

- (c) stored programming configured to initiate transfer of said data stream by said direct memory access controller from said memory to said cyclic redundancy check circuit.
7. The apparatus of claim 6, further comprising:
- (a) stored programming configured to read said calculated cyclic redundancy check value from said cyclic redundancy check circuit; and
- (b) stored programming configured to store said calculated cyclic redundancy check value in said memory.
8. The apparatus of claim 5, further comprising a display controller operatively coupled to said direct memory access controller, said direct memory access controller configured to transfer a display data stream from said memory to said display controller.
9. The apparatus of claim 8, further comprising:
- (a) stored programming configured to set up said display controller with a display address for said display data stream;
- (b) stored programming configured to set up said direct memory access controller with a source address for said display data stream, a destination address for said display data stream, and a size for said display data stream; and
- (c) stored programming configured to initiate transfer of said display data stream by said direct memory access controller to said display controller.
10. The data entry and display apparatus of claim 5, further comprising:
- (a) a stored list of cyclic redundancy check values corresponding to authorized strings of alphanumeric characters; and
- (b) stored programming configured to compare a cyclic redundancy check value for an input string of alphanumeric characters entered on said keypad to said stored list of cyclic redundancy check values, and determine validity of said cyclic redundancy check value for said input string.
11. A data processing apparatus, comprising:
- (a) a keypad including a plurality of first keys and a plurality of second keys;
- (b) said first keys each having a primary alphanumeric symbol associated therewith;
- (c) a plurality of said first keys having secondary alphanumeric symbols associated therewith; and
- (c) said first keys with said secondary alphanumeric symbols being operable upon actuation to selectively display said secondary alphanumeric symbols in association with said second keys.
12. The apparatus of claim 11, further comprising a display field operatively coupled to said keypad, said display field configured to selectively display said primary and secondary alphanumeric symbols according to actuation of said first keys and second keys.
13. The apparatus of claim 11, wherein said second keys are configured to display one said secondary alphanumeric symbol on each said second key.
14. The apparatus of claim 12, further comprising a touch screen in a superimposed relationship with said keypad.
15. The apparatus of claim 12, further comprising:
- (a) a memory operatively coupled to said keypad;
- (b) a direct memory access controller operatively coupled to said memory;
- (c) a cyclic redundancy check circuit operatively coupled to said direct memory access controller;
- (d) said direct memory access controller configured to transfer data from said memory to said cyclic redundancy check circuit; and
- (e) said cyclic redundancy check circuit configured to calculate a check value for said data.
16. The data processing apparatus of claim 15, further comprising:
- (a) programming stored in said memory capable of seeding said cyclic redundancy check circuit with a selected initial value;
- (b) programming stored in said memory capable of setting up said direct memory access controller with a source address for a data stream, a destination address for said data stream, and a size for said data stream; and
- (c) programming stored in said memory capable of initiating transfer of said data stream by said direct memory access controller to said cyclic redundancy check circuit.
17. The data processing apparatus of claim 15, further comprising a display controller operatively coupled to said direct memory access controller and said cyclic redundancy check circuit, said direct memory access controller configured to transfer a display data to stream said display controller.
18. The data processing apparatus of claim 17, further comprising:
- (a) programming stored in said memory capable of setting up said display controller with a display address for said display data stream;
- (b) programming stored in said memory capable of setting up said direct memory access controller with a source address for said display data stream, a destination address for said display data stream, and a size for said display data stream; and
- (c) programming stored in said memory capable of initiating transfer of said display data stream by said direct memory access controller to said display controller.
19. The data processing apparatus of claim 15, further comprising:
- (a) a stored list of cyclic redundancy check values corresponding to authorized strings of alphanumeric characters; and
- (b) programming stored in said memory capable of comparing a cyclic redundancy check value for an input string of alphanumeric characters entered on said keypad to said stored list of cyclic redundancy check values, and determining validity of said cyclic redundancy check value for said input string.
20. A method for data entry and display, comprising:
- (a) providing a keypad including a plurality of first keys and a plurality of second keys, each said first key