

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person*			2. Issuer Name and Ticker or Trading Symbol			5. Relationship of Reporting Person(s) to Issuer (Check all applicable)		
<u>Ueuten Paul</u>			<u>MONOLITHIC POWER SYSTEMS INC</u>			Director 10% Owner		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year)			X Officer (give title below) Other (specify below)		
6409 GUADALUPE MINES ROAD			02/24/2012			Sr. V.P. Design Engineering		
(Street)			4. If Amendment, Date of Original Filed (Month/Day/Year)			6. Individual or Joint/Group Filing (Check Applicable Line)		
SAN JOSE CA 95120						X Form filed by One Reporting Person		
(City) (State) (Zip)						Form filed by More than One Reporting Person		

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	02/24/2012		M <sup>(1)</sup>		30,000	A	\$9.32	174,208	D	
Common Stock	02/24/2012		S <sup>(1)</sup>		30,000	D	\$19	144,208	D	
Common Stock	02/24/2012		M <sup>(1)</sup>		19,238	A	\$9.32	163,446	D	
Common Stock	02/24/2012		S <sup>(1)</sup>		19,238	D	\$19	144,208	D	
Common Stock								153,556	I	Ueuten Trust I
Common Stock								113,900	I	Ueuten Trust II
Common Stock								26,000	I	Ueuten Trust III
Common Stock								26,000	I	Ueuten Trust IV

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date						Title
Incentive Stock Option (right to buy)	\$9.32	02/24/2012		M <sup>(1)</sup>			19,238	06/15/2006	06/15/2015	Common Stock	19,238	\$0.0	0.0	D	
Non-Qualified Stock Option (right to buy)	\$9.32	02/24/2012		M <sup>(1)</sup>			30,000	06/15/2006	06/15/2015	Common Stock	30,000	\$0.0	762	D	

**Explanation of Responses:**

1. In accordance with the reporting person's 10b5-1 trading plan.

By: Saria Tseng For: Paul  
Ueunten

02/27/2012

\*\* Signature of Reporting Person      Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

**Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.**