

No attempt has been made to rank the information contained in this report in order of importance, since BPA Worldwide believes this is a judgment which must be made by the user of the report.

Institute of Electrical and Electronics Engineers Inc.  
3 Park Ave. 17th Floor  
New York, NY 10016  
Tel.: (212) 419-7767  
Fax: (212) 419-7589

**IEEE SPECTRUM** is a media brand targeting individuals with broad-based interests in new technologies, science and electrical engineering. The brand content and editorial scope of IEEE Spectrum includes emerging technology news, analysis and commentary, in-depth technical articles and special features. The content of every issue is also available to subscribers globally via the online digital version.

### BRAND REPORT PURPOSE

The Brand Report provides a deeper understanding and identification of all audited touch points with customers that have interest in the brand. It is designed to present analysis of all communication channels, including a brand's unique users within each channel of, but not across, multiple media platforms. This non-integrated report contains data for each separate media channel as indicated in the Executive Summary. No attempt has been made to identify or eliminate duplication that may exist across media channels.

## CHANNELS

### IEEE SPECTRUM MAGAZINE



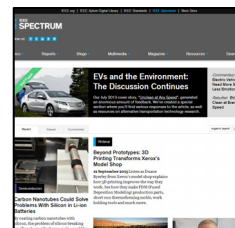
6 Issues in the period  
364,302 average circulation

### IEEE SPECTRUM E-NEWSLETTERS

tech alert

7 E-Newsletters in the period  
86 total issued in the period  
See below for average per occurrence

### IEEE SPECTRUM WEBSITE



777,239 average unique browsers

### IEEE SPECTRUM SOCIAL MEDIA



103,479 Twitter followers  
330,727 Facebook likes

## EXECUTIVE SUMMARY

Below are the Average contacts per occurrence, including frequency per period reported

	Paid	Non-Paid	Average
<b>IEEE SPECTRUM MAGAZINE</b> Unique Total* (6 issues in the period)	347,105	17,197	364,302
a. Print	185,788	15,013	200,801
b. Digital	165,683	2,184	167,867
1. Requested	-	-	-
2. Non-Requested	165,683	2,184	167,867
<b>IEEE SPECTRUM E-NEWSLETTERS</b>			
a. The Tech Alert (weekly) (25 issued in the period)	-	473,164	473,164
b. Energy-Wise (bi-weekly) (7 issued in the period)	-	105,855	105,855
c. Test + Newsletter (monthly) (13 issued in the period)	-	92,558	92,558
d. Cars That Think (bi-weekly) (12 issued in the period)	-	108,079	108,079
e. Career Alert (bi-weekly) (11 issued in the period)	-	270,806	270,806
f. Robotics news (bi-weekly) (12 issued in the period)	-	98,455	98,455
g. Human OS (6 issued in the period)	-	67,033	67,033
<b>IEEE SPECTRUM WEBSITE</b> (Monthly Unique Browsers with 1,601,648 average Page Impressions)	-	777,239	777,239
<b>IEEE SPECTRUM SOCIAL MEDIA</b>			
a. Twitter followers	-	**103,479	**103,479
b. Facebook likes	-	**330,727	**330,727

\*Unique Total represents unique recipients, not the sum of Print and Digital.

\*\*Social Media Claims is a cumulative figure, not an average.

## MARKET SERVED

IEEE SPECTRUM serves members of the Institute of Electrical and Electronics Engineers (IEEE), and other paid and non-paid subscribers.

## PRICE AND FREQUENCY

\$19.99 Average Annual Subscription Order Price for the Period Reported (Excluding Sponsored Subscriptions)

12 Issues Per Year

\$3.95 All Single-Copy Sales Prices for the Period

## AVERAGE TOTAL QUALIFIED BASED ON 6 ISSUES IN THE PERIOD

<b>Total Qualified</b>	<b>364,302</b>
Average Rate Base	**NC
Variance +/-	**NC
Percent +/-	**NC
Qualified Paid	347,105
Subscriptions	346,991
Sponsored	-
Single-Copy Sales	114
Qualified Non-Paid	17,197

\*\*NC = None Claimed

## 1. AVERAGE QUALIFIED CIRCULATION BREAKOUT FOR PERIOD

	Qualified Paid		Qualified Non-Paid		Total Qualified	
	Copies	Percent	Copies	Percent	Copies	Percent
Individual	1,251	0.3	-	-	1,251	0.3
*Membership Benefit	345,568	94.9	2,197	0.6	347,765	95.5
Multi-Copy Same Addressee	172	0.1	10,000	2.7	10,172	2.8
Sponsored Individually Addressed	-	-	5,000	1.4	5,000	1.4
Sponsored Multi-Copy Same Addressee	-	-	-	-	-	-
<b>Sub-Total Subscriptions:</b>	<b>346,991</b>	<b>95.3</b>	<b>17,197</b>	<b>4.7</b>	<b>364,188</b>	<b>100.0</b>
Single-Copy Sales	114	-	-	-	114	-
Sponsored Single-Copy Sales	-	-	-	-	-	-
<b>TOTAL</b>	<b>347,105</b>	<b>95.3</b>	<b>17,197</b>	<b>4.7</b>	<b>364,302</b>	<b>100.0</b>

\*See Additional Data

## 2. QUALIFIED CIRCULATION BY ISSUES FOR PERIOD

2016 Issue	Print	Digital	Qualified Paid			Qualified Non-Paid	Unique Total Qualified*
			Single-Copy Sales	Subscriptions	Total		
January	211,657	196,195	131	385,820	385,951	17,230	403,181
February	213,033	202,315	102	393,241	393,343	17,238	410,581
March	214,726	208,134	109	400,642	400,751	17,256	418,007
April	180,084	118,997	116	278,318	278,434	17,140	295,574
May	187,938	133,418	112	300,231	300,343	17,154	317,497
June	196,788	148,142	115	323,690	323,805	17,161	340,966

\*Unique Total Qualified represents unique recipients, not the sum of Print and Digital.

**3. BREAKOUT OF QUALIFIED CIRCULATION TO THE CONSUMER MARKET FOR ISSUE OF MAY 2016**

This issue is 15.0% or 56,165 copies below the average of the other 5 issues reported in Paragraph 2. (See Additional Data)

MARKET SERVED	UNIQUE TOTAL QUALIFIED*	PERCENT OF TOTAL	Print	Digital	Qualified Non-Paid	Qualified Paid
IEEE members and others allied to the field	301,109	94.8	171,578	133,374	2,154	298,955
Individual paid subscribers	1,122	0.4	1,122	-	-	1,122
Single copy sales	112	0.0	112	-	-	112
Multi-copy same addressee (Note 1)	15,154	4.8	15,126	44	15,000	154
<b>UNIQUE TOTAL QUALIFIED CIRCULATION*</b>	<b>317,497</b>	<b>100.0</b>	<b>187,938</b>	<b>133,418</b>	<b>17,154</b>	<b>300,343</b>

Note 1: Multiple copies are distributed to first-class lounges and corporate waiting rooms. Also included are copies delivered to the same individual appearing on the qualification list more than once.

\*Unique Total Qualified represents unique recipients, not the sum of Print and Digital.

**4. QUALIFICATION SOURCE BREAKOUT OF QUALIFIED CIRCULATION FOR ISSUE OF MAY 2016**

QUALIFICATION SOURCE	Qualified Within			Print	Digital	Qualified Non-Paid	Qualified Paid	Unique Total Qualified*	Percent
	1 Year	2 Years	3 Years						
I. Direct Request:	1,122	-	-	1,122	-	-	1,122	1,122	0.5
II. Request from recipient's company:	154	-	-	126	44	-	154	154	-
III. Membership Benefit:	301,109	-	-	171,578	133,374	2,154	298,955	301,109	94.8
IV. Communication from recipient or re-distributor (other than request):	-	-	-	-	-	-	-	-	-
V. <b>TOTAL</b> – Sources other than above (listed alphabetically):	15,000	-	-	15,000	-	15,000	-	15,000	4.7
Rosters and Directories	15,000	-	-	15,000	-	15,000	-	15,000	4.7
Manufacturer's, distributor's and wholesaler's lists	-	-	-	-	-	-	-	-	-
Other sources	-	-	-	-	-	-	-	-	-
VI. Single Copy Sales:	112	-	-	112	-	-	112	112	-
<b>UNIQUE TOTAL QUALIFIED CIRCULATION*</b>	<b>317,497</b>	-	-	<b>187,938</b>	<b>133,418</b>	<b>17,154</b>	<b>300,343</b>	<b>317,497</b>	<b>100.0</b>
<b>PERCENT</b>	<b>100.0</b>	-	-	<b>59.2</b>	<b>42.0</b>	<b>5.4</b>	<b>94.6</b>	<b>100.0</b>	

\*Unique Total Qualified represents unique recipients, not the sum of Print and Digital.

**AVERAGE ANNUAL AUDITED QUALIFIED CIRCULATION AND CURRENT UNAUDITED CIRCULATION STATEMENTS**

6-Month Period Ended:	Audited Data	Audited Data	Audited Data	Audited Data	Audited Data	Circulation Claim
	July - December 2013	January - June 2014	July - December 2014	January - June 2015	July - December 2015	January - June 2016*
Total Audit Average Qualified:	390,051	376,418	381,647	368,556	372,168	364,207
Rate Base (if any):	**NC	**NC	**NC	**NC	**NC	**NC
Rate Base +/-:	**NC	**NC	**NC	**NC	**NC	**NC
Percent +/-:	**NC	**NC	**NC	**NC	**NC	**NC
Qualified Paid :	375,275	361,591	366,830	353,670	357,312	347,105
Subscriptions	375,091	361,424	366,674	353,480	357,173	346,991
Sponsored	-	-	-	-	-	-
Single-Copy Sales	184	167	156	190	139	114
Qualified Non-Paid:	14,776	14,827	14,817	14,886	14,856	17,197
Post Expire Copies included in Total Qualified Circulation:	**NC	**NC	**NC	**NC	**NC	**NC
Average Annual Order Price:	\$19.99	\$19.99	\$19.99	\$19.99	\$19.99	\$19.99

\*NOTE: January – June 2016 data is unaudited. With each successive period, new data will be added until six 6-month periods are displayed.

\*\*NC = None Claimed.

**GEOGRAPHICAL BREAKOUT OF QUALIFIED CIRCULATION FOR ISSUE OF MAY 2016\*\***

State	Print	Digital	Qualified Paid			Qualified Non-Paid	Unique Total Qualified*	Percent
			Single Copy Sales	Subscriptions	Total Paid			
Maine	322	144	-	455	455	3	458	
New Hampshire	1,004	254	-	1,226	1,226	22	1,248	
Vermont	283	85	-	360	360	3	363	
Massachusetts	6,680	1,839	6	7,526	7,532	867	8,399	
Rhode Island	423	154	-	562	562	5	567	
Connecticut	1,340	479	-	1,777	1,777	23	1,800	
<b>NEW ENGLAND</b>	<b>10,052</b>	<b>2,955</b>	<b>6</b>	<b>11,906</b>	<b>11,912</b>	<b>923</b>	<b>12,835</b>	<b>4.0</b>
New York	16,070	2,162	-	8,030	8,030	10,097	18,127	
New Jersey	4,792	1,418	-	6,055	6,055	96	6,151	
Pennsylvania	4,481	1,758	-	6,094	6,094	70	6,164	
<b>MIDDLE ATLANTIC</b>	<b>25,343</b>	<b>5,338</b>	<b>-</b>	<b>20,179</b>	<b>20,179</b>	<b>10,263</b>	<b>30,442</b>	<b>9.6</b>
Ohio	2,987	1,222	5	4,101	4,106	44	4,150	
Indiana	1,389	700	-	2,041	2,041	16	2,057	
Illinois	3,489	1,338	7	4,720	4,727	40	4,767	
Michigan	2,279	1,078	1	3,282	3,283	28	3,311	
Wisconsin	1,593	527	5	2,062	2,067	14	2,081	
<b>EAST NO. CENTRAL</b>	<b>11,737</b>	<b>4,865</b>	<b>18</b>	<b>16,206</b>	<b>16,224</b>	<b>142</b>	<b>16,366</b>	<b>5.2</b>
Minnesota	2,020	689	1	2,650	2,651	16	2,667	
Iowa	561	256	1	801	802	6	808	
Missouri	1,299	520	2	1,775	1,777	24	1,801	
North Dakota	170	72	-	237	237	-	237	
South Dakota	126	95	-	218	218	1	219	
Nebraska	378	151	1	515	516	5	521	
Kansas	559	293	-	838	838	5	843	
<b>WEST NO. CENTRAL</b>	<b>5,113</b>	<b>2,076</b>	<b>5</b>	<b>7,034</b>	<b>7,039</b>	<b>57</b>	<b>7,096</b>	<b>2.2</b>
Delaware	292	91	-	373	373	6	379	
Maryland	4,888	1,272	1	6,008	6,009	74	6,083	
Washington, DC	306	106	-	400	400	4	404	
Virginia	4,693	1,562	-	6,101	6,101	65	6,166	
West Virginia	197	131	-	325	325	1	326	
North Carolina	2,580	1,077	-	3,578	3,578	38	3,616	
South Carolina	957	361	-	1,290	1,290	19	1,309	
Georgia	2,573	1,074	-	3,569	3,569	35	3,604	
Florida	4,477	1,765	2	6,049	6,051	123	6,174	
<b>SOUTH ATLANTIC</b>	<b>20,963</b>	<b>7,439</b>	<b>3</b>	<b>27,693</b>	<b>27,696</b>	<b>365</b>	<b>28,061</b>	<b>8.9</b>
Kentucky	537	277	1	791	792	11	803	
Tennessee	1,498	688	-	2,137	2,137	22	2,159	
Alabama	1,263	486	-	1,707	1,707	20	1,727	
Mississippi	344	165	-	501	501	5	506	
<b>EAST SO. CENTRAL</b>	<b>3,642</b>	<b>1,616</b>	<b>1</b>	<b>5,136</b>	<b>5,137</b>	<b>58</b>	<b>5,195</b>	<b>1.6</b>
Arkansas	361	222	-	565	565	8	573	
Louisiana	670	282	-	929	929	8	937	
Oklahoma	500	308	-	783	783	7	790	
Texas	9,484	3,411	-	11,433	11,433	1,303	12,736	
<b>WEST SO. CENTRAL</b>	<b>11,015</b>	<b>4,223</b>	<b>-</b>	<b>13,710</b>	<b>13,710</b>	<b>1,326</b>	<b>15,036</b>	<b>4.8</b>
Montana	238	77	-	312	312	2	314	
Idaho	500	200	-	686	686	7	693	
Wyoming	81	38	1	115	116	2	118	
Colorado	3,055	953	5	3,882	3,887	45	3,932	
New Mexico	973	311	-	1,242	1,242	19	1,261	
Arizona	2,372	856	-	3,143	3,143	53	3,196	
Utah	663	335	-	971	971	9	980	
Nevada	480	211	-	665	665	15	680	
<b>MOUNTAIN</b>	<b>8,362</b>	<b>2,981</b>	<b>6</b>	<b>11,016</b>	<b>11,022</b>	<b>152</b>	<b>11,174</b>	<b>3.5</b>
Alaska	224	102	-	320	320	1	321	
Washington	3,561	1,164	9	4,249	4,258	398	4,656	
Oregon	1,982	547	-	2,476	2,476	26	2,502	
California	22,499	7,088	4	26,135	26,139	3,081	29,220	
Hawaii	336	158	-	475	475	15	490	
<b>PACIFIC</b>	<b>28,602</b>	<b>9,059</b>	<b>13</b>	<b>33,655</b>	<b>33,668</b>	<b>3,521</b>	<b>37,189</b>	<b>11.7</b>
<b>UNITED STATES</b>	<b>124,829</b>	<b>40,552</b>	<b>52</b>	<b>146,535</b>	<b>146,587</b>	<b>16,807</b>	<b>163,394</b>	<b>51.5</b>
U.S. Territories	242	531	-	766	766	2	768	
Canada	7,964	4,406	60	12,002	12,062	85	12,147	
Mexico	467	1,876	-	2,323	2,323	2	2,325	
Other International	54,404	86,040	-	138,561	138,561	258	138,819	
APO/FPO	32	13	-	44	44	-	44	
<b>UNIQUE TOTAL QUALIFIED CIRCULATION*</b>	<b>187,938</b>	<b>133,418</b>	<b>112</b>	<b>300,231</b>	<b>300,343</b>	<b>17,154</b>	<b>317,497</b>	<b>100.0</b>

\*Unique Total Qualified represents unique recipients, not the sum of Print and Digital.

\*\*See Additional Data

**GEOGRAPHICAL BREAKOUT OF QUALIFIED CIRCULATION FOR ISSUE OF MAY 2016\*\***

Region/Country	Print	Digital	Qualified Paid			Qualified Non-Paid	Unique Total Qualified*	Percent
			Single Copy Sales	Subscriptions	Total Paid			
<b>ASIA</b>								
ARMENIA	1	10	-	11	11	-	11	
AZERBAIJAN	2	3	-	5	5	-	5	
BANGLADESH	39	961	-	997	997	-	997	
BRUNEI	17	7	-	24	24	-	24	
CAMBODIA	-	1	-	1	1	-	1	
CHINA	1,697	8,431	-	10,106	10,106	2	10,108	
GEORGIA	9	44	-	53	53	-	53	
HONG KONG - SAR	3,153	854	-	3,981	3,981	2	3,983	
INDIA	2,322	26,062	-	28,306	28,306	9	28,315	
INDONESIA	125	803	-	910	910	-	910	
JAPAN	7,429	3,024	-	10,277	10,277	58	10,335	
KAZAKSTAN	8	27	-	35	35	-	35	
LAOS	-	3	-	3	3	-	3	
MACAU	74	68	-	140	140	-	140	
MALAYSIA	427	1,822	-	2,231	2,231	1	2,232	
MALDIVES	2	6	-	8	8	-	8	
MONGOLIA	1	1	-	2	2	-	2	
MYANMAR (BURMA)	1	6	-	7	7	-	7	
NEPAL	5	46	-	51	51	-	51	
PAKISTAN	225	1,361	-	1,577	1,577	-	1,577	
PHILIPPINES	52	221	-	269	269	1	270	
SINGAPORE	1,284	891	-	2,151	2,151	-	2,151	
KOREA REP	1,827	1,318	-	3,110	3,110	2	3,112	
SRI LANKA	208	993	-	1,193	1,193	-	1,193	
TAIWAN ROC	1,781	975	-	2,713	2,713	3	2,716	
THAILAND	123	461	-	577	577	2	579	
VIETNAM	36	100	-	135	135	-	135	
Subtotal	20,848	48,499	-	68,873	68,873	80	68,953	21.7
<b>MIDDLE EAST</b>								
BAHRAIN	64	42	-	101	101	-	101	
IRAN	116	1,173	-	1,281	1,281	1	1,282	
IRAQ	17	114	-	131	131	-	131	
ISRAEL	578	244	-	796	796	12	808	
JORDAN	39	602	-	637	637	1	638	
KUWAIT	90	152	-	239	239	1	240	
LEBANON	61	895	-	948	948	-	948	
OMAN	512	186	-	698	698	-	698	
QATAR	116	99	-	209	209	-	209	
SAUDI ARABIA	542	628	-	1,143	1,143	-	1,143	
UNITED ARAB EMIRATES	382	619	-	980	980	-	980	
YEMEN	1	3	-	3	3	-	3	
Subtotal	2,518	4,757	-	7,166	7,166	15	7,181	2.2
<b>EUROPE</b>								
ALBANIA	4	7	-	11	11	-	11	
ANDORRA	1	-	-	1	1	-	1	
AUSTRIA	618	472	-	1,056	1,056	3	1,059	
BELARUS	6	15	-	21	21	-	21	
BELGIUM	724	449	-	1,134	1,134	3	1,137	
BOZNA-HERZEGOVINA	25	173	-	195	195	-	195	
BULGARIA	62	142	-	204	204	-	204	
CROATIA	106	486	-	585	585	3	588	
CYPRUS	109	128	-	233	233	-	233	
CZECH REPUBLIC	236	99	-	328	328	-	328	
DENMARK	419	250	-	654	654	4	658	
ESTONIA	44	87	-	130	130	-	130	
FAROE ISLANDS	4	1	-	5	5	-	5	
FINLAND	462	308	-	754	754	2	756	
FRANCE	1,968	913	-	2,827	2,827	6	2,833	
GERMANY	3,737	2,418	-	6,024	6,024	16	6,040	
GREECE	241	755	-	960	960	3	963	
HUNGARY	104	259	-	360	360	-	360	
ICELAND	42	14	-	53	53	1	54	
REPUBLIC OF IRELAND	549	325	-	850	850	2	852	
ITALY	2,310	1,302	-	3,530	3,530	11	3,541	
LATVIA	25	63	-	86	86	-	86	
LIECHTENSTEIN	3	4	-	6	6	-	6	
LITHUANIA	23	84	-	106	106	-	106	
LUXEMBOURG	61	40	-	98	98	-	98	
MACEDONIA	33	140	-	171	171	-	171	
MALTA	68	49	-	108	108	-	108	
MOLDOVA	3	19	-	22	22	-	22	
MONACO	2	1	-	3	3	-	3	
NETHERLANDS	935	586	-	1,482	1,482	6	1,488	
NORWAY	541	248	-	758	758	2	760	
POLAND	166	736	-	893	893	1	894	
PORTUGAL	478	450	-	903	903	-	903	
ROMANIA	215	538	-	752	752	-	752	
RUSSIAN FEDERATION	285	645	-	922	922	-	922	
SERBIA	213	386	-	593	593	-	593	
SLOVAKIA	26	103	-	128	128	1	129	
SLOVENIA	181	66	-	244	244	-	244	
SPAIN	1,707	1,167	-	2,804	2,804	7	2,811	
SWEDEN	1,038	582	-	1,581	1,581	4	1,585	
SWITZERLAND	1,629	763	-	2,298	2,298	16	2,314	
TURKEY	218	1,325	-	1,522	1,522	2	1,524	
UKRAINE	97	204	-	298	298	-	298	
UNITED KINGDOM	4,741	2,720	-	7,311	7,311	21	7,332	
Subtotal	24,459	19,522	-	43,004	43,004	114	43,118	13.6

\*Unique Total Qualified represents unique recipients, not the sum of Print and Digital.

\*\*See Additional Data

**GEOGRAPHICAL BREAKOUT OF QUALIFIED CIRCULATION FOR ISSUE OF MAY 2016\*\***

Region/Country	Print	Digital	Qualified Paid			Qualified Non-Paid	Unique Total Qualified*	Percent
			Single Copy Sales	Subscriptions	Total Paid			
<b>AFRICA</b>								
ALGERIA	11	68	-	79	79	-	79	
BENIN	1	4	-	4	4	-	4	
BOTSWANA	11	21	-	32	32	-	32	
BURKINA	-	4	-	4	4	-	4	
BURUNDI	-	4	-	4	4	-	4	
CAMEROON	1	3	-	4	4	-	4	
CAPE VERDE	-	1	-	1	1	-	1	
COTE D'IVOIRE	4	3	-	7	7	-	7	
EGYPT	170	933	-	1,093	1,093	4	1,097	
ETHIOPIA	2	7	-	9	9	-	9	
THE GAMBIA	2	3	-	5	5	-	5	
GHANA	38	85	-	122	122	-	122	
KENYA	29	99	-	126	126	-	126	
LESOTHO	-	5	-	5	5	-	5	
LIBERIA	-	2	-	2	2	-	2	
LIBYA	-	7	-	7	7	-	7	
MALAWI	1	6	-	7	7	-	7	
MALI	-	2	-	2	2	-	2	
MAURITIUS	16	63	-	79	79	-	79	
MOROCCO	35	136	-	170	170	-	170	
MOZAMBIQUE	3	2	-	5	5	-	5	
NAMIBIA	2	17	-	18	18	-	18	
NIGERIA	206	401	-	602	602	-	602	
REUNION	3	1	-	4	4	-	4	
RWANDA	-	7	-	7	7	-	7	
SENEGAL	1	37	-	38	38	-	38	
SEYCHELLES	1	2	-	3	3	-	3	
REPUBLIC OF SOUTH AFRICA	171	603	-	765	765	1	766	
SUDAN	2	93	-	95	95	-	95	
SWAZILAND	-	3	-	3	3	-	3	
TANZANIA	8	12	-	20	20	-	20	
TUNISIA	66	878	-	942	942	-	942	
UGANDA	9	27	-	36	36	-	36	
ZAMBIA	71	24	-	93	93	-	93	
ZIMBABWE	13	15	-	28	28	-	28	
Subtotal	877	3,578	-	4,421	4,421	5	4,426	1.4
<b>NORTH AMERICA</b>								
Canada	7,964	4,398	60	11,994	12,054	85	12,139	
United States Of America	125,113	41,080	52	147,342	147,394	16,806	164,200	
Mexico	467	1,876	-	2,323	2,323	2	2,325	
Subtotal	133,544	47,354	112	161,659	161,771	16,893	178,664	56.3
<b>CARIBBEAN</b>								
ANGUILLA	1	-	-	1	1	-	1	
ANTIGUA AND BARBUDA	-	1	-	1	1	-	1	
ARUBA	1	1	-	2	2	-	2	
THE BAHAMAS	9	4	-	12	12	-	12	
BARBADOS	8	29	-	35	35	-	35	
BERMUDA	9	5	-	13	13	-	13	
VIRGIN ISLANDS UK	4	-	-	4	4	-	4	
CAYMAN ISLANDS	2	8	-	10	10	-	10	
DOMINICA	1	3	-	4	4	-	4	
DOMINICAN REPUBLIC	12	51	-	62	62	-	62	
HAITI	2	5	-	7	7	-	7	
JAMAICA	39	106	-	142	142	2	144	
MONTSERRAT	1	1	-	2	2	-	2	
ST LUCIA	3	9	-	12	12	-	12	
ST KITTS-NEVIS	-	1	-	1	1	-	1	
ST VINCENT AND GRENADINES	2	1	-	3	3	-	3	
TRINIDAD AND TOBAGO	116	99	-	213	213	-	213	
TURKS AND CAICOS ISLANDS	1	1	-	2	2	-	2	
Subtotal	211	325	-	526	526	2	528	0.2
<b>CENTRAL AMERICA</b>								
BELIZE	2	11	-	13	13	-	13	
COSTA RICA	37	155	-	187	187	2	189	
EL SALVADOR	13	133	-	145	145	1	146	
GUATEMALA	13	148	-	160	160	-	160	
HONDURAS	5	208	-	213	213	-	213	
NICARAGUA	14	81	-	95	95	-	95	
PANAMA	31	233	-	260	260	2	262	
Subtotal	115	969	-	1,073	1,073	5	1,078	0.3
<b>SOUTH AMERICA</b>								
ARGENTINA	103	606	-	696	696	4	700	
BOLIVIA	6	131	-	137	137	-	137	
BRAZIL	462	2,214	-	2,637	2,637	6	2,643	
CHILE	110	358	-	455	455	1	456	
COLOMBIA	133	1,054	-	1,182	1,182	1	1,183	
EQUADOR	61	521	-	579	579	2	581	
GUYANA	3	3	-	6	6	-	6	
PARAGUAY	7	51	-	58	58	-	58	
PERU	121	728	-	841	841	1	842	
SURINAME	-	2	-	2	2	-	2	
URUGUAY	30	168	-	195	195	1	196	
VENEZUELA	14	52	-	66	66	-	66	
Subtotal	1,050	5,888	-	6,854	6,854	16	6,870	2.2
<b>ASIA PACIFIC</b>								
AUSTRALIA	3,779	2,146	-	5,762	5,762	21	5,783	
FIJI	6	41	-	45	45	-	45	
FRENCH POLYNESIA	-	1	-	1	1	-	1	
NEW CALEDONIA	3	5	-	8	8	-	8	
NEW ZEALAND	527	323	-	828	828	3	831	
PAPUA NEW GUINEA	1	10	-	11	11	-	11	
Subtotal	4,316	2,526	-	6,655	6,655	24	6,679	2.1
<b>UNIQUE TOTAL QUALIFIED*</b>	<b>187,938</b>	<b>133,418</b>	<b>112</b>	<b>300,231</b>	<b>300,343</b>	<b>17,154</b>	<b>317,497</b>	<b>100.0</b>

\*Unique Total Qualified represents unique recipients, not the sum of Print and Digital.

\*\*See Additional Data

## E-NEWSLETTER CHANNEL

2016	The Tech Alert (weekly)	Energy Wise (bi-weekly)	Test + Measurement (bi-weekly)	Cars That Think (bi-weekly)	Career Alert (bi- weekly)	Robotics (bi-weekly)	Human OS
<b>JANUARY</b>							
January 6	480,474	-	-	109,575	-	99,269	-
January 13	457,371	106,671	90,346	-	-	-	-
January 20	453,005	-	-	109,467	343,326	99,270	-
January 27	480,601	-	88,665	-	-	-	-
<b>FEBRUARY</b>							
February 5	504,024	-	-	107,907	342,696	97,887	-
February 12	416,936	105,448	88,802	-	-	-	-
February 19	411,040	-	-	107,903	341,975	98,020	-
February 26	411,116	-	89,476	-	-	-	-
<b>MARCH</b>							
March 4	409,498	-	-	107,663	-	98,096	-
March 11	409,954	105,486	89,365	-	245,084	-	-
March 18	409,947	-	-	107,386	-	97,987	-
March 25	408,971	-	89,052	-	244,820	-	-
<b>APRIL</b>							
April 1	407,977	-	-	-	-	-	-
April 8	517,779	105,201	88,697	-	244,363	98,750	66,404
April 15	469,173	-	-	107,337	-	-	-
April 22	514,522	-	88,583	-	244,155	97,691	66,416
April 29	516,384	-	-	108,350	-	-	-
<b>MAY</b>							
May 6	534,392	106,259	89,651	-	243,589	-	67,557
May 13	534,353	-	-	108,169	-	98,810	-
May 20	513,615	-	89,422	-	243,425	-	67,290
May 27	514,247	-	-	107,931	-	98,623	-
<b>JUNE</b>							
June 3	512,939	105,984	104,332	-	-	-	-
June 10	512,704	-	-	107,722	242,880	98,623	-
June 17	514,387	-	103,543	-	-	-	67,233
June 24	513,703	105,936	103,320	107,536	242,554	98,428	67,295
<b>AVERAGE:</b>	<b>473,164</b>	<b>105,855</b>	<b>92,558</b>	<b>108,079</b>	<b>270,806</b>	<b>98,455</b>	<b>67,033</b>

The Tech Alert (weekly) (25 issued in the period)  
 Energy Wise (bi-weekly) (7 issued in the period)  
 Test + Measurement (monthly) (13 issued in the period)  
 Cars That Think (bi-weekly) (12 issued in the period)  
 Career Alert (bi-weekly) (11 issued in the period)  
 Robotics news (bi-weekly) (12 issued in the period)  
 Human OS (6 issued in the period)

## WEBSITE CHANNEL

### SPECTRUM.IEEE.ORG

2016	PAGE IMPRESSIONS	USER SESSIONS	UNIQUE BROWSERS	UNIQUE BROWSER FREQUENCY	PAGE DURATION	USER SESSION DURATION
January	1,271,460	786,617	553,495	1.42	03:07	01:56
February	1,756,424	1,169,966	880,004	1.33	03:10	01:36
March	1,900,670	1,295,155	946,042	1.37	03:12	01:30
April	1,707,544	1,142,616	839,418	1.36	03:11	01:35
May	1,575,317	1,071,562	781,675	1.37	03:17	01:33
June	1,398,473	925,518	662,798	1.40	03:08	01:37
<b>AVERAGE:</b>	<b>1,601,648</b>	<b>1,065,239</b>	<b>777,239</b>	<b>1.38</b>	<b>03:11</b>	<b>01:38</b>

January - June 2016 data was provided by Google Analytics. All website activity is audited by BPA Worldwide.

### WEBSITE GLOSSARY

**Page Impressions:** A Page Impression is recorded each time a page implanted with the JavaScript code (tag) is displayed in a browser window. This will occur whether the page is served directly from the web server, from a proxy, or from the browser's cache.

**User Sessions:** A single continuous set of activity attributable to a cookie browser resulting in one or more pulled text and/or graphics downloads from a site. A period of 30 minutes of inactivity will terminate the session.

**Unique Browsers:** An identified and unduplicated Cookie Browser that accesses Internet content or advertising during a measurement period.

**Unique Browser Frequency:** Unique Browser Frequency represents the average number of times a Unique Browser visits a site during a reporting period. This is calculated by dividing the total number of User Sessions by the number of Unique Browsers.

**Page Duration:** The average time spent viewing any page on a web site.

**User Session Duration:** The average time visitors remain on a site per session.

For info on how to obtain online ad campaign performance metrics across multiple sites, visit [www.adicompli.com](http://www.adicompli.com)

## SOCIAL MEDIA CHANNEL

### IEEE Spectrum Social Media



Twitter followers

<https://twitter.com/IEEESpectrum>



Facebook likes

<https://www.facebook.com/IEEE.Spectrum>

2016	Twitter followers	Facebook likes
Beginning Balance	96,246	305,662
January	98,086	311,110
February	99,219	315,540
March	100,335	319,888
April	101,055	323,846
May	102,235	327,243
June	103,479	330,727

## ADDITIONAL DATA

### METHOD OF DISTRIBUTION:

Copies are distributed to paid individual subscribers via periodicals class mail under U.S. Postal permit. Copies are also placed on the Newsstand for sale. All qualified circulation conforms to the Market Served, as reported. Print copies are distributed via postal services or other carriers. Recipients of the digital version are notified via email when the Version is available. Also, qualified copies are delivered as Multi-Copy Same Addressee within the Market Served. These include copies delivered to the same individual appearing on the qualification list more than once. Multi-copy same addressee circulation is audited only to the point of distribution. An agreement not more than three years old has been obtained indicating that the recipient at the point of distribution agrees to accept the magazine for redistribution.

### STATEMENT OF CONTENT PLATFORM:

Editorial Replica – If a print edition exists, editorial and design are unchanged from the original print edition. Each issue's content and design are identical to the original edition. Apart from minor updates, the content cannot change once the issue is made available.

### MAGAZINE:

#### PARAGRAPH 1:

IEEE SPECTRUM is the official publication of Institute of Electrical and Electronics Engineers (IEEE). Qualified paid Membership Benefit subscriptions averaging 345,568 copies were sold to qualified recipients at the following subscription prices: \$22.00. Members yearly subscription price is included in the dues and is non-deductible therefrom.

#### PARAGRAPH 3:

The May 2016 issue is 15.0% or 56,165 copies below the average of the other 5 issues reported in Paragraph 2.

### GEOGRAPHIC DISTRIBUTION:

Geographic data for E-Newsletters, Website and Social Media are not reported at the media owner's option.

#### 1a. AVERAGE QUALIFIED CIRCULATION BREAKOUT FOR PERIOD – PRINT

	Qualified Paid		Qualified Non-Paid		Total Qualified	
	Copies	Percent	Copies	Percent	Copies	Percent
Individual	1,251	0.6	-	-	1,251	0.6
Membership Benefit	184,279	91.8	13	-	184,292	91.8
Multi-Copy Same Addressee	144	0.1	10,000	5.0	10,144	5.1
Sponsored Individually Addressed	-	-	5,000	2.5	5,000	2.5
Sponsored Multi-Copy Same Addressee	-	-	-	-	-	-
<b>Sub-Total Subscriptions:</b>	<b>185,674</b>	<b>92.5</b>	<b>15,013</b>	<b>7.5</b>	<b>200,687</b>	<b>100.0</b>
Single-Copy Sales	114	-	-	-	114	-
Sponsored Single-Copy Sales	-	-	-	-	-	-
<b>TOTAL</b>	<b>185,788</b>	<b>92.5</b>	<b>15,013</b>	<b>7.5</b>	<b>200,801</b>	<b>100.0</b>

#### 1b. AVERAGE QUALIFIED CIRCULATION BREAKOUT FOR PERIOD – DIGITAL

	Qualified Paid		Qualified Non-Paid		Total Qualified	
	Copies	Percent	Copies	Percent	Copies	Percent
Individual	-	-	-	-	-	-
Membership Benefit	165,639	98.7	2,184	1.3	167,823	100.0
Multi-Copy Same Addressee	44	-	-	-	44	-
Sponsored Individually Addressed	-	-	-	-	-	-
Sponsored Multi-Copy Same Addressee	-	-	-	-	-	-
<b>Sub-Total Subscriptions:</b>	<b>165,683</b>	<b>98.7</b>	<b>2,184</b>	<b>1.3</b>	<b>167,867</b>	<b>100.0</b>
Single-Copy Sales	-	-	-	-	-	-
Sponsored Single-Copy Sales	-	-	-	-	-	-
<b>TOTAL</b>	<b>165,683</b>	<b>98.7</b>	<b>2,184</b>	<b>1.3</b>	<b>167,867</b>	<b>100.0</b>

#### 1c. AVERAGE QUALIFIED CIRCULATION BREAKOUT FOR PERIOD – BOTH

	Qualified Paid		Qualified Non-Paid		Total Qualified	
	Copies	Percent	Copies	Percent	Copies	Percent
Individual	-	-	-	-	-	-
Membership Benefit	4,350	99.6	-	-	4,350	99.6
Multi-Copy Same Addressee	16	0.4	-	-	16	0.4
Sponsored Individually Addressed	-	-	-	-	-	-
Sponsored Multi-Copy Same Addressee	-	-	-	-	-	-
<b>Sub-Total Subscriptions:</b>	<b>4,366</b>	<b>100.0</b>	<b>-</b>	<b>-</b>	<b>4,366</b>	<b>100.0</b>
Single-Copy Sales	-	-	-	-	-	-
Sponsored Single-Copy Sales	-	-	-	-	-	-
<b>TOTAL</b>	<b>4,366</b>	<b>100.0</b>	<b>-</b>	<b>-</b>	<b>4,366</b>	<b>100.0</b>

### PUBLISHER'S AFFIDAVIT

We hereby make oath and say that all data set forth in this statement are true.

Jim Vick, Publisher

Bob Ross, Business Manager

(At least one of the above signatures must be that of an officer of the publishing company or its authorized representative.)

#### IMPORTANT NOTE:

This unaudited brand report has been checked against the previous audit report. It will be included in the annual audit made by BPA Worldwide.

Date signed July 7, 2016

State New York

County New York

Received by BPA Worldwide July 7, 2016

Type CBD

ID Number I319BOJ6

#### About BPA Worldwide:

A not-for-profit organization since 1931, BPA Worldwide is governed by a tripartite board comprised of media owners, advertising agencies and advertisers. Headquartered in Shelton, Connecticut, USA, BPA has the largest membership of any media-auditing organization in the world, spanning more than 30 countries. Globally, BPA audits media properties including consumer magazines, newspapers, web sites, events, email newsletters, databases, wireless, social media and other advertiser-supported media—as well as advertiser and agency members. Visit [www.bpaww.com](http://www.bpaww.com) for the latest audit reports, membership information and publishing and advertising industry news.