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weight stack accelerometer

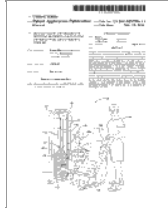
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## Patents

[Find prior art](#)[Discuss this application](#)[View PDF](#)[Download PDF](#)**DEVICES, SYSTEMS AND METHODS FOR RECEIVING, RECORDING AND DISPLAYING**

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Hidong Kim et al

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 [Go](#)**Application number:** 13/028,955**Publication number:**

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Devices, systems and methods for receiving, recording, and/or displaying information related to physical exercise are disclosed herein. In one embodiment, an instrumented weight pin for use with a stacked weight exercise machine includes a shaft portion extending outwardly from a handle portion. In this embodiment, the shaft portion is configured to be removably positioned adjacent to one or more weights of the exercise machine to selectively engage the one or more weights during use of the exercise machine. The weight pin can further include a load sensor and/or an accelerometer. The load sensor and/or the accelerometer can provide information associated with an exercise set to a data storage device carried by the weight pin. The data storage device can be operably coupled to a user computer or other display device so that information relating to the exercise set can be displayed for viewing by the user.

**Inventors:** [Hidong Kim](#), [Daniel Kohn](#)**Current U.S. Classification:** 482/8; 482/98[View patent at USPTO](#)[Search USPTO Assignment Database](#)

## Claims

1-31. (canceled)

32. An exercise system, the exercise system comprising:

a device for receiving and/or recording information related to the use of an exercise machine, the device including:

a weight support portion configured to be removably positioned adjacent to one or more weights of the exercise machine to selectively engage the one or more weights during use of the exercise machine; and

a data acquisition portion operably coupled to the weight support portion and configured to record information related to movement of the one or weights during use of the exercise machine.

33. The exercise system of claim 32 wherein the data acquisition portion is removably attached to the weight support portion.

34. The exercise system of claim 32 wherein the data acquisition portion is removably attached to the weight support portion via a USB port.

35. The exercise system of claim 32 wherein the device further includes a load sensor operably connected to the data acquisition portion.

36. The exercise system of claim 32 wherein the device further includes a load sensor carried by the weight support portion and operably connected to the data acquisition portion.

37. The exercise system of claim 32 wherein the device further includes an accelerometer operably connected to the data acquisition portion.

38. The exercise system of claim 32 wherein the device further includes an exercise machine information reader operably connected to the data acquisition portion.

39. The exercise system of claim 32 wherein the device further includes a wireless receiver operably connected to the data acquisition portion and configured to receive information related to the exercise machine.

40. The exercise system of claim 32, further comprising:

a machine information unit positioned at least proximate to the exercise machine, wherein the data acquisition portion further includes a receiver configured to receive information from the machine information unit.

41. The exercise system of claim 32, further comprising:

a machine information unit positioned at least proximate to the exercise machine, wherein the machine information unit includes a user interface configured to receive user input, and wherein the data acquisition device portion includes a receiver configured to receive information from the machine information unit.

42. The exercise system of claim 32, further comprising:

a machine information unit removably attached to the exercise machine, wherein the data acquisition portion includes a reader configured to receive information from the machine information unit.

43. The exercise system of claim 32, further comprising:

an RFID tag positioned at least proximate to the exercise machine, wherein the data acquisition portion includes a receiver configured to receive exercise machine information from the RFID tag.

44. The exercise system of claim 32, further comprising:

the exercise machine, wherein the exercise machine includes a support member movably extending through the one or more weights, wherein the support member includes at least one through-hole configured to receive the weight support portion of the device to releasably couple the one or more weights to the support member during use of the exercise machine.

45. The exercise system of claim 32, further comprising:

a user-operable display device configured to receive information from the data acquisition portion and display at least a portion of the information.

46. The exercise system of claim 32, further comprising:

a user-operable display device configured to receive information from a user, wherein the user-operable display device includes computer-readable instructions configured to cause the user-operable display device to transfer at least a portion of the information received from the user to the data acquisition portion.

47. The exercise system of claim 32 wherein the data acquisition portion includes a first electrical interface, and wherein the exercise system further comprises:

a user-operable display device having a second electrical interface, wherein the first electrical interface is operably connectable to the second electrical interface to transfer information from the data acquisition portion to the user computer.

48. The exercise system of claim 32 wherein the data acquisition portion includes a first wireless interface, and wherein the exercise system further comprises:

a user-operable display device having a second wireless interface, wherein the first wireless interface is operably connectable to the second wireless interface to transfer information from the data acquisition portion to the display device.

49-59. (canceled)

60. A system for use with a stacked weight exercise machine, the system comprising:

means for selectively coupling one or more weights of the exercise machine to a lifting portion of the exercise machine, the means for selectively coupling including:

means for receiving information related to movement of the one or more weights during use of the exercise machine; and

means for recording the information related to movement of the one or more weights.

61. The information system of claim 60 wherein the means for receiving information include means for receiving force information.

62. The information system of claim 60 wherein the means for receiving information include means for receiving acceleration information.

63. The information system of claim 60 wherein the means for recording is releasably attached to the means for selectively coupling.

64-65. (canceled)

## Drawings



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