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30th October, 2002

Gentlemen,

FCC ID: PJ5MTX2-S3

The Commission has already given a grant of type acceptance for the Raymarine 'Pathfinder' 2kW, 18" Radome Radar Scanner Unit (FCC ID: PJ5MTX2-8P), when used in combination with a range of specified Display Units. This application for authorization of a new grant has resulted from proposed changes to enhance performance, which affect the characteristics originally reported to the commission. The new Scanner Unit can be connected to any of the same Display Units that are currently in use, to form light marine radar systems (see Annex 1 below).

The primary changes are to the magnetron (transmitting device) and to the associated circulator, which now incorporates an isolator and low pass filter (LPF). The purpose of these changes is to improve the Spurious Emissions and Out of Band Emissions of the transmitter in accordance with the requirements of ITU-R M1177. The peak-radiated power remains the same at 2 kW, as do the Pulse Repetition Frequencies (PRF). Of the 8 available Pulse Widths, the two shortest have been increased in width. Removal of the unwanted emissions has been mainly achieved by filtering.

The new 2kW Scanner Unit has been fully tested to the appropriate parts of CFR 47 Part 2 and Part 80. The measurement taken data demonstrates that the scanner continues to be compliant with the rules and the performance is within the technical ratings specified by Raymarine (manufacturer).

The modifications will be introduced to all new scanner units of this type in production after the grant has been authorized.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Bird".

Chris Bird,
Approvals Manager,
Raymarine Limited.

ANNEX 1

The following Raymarine Display Units are combined with the Raymarine **2D**, 2kW 18" Radome Scanner Unit to form operational light marine radar systems.

<i>Display Unit</i>	<i>Scanner Unit</i>	<i>Radar System</i>
SL70 PLUS – 7" mono LCD	2D – 2kW, 18" radome	SL72 PLUS
SL70RC PLUS – 7" mono LCD/Chart	2D	SL72RC PLUS
SL70M PLUS – 7" mono LCD	2D	SL72M PLUS
SL70MRC PLUS – 7" mono LCD/Chart	2D	SL72MRC PLUS
RL70 PLUS – 7" mono LCD/hsb ²	2D	RL72 PLUS
RL70RC PLUS – 7" mono LCD/hsb ² /Chart	2D	RL72RC PLUS
R70 PLUS – 7" CRT/hsb ²	2D	R72 PLUS
R70RC PLUS – 7" CRT/hsb ² /Chart	2D	R72RC PLUS
R80 PLUS – 10" CRT/hsb ²	2D	R82 PLUS
R80RC PLUS – 10" CRT/hsb ² /Chart	2D	R82RC PLUS
SL70C PLUS – 7" Colour LCD	2D	SL72C PLUS
SL70CRC PLUS – 7" Colour LCD/Chart	2D	SL72CRC PLUS
RL70C PLUS – 7" Colour LCD/hsb ²	2D	RL72C PLUS
RL70CRC PLUS – 7" Colour LCD/hsb ² /Chart	2D	RL72CRC PLUS
RL80C PLUS – 10" Colour LCD/hsb ²	2D	RL82C PLUS
RL80CRC PLUS – 10" Colour LCD/hsb ² /Chart	2D	RL82CRC PLUS

Key:

The allocated designation for each unit or system is shown in **bold**.

hsb² (high speed bus) – allows the connection of one or more repeater display unit

Chart – Chartplotter feature built-in