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DISPLAY MOUNT CONSOLE FOR A VESSEL

Abstract

A display mount console for a vessel includes a mounting box configured to be secured adjacent to seating of the vessel, and a display compartment moveably secured to the mounting box. The display compartment is configured to hold an electronic display and is configured to move between a deployed position and a stowed position, where the display compartment is extended outwards from the mounting box in the deployed position, and the display compartment is retracted towards the mounting box when in the stowed position to reduce blocking a pathway in front of the seating. The display mount console may also include a base cabinet configured to be positioned between the seating, where the mounting box is mounted to a top of the base cabinet.

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Background/Summary

CROSS-REFERENCE TO RELATED APPLICATIONS [0001] This application claims the benefit of U.S. provisional application no. 63/552,260 filed Feb. 12, 2024, which is hereby incorporated herein in its entirety by reference.

FIELD

[0002] The present invention relates to the field of mounting systems for electronics, and, more particularly, to a display mount console for a vessel.

BACKGROUND

[0003] The helm station of a vessel typically includes essential components for navigation, control, and monitoring of the vessel. This includes a steering wheel to control the direction of the boat, and throttle and shift controls to control the speed of the engines. In addition, the helm includes an instrument panel that display critical information such as engine RPM, fuel levels, engine temperature, battery voltage, and other engine diagnostics. Also at the helm station are navigation instruments such as a GPS/chartplotter for positioning and route planning, depth sounds for monitoring water depth, and radar for detecting nearby vessels or obstacles.

[0004] The specific layout and features of the helm station may vary depending on the size, type, and design of the vessel. Additionally, modern vessels may include advanced technologies such as touchscreen displays, autopilot systems, and integrated entertainment systems at the helm stations.

[0005] The captain may want to step away from the helm station when the vessel is cruising and sit back to relax. However, the advanced technologies mounted at the helm stations are then too far away for the captain to monitor. Accordingly, there is a need in the art for a display mount console for these modern vessels that makes it easy to access advanced technologies when the captain is not at the helm station but can also be easily stowed out of the way when not needed.

SUMMARY

[0006] In view of the foregoing background, it is therefore an object of the present invention to provide an improved display mount console for a vessel. The display mount console of the present invention includes a mounting box configured to be secured adjacent to seating of the vessel, and a display compartment moveably secured to the mounting box. The display box is configured to hold an electronic display and is configured to move between a deployed position and a stowed position, where the display compartment is extended outwards from the mounting box in the deployed position, and the display box is retracted towards the mounting box when in the stowed position to reduce blocking a pathway in front of the seating. The display mount console may also include a base cabinet configured to be positioned between the seating, where the mounting box is mounted to a top of the base cabinet.

[0007] The display compartment may be rotatably secured to the mounting box or slidingly secured to the mounting box. The display compartment is tilted upwards when in the deployed position. In addition, the display compartment may be retracted upwards above the mounting box when in the stowed position, and the display compartment may extend beyond an edge of the seating when in the deployed position, and may not extend completely beyond an edge of the seating when in the stowed position.

[0008] In another aspect, a display mount console for a vessel includes a base cabinet configured to be positioned between seats of the vessel, and a mounting box secured to a top of the base cabinet, where the mounting box has a first side and an opposing second side. The display mount console

includes a first arm and a second arm with each having a respective proximal end and a distal end. The proximal ends of the first arm and the second arm are coupled to the first side and second side of the mounting box, respectively. The display mount console also includes a display compartment having a first side and a second side, the distal end of the first arm coupled to the first side of the display compartment, and the distal end of the second arm coupled to the second side of the display compartment. An electronics display may be secured within the display compartment, where the electronics display comprises controls for operating the vessel.

[0009] The display mount console may include a first bearing and a second bearing securing each of the proximal ends of the arms to a respective side of the mounting box, where the display compartment is configured to rotate between a deployed position and a stowed position using the first and second bearings. The first and second bearings may each comprise a detent plate and a nylon bearing. In addition, a first retention ring and a second retention ring may secure the first bearing to the first side of the mounting box, and the second retention ring may secure the second bearing to the second side of the mounting box. In another aspect, the proximal ends of the first arm and the second arm may be configured to slide along the mounting box to move the display compartment between the deployed position and the stowed position.

[0010] A top of the mounting box may also be configured so that beverage containers can be temporarily secured therein, and the base cabinet may have a storage drawer.

Description

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The aspects and the attendant advantages of the embodiments described herein will become more readily apparent by reference to the following detailed description when taken in conjunction with the accompanying drawings wherein:

[0012] FIG. 1 is a front perspective view of a display mount console for a seat console of a vessel in accordance with the present disclosure;

[0013] FIG. 2 is a rear perspective view of display mount console with a display compartment in a deployed position;

[0014] FIG. 3 is an exploded view of the display mount console;

[0015] FIG. 4 is a perspective view of the display compartment of the display mount console in a stowed position;

[0016] FIG. 5 is an exploded view of an arm of the display mount console;

[0017] FIG. 6 is a detail view of a bearing of the display mount console;

[0018] FIG. 7 is a detail view of the bearing secured to the arm;

[0019] FIG. 8 is a perspective view of the display mount console installed on a vessel; and

[0020] FIG. 9 is another perspective view of the display mount console on the vessel.

DETAILED DESCRIPTION

[0021] The present invention will now be described more fully hereinafter with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art.

[0022] Referring now to FIGS. 1-3, a display mount console for a vessel of the present invention is depicted and generally designated **100**. The display mount console **100** includes a display compartment **102** that is used to secure an electronics display such GPS/chartplotter **200**, for example. The electronics display **200** may be in communication with electronics at the helm station of the vessel. The display compartment **102** is in a deployed position in FIGS. 1 and 2, and in the

stowed position in FIG. 3.

[0023] The display compartment **102** and electronic display **200** is configured to move between the deployed position and the stowed position. The display compartment **102** is extended outwards from a mounting box **106** and seating in the deployed position, and the display compartment **102** is retracted towards the mounting box **108** and seating when in the stowed position. The stowed position of the display compartment **102** and electronic display **200** reduces blocking a pathway in front of the seating and advantageously opens up space around the helm station.

[0024] On each side of the display compartment **102** is a respective arm **104a**, **104b**. The arms **104a**, **104b** are secured to opposing sides of the mounting box **106**. As those of ordinary skill in the art, there could only be one arm on one side rather than an arm on each side. The mounting box **106** is secured on top of a base cabinet **108**. The arms **104a**, **104b** are able to rotate and/or slide between the deployed position and stowed position. The deployed position is shown in FIGS. **1** and **2**, and the stowed position is shown in FIG. **3**. The display compartment **102** and electronics display **200** have been rotated upward to be approximately perpendicular to a top surface of the mounting box **106** when in the stowed position. As those of ordinary skill in the art can appreciate, the angle of the electronics display may vary when in the stowed position and is not required to be perpendicular. The display compartment **102** may also be slid to the stowed position towards the seating using rails **105a**, **105b** or other similar means.

[0025] The assembly of the display mount console **100** begins with the base cabinet **108** and the mounting box **106** is secured over the base cabinet **108**. The arms **104a**, **104b** are secured to the mounting box **106** and to the display compartment **102**. A cup holder **114** may be secured inside the mounting box **106**. The electronics display **200** is secured within the display compartment **102** and a drawer **112** is installed within the base cabinet **108**.

[0026] A partially exploded view of the display mount console **100** is depicted in FIG. **4**. The assembly of the arms **104a**, **104b** are positioned proximate to a front of the mounting box **106**. Accordingly, when the arms **104a**, **104b** are rotated outward to the deployed position, the display box **102** with the electronics display **200** is easier to view by the captain when in the seating at the helm station.

[0027] Referring now to FIGS. **5-7**, the assembly of the bearings **118** to the **104a**, **104b**, are shown. The elements for the right and left arms **104a**, **104b** are similar and configured to account for the respective side to be mounted. The arms **104a**, **104b** are shown without any padding or covering for clarity. Each of the arms **104a**, **104b** includes a structural member **120**. The structural member **120** may not be straight but have a first leg **125** and a second leg **127** forming an angle **129** therebetween.

[0028] A retention ring **122** is fixed to an inside of the mounting box **106**. A detent plate **124** and nylon bearing **126** are secured to the structural member **120**. The nylon bearing **126** is secured to the retention ring **122** and configured for the structural member **120** to rotate between a deployed position and a stowed position.

[0029] In addition, a pathway **132** is formed in the structural member **120**. The pathway **132** is configured for wiring **134** to couple to the electronic display **200**. The wiring **134** can pass through the bearing **118** from inside the mounting box **106** to the electronic display **200** and be hidden from view and protected.

[0030] FIGS. **8** and **9** are perspective views of display mount consoles **100** installed on a vessel **10**. The display compartments **102** of both consoles **100** are shown in the deployed position so that the electronics displays **200** are easily visible to the captain. Also, more than one console **100** may be installed on a vessel as shown. As those of ordinary skill in the art can appreciate, the electronics displays **200** may impede the space around the helm. Accordingly, being able to easily move the electronics displays **200** out of the way and stowed when not being used is highly desirable and advantageous. Likewise, when the electronics displays are needed, they can be easily moved back into the deployed position.

[0031] Many modifications and other embodiments of the invention will come to the mind of one skilled in the art having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is understood that the invention is not to be limited to the specific embodiments disclosed, and that modifications and embodiments are intended to be included within the scope of the appended claims.

Claims

1. A display mount console for a vessel, the display mount console comprising: a mounting box configured to be secured adjacent to seating of the vessel; and a display compartment moveably secured to the mounting box, the display compartment configured to hold an electronic display and configured to move between a deployed position and a stowed position, wherein the display compartment is extended outwards from the mounting box in the deployed position, and the display compartment is retracted towards the mounting box when in the stowed position to reduce blocking a pathway in front of the seating.
2. The display mount console of claim 1, further comprising a base cabinet configured to be positioned between the seating, wherein the mounting box is mounted to a top of the base cabinet.
3. The display mount console of claim 1, wherein the display compartment is rotatably secured to the mounting box.
4. The display mount console of claim 1, wherein the display compartment is slidingly secured to the mounting box.
5. The display mount console of claim 1, wherein the display compartment is tilted upwards when in the deployed position.
6. The display mount console of claim 1, wherein the display compartment is retracted upwards above the mounting box when in the stowed position.
7. The display mount console of claim 1, wherein the display compartment extends beyond an edge of the seating when in the deployed position.
8. The display mount console of claim 1, wherein the display compartment does not extend completely beyond an edge of the seating when in the stowed position.
9. A display mount console for a vessel, the display mount console comprising: a base cabinet configured to be positioned between seats of the vessel; a mounting box secured to a top of the base cabinet, the mounting box having a first side and an opposing second side; a first arm having a proximal end and a distal end, the proximal end of the first arm coupled to the first side of the mounting box; a second arm having a proximal end and a distal end, the proximal end of the second arm coupled to the second side of the mounting box; and a display compartment having a first side and a second side, the distal end of the first arm coupled to the first side of the display compartment, and the distal end of the second arm coupled to the second side of the display compartment.
10. The display mount console of claim 9, further comprising an electronics display within the display compartment.
11. The display mount console of claim 10, wherein the electronics display comprises controls for operating the vessel.
12. The display mount console of claim 9, further comprising a first bearing and a second bearing securing each of the proximal ends of the arms to a respective side of the mounting box, wherein the display compartment is configured to rotate between a deployed position and a stowed position using the first and second bearings.
13. The display mount console of claim 12, wherein the first and second bearings each comprise a detent plate and a nylon bearing.
14. The display mount console of claim 13, further comprising a first retention ring and a second retention ring, wherein the first retention ring secures the first bearing to the first side of the

mounting box, and the second retention ring secures the second bearing to the second side of the mounting box.

15. The display mount console of claim 9, wherein the proximal ends of the first arm and the second arm are configured to slide along the mounting box to move the display compartment between the deployed position and the stowed position.

16. The display mount console of claim 9, wherein a top of the mounting box is configured so that beverage containers can be temporarily secured therein.

17. The display mount console of claim 9, wherein the base cabinet has a storage drawer.

18. The display mount console of claim 9, wherein the display compartment extends beyond an edge of the seating when in the deployed position.

19. The display mount console of claim 9, wherein the display compartment does not completely extend beyond an edge of the seating when in the stowed position.

20. A display mount console for a vessel, the display mount console comprising: a mounting box having a first side and an opposing second side; a first arm having a proximal end and a distal end, the proximal end of the first arm coupled to the first side of the mounting box; a second arm having a proximal end and a distal end, the proximal end of the second arm coupled to the second side of the mounting box; a display compartment having a first side and a second side, the distal end of the first arm coupled to the first side of the display compartment, and the distal end of the second arm coupled to the second side of the display compartment; and a first bearing and a second bearing securing each of the proximal ends of the arms to a respective side of the mounting box, wherein the display compartment is configured to move between a deployed position and a stowed position using the first and second bearings.
