Circuit Operational Description CHH

revision **1**

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revision history

	effective date	author	description of change
1	20/01/2005	Dmitri Lenkevitch	Initial release

approval

Engineering	**signature**	**date**
Manufacturing	**signature**	**date**
Quality Assurance	**signature**	**date**

Table of Contents

1. Operational Description

CHH consists of:

External attachments:
2.4 GHz antenna
7.2V battery pack

Internal components:
802.11b 2.4 GHz PCMCIA wireless card
Navman Jupiter 12 GPS receiver
Slazenger motherboard with SA1110 processor
5” Colour Sharp LCD screen
SIPF-150 inverter
Passive GPS antenna

The purpose of the system is to enable a user to accurately measure distances on a golf course, view the current location on the golf course, keep track of the score, receive messages from the Clubhouse and allow the capability to order items from a pre-programmed menu as well as monitor the location of other users on the golf course equipped with either identical devices or other RF enabled units from the “Inforemer” family.

1.1 GPS

GPS signal (L1) is received by passive patch GPS antenna which is connected via a coaxial cable (RJ316) and a right angle OSX connector to the Jupiter 12 GPS receiver which in turn processes this signal. The GPS receiver is connected to the main motherboard via a 20 pin header (J26). The processed information is sent to the main processor (SA1110) U26 using Jupiter binary protocol. This information is reinterpreted by the software and is displayed in graphical format on the colour LCD screen.

1.2 RF

The radio signal is received by the 2.4GHz external antenna and passed through to the Agere 802.11b radio card which is inserted into the PCMCIA slot (U12) located on the main motherboard. The information from the radio card is processed by PCMCIA controller and sent to the main processor (SA1110) U26. The unit’s IP is static.

1.3 Power

The unit gets its power from either a 7.2V Li-ion battery or a 12V power supply through a “battery eliminator” either of which is connected to 4 pin connector J30 located on the main motherboard. 12V is used by the onboard regulators to produce 1.7V, 3.3 and 5V to feed various components on the motherboard. Battery voltage may vary from 8.4V (fully charged state) to 6.5V (fully discharged and unusable by the CHH).

1.4 Display

The display that is used with the CHH is Sharp LQ050Q5DR01 5” diagonal LCD in conjunction with SIPF-150 backlight inverter connected to connector J27 driving the CCFL. The display is connected to the motherboard via a flat ribbon cable to connector J9. The main processor SA1110 handles the interface

1.5 User Interface

The user interface consists of a keypad located on the front of the CHH. Total of 10 keys are available. Function of those keys may vary depending on current view displayed on the LCD.