



U.S. Department
of Transportation
**Federal Aviation
Administration**

**Transport Airplane Directorate
Aircraft Certification Service**

1601 Lind Avenue S.W.
Renton, Washington 98055-4056

JUL 17 2003

In Reply
Refer To: 130S-03-357

**RECEIVED
JUL 22 2003**

Ms. Colleen M. Porch
Certification Services Administrator
Honeywell International Inc.
15001 NE 36th Street
P.O. Box 97001
Redmond, WA 98073-9701

Dear Ms. Porch:

Technical Standard Order (TSO) Approvals for
TSO-C151b Class B and Class C Authorization of
Terrain Awareness and Warning System (TAWS) Functions for the
Honeywell KGP-560 and KGP 860
General Aviation-Enhanced Ground Proximity Warning System (GA-EGPWS),
part numbers (P/N) 965-1198-005 and 965-1199-005 and
TSO-C151b Class B and Class C Authorization for the Configuration Module
used with the EGPWS, part number 700-1710-021

We received your letter ref: 03FAA118, dated June 24, 2003, in which you certified that a major change was made to the KGP-560 software along with a minor change to the KGP-560 hardware. In addition, the KGP-860 software was created that is identical to the KGP-560 software with the exception of the label and configurability. A new boot code was incorporated in the baseline part for the new KGP-860 software. A new configuration module was also created to include a Real Time Clock feature. You certified that the TAWS functions for the Honeywell KGP-560 and KGP-860 GA-EGPWS, P/N 965-1198-005 and 965-1199-005, and the configuration module used with the EGPWS, P/N 700-1710-021, meet the Federal Aviation Regulations (FAR) Part 21.611, and the standards of TSO-C151b. Your certification is acceptable. The following documents, submitted with your letter, have been added to our TSO files:

Item	Title	Document #	Rev.	Date	Effectivity	Chg
1.	Interface Control Document for the General Aviation and Helicopter Enhanced Ground Proximity Warning System (GA-EGPWS)/(MK XXI EGPWS)	993-1196-403	A	05-JUN-03	ALL	Y

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2.	Plan for Software Aspects of Certification for the GA-EGPWS	992-1196-000	New	15-FEB-00	ALL	N
3.	Plan for Software Release -005 and Boot Loader Mod B101.1 for the KGP 560, KGP 860, KHM 820 and MK XXI Enhanced Ground Proximity Warning Computer (EGPWC)	060-4210-057	New	09-APR-03	ALL	Y
4.	Configuration Index Document (CID) for the GA & MK XXI EGPWS	993-1196-000	G	10-JUN-03	ALL	Y
5.	TSO-C151b Test Procedure for the GA Enhanced Ground Proximity Warning System (GA-EGPWC)	060-4331-001	New	04-JUN-03	ALL	Y
6.	TSO-C151b Test Results for the GA Enhanced Ground Proximity Warning System (GA-EGPWC)	070-4616-002	New	04-JUN-03	KGP560 KGP860	Y
7.	TSO-C151b Test Results for the MK XXI Enhanced Ground Proximity Warning System (Part Number 965-1227-005)	070-4646-001	New	04-JUN-03	MKXXI	Y
8.	TSO-C151b Class C Test Procedure for the GA Enhanced Ground Proximity Warning System (GA-EGPWS)	076-1010-000	New	04-JUN-03	KGP560 KGP860	Y
9.	TSO-C151b Class C Test Results for the GA Enhanced Ground Proximity Warning System (GA-EGPWS)	070-4684-000	New	04-JUN-03	KGP560 KGP860	Y
10.	Software Accomplishment Summary for the GA-EGPWS and MK-XXI EGPWS	992-1196-802	New	06-JUN-03	ALL	Y
11.	Test Results Summary Document for the GA-EGPWS	997-1196-702	New	04-JUN-03	ALL	Y
12.	Hardware/Software Acceptance Procedure for the Enhanced Ground Proximity Warning System (MK IV/VI/VIII/XXI/XXII/GA EGPWS)	076-0901-001	Y	21-APR-03	ALL	Y
13.	General Aviation Enhanced Ground Proximity Warning System - Cold-Temp with GPS	965-1198	E	08-MAY-03	KGP 560	Y

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14.	Outline – GA EGPWC (Cold-Temp with GPS)	965-1198-201	New	07-JUN-01	KGP 560	N
15.	General Aviation Enhanced Ground Proximity Warning System – Cold-Temp with GPS	965-1199	A	14-APR-03	KGP 860	Y
16.	Outline – GA-EGPWS (Cold-Temp with GPS)	965-1199-201	New	10-MAR-03	KGP 860	Y
17.	Enhanced Ground Proximity Warning System – MKXXI EGPWS with GPS	965-1227	E	08-MAY-03	MK XXI	Y
18.	Outline – MKXXI EGPWC (with GPS)	965-1227-201	New	08-JUN-01	MK XXI	N
19.	Assembly, Configuration Module – GA & MK XXI EGPWS	700-1710-002	E	03-APR-00	ALL	N
20.	Assembly, Configuration Module – GA & MK XXI EGPWS	700-1710-004	New	08-JUN-01	ALL	N
21.	Configuration Module Assembly – GA and MKXXI EGPWS	700-1710-021	A	14-APR-03	ALL	Y
22.	Label, Software Version	402-6070	C	03-JUN-02	ALL	N
23.	Label, GA-EGPWS	402-6080	N	08-MAY-03	KGP 560 KGP 860 Config. Module	Y
24.	Label – MKXXI EGPWS	402-6084	B	08-MAY-03	MK XXI	Y
25.	Failure Modes Effects and Criticality Analysis for the GA-EGPWC w/wo GPS	993-1196-600	New	09-MAY-00	KGP560 KGP 860	N
26.	Failure Modes Effects and Criticality Analysis for the MK XXI Enhanced Ground Proximity Warning Computer	993-1227-600	New	01-NOV-01	MK XXI	N
27.	Flammability Report for GA and MK XXI EGPWS	070-4617-000	A	26-OCT-01	ALL	N
28.	Qualification by Similarity Report for Cold Temperature General Aviation Enhanced Ground Proximity Warning Computer With GPS, HI PN 965-1198-403	965-1198-403	New	24-OCT-01	KGP560	N

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29.	QUALIFICATION TEST PROCEDURE FOR EGPWC MK-XXI HONEYWELL PN 965-1227-003 WITH INTERNAL GPS	965-1227-103	A	09-NOV-01	MKXXI	N
30.	QUALIFICATION TEST REPORT FOR EGPWC MK-XXI HONEYWELL PN 965-1227-003 WITH INTERNAL GPS	965-1227-403	New	12-NOV-01	MKXXI	N
31.	Qualification By Similarity Report for EGPWS, PN 965-1198-005 HW MOD 2 and EGPWS PN 965-1227-005 HW MOD 2	904-0164-401	New	03-JUN-03	KGP560 MKXXI	Y
32.	Qualification By Similarity Report for GA EGPWS PN 965-1199-005	965-1199-405	New	03-JUN-03	KGP860	Y
33.	Qualification By Similarity Report for Configuration Module PN 700-1710-021	904-0166-401	New	03-JUN-03	ALL	Y
34.	Database Development Process for Enhanced Ground Proximity Warning System (EGPWS)	992-0109-100	G	28-MAY-03	ALL	N
35.	Component Maintenance Manual with Illustrated Parts List, General Aviation and Helicopter-Enhanced Ground Proximity Warning Computer	012-0711-001	4	04-APR-03	ALL	Y
36.	Configuration Module II Hardware-Software Interface Document	993-0157-500	New	14-APR-03	ALL	Y
37.	System Installation Manual KGP 560 GA-EGPWS	006-10611-0003	3	JUN-2003	KGP 560	Y
38.	System Installation Manual KGP 860 GA-EGPWS	006-10618-0000	New	JUN-2003	KGP 860	Y
39.	System Installation Manual MK XXI	060-4314-101	A	JUN-2003	MKXXI	Y
40.	Pilots Guide – KGP 560/860	006-18254-0001	3	JUN-2003	KGP560 KGP 860	Y
41.	Pilots Guide – MK XXI	060-4314-100	A	JUN-2003	MKXXI	Y
42.	KGP 560 Terrain Database	071-00167-01	New	MAY -2000	KGP560 KGP 860	N

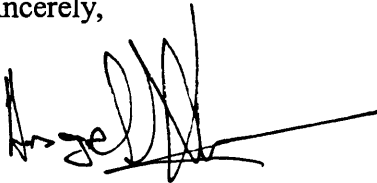
Item	Title	Document #	Rev.	Date	Effectivity	Chg
43.	IIDS "Bill of Materials – Parts List" KGP 560 Americas Database	071-00167-0101	G	-	KGP560 KGP 860	N
44.	IIDS "Bill of Materials – Parts List" KGP 560 Atlantic Database	071-00167-0102	G	-	KGP560 KGP 860	N
45.	IIDS "Bill of Materials – Parts List" KGP 560 Pacific Database	071-00167-0103	G	-	KGP560 KGP 860	N
46.	EGPWS Terrain Database	071-00182-01	New	JUL-2001	MKXXI	N
47.	IIDS "Bill of Materials – Parts List" EGPWS Terrain Database, North America	071-00182-0110	B	-	MKXXI	N
48.	IIDS "Bill of Materials – Parts List" EGPWS Terrain Database, South America	071-00182-0120	B	-	MKXXI	N
49.	IIDS "Bill of Materials – Parts List" EGPWS Terrain Database, Europe	071-00182-0130	B	-	MKXXI	N
50.	IIDS "Bill of Materials – Parts List" EGPWS Terrain Database, Eastern Europe	071-00182-0140	B	-	MKXXI	N
51.	IIDS "Bill of Materials – Parts List" EGPWS Terrain Database, Africa	071-00182-0150	B	-	MKXXI	N
52.	IIDS "Bill of Materials – Parts List" EGPWS Terrain Database, Pacific	071-00182-0160	B	-	MKXXI	N
53.	IIDS "Bill of Materials – Parts List" EGPWS Terrain Database, Asia	071-00182-0170	B	-	MKXXI	N
54.	IIDS "Bill of Materials – Parts List" EGPWS Terrain Database, South Pacific	071-00182-0180	B	-	MKXXI	N
55.	IIDS "Bill of Materials – Parts List" EGPWS Terrain Database, Middle East	071-00182-0190	B	-	MKXXI	N
56.	Compact Flash Card Loading Procedure, Americas Region Terrain Database Version 426N for GA-EGPWS B & GA PN 071-00167-0101	718-1404-426	C	01-OCT-01	ALL	N
57.	Compact Flash Card Loading Procedure, Atlantic Region Terrain Database Version 426A for GA-EGPWS B & GA PN 071-00167-0102	718-1405-426	C	01-OCT-01	ALL	N

Item	Title	Document #	Rev.	Date	Effectivity	Chg
58.	Compact Flash Card Loading Procedure, Pacific Region Terrain Database Version 426P for GA-EGPWS B & GA PN 071-00167-0103	718-1406-426	C	01-OCT-01	ALL	N
59.	KGP 560/MK XXI EGPWS Terrain Database Cartridge Duplication and Verification Procedure / Work Instructions	QMS 3-09-412 EN	B	17-APR-02	ALL	N
60.	Terrain Database Procedures	001-00878-0000	New	31-MAY-00	ALL	N
61.	Bar Code Data Label, KGP 560	057-06005-01	New	MAY-2000	ALL	N
62.	Tag, EGPWS Database	057-05997-01	A	JUL-2001	ALL	N
63.	Label, Blank	057-03371-0000	AA	OCT-2001	ALL	N

We acknowledge the FAA Forms 8110-3, signed by Designated Engineering Representatives Esko Mannisto and Kevin W. Allen, which were submitted approving the software accomplishment summary and other related data for this application.

If you have any questions, please contact Mr. Patrice Adjibly of the Systems and Equipment Branch at (425) 917-6459.

Sincerely,



Angelos G. Xidias
 Manager, Systems and Equipment Branch
 Seattle Aircraft Certification Office