

The nature of the amateur services

*of the art of personal communications in
international fraternity of enthusiastic
practitioners*



ARRL *The national association for
AMATEUR RADIO*

November 12

What is the amateur service?

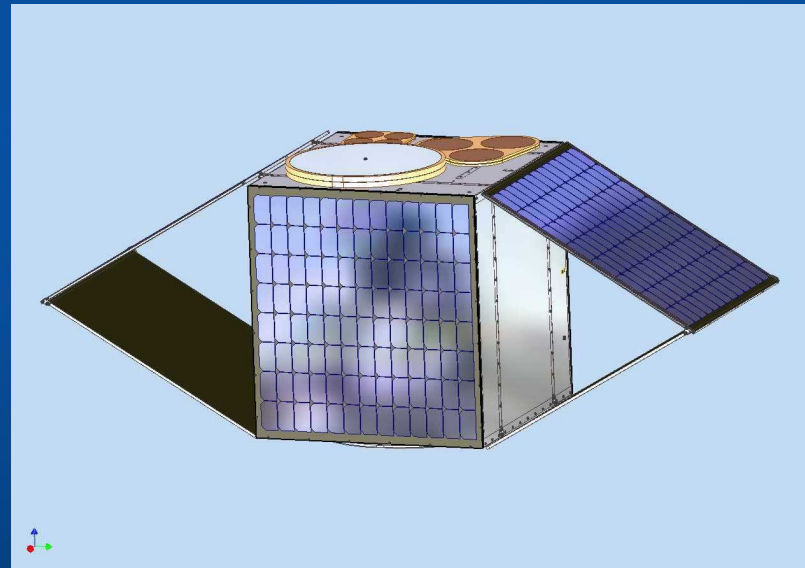
- It's a radio communications service
- for the purpose of self-training, intercommunication & technical investigation
- and is performed by duly authorized persons interested in radio technology without monetary interests



ARRL *The national association for
AMATEUR RADIO*

What is the amateur-satellite service?

- a radiocommunication service
- using space stations on earth satellites
- for the same purpose as the amateur service



ARRL *The national association for
AMATEUR RADIO*

November 12

National & international resource

- public service - natural disasters
- develops source of electronic expertise
- develops nation's human resources
- contributes to radio technology
- explores radio wave propagation
- promotes international friendship
- projects a national image
- provides learning opportunity for all
- disciplined & self-regulating service



ARRL *The national association for
AMATEUR RADIO*

November 12

National & international resource public service natural disasters



ARRL *The national association for
AMATEUR RADIO*

November 12

Amateur Radio: disaster communications resources



- amateurs can communicate in the event of outage or overload of normal services
- amateurs are geographically dispersed
- able to adapt and reconfigure networks



ARRL *The national association for*
AMATEUR RADIO

November 12

Non-typical emergency communications van



ARRL *The national association for*
AMATEUR RADIO

November 12

Contributes to and demonstrates electronic innovations

- Since year 2000 more than 50 amateur satellites
- Developed packet radio
- Global Positioning System (GPS) Automatic Position Reporting System (APRS)
- Antenna designs
- Amateur radio HF Digital voice
- Software Designed Radio (SDR)



ARRL *The national association for
AMATEUR RADIO*

Develops a national source of electronics expertise

- electronic devices & telecommunications systems proliferate in the world today
- radio amateurs train themselves in
 - electronics
 - radio wave propagation
 - telecommunications techniques
- a technical human resource for industry, government & the public



ARRL *The national association for
AMATEUR RADIO*

National & international resource of technical development

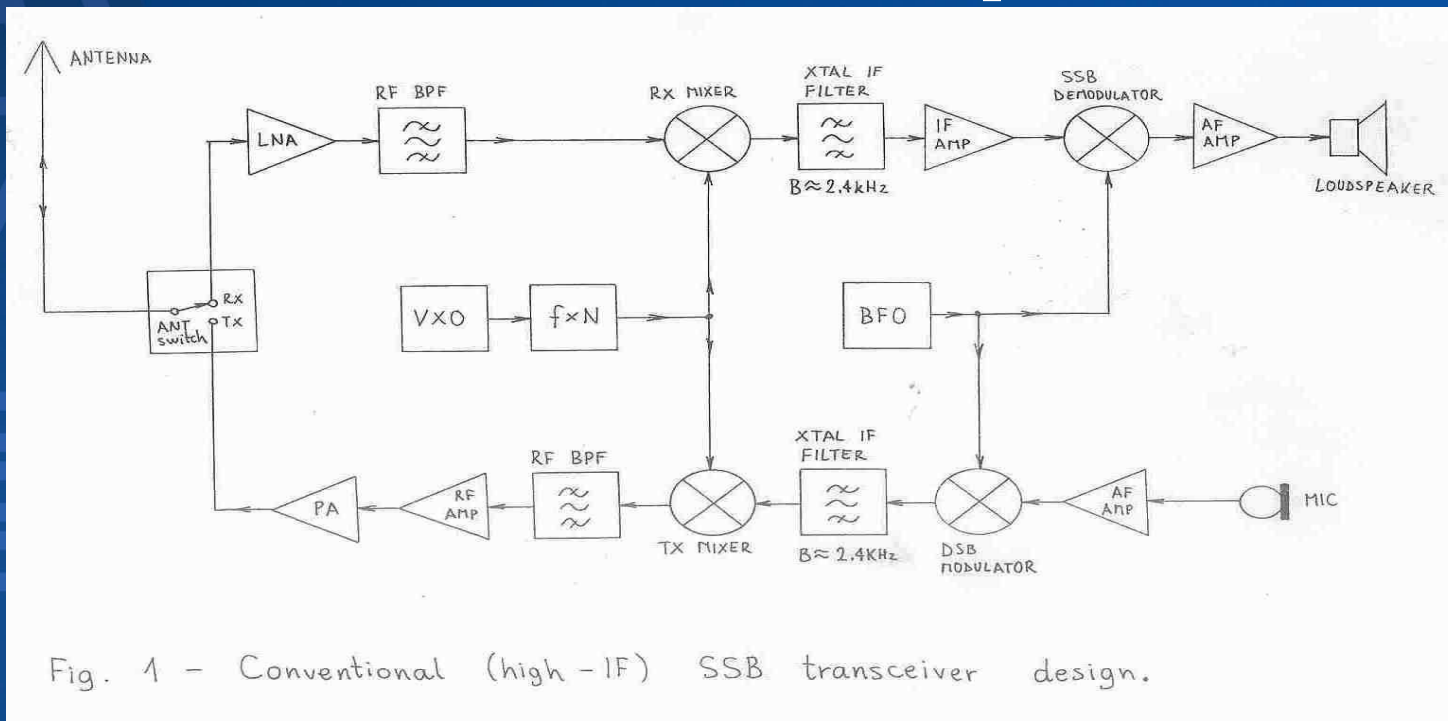


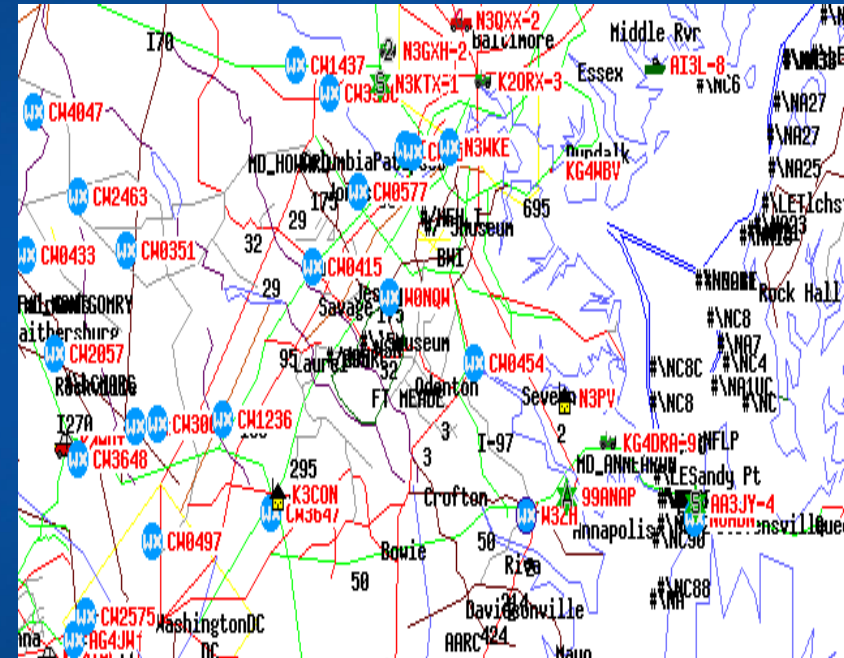
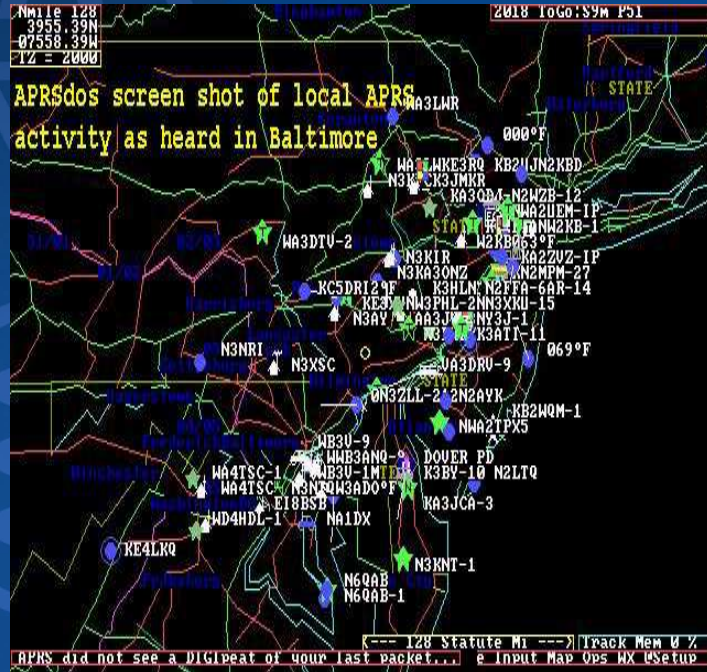
Fig. 1 - Conventional (high-IF) SSB transceiver design.



ARRL The national association for
AMATEUR RADIO

November 12

GPS & Automatic Position Reporting System (APRS)



ARRL The national association for
AMATEUR RADIO

Amateur Innovations (Almost hidden antenna design)



ARRL *The national association for
AMATEUR RADIO*

November 12

Amateurs explore signal & propagation phenomena

- Observe, measure and record signals
- Explore propagation modes, anomalies
 - meteor scatter
 - Earth-Moon-Earth (EME)
 - sporadic-E
 - Trans-equatorial spread-F
- Numerous HF, VHF, UHF beacons



ARRL *The national association for
AMATEUR RADIO*

November 12

-13

Amateurs promote international friendships and understanding

- offers opportunity for regular, direct, person-to-person international contact
- radio recognizes no political, geographic, ethnic, religious, age, culture, economic, or other barriers
- unique bridge among all peoples of the world



ARRL *The national association for
AMATEUR RADIO*

Amateurs project the national image

- Amateurs represent their country over the airwaves
- When engaged in international contacts they convey a positive image of their country as being friendly, progressive, and interested in the rest of the world



ARRL *The national association for
AMATEUR RADIO*

Amateur radio provides learning opportunities

- for all ages, especially the youth of the world, which can lead to professional jobs in electronics and telecommunications
- a productive outlet for older people
- for the physically handicapped - offers a unique window on the world



ARRL *The national association for
AMATEUR RADIO*

Motivation for youth



ARRL *The national association for*
AMATEUR RADIO

November 12

A self-disciplined service

- Training emphasises self discipline
- Amateurs monitor & report problems
- Peer pressure helps
- Occasionally, administrations are called upon to assist in persistent cases of operating violation



ARRL *The national association for
AMATEUR RADIO*

Amateur radio is a growing service

- Nearly 3 million licensed radio amateurs worldwide
- Continues to grow in both membership and technology advancement
- Future telecommunications techniques and opportunities are unlimited



ARRL *The national association for
AMATEUR RADIO*