

The Nature of the Amateur Services

the art of personal communications among an international fraternity of enthusiastic practitioners



ARRL

The national association for
AMATEUR RADIO

What is the Amateur Service?

- It is 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.

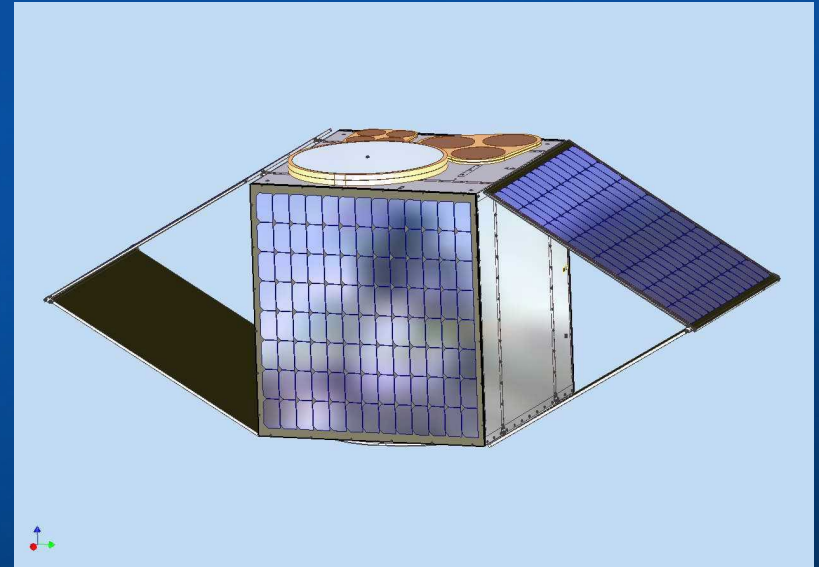


ARRL

*The national association for
AMATEUR RADIO*

What is the Amateur-Satellite Service?

- a radiocommunication service
- using space stations (satellites) and earth stations,
- for the same purpose as the amateur service



ARRL *The national association for
AMATEUR RADIO*

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*

National & International Resource

public service natural disasters



ARRL *The national association for
AMATEUR RADIO*

Amateur Radio: Disaster Communications Resources



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



ARRL The national association for
AMATEUR RADIO

Emergency Communications Van



ARRL The national association for
AMATEUR RADIO

Contributes to and Demonstrates Electronic Innovations

- More than 50 amateur satellites
- Developed packet radio
- Automatic Packet Reporting System (APRS), usually utilizing Global Positioning System (GPS)
- Antenna designs
- 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,
- becoming a technical human resource for industry, government & the public.

National & International Resource of Technical Development

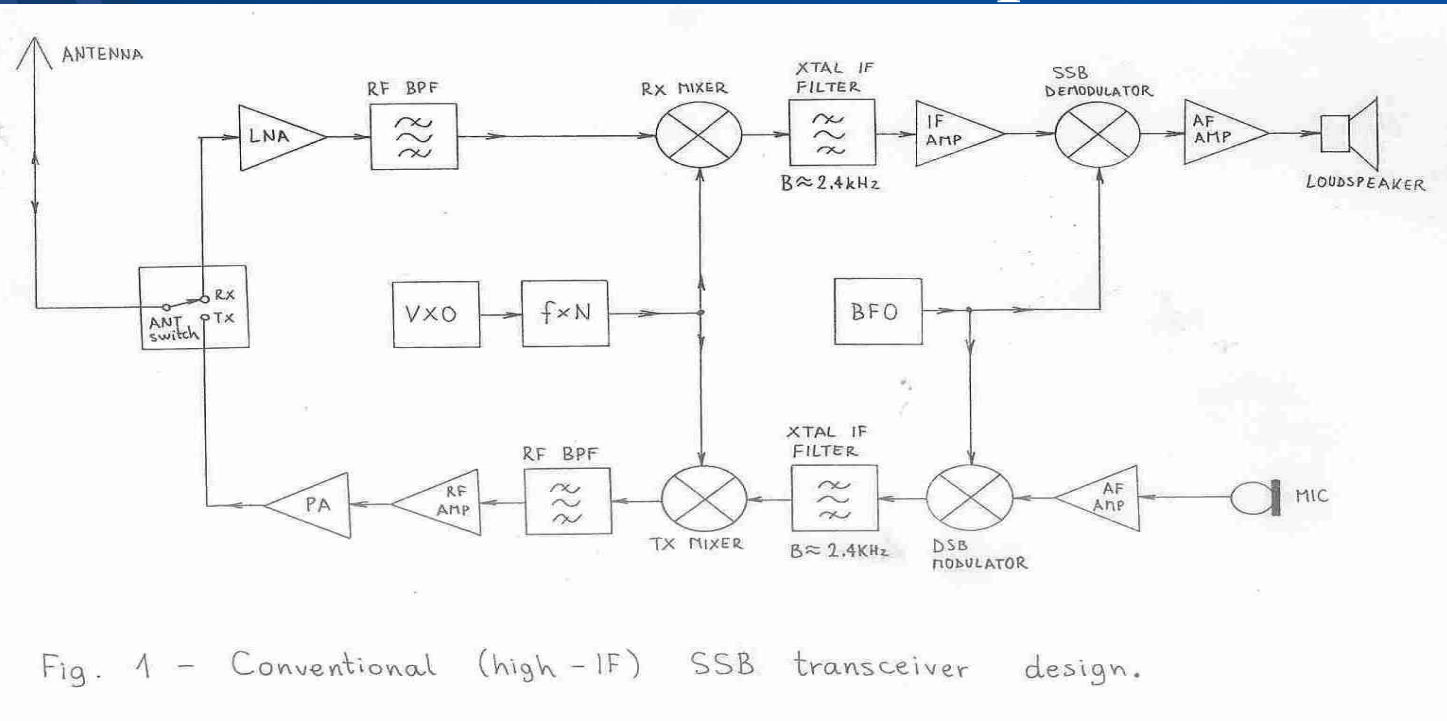
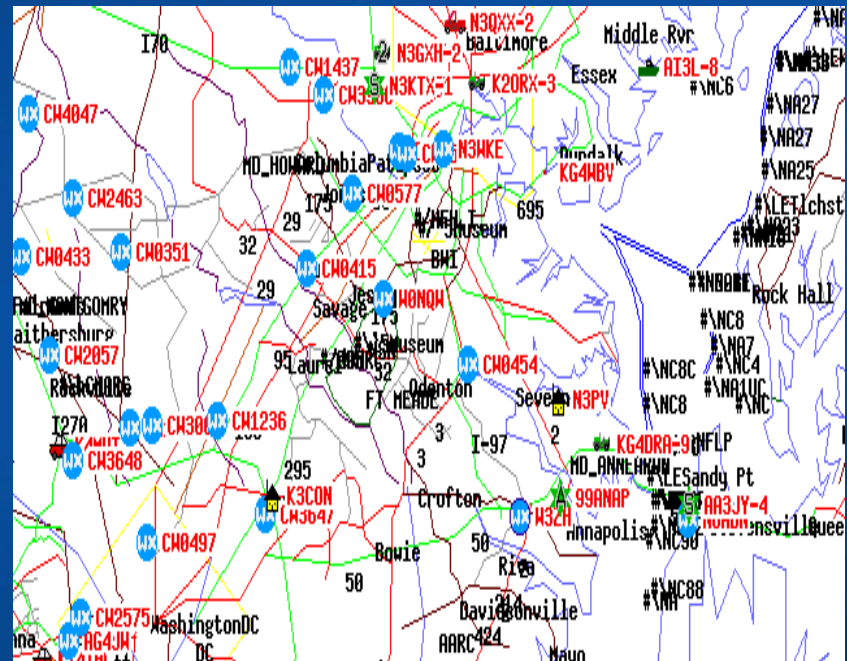
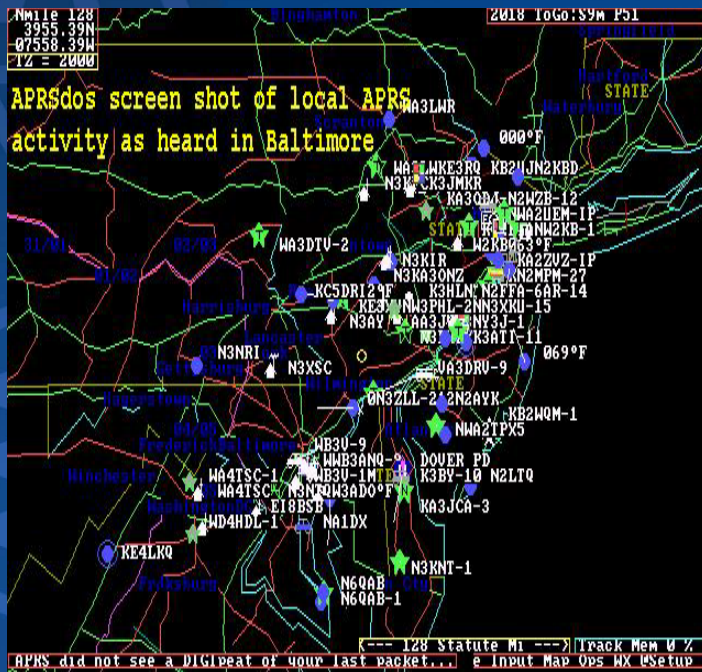


Fig. 1 - Conventional (high-IF) SSB transceiver design.



ARRL The national association for
AMATEUR RADIO

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

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*

Amateurs Promote International Friendships and Understanding

- Amateur Radio offers opportunity for regular, direct, person-to-person international contact.
- Radio recognizes no political, geographic, ethnic, religious, age, culture, economic, or other barriers.
- Amateur Radio is a 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*

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

- There are nearly 3 million licensed radio amateurs worldwide.
- Amateur Radio continues to grow in both membership and technology advancement.
- Future telecommunications techniques and opportunities are unlimited.



ARRL

*The national association for
AMATEUR RADIO*