Change Notice for: Hermes_User_Manual_V1.7.doc

Page 1	Delete:	Photo of prototype board
	Add:	Correct photo of production board
Page 2	Delete:	**A suitable LPF is the openHPSDR Alex* board which may be controlled directly from Hermes. A combined Power Amplifier and LPF, the ANAN-10, is available from Apache Labs#.**
	Add:	**A suitable LPF is the HPSDR Alex* board which may be controlled directly from Hermes, with the addition of a few parts. A combined Power Amplifier and LPF, the ANAN-10, is available from Apache Labs#. The HPSDR Apollo& Power Amplifier and LPF also includes a built in Antenna Tuner.**
	Add:	**& http://openhpsdr.org/apollo.php**
Page 4	Delete:	Nothing
	Add:	[After "Jumper Settings and Connectors"] Mounting Hermes
	Add:	Renumber page 2 & following due to text additions.
Page 3	Delete:	Nothing
	Add:	Ver 1.8 - Description of these changes and date
Page 5	Delete:	The initial release of FPGA code (V1.8) will enable two independent receivers (fed from the same antenna) to be used assuming PC software that supports this facility is used.
	Add:	The initial release of FPGA code (V1.8) was installed on all TAPR boards. This will enable two independent receivers (fed from the same antenna) to be used assuming PC software that supports this facility is used. See the Chapter on UPDATING HERMES FIRMWARE for updating instructions when new features or firmware are required.
Page 6	Delete:	Hermes provides a number of connectors and user-configurable jumpers; their locations are shown in Figure 3.
	Add:	Hermes provides a number of connectors and user-configurable jumpers; their locations are shown in Figure 3 and Figure 4.

Page 7 Delete: Fig 3 drawing
Add: Fig 3 that corresponds to the production board top view
Add Fig 4 that corresponds to the production board bottom view.

Page 8 Delete: **J14:** Provides I/O connections for future expansion.
Add: **J14:** Provides I/O connections for future expansion. [not included]

Delete: **J15:** Provides interfacing to an external power amplifier (e.g. HPSDR Apollo or Apache Labs ANAN-10) or filter bank (e.g. HPSDR Alex).

Add: **J15:** Provides interfacing to an external power amplifier (e.g. Apache Labs ANAN-10) or filter bank (e.g. HPSDR Alex). [not included]

Page 11 Delete: **J10:** Provides a DC power connection. For operation from 13.8 V DC supply, connect the 'positive' lead of the supply to pin 1 and the 'negative' lead to pin 2 and ensure the jumper on J18 is in place, the jumper on J17 is connected to pins 2 and 3 and a jumper on J26 connects pins 2 and 3. **NOTE**: As supplied, the Hermes board is configured for operation from a 13.8 V DC supply.

Add: **J10:** Provides a DC power connection using the four pin connector that is mounted on the bottom side of the board. **NOTE:** Pin 1 is the pin closest to the outside edge of the board. See Figure 4.

For operation from 13.8 V DC supply, connect the 'positive' lead of the supply to pin 1 and the 'negative' lead to pin 2 and ensure the jumper on J18 is in place, the jumper on J17 is connected to pins 2 and 3 and a jumper on J26 connects pins 2 and 3. **NOTE**: As supplied, the Hermes board is configured for operation from a 13.8 V DC supply.

When used in conjunction with Apollo the power switch is located on the Apollo. A separate power switch is required for stand alone operation.

If resistors R102 and R 145 are removed from the bottom the Apache Labs power switch may be installed.

Delete: **J11:** Provides an open-drain PTT output that is common with pin 13 of J16 and is intended for use with an external power amplifier or transverter, etc.

Add: **J11:** Provides an open-drain PTT output that is common with pin 25 of J16 and is intended for use with an external power amplifier or transverter, etc.

Page 12

Delete: **J27:** 3.5 mm Jack Socket (not fitted during manufacture), Left Speaker output (see J9 for further details).

Add: **J27:** 3.5 mm Stereo Jack Socket, Left Speaker output. Speakers of 8 ohms impedance or more may only be connected to the tip and ring of J27. WARNING: These pins are directly connected to the audio output IC and should not be shorted to each other or to ground.

Page 13

Delete: **J28:** Alternative transmitter output for connection to an Apollo PA board.

Add: **J28:** Alternative transmitter output for connection to a Apache Labs ANAN-10 PA board. [not included]

Delete: **J29:** Alternative receiver input for connection to an Apollo PA board.

Add: **J29:** Alternative receiver input for connection to a Apache Labs ANAN-10 PA board. [not included]

Add: **J30:** Alternative transmitter output for connection to an Apollo PA board.

Add: **J31:** Alternative receiver input for connection to an Apollo PA board.

Add: **J32:** Provides interfacing to HPSDR Apollo external power amplifier or separate filter bank.

Delete: D1: 3.3 V supply OK

Add: D1: [Front Panel] 3.3 V supply OK

Add: D6 [Front Panel] Status_LED: Flashes twice per second

Delete: LED1: Lights when an Ethernet broadcast is detected.
LED2: Lights when traffic to the board's MAC address is detected.
LED3: Lights when detecting a received sequence error or the ASMI is busy.
LED4: Displays state of PHY negotiations – there is a fast flash if no Ethernet connection;
a slow flash if 100T; and a steady 'on' if 1000T.
LED5: Lights when the PHY receives Ethernet traffic.
LED6: Lights when the PHY transmits Ethernet traffic.
LED7: Displays state of DHCP negotiations or static IP – the LED is on if ACK;
displays a slow flash if NAK; fast flash if time out; and long flash then short flash if static IP.

LED8: Lights when sync (0x7F7F7F) is received from the personal computer.
LED9: Lights when a Hermes discovery packet is received.
LED10: Lights when a Hermes discovery packet reply is sent.

Add: LED1: (D19) Lights when an Ethernet broadcast is detected.
LED2: (D18) Lights when traffic to the board's MAC address is detected.
LED3: (D17) Lights when detecting a received sequence error or the ASMI is busy.
LED4: (D16) Displays state of PHY negotiations – there is a fast flash if no Ethernet connection;
a slow flash if 100T; and a steady 'on' if 1000T.
LED5: (D15) Lights when the PHY receives Ethernet traffic.
LED8: (D14) Lights when sync (0x7F7F7F) is received from the personal computer.
LED6: (D13) Lights when the PHY transmits Ethernet traffic.
LED7: (D12) Displays state of DHCP negotiations or static IP – the LED is on if ACK;
displays a slow flash if NAK; fast flash if time out; and long flash then short flash if static IP.
LED9: (D11) Lights when a Hermes discovery packet is received.
LED10: (D10) Lights when a Hermes discovery packet reply is sent.

Delete: Status_LED: Flashes twice per second

Add: Mounting Hermes

When Hermes and Apollo are installed into the Hammond 1455Q1601[2.03" h] or equivalent TAPR enclosure, Apollo is mounted on the bottom with main components facing up (slot 1 from bottom). Hermes is inserted into slot 4 from top also with main components facing up. The switched power is taken from a 4-pin connector on Apollo to J10 on the bottom of Hermes. The Hermes RF out (J30) and RX in (J31) are connected to their respective connectors on Apollo. The control cable from Hermes to Apollo is from J32 to the corresponding connector on Apollo.

If Hermes is going to be used with Alex. install J15 on top of Hermes and connect a cable to the corresponding connector on Alex. J32 CAN NOT BE USED WITH ALEX!

If mounting to a chassis the four corner "mounting holes" are 6.000" x 4.425" or 152.4mm x 112.4mm and are 1.575"D or 4.0mmD, plated through.

The nominal board dimensions are 160mm x 120mm x 1.597666mm or 6.2992" x 4.7244" x 0.0629".

See Appendix D for end panel dimentions.

Page 27 Add: Appendix C End Panels Dimensions

by Dick Faust K9IVB