

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In re:)
)
Hawaii Catholic TV, Inc.)
) CSR- _____
Must-Carry Complaint Regarding)
Television Station KUPU(DT),)
Waimanalo, Hawaii)

To: Office of the Secretary
Attn: Chief, Media Bureau

MUST-CARRY COMPLAINT

Hawaii Catholic TV, Inc. (“HCTV”), pursuant to Section 614 of the Communications Act of 1934, as amended, and Sections 76.7 and 76.61 of the Commission’s Rules, hereby files this Complaint requesting that the Commission order Time Warner Entertainment Company, L.P., d/b/a Oceanic Time Warner Cable (“Oceanic”) to carry local commercial television station KUPU(DT), licensed to serve Waimanalo, Hawaii (the “Station”) in accordance with the Commission’s must carry rules and policies throughout the Honolulu, Hawaii designated market area (the “DMA”) for the remaining duration of the current must carry election cycle, expiring December 31, 2014.

I. OCEANIC HAS DENIED KUPU(DT) ITS FULL CARRIAGE RIGHTS

In a letter dated August 13 (the “Carriage Request”), HCTV notified Oceanic that its failure to carry the Station throughout the Honolulu DMA constituted a failure by Oceanic to comply with the Commission’s must-carry rules. A copy of the Carriage Request is attached to this Petition at its Exhibit 1. The Carriage Request demanded that Oceanic commence carriage of the Station on all of Oceanic’s cable systems serving the DMA, and included documentation demonstrating that KUPU(DT) would provide a good quality over-the-air signal to Oceanic’s principal headend for all of its Hawaii Cable Systems.

Oceanic responded to HCTV by letter dated September 12, 2013, a copy of which is attached to this Petition as Exhibit 2 (the “Partial Denial”). The Partial Denial denied carriage to the Station on systems serving areas outside of Oahu (the “Denied Systems”) based on Oceanic’s claim that the Station does not deliver a good-quality over-the-air signal to the headends Oceanic claims serve those systems. As explained more fully below, however, Oceanic in fact operates all of its Hawaii systems from a single central headend in Honolulu – a headend to which the Station clearly provides a good quality over-the-air signal.

Section 76.61(a)(5) provides that any must-carry complaint must be filed within 60 days of either a cable operator’s denial of a carriage request or the expiration of the 30-day response period set forth in Section 76.61(a)(2). The Partial Denial was dated September 12, 2013, and this Complaint is therefore timely filed under Section 76.61(a)(5).

II. KUPU IS ENTITLED TO MANDATORY CARRIAGE ON ALL OF OCEANIC’S CABLE SYSTEMS IN THE HONOLULU, HAWAII DMA

Under the Communications Act and the Commission’s Rules, a station is entitled to mandatory carriage on cable systems if it is a “local commercial television station,” as defined in Section 76.55(c) of the Commission’s Rules. Section 76.55(c) defines a “local commercial television station” as any full power television broadcast station that is 1) licensed to a community within the same television market as the cable system, 2) not considered a distant signal pursuant to the cable compulsory copyright license, and 3) capable of delivering a good quality over-the-air signal to the system’s principal headend or willing to agree to be responsible for the costs of delivering such a signal through alternative means. KUPU(DT) qualifies as a local commercial television station on the Denied Systems operated by Oceanic and therefore is entitled to mandatory carriage.

Pursuant to Section 76.55(e) a station’s television market is defined as its designated market area (“DMA”) as assigned by Nielsen Media Research. The Station is licensed to serve the

community of Waimanalo, Hawaii and is in the Honolulu, Hawaii, DMA.¹ Oceanic's Denied Systems also serve communities located within the Honolulu, Hawaii DMA, and are therefore within the same local market as KUPU(DT). For the same reasons, KUPU(DT) would not be considered a "distant signal" for copyright purposes. KUPU(DT) sent a letter to Oceanic dated September 30, 2011 properly electing mandatory carriage for the current election cycle expiring on December 31, 2014. This Petition was preceded by a written request for carriage delivered to Oceanic and Oceanic has not identified any valid defense to the request for carriage.

In the Partial Denial, Oceanic claims that KUPU(DT) fails to deliver a good quality over-the-air signal to headends that it operates in the outer islands, headends it claims serve the Denied Systems. Oceanic's assertions, however, should not be allowed to serve as a basis for a denial of carriage where Oceanic in fact operates all of its Hawaii cable systems from a single headend located in Honolulu. As conceded in the Partial Denial, KUPU(DT) delivers a good quality over-the-air signal to Oceanic's Oahu headend, which is in fact the principal headend used by all of Oceanic's Hawaii systems, including the Denied Systems. Oceanic should not be allowed to avoid its carriage obligations simply by claiming that other headends located in the outer islands, but that do not in fact control Oceanic's operations, are the "principal" headends of those systems.

Almost ten years ago, Oceanic consolidated its four separate Hawaii headends into a "single, master headend" which allowed Oceanic to receive signals at any location on the islands, consolidate signal processing in one location and to "control, operate and monitor" all operations from one location.² As explained in press reports regarding this unified headend, Oceanic gathers all incoming program signals at its Oahu headend, processes them there, and sends them out to all

¹ See Television and Cable Factbook 2013 at A-400.

² See "Hawaii, Fiber-Optic Style," TVTechnology, available at <http://www.tvtechnology.com/news/0110/hawaii-fiber-optic-style/184853>.

of its systems, including the Denied Systems.³ Oceanic even has delivered testimony to the Cable Television Division of Hawaii's Department of Commerce and Consumer Affairs ("DCCA"), the state's cable franchising authority, asserting that Oceanic operates a single, unified system serving the entire state of Hawaii. During a December 2011 hearing on the renewal of Oceanic's franchises for the island of Hawaii, Bob Barlow, President of Oceanic, advised the DCCA's Cable Advisory Committee that "[Oceanic] views the whole state as one system and provides the exact same service throughout the state."⁴ This service is provided through a central location in Honolulu, a location (a) from which Oceanic currently delivers programming to its systems located on the other islands and (b) to which KUPU(DT) provides – by Oceanic's own admission – a good-quality over-the-air signal.

Any attempt by Oceanic to deny carriage on the Denied Systems based on a claim that the headends located in the outer islands are the "principal" headends for those systems would be directly contrary to the way Oceanic in fact operates its systems. Such a designation would run counter to the requirements of the Commission's Rules, which prohibit a cable operator from using a headend designation to "undermine or evade" the must-carry requirements.⁵ At the very least, the design of Oceanic's unified system should be considered to itself constitute an alternative means of delivery to the headends allegedly serving the Denied Systems. Oceanic is clearly capable of, and in fact does, receive over-the-air signals of other Honolulu television stations at its Oahu headend

³ *Id.*

⁴ Cable Advisory Committee, Department of Commerce and Consumer Affairs, State of Hawaii, Minutes of December 12, 2011 Meeting at §II(B), p.2, available at http://files.hawaii.gov/dcca/catv/cable_advisory_committee/CAC-minutes-meeting-12-12-2011-final-01-11-2012.pdf.

⁵ 47 C.F.R. §76.5(pp)(2).

and distribute them to the Denied Systems.⁶ Where such a signal delivery mechanism is available and in use, and entirely under the control of Oceanic, Oceanic should not be able to deny carriage to KUPU(DT) simply based on its refusal to make this mechanism available to it.

III. KUPU(DT) IS ENTITLED TO CARRIAGE COMMENSURATE WITH CARRIAGE AFFORDED TO OTHER SIMILARLY-SITUATED MUST-CARRY STATIONS.

In the Partial Denial, Oceanic refers to “FCC rule changes that . . . no longer require cable operators to downconvert digital television signals into analog format.” This appears to be an oblique reference to the “viewability rule” previously codified as Section 76.56(d)(3)-(5). The Commission allowed that rule to “sunset” as of December 12, 2012, following a six-month transition period. *See Carriage of Digital Television Broadcast Signals*, 27 FCC Rcd 6529 (2012) (the “Viewability Order”), *petition for review pending sub nom. Agape Church, Inc. v. FCC*, No. 12-1334 (D.C. Cir.). HCTV reserves the right to insist upon compliance with any carriage obligations that may arise as a result of the pending appeal in that proceeding.

HCTV also expects that Oceanic will certify to it, and to the Commission, that Oceanic is in fact in compliance with the requirements of the Viewability Order, including in particular the requirements to make available at “no cost or an affordable cost,” equipment sufficient to allow any legitimate analog subscribers to receive KUPU’s signals.⁷ In the Partial Denial, Oceanic makes no reference to the availability of such equipment, and a review of Oceanic’s website does not disclose the availability of such equipment. HCTV is also aware of no efforts by Oceanic to publicize the availability of such equipment to subscribers in the DMA. If Oceanic intends to take advantage of the Viewability Order to avoid providing KUPU(DT)’s signal to any legitimate analog subscribers,

⁶ Indeed, it appears that to deliver signals from outer island television stations to the Denied Systems, Oceanic receives those signals over-the-air at the outer island headends, sends them back to the Oahu headend for processing, and then delivers them back to the Denied Systems.

⁷ *See Viewability Order*, 27 FCC Rcd at 6540-41 (noting that a fee of no more than \$2 per month may be considered “affordable”).

HCTV would expect, and the Viewability Order would require, that Oceanic make available, and publicize the availability of, such low or no-cost equipment. To HCTV's knowledge, Oceanic has provided no such publicity, and has not in fact made such equipment readily available.

HCTV also insists that Oceanic deliver KUPU(DT)'s signal to all subscribers that subscribe to any digital service provided by Oceanic.⁸ In any event, HCTV will continue to insist on compliance with Section 76.56(d)(1), which provides that the signal of stations such as KUPU(DT)

shall be provided to every subscriber of a cable system. Such signals shall be viewable via cable on all television receivers of a subscriber which are connected to a cable system by a cable operator or for which a cable operator provides a connection.

HCTV is particularly concerned that Oceanic's reference to the sunseting of the viewability rule may indicate an intention on its part to withhold the KUPU(DT) signal from some of its subscribers by preventing, or imposing technical barriers to, the delivery of a viewable KUPU(DT) signal to some Oceanic subscribers. Since Oceanic has not provided any detailed explanation of precisely what it might mean by that reference or how it intends to deliver the KUPU(DT) signal to all Oceanic subscribers, HCTV is correspondingly unable to conclude that Oceanic's carriage of KUPU(DT) will in fact comply with the Commission's rules. Nevertheless, HCTV hereby puts Oceanic and the Commission on notice that HCTV will insist on full carriage of KUPU(DT) equivalent to the carriage of all other must-carry stations in the market. To the extent that, once initiated, Oceanic's carriage falls short of full compliance, HCTV will take appropriate responsive action.

⁸ HCTV has reason to believe that many subscribers Oceanic may claim as "analog" subscribers are in fact receiving a digital service from Oceanic and reserves the right to verify that Oceanic is in fact delivering analog service to any subscriber to whom Oceanic refuses to deliver KUPU(DT)'s programming.

CONCLUSION

HCTV is clearly entitled to mandatory carriage of the signal of KUPU(DT) on all cable systems operated by Oceanic in the Honolulu DMA. KUPU(DT) has properly elected mandatory carriage, has notified Oceanic of its failure to comply with the Commission’s mandatory carriage rules with respect to KUPU(DT), and has requested that Oceanic commence carriage of the Station on all of its Cable Systems in the Honolulu DMA. Oceanic has refused in writing to carry KUPU(DT) on a number of systems in the Honolulu DMA, forcing HCTV to file this Complaint. For the reasons set forth herein, HCTV hereby respectfully requests that the Commission order Oceanic to carry KUPU(DT) throughout the Honolulu, Hawaii DMA in accordance with the must carry rules and policies.

Respectfully submitted,

HAWAII CATHOLIC TV, INC.

By: 

Harry F. Cole
Daniel A. Kirkpatrick
Its Counsel

FLETCHER, HEALD & HILDRETH, PLC
1300 North 17th Street, Suite 1100
Arlington, VA 22209
(703) 812-0400

November 12, 2013

EXHIBIT 1

HAWAII CATHOLIC TV, INC. KUPU-TV15

POST OFFICE BOX 15, HONOLULU, HI 96810

T: (808) 591-8282 F: (808) 591-1250 E: info@kupu.tv

August 13, 2013

VIA CERTIFIED MAIL, RECEIPT NO. 7011 0110 0002 2061 7089

RETURN RECEIPT REQUESTED

Bob Barlow, President
Time Warner Entertainment Company, L.P.
dba Oceanic Time Warner Cable
200 Akamainui Street
Mililani, HI 96789

Re: **KUPU-TV, CHANNEL 15 (DMA: Honolulu, HI)**

Dear Mr. Barlow:

HAWAII CATHOLIC TV, INC. ("HCTV"), licensee of KUPU-DT, Channel 15, Waimanalo, Hawaii hereby notifies TIME WARNER ENTERTAINMENT COMPANY, LP dba OCEANIC TIME WARNER CABLE ("OTWC") that it currently delivers a good quality signal to the principal local head end serving OTWC's system (located at 200 Akamainui Street, Mililani, HI 96789) serving communities in the Honolulu, Hawaii DMA. As a result, HCTV demands carriage within 30 days on all cable systems operated by Oceanic Time Warner Cable or its subsidiaries and affiliates serving the Honolulu, Hawaii Designated Market Area ("DMA"), as required by Section 534 of the Communications Act of 1934, as amended (47 U.S.C. § 534), and by Section 76.61 and Section 76.56 of the rules of the Federal Communications Commission ("FCC") (47 C.F.R. §§ 76.61, 76.56).

We have conducted a Longley-Rice Coverage Study for the KUPU-DT15 facility (see attached) using a receive antenna height at OTWC's facility of 10 meters above ground. As shown, the station places, at a minimum, a 99.6 dBu signal over OTWC's receive site. Utilized was a very precise cell size and increment spacing for the study (0.1 kilometer for each). Also provided (see attached) is a Terrain Profile Study from the transmitting site to the receive site (approximately 11.5 km) It shows no terrain obstruction between the two sites.

Carriage of KUPU-DT will not cause OTWC's system to exceed the maximum number of signals a cable system is required to carry under the FCC's must carry rules. KUPU-DT does not and will not share a broadcast network affiliation with, or substantially duplicate the programming of, any other local commercial broadcast television station in the Honolulu, Hawaii DMA. A copy of the station's current programming schedule can be viewed on KUPU's website (www.kupu.tv). It should be noted that as of this date KUPU is being carried in Hawaii on DIRECTV, DISH Network and Hawaiian Telcom TV.

On September 30, 2011 OTWC was notified by Certified Mail of KUPU-DT's decision pursuant to Sections 76.56 and 76.64 of the rules of the FCC to elect mandatory carriage of the Station's television signal on all systems operated by OTWC or its subsidiaries and affiliates serving the Honolulu, Hawaii DMA for the election period starting January 1, 2012 and ending December 31, 2014.

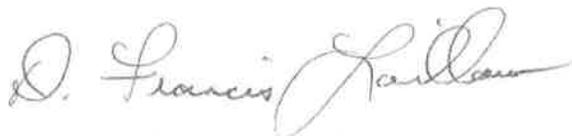
There is no lawful reason for OTWC to refuse to carry KUPU-DT on any part of its system serving the Honolulu, Hawaii DMA. Accordingly, we do hereby restate our demand for carriage within 30 days. Please feel free to contact us should you have any questions. As Hawaii's Catholic TV serving all communities including Hawaii's 345,000 registered Catholics, it is our hope to have a cordial and cooperative relationship with Oceanic Time Warner Cable.

The station's contact person and address for purposes of receiving official correspondence is:

KUPU - Hawaii Catholic TV, Inc.
Attn.: D. Francis Laidlaw
Post Office Box 15
Honolulu, HI 96810
T: (808) 591-8282 F: (808) 591-1250
manager@kupu.tv

Please feel free to contact us should you have any questions.

Sincerely yours,

A handwritten signature in cursive script that reads "D. Francis Laidlaw".

D. Francis Laidlaw
General Manager

EXHIBIT 2

200 Akamainui Street
Mililani, Hawaii 96789-3999
Tel 808-625-2100
Fax 808-625-5888



September 12, 2013

**VIA CERTIFIED MAIL/
RETURN RECEIPT REQUESTED**

Mr. D. Francis Laidlaw
General Manager
Hawaii Catholic TV, Inc.
P.O. Box 15
Honolulu, Hawaii 96810

Re: KUPU-TV

Dear Mr. Laidlaw:

This is in response to your letter dated August 13, 2013 seeking carriage by Oceanic Time Warner Cable ("TWC") of KUPU-TV, and to follow-up on our subsequent communications.

We have determined that KUPU-TV delivers a good quality signal to TWC's Oahu headend. Accordingly, we plan to commence carriage of KUPU-TV on digital channel 56 on our Oahu cable system on or about October 16, 2013. TWC intends to comply with recent FCC rule changes that, as you may know, no longer require cable operators to downconvert digital television station signals into analog format.

As shown on the attached signal test results, we have also determined that KUPU-TV does not deliver a good quality signal to any of our other Hawaii headends serving areas outside Oahu. Naturally, we remain willing to consider carriage of KUPU-TV on our other Hawaii systems upon receipt of a proposal from KUPU-TV for delivery of its signal, at its expense, to the affected headends.

We look forward to commencing carriage of KUPU-TV on TWC's Oahu cable system and the continuation of the cordial and mutually beneficial relationship referenced in your email dated August 23, 2013.

Very truly yours,

A handwritten signature in black ink that reads "Bob Barlow". The signature is written in a cursive, flowing style.

Bob Barlow

KUPU - Honolulu Hawaii

Signal Strength and Quality Tests

According to the FCC, "The cable operator bears the burden of demonstrating the lack of a good quality signal being delivered to the system's principal headend. In meeting this burden, the cable operator must show that it has used good engineering practices to measure the signal."

"Signal strength surveys should, at a minimum, include the following: (1) specific make and model numbers of the equipment used, as well as its age and most recent date(s) of calibration; (2) descriptions of the characteristics of the equipment used, such as antenna ranges and radiation patterns; (3) height of the antenna above ground level and whether the antenna was properly oriented; and (4) weather conditions and time of day when the tests were done."

Generally, the signal being tested should be treated similarly to other currently-received signals in the same band (same antenna height, etc.).

The initial point of measurement should be at the input to the first piece of active processing equipment (before the preamp) relevant to the signal at issue. Please be as objective as possible while checking the picture quality for possible interference.

For digital stations, the threshold level for a good quality signal is -61 dBm (-12.25 dBmV), with testing required over a 24-hour period with measurements not more than four hours apart. To convert dBmV to dBm, subtract 48.75 dB from the dBmV value. However, if the initial test results are less than -67 dBm (-18.25 dBmV), the FCC has said that at least four more readings must be taken over a two-hour period. Where the initial readings are between -67 dBm (-18.25 dBmV) and -61 dBm (-12.25 dBmV), inclusive, six additional readings should be taken over a 24-hour period with measurements not more than four hours apart.

Equipment used for tests: list the antenna, preamp, downconverter, downlead, etc. used to perform the tests. Indicate if the antenna is cut to a particular channel or frequency. Indicate the height of the antenna during the test, and the length and type of downlead. Indicate the output frequency or channel of the downconverter. Include equipment specifications, settings, measured RF levels at the input terminals of the signal processing equipment, a description of the test methodology used, and a block diagram of the test setup.

Date of test: 8/30/13 Weather: Clear

Headend Name & State: OTWC Kaloko-Hawaii Headend / Antenna Location (lat./long.): 19 30 00N 156 00 07W

Call Sign of signal tested: KUPU Channel of signal tested: UHF-15 Video carrier frequency: 479.0MHz

Station city and state of license: Waimanalo-HI Station transmitter site (lat./long.): 21 19 23N 157 40 53W

Transmitter elevation: 840m amsl Transmitter power: 49.6kW Distance of transmitter from headend reception site: 267km

Test	Time	DBm	dBmv	Picture Quality (note signal quality problems & weather conditions)
Test #1	07:30	-106.05dBm	-57.3dBmV	blank raster- with clear skies
Test #2	09:00	-104.15dBm	-55.4dBmV	blank raster- with clear skies
Test #3	10:30	-105.05dBm	-56.3dBmV	blank raster- with clear skies
Test #4	12:00	-103.45dBm	-54.7dBmV	blank raster- with clear skies
Test #5	13:30	-106.95dBm	-58.2dBmV	blank raster- with clear skies
Test #6	15:00	-104.35dBm	-55.6dBmV	blank raster- with clear skies

Make and Model	Type	Frequency	Channel	Gain	Cal. Date	Age (yrs)	Ant. Height(ft)	Ant. properly oriented?
Radio Shack Dual Band Sunrise Telecom AT2500RQv	VHF-UHF Spectrum Analyzer	479MHz	UHF-15		Aug 2010	5	18' agl	yes

Name of person performing tests: Patrick Carvalho Phone: (808)331-4921



Antenna: Radio Shack UHF-VHF
 Installed: 2008
 Mounted Height: 18'agl
 Location: 19 30 00N 156 00 07W
 Heading: 285 degrees NW

Downlead: Commscope RG6 100ft long
 Installed: 2008
 Approximate loss at 600MHz: 3.5dB

Test Meter: Sunrise Telecom AT2500RQv
 Ser: 3448-0901
 Cal Date: 2007

Test Date: 9/6/2013
 Call sign of signal tested: KUPU
 Channel of signal tested: UHF-15
 Carrier frequency of signal tested: 479MHz
 Avg Results:
 dBm: -105dBm(calc) dBmV: -56.8dBmV
 Avg Picture: snowy raster- receiver no lock on signal
 Weather conditions: Clear day with some clouds, very little wind with calm oceans

	Must Carry Block Diagram		
	KUPU - 479MHz		
Kailua-Kona, Hawaii	File	Revised by	kupu antenna test setup
9/6/2013	Drawn By	PC	SHEET 1 of 1

[CALL SIGN] - [COMMUNITY OF LICENSE]

Signal Strength and Quality Tests

According to the FCC, "The cable operator bears the burden of demonstrating the lack of a good quality signal being delivered to the system's principal headend. In meeting this burden, the cable operator must show that it has used good engineering practices to measure the signal."

"Signal strength surveys should, at a minimum, include the following: (1) specific make and model numbers of the equipment used, as well as its age and most recent date(s) of calibration; (2) descriptions of the characteristics of the equipment used, such as antenna ranges and radiation patterns; (3) height of the antenna above ground level and whether the antenna was properly oriented; and (4) weather conditions and time of day when the tests were done."

Generally, the signal being tested should be treated similarly to other currently-received signals in the same band (same antenna height, etc.).

The initial point of measurement should be at the input to the first piece of active processing equipment (before the preamp) relevant to the signal at issue. Please be as objective as possible while checking the picture quality for possible interference.

For digital stations, the threshold level for a good quality signal is -61 dBm (-12.25 dBmV), with testing required over a 24-hour period with measurements not more than four hours apart. To convert dBmV to dBm, subtract 48.75 dB from the dBmV value. However, if the initial test results are less than -67 dBm (-18.25 dBmV), the FCC has said that at least four more readings must be taken over a two-hour period. Where the initial readings are between -67 dBm (-18.25 dBmV) and -61 dBm (-12.25 dBmV), inclusive, six additional readings should be taken over a 24-hour period with measurements not more than four hours apart.

Equipment used for tests: list the antenna, preamp, downconverter, downlead, etc. used to perform the tests. Indicate if the antenna is cut to a particular channel or frequency. Indicate the height of the antenna during the test, and the length and type of downlead. Indicate the output frequency or channel of the downconverter. Include equipment specifications, settings, measured RF levels at the input terminals of the signal processing equipment, a description of the test methodology used, and a block diagram of the test setup.

Date of test: 9/6/13 Weather: Clear no clouds Sunny
 Headend Name & State: Hilo Headend Hawaii Headend / Antenna Location (lat./long.): 19-42-39.1N 155-4-33.0W
 Call Sign of signal tested: KUPU Channel of signal tested: UHF 15 Video carrier frequency: 477.25MHz
 Station city and state of license: Oahu Station transmitter site (lat./long.): _____
 Transmitter elevation: _____ Transmitter power: _____ Distance of transmitter from headend reception site: 211 miles

Test	Time	DBm	dBmv	Picture Quality (note signal quality problems & weather conditions)				
Test #1	9:15AM		-28	No Picture Clear no clouds Sunny Radio Shack 8 element UHF Antenna w/Sunrise AT2500RQv meter				
Test #2	9:45AM		-29	No Picture Clear no clouds Sunny w/ Radio Shack Omni Directional UHF Ant w/ SDA 5000meter				
Test #3	10:40AM		-27.8	No Picture Clear no clouds Sunny with Radio Shack 8 element UHF Antenna w/ 10db Amp. AT2500RQv				
Test #4	11:12AM		-28.5	No Picture Clear no clouds Sunny with Radio Shack Omni directional Ant. SDA5000 meter				
Test #5								
Test #6								
Test #7								
Test #8								
Make and Model	Type	Frequency	Channel	Gain	Cal. Date	Age (yrs)	Ant. Height(ft)	Ant. properly oriented?
Radio Shack 5MS921	Omni Dir	477.25M	UHF/15	20db		2 years	73ft	Yes
Radio Shack UHF	UHF	477.25	UHF15	10db amp		5 Years	28ft	Yes

Name of person performing tests: Blaine Oyama Phone: 808 960-0185 cell



Antenna: Radio Shack 5MS921 UHF 20db gain Omni Directional
 Installed: 2011
 Mounted Height: 73ft
 Location: 19 42 39.1N 155 4 33.0 W
 Heading: 360 degrees Omni ant., 291 degrees West

cleared
 Pre-amp: Pre-amp with Omni Directional to combine for 20db gain
 Installed: 2011
 Downlead: Commscope RG11 150ft
 Installed: 2011
 Approximate loss at 500MHz: 3dB

Test Meter: Acterna SDA5000
 Ser: 3150096
 Cal Date: April 25, 2013
 Cable: 150 ft Comscope RG11 3.5db loss
 Test Receiver: K Tech Telecom DTV Receiver/Decoder
 Model: DVM150E
 S/N DVMNRDN-5208-13
 Sony KV-13FS100 S/N4040555
 Installed: 2013

Test Date: 9/6/2013
 Call sign of signal tested: KUPU
 Channel of signal tested: UHF-15
 Carrier frequency of signal tested: 479MHz
 Avg Results:
 dBm: -77.3 dBmV: -28.5
 Avg Picture: No Picture, only snow
 Weather conditions: Clear day with no clouds, Mauna Kea Mt. in path clear.

	Must Carry Block Diagram		
	KUPU - 479MHz		
Hilo, Hawaii	Rev	Revised by	Filename
9/6/2013	Drawn By	BYO	kupu antenna test setup hilo.vsd
			SHEET



Antenna: Radio Shack UHF 8 Element Antenna
 Installed: 2008
 Mounted Height: 28ft
 Location: 19 42 39.1N 155 4 33.0 W
 Heading: 291 degrees West
 Pre-amp: Antronix 10B1 ARA2 10db gain
 Installed: 2011
 Downlead: Commscope F11TSVV RG11 75ft
 Installed: 2011
 Approximate loss at 500MHz: 2.5db

Test Meter: Sunrise AT2500RQv
 Cal Date: 2012
 Test Receiver: K Tech Telecom DTV Receiver/Decoder
 Model: DVM150E
 S/N DVMNRDN-5208-13
 Sony KV-13FS100 S/N4040555
 Installed: 2013

Test Date: 9/6/2013
 Call sign of signal tested: KUPU
 Channel of signal tested: UHF-15
 Carrier frequency of signal tested: 479MHz
 Avg Results:
 dBm: -76.8 dBmV: -28
 Avg Picture: No Picture, only snow
 Weather conditions: Clear day with no clouds, Mauna Kea Mt. in path clear.

	Must Carry Block Diagram		
	ant2		
Hilo, Hawaii	Rev	Revised by	Filename
9/6/2013	Drawn By	BYO	kupu antenna test setup hilo.vsd
			SHEET 2 of 2

Signal Strength and Quality Tests

According to the FCC, "The cable operator bears the burden of demonstrating the lack of a good quality signal being delivered to the system's principal headend. In meeting this burden, the cable operator must show that it has used good engineering practices to measure the signal."

"Signal strength surveys should, at a minimum, include the following: (1) specific make and model numbers of the equipment used, as well as its age and most recent date(s) of calibration; (2) descriptions of the characteristics of the equipment used, such as antenna ranges and radiation patterns; (3) height of the antenna above ground level and whether the antenna was properly oriented; and (4) weather conditions and time of day when the tests were done."

Generally, the signal being tested should be treated similarly to other currently-received signals in the same band (same antenna height, etc.).

Date of test: 8/29/2013

Weather: Clear to Partly Cloudy

Headend Name & State: Kihei (Maui), HI

Headend / Antenna Location (lat./long.): 20° 44' 40" N 156° 27' 3" W

Call Sign of signal tested: KUPU

Channel of signal tested: UHF Ch. 15 (Digital Ch. 56)

Video carrier frequency: 479 MHz

Station city and state of license: Waimanalo, HI

Station transmitter site (lat./long.): 21° 19' 23.00" N 157° 40' 53.00" W

Transmitter elevation: 1646' Transmitter power: 12.0 kw

Distance of transmitter from headend reception site: 106.07 miles.

Test	Time	DBm	dBmv	Picture Quality (note signal quality problems & weather conditions)
Test #1	10:30 am	-70.35	-21.6	No picture – Clear Day
Test #2	11:05am	-70.35	-21.6	No picture – Clear Day
Test #3	11:45am	-70.35	-21.6	No picture – Clear Day
Test #4	12:10pm	-70.35	-21.6	No picture – Clear Day
Make and Model				
Channel Master CM-2018	Type	UHF	Frequency	479 MHz
	Channel	UHF Ch. 15	Gain	8 db
	Cal. Date	Jan 2011	Age (yrs)	2
	Ant. Height(ft)	20 feet	Ant. properly oriented? yes	

Name of person performing tests: Rodney Mayeaux Phone: 808-357-3475 - Down lead length is 15' Commscope RG6 coaxial cable connected to antenna Balun - Test Equipment HP Spectrum Analyzer and JDSU 3500 Signal Level Meter.



Equipment used for tests: list the antenna, preamp, downconverter, downlead, etc. used to perform the tests. Indicate if the antenna is cut to a particular channel or frequency. Indicate the height of the antenna during the test, and the length and type of downlead. Indicate the output frequency or channel of the downconverter. Include equipment specifications, settings, measured RF levels at the input terminals of the signal processing equipment, a description of the test methodology used, and a block diagram of the test setup.

The initial point of measurement should be at the input to the first piece of active processing equipment (before the preamp) relevant to the signal at issue. Please be as objective as possible while checking the picture quality for possible interference.

For digital stations, the threshold level for a good quality signal is **-61 dBm** (-12.25 dBmV), with testing required over a 24-hour period with measurements not more than four hours apart. To convert dBmV to dBm, subtract 48.75 dB from the dBmV value. However, if the initial test results are less than -67 dBm (-18.25 dBmV), the FCC has said that at least four more readings must be taken over a two-hour period. Where the initial readings are between -67 dBm (-18.25 dBmV) and -61 dBm (-12.25 dBmV), inclusive, six additional readings should be taken over a 24-hour period with measurements not more than four hours apart.



Antenna: Channel Master CM-2018, 8dB Gain
 Installed: 2010
 Mounted Height: 20'
 Location: 20' 44' 40"N 156' 27' 3" W
 Heading: 294 degrees NW

Downlead: Commscope 2281 BKRL RG6 53ft long
 Installed: 2012
 Approximate loss at 600MHz: 2.7dB

Test Meter: Hewlett Packard 8591 C
 S/N 3441A00516
 Cal Date: 2009

Test Receiver: RCA ATSC Mod# DTA800B1
 Installed: 2010

Test Date: 8/29/2013
 Call sign of signal tested: KUPU
 Channel of signal tested: UHF-15
 Carrier frequency of signal tested: 479MHz
 Avg Results:
 dBm: -70.35 dBmV: -21.6
 Avg Picture: None
 Weather conditions: Clear day with some clouds, very little wind with calm oceans

	Must Carry Block Diagram		
	KUPU - 479MHz		
Kihei, Maui	Rev	Revised by	kupu antenna test setup
9/4/2013	Drawn By	MK	SHEET 1 of 1

KUPU - Honolulu Hawaii

Signal Strength and Quality Tests

According to the FCC, "The cable operator bears the burden of demonstrating the lack of a good quality signal being delivered to the system's principal headend. In meeting this burden, the cable operator must show that it has used good engineering practices to measure the signal."

"Signal strength surveys should, at a minimum, include the following: (1) specific make and model numbers of the equipment used, as well as its age and most recent date(s) of calibration; (2) descriptions of the characteristics of the equipment used, such as antenna ranges and radiation patterns; (3) height of the antenna above ground level and whether the antenna was properly oriented; and (4) weather conditions and time of day when the tests were done."

Generally, the signal being tested should be treated similarly to other currently-received signals in the same band (same antenna height, etc.).

The initial point of measurement should be *at the input to the first piece of active processing equipment* (before the preamp) relevant to the signal at issue. Please be as objective as possible while checking the picture quality for possible interference.

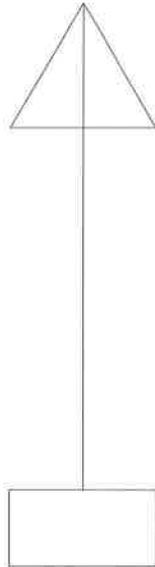
For digital stations, the threshold level for a good quality signal is **-61 dBm** (-12.25 dBmV), with testing required over a 24-hour period with measurements not more than four hours apart. To convert dBmV to dBm, subtract 48.75 dB from the dBmV value. However, if the initial test results are less than -67 dBm (-18.25 dBmV), the FCC has said that at least four more readings must be taken over a two-hour period. Where the initial readings are between -67 dBm (-18.25 dBmV) and -61 dBm (-12.25 dBmV), inclusive, six additional readings should be taken over a 24-hour period with measurements not more than four hours apart.

Equipment used for tests: List the antenna, preamp, downconverter, downlead, etc. used to perform the tests. Indicate if the antenna is cut to a particular channel or frequency. Indicate the height of the antenna during the test, and the length and type of downlead. Indicate the output frequency or channel of the downconverter. Include equipment specifications, settings, measured RF levels at the input terminals of the signal processing equipment, a description of the test methodology used, and a block diagram of the test setup.

Date of test: 9/04/2013 Weather: Clear with some clouds
 Headend Name & State: OTWC Kalaheo-Hawaii Headend / Antenna Location (lat./long.): 21 54 58N 159 31 26.5 W
 Call Sign of signal tested: KUPU Channel of signal tested: UHF-15 Video carrier frequency: 479.0mHz
 Station city and state of license: Waimanalo-HI Station transmitter site (lat./long.): 21 19 23N 157 40 53W
 Transmitter elevation: 840m amsl Transmitter power: 49.6kW Distance of transmitter from headend reception site: 201.6km

Test	Time	DBm	dBmv	Picture Quality (note signal quality problems & weather conditions)				
#1	9/3/13	12:00	-63.55dBm	-14.8dBmV Pix and audio constantly breaking up, freeze frames w/pixels. Clear day with some clouds.				
#2	9/3/13	13:00	-64.55dBm	-15.8dBmV Pix and audio constantly breaking up, freeze frames w/pixels. Clear day with some clouds.				
#3	9/3/13	14:00	-65.15dBm	-16.4dBmV Pix and audio constantly breaking up, freeze frames w/pixels. Clear day with some clouds.				
#4	9/3/13	15:00	-63.65dBm	-14.9dBmV Pix and audio constantly breaking up, freeze frames w/pixels. Clear day with some clouds.				
#5	9/3/13	16:00	-64.15dBm	-15.4dBmV Pix and audio constantly breaking up, freeze frames w/pixels. Clear day with some clouds.				
#6	9/4/13	08:00	-63.45dBm	-14.7dBmV Pix and audio constantly breaking up, freeze frames w/pixels. Clear day with some clouds.				
#7	9/4/13	09:00	-64.35dBm	-15.6dBmV Pix and audio constantly breaking up, freeze frames w/pixels. Clear day with some clouds.				
#8	9/4/13	10:00	-64.85dBm	-16.1dBmV Pix and audio constantly breaking up, freeze frames w/pixels. Clear day with some clouds.				
#9	9/4/13	11:00	-65.05dBm	-16.3dBmV Pix and audio constantly breaking up, freeze frames w/pixels. Clear day with some clouds.				
Make and Model	Type	Frequency	Channel	Gain	Cal. Date	Age (yrs)	Ant. Height(ft)	Ant. properly oriented?
Archer U-120	UHF yagi	UHF	UHF 15	12dB	Na	5	25	Yes
Commscope F11TSVV	RG11	5mhz-1g	na	na	na	1	60' long	na
Blonder TongueCMA-uc	preamp	UHF	UHF	20dB	na	5	inside headend	na
Sunrise AT2500RQv	Analyzer	479mhz	UHF15	Na	2007	7	na	na
Ktech DVM-150E	Dtv rx/dec	Uhf/vhf	Uhf15	na	na	3	na	na

Name of person performing tests: Mike Matutino Phone: (808)332-9451



Antenna: Archer U-120 UHF Yagi, 11.7dB Gain
 Installed: 2008
 Mounted Height: 25'
 Location: 21 54 58N 159 31 26.5 W
 Heading: 109 degrees

Pre-amp: BlonderTongueCMA-uc 20dB Gain
 Installed: 2008

Downlead: Commscope F11TSVV RG11 60ft long
 Installed: 2012
 Approximate loss at 600MHz: 1.9dB

Test Meter: Sunrise Telecom AT2500RQv
 Ser: 5641-1103
 Cal Date: 2007

Test Receiver: Ktech DVM-150E
 Installed: 2010

Test Date: 9/4/2013

Call sign of signal tested: KUPU

Channel of signal tested: UHF-15

Carrier frequency of signal tested: 479MHz

Avg Results:

dBm: -64.306 dBmV: -15.56

Avg Picture: Pixelation and freeze frames with broken audio

Weather conditions: Clear day with some clouds, very little wind with calm oceans

	Must Carry Block Diagram		
	KUPU - 479MHz		
Kalaheo, Kauai	Rev	Revised by	kupu antenna test setup,
9/4/2013	Drawn By	IKY	SHEET 1 of 1

CERTIFICATE OF SERVICE

I, Daniel Kirkpatrick, hereby certify that on this 12th day of November, 2013, I caused a copy of the foregoing "Must Carry Complaint" to be served via U.S. mail, postage prepaid, upon the following:

Bob Barlow, President
Time Warner Entertainment Co., L.P.
200 Akamainui Street
Mililani, HI 96789