



State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
EBA326

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
SHELLY MURRAY
304-558-8801

RFQ COPY

TYPE NAME/ADDRESS HERE

*820163637 814-472-5540

Propagation Systems, Inc.

719 Pensacola Road

PO Box 113

Ebensburg, PA 15931

EDUCATIONAL BROADCASTING
AUTHORITY
VARIOUS LOCALES AS INDICATED
BY ORDER

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
12/10/2010				

BID OPENING DATE:

01/06/2011

BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
----- ADDENDUM NO. 1 -----						
THIS ADDENDUM IS ISSUED TO ALLOW FOR THE SUBMISSION OF QUESTIONS.						
TECHNICAL QUESTIONS MUST BE SUBMITTED IN WRITING TO SHELLY MURRAY IN THE WEST VIRGINIA PURCHASING DIVISION VIA MAIL AT THE ADDRESS SHOWN AT THE TOP IF THIS RFQ, VIA FAX AT 304-558-4115, OR VIA E-MAIL AT SHELLY.L.MURRAY@WV.GOV. DEADLINE FOR ALL TECHNICAL QUESTIONS IS 12/20/2010 AT THE CLOSE OF BUSINESS. ALL TECHNICAL QUESTIONS RECEIVED, IF ANY, WILL BE ADDRESSED BY ADDENDUM AFTER THE DEADLINE.						
THE BID OPENING DATE HAS BEEN EXTENDED:						
FROM: 12/16/2010						
TO : 01/06/2011						
001	1	EA		840-10		
ANTENNAS AND ACCESSORIES, TELEVISION						
EXHIBIT 10						
REQUISITION NO.: EBA326						
ADDENDUM ACKNOWLEDGEMENT						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
	814-472-5540	January 5, 2011
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
President		

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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12/10/2010				

BID OPENING DATE: 01/06/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.						
ADDENDUM NO. S:						
NO. 1 ✓						
NO. 2 ✓						
NO. 3						
NO. 4						
NO. 5						
I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.						
VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.						
..... SIGNATURE						
Propagation Systems, Inc. COMPANY						
January 5, 2011 DATE						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
	814-472-5540	January 5, 2011
TITLE	ADDRESS CHANGES TO BE NOTED ABOVE	
President		

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12/10/2010				

BID OPENING DATE:

01/06/2011

BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.						
----- END OF ADDENDUM NO. 1 -----						
***** THIS IS THE END OF RFQ EBA326 ***** TOTAL:						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
<i>Donald A. M...</i>	814-472-5540	January 5, 2011
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
President		

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SHELLY MURRAY 304-558-8801

V E N D O R	*820163637	814-472-5540
	PROPAGATION SYSTEMS INC	
	PO BOX 113	
	719 PENSACOLA RD	
	EBENSBURG PA 15931	

S H I P T O	EDUCATIONAL BROADCASTING
	AUTHORITY
	VARIOUS LOCALES AS INDICATED
	BY ORDER

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS		
12/23/2010						
BID OPENING DATE: 01/06/2011		BID OPENING TIME 01:30PM				
LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
----- ADDENDUM NO. 2 -----						
THIS ADDENDUM IS ISSUED TO ADDRESS THE QUESTIONS RECEIVED PRIOR TO THE QUESTION SUBMISSION DEADLINE OF 12/20/2010 AS ESTABLISHED IN ADDENDUM NO. 1.						
0001	1	EA		840-10		
ANTENNAS AND ACCESSORIES, TELEVISION						
EXHIBIT 10						
REQUISITION NO.: EBA326						
ADDENDUM ACKNOWLEDGEMENT						
I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.						
ADDENDUM NO.'S:						
NO. 1 ✓						
NO. 2 ✓						
NO. 3						
SEE REVERSE SIDE FOR TERMS AND CONDITIONS						
SIGNATURE <i>Daughter A. Holt</i>			TELEPHONE 814-472-5540		DATE January 5, 2011	
TITLE President			FEIN		ADDRESS CHANGES TO BE NOTED ABOVE	

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12/23/2010				

BID OPENING DATE: 01/06/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
NO. 4					
NO. 5					
I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.						
VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.						
..... SIGNATURE Propagation Systems, Inc. COMPANY January 5, 2011 DATE						
NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.						
----- END OF ADDENDUM NO. 2 -----						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
..... President	814-472-5540	January 5, 2011
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EBA326
Addendum No. 2

QUESTION:

Transmission Line section 2.3 – how long of a cable section would we need to supply?

RESPONSE:

The 6 1/8" line terminates at approximately 1010 feet AGL. The antenna Center of Radiation is 960 Feet. This provides a vertical difference of 50 feet. The actual length would vary depending on the antenna being end fed or center fed. The vendor shall provide a connecting line 100 feet in length with one connector factory attached with the other connector provided to be field installed.

QUESTION:

Tower Specifics section 4.3 – What is the diameter of the G7 tower leg that we would be mounting too?

RESPONSE:

The diameter is 5 inches

QUESTION:

What is the proposed centerline of the temporary antenna relative to the top of the existing 6-1/8" rigid coaxial line?

RESPONSE:

The 6 1/8" line terminates at approximately 1010 feet AGL. The antenna Center of Radiation is 960 Feet. This provides a vertical difference of 50 feet. The actual length would vary depending on the antenna being end fed or center fed. The vendor shall provide a connecting line 100 feet in length with one connector factory attached with the other connector provided to be field installed.

QUESTION:

Will the proposed antenna be mounted off the tower leg or face? Or is this for the antenna supplier to decide? What are the sizes of each (tower leg and face)?

RESPONSE:

The vendor has discretion regarding face or leg mount. Either method must have reinforcement to prevent rotation of the antenna. Mounting can be either face mount or leg mount at vendor's discretion. The tower leg diameter is 5 inches. The G7 is a 7 foot face tower

QUESTION:

Can the bidder, so long as the terms don't conflict with the WV rules, provide the terms of its warranty, including duration?

RESPONSE:

Vendor shall provide a one year warranty parts and labor to repair FOB factory. Removal and reinstallation excluded.



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DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
11/29/2010				

BID OPENING DATE: 12/16/2010 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	EA		840-10		
ANTENNAS AND ACCESSORIES, TELEVISION						
REQUEST FOR QUOTATION						
THE PURCHASING DIVISION IS SOLICITING BIDS FOR THE WEST VIRGINIA EDUCATIONAL BROADCASTING AUTHORITY TO PROVIDE (1) DIGITAL CHANNEL 34 SIDE MOUNT ANTENNA WITH RADOME, WHICH INCLUDES A TRANSMISSION LINE TO ADAPTER OF ANTENNA AND TOWER MOUNTING ADAPTERS.						
ATTACHMENTS: BID SHEETS PURCHASING AFFIDAVIT						
BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.						
THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE 814-472-5540	DATE January 5, 2011
TITLE President	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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304-558-8801

VENDOR

*820163637 814-472-5540
Propagation Systems, Inc.
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Ebensburg, PA 15931

SHIP TO

EDUCATIONAL BROADCASTING
AUTHORITY
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BY ORDER

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS		
11/29/2010						
BID OPENING DATE: 12/16/2010		BID OPENING TIME 01:30PM				
LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p>DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: 31</p> <p>RFQ. NO.: EBA326</p> <p>BID OPENING DATE: 12/16/2010</p> <p>BID OPENING TIME: 01:30 PM</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p> <p>FAX: 814-472-5676</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY): DOUG ROSS</p>						
SEE REVERSE SIDE FOR TERMS AND CONDITIONS						
SIGNATURE 			TELEPHONE 814-472-5540		DATE January 5, 2011	
TITLE President			FEIN		ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

RFQ EBA326

The West Virginia Educational Broadcasting Authority is conducting a request for quotations for a digital capable Channel 34 broadcast television side mount antenna.

Overview:

West Virginia Public Broadcasting operates WPBY-DT in Huntington, WV. Two of three bays have failed on the existing antenna, and the station is operating at a reduced power under a Special Temporary Authority issued by the FCC. This project will place a temporary antenna in service in preparation for the replacement and upgrade of the primary antenna. The placement of the temporary antenna is time critical.

- 1 General Mechanical Specifications**
- 2 Transmission line**
- 3 Antenna Gain and Pattern**
- 4 Tower Specifics**
- 5 Attachments**
- 6 Shipping and Delivery**
- 7 Invoicing and Billing**

1 General Mechanical Specifications

<u>COMPLY</u>	1.1	All structural elements shall be designed and fabricated in accordance with TIA/EIA standard RS-222-G, Structural Standards for Steel Antenna, Towers, and Supporting Structures
<u>COMPLY</u>	1.2	All hardware shall be constructed of non-ferrous material (Brass, Copper, Stainless Steel, etc) or be Galvanized
<u>COMPLY</u>	1.2.1	Steel elements shall be hot-dip galvanized in accordance with ASTM A123
<u>COMPLY</u>	1.2.2	Zinc coating shall be applied with a minimum thickness of 0.002 inches (0.05 mm) in accordance with Metco Specification MS-108A
<u>COMPLY</u>	1.3	Vendor shall provide mounting adapters for each antenna
<u>COMPLY</u>	1.4	Vendor shall certify the directional pattern and gain for each antenna
<u>COMPLY</u>	1.5	All antennas, transmission lines, and connectors shall be rated for the power level indicated
<u>COMPLY</u>	1.6	All materials shall be new, no surplus or refurbished components are allowed
<u>COMPLY</u>	1.7	Antenna shall be supplied with a radome for operation in icing conditions

2 Transmission line

- UNDERSTOOD 2.1 There is an existing 6 1/8 rigid coaxial line currently in service which terminates just below the top of steel on the tower.
- UNDERSTOOD 2.1.1 There is a 75 to 50 Ohm transformer at the termination point.
- UNDERSTOOD 2.2 EBA can provide adapters to reduce to 3 1/8 and 1 5/8 EIA flange
- COMPLY 2.3 Vendor shall provide transmission line from adapter to antenna
- UNDERSTOOD 2.3.1 Antenna input connector size and interconnecting line is at vendor's discretion
- COMPLY 2.4 All components must be rated greater than 3000 watts DTV average power

3 Antenna Gain and Pattern

- COMPLY 3.1 Antenna shall operate on Channel 34
- COMPLY 3.2 Antenna shall exhibit a peak directional gain of 16 dB referenced to halfwave dipole
- COMPLY 3.3 Antenna shall have a directional pattern indicated by polar plot and tabulation attached
- COMPLY 3.4 Antenna shall be rated above 3000 watts DTV average power
- COMPLY 3.5 Antenna shall have a 50 ohm impedance
- COMPLY 3.5.1 Antenna shall exhibit a VSWR of less than 1.1:1
- COMPLY 3.6 Beam tilt shall be 1.2 degrees

4 Tower Specifics

UNDERSTOOD 4.1 The tower is a Stainless G7

UNDERSTOOD 4.2 Site drawing showing tower orientation is attached

UNDERSTOOD 4.2.1 Azimuth is reference to True North

COMPLY 4.3 Vendor shall provide mounts for proper azimuth orientation

UNDERSTOOD 4.3.1 Antenna tabulation and polar plot are attached

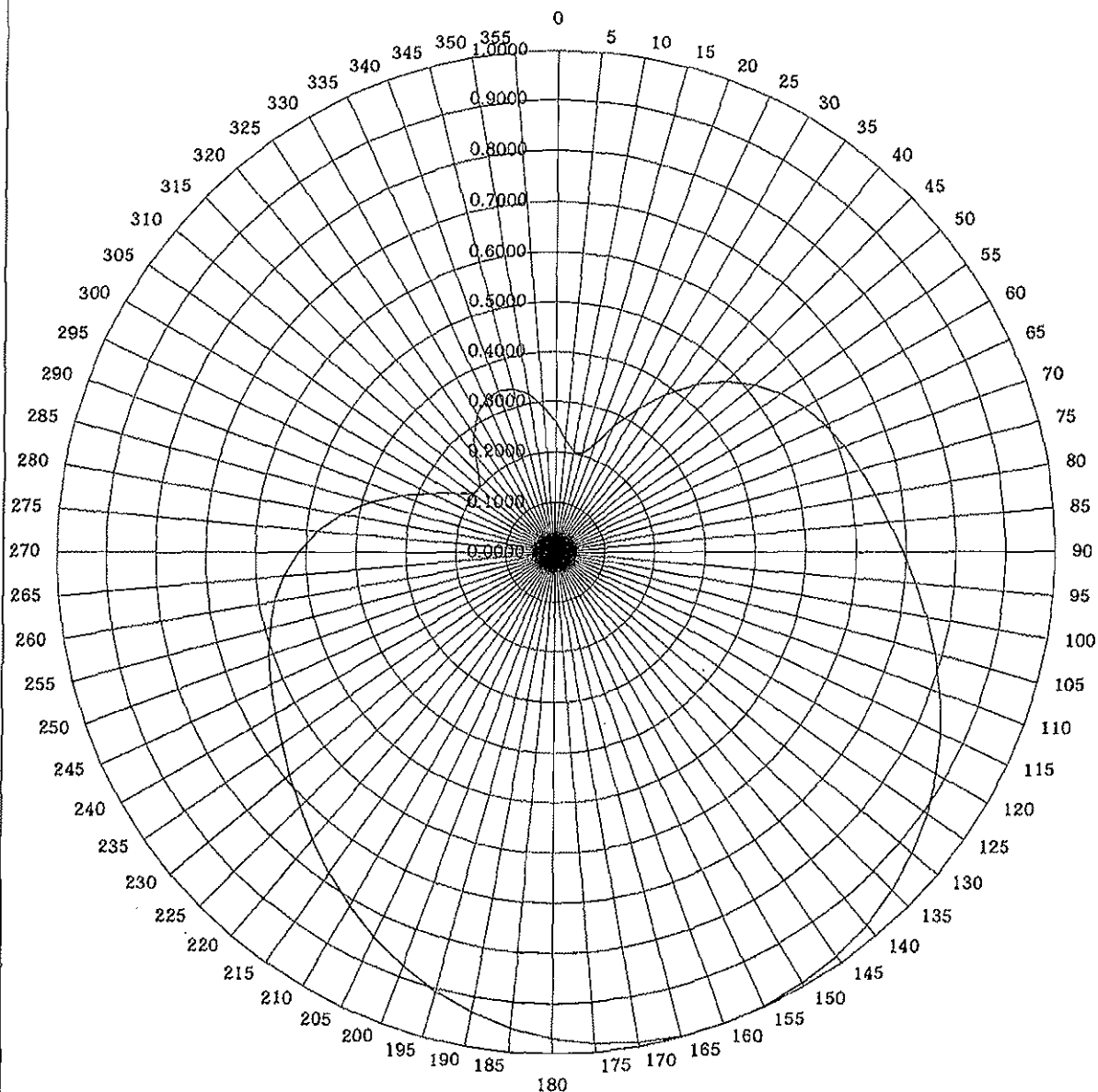
5 Attachments

5.1 Drawing of tower azimuth

5.2 Tabulation of gain

5.3 Polar plot of gain

RELATIVE FIELD AZIMUTH PATTERN



DIELECTRIC - 881-24

ORIENTED WITH BEAM MAXIMA AT 160°

MAXIMUM GAIN (HORIZONTAL AND VERTICAL PATTERN): 17.7 DBD

KESSLER & GEHMAN

TELECOMMUNICATIONS CONSULTING ENGINEERS

507 N.W. 60th Street, Suite C

Gainesville, Florida 32607

WPBY-DT
HUNTINGTON, WV

20030220

EXHIBIT E4B

WPBY-DT

HUNTINGTON, WEST VIRGINIA

TABULATION OF RELATIVE FIELD FOR PROPOSED DIRECTIONAL ANTENNA

<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>	<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>
N000°E	0.254	N180°E	0.970
N005°E	0.221	N185°E	0.952
N010°E	0.200	N190°E	0.931
N015°E	0.202	N195°E	0.907
N020°E	0.229	N200°E	0.879
N025°E	0.275	N205°E	0.849
N030°E	0.328	N210°E	0.816
N035°E	0.382	N215°E	0.783
N040°E	0.433	N220°E	0.751
N045°E	0.478	N225°E	0.720
N050°E	0.515	N230°E	0.691
N055°E	0.546	N235°E	0.666
N060°E	0.571	N240°E	0.645
N065°E	0.591	N245°E	0.626
N070°E	0.609	N250°E	0.609
N075°E	0.626	N255°E	0.591
N080°E	0.645	N260°E	0.571
N085°E	0.666	N265°E	0.546
N090°E	0.691	N270°E	0.515
N095°E	0.720	N275°E	0.478
N100°E	0.751	N280°E	0.433
N105°E	0.783	N285°E	0.382
N110°E	0.816	N290°E	0.328
N115°E	0.849	N295°E	0.275
N120°E	0.879	N300°E	0.229
N125°E	0.907	N305°E	0.202
N130°E	0.931	N310°E	0.200
N135°E	0.952	N315°E	0.221
N140°E	0.970	N320°E	0.254
N145°E	0.983	N325°E	0.288
N150°E	0.992	N330°E	0.317
N155°E	0.998	N335°E	0.335
N160°E	1.000	N340°E	0.341
N165°E	0.998	N345°E	0.335
N170°E	0.992	N350°E	0.317
N175°E	0.983	N355°E	0.288

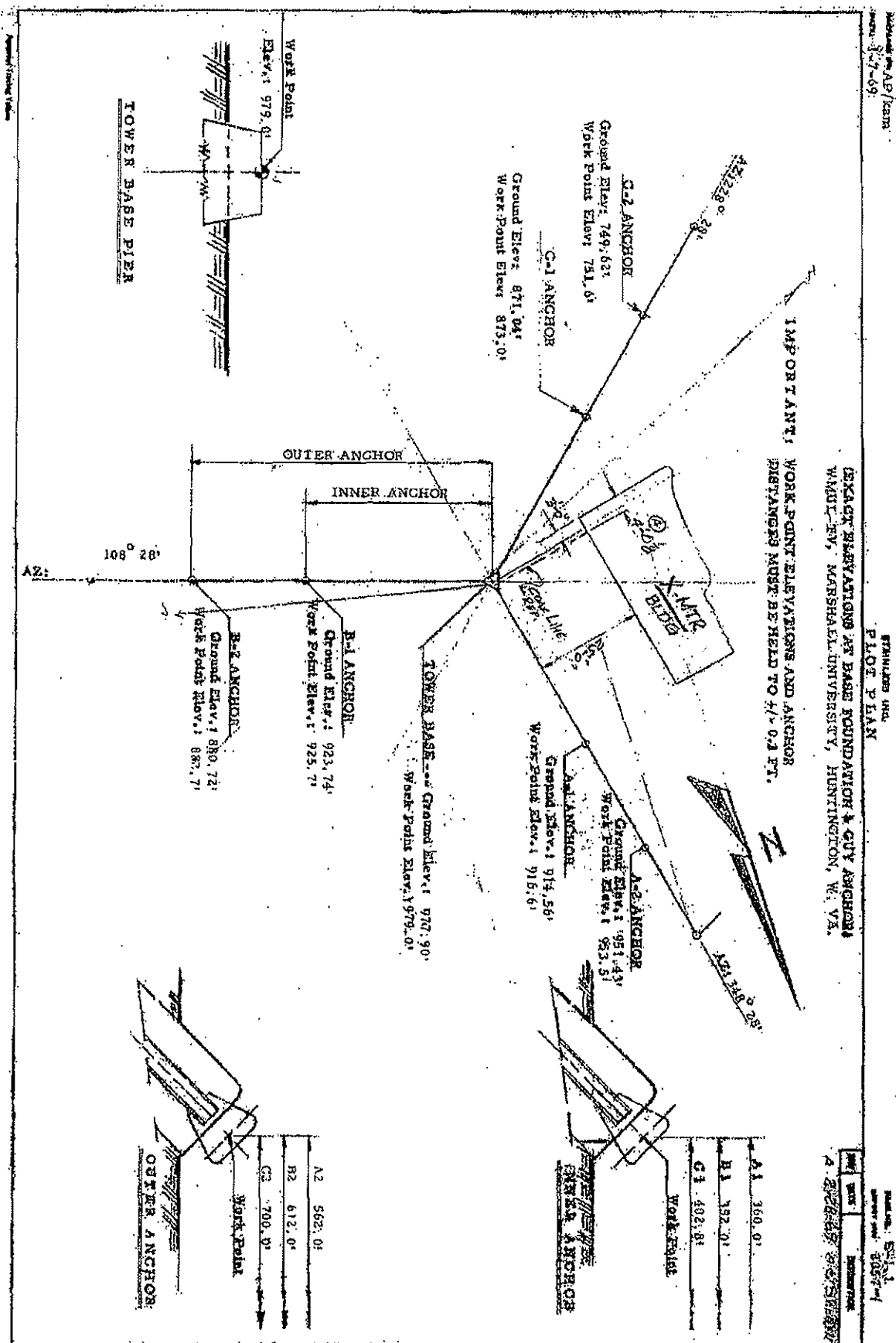
MAXIMUM OF 1.000 AT N160°E
 MINIMUM OF 0.200 AT N010°E AND N310°E

KESSLER & GEHMAN
 TELECOMMUNICATIONS CONSULTING ENGINEERS
 507 N.W. 80th Street, Suite C
 Gainesville, Florida 32607

WPBY-DT
HUNTINGTON, WV

20030220

EXHIBIT E4A



6 Shipping and Delivery

COMPLY 6.1 Vendor shall provide shipping and it will be included in equipment pricing.

UNDERSTOOD 6.2 The receiving facility will be the WPBY Transmitter site

9283 Barker's Ridge Church Road

Milton, WV 25541

UNDERSTOOD 6.3 Shipper shall provide 24 hours notice to arrange off-loading

Contact Dave McClanahan

600 Capitol Street

Charleston, wv 25302

Office 304-556-4914

Cell 304-533-6808

Backup Jeff Queen 304-533-6810

Backup Ernie Maggard 304-533-6811

7 Invoicing and Billing

UNDERSTOOD 7.1 The billing address is:

West Virginia Public Broadcasting

PO Box 9004

Beckley, wv 25802

Jeff Bennett

304-254-7899

EBA326 Pricing Page Digital Channel 34 Sidemount Television Broadcast Antenna

ANTENNA OPTION 1 - MODEL: PSILPD18D88C-34 FULL RADOME

<u>Quantity</u>	<u>Description</u>	<u>Unit Price</u>	<u>Extended Price</u>
1	Digital Channel 34 Side Mount antenna with Radome	\$26,632	\$26,632
1	Transmission Line (from main tower transmission line to adapter of antenna)	\$ 2,335	\$2,335
1 lot	Antenna to tower mounting adaptors	\$ 850	\$ 850
Total			\$29,817

Shipping shall be included in equipment pricing.

	January 5, 2011
Signature of Vendor Representative Submitting Bid	Date

EBA326 Pricing Page Digital Channel 34 Sidemount Television Broadcast Antenna

ANTENNA OPTION 2 - MODEL: PSILPD18D88C-34 SLOT COVER RADOME

<u>Quantity</u>	<u>Description</u>	<u>Unit Price</u>	<u>Extended Price</u>
1	Digital Channel 34 Side Mount antenna with Radome	\$19,311	\$19,311
1	Transmission Line (from main tower transmission line to adapter of antenna)	\$ 2,335	\$ 2,335
1 lot	Antenna to tower mounting adaptors	\$ 600	\$ 600
Total			\$22,246

Shipping shall be included in equipment pricing.

	January 5, 2011
Signature of Vendor Representative Submitting Bid	Date

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (**West Virginia Code §61-5-3**), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Propagation Systems, Inc.

Authorized Signature: *[Signature]* Date: January 5, 2011

State of Pennsylvania

County of Cambria, to-wit:

Taken, subscribed, and sworn to before me this 5 day of January, 2011.

My Commission expires March 14, 2014

AFFIX SEAL HERE

NOTARY PUBLIC *[Signature]*

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal

Lisa A. Summerson, Notary Public

Cambria Twp., Cambria County

My Commission Expires March 14, 2014

Member, Pennsylvania Association of Notaries



Propagation Systems, Inc.

Quality Broadcast Antenna Systems

Propagation Systems, Inc. proposes to supply a digital channel 34 side mount antenna with transmission line to West Virginia Educational Broadcasting Authority for WPBY-DT, Huntington, WV. Two antenna options meeting the requirements of RFQ No. EBA326 are proposed.

Antenna Option 1

The PSILPD series is a UHF band-transmitting antenna optimized for single channel operation in the frequency range of 470 MHz to 862 MHz. The antenna, a collinear "slot" type radiator, is horizontally polarized. The antenna can be customized for a variety of directional patterns.

The antenna employs vertical slots that are cut parallel to the axis of the pipe. The slots are approximately $\frac{1}{2}$ wavelength long at the operating frequency and are spaced approximately 1 wavelength. Adjusting the amplitude and phase at each slot radiator controls the elevation pattern characteristics. The coupling values for each slot are chosen so as to produce desired degree of beam tilt with typically 15% and 5% first and second null fill. This design has been commonly referred to as a traveling wave antenna and is essentially a tuned radiating transmission line. The benefits to this approach include high power handling capacity with a minimal amount of internal components for long-term reliability. No internal cables or power dividers are used in the slot design. The antenna inner conductor is DC grounded for lightning protection.

The slot radiators are protected from the environmental elements by the use of a full fiberglass radome that is pressurized through the feeding transmission line. The proposed antenna will be center fed and will have a 1-5/8" EIA input capable of input powers up to 5 kW of average power.

The directional antenna pattern will have the equivalent azimuth pattern to that specified in the request for bid. The elevation pattern is to have 1.2 degrees of electrical down tilt and 10-20% first null fill. Directional gain of the antenna is 41.76 (16.21 dB).

The antenna is supplied with hot dip galvanized mounting brackets with anti-sway tie backs to accommodate a 5.0" diameter tower leg. The proposed mounting will be off the southeast tower leg with the antenna main lobe positioned 160 degrees true.

Antenna Option 2

A second lower cost antenna option with equivalent electrical characteristics is being offered. The optional antenna will employ a non-pressurized slot cover radome. An outline drawing of the antenna has been included.

Transmission Line

A "jumper" of 1-5/8" flexible coaxial transmission line (100 ft.) will be supplied with the antenna to facilitate the connection from the existing transmission line to the new temporary antenna. A 1-5/8" gas pass connector will be installed first off the reel with an additional 1-5/8" gas pass connector for installation in the field. Cable hangers with round member adapters will be supplied for securing the cable to the tower leg. If the optional non pressurized antenna option is chosen, a 1-5/8" EIA gas block connector will be used with the transmission line.

Warranty

Standard 2-year warranty is offered with either antenna option. Warranty details are attached.

Delivery

Estimated delivery date is to be 4-7 weeks after receiving valid purchase order from West Virginia Educational Broadcasting Authority. All equipment shipping charges are included.

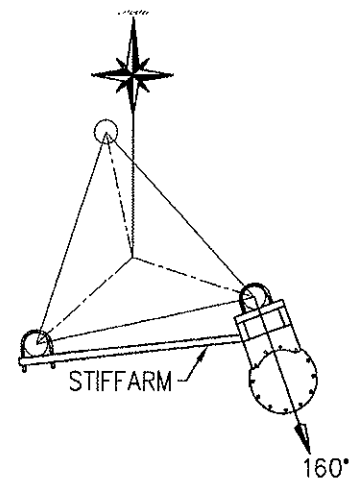
Payment Terms

Purchase order required with order, payment N30 after antenna/transmission line delivery to site.

TOP OF TOWER
1010 FT AGL

EXISTING 6 $\frac{1}{8}$ " LINE WITH
TRANSFORMER AND
REDUCER TO 1 $\frac{5}{8}$ "

PSI SUPPLIED 1 $\frac{5}{8}$ " JUMPER WITH
1 $\frac{5}{8}$ " GAS PASS CONNECTORS



ANTENNA PLAN VIEW AND ORIENTATION
2X SCALE

10" I.D.
RADOME

RCAGL: 960 FT

32.9 FT
[10.03m]

4X MOUNTING BRACKETS

APPROXIMATE SPECIFICATIONS	
LENGTH:	32.9 FT [10.03m]
RATING:	5 kW
GAIN:	41.76 (16.21 dB)
WEIGHT:	290 LB [131.5 Kg]
WINDAREA:	35 Ft ²
TIA-222-F (NO ICE)	

A	D.G. Keller	1/04/10	CHANGE ANTENNA DESIGN PER D. ROSS/CUSTOMER
	MADE BY	CHECKED BY	DATE
REV.	MADE BY	CHECKED BY	DATE
			CHANGE

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SIZE
A

PROPAGATION SYSTEMS, INC.
 Ebensburg, Pennsylvania USA (814) 472-5540

TITLE: 18-BAY UHF ANTENNA OUTLINE, OPTION 1
 for WPBY

MODEL: PSILPD18D88C-34	CHANNEL/FREQUENCY: CHAN. 34	DATE: 3/02/10
SCALE: 1: 80	DRAWN BY: D.G. Keller	APPROVED:
DRAWING NO.: PR1537-A		REV. A

PR1537-A



Antenna Specifications

ANTENNA OPTION 1

PROPOSAL NUMBER:	PR1537-A	DATE:	1/5/11
CUSTOMER:	West Virginia Public Broadcast	ANTENNA TYPE:	PSILPD18D88C-34
CALL LETTERS:	WPBY	CHANNEL:	34
LOCATION:	Huntington, WV	REVISION:	A

Electrical Specifications

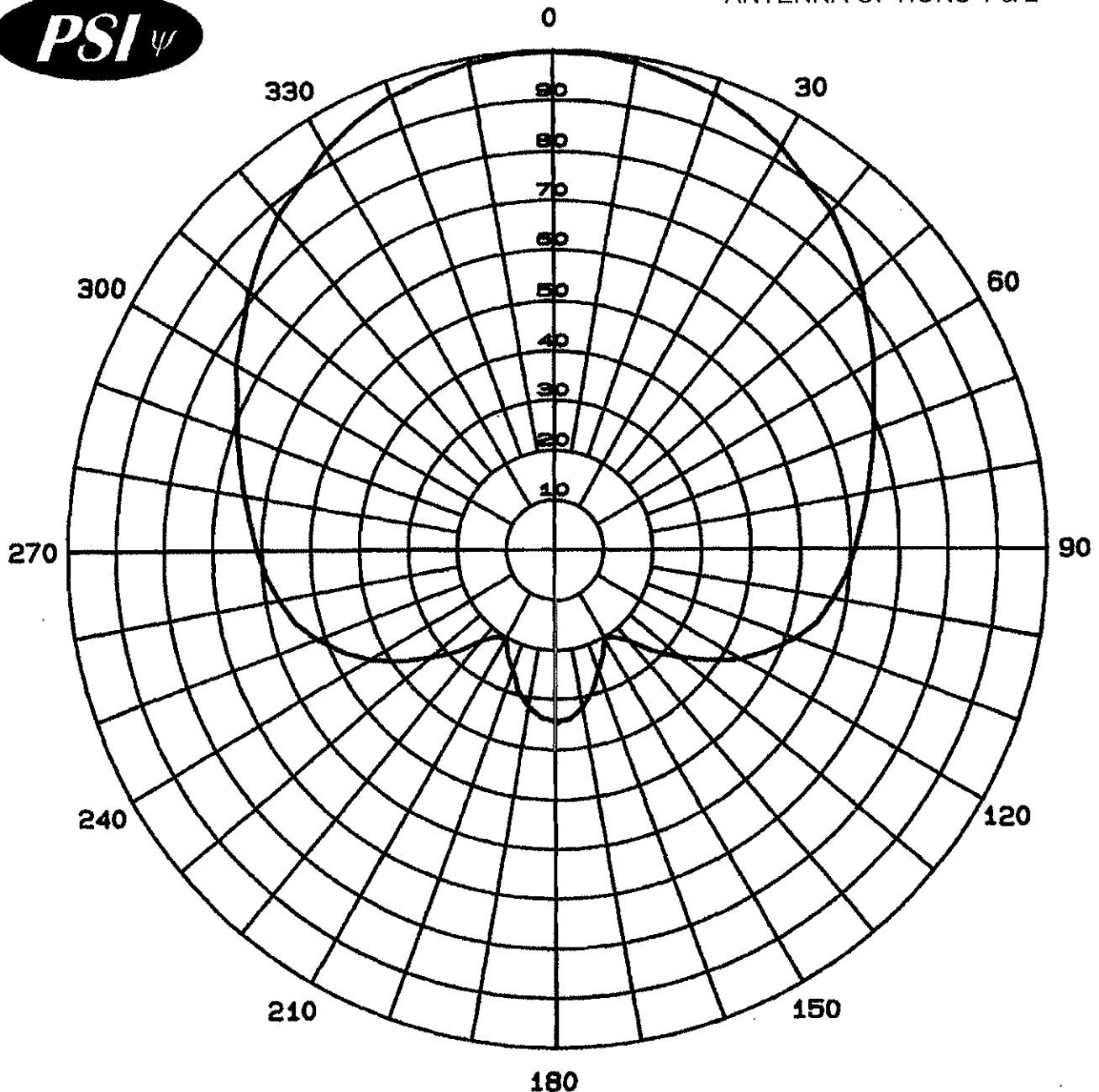
RMS GAIN MAIN LOBE	18.0	12.55	dB
RMS GAIN AT HORIZONTAL	11.73	10.69	dB
AZIMUTH DIRECTIVITY	2.32	3.65	dB
PEAK DIRECTIONAL GAIN	41.76	16.21	dB
ELEVATION PATTERN	PR1537-A Elevation		
AZIMUTH PATTERN	PR1537-A Azimuth		
BEAM TILT	1.2 Degree		
AVERAGE INPUT POWER	5 kW		
INPUT SIZE	1-5/8" EIA center fed		
INPUT IMPEDANCE	50 Ohm		

Mechanical Specifications

HEIGHT WITH LIGHTNING PROTECTION	NA	Ft	NA	M
ANTENNA LENGTH	32.9	Ft	10.0	M
CENTER OF RADIATION	16.45	Ft	5.0	M
WIND AREA (TIA-222-F) No Ice	35	Sq. Ft	3.25	Sq. M
OVERTURN MOMENT	NA	Ft LB	NA	Kg M
WEIGHT	290	LB	131.5	Kg



ANTENNA OPTIONS 1 & 2



Calculated Relative Field
Azimuth Plane Pattern
Antenna: PSILPD18D88C-34
Channel: 34
Directivity: 2.32 (3.65 dB)
Peak Gain: 41.76 (16.21 dB)
Pattern: PR1537-A Azimuth
Station: WPBY

Propagation Systems Inc.
PO Box 113
Ebensburg, PA 15931

Huntington, WV

PROPAGATION SYSTEMS INC.
Relative Field Tabulation
Antenna Model: PSILPD18D88C-33
Gain: 41.76 (16.21 dBd)

Angle	Relative Field	Power Gain	Gain dB
0	1.000	41.76	16.21
10	0.992	41.09	16.14
20	0.970	39.29	15.94
30	0.931	36.20	15.59
40	0.879	32.27	15.09
50	0.816	27.81	14.44
60	0.751	23.55	13.72
70	0.691	19.94	13.00
80	0.645	17.37	12.40
90	0.609	15.49	11.90
100	0.571	13.62	11.34
110	0.515	11.08	10.44
120	0.433	7.83	8.94
130	0.328	4.49	6.53
140	0.229	2.19	3.40
150	0.200	1.67	2.23
160	0.254	2.69	4.30
170	0.317	4.20	6.23
180	0.341	4.86	6.86
190	0.317	4.20	6.23
200	0.254	2.69	4.30
210	0.200	1.67	2.23
220	0.229	2.19	3.40
230	0.328	4.49	6.53
240	0.433	7.83	8.94
250	0.515	11.08	10.44
260	0.571	13.62	11.34
270	0.609	15.49	11.90
280	0.645	17.37	12.40
290	0.691	19.94	13.00
300	0.751	23.55	13.72
310	0.816	27.81	14.44
320	0.879	32.27	15.09
330	0.931	36.20	15.59
340	0.970	39.29	15.94
350	0.992	41.09	16.14

ANTENNA OPTIONS 1 & 2

PROPAGATION SYSTEMS INC.

ERP Tabulation

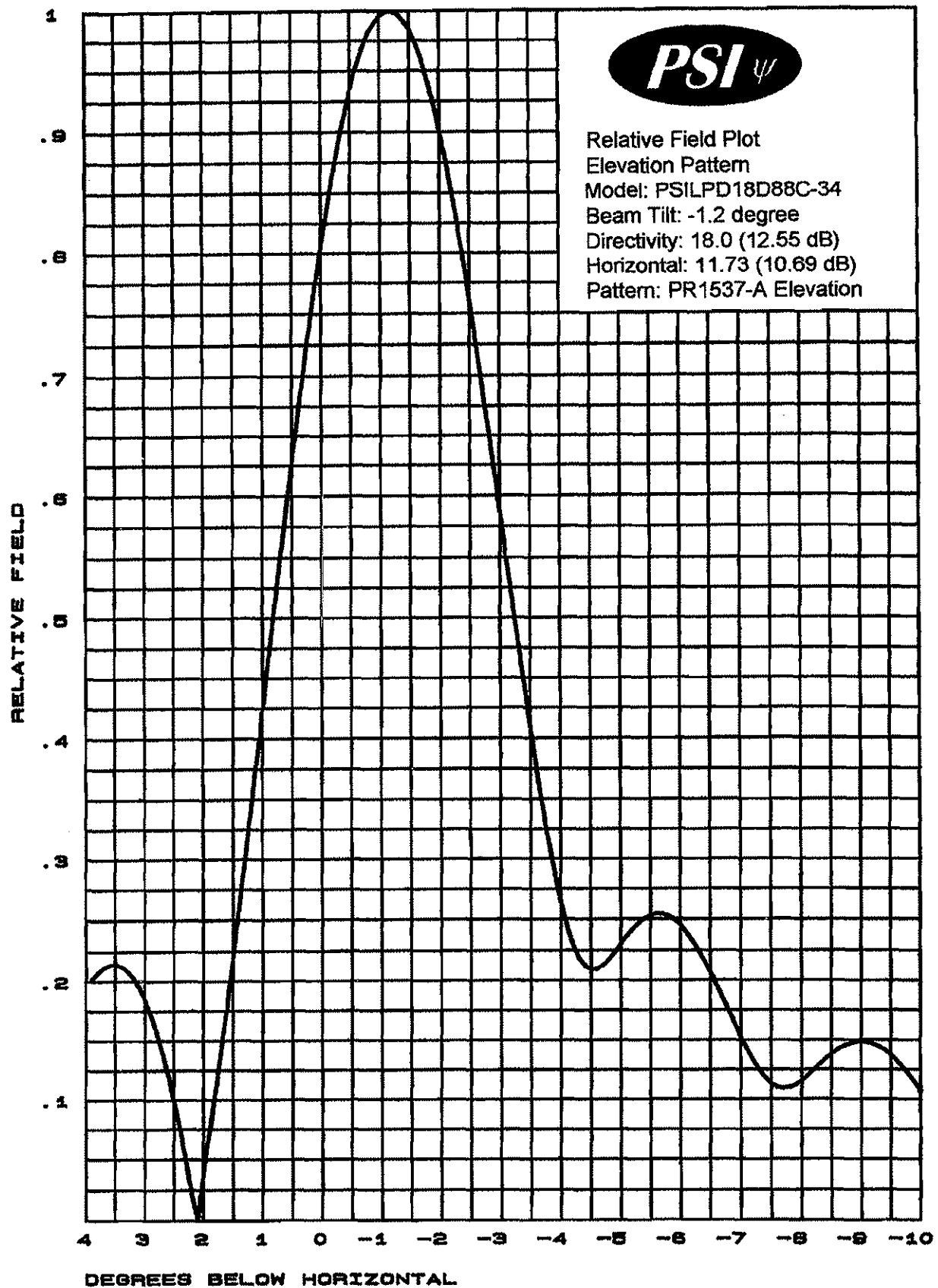
Antenna Model: PSILPD18D88C-33

Gain: 41.76 (16.21 dBd)

ERP: 60.1 kW (17.79 dBk)

Angle	Relative Field	ERP kW	ERP dBk
0	1.000	60.09	17.79
10	0.992	59.14	17.72
20	0.970	56.54	17.52
30	0.931	52.09	17.17
40	0.879	46.43	16.67
50	0.816	40.01	16.02
60	0.751	33.89	15.30
70	0.691	28.69	14.58
80	0.645	25.00	13.98
90	0.609	22.29	13.48
100	0.571	19.59	12.92
110	0.515	15.94	12.02
120	0.433	11.27	10.52
130	0.328	6.47	8.11
140	0.229	3.15	4.98
150	0.200	2.40	3.81
160	0.254	3.88	5.88
170	0.317	6.04	7.81
180	0.341	6.99	8.44
190	0.317	6.04	7.81
200	0.254	3.88	5.88
210	0.200	2.40	3.81
220	0.229	3.15	4.98
230	0.328	6.47	8.11
240	0.433	11.27	10.52
250	0.515	15.94	12.02
260	0.571	19.59	12.92
270	0.609	22.29	13.48
280	0.645	25.00	13.98
290	0.691	28.69	14.58
300	0.751	33.89	15.30
310	0.816	40.01	16.02
320	0.879	46.43	16.67
330	0.931	52.09	17.17
340	0.970	56.54	17.52
350	0.992	59.14	17.72

ANTENNA OPTIONS 1 & 2



ANTENNA OPTIONS 1 & 2

PROPAGATION SYSTEMS INC.

Relative Field Elevation Pattern Tabulation

West Virginia Public Broadcast

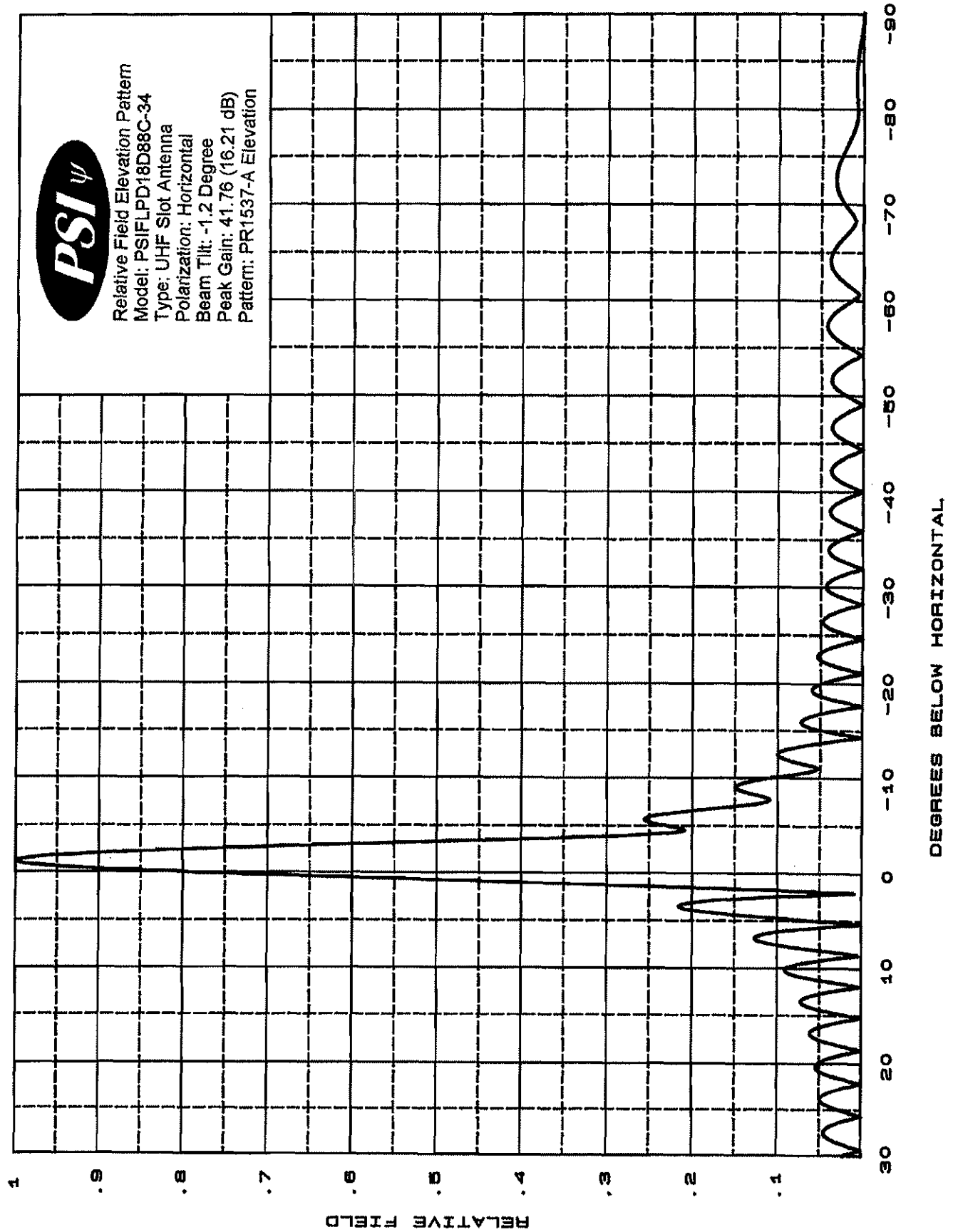
Antenna: PSILPD18D88C-34

Pattern: PR1537-A Elevation

Station: WPBY

Angle	Relative Field	Angle	Relative Field	Angle	Relative Field	Angle	Relative Field
-10.0	0.107	-6.5	0.207	-3.0	0.586	0.5	0.630
-9.9	0.115	-6.4	0.217	-2.9	0.622	0.6	0.591
-9.8	0.121	-6.3	0.226	-2.8	0.658	0.7	0.550
-9.7	0.127	-6.2	0.234	-2.7	0.693	0.8	0.509
-9.6	0.133	-6.1	0.241	-2.6	0.728	0.9	0.468
-9.5	0.138	-6.0	0.247	-2.5	0.761	1.0	0.426
-9.4	0.142	-5.9	0.251	-2.4	0.792	1.1	0.384
-9.3	0.145	-5.8	0.254	-2.3	0.822	1.2	0.343
-9.2	0.147	-5.7	0.256	-2.2	0.850	1.3	0.302
-9.1	0.149	-5.6	0.256	-2.1	0.877	1.4	0.261
-9.0	0.149	-5.5	0.255	-2.0	0.901	1.5	0.221
-8.9	0.148	-5.4	0.252	-1.9	0.922	1.6	0.182
-8.8	0.147	-5.3	0.248	-1.8	0.942	1.7	0.144
-8.7	0.145	-5.2	0.243	-1.7	0.958	1.8	0.108
-8.6	0.142	-5.1	0.237	-1.6	0.972	1.9	0.073
-8.5	0.138	-5.0	0.231	-1.5	0.984	2.0	0.039
-8.4	0.134	-4.9	0.224	-1.4	0.992	2.1	0.008
-8.3	0.129	-4.8	0.218	-1.3	0.997	2.2	0.023
-8.2	0.124	-4.7	0.213	-1.2	1.000	2.3	0.051
-8.1	0.120	-4.6	0.210	-1.1	0.999	2.4	0.077
-8.0	0.115	-4.5	0.209	-1.0	0.996	2.5	0.100
-7.9	0.112	-4.4	0.212	-0.9	0.990	2.6	0.122
-7.8	0.110	-4.3	0.218	-0.8	0.980	2.7	0.142
-7.7	0.109	-4.2	0.229	-0.7	0.968	2.8	0.159
-7.6	0.110	-4.1	0.244	-0.6	0.953	2.9	0.174
-7.5	0.113	-4.0	0.264	-0.5	0.935	3.0	0.186
-7.4	0.118	-3.9	0.287	-0.4	0.914	3.1	0.197
-7.3	0.125	-3.8	0.313	-0.3	0.891	3.2	0.205
-7.2	0.133	-3.7	0.342	-0.2	0.865	3.3	0.210
-7.1	0.143	-3.6	0.373	-0.1	0.837	3.4	0.214
-7.0	0.153	-3.5	0.407	0.0	0.807	3.5	0.216
-6.9	0.164	-3.4	0.441	0.1	0.775	3.6	0.215
-6.8	0.175	-3.3	0.476	0.2	0.741	3.7	0.213
-6.7	0.186	-3.2	0.513	0.3	0.706	3.8	0.209
-6.6	0.197	-3.1	0.549	0.4	0.668	3.9	0.203

ANTENNA OPTIONS 1 & 2



ANTENNA OPTIONS 1 & 2

PROPAGATION SYSTEMS INC.
Relative Field Elevation Pattern Tabulation
West Virginia Public Broadcast
Antenna: PSILPD18D88C-34
Pattern: PR1537-A Elevation
Station: WPBY

Angle	Relative Field	Angle	Relative Field	Angle	Relative Field
-90	0.001	-50	0.021	-10	0.107
-89	0.001	-49	0.002	-9	0.149
-88	0.002	-48	0.024	-8	0.115
-87	0.004	-47	0.036	-7	0.153
-86	0.006	-46	0.034	-6	0.247
-85	0.007	-45	0.016	-5	0.231
-84	0.008	-44	0.009	-4	0.264
-83	0.009	-43	0.031	-3	0.586
-82	0.009	-42	0.038	-2	0.901
-81	0.008	-41	0.026	-1	0.996
-80	0.007	-40	0.001	0	0.807
-79	0.008	-39	0.026	1	0.426
-78	0.011	-38	0.039	2	0.039
-77	0.016	-37	0.031	3	0.186
-76	0.021	-36	0.004	4	0.195
-75	0.026	-35	0.026	5	0.062
-74	0.031	-34	0.041	6	0.080
-73	0.033	-33	0.031	7	0.126
-72	0.033	-32	0.001	8	0.067
-71	0.029	-31	0.031	9	0.033
-70	0.023	-30	0.044	10	0.089
-69	0.014	-29	0.028	11	0.067
-68	0.010	-28	0.008	12	0.005
-67	0.018	-27	0.040	13	0.064
-66	0.028	-26	0.045	14	0.066
-65	0.037	-25	0.017	15	0.017
-64	0.039	-24	0.025	16	0.040
-63	0.035	-23	0.052	17	0.061
-62	0.025	-22	0.041	18	0.034
-61	0.010	-21	0.003	19	0.017
-60	0.013	-20	0.048	20	0.052
-59	0.029	-19	0.058	21	0.046
-58	0.041	-18	0.021	22	0.006
-57	0.043	-17	0.038	23	0.035
-56	0.034	-16	0.072	24	0.049
-55	0.017	-15	0.049	25	0.028
-54	0.006	-14	0.021	26	0.012
-53	0.025	-13	0.087	27	0.042
-52	0.037	-12	0.094	28	0.041
-51	0.035	-11	0.054	29	0.013

TOP OF TOWER
1010 FT AGL

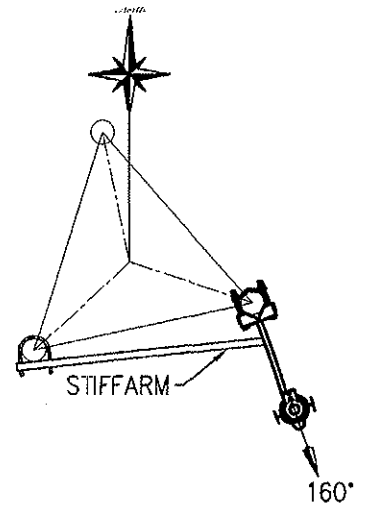
EXISTING 6 $\frac{1}{8}$ " LINE WITH
TRANSFORMER AND
REDUCER TO 1 $\frac{5}{8}$ "

PSI SUPPLIED 1 $\frac{5}{8}$ " JUMPER WITH
1 $\frac{5}{8}$ " GAS PASS CONNECTORS

WHITE FIBERGLASS
SLOT COVERS

RCAGL: 960 FT

32.4 FT
[9.87m]



ANTENNA PLAN VIEW AND ORIENTATION

2X SCALE

APPROXIMATE SPECIFICATIONS

LENGTH: 32.4 FT [9.87m]

RATING: 5 kW

GAIN: 41.76 (16.21 dB)

WEIGHT: 162 LB [74 Kg]

WINDAREA: 24 Ft²

TIA-222-F (NO ICE)



PROPAGATION SYSTEMS, INC.

Ebensburg, Pennsylvania USA (814) 472-5540

FILE:

18-BAY UHF ANTENNA OUTLINE, OPTION 2

for
WPBY

MODEL: PSILPD18D88C-34

CHANNEL/
FREQUENCY: CHAN. 34

DATE: 3/02/10

SCALE: 1:80

DRAWN BY: D.G. Keller

APPROVED:

DRAWING NO.:

PR1537-B

REV.

REV.	MADE BY	CHECKED BY	DATE	CHANGE

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SIZE

A

PR1537-B



Antenna Specifications

ANTENNA OPTION 2

PROPOSAL NUMBER:	PR1537-A	DATE:	1/5/11
CUSTOMER:	West Virginia Public Broadcast	ANTENNA TYPE:	PSILPD18D88C-34
CALL LETTERS:	WPBY	CHANNEL:	34
LOCATION:	Huntington, WV	REVISION:	A

Electrical Specifications

RMS GAIN MAIN LOBE	18.0	12.55	dB
RMS GAIN AT HORIZONTAL	11.73	10.69	dB
AZIMUTH DIRECTIVITY	2.32	3.65	dB
PEAK DIRECTIONAL GAIN	41.76	16.21	dB
ELEVATION PATTERN	PR1537-A Elevation		
AZIMUTH PATTERN	PR1537-A Azimuth		
BEAM TILT	1.2 Degree		
AVERAGE INPUT POWER	5 kW		
INPUT SIZE	1-5/8" EIA center fed		
INPUT IMPEDANCE	50 Ohm		

Mechanical Specifications

HEIGHT WITH LIGHTNING PROTECTION	NA	Ft	NA	M
ANTENNA LENGTH	32.4	Ft	9.87	M
CENTER OF RADIATION	16.2	Ft	4.94	M
WIND AREA (TIA-222-F) No Ice	24	Sq. Ft	2.25	Sq. M
OVERTURN MOMENT	NA	Ft LB	NA	Kg M
WEIGHT	162	LB	74	Kg



Propagation Systems, Inc.

Quality Broadcast Antenna Systems

WARRANTY

LIMITED WARRANTY AND LIMITATION OF LIABILITY

Unless otherwise specifically offered in writing, Seller warrants its products to be free of defects in material and workmanship for a period of two years from the date of shipment, and to conform to its standard specifications at the time of shipment. Seller agrees to service, adjust and/or replace at its option any defective parts of any equipment, returned to its Ebensburg, PA plant, freight pre-paid, within the specified warranty period. This warranty is subject to the conditions that, notice of any defect must be received by the Seller in writing within 30 days of the discovery of the defect, within the warranty period, and that Seller's inspection of the returned equipment substantiates to Seller's satisfaction the claimed defect. Seller is not liable for warranty work if notice of defect is given after the warranty period, even though Buyer deems the defect to have occurred during the warranty period.

THE SOLE REMEDY FOR BREACH OF ANY AND ALL WARRANTIES AND THE SOLE REMEDIES FOR SELLER'S LIABILITY OF ANY KIND WITH RESPECT TO PRODUCTS OR SERVICES PROVIDED UNDER THE PURCHASE ORDER OR ANY OTHER PERFORMANCE BY SELLER SHALL BE LIMITED TO THE REMEDIES PROVIDED HEREIN. BUYER AGREES THAT SELLER SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR FOR ANY LOSS OF PROFIT, REVENUE OR DATA, EVEN IF SELLER SHALL HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH POTENTIAL LOSS OR DAMAGE. SELLER SHALL NOT BE LIABLE FOR ANY CLAIM AGAINST BUYER BY AN OTHER PARTY. EXCEPT AS SPECIFICALLY PROVIDED HEREIN, SELLER DOES NOT MAKE ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.



Propagation Systems, Inc.

Phone 814-472-5540 Fax 814-472-5676

TV ANTENNA USER LIST

CONFIDENTIAL

<u>CALL SIGN</u>	<u>LOCATION</u>	<u>ANTENNA MODEL</u>	<u>CONTACT</u>	<u>PHONE</u>	<u>DATE</u>
W60AI	New York, NY	PSIUP-41 Custom	John Collinson	727-872-4210	January, 2011
W16CO	Middleburg, PA	PSILP8-16	Bette Deitrich	717-582-7612	December, 2010
KSEX	Dallas-Ft Worth, TX	PSILPD16AWR-20	Randy Weigner	603-279-4758	December, 2010
WLEP-LD	Erie, PA	PSILP8AM-43	Kevin Bae	847-674-0864	November, 2010
WQSJ-CD	Quebradillas, PR	PSILP4BG-48	Juan Padin	787-383-9905	September, 2010
W38EJ-D	Warner Robins, GA	PSILPD16OI-38/42	John Timms	478-745-1299	September, 2010
KNRC-LD	Vista, NV	PSILP8-14	John Fiori	707-324-9167	August, 2010
WDVB-LD	Edison, NJ	PSIUP-23	Larry Boone	207-627-7474	August, 2010
KLEG-LP	Dallas, TX	PSILP8-44 Custom	Larry Boone	207-627-7474	July, 2010
WVQS-LP	Isabel Segunda, PR	PSILP12ARA-50	Juan Padin	787-383-9905	July, 2010
W39CD	Fulton, MS	PSILP18EA-39	Grady Davidson	662-862-9796	July, 2010
W21CJ	Clarksburg, WV	PSILP8-46	Gary Stewart	412-824-3930	June, 2010
WSKC-CA	Atlanta, GA	PSILP8CUS-22	Kevin Bae	847-674-0864	June, 2010
W51CW-D	Wilmington, NC	PSILP12-51	Bill Vassar	910-343-3500	May, 2010
W45DF-D	Knoxviolle, TN	PSILP16OI-45	John Collinson	727-872-4210	May, 2010
		PSILPD16OI-50-CP	James Primm	805-896-7335	May, 2010
W12CA	Elliottsburg, PA	PSILP8-14	Bette Deitrich	717-582-7612	May, 2010
WBPH-TV	Bethlehem, PA	PSIVLP6BPHEC-9	Dan Huber	610-433-4400	May, 2010
WPSJ-LD	Hammonton, NJ	PSILP16AW-51	Paul Engle	856-767-8884	April, 2010
KLHO-LD	Oklahoma City, OK	PSILP16OI-31	Bill Barrow	215-449-9104	March, 2010
WAWA-LP	Orlando, FL	PSIUP-47	Mark Jorgenson	828-859-6982	February, 2010
W21CX-D	Mayaguez, PR	PSILP8BH-21-CP	Doel Oriol	787-997-1200	February, 2010
WAWD	Fort Walton Beach, FL	PSILP16AH-49	Brad Skaret	850-258-1797	December, 2009
WAZW-LD	Winchester, VA	PSILP12AW-46	Bill Barrow	215-499-9104	December, 2009
W33CC	St Petersburg, FL	PSILP16APR-40	Byron St. Clair	303-465-5742	December, 2009
KMMD	Salinas, CA	PSILP8AER-39-CP	Warren Reeves/Liz Ki	915-351-0591	December, 2009
K29HW-D	Austin, TX	PSILPD8EC-29	Dan Knight	512-471-3098	December, 2009
KWYB-LD	Bozeman, MT	PSILPD8SNC-28	Mark Huller	406-656-8000	December, 2009
KOHC-LD	Oklahoma City, OK	PSILPD20OI-45	Ron Tutor	405-808-3356	November, 2009
WPBM-LD	Scottsville, KY	PSILPD24OI-46	David Benz	270-618-8831	November, 2009
K28FT	Walla Walla, WA	PSILP16BA-31	Byron St. Clair	303-465-5742	November, 2009
WGEN-LD	Miami, FL	PSILP16BA-45	Byron St. Clair	303-465-5742	November, 2009
KAZT-LD	Phoenix, AZ	PSILP10WL-36-CP	Mark Parthe	928-379-2411	November, 2009
KVMM-CA	Santa Barbara, CA	PSILP8BB-41-CP	Warren Reeves/Liz Ki	915-351-0591	October, 2009
WTLU	Lynchburg, VA	PSILP12AOC-43-CP & Transm	Milton S. Ridgeway	434-582-2737	September, 2009
WAAO-LP	Andalusia, AL	PSILP18OMM-40	Blaine Wilson	334-804-9080	September, 2009
W26DH-D	Auburn, IN	PSILP12AER-26	Ray Alexander	260-387-6914	August, 2009
WGCT-LD	Tampa, FL	PSILP12ARA-45-CP	Harvey Budd	352-371-7772	July, 2009
K41KX	Pittsburg, KS	PSILP8CRC-41	Randy Weiss	972-291-3750	June, 2009
WHCQ-LP	Cleveland, MS	PSIVLP2OI-9	David Ellington	662-375-2654	June, 2009
WREP-LP	Martinsville, IN	PSILP8-15	Bill Barrow	215-449-9104	June, 2009



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W16CM-D	Jasper, AL	PSILP16OI-16	Benny Springer	800-210-1737	May, 2009
K49JK-D	North Platte, NE	PSILP8-49/50	Randy Weiss	972-291-3750	May, 2009
K40IJ-D	Manhattan, KS	PSILP8BA-40	Randy Weiss	972-291-3750	May, 2009
WCVI-TV	Christiansted, VI	PSILPD16-23	Victor Gold	340-718-9927	April, 2009
KPVY-LD	Prescott, AZ	PSILPD12AH-45	Kevin Bae	847-674-0864	April, 2009
NEW	Pampa, TX	PSILP8-54	Daniel Christiansen	512-799-8164	March, 2009
KMMW-LP	Stockton, CA	PSILP8ANR-28-CP	Liz Kiley	615-335-8495	March, 2009
W46DF	Hamilton, AL	PSILP16EAC-46	Pete Nichols	205-921-5150	February, 2009
KBDI-TV	Broomfield, CO	PSILVLP2EC2-13	Mark Seewald	303-503-1176	February, 2009
WNSA-CA	Jeffersonville, IN	PSILP16OI-16	John Smith	812-949-9595	January, 2009
WNYA	Pittsfield, MA	PSIVLP4OIM-13	Larry Rogow	323-904-4090	January, 2009
KTNC-TV	Concord, CA	PSIUSMD8OM-14	Norm Wright	559-635-3622	December, 2008
WVII-TV	Bangor, ME	PSIVLP8OI-7	Jim Zaroda	570-474-1105	December, 2008
KXHD-LP	Montrose, CO	PSIUP	Jim Dechant	541-383-2121	October, 2008
KCPM	Grand Forks, ND	PSILP16-27	Chuck Poppen	605-334-0026	October, 2008
KOMI-LP	Woodward, OK	PSILP12AOC-34	Kevin Grice	580-256-2450	September, 2008
WHVL-LD	State College, PA	PSIUSMD8OM-27	Jon Hain	814-441-6970	August, 2008
KGWL-DT	Lander, WY	PSIVLP6OI-7	Byron St. Clair	303-465-5742	August, 2008
KFNR-DT	Rawlins, WY	PSIVLP6OIM-9	Byron St. Clair	303-465-5742	August, 2008
W21CR-D	Jefferson, NC	PSILP8SO-21	Don Smith	919-549-7025	July, 2008
W35CK-D	Highlands, NC	PSILP8DF-35	Don Smith	919-549-7025	July, 2008
WSWP-TV	Grandview, WV	PSIVLP4OIC-10	Steve Chapman	304-556-4961	July, 2008
WLVT-TV	Allentown, PA	PSILP16OM-39	David Smith	610-867-4677	July, 2008
W27CB	Hempstead, NY	PSILP16WCB-26	Young Kwon	347-582-0979	May, 2008
WTKJ-LP	Watertown, NY	PSILP8-19	Brian Larson	518-686-0975	April, 2008
WWJV-LP	Jupiter, FL	PSILP32AM-53	Mark Jorgeson	828-859-6982	April, 2008
W56CM	Knoxville, TN	PSILP16BA-40	Dana Dulabone	727-872-4210	March, 2008
KBOP-CA	San Diego, CA	PSIUP6-43 Custom	Randy Weigner	603-279-4758	March, 2008
KHPN-LP	Warrenton, OR	PSILP8BG-51	Brian Larson	518-686-0975	March, 2008
		PSIUP	Brian Larson	518-686-0975	March, 2008
KQMM-CA	Santa Maria, CA	PSILP8BB-29	Amy Brown	404-814-7839	March, 2008
		PSIUP	George Chambers	806-249-4747	March, 2008
KNTA-LP	New Braunfels, TX	PSILP12-14	Carlos Macias	956-343-7912	February, 2008
KHSB-LP	Steamboat Springs, CO	PSILP8-33	Brian Larson	518-686-0975	February, 2008
W14CU	Huntington, WV	PSILPD16DJ-14	Dana Dulabone	727-872-4210	January, 2008
K47HO	Shreveport, LA	PSILP16DA-47	Dana Dulabone	727-872-4210	December, 2007
WCBZ-LP	Baton Rouge, LA	PSIVLP4EC2-7	Woody Jenkins	225-921-1433	December, 2007
KGSC-LP	Cheyenne, WY	PSILP16OI-47	Byron St. Clair	303-465-5742	October, 2007
W14DC	Portsmouth, VA	PSILP16OM-14	George Randall	757-398-3158	September, 2007
K38HD	St. Louis, MO	PSILP16DH-38	Dana Dulabone	504-616-7897	August, 2007
K26GS	Mountain Home, AR	PSILP24EAC-26	Dan Reynolds	615-826-0792	August, 2007



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KSMI-LP	Wichita, KS	PSILP16-51	David Caruso	316-942-2424	August, 2007
KTKO-LP	Harrison, AR	PSIVLP2MCC-8	Dennis King	870-715-9890	August, 2007
WLCF-LD	Decatur, IL	PSILP24OM-45	Chris Mavros	727-580-0712	August, 2007
KIDQ-LP	Lewiston, ID	PSILP8AWR-27	Jarel Pittman	509-210-3023	July, 2007
WIRE-CA	Atlanta, GA	PSILP24AWR-40	Randy Weigner	603-279-4758	June, 2007
W14DC	Portsmouth, VA	PSILP4-14	Dana Dulabone	504-616-7897	June, 2007
K46IL	Verde Valley, AZ	PSILP8-46	Roger Doering	928-567-3433	May, 2007
KEGS-LP	Las Vegas, NV	PSIUSM8CRAR-30/31-CP	Ron Taylor	501-221-0400	May, 2007
KGLA-DT	Hammond, LA	PSIUSMDT24AOC-42	Ernesto Schweikert	504-347-1540	May, 2007
KPDR-LP	Park City, UT	PSIUP-56	Roger Mills	801-716-0379	April, 2007
WCTU-LP	Pensacola, FL	PSILPD24BH-46	Brian Larson	518-686-0975	February, 2007
KOMI-LP	Woodward, OK	PSILP12AOC-24	Doug Williams	580-256-4101	January, 2007
KRYT-LP	San Antonio, TX	PSILP16CRA-51	Carlos Macias	956-343-7912	December, 2006
K43HB	Minneapolis, MN	PSILP16DH-43	Byron St. Clair	303-465-5742	December, 2006
WJXE-LP	Jacksonville, FL	PSILPD16BH-15/18	Harvey Budd	352-371-7772	December, 2006
WAAO-LP	Andalusia, AL	PSILP8-40	Mike Smith	334-488-6540	November, 2006
WAAA-LP	Westville, IN	PSILP24BB-49	Tom Tittle	219-762-1541	October, 2006
WEDD-LP	Roanoke, VA	PSILP16DM-25	Dorothy Brunson	410-563-1707	September, 2006
WPRQ-LP	Clarksdale, MS	PSIVLP2OI-12	David Ellington	662-375-2654	September, 2006
KSCE	El Paso, TX	PSIUSMD24AP-38/39	Grace Rendall	915-585-8838	September, 2006
WBSF	Bay City, MI	PSIUP1266C-46	Keith Bland	847-884-1877	August, 2006
K47JO	New Orleans, LA	PSILP16AE-47	Dana Dulabone	504-616-7897	August, 2006
KXHD-LP	Montrose, CO	PSILP8AHC-36	Bill Varecha	970-249-8989	August, 2006
WVXF	Charlotte Amalie, VI	PSIUP-17	Keith Bass	323-930-1908	July, 2006
KEVI-LP	San Antonio, TX	PSILP16ACA-25	Carlos Macias	956-343-7912	June, 2006
WPSJ-LP	Hammon, NJ	PSIUP2-24	Paul Engle	856-767-8884	June, 2006
WPRU-LP & WSJX-	Aquidilla, PR	PSIUP-20/24	Keith Bass	323-930-1908	June, 2006
WEON-LP	Frederiksted, VI	PSIUP-60	Keith Bass	323-930-1908	June, 2006
WWTD-LP	Washington, DC	PSILP24AW-49-CP	Paul Candolini	757-538-2660 x1	May, 2005
KGHB-CA	Pueblo, CO	PSILP8BG-27	Carl Cutforth	303-832-0050	May, 2006
KJDF-LP	Beaumont, TX	PSILP16S-25	Carlos Macias	956-490-8173	April, 2006
KYMA-DT	Yuma, AZ	PSILP10BE-41	Robbie DeCorse	928-246-9698	April, 2006
WBQP-CA	Pensacola, FL	PSILVLP2EC2-12	Vernon Watson	850-433-1210	April, 2006
K30DN	Freeport, TX	PSILP28OI-30	Jerry Proctor	936-328-5960	March, 2006
W44CL	Roanoke, VA	PSILP16AN-44	Byron St. Clair	303-465-5742	January, 2006
KFCL-LP	Clovis, NM	PSILP16AOC-41	Byron St. Clair	303-465-5742	December, 2005
K45IO	Kansas City, MO	PSILP16AM-45	Byron St. Clair	303-465-5742	December, 2005
WXSX-CA	Savannah, GA	PSILP16AOC-46	Mark Mayo	321-729-8451	December, 2005
KAZA-TV	Avalon, CA	PSIUSMTD27AC2-47-CP	Lebon Abercrombie	559-733-7800	November, 2005
KEFB	Ames, IA	PSILP16OI-34	Dale Scherbring	402-554-4222	September, 2005
WVVC-LP	Utica, NY	PSILP8-40	Brian Larson	518-686-0975	September, 2005



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WLGA	Opelika, AL	PSIHPT32OM-66-CP	Dale Scherbring	402-554-4222	September, 2005
W24DC	Hamilton, AL	PSILP16OI-24	Byron St. Clair	303-465-5741	September, 2005
WMJF-LP	Towson, MD	PSILPD8BG-16	John Mackerron	410-704-2447	August, 2005
W38DH	Toledo, OH	PSILP16DM-38	Byron St. Clair	303-465-5742	July, 2005
W30BX	Mobile, AL	PSILP16DM-30	Byron St. Clair	303-465-5742	June, 2005
WAST-LP	Ashland, WI	PSILP16AER-25	Bob Truscott/Alan Ra	262-629-1300	June, 2005
W54DR	Watkinsville, GA	PSILP16AOC-54	Gene Gibson	864-244-1616	June, 2005
WFMZ-TV	Allentown, PA	PSIMPTD-10-DCPA-46	Barry Fisher	610-797-4530	May, 2005
KFAM-LP	Lake Charles, LA	PSILP16ML-14	Byron St. Clair	303-465-5742	April, 2005
WGNM	Macon, GA	PSIUSMD24AC3-45	Chris Mavros	727-535-5622	April, 2005
KIDT-LP	Stamford, TX	PSILP8-44	Charles Sherril	325-655-6006	March, 2005
W45CK	Humboldt, TN	PSILP16BC-45	Byron St. Clair	303-465-5742	March, 2005
WYSJ-CA	Yorktown, VA	PSILP24OI-19	Sam Jacobs	757-249-9545	February, 2005
WPRU-LP	Aquadilla, PR	PSILPS8OI-20	Keith Bass	323-930-1908	January, 2005
WSJP-LP	Aquadilla, PR	PSILPS8OI-30	Keith Bass	323-930-1908	January, 2005
WMEU-CA	Chicago, IL	PSILP24WBB-48	Kyle Walker	312-705-2675	November, 2004
WSLF-LP	Port St. Lucia, FL	PSILP24AW-35	Mike Brown	501-221-0400	November, 2004
WUDT-CA	Detroit, MI	PSILP8DFMB-23-CP	Mike Brown	501-221-0400	November, 2004
WDPB	Seaford, DE	PSILP12BSLC-64	John Doran	215-351-1271	October, 2004
WDPB-DT	Seaford, DE	PSILPT16BSLC-44	John Doran	215-351-1271	October, 2004
WBPH-TV	Bethlehem, PA	PSIVLP4BPHC1-9	Dan Huber	610-433-4400	October, 2004
KUOK-CA	Norman, OK	PSIVLP2NC1-11	Mike Brown	501-221-0400	October, 2004
WPHA-CA	Philadelphia, PA	PSILP16CRAC-38	Randy Weigner	603-279-4758	October, 2004
KZCO-LP	Denver, CO	PSILP16CRAC-27	Byron St. Clair	303-465-5742	October, 2004
KIDZ-LP	Abilene, TX	PSILP12-42	Charles Sherril	325-655-6006	October, 2004
KIDV-LP	Albany, TX	PSILP16BA-34	Charles Sherril	325-655-6006	October, 2004
KZFC-LP	Windsor, CO	PSILP16BA-36	Byron St. Clair	303-465-5742	October, 2004
WMNS-LP	Charlotte Amalie, VI	PSILPD16AOC-22	Adelle Brown	340-714-4399	September, 2004
KBOP-CA	San Diego, CA	PSILP16CRAC-43	Randy Weigner	603-279-4758	September, 2004
KBVQ-LP	Eureka, CA	PSILP16AER-35-CP	Norm Wright	925-288-3614	September, 2004
KWBK-LP	Pine Bluff, AR	PSIUP-45	Mike Brown	501-219-2400	August, 2004
WCQT-LP	Cullman, AL	PSILP16OI-27	Andy Stevens	256-739-6652	August, 2004
KRNS-CA	Reno, NV	PSILP16AW-46-CP	James Ocon	775-333-2727	August, 2004
KBMY	Bismark, ND	PSILPS8-16	Jerry Grimstadt	701-355-0026	August, 2004
KIDU-LP	Brownwood, TX	PSILP8-17	Charles Sherril	325-655-6006	July, 2004
KIDB-CA	Sweetwater, TX	PSILP8-35	Charles Sherril	325-655-6006	July, 2004
WJYL-CA	Jeffersonville, IN	PSIVLP2OI-9	John Smith	812-949-9595	June, 2004
KAZO-LP	Omaha, NE	PSILP18OI-57-CP	Rick Graham	402-554-4222	May, 2004
KBBL-CA	Fort Smith, AR	PSILP16OI-31/36	Neal Ardman	830-980-6499	May, 2004
KGPT-CA	Wichita, KS	PSILP8-49	David Caruso	316-942-2424	May, 2004
KAJN-LP	Lafayette, LA	PSILP16OI-40	Byron St. Clair	303-465-5742	April, 2004



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Unknown	Unknown	PSIUP-15	Neal Ardman	830-980-6499	February, 2004
WLLC-LP	Nashville, TN	PSILP12OM-42-CP	Kenneth Schreiner	650-364-9685	January, 2004
K27GR	Paris, TX	PSILP16OI-27	Travis Jackson	903-785-6431	January, 2004
WHEC-TV	Rochester, NY	PSIVLP6OI-10	John Walsh	585-546-5670	January, 2004
WEYS-LP	Miami, FL	PSILP16BH-56	Byron St. Clair	303-465-5742	January, 2004
W34DB	Lewisburg, TN	PSILP8-34	Bob Smartt	931-359-6641	December, 2003
WOCB-CA	Marion, OH	PSILP16-39	Dave Aiken	740-383-1794	November, 2003
W17CI	Windsor, VT	PSILPD20AE-17	Wayne Rosburg	802-644-5781	October, 2003
WTSD-CA	Philadelphia, PA	PSIUP-14	Joseph Clinton	908-996-1254	September, 2003
WVGN-LP	Charlotte Amalie, VI	PSILPS8OI-14	Keith Bass	323-930-1908	August, 2003
KAGN-LP	Crowley, LA	PSILP16BA-31	Corey Meyer	800-544-2636	August, 2003
KIDY-DT	San Angelo, TX	PSILDS8-19	Charles Sherril	325-655-6006	August, 2003
WNGN-LP	Troy, NY	PSILP16CRA	Brian Larson	518-686-0975	August, 2003
KAZA-TV	Avalon, CA	PSIUP8-54	Dale Scherbring	402-554-4222	August, 2003
W39CD	Fulton, MS	PSILP16EAC-15	Byron St. Clair	303-465-5742	July, 2003
KWBF-LP	Benton, AR	PSILP16OI-47	Ron Taylor	501-221-0400	June, 2003
WJOS	Pomeroy, OH	PSILP16OI-58	Pete Barnhart	740-992-2727	May, 2003
WCVI	St. Croix, VI	PSILP16-39	Victor Gold	340-713-9927	April, 2003
W29CR	Grand Rapids, MI	PSILP16BQM-29	Bob Naismith	231-436-7731	March, 2003
WXCB	Delaware, OH	PSILP16BD-42	Dave Aiken	740-383-1794	March, 2003
WREI	Quebradillas, PR	PSILP8-16	Jose Arzuaga	787-895-2725	March, 2003
KIDA	Sun Valley, ID	PSICR-5	Marcia Turner	702-256-8030	February, 2003
WNYI	Ithaca, NY	PSILP16AER-52	Bill Smith	716-942-3010	December, 2002
W60BR	Chesapeake, VA	PSILP16BA-25	Bob Kelly	202-464-1794	December, 2002
W53AF	Booneville, MS	PSILPT16EAC-33	Bill Lambert	662-728-6492	December, 2002
WMYG-LP	Lake City, FL	PSIVLP4BA-11	Terry Blakeney	352-332-1128	December, 2002
KXND	Bismark, ND	PSILP8-42	Jerry Grimstadt	701-323-0427	November, 2002
KXND	Bismark, ND	PSILP8-44	Jerry Grimstadt	701-323-0427	November, 2002
KWNF	Waterloo, IA	PSILP24OI-22	Bill Smith	716-942-3010	November, 2002
K38HE	West Plains, MO	PSILP24EAC-38	Bill Lambert	662-728-6492	October, 2002
KTLJ	Topeka, KS	PSILP32AOC-43	Gary Krohe	785-224-0345	September, 2002
W23GJ	Arvada, CO	PSILP16ABA-23	Chris Blair	540-667-5138	September, 2002
TV-38	Tifton, GA	PSILP8-38	Ricky Hobby	229-382-6855	September, 2002
W66BM	Quebradillas, PR	PSILPS8OI-48	Jose Arzuaga	787-895-2725	September, 2002
WYPN	Gainesville, FL	PSILP24BRA-45	Terry Blakeney	352-332-1128	August, 2002
WBXJ	Jacksonville, FL	PSILP32OI-43	Amy Brown	404-814-7839	August, 2002
W59CF	Russellville, AL	PSILP16OI-44	Bill Lambert	662-728-6492	July, 2002
KADO	Shreveport, LA	PSILP8-40	Chad Giddens	318-560-1107	July, 2002
TV-65	Taylors, SC	PSILP16OI-65	Gene Gibson	864-244-1616	July, 2002
KTYO	Las Cruces, NM	PSILPD16BD-47	Michael Brendzel	703-471-5117	May, 2002
WBXJ	Jacksonville, FL	PSILP8OI-43	Amy Brown	404-814-7839	April, 2002



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WSVT	Tampa, FL	PSIMP8OI-18-CP	Dave Thompson	817-355-1295	April, 2002
WYLE	Sheffield, AL	PSIVLP201-13	Less White	256-389-9171	April, 2002
WBPH	Bethlehem, PA	PSIUSM32AN2-60	Dan Huber	610-433-4400	March, 2002
TV-28	Gainesville, GA	PSILP16OI-28	Marcus Lamb	817-858-9955	January, 2002
WJYL	Clarksville, IN	PSILP32EC-45	John Smith	812-284-9595	December, 2001
KLUH	Lake Havasu City, AZ	PSILP8BA-45	Jim Husted	928-855-2533	December, 2001
K30EH	Salem, OR	PSILP8MCR1-57	Ron Taylor	501-221-0400	November, 2001
WEIL	Effingham, IL	PSI16AP-54	Kyle Walker	217-428-2323	September, 2001
K27FR	Overland Park, KS	PSILP8BRAR-27	John Graf	972-385-3874	August, 2001
K45BM	Scottsville, KY	PSILP32EC-31	Dale Howard	615-202-3253	August, 2001
WBXD	Detroit, MI	PSILP24BB-35	Amy Brown	305-674-5077	May, 2001
W12CW	Charleston, SC	PSILVLP2BA-12	Charles Namey	407-740-8897	May, 2001
K25FY	Van Nuys, CA	PSILPS8-25	Paula Cracium	818-831-9333	May, 2001
WMUN	Muncie, IN	PSILP4CRA-26	Donald Badgley	765-282-3725	May, 2001
K25FY	Van Nuys, CA	PSILP8-25	Paula Cradium	818-831-9333	May, 2001
WQQZ	Quebradillas, PR	PSILP6BG-33	Jose Arzuaga	787-895-2725	April, 2001
K10NG	New Orleans, LA	PSILP24BF-18	Amy Brown	305-674-5077	April, 2001
Unknown	Hobbs, NM	PSILP8-52	Al Cooper	800-707-0420	March, 2001
KPTF	Farwell, TX	PSILPD28MBFA-18	Al Cooper	800-707-0420	March, 2001
W61BC	Shreveport, LA	PSILP16OI-50	Amy Brown	305-674-5077	February, 2001
Unknown	Paducah, KY	PSIVHP4E-9-CP	Steve Engles	805-692-9314	January, 2001
WKPV	Ponce, PR	PSILP26ECA-20	Paul Titchenal	727-576-7700	December, 2000
K46EY	Des Moines, IA	PSILPS16-46	Doug Sheldahl	515-597-2437	December, 2000
K48FZ	Ames, IA	PSILPS16-48	Doug Sheldahl	515-597-2437	December, 2000
K56GD	Ames, IA	PSILPS16-56	Doug Sheldahl	515-597-2437	December, 2000
KXVA	Abilene, TX	PSIUSMD32MCA-15	Bill Carter	915-655-6006	December, 2000
W50CH	Alton, IL	PSILP16-50	Mark Church	618-465-4000	November, 2000
WREI	Quebradillas, PR	PSILP4BH-20	Jose Arzuaga	787-895-4198	October, 2000
WSCF	Melbourne, FL	PSILP12MCR1-31	James Chladek	212-576-1550	October, 2000
W31BW	Masury, OH	PSILP8BRA1-17-CP	Tom Zocolo	330-781-7086	September, 2000
KWDK	Tacoma, WA	PSIUSM25AC2-56	Marcus Lamb	817-858-9955	August, 2000
WATC	Atlanta, GA	PSIUSM28BA-57	Gene Gibson	864-244-1616	July, 2000
Unknown	Abilene, TX	PSIVLP4AWR-7	Larry Bradshaw	915-674-2311	May, 2000
WTCV	San, Juan, PR	PSILP12SBC-18-CP	Margarita Nazario	787-274-1800	April, 2000
W22AN	St. Augustine, FL	PSILP16AD-22	Charlie Hotchkin	904-829-6883	March, 2000
K35FM	Las Vegas, NV	PSILP16CRA-35-CP	Scott Powell	915-695-9898	March, 2000
W23BQ	Asheville, NC	PSILP8BT-23	Gene Gibson	864-244-1616	February, 2000
WNGX	Schenectady, NY	PSILP8-42	Brian Larson	518-686-0975	January, 2000
K17EQ	West Monroe, LA	PSILP16-17	Charles Jackson	318-323-4668	December, 1999
W26BT	Atlanta, GA	PSILP16OI-26	Vince Castelli	770-953-3232	December, 1999
KBDI	Denver, CO	PSIVLP2OI-11	Byron St. Clair	303-465-5742	October, 1999



Propagation Systems, Inc.

Phone 814-472-5540 Fax 814-472-5676

TV ANTENNA USER LIST

CONFIDENTIAL

<u>CALL SIGN</u>	<u>LOCATION</u>	<u>ANTENNA MODEL</u>	<u>CONTACT</u>	<u>PHONE</u>	<u>DATE</u>
KCCE	San Luis Obispo, CA	PSILP20BH-50	Craig Fossey	805-545-7770	September, 1999
K32ER	McAllen, TX	PSILPS28-32	Carlos Ortiz	956-412-5600	August, 1999
WCVI	St. Croix, VI	PSILP16-27	Victor Gold	340-713-9927	August, 1999
KWCV	Wichita, KS	PSILP24OI-33	Larry Weber	702-565-6617	July, 1999
KMLM	Odessa, TX	PSILP16-42	Fred Magnusson	915-563-0420	July, 1999
W54CO	Florence, SC	PSILP16-54	Gene Gibson	864-244-1616	June, 1999
W39BW	Newport News, VA	PSILP16BB-39	Sam Jacobs	757-249-9545	May, 1999
WCEA	Boston, MA	PSILP16AW-19	Peter Cuenca	617-541-2222	May, 1999
K17EX	Oklahoma City, OK	PSILP8BD-17	Carlos Ortiz	956-428-4848	May, 1999
Unknown	War, WV	PSILPS8-25	John Dash	304-875-2202	April, 1999
W42AO	Athens, GA	PSILP16-42	Gene Gibson	864-244-1616	February, 1999
W31BW	Masury, OH	PSILP12OI-31	Bob Fliss	330-782-3504	February, 1999
WYDN	Worcester, MA	PSIMP28BD-48	Carlos Ortiz	956-412-5600	February, 1999
Unknown	Panama City, FL	PSILP8-48	Judd Colley	850-234-2773	January, 1999
K38DU	Sioux City, IA	PSILPS16-38	Doug Daniels	712-274-7572	January, 1999
W60BR	Virginia Beach, VA	PSILP16BA-60	Bob Kelly	703-455-6101	January, 1999
WCLL	Columbus, OH	PSILP24BG-19-CP	Jeff Parks	614-358-1900	December, 1998
WYFX	Youngstown, OH	PSILP16AH-62	Bob Fliss	330-782-1144	December, 1998
W51AT	Myrtle Beach, SC	PSILP16-51	Gene Gibson	864-244-1616	November, 1998
WVOZ	Rio Piedras, PR	PSILP12OM-48	Rey Moreira	787-287-9448	October, 1998
Unknown	West Monroe, LA	PSILPO8CRA-17	Son Rise Comm.	318-396-8796	September, 1998
W27BB	Orlando, FL	PSILP4BG-27	Charles Namey	407-740-8422	August, 1998
K68EI	San Antonio, TX	PSILP24CA-68	Carlos Ortiz	956-412-5600	August, 1998
WDTA	Atlanta, GA	PSIUSM10A-53-CP	Marcus Lamb	817-355-1295	July, 1998
W48BV	Summerville, SC	PSILP16ANR-48	Gene Gibson	864-244-1616	July, 1998
W67DP	Edmund, SC	PSILPS16-67	Gene Gibson	864-244-1616	July, 1998
WMTA	Central City, KY	PSILP8-16	Brian Smeathers	502-754-1380	July, 1998
W14CI	Ft. Myers, FL	PSILP8BT-14	Nathan Price	407-682-7195	July, 1998
W66CA	Spartanburg, SC	PSILP20-66	Harvey Budd	352-371-7772	June, 1998
W45BP	Honea Path, SC	PSILP8-45	Gene Gibson	864-244-1616	May, 1998
K53EO	Wichita, KS	PSILPS8-53	Mary Kanek	Unknown	May, 1998
W43BS	Columbia, SC	PSILPS16-43	Gene Gibson	864-244-1616	April, 1998
Unknown	Houston, TX	PSILP24AW-43	Dean Mosely	318-992-6677	April, 1998
W45BK	Shallotte, NC	PSILPS8-45	Gene Gibson	864-244-1616	February, 1998
W47BS	Talladega, AL	PSILPS16-47	Jimmy Dale Abrams	205-363-6209	January, 1998
W31BS	Orangeburg, SC	PSILPS28-31	Gene Gibson	864-244-1616	January, 1998
W64BC	Columbus, OH	PSILP16EC-64-CP	Jeff Parks	614-527-6400	December, 1997
K32ER	Harlingen, TX	PSILP8OI-32	Carlos Ortiz	956-412-5600	December, 1997
WREI	Quebradillas, PR	PSILP8-27	Jose Arzuaga	787-895-2725	November, 1997
K32EA	New Braunfels, TX	PSILPS24-62	Carlos Ortiz	956-412-5600	November, 1997
W40AK	Muskegon, MI	PSILP8BRA-40	Fenton L. Kelley	616-733-4040	November, 1997



Propagation Systems, Inc.

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TV ANTENNA USER LIST

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<u>CALL SIGN</u>	<u>LOCATION</u>	<u>ANTENNA MODEL</u>	<u>CONTACT</u>	<u>PHONE</u>	<u>DATE</u>
K33DT	Boise, ID	PSILP24AE-33-CP	Brian Gould	208-383-9966	October, 1997
K52FR	Harlingen, TX	PSILP8BA-52-CP	Carlos Ortiz	956-412-5600	September, 1997
K67HC	McAllen, TX	PSILPS8-67	Carlos Ortiz	956-412-5600	September, 1997
K30FF	LaFeria, TX	PSILP16BG-30-CP	Carlos Ortiz	956-412-5600	August, 1997
K68FB	Phoenix, AZ	PSILP8DRA-68	Carlos Ortiz	956-412-5600	June, 1997
K63EU	Corpus Christi, TX	PSILPS24/55-63	Stepper Enterprises	512-852-6861	May, 1997
K30CS	Lufkin, TX	PSILP32AB-30	Ted Small	903-236-0051	March, 1997
K22EH	Longview, TX	PSILP32AN-22	Ted Small	903-236-0051	February, 1997

USER REPORT

WFMZ-DT

Allentown, PA

Barry Fisher, President
Maranatha Broadcasting Company, Inc.

MODEL:
PSIMPTD-10-DCPA-46

TECHNICAL SPECIFICATIONS

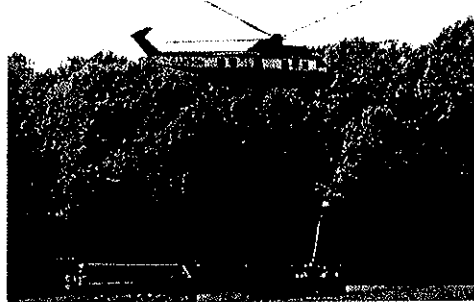
Frequency / Channel	46
Power Rating	30 kW
ERP	400 kW
Service	Digital
Mount Position	Top
Polarization	Horizontal
Directional	Yes
Radomes	International Orange Fiberglass
Deicers	No

Corporate Office
P.O. Box 113
719 Pensacola Road
Ebensburg, PA 15931

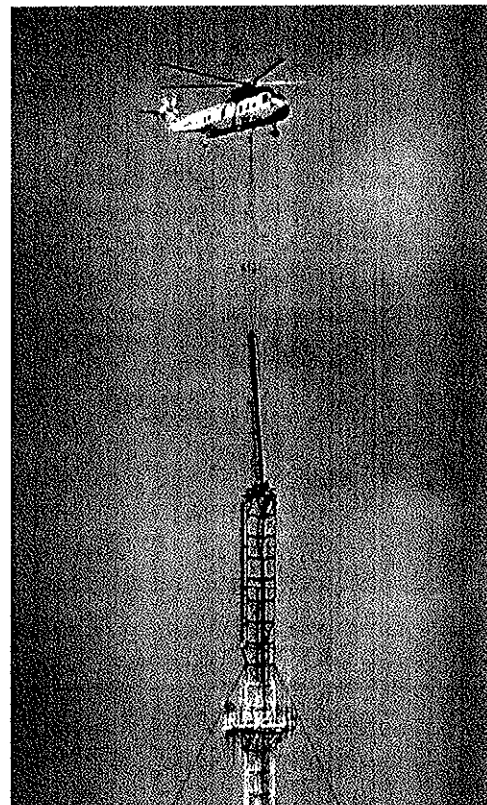
Phone: 81-472-5540
Fax: 814-472-5676
Email: sales@psibroadcast.com
www.psibroadcast.com

"WFMZ-TV has undergone several antenna changes since signing on the air in 1976. Most recently, we chose PSI for our final top mount DTV antenna. The choice was made as a result of seeing the performance of another TV station's PSI antenna located on our tower.

We compared the PSI antenna to other TV antennas on our tower. We noted that coverage of the PSI antenna was very consistent with the design pattern. As a result of our observations, we were very comfortable



PREPARING FOR MOUNTING



PSIMPTD-10-DCPA-46 BEING MOUNTED ON TOWER

with PSI's ability to deliver high power antennas that work.

We chose a PSI top mount directional full power radome-enclosed slot antenna.

continued

Propagation Systems, Inc. (PSI)
Quality Broadcast Antenna Systems



USER REPORT

WFMZ-DT Allentown, PA

Barry Fisher, President
Maranatha Broadcasting Company, Inc.

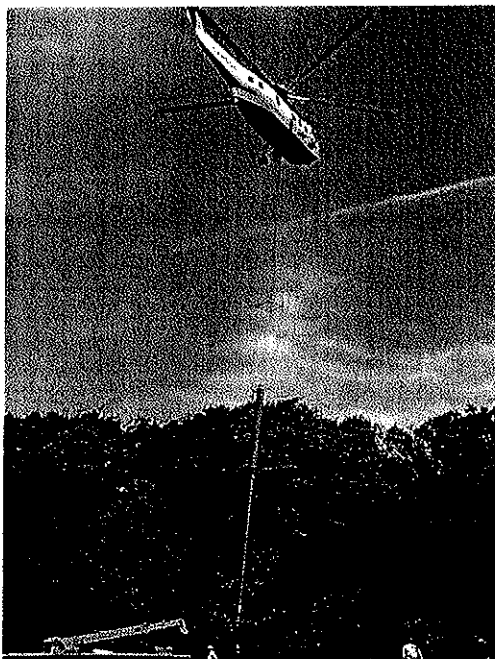
MODEL:
PSIMPTD-10-DCPA-46

TECHNICAL SPECIFICATIONS

Frequency / Channel	46
Power Rating	30 kW
ERP	400 kW
Service	Digital
Mount Position	Top
Polarization	Horizontal
Directional	Yes
Radomes	International Orange Fiberglass
Deicers	No

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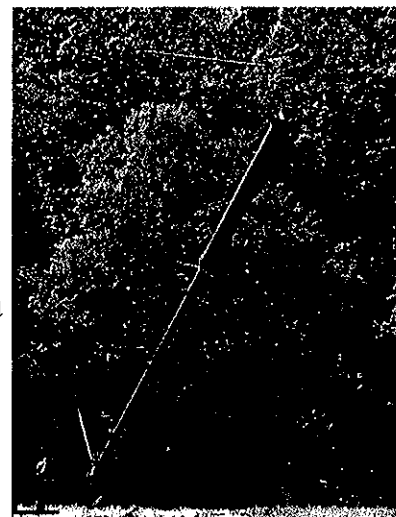
The antenna has been on the air for two years now in good and bad weather. In all cases VSWR has remained very low. We are very pleased with our PSI antenna and with the performance of the company as a whole."

Barry Fisher, President
Maranatha Broadcasting Company, Inc.

Propagation Systems, Inc. (PSI)
Quality Broadcast Antenna Systems

Continued

However, we had two critical requirements; the antenna had to meet specific space limitations in length to avoid any FAA modifications to our tower height and it had to support an existing FM antenna. PSI engineered an elegant solution to our problem and delivered the product on time without any problems.



USER REPORT

WGNM TV Macon, GA

Chris Mavros, D.E.
Christian Television Corp

MODEL:
PSIUSMD24AC3-45

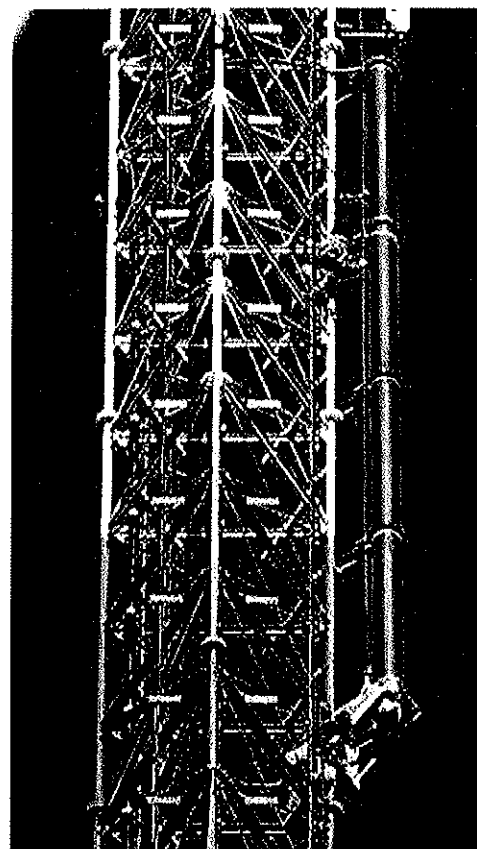
TECHNICAL SPECIFICATIONS

Frequency / Channel	45
Power Rating	25 kW
ERP	1000 kW
Service	Digital
Mount Position	Side
Polarization	Horizontal
Directional	Yes
Radomes	International Orange Fiberglass
Deicers	N/A

“In 2005, I chose a PSIUSMD24AC3-45 antenna for full power DTV service at our station, WGNM TV, in Macon, Georgia. The decision to use a PSI antenna was made because of a very competitive price and good recommendation of how well PSI antennas perform.

I have been pleased with the antenna as well as the customer service that I received from PSI.”

Chris Mavros, D.E.
Christian Television Corp.



ACTUAL PHOTO NOT AVAILABLE.
THIS IS A SIMILAR MODEL.

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Quality Broadcast Antenna Systems



USER REPORT

KBOP-CA

San Diego, CA

Randy Weigner, President
Commercial Broadcasting Corp.

MODEL:
PSILP16CRAC-43

TECHNICAL SPECIFICATIONS

Frequency / Channel	43
Power Rating	5 kW
ERP	4.1 kW
Service	Analog
Mount Position	Side
Polarization	Horizontal
Directional	Custom Directional
Radomes	White Slot Cover
Deicers	No

"Over the years I've purchased TV broadcast antennas from 4 different manufacturers and I'd rank the PSI antennas equal to the pre-ERI Andrews.

They're VERY well made right down to the welds and provide an excellent signal with superior reliability.

The company is well run and responsive, delivery was on time and the antenna was crated to withstand a nuclear blast. Pricing is excellent and I won't hesitate a second to recommend them."



PSILP SLOT ANTENNA IN PRODUCTION AT THE FACTORY.

Corporate Office
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Email: sales@psibroadcast.com

Randy Weigner, President
Commercial Broadcasting Corp.

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Quality Broadcast Antenna Systems

PSI ψ

USER REPORT

WFBT-CA 48

Chicago, IL

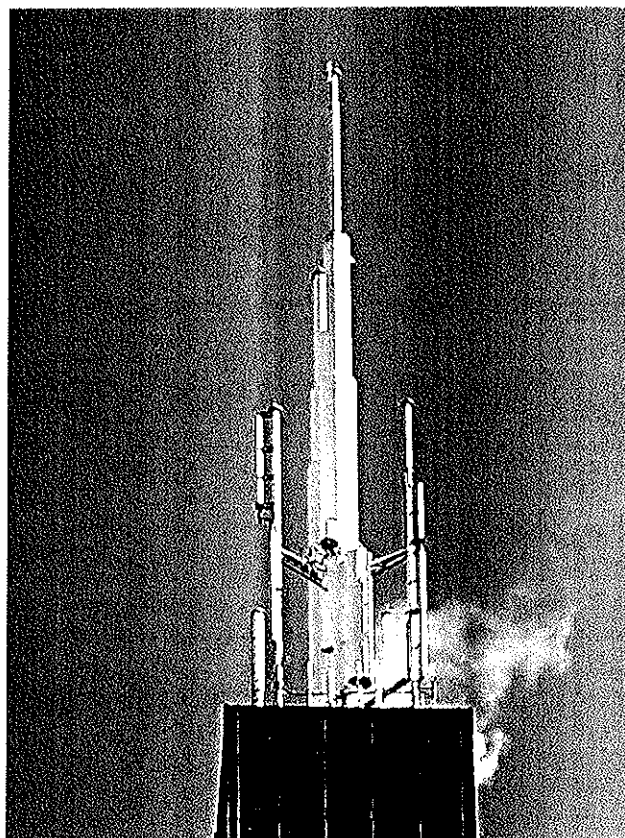
Kyle Walker, Director of Engineering
Weigel Broadcasting Chicago

MODEL:
PSILP24WBB-48

TECHNICAL SPECIFICATIONS

Frequency / Channel	48
Power Rating	5 kW
ERP	150 kW
Service	Analog
Mount Position	Side
Polarization	Horizontal
Directional	Yes
Radomes	White Slot Cover
Deicers	N/A

"In late October 2004, we acquired a low power television station in Chicago. This new station was part of another station launch and needed to be relocated from the southwest suburbs to Sears Tower, located in the heart of downtown Chicago, in just 6 weeks.



PSI ANTENNA MOUNTED INSIDE CENTRAL STRUCTURE
ON TOP OF SEARS TOWER

The antenna pattern we chose maximized our signal potential while still protecting nearby adjacent and co-channel stations. **This was not an "off the shelf" pattern and we needed this antenna built and tested in just over three weeks.** Since this is a low power station and interference protection is a requirement, we also wanted real world measurements to insure that this antenna met the predicted specifications.

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PSI ψ

USER REPORT

WFBT-CA 48

Chicago, IL

Kyle Walker, Director of Engineering
Weigel Broadcasting Chicago

MODEL:
PSILP24WBB-48

TECHNICAL SPECIFICATIONS

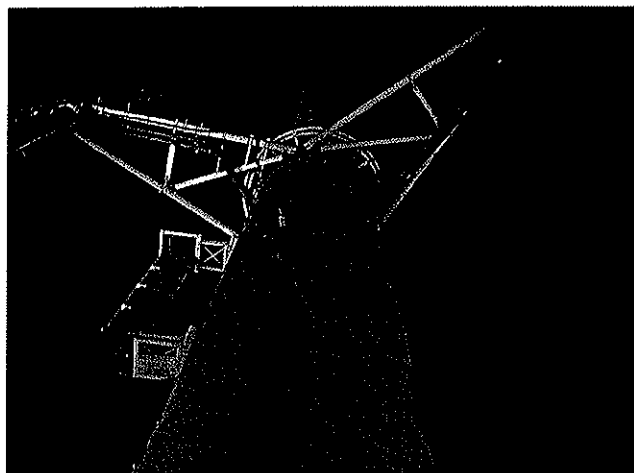
Frequency / Channel	48
Power Rating	5 kW
ERP	150 kW
Service	Analog
Mount Position	Side
Polarization	Horizontal
Directional	Yes
Radomes	White Slot Cover
Deicers	N/A

CONT'D

"I contacted PSI days after our purchase of this station expressing our delivery and quality concerns.

Doug and his team met our goals and provided us

with true measured elevation and azimuth data that met all of our requirements. PSI was also on-site during the installation insuring that the installation crew had no problems re-assembling the antenna on the rooftop of Sears Tower.



ROOFTOP OF SEARS TOWER DURING INSTALLATION



It was a pleasure working with PSI on this project. PSI provides quality antennas and is committed to customer satisfaction."

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Kyle Walker, Director of Engineering
Weigel Broadcasting Chicago

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USER REPORT

WDPB-DT

Seaford, DE

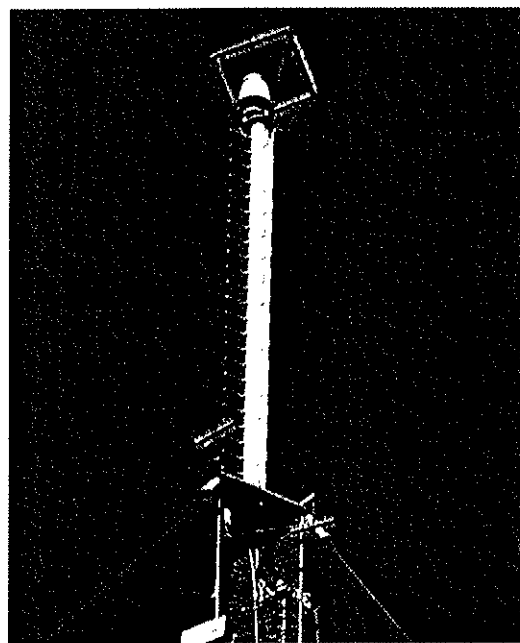
**John Doran, Chief Engineer
WHYY, Inc.**

**MODEL:
PSILP16BSLC-44**

TECHNICAL SPECIFICATIONS

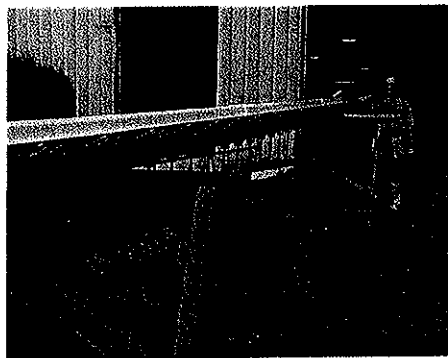
Frequency / Channel	44
Power Rating	5 kW
ERP	98 kW
Service	Digital
Mount Position	Top
Polarization	Horizontal
Directional	Yes
Radomes	White Slot Cover
Deicers	No

“WHYY is very pleased with its purchase of two PSI designed and manufactured antennas. They were purchased for WHYY's Southern Delaware outlet WDPB in Seaford, Delaware. WHYY had pretty routine requirements to convert from analog to DTV at the Seaford tower and like many stations needed to accomplish it with an existing tower. Our biggest challenge was converting to DTV without increasing the windloading or dead weight to the tower. It was also important to our budget to complete the transition to digital in one step. We retired an old top mounted Ch64 analog antenna,



WDPB-DT PSILP16BSLC-44 ANTENNA

replacing it with a Ch44 DTV antenna and then used a less expensive side mounted Ch64 analog antenna to finish out the analog years. Thus all we need to do at the end of the transition is take down the Ch64 antenna.”



JOHN DORAN DURING VISIT TO PSI

CONT'D

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Propagation Systems, Inc. (PSI)
Quality Broadcast Antenna Systems



USER REPORT

WPHA-CA

Philadelphia, PA

**Randy Weigner, President
Commercial Broadcasting Corp.**

**MODEL:
PSILP16CRAC-38**

TECHNICAL SPECIFICATIONS

Frequency / Channel	38
Power Rating	5 kW
ERP	40 kW
Service	Analog
Mount Position	Side
Polarization	Horizontal
Directional	Custom Directional
Radomes	White Slot Cover
Deicers	No

“Over the years I've purchased TV broadcast antennas from 4 different manufacturers and I'd rank the PSI antennas equal to the pre-ERI Andrews.

They're VERY well made right down to the welds and provide an excellent signal with superior reliability.

The company is well run and responsive, delivery was on time and the antenna was crated to withstand a nuclear blast. Pricing is excellent and I won't hesitate a second to recommend them.”

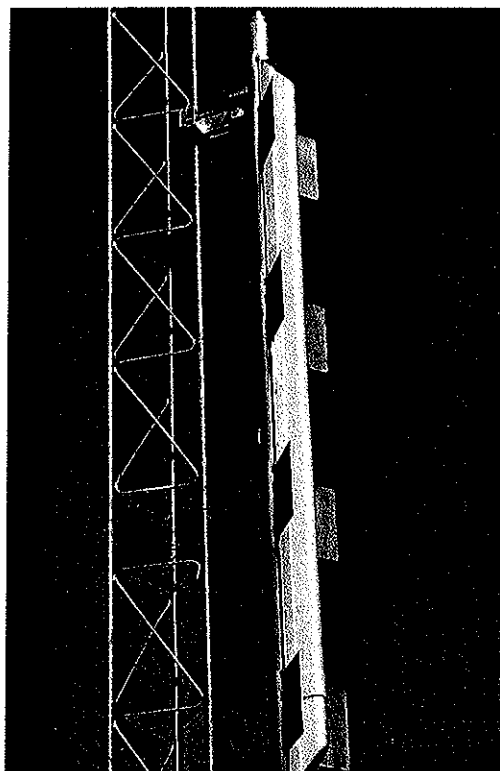


PHOTO OF WPHA-CA NOT AVAILABLE. THIS IS SIMILAR MODEL.

**Randy Weigner, President
Commercial Broadcasting Corp.**

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Propagation Systems, Inc. (PSI)
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USER REPORT

WBPH-TV

Bethlehem, PA

Daniel P. Huber, Chief Engineer
Sonshine Family TV Corp WBPH 60

MODEL:

PSIUSM32AN2-60

TECHNICAL SPECIFICATIONS

Frequency / Channel	60
Power Rating	36 kW
ERP	2950 kW
Service	Analog
Mount Position	Side
Polarization	Horizontal
Directional	Yes
Radomes	International Orange Fiberglass
Deicers	N/A

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“When WBPH looked for a high power UHF broadcast antenna we needed an antenna manufacturer with high quality, high reliability and who could work with our specific needs, and also work within our budget. We thoroughly investigated all options available to us and in the end selected PSI and in 2002 we signed on WBPH’s new PSI antenna at 3 million watts.

From manufacture to delivery to installation to test, our experience with PSI was excellent. Turn on was smooth, Low VSWR and excellent propagation. When WBPH needed to build WBPH DT, we again turned to PSI. WBPH-DT signed on with no problems. Again, excellent results from Doug Ross and the PSI team.”

Daniel P. Huber, Chief Engineer
Sonshine Family TV Corp WBPH 60



PSI ANTENNA BEING MOUNTED ON THE TOWER.
PSI ANALOG CHANNEL 60 ANTENNA

Propagation Systems, Inc. (PSI)
Quality Broadcast Antenna Systems

