



# 2008 AIN product support survey



JOHN T. LEWIS

## PART 2 | AVIONICS

Strong finishes by a trio of survey newcomers weren't enough to keep perennial top-scorer Garmin from retaining its first-place overall ranking.

by Stephen Pope

The number of companies included in this year's avionics product support survey nearly doubled from a year ago, with 10 newcomers receiving the requisite responses to be included for the first time ever. Still, despite added pressure from several well known industry names, perennial survey powerhouse Garmin held onto its spot at the top of the rankings for the fifth year in a row by finishing first overall in five of seven survey categories and second in two others.

Last year's second-place finisher wasn't as fortunate. Owing to strong showings by a trio of survey first-timers and a slight

improvement by last year's third-place finisher, Universal Avionics dropped four spots in the rankings to end up in sixth place. Rounding out the top finishers in this year's survey rankings behind Garmin were Sandel Avionics in second place, Rockwell Collins in third, Flight Display Systems in fourth and Innovative Solutions & Support in fifth place.

It's noteworthy that three of the top five finishers in this year's rankings are survey debutantes, but what makes their relatively high marks all the more impressive are the comparatively low scores received by the seven other first-time entrants, all of which wound up finishing

in the bottom half of the rankings. Still, all of the companies rated in this year's survey finished with overall average scores higher than 5 (on a scale where a 1 was judged to be inadequate and a 10 excellent) and only Garmin finished with an overall rating higher than 8. This suggests that avionics manufacturers generally are doing a good job of supporting their customers in business aviation, yet they still have room for improvement.

This year, as always, AIN asked readers with specific firsthand knowledge of the avionics they use and maintain to rate manufacturers in categories for parts availability; cost of parts; AOG (aircraft-on-ground) response; warranty fulfillment; technical manuals; technical reps; and overall product reliability. Of the thousands of readers queried, 1,394 filled out complete survey forms. Many respondents included additional written comments for each company and category they ranked. Several even singled out company technical representatives who they felt did an exceptional job in the previous year.

### GARMIN

Garmin once again stands alone atop AIN's product support rankings of cockpit avionics and cabin electronics manufacturers, boosting its overall average score slightly to finish with an industry-best 8.03 points across all segments, compared with an average of 7.88 last year. The Olathe, Kan. company's best showings were in the categories for overall product reliability, warranty fulfillment and parts availability. Garmin finished in first place in two of these cate-

*For the fifth year in a row, Garmin stands alone as the top provider of product support in business aviation. The keys to the company's success are reliable avionics and comparatively low prices.*

gories as well as in the segments for cost of parts, AOG response and technical manuals. Sandel edged out Garmin in the product reliability category by a tenth of a point, and also narrowly received the top score in the technical reps category.

Garmin's continued dominance of the product support rankings is all the more impressive considering the company's G1000 integrated avionics system is entering the field in numbers large enough to affect the scores. At last count Garmin had delivered the system in around 5,000 airplanes. Most of these were piston singles, but the G1000 system is also flying in the Cessna Citation Mustang, Socata TBM 850 and a handful of Beech King Airs that have been retrofitted with the avionics. With Embraer's G1000-equipped Phenom 100 and 300 working on certification and additional G1000-equipped business jets and turboprops taking to the skies, the next few years will be telling ones for Garmin as it continues to increase its presence in the market for fully integrated cockpit systems.

Based on comments from AIN readers, Garmin consistently scores high because its products are inexpensive and they rarely need repairs. "I can't say enough about Garmin," commented a Mitsubishi MU-2 pilot. "The GNS 530W is as close to a perfect product as I've ever had." Echoing comments from past surveys, several readers noted that Garmin products almost never break or need repairs. "Don't generally need parts for something that doesn't fail," wrote a Westwind captain.

A senior executive at Garmin recently offered his thoughts on the formula that has served the company so well over the years: "We're firm believers that if you build quality, reliable, innovative

products and support them very well, you win," he said.

### ROCKWELL COLLINS

Rockwell Collins retained its lock on the third spot in this year's rankings, and would have secured a second-place finish if not for the inclusion of first-timer Sandel Avionics. Again this year a poor showing in the category for cost of parts (where Collins finished in 11th place)



*Rockwell Collins' overall average score received a boost from high ratings in the categories for reliability and tech reps.*

hurt the Cedar Rapids, Iowa manufacturer's overall average score. Dozens of respondents commented that Rockwell Collins charges too much for parts and repairs, with several others noting that although the manufacturer's cost-managed corporate aircraft service program is generally good, it is also quite expensive.

Still, Rockwell Collins finished with high scores in the categories for overall product reliability, technical reps and AOG response, with several respondents offering especially high praise for the company's field representatives. "These guys are amazingly dedicated," wrote the director of maintenance for a corporate flight department that



operates a Gulfstream G550. "There aren't that many of them, but they are so quick to jump on a plane or hop in their car to come out to my facility that I'm just amazed. These guys rock."

The vast majority of respondents also praised the reliability of Rockwell Collins cockpit avionics, judging the Pro Line 21 system to be highly dependable. "Rockwell Collins avionics are the best in the business," noted the chief pilot for a Minnesota-based Gulfstream G150 and G200 operator. Comments similar to this one were voiced frequently by survey respondents, with only a handful complaining about occasional display failures and other avionics glitches. A Beech Premier I captain even joked that his wife is jealous of the Pro Line 21 cockpit in his airplane because he loves it so much.

A handful of commenters, however, gave lower grades to Rockwell Collins cabin entertainment equipment, particularly in the Bombardier Global Express. "The new [cabin entertainment] system needs a lot of work," wrote a maintenance manager at Jet Aviation. "The largest part of maintaining the Global Express XRS is trying to keep the system in shape. Constant failures." Several others complained about glitches with the Airshow moving-map systems, which Collins supports. It's worth noting that Airshow, a subsidiary of Rockwell Collins which is judged separately

from the rest of the company, landed near the bottom of this year's survey in 16th place.

### UNIVERSAL AVIONICS

At first glimpse it appears as though Universal Avionics took an appreciable tumble in the year's product support survey, considering that the Tucson, Ariz. company finished in sixth place after coming in second last year. But Universal's average score across all categories dropped by a mere quarter point, and its ranking for overall reliability held about steady at 8.41 compared with the 8.51 average it notched last year. Universal actually did quite well in the AIN survey compared with its competitors, and it would have finished in third place were it not for the addition of the three new survey entrants.

Of the dozens of written



*Universal Avionics dropped from second to sixth place, but would have finished third if not for strong finishes by three newcomers.*

comments about the reliability of Universal equipment, only four were negative, and one barely so: "We have had only a single issue in seven years," wrote one chief pilot. "One morning our FMS lost all databases. Loaded the databases and it has worked fine since." The remainder of the comments used words like "flawless," "excellent" and "bulletproof" to describe the company's products, which primarily consist of flight management systems but also include a range of retrofit avionics, terrain awareness and warning systems and other equipment.

Owners of Universal products also heaped praise on the company's technical reps, with several rating them as "very good" or "great." Wrote the chief of maintenance for a Challenger 601-3A operator, "The field support is the best in the industry year after year. This is why [Universal's] product sells. Not just because of design and reliability but because of the service." A few respondents, however, said they've never had any contact with a Universal rep or that reps have been slow to respond. One Learjet 31A pilot judged Universal customer service as "poor," but this was among only a few negative write-in comments received among the overwhelming number of positive remarks.

### HONEYWELL

Honeywell landed in ninth place overall after improving

*Survey debutante Sandel Avionics grabbed the second spot in the rankings, and will be looking toward a repeat performance next year.*



on its year-ago scores across all categories. Remove the three top survey newcomers from the mix, and Honeywell would have finished in sixth place, one spot ahead of last year's ranking. Its highest rating was for overall product reliability and lowest ranking for cost of parts, a result that generally mirrored that of competitor Rockwell Collins. Clearly operators believe avionics produced by these two companies are too expensive.

A number of survey respondents indicated that while Honeywell avionics generally are dependable, dealing with issues when they arise can be difficult. Honeywell revamped its customer support phone system a couple of years ago, but several readers said it still needs improvements. "Honeywell needs to train its CSRs to actually do their job," said a maintenance technician for a Midwest Gulfstream

and Hawker operator. "Numerous times orders were lost, delayed or not entered."

While generally praising Honeywell's Spex avionics exchange and rental program and the Happ avionics protection plan, some respondents noted glitches with the support phone system and communication difficulties with Honeywell tech reps. "The knowledge of the person on the phone makes the difference," said a mechanic for an East Coast G550 operator. "It has taken three calls and four to five hours for a simple order to be finalized." Said a senior maintenance tech for a Falcon 900B operator, "There are ridiculous procedures to get parts. Takes lots of time to work around the system."

Comments about Honeywell's AOG response were generally positive, with several terming this area of Honeywell's support

*Continues on next page* ▶

## 2008 RATINGS

Companies are listed in the order of their 2008 overall averages.

Avionics	Overall Average 2008	Overall Average 2007	Percentage Change	Parts Availability	Cost of Parts	AOG Response	Warranty Fulfillment	Technical Manuals	Technical Reps	Overall Product Reliability
Garmin	<b>8.03</b>	7.88	1.9%	<b>8.20</b>	<b>7.35</b>	<b>7.81</b>	<b>8.22</b>	<b>7.90</b>	7.79	8.75
Sandel Avionics	7.93	N/A	N/A	7.83	7.13	<b>7.81</b>	8.09	7.44	<b>8.13</b>	<b>8.76</b>
Rockwell Collins	7.60	7.49	1.42%	7.69	6.39	7.69	7.88	7.49	7.63	8.29
Flight Display Systems	7.59	N/A	N/A	7.77	7.29	7.30	7.90	7.13	7.50	8.04
Innovative Solutions & Support	7.58	N/A	N/A	7.27	7.33	7.54	7.82	7.31	7.54	8.10
Universal Avionics	7.55	7.79	-3.12%	7.60	6.52	7.58	7.77	7.26	7.54	8.41
Aircell	7.46	7.41	0.76%	7.57	7.11	7.43	7.67	7.07	7.13	8.05
Safe Flight	7.42	7.47	-0.67%	7.38	7.04	7.17	7.54	6.74	7.20	8.48
Honeywell	7.41	7.27	1.87%	7.61	6.26	7.53	7.72	7.24	7.51	7.94
Avidyne	7.31	7.44	-1.68%	7.42	6.97	7.05	7.38	7.22	6.95	8.02
L-3 Communications Avionics Systems	7.28	6.92	5.18%	7.28	6.90	7.25	7.46	7.00	7.10	7.79
Shadin	7.28	7.26	0.22%	7.44	6.83	6.97	7.38	6.82	7.18	8.03
Chelton Flight Systems	7.16	N/A	N/A	7.00	6.58	6.85	7.25	7.00	7.50	7.80
Rosen	7.09	N/A	N/A	7.30	6.16	6.83	7.62	6.37	6.88	8.18
Honeywell Bendix/King	7.09	7.18	-1.30%	7.10	6.27	6.99	7.04	7.19	7.08	7.83
Airshow (Rockwell Collins)	6.86	6.87	-0.19%	6.89	6.12	6.56	7.14	6.66	7.02	7.49
Thrane & Thrane	6.68	N/A	N/A	6.75	6.05	6.61	7.06	6.14	6.57	7.46
Kollsman	6.61	N/A	N/A	6.60	5.50	6.33	6.79	6.70	6.59	7.47
EMS Satcom	6.39	N/A	N/A	6.81	5.55	6.38	6.63	5.37	6.65	7.26
CMC Electronics	6.36	N/A	N/A	6.39	5.60	6.14	7.36	6.07	6.29	6.67
Thales	6.30	5.87	<b>7.36%</b>	6.14	5.55	6.42	6.58	6.43	5.90	6.97
MagnaStar (supported by Teledyne Controls)	6.22	6.24	-0.29%	6.03	5.60	5.84	6.50	6.23	6.33	6.87
Audio International	5.79	N/A	N/A	5.36	5.17	5.34	6.66	5.49	5.89	6.62

Compiled by Jane Campbell with data provided by Forecast International of Newtown, Conn.

**Bold type** indicates the highest rating in each category.





# 2008 AIN product support survey

► Continued from preceding page

operation “very good” or “excellent” when relying on the Spex exchange pool. The same was true for the warranty fulfillment category, where several readers said their experience with Honeywell in this area was “outstanding” and “timely.” One Citation Encore+ operator, however, said he feels Honeywell has “forgotten about the little guy” and “seems to have orphaned the Primus line of products, at least with regard to WAAS and other improvements.”

The biggest complaints about Honeywell’s customer support operation centered on the phone system and the people answering the phones. Noted the maintenance manager for Pfizer’s corporate flight department, “No one is knowledgeable about specific

had many fault-found problems for years in this airplane. Honeywell has been the worst for product and spares reliability. Honeywell has not resolved problems with existing avionics. It has provided many spares that have been contaminated with problems right from the Spex pool. Many parts have had to be returned because of previously reported failures that were not repaired. Not a good track record, and the trend is not improving much. They are fixated with the next project and do not focus on past products that have problems.”

Still, several respondents noted that when problems arise they have excellent relationships with their field representatives. “My Honeywell rep is as good as they come,” said the chief of maintenance for a Cleveland-based Global Express XRS operator. “It doesn’t matter what Honeywell system I’m working on...he has or can get the answer I need.”

## TOP NEWCOMERS

As noted earlier, 10 companies were included in the survey for the first time this year after garnering the minimum number of required responses, with three of them finishing in the top five. The others all occupied spots in the bottom half of the rankings, with Audio International coming in last and notching the only overall average score below a six (5.79).

Second-place finisher Sandel Avionics received high marks for overall reliability and the response of its tech reps. Fourth-place finisher Flight Display Systems managed to do well in the survey after strengthening its relationship with its suppliers in China. Company president David Gray noted that he has been traveling to China to resolve product reliability issues, a practice that appears to be paying dividends. Based on written comments, customers also clearly appreciate the company’s low prices.

A few years after the mandate for equipment to meet RVSM airspace requirements, fifth-place finisher Innovative Solutions & Support appears to be doing a decent job of supporting business jet operators who bought and installed the company’s air-data



More cockpit retrofit systems in the category of this Pilatus PC-12 upgrade from Innovative Solutions & Support are entering service, putting pressure on manufacturers of the Part 23 avionics to provide top-level support. A push by some companies into the higher-echelon Part 25 realm will only add to the requirement to develop reliable components while keeping prices in check.

packages. A number of commenters wrote that the equipment has been “very reliable,” and one termed the gear “bulletproof.” IS&S also sells complete cockpit upgrade systems, although these have yet to enter the general aviation fleet in appreciable numbers and therefore probably did not affect the company’s score much.

## SATCOM MAKERS

One of the surprising results of the survey was the low scores received by satcom makers EMS Satcom and Thrane & Thrane, both of which saw big declines

The survey results suggest that avionics manufacturers generally are doing a good job of supporting customers, yet they still have room for improvement.

in their ratings this year (17.73 and 18.17 percent respectively) compared with numbers for last year—although neither company’s results were included in last year’s survey due to low response rates.

A quick study of the numbers leads one to wonder whether these companies unfairly suffered as a result of the congestion problems that have been plaguing the Inmarsat Swift64 satellite

service for the last year. But reader comments do not support this hypothesis as none mentioned this issue. Rather, high equipment prices and complications related to equipment installation appear to be the cause of low scores for both companies.

Iridium satcom maker Aircell once again fared well in the AIN survey, finishing in seventh place with an overall average score of 7.46, slightly ahead of last year’s score. Without the inclusion of the survey newcomers, Aircell would have notched the fourth spot overall compared with a sixth-place finish last year. Respondents praised Aircell’s tech reps, with one chief of maintenance for a Challenger operator writing “let’s hope it stays that way” as Aircell introduces its air-to-ground broadband Internet service. The biggest complaints about Aircell centered on spotty coverage and poor reception of its phone systems.

## OTHERS

The remaining companies included in the survey generally finished close to the same spots as last year, with none making major moves up or down. Safe Flight Instrument saw a slight drop in its score that put it in eighth place, Avidyne dipped slightly to end up in 10th place, L-3 Avionics Systems improved its score and finished in a tie for 11th with Shadin, which posted nearly an identical overall average score as last year.

As noted earlier, the bottom half of the rankings was domi-



Despite a 5-percent jump in its overall average score, L-3 Communications Avionics Systems landed in 11th place.

nated by survey first-timers and perennial lower-echelon performers. The biggest drop in the rankings was recorded by Honeywell’s Bendix/King division, which fell from eighth place last year to the 14th spot—although Bendix/King’s overall average score actually dropped by less than a tenth of a point. On a percentage basis, 2007’s last-place finisher saw the sharpest rise in its overall average score, as Thales’ rating improved 7.36 percent from a score of 5.87 to 6.30. That placed the French company third from last in this year’s survey. □

This year’s survey was devised by AIN’s editors and designed and administered by Newtown, Conn.-based Forecast International in full collaboration with AIN. The results from the aircraft portion ran last month and those from the engine portion will run next month.



Complaints about Honeywell’s support of its telephone system and high prices relegated the company to ninth place.

Honeywell systems. They have broad knowledge, but not specific enough with individual aircraft.” Said the chief mechanic for a major fast food chain’s flight department, “Calling the 800 number is an all-afternoon process. Then they don’t know the answer, give wrong information and don’t call back.”

The chief pilot for Gulfstream and Citation operator International Lease Finance clearly has lost patience with Honeywell support, noting in the comments section of the survey, “This is an area that does not have enough space to write. Honeywell has let us down in all areas of avionics—FMS, IAC, HUD and miscellaneous other components that are carried on the GV. We have