NFARL Antenna Special Interest Group (SIG)
Self-Study Reading Assignments

<u>**Month 4**</u> **– Feedlines, Baluns and Chokes (what, why and where)**

- **Week 1** – for net discussion on 04/08/2010
  <u>**Transmission Line Theory**</u>
    - "Basic Theory of Transmission Lines"   ARRL Antenna Book, pp. 24-1 to 24-6
    - "Practical Transmission Lines"   ARRL Antenna Book, pp. 24-7 to 24-11
    - "Input Impedance"   ARRL Antenna Book, pp. 24-11 to 24-14

- **Week 2** – for net discussion on 04/15/2010
  <u>**Parallel and Coaxial Transmission Lines**</u>
    - "Line Construction and Operating Characteristics"   ARRL Antenna Book, pp. 24-15 to 24-23
    - "Coaxial Fittings"   ARRL Antenna Book, pp. 24-23 to 24-26
    - "Line Installation"   ARRL Antenna Book, pp. 24-26 to 24-27

- **Week 3** – for net discussion on 04/22/2010
  <u>**1:1 Baluns and Current Chokes***</u>
    - "Common Mode Transmission-Line Currents"   ARRL Antenna Book, pp. 26-17 to 26-21
    - "Eliminating Common Mode   ARRL Antenna Book, pp. 26-21 to 26-28
    - "Chapter 6 – Baluns"   A Ham's Guide to RFI, Ferrites, Baluns, and Audio Interfacing (must read for RFI problems) http://www.audiosystemsgroup.com/RFI-Ham.pdf
    - "Striking a Balance"   http://www.balundesigns.com/servlet/the-template/Importance%20of%20Baluns/Page
    - "The 1:1 Balun" (optional)   Understanding, Building and Using Baluns and Ununs, Chapter 7. Jerry Sevick, W2FMI http://www.universal-radio.com/CATALOG/books/0558.html http://store.cq-amateur-radio.com/Detail.bok?no=106

- **Week 4** – for net discussion on 04/29/2010
  <u>**4:1 and Other Ratio Baluns***</u>
    - "Transmission Line Trans-formers and Baluns"   ARRL Handbook 2010, pages 5-29 to 5-30
    - "Choosing the Correct Balun"   From DX Engineering http://www.dxengineering.com/techarticlepopup.asp?ID={3E5220F7-2D0F-45B5-85F7-3B654F804C4F}
    - "The 4:1 Balun" (optional)   Understanding, Building and Using Baluns and Ununs, Chapter 8. Jerry Sevick, W2FMI
    - Other Ratio Baluns (optional)   Understanding, Building and Using Baluns and Ununs, Chapters 10 and 11. Jerry Sevick, W2FMI

* Sources for high-quality chokes and baluns
- Balun Designs LLC: http://www.balundesigns.com/servlet/StoreFront
- DX Engineering: http://www.dxengineering.com/default.asp?DeptID=9
- Array Solutions: http://www.arraysolutions.com/