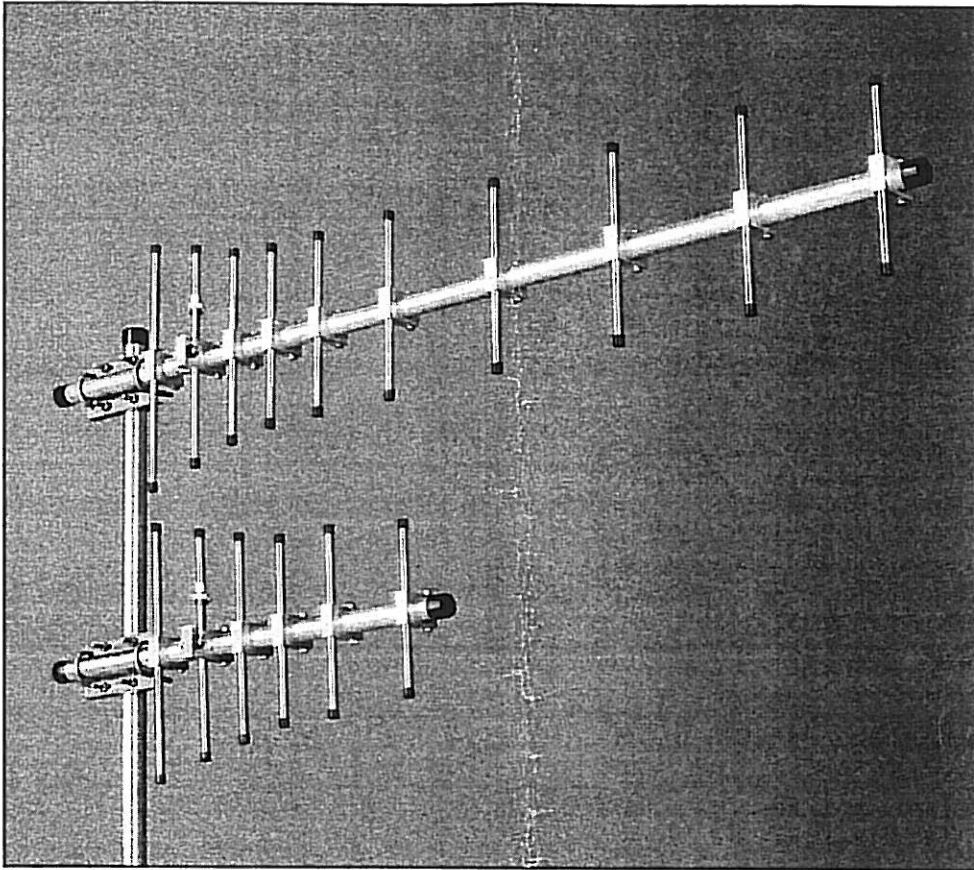


ASSEMBLY & INSTALLATION INSTRUCTIONS



PLC 6 & 10 Element Yagis



CUSHCRAFT
COMMUNICATIONS ANTENNAS

6 & 10 ELEMENT PLC YAGIS

6 ELEMENT PARTS PACKAGE

PART NO.	KEY	DESCRIPTION	QUANTITY
010404	404	2" Stainless Steel U-Bolt	2
010403	403	1 5/8" Stainless Steel U-Bolt	2
010119	119	5/16" Stainless Steel Lock Washer	8
010118	118	5/16" Stainless Steel Hex Nut	8
050013	013	1 1/4" Plastic Cap	2
050115	115	Vinyl Boot	1
240116	116	Silicone Pack	1
290326	326	Warning Label	1

10 ELEMENT PARTS

PACKAGE

010404	404	2" Stainless Steel U-Bolt	2
010403	403	1 5/8" Stainless Steel U-Bolt	2
010119	119	5/16" Stainless Steel Lock Washer	8
010118	118	5/16" Stainless Steel Hex Nut	8
050013	013	1 1/4" Plastic Cap	2
030413	413	1 3/8" Stainless Steel Worm Clamps HSS-16	2
050115	115	Vinyl Boot	1
240116	116	Silicone Pack	1
290326	326	Warning Label	1

PARTSLIST

PART NO.	DESCRIPTION	QUANTITY
190070	4" x 6" Mounting Plate	1
	Boom 1 1/4" .058 Aluminum Tubing	1
	Elements, Reflector #1, Driven Element with preassembled Reddi Match #2 Directors #3, #4, #5, #6 (For 6 Element Yagis)	6
	Elements, Reflector #1, Driven Element with preassembled Reddi Match #2 Directors #3, #4, #5, #6, #7, #8, #9, #10 (for 10 Element Yagis)	10
	Boom Splice, 1 3/8" O .D. Aluminum Tube (For 10 Element Yagis)	1

WARNING

THIS ANTENNA IS AN ELECTRICAL CONDUCTOR; CONTACT WITH POWER LINES CAN RESULT IN DEATH, OR SERIOUS INJURY. DO NOT INSTALL THIS ANTENNA WHERE THERE IS ANY POSSIBILITY OF CONTACT WITH, OR HIGH VOLTAGE ARC-OVER FROM, POWER CABLES OR SERVICE DROPS TO BUILDINGS. THE ANTENNA, SUPPORTING MAST AND OR TOWER MUST NOT BE CLOSE TO ANY POWER GUIDELINES FOR ANTENNA INSTALLATIONS RECOMMENDED BY THE U.S. CONSUMER PRODUCT SAFETY COMMISSION AND LISTED IN THE ENCLOSED PAMPHLET.

ASSEMBLY OF VHF ANTENNAS

6 ELEMENT MODELS

PLC elements are secured at the factory to the machined mounting blocks. To assemble, slide each element to the proper marked position on the 1 1/4 inch boom. The driven element is installed with the coaxial connector facing the rear of the antenna. If there is any difficulty sliding the blocks onto the boom, it may be necessary to loosen the locking bolt and insert a screwdriver blade in the slot of the block to wedge it slightly open. Align the elements and secure them in place with the locking bolts. Attach the mast bracket as shown in Figures 1 and 2. The boom may be rotated for vertical or horizontal polarization. Slide the 1 1/4 inch protective caps on the ends of the boom.

10 ELEMENT MODELS

The 10 element antennas have a two-piece boom which is assembled by sliding the 1 1/4 inch sections into the 1 3/8 inch sleeve and securing with the clamps provided as shown in Figure 4. Attach the mast mount bracket on the 1 3/8 inch sleeve as shown in Figures 1 and 3. Slide the preassembled elements to their proper marked positions with the coaxial connector on the driven element facing the center of the antenna. Align the elements and secure them in place with the locking bolts. The antenna may be mounted for vertical or horizontal polarization by rotating in the mast mount bracket. Slide the 1 1/4 inch protective caps on the ends of the boom

6 AND 10 ELEMENT UHF ANTENNAS

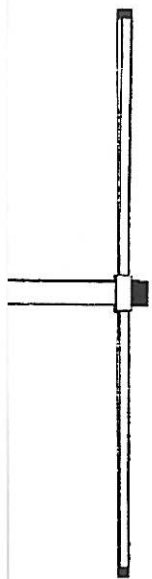
The PLC-406 through PLC 496 and PLC 4010 through PLC-4090 are fully assembled at the factory. This manual is included for reference and tune-up procedure. The UHF antenna mast mount bracket is attached for vertical polarization. If horizontal polarization is needed, rotate the bracket on the boom 90°.

TUNE-UP PROCEDURE

The Proline broadband Yagi antenna normally does not require adjustment of the Reddi Match. The Reddi Match is pre-set at the factory; however, should the need arise follow these procedures:

Mount the antenna in the clear. Attach the SWR bridge to the antenna with a short length of 50 Ohm coaxial cable. If the SWR reading is high, slide the Reddi Match tuning strap in either direction by a small amount. Move away from the antenna and measure the SWR. Repeat this procedure until the SWR reading is at its lowest. Disconnect the cable and bridge, then tighten the tuning strap on the Reddi Match. The antenna can now be mounted and connected to the feedline

A vinyl boot and silicone pack are supplied to weatherproof antennas with UHF type coaxial fittings. Slide the boot onto the cable before attaching the PL-259 connector. Coat the outside threads of the antenna connector with silicone grease, DO NOT COAT THE CONNECTOR CENTER PIN. Screw the PL-259 onto the antenna connector, then slide the boot over the PL-259 and up to the block. The vinyl boot and silicone grease are only provided with antennas that use UHF connectors.



#6

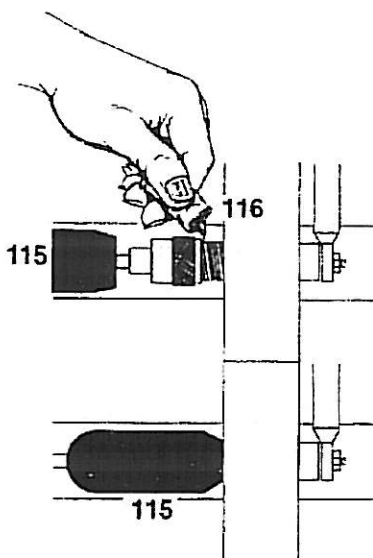


FIGURE 5

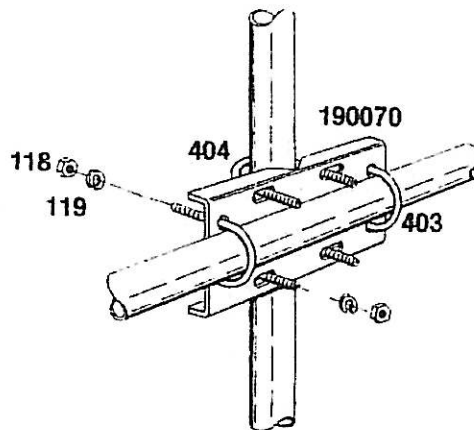
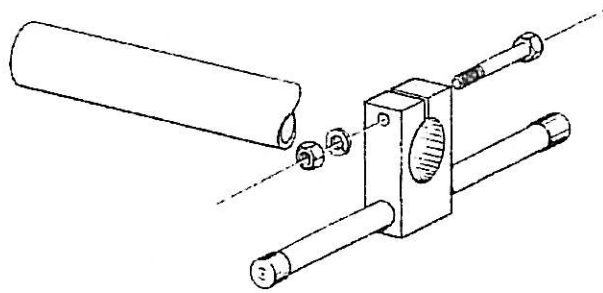


FIGURE 1

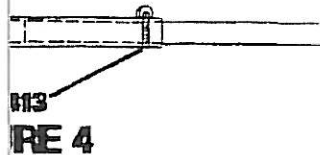
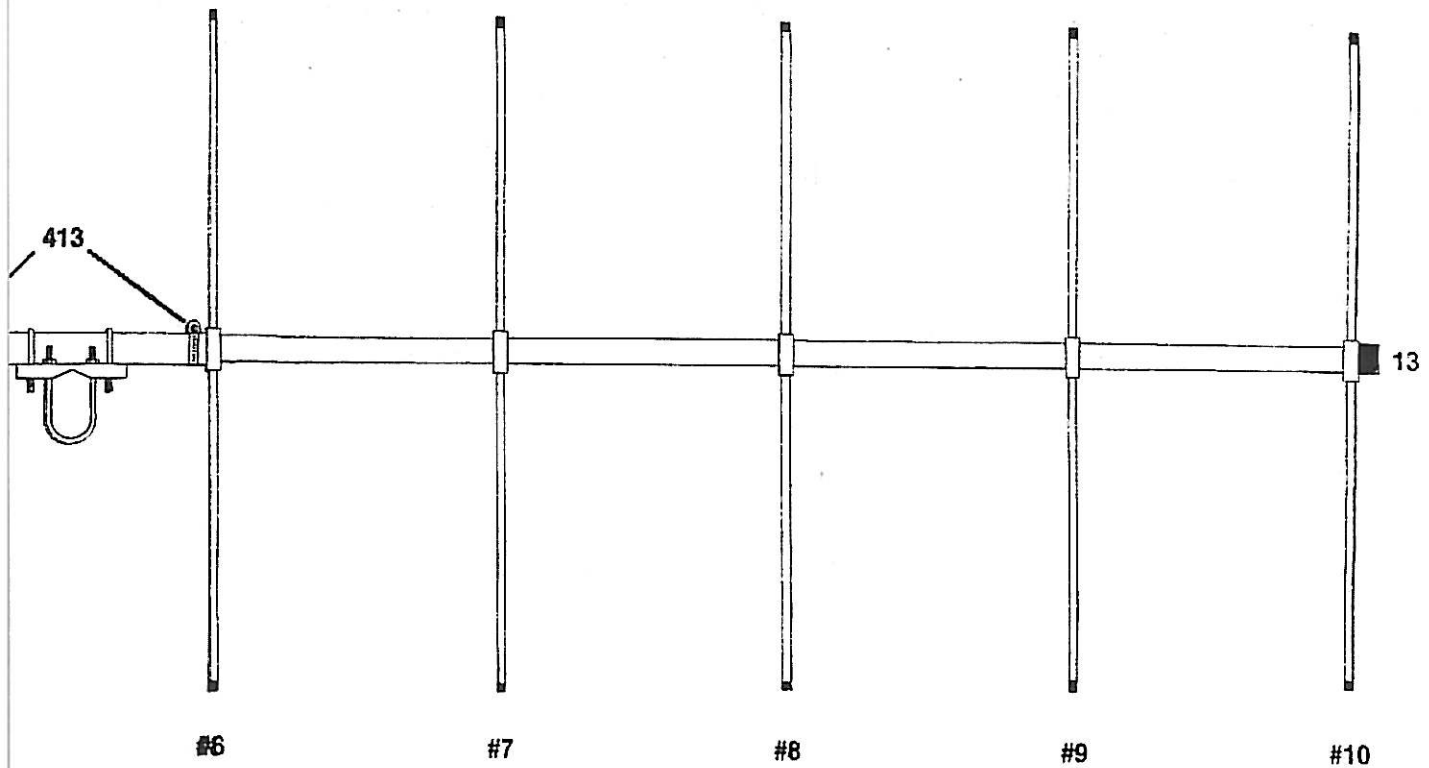


FIGURE 4

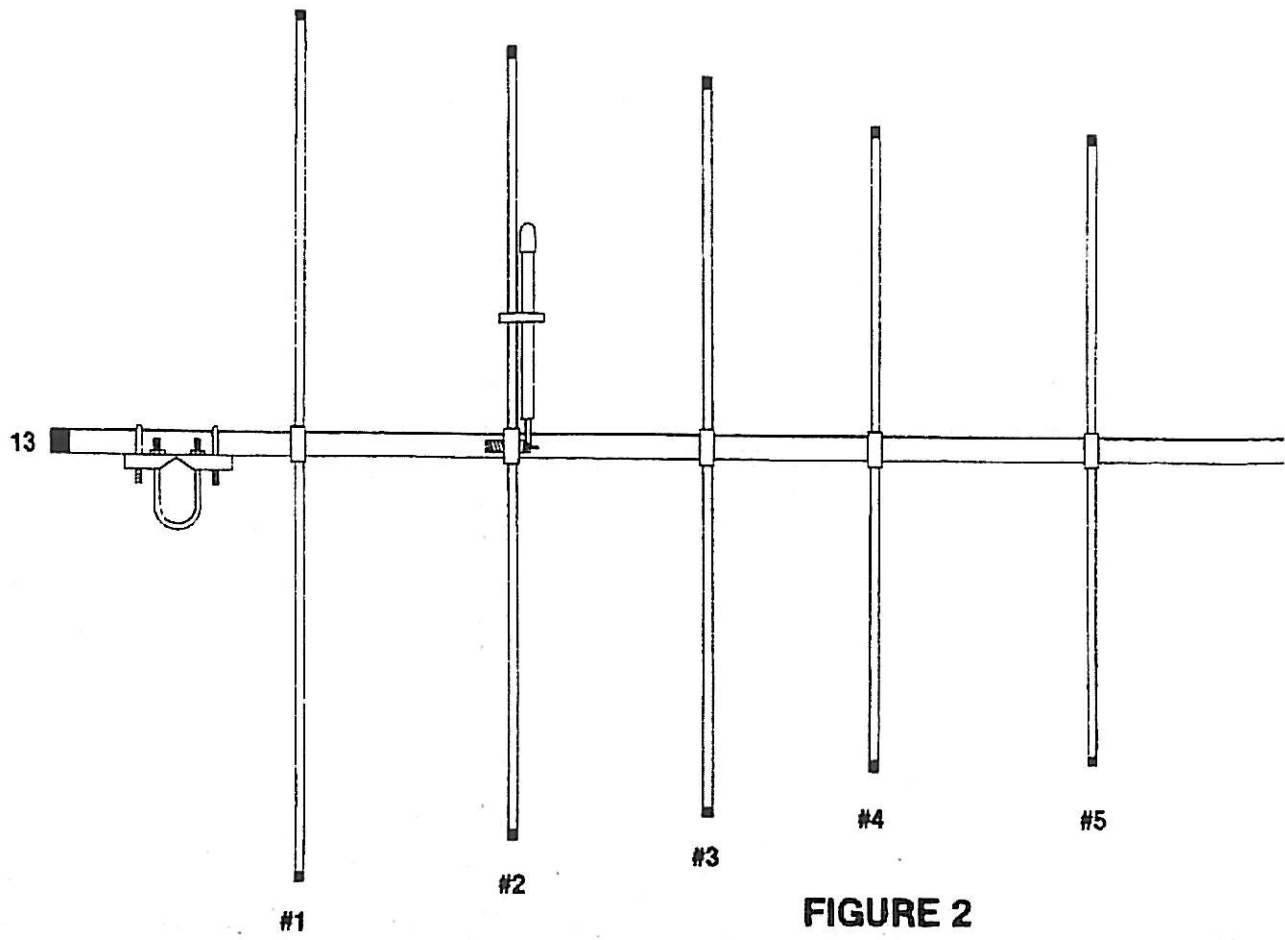


FIGURE 2

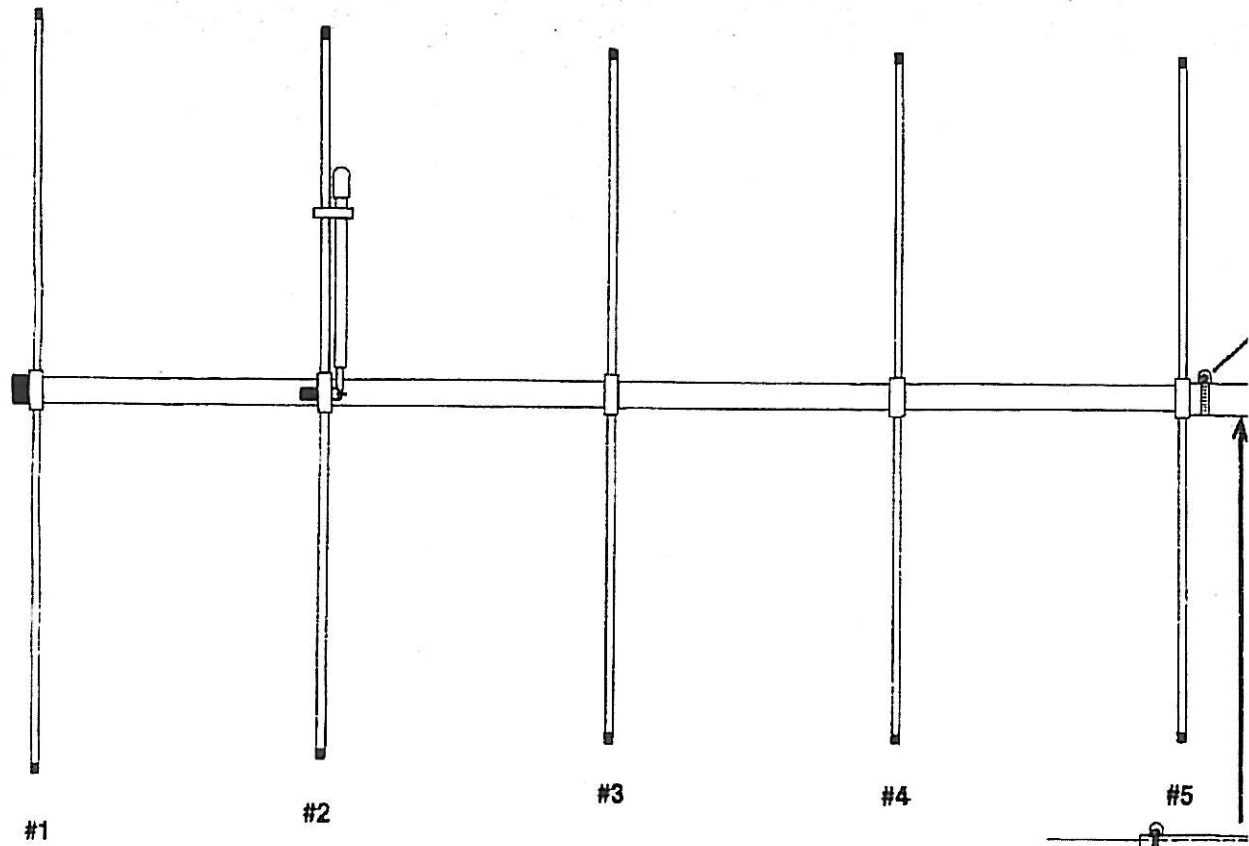
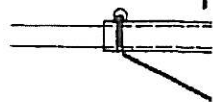


FIGURE 3



FIGI

UHF HEAVY-DUTY YAGI SELECTOR CHART

Model	Freq. MHz	Gain dBd	No. F Elem	B dB	-3dB Beamwidth		Conn. Type	W/ surf. Area	W/ surv. W/ 1/2"	Length in (cm)	Wt. lb (kg)	
					E-Plane°	H-Plane°		ft ² (m ²)	mph (kph)			
PLC-406	406-420	7.5	6	25	53	74	UHF	0.41 (0.038)	125 (200)	100 (161)	31-1/4 (79.4)	3.7 (1.7)
PLC-406N	406-420	7.5	6	25	53	74	N	0.41 (0.038)	125 (200)	100 (161)	31-1/4 (79.4)	3.7 (1.7)
PLC-456	450-470	7.5	6	25	53	74	UHF	0.41 (0.038)	125 (200)	100 (161)	31-1/4 (79.4)	3.7 (1.7)
PLC-456N	450-470	7.5	6	25	53	74	N	0.41 (0.038)	125 (200)	100 (161)	31-1/4 (79.4)	3.7 (1.7)
PLC-476	470-490	7.5	6	25	53	74	UHF	0.41 (0.038)	125 (200)	100 (161)	31-1/4 (79.4)	3.7 (1.7)
PLC-476N	470-490	7.5	6	25	53	74	N	0.41 (0.038)	125 (200)	100 (161)	31-1/4 (79.4)	3.7 (1.7)
PLC-496	490-512	7.5	6	25	53	74	UHF	0.41 (0.038)	125 (200)	100 (161)	31-1/4 (79.4)	3.7 (1.7)
PLC-496N	490-512	7.5	6	25	53	74	N	0.41 (0.038)	125 (200)	100 (161)	31-1/4 (79.4)	3.7 (1.7)
PLC-4010	406-420	11.5	10	25	37	42	UHF	0.68 (0.063)	125 (200)	85 (137)	66 (167)	5.25 (2.38)
PLC-4010N	406-420	11.5	10	25	37	42	N	0.68 (0.063)	125 (200)	85 (137)	66 (167)	5.25 (2.38)
PLC-4510	450-470	11.5	10	25	37	42	UHF	0.68 (0.063)	125 (200)	85 (137)	66 (167)	5.25 (2.38)
PLC-4510N	450-470	11.5	10	25	37	42	N	0.68 (0.063)	125 (200)	85 (137)	66 (167)	5.25 (2.38)
PLC-4710	470-490	11.5	10	25	37	42	UHF	0.68 (0.063)	125 (200)	85 (137)	66 (167)	5.25 (2.38)
PLC-4710N	470-490	11.5	10	25	37	42	N	0.68 (0.063)	125 (200)	85 (137)	66 (167)	5.25 (2.38)
PLC-4910	490-512	11.5	10	25	37	42	UHF	0.68 (0.063)	125 (200)	85 (137)	66 (167)	5.25 (2.38)
PLC-4910N	490-512	11.5	10	25	37	42	N	0.68 (0.063)	125 (200)	85 (137)	66 (167)	5.25 (2.38)

Common specifications: Power handling-250 W atts; Element material-1/2 in.(1.3 cm) 6063-T832 Aluminum; Boom material-1-1/8 in. (2.9 cm) 6063-T832 Aluminum. All PLC models can mount to 2-1/8 in. (5.4 cm) diameter pipe with U-bolts and plates supplied.

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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Please contact your vendor for technical support and warranty service.



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