	5% to 95%, non-condensing

Regulatory Specifications

The EXPLORER 2000 Digital Home Communications Terminal (DHCT) meets FCC Part 15, subpart B, class B, applicable parts of Part 76, and UL rule #1409 under the required category of Cable Terminal Devices.

TIME WARNER CABLE
BINGHAMTON DIVISION

Proof - of - Performance Tests

Headend Tests

System Name: ONEONTA

HE Location 123 CORPORATE DRIVE, ONEONTA NY

Visual Carrier and Aural Carrier Difference Frequency Tests

(at Headend)

System Name: **ONEONTA**

HE Location: **123 CORPORATE DR., ONEONTA NY (Otsego Feed)**

Date: **02/06/2001** Performed by: **BRIAN MILLER**

Chan	Freq.	Visual Freq. (MHz)		Aural Freq. Diff. (MHz)	Chan	Freq.	Visual Freq. (MHz)	Aural Freq. Diff. (MHz)
2	55.2500	55.2400		4.5000	37	301.2625	301.2637	4.5000
3	61.2500	61.2438		4.5000	38	307.2625	307.2614	4.5000
4	67.2500	67.2502		4.5001	39	313.2625	313.2618	4.5000
5	77.2500	77.2480		4.5001	40	319.2625	319.2619	4.5002
6	83.2500	83.2255		4.5000	41	325.2625	325.2589	4.4997
					42	331.2750	331.2738	4.5000
					43	337.2625	337.2608	4.4999
A-5	91.2500				44	343.2625	343.2615	4.5000
A-4	97.2500				45	349.2625	349.2605	4.5000
A-3	103.2500				46	355.2625	355.2612	4.5000
A-2	109.2750				47	361.2625	361.2626	4.5000
A-1	115.2750				48	367.2625	367.2615	4.5000
14	121.2625	121.2624		4.5002	49	373.2625	373.2614	4.5000
15	127.2625	127.2620		4.4999	50	379.2625	379.2624	4.5000
16	133.2625	133.2636		4.4999	51	385.2625	385.2625	4.4999
17	139.2500	139.2527		4.5001	52	391.2625	391.2626	4.4998
18	145.2500	145.2494		4.5000	53	397.2625	397.2624	4.5000
19	151.3210	151.3212		4.5000	54	403.2500	403.2625	4.5000
20	157.2500	157.2494		4.5000	55	409.2500	409.2627	4.5000
21	163.2500	163.2576		4.5000	56	415.2500	415.2622	4.5000
22	169.2500	169.2564		4.5001	57	421.2500	421.2628	4.5000
7	175.2500	175.2503		4.5001	58	427.2500	427.2498	4.5001
8	181.2500	181.2507		4.5000	59	433.2500	433.2628	4.5000
9	187.2500	187.2557		4.5001	60	439.2500	439.2619	4.5000
10	193.2500	193.2369		4.4999	61	445.2500	445.2630	4.4999
11	199.2500	199.2622		4.5000	62	451.2500	451.2503	4.5000
12	205.2500	205.2568		4.5001	63	457.2500	457.2498	4.5000
13	211.2500	211.2408		4.5000	64	463.2500	463.2497	4.4999
23	217.2500	217.2503		4.5000	65	469.2500	469.2628	4.5001
24	223.2500	223.2619		4.5001	66	475.2500	475.2622	4.5001
25	229.2625	229.2611		4.5001	67	481.2500	481.2623	4.5000
26	235.2625	235.2140	OUT	4.5000	68	487.2500	487.2624	4.5000
27	241.2625	241.2656		4.5000	69	493.2500	493.2507	4.4999
28	247.2625	247.2625		4.5000	70	499.2500	499.2504	4.4999
29	253.2625	253.2624		4.5000	71	505.2500	505.2502	4.5001
30	259.2625	259.2628		4.5000	72	511.2500	511.2503	4.4999
31	265.2625	265.2627		4.5001	73	517.2500	517.2499	4.5000
32	271.2625	271.2623		4.5000	74	523.2500	523.2624	4.5000
33	277.2625	277.2641		4.5000	75	529.2500	529.2506	4.5000
34	283.2625	283.2620		4.4999	76	535.2500	535.2504	4.5000
35	289.2625	289.2632		4.5001	77	541.2500	541.2500	4.5000
36	295.2625	295.2653		4.5002	78	547.2500	547.2502	4.5000

Visual Carrier and Aural Carrier Difference Frequency Tests

(at Headend)

System Name: **ONEONTA**

HE Location: **123 CORPORATE DR., ONEONTA NY (Delaware Feed)**

Date: **02/06/2001** Performed by: **BRIAN MILLER**

Chan	Freq.	Visual Freq. (MHz)	Aural Freq. Diff. (MHz)	Chan	Freq.	Visual Freq. (MHz)	Aural Freq. Diff. (MHz)
2	55.2500	55.2438	4.5000	37	301.2625		
3	61.2500			38	307.2625		
4	67.2500			39	313.2625		
5	77.2500	77.2500	4.5000	40	319.2625		
6	83.2500			41	325.2625		
				42	331.2750		
				43	337.2625		
A-5	91.2500			44	343.2625		
A-4	97.2500			45	349.2625		
A-3	103.2500			46	355.2625		
A-2	109.2750			47	361.2625		
A-1	115.2750			48	367.2625		
14	121.2625			49	373.2625		
15	127.2625			50	379.2625		
16	133.2625			51	385.2625		
17	139.2500			52	391.2625		
18	145.2500			53	397.2625		
19	151.3210			54	403.2500		
20	157.2500			55	409.2500		
21	163.2500			56	415.2500		
22	169.2500			57	421.2500		
7	175.2500	175.2702	4.5000	58	427.2500		
8	181.2500			59	433.2500		
9	187.2500			60	439.2500		
10	193.2500			61	445.2500		
11	199.2500	199..2502	4.5000	62	451.2500		
12	205.2500			63	457.2500		
13	211.2500			64	463.2500		
23	217.2500			65	469.2500		
24	223.2500			66	475.2500		
25	229.2625			67	481.2500		
26	235.2625			68	487.2500		
27	241.2625			69	493.2500		
28	247.2625			70	499.2500		
29	253.2625			71	505.2500		
30	259.2625			72	511.2500		
31	265.2625			73	517.2500		
32	271.2625			74	523.2500		
33	277.2625			75	529.2500		
34	283.2625			76	535.2500		
35	289.2625			77	541.2500		
36	295.2625			78	547.2500		

Visual Carrier and Aural Carrier Difference Frequency Tests

(at Headend)

System Name: ONEONTA

HE Location: BGA / Ox - SIDNEY HUB SITE

Date: 02/06/2001 Performed by: JERRY HENRY

Chan	Freq.	Visual Freq. (MHz)		Aural Freq. Diff. (MHz)		Chan	Freq.	Visual Freq. (MHz)		Aural Freq. Diff. (MHz)	
2	55.2500					37	301.2625				
3	61.2500					38	307.2625				
4	67.2500					39	313.2625				
5	77.2500					40	319.2625				
6	83.2500					41	325.2625				
						42	331.2750				
						43	337.2625				
A-5	91.2500					44	343.2625				
A-4	97.2500					45	349.2625				
A-3	103.2500					46	355.2625				
A-2	109.2750					47	361.2625				
A-1	115.2750					48	367.2625				
14	121.2625					49	373.2625				
15	127.2625					50	379.2625				
16	133.2625					51	385.2625				
17	139.2500					52	391.2625				
18	145.2500					53	397.2625				
19	151.3210					54	403.2500				
20	157.2500					55	409.2500				
21	163.2500					56	415.2500				
22	169.2500					57	421.2500				
7	175.2500					58	427.2500				
8	181.2500					59	433.2500				
9	187.2500					60	439.2500				
10	193.2500					61	445.2500				
11	199.2500					62	451.2500				
12	205.2500					63	457.2500				
13	211.2500					64	463.2500				
23	217.2500					65	469.2500				
24	223.2500					66	475.2500				
25	229.2625					67	481.2500				
26	235.2625	235.2623		4.5001		68	487.2500				
27	241.2625					69	493.2500				
28	247.2625					70	499.2500				
29	253.2625					71	505.2500				
30	259.2625					72	511.2500				
31	265.2625					73	517.2500				
32	271.2625					74	523.2500				
33	277.2625					75	529.2500				
34	283.2625					76	535.2500				
35	289.2625					77	541.2500				
36	295.2625					78	547.2500				

Visual Carrier and Aural Carrier Difference Frequency Tests

(at Headend)

System Name: **ONEONTA**

HE Location: **NEW BERLIN - NEW BERLIN HUB SITE**

Date: **02/06/2001** Performed by: **DAVID KULZE**

Chan	Freq.	Visual Freq. (MHz)		Aural Freq. Diff. (MHz)		Chan	Freq.	Visual Freq. (MHz)		Aural Freq. Diff. (MHz)	
2	55.2500					37	301.2625				
3	61.2500					38	307.2625				
4	67.2500					39	313.2625				
5	77.2500					40	319.2625				
6	83.2500					41	325.2625				
						42	331.2750				
						43	337.2625				
A-5	91.2500					44	343.2625				
A-4	97.2500					45	349.2625				
A-3	103.2500					46	355.2625				
A-2	109.2750					47	361.2625				
A-1	115.2750					48	367.2625				
14	121.2625					49	373.2625				
15	127.2625					50	379.2625				
16	133.2625					51	385.2625				
17	139.2500					52	391.2625				
18	145.2500					53	397.2625				
19	151.3210					54	403.2500				
20	157.2500					55	409.2500				
21	163.2500					56	415.2500				
22	169.2500					57	421.2500				
7	175.2500					58	427.2500				
8	181.2500					59	433.2500				
9	187.2500					60	439.2500				
10	193.2500					61	445.2500				
11	199.2500					62	451.2500				
12	205.2500					63	457.2500				
13	211.2500					64	463.2500				
23	217.2500					65	469.2500				
24	223.2500					66	475.2500				
25	229.2625					67	481.2500				
26	235.2625	235.2643		4.5000		68	487.2500				
27	241.2625					69	493.2500				
28	247.2625					70	499.2500				
29	253.2625					71	505.2500				
30	259.2625					72	511.2500				
31	265.2625					73	517.2500				
32	271.2625					74	523.2500				
33	277.2625					75	529.2500				
34	283.2625					76	535.2500				
35	289.2625					77	541.2500				
36	295.2625					78	547.2500				

Visual Carrier and Aural Carrier Difference Frequency Tests

(at Headend)

System Name: ONEONTA

HE Location: DELHI / WALTON - DELHI HUB SITE

Date: 02/06/2001 Performed by: BRIAN MILLER

Chan	Freq.	Visual Freq. (MHz)	Aural Freq. Diff. (MHz)	Chan	Freq.	Visual Freq. (MHz)	Aural Freq. Diff. (MHz)
2	55.2500			37	301.2625		
3	61.2500			38	307.2625		
4	67.2500			39	313.2625		
5	77.2500			40	319.2625		
6	83.2500			41	325.2625		
				42	331.2750		
				43	337.2625		
A-5	91.2500			44	343.2625		
A-4	97.2500			45	349.2625		
A-3	103.2500			46	355.2625		
A-2	109.2750			47	361.2625		
A-1	115.2750			48	367.2625		
14	121.2625			49	373.2625		
15	127.2625			50	379.2625		
16	133.2625			51	385.2625		
17	139.2500			52	391.2625		
18	145.2500			53	397.2625		
19	151.3210			54	403.2500		
20	157.2500			55	409.2500		
21	163.2500			56	415.2500		
22	169.2500			57	421.2500		
7	175.2500			58	427.2500		
8	181.2500			59	433.2500		
9	187.2500			60	439.2500		
10	193.2500			61	445.2500		
11	199.2500			62	451.2500		
12	205.2500			63	457.2500		
13	211.2500			64	463.2500		
23	217.2500	217.2646	4.5000	65	469.2500		
24	223.2500			66	475.2500		
25	229.2625			67	481.2500		
26	235.2625			68	487.2500		
27	241.2625			69	493.2500		
28	247.2625			70	499.2500		
29	253.2625			71	505.2500		
30	259.2625			72	511.2500		
31	265.2625			73	517.2500		
32	271.2625			74	523.2500		
33	277.2625			75	529.2500		
34	283.2625			76	535.2500		
35	289.2625			77	541.2500		
36	295.2625			78	547.2500		

TIME WARNER CABLE
BINGHAMTON DIVISION

Proof-of-Performance Tests

System Name: ONEONTA

System Test Point # 1

Location: NYS RT 7 E

Community: EAST WORCESTER

Pole Number: 14 1/2 // 265

D.T. Value: Philips 9214

Map Number:

OR Number: Node 11

Trunk Cascade: 3 LE Cascade: 2

Visual Carrier Level
Visual / Aural Level Difference
(at Test Point, at The End of a 100' Drop)

System Name: **ONEONTA**

Test Location: **TP 1...EAST WORCESTER**

Date: **02/14/2001**

Time: **02:24 PM**

Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff. (Dbmv)	Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff. (Dbmv)
2	55.2500	16.1	1.3		14.8	37	301.2625	15.1	1.6		13.5
3	61.2500	17.6	2.3		15.3	38	307.2625	14.9	1.1		13.8
4	67.2500	18.7	3.5		15.2	39	313.2625	15.2	0.8		14.4
5	77.2500	16.8	6.4	S	10.2	40	319.2625	15.1	0.5		14.6
6	83.2500	17.9	2.7		15.2	41	325.2625	15.3	0.1		15.2
						42	331.2750	15.3	2.1		13.2
						43	337.2625	14.7	1.0		13.7
A-5	91.2500					44	343.2625	15.6	1.1		14.5
A-4	97.2500					45	349.2625	15.5	1.9		13.6
A-3	103.2500					46	355.2625	15.7	1.6		14.1
A-2	109.2750					47	361.2625	15.4	1.6		13.8
A-1	115.2750					48	367.2625	15.8	2.1		13.7
14	121.2625	15.5	1.1		14.4	49	373.2625	16.9	2.5		14.4
15	127.2625	15.8	1.5		14.3	50	379.2625	15.7	5.7	S	10.0
16	133.2625	15.1	2.1		13.0	51	385.2625	15.6	5.5	S	10.1
17	139.2500	15.9	1.5		14.4	52	391.2625	16.6	6.5	S	10.1
18	145.2500	16.0	2.7		13.3	53	397.2625	15.5	1.2		14.3
19	151.2500	15.3	0.9		14.4	54	403.2500	15.9	5.8	S	10.1
20	157.2500	16.8	1.5		15.3	55	409.2500	16.3	6.2	S	10.1
21	163.2500	15.4	2.0		13.4	56	415.2500	15.6	2.1		13.5
22	169.2500	15.7	1.7		14.0	57	421.2500	16.3	2.4		13.9
7	175.2500	15.4	1.2		14.2	58	427.2500	16.4	2.8		13.6
8	181.2500	15.8	1.8		14.0	59	433.2500	15.9	1.8		14.1
9	187.2500	16.1	1.9		14.2	60	439.2500	16.4	3.0		13.4
10	193.2500	17.5	2.7		14.8	61	445.2500	16.1	6.0	S	10.1
11	199.2500	15.1	0.8		14.3	62	451.2500	16.4	2.4		14.0
12	205.2500	14.6	0.5		14.1	63	457.2500	16.1	2.3		13.8
13	211.2500	14.1	-1.0		15.1	64	463.2500	15.9	3.7	S	12.2
23	217.2500	15.0	0.6		14.4	65	469.2500	16.8	3.0		13.8
24	223.2500	15.1	0.7		14.4	66	475.2500	16.1	1.7		14.4
25	229.2625	14.5	0.6		13.9	67	481.2500	16.3	1.9		14.4
26	235.2625	16.0	2.8		13.2	68	487.2500	15.7	2.5		13.2
27	241.2625	14.7	1.0		13.7	69	493.2500	15.6	0.6		15.0
28	247.2625	16.0	4.1	S	11.9	70	499.2500	16.4	5.5	S	10.9
29	253.2625	15.0	4.0	S	11.0	71	505.2500	15.7	1.7		14.0
30	259.2625	15.1	3.5	S	11.6	72	511.2500	16.8	6.7	S	10.1
31	265.2625	15.3	5.2	S	10.1	73	517.2500	16.2	2.4		13.8
32	271.2625	15.1	4.8	S	10.3	74	523.2500	15.5	0.9		14.6
33	277.2625	15.6	5.5	S	10.1	75	529.2500	16.9	6.9	S	10.0
34	283.2625	15.3	1.1		14.2	76	535.2500	15.8	1.7		14.1
35	289.2625	15.0	0.5		14.5	77	541.2500	15.4	0.3		15.1
36	295.2625	15.3	0.8		14.5	78	547.2500	16.1	1.8		14.3

PEAK TO VALLEY: 4.6

IN CHANNEL RESPONSE Test

CARRIER - TO - NOISE Test

COHERENT DISTURBANCES Test

LOW FREQUENCY DISTURBANCES Test

System Name: ONEONTA **Date:** 02/14/2001

Test Performed By: Brian Miller

Location: TP1 East Worcester

Note: Make measurements through a 100 ft. test drop cable without converter.

4	0.4	50.5	>-60	>-60	>-60	
15	0.5	47.7	>-60	56.9	>-60	0.8
9	0.8	46.3	>-60	58.2	>-60	
24	0.7	45.1	>-60	57.3	>-60	
35	1.2	47.6	>-60	56.9	>-60	
41	0.2	48.9	>-60	56.1	>-60	
48	0.8	51.2	>-60	56.8	>-60	
57	0.1	46.5	>-60	58.5	>-60	
65	0.1	49.5	>-60	57.5	>-60	
69	0.2	46.8	>-60	56.3	>-60	
78	0.1	46.9	>-60	57.5	>-60	

TP#1

Visual Carrier Level Variation Test 76.605 (a) 4
System Name: Time Warner Oneonta

Test Point: E Worcester 1
Date: 02/14/2001

Chan	Visual Level (dBmv) 73 Deg Time 10:47 AM	Temp 81 Deg 16:47 PM	55 Deg 22:47 PM	52 Deg 04:47 AM	Max Var
2	13.6	13.3	14.1	14.2	0.9
3	14.6	14.2	15.1	15.4	1.2
4	14.8	14.1	15.2	15.4	1.3
5	13.6	13.8	14.6	14.7	1.1
6	14.5	14.3	15.1	15.5	1.2
A-2					
A-1					
14	15.5	14.9	16.1	16.3	1.4
15	16.0	15.7	16.6	17.0	1.3
16	14.8	14.5	15.7	15.9	1.4
17	16.0	16.0	16.8	17.1	1.1
18	16.2	16.1	16.9	17.1	1.0
19	15.8	15.4	16.1	16.8	1.4
20	15.1	15.3	15.9	15.3	0.8
21	16.3	16.2	16.8	16.9	0.7
22	16.3	15.8	16.7	16.7	0.9
7	16.0	16.0	16.4	16.0	0.4
8	16.2	16.0	16.6	17.0	1.0
9	16.8	16.6	17.3	17.3	0.7
10	16.2	16.1	16.6	16.8	0.7
11	16.1	15.9	16.7	16.8	0.9
12	15.7	15.4	16.3	16.8	1.4
13	15.4	15.2	15.9	16.0	0.8
23	16.9	16.7	17.5	17.6	0.9
24	16.2	15.9	16.9	17.2	1.3
25	16.4	16.2	17.3	17.5	1.3
26	15.6	15.3	16.2	15.7	0.9
27	16.4	16.0	17.0	17.1	1.1
28	16.1	15.0	16.0	16.2	1.2
29	15.8	15.4	16.2	16.6	1.2
30	15.0	15.0	16.0	15.0	1.0
31	16.4	16.2	17.4	17.6	1.4
32	14.7	14.4	15.9	15.8	1.5
33	16.4	16.1	17.2	17.2	1.1
34	16.6	16.2	17.4	17.4	1.2
35	15.2	14.7	15.9	16.7	1.5
36	15.0	14.0	15.0	15.0	2.0
37	15.0	14.0	14.0	15.0	2.0
38	15.0	14.0	14.0	15.0	1.0
Max	16.9	16.7	17.5	17.6	2.0
Min	0.0	0.0	0.0	0.0	0.0
Diff	16.9	16.7	17.5	17.6	2.0

Chan	Visual Level (dBmv)				Max Var
39	15.2	14.9	16.2	16.2	1.3
40	15.1	14.7	15.9	16.1	1.4
41	14.9	14.5	15.9	16.0	1.5
42	16.0	15.6	17.2	17.1	1.6
43	15.6	14.8	16.2	16.5	1.7
44	16.4	16.1	17.4	17.5	1.4
45	16.6	16.2	17.6	17.7	1.5
46	17.2	16.7	18.3	18.3	1.6
47	16.6	16.0	17.7	17.9	1.9
48	16.9	16.1	17.9	18.3	2.2
49	16.9	16.2	17.6	17.9	1.7
50	17.4	16.9	18.2	18.4	1.5
51	16.9	16.2	17.7	17.8	1.6
52	17.4	16.7	18.4	18.8	2.1
53	16.0	15.5	17.0	17.1	1.6
54	15.2	15.0	16.7	17.2	2.2
55	16.7	15.7	17.9	18.1	2.4
56	15.1	14.6	16.5	16.6	2.0
57	14.8	14.2	16.1	16.1	1.9
58	14.1	13.4	15.5	15.7	2.3
59	12.9	12.2	14.2	14.7	2.5
60	13.3	12.4	14.8	15.0	2.6
61	12.8	12.5	13.9	14.1	1.6
62	13.6	12.9	14.5	14.4	1.6
63	13.3	12.5	14.7	14.9	2.4
64	12.9	12.3	14.4	15.2	2.9
65	12.9	12.7	14.3	14.7	2.0
66	13.2	12.6	13.9	14.3	1.7
67	13.8	13.7	14.6	14.9	1.2
68	13.4	13.2	14.2	14.6	1.4
69	12.6	12.3	13.7	14.0	1.7
70	12.7	12.4	13.8	14.1	1.7
71	12.4	11.8	13.4	13.4	1.6
72	11.3	10.9	12.4	12.6	1.7
73	10.4	9.6	11.5	11.7	2.1
74	9.6	8.6	10.6	11.0	2.4
75	9.0	9.5	9.0	9.0	0.5
76	8.4	7.3	9.7	10.2	2.9
77	10.0	9.0	9.0	9.0	1.0
78	9.0	9.0	11.0	9.5	2.0
Max	17.4	16.9	18.4	18.8	2.9
Min	8.4	7.3	9.0	9.0	0.0
Diff	9.0	9.6	9.4	9.8	2.9

Max NonAdjacent Channel Variance: 18.8 out
Max Adjacent Channel Variance:

Max Variance from last proof-of-performance test:

	Test 1	Test 2	Test 3	Test 4
Max	17.4	16.9	18.4	18.8
Min	0	0	0	0
Diff	17.4	16.9	18.4	18.8

Note: Make measurements through a 100 ft test drop cable without a converter

Test Point # 1

TIME WARNER CABLE
BINGHAMTON DIVISION

Proof-of-Performance Tests

System Name: ONEONTA

System Test Point # 2

Location: Railroad Ave.

Community: Sidney

Pole Number: NYSE&G T51

D.T. Value: PHILIPS 9217

Map Number:

OR Number: NODE 43

Trunk Cascade: 5 LE Cascade: 3

Visual Carrier Level
Visual / Aural Level Difference
(at Test Point, at The End of a 100' Drop)

System Name: **ONEONTA**

Test Location: **TP 2...SIDNEY**

Date: **02/16/2001**

Time: **14:51 PM**

Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scrai "S"	Diff. (Dbmv)	Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scrai "S"	Diff. (Dbmv)
2	55.2500	11.9	-0.7		12.6	37	301.2625	16.6	2.8		13.8
3	61.2500	13.1	-1.4		14.5	38	307.2625	17.2	2.9		14.3
4	67.2500	13.5	-1.1		14.6	39	313.2625	16.8	2.0		14.8
5	77.2500	12.9	-2.3		15.2	40	319.2625	16.2	1.4		14.8
6	83.2500	13.4	-1.8		15.2	41	325.2625	16.7	1.5		15.2
						42	331.2750	16.0	2.2		13.8
						43	337.2625	15.9	1.5		14.4
A-5	91.2500					44	343.2625	16.0	1.4		14.6
A-4	97.2500					45	349.2625	16.3	1.6		14.7
A-3	103.2500					46	355.2625	16.1	1.6		14.5
A-2	109.2750					47	361.2625	15.2	1.0		14.2
A-1	115.2750					48	367.2625	16.8	1.9		14.9
14	121.2625	13.5	-0.1		13.6	49	373.2625	16.2	2.5		13.7
15	[illegible]	[illegible]	0.1		13.4	50	379.2625	15.6	3.6	S	12.0
16	133.2625	[illegible]	0.8		14.4	51	385.2625	16.1	4.1	S	12.0
17	139.2500	14.2	0.5		13.7	52	391.2625	15.6	4.2	S	11.4
18	145.2500	14.9	1.4		13.5	53	397.2625	15.5	1.1		14.4
19	151.2500	15.2	1.2		14.0	54	403.2500	16.3	3.7	S	12.6
20	157.2500	15.6	1.4		14.2	55	409.2500	15.7	3.5	S	12.2
21	163.2500	15.7	2.1		13.6	56	415.2500	16.2	3.1		13.1
22	169.2500	15.6	2.0		13.6	57	421.2500	16.7	3.2		13.5
7	175.2500	14.8	0.2		14.6	58	427.2500	16.5	2.2		14.3
8	181.2500	16.3	1.6		14.7	59	433.2500	16.7	2.8		13.9
9	187.2500	16.2	2.0		14.2	60	439.2500	16.6	2.9		13.7
10	193.2500	16.4	2.1		14.3	61	445.2500	17.2	4.9	S	12.3
11	199.2500	15.3	0.9		14.4	62	451.2500	16.0	2.1		13.9
12	205.2500	15.1	0.6		14.5	63	457.2500	16.4	1.7		14.7
13	211.2500	15.2	0.1		15.1	64	463.2500	16.2	0.9	S	15.3
23	217.2500	14.9	0.2		14.7	65	469.2500	15.9	2.3		13.6
24	223.2500	14.9	-0.1		15.0	66	475.2500	16.8	1.5		15.3
25	229.2625	13.6	-3.3		16.9	67	481.2500	15.9	1.3		14.6
26	235.2625	11.8	-2.8		14.6	68	487.2500	15.7	2.2		13.5
27	241.2625	11.5	1.1		10.4	69	493.2500	15.9	1.4		14.5
28	247.2625	14.1	3.1	S	11.0	70	499.2500	16.5	2.4	S	14.1
29	253.2625	16.5	2.4	S	14.1	71	505.2500	16.9	2.7		14.2
30	259.2625	16.1	2.9	S	13.2	72	511.2500	17.6	5.3	S	12.3
31	265.2625	16.4	4.7	S	11.7	73	517.2500	17.4	2.5		14.9
32	271.2625	16.9	4.1	S	12.8	74	523.2500	16.4	1.5		14.9
33	277.2625	17.8	5.0	S	12.8	75	529.2500	16.6	4.8	S	11.8
34	283.2625	16.3	2.3		14.0	76	535.2500	16.8	2.1		14.7
35	289.2625	16.6	2.0		14.6	77	541.2500	16.0	2.1		13.9
36	295.2625	17.0	3.0		14.0	78	547.2500	17.3	2.8		14.5

PEAK TO VALLEY: 6.3

IN CHANNEL RESPONSE Test

CARRIER - TO - NOISE Test

COHERENT DISTURBANCES Test

LOW FREQUENCY DISTURBANCES Test

System Name: ONEONTA **Date:** 02/16/2001

Test Performed By: David Kulze

Location: TP2 Sidney

Note: **Make measurements through a 100 ft. test drop cable without converter.**

Channel Number	In Channel Response dB p-p	Carrier to Noise dB				
4	0.5	46.3	>-60	55.9	>-60	
15	0.9	46	>-60	55.3	>-60	0.9
9	1	45.3	>-60	55.3	>-60	
24	0.6	44.8	>-60	58.9	>-60	
35	1.3	44.8	>-60	57.2	>-60	
41	0.5	46.1	>-60	57.8	>-60	
48	0.5	47.2	>-60	57.5	>-60	
57	0.4	45.2	>-60	57.2	>-60	
65	0.6	46.5	>-60	56.3	>-60	
69	0.3	45.7	>-60	56.4	>-60	
78	0.6	45.6	>-60	57	>-60	

TP#2

Visual Carrier Level Variation Test 76.605 (a) 4
System Name: Time Warner Oneonta

Test Point: Sidney 2
Date: 02/19/2001

	Visual Level (dBmv)				
	Temp				
	41 Deg	39.2 Deg	37.4	39.2 Deg	
	Time				Max
Chan	13:02 PM	19:02 PM	01:02 AM	07:02 AM	Var
2	11.2	11.5	10.1	10.5	1.4
3	12.4	13.1	12.3	12.8	0.8
4	12.8	13.0	12.6	12.6	0.4
5	12.4	12.8	12.5	12.2	0.6
6	12.3	12.6	12.1	12.2	0.5
A-2					
A-1					
14	12.5	12.8	12.6	12.3	0.5
15	12.4	12.9	12.5	12.5	0.5
16	13.7	14.2	14.1	14.1	0.5
17	13.1	13.6	13.3	13.1	0.5
18	13.7	14.3	13.7	13.8	0.6
19	13.7	14.0	13.5	13.5	0.5
20	14.3	14.7	14.3	14.3	0.4
21	14.8	15.4	14.8	14.8	0.6
22	14.5	14.9	14.3	14.4	0.6
7	13.5	14.2	13.7	13.7	0.7
8	15.0	15.4	14.4	15.1	1.0
9	14.7	15.3	14.8	14.5	0.8
10	15.3	15.3	15.6	14.6	1.0
11	14.2	14.8	14.3	14.0	0.6
12	14.4	14.7	10.4	14.8	4.3
13	13.1	14.1	14.3	14.4	1.3
23	13.3	13.8	13.5	13.2	0.6
24	14.8	15.2	14.9	14.8	0.4
25	12.4	13.1	12.6	12.5	0.7
26	10.6	11.3	10.9	10.5	0.8
27	10.4	11.1	10.8	10.6	0.7
28	12.9	14.4	14.2	14.1	1.5
29	15.3	15.9	15.6	15.4	0.6
30	14.4	15.5	14.7	15.0	1.1
31	14.9	15.7	15.2	15.1	0.8
32	15.6	16.5	16.0	15.9	0.9
33	16.5	17.2	17.0	16.5	0.7
34	14.6	15.4	14.9	14.8	0.8
35	15.0	15.9	15.4	15.4	0.9
36	16.2	16.8	16.6	16.2	0.6
37	15.1	15.7	15.6	15.3	0.6
38	15.7	16.7	16.2	15.7	1.0
Max	16.5	17.2	17.0	16.5	4.3
Min	10.4	11.1	10.1	10.5	0.4
Diff	6.1	6.1	6.9		3.9

	Visual Level (dBmv)				
Chan					Max Var
39	15.4	16.0	15.7	15.4	0.6
40	14.8	15.5	15.0	14.7	0.8
41	14.8	15.5	15.1	14.8	0.7
42	14.2	14.9	14.6	14.3	0.7
43	14.1	14.7	14.2	14.2	0.6
44	14.4	15.0	14.6	14.6	0.6
45	14.4	15.2	14.7	14.5	0.8
46	14.1	14.5	14.1	13.8	0.7
47	13.7	14.2	13.7	13.5	0.7
48	14.7	15.1	14.9	14.7	0.4
49	14.5	15.4	14.9	14.8	0.9
50	14.1	14.8	14.4	14.1	0.7
51	14.7	15.4	15.2	14.7	0.7
52	14.4	15.2	14.8	14.5	0.8
53	13.9	14.7	14.3	14.0	0.8
54	15.1	15.8	15.4	15.2	0.7
55	14.6	15.4	15.1	14.8	0.8
56	14.2	14.8	14.7	14.4	0.6
57	15.1	15.8	15.5	15.3	0.7
58	15.2	15.7	15.6	15.1	0.6
59	15.0	15.4	15.2	15.0	0.4
60	15.2	15.7	15.4	15.4	0.5
61	15.9	16.4	16.0	15.8	0.6
62	14.6	15.1	14.7	14.4	0.7
63	14.8	15.7	15.2	15.0	0.9
64	14.7	15.1	14.9	14.7	0.4
65	14.1	14.8	14.7	14.5	0.7
66	15.4	15.8	15.7	15.1	0.7
67	14.8	15.3	15.0	14.6	0.7
68	14.1	15.2	15.0	14.5	1.1
69	14.4	15.0	14.6	14.2	0.8
70	15.1	15.7	15.3	15.0	0.7
71	15.1	15.6	15.3	14.8	0.8
72	16.1	16.8	16.3	16.1	0.7
73	15.9	16.5	16.1	15.7	0.8
74	14.5	14.9	14.6	14.4	0.5
75	15.3	15.9	15.6	15.4	0.6
76	15.4	15.9	15.5	15.5	0.5
77	14.8	15.3	14.9	14.6	0.7
78	15.9	16.4	16.2	15.8	0.6
Max	16.1	16.8	16.3	16.1	4.3
Min	13.7	14.2	13.7	13.5	0.4
Diff	2.4	2.6	2.6	2.6	3.9

Max NonAdjacent Channel Variance: 6.9
Max Adjacent Channel Variance:

Max Variance from last proof-of-performance test:

	Test 1	Test 2	Test 3	Test 4
Max	16.5	17.2	17	16.5
Min	10.4	11.1	10.1	10.5
Diff	6.1	6.1	6.9	6.0

Test Point # 2

TIME WARNER CABLE
BINGHAMTON DIVISION

Proof-of-Performance Tests

System Name: ONEONTA

System Test Point # 3

Location: Bloom & Mill Streets, Gilbertsville

Community: NEW BERLIN

Pole Number: 27 // 90

D.T. Value: Philips 9423

Map Number:

OR Number:

Trunk Cascade: 2 LE Cascade: 2

Visual Carrier Level
Visual / Aural Level Difference
(at Test Point, at The End of a 100' Drop)

System Name: **ONEONTA**

Test Location: **TP 3...New Berlin**

Date: **02/16/2001**

Time **09:06 AM**

Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff. (Dbmv)	Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff. (Dbmv)
2	55.2500	7.1	-8.7		15.8	37	301.2625	10.1	-4.1		14.2
3	61.2500	8.8	-6.1		14.9	38	307.2625	9.8	-5.5		15.3
4	67.2500	8.8	-6.0		14.8	39	313.2625	7.9	-8.5		16.4
5	77.2500	9.1	-6.7		15.8	40	319.2625	6.5	-7.0		13.5
6	83.2500	6.6	-6.4		13.0	41	325.2625	8.4	-5.7		14.1
						42	331.2750	9.1	-4.6		13.7
						43	337.2625	9.4	-4.9		14.3
A-5	91.2500					44	343.2625	9.5	-5.7		15.2
A-4	97.2500					45	349.2625	8.6	-7.2		15.8
A-3	103.2500					46	355.2625	6.3	-8.4		14.7
A-2	109.2750					47	361.2625	6.0	-7.0		13.0
A-1	115.2750					48	367.2625	8.9	-4.4		13.3
14	121.2625	8.6	-5.4		14.0	49	373.2625	10.0	-4.2		14.2
15	127.2625	8.2	-5.5		13.7	50	379.2625	9.9	-0.2	S	10.1
16	133.2625	10.1	-5.7		15.8	51	385.2625	10.0	0.0	S	10.0
17	139.2500	8.1	-6.6		14.7	52	391.2625	10.6	0.1	S	10.5
18	145.2500	7.8	-5.7		13.5	53	397.2625	10.8	-5.8		16.6
19	151.2500	9.6	-3.9		13.5	54	403.2500	10.5	0.5	S	10.0
20	157.2500	10.0	-4.8		14.8	55	409.2500	10.5	0.4	S	10.1
21	163.2500	9.7	-3.9		13.6	56	415.2500	11.0	-2.8		13.8
22	169.2500	10.2	-3.8		14.0	57	421.2500	11.1	-4.0		15.1
7	175.2500	9.3	-5.4		14.7	58	427.2500	10.5	-3.3		13.8
8	181.2500	9.9	-5.3		15.2	59	433.2500	11.3	-2.0		13.3
9	187.2500	8.3	-6.8		15.1	60	439.2500	11.9	-2.0		13.9
10	193.2500	8.7	-5.3		14.0	61	445.2500	12.7	2.6	S	10.1
11	199.2500	8.1	-5.1		13.2	62	451.2500	12.4	0.2		12.2
12	205.2500	9.3	-5.3		14.6	63	457.2500	11.6	-2.7		14.3
13	211.2500	9.0	-5.9		14.9	64	463.2500	11.9	-0.5	S	12.4
23	217.2500	9.0	-6.9		15.9	65	469.2500	12.7	-1.9		14.6
24	223.2500	6.1	-10.3		16.4	66	475.2500	11.9	-2.9		14.8
25	229.2625					67	481.2500	12.0	-2.5		14.5
26	235.2625	8.8	-5.8		14.6	68	487.2500	11.7	-1.7		13.4
27	241.2625	6.6	-6.5		13.1	69	493.2500	12.4	-3.2		15.6
28	247.2625	7.4	-2.7	S	10.1	70	499.2500	12.2	0.5	S	11.7
29	253.2625	8.6	-1.8	S	10.4	71	505.2500	12.1	-2.1		14.2
30	259.2625	7.0	-3.7	S	10.7	72	511.2500	13.3	3.2	S	10.1
31	265.2625	9.6	-0.5	S	10.1	73	517.2500	13.0	-1.4		14.4
32	271.2625	8.9	-1.3	S	10.2	74	523.2500	12.4	-2.3		14.7
33	277.2625	9.0	-1.0	S	10.0	75	529.2500	13.2	3.2	S	10.0
34	283.2625	7.7	-6.5		14.2	76	535.2500	12.8	-2.6		15.4
35	289.2625	8.1	-5.8		13.9	77	541.2500	11.5	-4.6		16.1
36	295.2625	9.8	-4.1		13.9	78	547.2500	10.7	-6.0		16.7

PEAK TO VALLEY: 7.3

Testpoint # 3

6 13.3

IN CHANNEL RESPONSE Test

CARRIER - TO - NOISE Test

COHERENT DISTURBANCES Test

LOW FREQUENCY DISTURBANCES Test

System Name: ONEONTA **Date:** 02/16/2001

Test Performed By: David Kulze

Location: TP3 New Berlin

Note: Make measurements through a 100 ft. test drop cable without converter.

Channel Number	In Channel Response dB	Carrier to Noise dB	Composite Triple Beat dB	Composite Second Order dB	Discrete Spurious dB	Low Frequency Disturbances
4	0.5	46.5	>-60	52.3	>-60	
15	0.6	47.1	>-60	51.3	>-60	1
9	0.5	45.9	>-60	52.2	>-60	
24	0.5	43.6	57.7	55	>-60	
35	1.4	46.2	>-60	53.8	>-60	
41	0.3	45.3	59.7	51.1	>-60	
48	1.4	45.9	>-60	51.2	>-60	
57	0.1	46.8	>-60	55.5	>-60	
65	0.1	46.3	>-60	55.3	>-60	
69	0.1	45.8	>-60	54.5	>-60	
78	0.2	45.1	>-60	51.6	>-60	

TP#3

Visual Carrier Level Variation Test 76.605 (a) 4
System Name: Time Warner Oneonta

*Test Point: New Berlin 3
Date: 02/15/01

	Visual Level (dBmv)						Visual Level (dBmv)					
	35.6 Deg		23 Deg	14 Deg	14 Deg							
	Temp											
Chan	13:32 PM		19:32 PM	01:32 AM	07:32 AM	Max Var	Chan					Max Var
2	6.6		6.9	7.4	7.5	0.9	39	6.6	7.5	8.0	7.9	1.4
3	6.8		8.2	8.5	9.5	2.7	40	5.5	6.1	6.7	6.9	1.4
4	8.3		8.8	9.1	9.1	0.8	41	7.4	8.2	8.4	8.6	1.2
5	8.4		8.8	9.5	9.4	1.1	42	8.0	8.6	9.2	9.4	1.4
6	4.7		5.3	6.0	6.1	1.4	43	8.5	9.1	9.7	9.8	1.3
							44	8.0	8.6	9.2	9.3	1.3
							45	7.4	8.0	8.9	9.1	1.7
							46	5.0	5.6	6.6	6.6	1.6
A-2							47	5.2	5.8	6.3	6.5	1.3
A-1							48	8.0	8.2	8.8	9.2	1.2
14	8.1		8.5	8.6	9.0	0.9	49	9.4	9.7	10.4	11.1	1.7
15	7.7		8.1	8.5	8.8	1.1	50	8.9	9.5	10.4	10.4	1.5
16	8.9		8.9	10.2	10.5	1.6	51	8.8	9.6	10.3	10.4	1.6
17	7.1		7.7	7.9	8.1	1.0	52	9.3	9.9	11.0	11.1	1.8
18	7.0		7.4	8.1	8.2	1.2	53	9.4	10.2	11.1	11.2	1.8
19	7.7		8.9	9.9	9.9	2.2	54	9.1	9.8	11.0	11.0	1.9
20	9.1		9.7	10.5	10.9	1.8	55	9.1	9.8	10.9	11.0	1.9
21	8.6		9.2	9.9	10.0	1.4	56	9.4	10.2	11.3	11.9	2.5
22	8.9		9.6	9.8	10.3	1.4	57	9.4	10.2	11.6	11.5	2.2
7	8.3		8.9	9.2	9.7	1.4	58	9.4	9.8	11.1	11.4	2.0
8	8.3		9.4	8.8	10.3	2.0	59	9.9	10.7	11.7	12.0	2.1
9	7.1		7.7	8.5	8.3	1.4	60	10.6	11.3	12.3	12.6	2.0
10	7.0		8.2	8.5	8.7	1.7	61	11.1	12.0	13.3	13.1	2.2
11	7.1		7.3	8.1	8.6	1.5	62	11.1	11.3	12.4	12.6	1.5
12	7.8		8.8	8.0	10.3	2.5	63	10.6	11.1	12.0	12.4	1.8
13	7.6		9.3	11.1	8.8	3.5	64	10.6	11.2	12.3	12.4	1.8
23	7.8		8.5	9.3	9.3	1.5	65	10.8	12.0	13.0	13.4	2.6
24	5.0		5.6	6.2	6.4	1.4	66	10.3	11.1	12.2	12.3	2.0
25							67	10.5	11.4	12.4	12.4	1.9
26	7.7		8.7	9.8	9.3	2.1	68	10.3	11.6	12.7	12.5	2.4
27	5.5		6.0	6.9	6.9	1.4	69	11.1	11.7	12.5	12.4	1.4
28	6.2		6.8	7.5	7.7	1.5	70	11.0	11.5	12.7	12.7	1.7
29	7.9		8.3	9.0	9.1	1.2	71	10.6	11.8	12.6	12.9	2.3
30	7.5		7.3	9.7	9.1	2.4	72	11.6	12.7	13.9	13.8	2.3
31	8.5		9.0	9.8	9.9	1.4	73	11.8	12.3	13.5	13.1	1.7
32	7.9		8.6	9.2	9.4	1.5	74	10.7	11.6	12.9	12.4	2.2
33	7.8		8.6	9.2	9.4	1.6	75	11.8	12.6	13.6	13.8	2.0
34	6.8		7.1	7.9	7.7	1.1	76	11.6	12.5	13.6	13.3	2.0
35	7.6		8.4	8.9	8.7	1.3	77	10.3	10.6	11.9	11.5	1.6
36	8.6		9.2	9.7	9.8	1.2	78	9.3	10.2	10.7	10.6	1.4
37	9.3		10.1	10.4	10.9	1.6						
38	9.1		9.3	10.1	10.2	1.1						
Max	9.3		10.1	11.1	10.9	3.5	Max	11.8	12.7	13.9	13.8	3.5
Min	4.7		5.3	6.0	6.1	0.8	Min	5.0	5.6	6.3	6.5	0.8
Diff	4.6		4.8	5.1	4.8	2.7	Diff	6.8	7.1	7.6	7.3	2.7

Max NonAdjacent Channel Variance: 7.9
Max Adjacent Channel Variance:

Max Variance from last proof-of-performance test:

	Test 1	Test 2	Test 3	Test 4
Max	11.8	12.7	13.9	13.8
Min	4.7	5.3	6	6.1
Diff	7.1	7.4	7.9	7.7

Test Point # 3

TIME WARNER CABLE
BINGHAMTON DIVISION

Proof-of-Performance Tests

System Name: ONEONTA

System Test Point # 4

Location: Cornish Hill Rd.

Community: COOPERSTOWN

Pole Number: NYT 2

D.T. Value: Philips 9417

Map Number:

OR Number: 70

Trunk Cascade: 7 LE Cascade: 1

Visual Carrier Level
Visual / Aural Level Difference
(at Test Point, at The End of a 100' Drop)

System Name: **ONEONTA**

Test Location: **TP 4...Cooperstown**

Date: **02/15/2001**

Time **16:02 PM**

Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff. (Dbmv)	Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff. (Dbmv)
2	55.2500	7.2	-7.0		14.2	37	301.2625	10.4	-3.5		13.9
3	61.2500	9.4	-4.7		14.1	38	307.2625	10.6	-2.8		13.4
4	67.2500	9.2	-5.6		14.8	39	313.2625	10.8	-3.2		14.0
5	77.2500	8.4	-7.2		15.6	40	319.2625	11.2	-2.9		14.1
6	83.2500	5.4	-6.8		12.2	41	325.2625	11.2	-3.4		14.6
						42	331.2750	10.8	-2.8		13.6
						43	337.2625	11.1	-3.1		14.2
A-5	91.2500					44	343.2625	11.5	-2.9		14.4
A-4	97.2500					45	349.2625	11.7	-1.9		13.6
A-3	103.2500					46	355.2625	12.3	-1.4		13.7
A-2	109.2750					47	361.2625	12.6	-2.3		14.9
A-1	115.2750					48	367.2625	12.7	-1.3		14.0
14	121.2625	5.5	-6.8		12.3	49	373.2625	12.8	-1.4		14.2
15	127.2625	7.3	-6.7		14.0	50	379.2625	12.3	0.1	S	12.2
16	133.2625	8.2	-5.9		14.1	51	385.2625	12.6	1.2	S	11.4
17	139.2500	7.3	-7.2		14.5	52	391.2625	13.1	1.4	S	11.7
18	145.2500	6.6	-5.6		12.2	53	397.2625	12.7	-2.0		14.7
19	151.2500	8.7	-5.1		13.8	54	403.2500	13.1	0.3	S	12.8
20	157.2500	10.0	-4.4		14.4	55	409.2500	12.6	0.0	S	12.6
21	163.2500	9.6	-3.8		13.4	56	415.2500	11.8	-1.2		13.0
22	169.2500	9.9	-4.3		14.2	57	421.2500	12.3	-1.9		14.2
7	175.2500	8.5	-5.4		13.9	58	427.2500	12.7	-0.8		13.5
8	181.2500	9.3	-4.7		14.0	59	433.2500	13.1	-0.3		13.4
9	187.2500	9.5	-4.5		14.0	60	439.2500	13.1	-0.5		13.6
10	193.2500	9.6	-5.4		15.0	61	445.2500	13.6	1.9	S	11.7
11	199.2500	7.8	-6.6		14.4	62	451.2500	12.5	-1.4		13.9
12	205.2500	7.0	-7.3		14.3	63	457.2500	11.8	-2.9		14.7
13	211.2500	6.7	-7.8		14.5	64	463.2500	11.4	-3.2	S	14.6
23	217.2500	7.7	-6.8		14.5	65	469.2500	12.7	-1.1		13.8
24	223.2500	7.1	-7.8		14.9	66	475.2500	12.7	-1.5		14.2
25	229.2625	6.6	-7.2		13.8	67	481.2500	13.3	-1.2		14.5
26	235.2625	7.5	-5.3		12.8	68	487.2500	12.9	-1.1		14.0
27	241.2625	7.8	-5.4		13.2	69	493.2500	12.3	-2.4		14.7
28	247.2625	8.7	-4.7	S	13.4	70	499.2500	12.9	-1.4	S	14.3
29	253.2625	7.9	-6.5	S	14.4	71	505.2500	13.0	-1.7		14.7
30	259.2625	8.5	-4.1	S	12.6	72	511.2500	13.8	1.5	S	12.3
31	265.2625	8.6	-3.3	S	11.9	73	517.2500	13.7	-0.4		14.1
32	271.2625	8.5	-1.6	S	10.1	74	523.2500	12.9	-1.5		14.4
33	277.2625	11.5	-0.7	S	12.2	75	529.2500	13.6	1.5	S	12.1
34	283.2625	10.9	-2.7		13.6	76	535.2500	13.1	-1.2		14.3
35	289.2625	11.7	-3.5		15.2	77	541.2500	13.0	-1.3		14.3
36	295.2625	10.9	-4.0		14.9	78	547.2500	13.9	0.2		13.7

PEAK TO VALLEY: 8.4

5.4 13.8

IN CHANNEL RESPONSE Test

CARRIER - TO - NOISE Test

COHERENT DISTURBANCES Test

LOW FREQUENCY DISTURBANCES Test

System Name: ONEONTA **Date:** 02/16/2001

Test Performed By: Brian Miller

Location: TP4 Cooperstown

Note: **Make measurements through a 100 ft. test drop cable without converter.**

Channel Number	Channel Response	Carrier to Noise Ratio	Distortions (dBc)			Hum
4	0.1	46	>-60	54.8	>-60	
15	0.8	43.2	>-60	52.2	>-60	0.8
9	0.9	43.6	>-60	53.7	>-60	
24	0.2	44.8	58.4	51.5	>-60	
35	1.1	44.9	>-60	55.1	>-60	
41	0.3	45.9	>-60	53.3	>-60	
48	0.6	48.9	>-60	55.9	>-60	
57	0.4	43.6	>-60	54.8	>-60	
65	0.6	45.1	>-60	54.5	>-60	
69	0	45.8	>-60	52.7	>-60	
78	0.7	45.5	>-60	57.6	>-60	

TP#4

Visual Carrier Level Variation Test 76.605 (a) 4
System Name: Time Warner Oneonta

Test Point: Cooperstown 4
Date: 02/15/2001

Chan	Visual Level (dBmv) 38 Deg Temp Time 04:02 PM	32 Deg 22:02 PM	26.6 Deg 04:02 AM	30.2 Deg 10:02 AM	Max Var
2	7.2	7.6	8.2	7.3	1.0
3	9.4	9.6	10.2	9.5	0.8
4	9.2	9.9	10.3	9.4	1.1
5	8.4	8.9	9.2	8.5	0.8
6	5.3	5.8	6.0	5.4	0.7
A-2					
A-1					
14	5.5	5.6	6.1	5.3	0.8
15	7.3	7.4	8.1	7.3	0.8
16	8.2	8.8	9.4	8.5	1.2
17	7.3	8.1	8.6	7.8	1.3
18	6.6	8.2	8.3	6.7	1.7
19	8.7	8.8	9.2	8.1	1.1
20	10.0	10.1	10.8	10.0	0.8
21	9.6	9.9	10.6	10.0	1.0
22	9.9	10.4	10.7	10.0	0.8
7	8.5	9.1	9.0	8.9	0.6
8	9.3	9.9	9.4	9.6	0.6
9	9.5	10.1	10.4	9.7	0.9
10	9.6	9.9	10.7	9.7	1.1
11	7.8	8.4	8.9	7.9	1.1
12	7.0	8.6	8.3	8.6	1.6
13	6.7	7.1	8.4	7.5	1.7
23	7.7	8.3	8.9	7.9	1.2
24	7.1	7.9	8.4	7.6	1.3
25	6.6	7.2	7.7	6.7	1.1
26	7.5	8.5	9.1	8.1	1.6
27	7.8	8.9	9.4	8.2	1.6
28	8.7	9.5	10.0	9.0	1.3
29	7.9	8.6	9.2	8.0	1.3
30	8.5	8.0	9.7	8.2	1.7
31	8.6	9.3	9.8	8.6	1.2
32	8.9	9.4	10.1	9.3	1.2
33	11.9	12.9	13.1	12.3	1.2
34	10.9	11.4	12.3	11.2	1.4
35	11.7	12.4	12.9	11.8	1.2
36	10.9	11.7	12.1	11.1	1.2
37	10.4	11.2	11.8	10.8	1.4
38	10.6	11.4	11.9	10.7	1.3
Max	11.9	12.9	13.1	12.3	1.7
Min	5.3	5.6	6.0	5.3	0.6
Diff	6.6	7.3	7.1	7.0	1.1

Chan	Visual Level (dBmv)				Max Var
39	10.8	11.7	12.4	11.4	1.6
40	11.2	12.1	12.6	11.7	1.4
41	11.2	12.1	12.8	11.0	1.8
42	10.8	11.7	12.3	10.7	1.6
43	11.1	11.8	12.4	11.2	1.3
44	11.5	12.1	12.6	11.6	1.1
45	11.7	12.3	12.9	11.9	1.2
46	12.3	12.7	13.4	12.0	1.4
47	12.6	13.2	13.7	12.5	1.2
48	12.7	13.3	13.8	12.6	1.2
49	12.8	13.3	14.0	12.8	1.2
50	12.3	13.2	13.9	12.6	1.6
51	12.6	13.3	14.0	12.8	1.4
52	13.1	14.0	14.7	13.4	1.6
53	12.7	13.5	14.2	12.9	1.5
54	13.1	14.3	15.1	13.7	2.0
55	12.6	13.8	14.7	13.2	2.1
56	11.8	12.7	13.5	12.1	1.7
57	12.3	13.3	13.9	12.7	1.6
58	12.7	13.7	14.3	13.0	1.6
59	13.1	14.2	15.1	13.7	2.0
60	13.1	14.5	15.2	13.8	2.1
61	13.6	15.0	15.7	14.1	2.1
62	12.5	13.8	14.3	13.0	1.8
63	11.8	12.9	13.5	12.3	1.7
64	11.4	12.7	13.4	11.7	2.0
65	12.7	13.9	14.7	13.2	2.0
66	12.7	13.7	14.4	13.1	1.7
67	13.3	14.2	15.0	13.5	1.7
68	12.9	13.7	14.6	13.1	1.7
69	12.3	13.0	13.6	12.4	1.3
70	12.9	13.6	14.5	12.9	1.6
71	13.0	14.0	14.4	13.1	1.4
72	13.8	14.6	15.5	13.9	1.7
73	13.7	14.3	15.2	13.8	1.5
74	12.9	13.9	14.4	13.0	1.5
75	13.6	14.4	15.2	13.8	1.6
76	13.1	14.1	14.8	13.3	1.7
77	13.0	14.1	14.8	13.1	1.8
78	13.9	15.0	15.9	14.4	2.0
Max	13.9	15.0	15.9	14.4	2.1
Min	10.8	11.7	12.3	10.7	0.6
Diff	3.1	3.3	3.6	3.7	1.5

Max NonAdjacent Channel Variance: 9.9
Max Adjacent Channel Variance:

Max Variance from last proof-of-performance test:

	Test 1	Test 2	Test 3	Test 4
Max	13.9	15	15.9	14.4
Min	5.3	5.6	6	5.3
Diff	8.6	9.4	9.9	9.1

Test Point # 4

TIME WARNER CABLE
BINGHAMTON DIVISION

Proof-of-Performance Tests

System Name: ONEONTA

System Test Point # 5

Location: Otsego Co. RT 39

Community: TOWN OF BAINBRIDGE

Pole Number: 8 // 22

D.T. Value: Philips 9214

Map Number:

OR Number: 54

Trunk Cascade: 8 LE Cascade: 0

Visual Carrier Level
Visual / Aural Level Difference
(at Test Point, at The End of a 100' Drop)

System Name: **ONEONTA**

Test Location: **TP 5...Bainbridge**

Date: **02/16/2001**

Time **14:29 P.M.**

Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff. (Dbmv)	Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff. (Dbmv)
2	55.2500	19.1	6.0		13.1	37	301.2625	18.4	4.5		13.9
3	61.2500	18.9	3.0		15.9	38	307.2625	18.5	4.5		14.0
4	67.2500	19.6	4.1		15.5	39	313.2625	18.5	3.5		15.0
5	77.2500	17.8	2.7		15.1	40	319.2625	18.0	3.0		15.0
6	83.2500	18.5	2.6		15.9	41	325.2625	17.5	2.7		14.8
						42	331.2750	17.6	3.8		13.8
						43	337.2625	18.9	3.0		13.9
A-5	91.2500					44	343.2625	17.2	2.9		14.3
A-4	97.2500					45	349.2625	17.5	3.3		14.2
A-3	103.2500					46	355.2625	17.8	3.7		14.1
A-2	109.2750					47	361.2625	17.1	3.0		14.1
A-1	115.2750					48	367.2625	18.1	4.2		13.9
14	121.2625	17.3	2.6		14.7	49	373.2625	17.8	4.4		13.4
15	127.2625	17.3	2.7		14.6	50	379.2625	17.8	5.7	S	12.1
16	133.2625	18.4	3.8		14.6	51	385.2625	17.7	6.5	S	11.2
17	139.2500	17.8	3.5		14.3	52	391.2625	17.9	6.1	S	11.8
18	145.2500	17.7	4.0		13.7	53	397.2625	17.3	3.2		14.1
19	151.2500	18.7	5.0		13.7	54	403.2500	17.5	5.4	S	12.1
20	157.2500	19.1	4.6		14.5	55	409.2500	18.0	5.7	S	12.3
21	163.2500	19.0	4.7		14.3	56	415.2500	17.8	4.9		12.9
22	169.2500	18.8	4.7		14.1	57	421.2500	18.0	5.2		12.8
7	175.2500	17.2	2.5		14.7	58	427.2500	18.8	4.8		14.0
8	181.2500	17.9	4.1		13.8	59	433.2500	18.3	4.8		13.5
9	187.2500	18.2	3.9		14.3	60	439.2500	18.4	5.1		13.3
10	193.2500	18.6	3.8		14.8	61	445.2500	19.3	8.2	S	11.1
11	199.2500	16.6	2.8		13.8	62	451.2500	18.9	4.9		14.0
12	205.2500	15.6	1.3		14.3	63	457.2500	19.1	4.8		14.3
13	211.2500	15.9	0.8		15.1	64	463.2500	18.9	4.3	S	14.6
23	217.2500	15.8	1.9		13.9	65	469.2500	19.7	5.6		14.1
24	223.2500	16.2	1.3		14.9	66	475.2500	19.2	4.6		14.6
25	229.2625	15.5	-0.9		16.4	67	481.2500	19.2	4.7		14.5
26	235.2625	13.3	-1.0		14.3	68	487.2500	18.8	5.1		13.7
27	241.2625	13.3	3.3		10.0	69	493.2500	18.2	3.5		14.7
28	247.2625	16.3	5.3	S	11.0	70	499.2500	19.1	5.1	S	14.0
29	253.2625	18.2	4.4	S	13.8	71	505.2500	19.6	5.1		14.5
30	259.2625	16.7	5.3	S	11.4	72	511.2500	19.5	7.2	S	12.3
31	265.2625	18.5	6.6	S	11.9	73	517.2500	19.2	4.7		14.5
32	271.2625	18.7	6.3	S	12.4	74	523.2500	18.5	4.0		14.5
33	277.2625	19.2	6.3	S	12.9	75	529.2500	18.8	7.0	S	11.8
34	283.2625	18.6	3.9		14.7	76	535.2500	18.2	3.9		14.3
35	289.2625	18.4	3.8		14.6	77	541.2500	17.8	3.5		14.3
36	295.2625	18.8	4.3		14.5	78	547.2500	18.6	4.3		14.3

PEAK TO VALLEY: 6.4

13.3 19.7

IN CHANNEL RESPONSE Test

CARRIER - TO - NOISE Test

COHERENT DISTURBANCES Test

LOW FREQUENCY DISTURBANCES Test

System Name: ONEONTA **Date:** 02/16/2001

Test Performed By: David Kulze

Location: TP5 Bainbridge

Note: **Make measurements through a 100 ft. test drop cable without converter.**

Channel Number	In Channel Response	Carrier to Noise	Coherent Disturbances		Low Frequency Disturbances	
	dB	dB				
4	0.1	48	>-60	61.6	>-60	
15	0.8	46.4	>-60	58.8	>-60	0.8
9	1	45	>-60	60.3	>-60	
24	0.8	44.7	>-60	58.6	>-60	
35	1.4	45.3	>-60	58.1	>-60	
41	0.8	47.5	>-60	58.2	>-60	
48	0.8	47.7	>-60	57.7	>-60	
57	0.5	44.1	>-60	55.4	>-60	
65	0.4	47.8	>-60	58.1	>-60	
69	0.1	45.8	>-60	58.8	>-60	
78	0.6	45.7	>-60	59.1	>-60	

TP#2

Visual Carrier Level Variation Test 76.605 (a) 4
System Name: Time Warner Oneonta

Test Point: Sidney 2
Date: 02/10/2001

	Visual Level (dBmv)				
	41 Deg	39.2 Deg	37.4	39.2 Deg	
	Time				Max
Chan	13:02 PM	19:02 PM	01:02 AM	07:02 AM	Var
2	11.2	11.5	10.1	10.5	1.4
3	12.4	13.1	12.3	12.8	0.8
4	12.8	13.0	12.6	12.6	0.4
5	12.4	12.8	12.5	12.2	0.6
6	12.3	12.6	12.1	12.2	0.5
A-2					
A-1					
14	12.5	12.8	12.6	12.3	0.5
15	12.4	12.9	12.5	12.5	0.5
16	13.7	14.2	14.1	14.1	0.5
17	13.1	13.6	13.3	13.1	0.5
18	13.7	14.3	13.7	13.8	0.6
19	13.7	14.0	13.5	13.5	0.5
20	14.3	14.7	14.3	14.3	0.4
21	14.8	15.4	14.8	14.8	0.6
22	14.5	14.9	14.3	14.4	0.6
7	13.5	14.2	13.7	13.7	0.7
8	15.0	15.4	14.4	15.1	1.0
9	14.7	15.3	14.8	14.5	0.8
10	15.3	15.3	15.6	14.6	1.0
11	14.2	14.6	14.3	14.0	0.6
12	14.4	14.7	10.4	14.6	4.3
13	13.1	14.1	14.3	14.4	1.3
23	13.3	13.8	13.5	13.2	0.6
24	14.8	15.2	14.9	14.8	0.4
25	12.4	13.1	12.6	12.5	0.7
26	10.6	11.3	10.9	10.5	0.8
27	10.4	11.1	10.8	10.6	0.7
28	12.9	14.4	14.2	14.1	1.5
29	15.3	15.9	15.6	15.4	0.6
30	14.4	15.5	14.7	15.0	1.1
31	14.9	15.7	15.2	15.1	0.8
32	15.6	16.5	16.0	15.9	0.9
33	16.5	17.2	17.0	16.5	0.7
34	14.6	15.4	14.9	14.8	0.8
35	15.0	15.9	15.4	15.4	0.9
36	16.2	16.8	16.6	16.2	0.6
37	15.1	15.7	15.5	15.3	0.6
[redacted]	15.7	16.7	16.2	15.7	1.0
Max	16.5	17.2	17.0	16.5	4.3
Min	10.4	11.1	10.1	10.5	0.4
Diff	6.1	6.1	6.9	6.0	3.9

	Visual Level (dBmv)				
Chan					Max Var
39	15.4	16.0	15.7	15.4	0.6
40	14.8	15.6	15.0	14.7	0.8
41	14.8	15.5	15.1	14.8	0.7
42	14.2	14.9	14.6	14.3	0.7
43	14.1	14.7	14.2	14.2	0.6
44	14.4	15.0	14.6	14.6	0.6
45	14.4	15.2	14.7	14.5	0.8
46	14.1	14.5	14.1	13.8	0.7
47	13.7	14.2	13.7	13.5	0.7
48	14.7	15.1	14.9	14.7	0.4
49	14.5	15.4	14.9	14.8	0.9
50	14.1	14.8	14.4	14.1	0.7
51	14.7	15.4	15.2	14.7	0.7
52	14.4	15.2	14.8	14.5	0.8
53	13.9	14.7	14.3	14.0	0.8
54	15.1	15.8	15.4	15.2	0.7
55	14.6	15.4	15.1	14.8	0.8
56	14.2	14.8	14.7	14.4	0.6
57	15.1	15.8	15.5	15.3	0.7
58	15.2	15.7	15.6	15.1	0.6
59	15.0	15.4	15.2	15.0	0.4
60	15.2	15.7	15.4	15.4	0.5
61	15.9	16.4	16.0	15.8	0.6
62	14.6	15.1	14.7	14.4	0.7
63	14.8	15.7	15.2	15.0	0.9
64	14.7	15.1	14.9	14.7	0.4
65	14.1	14.8	14.7	14.5	0.7
66	15.4	15.8	15.7	15.1	0.7
67	14.8	15.3	15.0	14.6	0.7
68	14.1	15.2	15.0	14.5	1.1
69	14.4	15.0	14.6	14.2	0.8
70	15.1	15.7	15.3	15.0	0.7
71	15.1	15.6	15.3	14.8	0.8
72	16.1	16.8	16.3	16.1	0.7
73	15.9	16.5	16.1	15.7	0.8
74	14.5	14.9	14.6	14.4	0.5
75	15.3	15.9	15.6	15.4	0.6
76	15.4	15.9	15.5	15.5	0.5
77	14.8	15.3	14.9	14.6	0.7
78	15.9	16.4	16.2	15.8	0.6
Max	16.1	16.8	16.3	16.1	4.3
Min	13.7	14.2	13.7	13.5	0.4
Diff	2.4	2.6	2.6	2.6	3.9

Max NonAdjacent Channel Variance: 6.9
Max Adjacent Channel Variance:

Max Variance from last proof-of-performance test:

	Test 1	Test 2	Test 3	Test 4
Max	16.5	17.2	17	16.5
Min	10.4	11.1	10.1	10.5
Diff	6.1	6.1	6.9	6.0

Test Point # 2

TIME WARNER CABLE
BINGHAMTON DIVISION

Proof-of-Performance Tests

System Name: ONEONTA

System Test Point # 6

Location: NYS RT 206W

Community: Town of Walton

Pole Number: P38/51

D.T. Value: Philips 9414

Map Number:

OR Number: 87

Trunk Cascade: 5 LE Cascade: 3

Visual Carrier Level
Visual / Aural Level Difference
(at Test Point, at The End of a 100' Drop)

System Name: **ONEONTA**

Test Location: **TP 6...Walton**

Date: **08/16/2001**

Time **11:20 AM**

Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff. (Dbmv)	Chan	Freq. (MHz)	Visual Level (dbmv)	Aural Level (dbmv)	Scra "S"	Diff (Dbmv)
2	55.2500	13.6	0.6		13.0	37	301.2625	14.6	0.5		14.1
3	61.2500	14.8	0.0		14.8	38	307.2625	14.9	1.1		13.8
4	67.2500	14.6	0.4		14.2	39	313.2625	15.0	0.3		14.7
5	77.2500	15.1	0.2		14.9	40	319.2625	14.8	0.2		14.6
6	83.2500	15.8	0.1		15.7	41	325.2625	13.9	-0.9		14.8
						42	331.2750	14.6	0.7		13.9
						43	337.2625	14.1	0.1		14.0
A-5	91.2500					44	343.2625	14.3	-0.3		14.6
A-4	97.2500					45	349.2625	14.3	0.1		14.2
A-3	103.2500					46	355.2625	13.7	-0.4		14.1
A-2	109.2750					47	361.2625	13.3	-0.7		14.0
A-1	115.2750					48	367.2625	14.8	0.8		14.0
14	121.2625	12.7	-1.1		13.8	49	373.2625	14.7	0.6		14.1
15	127.2625	12.7	-1.2		13.9	50	379.2625	14.0	2.2	S	11.8
16	133.2625	14.4	-0.5		14.9	51	385.2625	14.4	2.6	S	11.8
17	139.2500	12.8	-0.9		13.7	52	391.2625	14.4	2.6	S	11.8
18	145.2500	13.2	0.0		13.2	53	397.2625	13.8	-0.7		14.5
19	151.2500	14.2	0.4		13.8	54	403.2500	14.3	1.5	S	12.8
20	157.2500	14.7	0.3		14.4	55	409.2500	13.9	1.5	S	12.4
21	163.2500	14.5	1.0		13.5	56	415.2500	13.5	0.2		13.3
22	169.2500	15.0	1.4		13.6	57	421.2500	13.8	0.1		13.7
7	175.2500	14.4	-0.9		15.3	58	427.2500	13.3	-0.9		14.2
8	181.2500	15.5	1.4		14.1	59	433.2500	13.3	-1.4		14.7
9	187.2500	16.2	1.6		14.6	60	439.2500	12.5	-1.1		13.6
10	193.2500	15.8	1.0		14.8	61	445.2500	13.2	1.9	S	11.3
11	199.2500	14.9	1.1		13.8	62	451.2500	12.9	-1.3		14.2
12	205.2500	16.4	1.8		14.6	63	457.2500	12.8	-1.4		14.2
13	211.2500	15.2	-1.8		17.0	64	463.2500	13.1	-2.1	S	15.2
23	217.2500	15.5	1.5		14.0	65	469.2500	14.2	0.4		13.8
24	223.2500	12.5	0.3		12.2	66	475.2500	14.3	-0.6		14.9
25	229.2625	14.5	0.5		14.0	67	481.2500	14.4	-0.1		14.5
26	235.2625	16.0	2.7		13.3	68	487.2500	13.7	0.5		13.2
27	241.2625	15.8	1.5		14.3	69	493.2500	13.9	-0.8		14.7
28	247.2625	15.5	2.6	S	12.9	70	499.2500	15.4	0.8	S	14.6
29	253.2625	15.2	0.9	S	14.3	71	505.2500	15.0	0.9		14.1
30	259.2625	14.8	2.0	S		72	511.2500	16.0	3.5	S	12.5
31	265.2625	14.8	2.7	S	12.1	73	517.2500	15.6	0.9		14.7
32	271.2625	14.8	2.3	S	12.5	74	523.2500	14.7	-0.4		15.1
33	277.2625	15.4	2.8	S	12.6	75	529.2500	15.0	3.2	S	11.8
34	283.2625	14.5	-0.2		14.7	76	535.2500	14.6	0.3		14.3
35	289.2625	14.4	-0.1		14.5	77	541.2500	14.1	-0.3		14.4
36	295.2625	15.1	0.8		14.3	78	547.2500	15.3	0.3		15.0

PEAK TO VALLEY: 3.9

12.5 16.4

IN CHANNEL RESPONSE Test

CARRIER - TO - NOISE Test

COHERENT DISTURBANCES Test

LOW FREQUENCY DISTURBANCES Test

System Name: ONEONTA **Date:** 02/16/2001

Test Performed By: David Kulze

Location: TP6 Walton

Note: **Make measurements through a 100 ft. test drop cable without converter.**

4	0.6	45.8	>-60	58.6	>-60	
15	0.8	45.1	>-60	55.4	>-60	0.6
9	1	45.8	>-60	56.6	>-60	
24	0.2	42.5	>-60	53.4	>-60	
35	1.1	47	>-60	55.8	>-60	
41	0.4	44.9	>-60	58.4	>-60	
48	0.6	48.4	>-60	56.1	>-60	
57	0.3	44.5	>-60	54.4	>-60	
65	0.5	46.7	>-60	55.4	>-60	
69	0.2	44.8	>-60	54	>-60	
78	0.3	46.1	>-60	54.8	>-60	

TP#2

Visual Carrier Level Variation Test 76.605 (a) 4
System Name: Time Warner Oneonta

Test Point: Sidney 2
Date: 02/10/2001

	Visual Level (dBmv)				
	41 Deg	39.2 Deg	Temp 37.4	39.2 Deg	
Chan	13:02 PM	19:02 PM	Time 01:02 AM	07:02 AM	Max Var
2	11.2	11.5	10.1	10.5	1.4
3	12.4	13.1	12.3	12.8	0.8
4	12.8	13.0	12.6	12.6	0.4
5	12.4	12.8	12.5	12.2	0.6
6	12.3	12.6	12.1	12.2	0.5
A-2					
A-1					
14	12.5	12.8	12.6	12.3	0.5
15	12.4	12.9	12.5	12.5	0.5
16	13.7	14.2	14.1	14.1	0.5
17	13.1	13.6	13.3	13.1	0.5
18	13.7	14.3	13.7	13.8	0.6
19	13.7	14.0	13.5	13.5	0.5
20	14.3	14.7	14.3	14.3	0.4
21	14.8	15.4	14.8	14.8	0.6
22	14.5	14.9	14.3	14.4	0.6
7	13.5	14.2	13.7	13.7	0.7
8	15.0	15.4	14.4	15.1	1.0
9	14.7	15.3	14.8	14.5	0.8
10	15.3	15.3	15.6	14.6	1.0
11	14.2	14.6	14.3	14.0	0.6
12	14.4	14.7	10.4	14.6	4.3
13	13.1	14.1	14.3	14.4	1.3
23	13.3	13.8	13.5	13.2	0.6
24	14.8	15.2	14.9	14.8	0.4
25	12.4	13.1	12.6	12.5	0.7
26	10.6	11.3	10.9	10.5	0.8
27	10.4	11.1	10.8	10.6	0.7
28	12.9	14.4	14.2	14.1	1.5
29	15.3	15.9	15.8	15.4	0.6
30	14.4	15.5	14.7	15.0	1.1
31	14.9	15.7	15.2	15.1	0.8
32	15.8	16.5	16.6	15.9	0.9
33	16.5	17.2	17.0	16.5	0.7
34	14.6	15.4	14.9	14.8	0.8
35	15.0	15.9	15.4	15.4	0.9
36	16.2	16.8	16.6	16.2	0.6
37	15.1	15.7	15.5	15.3	0.6
38	15.7	16.7	16.2	15.7	1.0
Max	16.5	17.2	17.0	16.5	4.3
Min	10.4	11.1	10.1	10.5	0.4
Diff	6.1	6.1	6.9	6.0	3.9

	Visual Level (dBmv)				
Chan					Max Var
39	15.4	16.0	15.7	15.4	0.6
40	14.8	15.5	15.0	14.7	0.8
41	14.8	15.5	15.1	14.8	0.7
42	14.2	14.9	14.6	14.3	0.7
43	14.1	14.7	14.2	14.2	0.6
44	14.4	15.0	14.6	14.6	0.6
45	14.4	15.2	14.7	14.5	0.8
46	14.1	14.5	14.1	13.8	0.7
47	13.7	14.2	13.7	13.5	0.7
48	14.7	15.1	14.9	14.7	0.4
49	14.5	15.4	14.9	14.8	0.9
50	14.1	14.8	14.4	14.1	0.7
51	14.7	15.4	15.2	14.7	0.7
52	14.4	15.2	14.8	14.5	0.8
53	13.9	14.7	14.3	14.0	0.8
54	15.1	15.8	15.4	15.2	0.7
55	14.6	15.4	15.1	14.8	0.8
56	14.2	14.8	14.7	14.4	0.6
57	15.1	15.8	15.5	15.3	0.7
58	15.2	15.7	15.6	15.1	0.6
59	15.0	15.4	15.2	15.0	0.4
60	15.2	15.7	15.4	15.4	0.5
61	15.9	16.4	16.0	15.8	0.6
62	14.6	15.1	14.7	14.4	0.7
63	14.8	15.7	15.2	15.0	0.9
64	14.7	15.1	14.9	14.7	0.4
65	14.1	14.8	14.7	14.5	0.7
66	15.4	15.8	15.7	15.1	0.7
67	14.8	15.3	15.0	14.6	0.7
68	14.1	15.2	15.0	14.5	1.1
69	14.4	15.0	14.6	14.2	0.8
70	15.1	15.7	15.3	15.0	0.7
71	15.1	15.6	15.3	14.8	0.8
72	16.1	16.8	16.3	16.1	0.7
73	15.9	16.5	16.1	15.7	0.8
74	14.5	14.9	14.6	14.4	0.5
75	15.3	15.9	15.6	15.4	0.6
76	15.4	15.9	15.5	15.5	0.5
77	14.8	15.3	14.9	14.6	0.7
78	15.9	16.4	16.2	15.8	0.6
Max	16.1	16.8	16.3	16.1	4.3
Min	13.7	14.2	13.7	13.5	0.4
Diff	2.4	2.6	2.6.	2.6	3.9

Max NonAdjacent Channel Variance: 6.9
Max Adjacent Channel Variance:

Max Variance from last proof-of-performance test:

	Test 1	Test 2	Test 3	Test 4
Max	16.5	17.2	17	16.5
Min	10.4	11.1	10.1	10.5
Diff	6.1	6.1	6.9	6.0

Test Point # 2

TIME WARNER CABLE
BINGHAMTON DIVISION

Proof-of-Performance Tests

System Name: ONEONTA

System Test Point # 7

Location: Pearl St.

Community: City of Oneonta

Pole Number: NYSEG P-3/3

D.T. Value: Philips 9815

Map Number:

OR Number: Node 004

Trunk Cascade: 2 LE Cascade: 2

Visual Carrier Level
Visual / Aural Level Difference
(at Test Point, at The End of a 100' Drop)

System Name: **ONEONTA**

Test Location: **TP 7...Oneonta Pearl**

Date: **02/14/01**

Time **12:02 PM**

Chan	Freq. (MHz.)	Visual Level (dbmv.)	Aural Level (dbmv.)	Scra *S*	Diff. (Dbmv.)	Chan	Freq. (MHz.)	Visual Level (dbmv.)	Aural Level (dbmv.)	Scra *S*	Diff. (Dbmv.)
2	55.2500	15.7	0.8		14.9	37	301.2625	16.3	2.5		13.8
3	61.2500	17.9	2.5		15.4	38	307.2625	15.8	2.4		13.4
4	67.2500	17.7	3.7		14.0	39	313.2625	16.5	1.7		14.8
5	77.2500	16.3	4.0	S	12.3	40	319.2625	15.6	0.3		15.3
6	83.2500	17.4	1.8		15.6	41	325.2625	15.0	-0.2		15.2
						42	331.2750	14.4	1.0		13.4
						43	337.2625	14.5	0.5		14.0
A-5	91.2500					44	343.2625	14.9	0.4		14.5
A-4	97.2500					45	349.2625	14.5	0.0		14.5
A-3	103.2500					46	355.2625	14.5	0.5		14.0
A-2	109.2750					47	361.2625	13.7	-0.4		14.1
A-1	115.2750					48	367.2625	14.5	0.6		13.9
14	121.2625	16.3	2.5		13.8	49	373.2625	14.2	0.1		14.1
15	127.2625	15.9	1.9		14.0	50	379.2625	14.9	2.6	S	12.3
16	133.2625	16.8	3.2		13.6	51	385.2625	14.9	3.0	S	11.9
17	139.2500	16.5	2.7		13.8	52	391.2625	15.1	3.5	S	11.6
18	145.2500	16.7	3.1		13.6	53	397.2625	15.2	0.4		14.8
19	151.2500	16.5	2.2		14.3	54	403.2500	15.3	2.4	S	12.9
20	157.2500	16.8	2.6		14.2	55	409.2500	16.0	3.8	S	12.2
21	163.2500	16.8	3.2		13.6	56	415.2500	15.2	1.9		13.3
22	169.2500	16.5	3.1		13.4	57	421.2500	15.8	2.1		13.7
7	175.2500	16.0	1.8		14.2	58	427.2500	15.9	1.9		14.0
8	181.2500	16.6	2.2		14.4	59	433.2500	16.0	2.6		13.4
9	187.2500	17.0	2.7		14.3	60	439.2500	16.5	2.5		14.0
10	193.2500	17.0	2.4		14.6	61	445.2500	16.7	4.9	S	11.8
11	199.2500	16.3	2.4		13.9	62	451.2500	16.1	1.9		14.2
12	205.2500	16.5	2.5		14.0	63	457.2500	15.3	1.0		14.3
13	211.2500	15.4	0.2		15.2	64	463.2500	16.0	0.6	S	15.4
23	217.2500	16.9	2.8		14.1	65	469.2500	15.8	1.7		14.1
24	223.2500	16.7	1.7		15.0	66	475.2500	15.9	1.6		14.3
25	229.2625	16.4	1.7		14.7	67	481.2500	15.5	1.6		13.9
26	235.2625	16.6	3.2		13.4	68	487.2500	15.4	2.0		13.4
27	241.2625	15.7	1.8		13.9	69	493.2500	15.7	0.6		15.1
28	247.2625	16.5	2.6	S	13.9	70	499.2500	16.1	1.7	S	14.4
29	253.2625	15.5	1.3	S	14.2	71	505.2500	16.5	2.4		14.1
30	259.2625	15.8	2.8	S	13.0	72	511.2500	16.6	4.3	S	12.3
31	265.2625	15.8	3.5	S	12.3	73	517.2500	17.0	2.2		14.8
32	271.2625	16.2	3.7	S	12.5	74	523.2500	16.2	1.4		14.8
33	277.2625	16.3	4.0	S	12.3	75	529.2500	16.9	5.7	S	11.2
34	283.2625	16.0	2.1		13.9	76	535.2500	16.4	2.1		14.3
35	289.2625	16.0	1.5		14.5	77	541.2500	15.8	1.3		14.5
36	295.2625	15.7	2.1		13.6	78	547.2500	17.1	2.2		14.9

PEAK TO VALLEY: 4.2

13.7 17.9

IN CHANNEL RESPONSE Test

CARRIER - TO - NOISE Test

COHERENT DISTURBANCES Test

LOW FREQUENCY DISTURBANCES Test

System Name: ONEONTA **Date:** 02/14/2001

Test Performed By: Brian Miller

Location: TP7 Oneonta..Pearl St.

Note: Make measurements through a 100 ft. test drop cable without converter.

Channel Number	In-Channel Frequency Response (dB)	Carrier-to-Noise (dB)	Discrete Interfering Signals (dBc)			Hum Modulation (%)
4	0.2	45.1	>-60	57.6	>-60	
15	0.3	47.5	>-60	56.9		0.9
9	1	45.3	>-60	58.8		
24	0.4	44.4	>-60	58.3		
35	1.1	45.8	>-60	57.4		
41	0.7	46.9	>-60	58.4		
48	0.7	49.3	>-60	57.7		
57	0.3	44.9	>-60	57		
65	0.1	48	>-60	56.5		
69	0.1	46.7	>-60	56.5		
78	0.4	45.6	>-60	58.2		

TP#2

Visual Carrier Level Variation Test 76.605 (a) 4
System Name: Time Warner Oneonta

Test Point: Sidney 2
Date: 02/19/2001

	Visual Level (dBmv)				
	Temp				
	82 Deg	65 Deg	60 Deg	64 Deg	
	Time				
Chan	15:17 PM	21:17 PM	03:17 AM	09:17 AM	Max Var
2	13.6	13.3	14.1	14.2	0.9
3	14.8	14.2	15.1	15.4	1.2
4	14.8	14.1	15.2	15.4	1.3
5	13.6	13.8	14.6	14.7	1.1
6	14.5	14.3	15.1	15.5	1.2
A-2					
A-1					
14	15.5	14.9	16.1	16.3	1.4
15	16.0	15.7	16.6	17.0	1.3
16	14.8	14.5	15.7	15.9	1.4
17	16.0	16.0	16.8	17.1	1.1
18	16.2	16.1	16.9	17.1	1.0
19	15.8	15.4	16.1	16.8	1.4
20	15.1	15.3	15.9	15.3	0.8
21	16.3	16.2	16.8	16.9	0.7
22	16.3	15.8	16.7	16.7	0.9
7	16.0	16.0	16.4	16.0	0.4
8	16.2	16.0	16.6	17.0	1.0
9	16.8	16.6	17.3	17.3	0.7
10	16.2	16.1	16.6	16.8	0.7
11	16.1	15.9	16.7	16.8	0.9
12	15.7	15.4	16.3	16.8	1.4
13	15.4	15.2	15.9	16.0	0.8
23	16.9	16.7	17.5	17.6	0.9
24	16.2	15.9	16.9	17.2	1.3
25	16.4	16.2	17.3	17.5	1.3
26	15.6	15.3	16.2	15.7	0.9
27	16.4	16.0	17.0	17.1	1.1
28	16.1	15.0	16.0	16.2	1.2
29	15.8	15.4	16.2	16.6	1.2
30	15.0	15.0	16.0	15.0	1.0
31	16.4	16.2	17.4	17.6	1.4
32	14.7	14.4	15.9	15.8	1.5
33	16.4	16.1	17.2	17.2	1.1
34	16.6	16.2	17.4	17.4	1.2
35	15.2	14.7	15.9	16.2	1.5
36	15.0	14.0	15.0	16.0	2.0
37	15.0	14.0	14.0	16.0	2.0
38	15.0	14.0	14.0	15.0	1.0
Max	16.9	16.7	17.5	17.6	2.0
Min	13.6	13.3	14.0	14.2	0.4
Diff	3.3	3.4	3.5	3.4	1.6

	Visual Level (dBmv)				
Chan					Max Var
39	15.2	14.9	16.2	16.2	1.3
40	15.1	14.7	15.9	16.1	1.4
41	14.9	14.5	15.9	16.0	1.5
42	16.0	15.6	17.2	17.1	1.6
43	15.6	14.8	16.2	16.5	1.7
44	16.4	16.1	17.4	17.5	1.4
45	16.6	16.2	17.6	17.7	1.5
46	17.2	16.7	18.3	18.3	1.6
47	16.6	16.0	17.7	17.9	1.9
48	16.9	16.1	17.9	18.3	2.2
49	16.9	16.2	17.6	17.9	1.7
50	17.4	16.9	18.2	18.4	1.5
51	16.9	16.2	17.7	17.8	1.6
52	17.4	16.7	18.4	18.8	2.1
53	16.0	15.5	17.0	17.1	1.6
54	15.2	15.0	16.7	17.2	2.2
55	16.7	15.7	17.9	18.1	2.4
56	15.1	14.6	16.5	16.6	2.0
57	14.8	14.2	16.1	16.1	1.9
58	14.1	13.4	15.5	15.7	2.3
59	12.9	12.2	14.2	14.7	2.5
60	13.3	12.4	14.8	15.0	2.6
61	12.8	12.5	13.9	14.1	1.6
62	13.6	12.9	14.5	14.4	1.6
63	13.3	12.5	14.7	14.9	2.4
64	12.9	12.3	14.4	15.2	2.9
65	12.9	12.7	14.3	14.7	2.0
66	13.2	12.6	13.9	14.3	1.7
67	13.8	13.7	14.6	14.9	1.2
68	13.4	13.2	14.2	14.6	1.4
69	12.6	12.3	13.7	14.0	1.7
70	12.7	12.4	13.8	14.1	1.7
71	12.4	11.8	13.4	13.4	1.6
72	11.3	10.9	12.4	12.6	1.7
73	10.4	9.6	11.5	11.7	2.1
74	9.6	8.6	10.6	11.0	2.4
75	9.0	9.5	9.0	9.0	0.5
76	8.4	7.3	9.7	10.2	2.9
77	10.0	9.0	9.0	9.0	1.0
78	9.0	9.0	11.0	9.5	2.0
Max	17.4	16.9	18.4	18.8	2.9
Min	8.4	7.3	9.0	9.0	0.4
Diff	9.0	9.6	9.4	9.8	2.5

Max NonAdjacent Channel Variance: 9.8
Max Adjacent Channel Variance:

Max Variance from last proof-of-performance test:

	Test 1	Test 2	Test 3	Test 4
Max	17.4	16.9	18.4	18.8
Min	8.4	7.3	9	9
Diff	9.0	9.6	9.4	9.8

Test Point # 2