The background features a light blue and white grid pattern overlaid on a faint, golden-yellow globe. The globe is centered and shows the continents of North and South America. There are also some faint, glowing circular patterns and lines scattered across the background, suggesting a technical or network theme.

Understanding Repeaters

Tom Schaefer, NY4I

But First, your Radio...

- Understanding repeaters requires understanding your own radio first.
- What does + or – offset really mean?
- PL, tone, CTCSS, DCS, etc...

UPARC Repeater

- 147.120 Mhz +600 Khz, PL of 100 Hz.
 - What does that mean?
- Repeater transmits on 147.120 Mhz, you listen on 147.12 Mhz.
- You transmit on 147.72 Mhz ($147.12 \text{ Mhz} + 600 \text{ Khz} = 147.72 \text{ Mhz}$).
- Repeater listens on 147.72 Mhz.

UPARC Repeater

- Repeater only activates transmitter if PL tone of 100 Hz is present on received signal.
- **The repeater transmits and receives at the same time.**
- You are listening to the repeater transmitter, NOT the other ham's transmitter.
- What happens when you hit the REV button?
- With REV, now you are listening to the user's transmitter.

Block Diagram

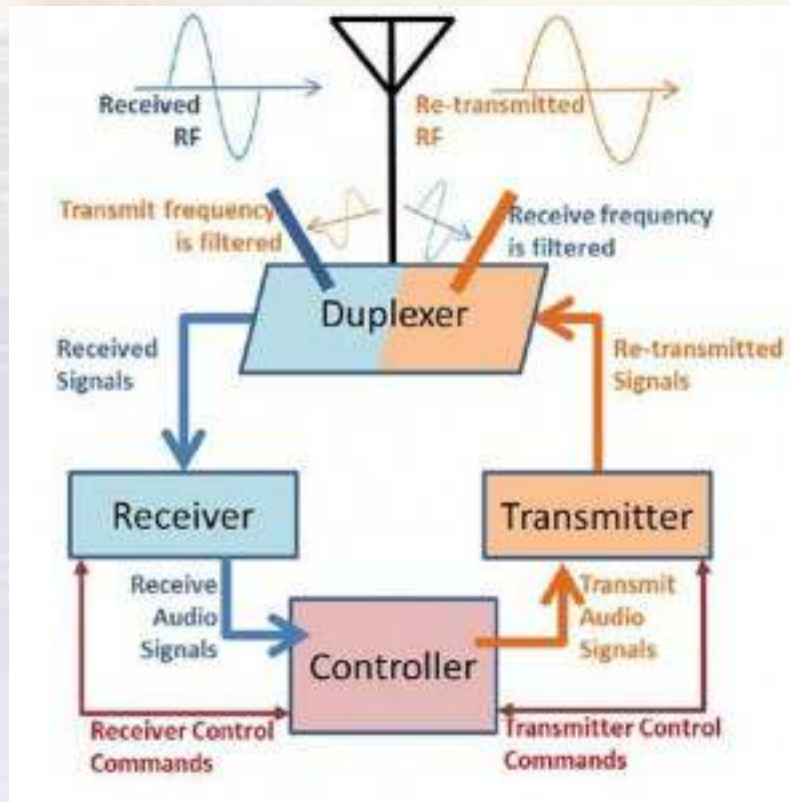


Image from hamradioschool.com

Specifics of our Repeater

- Repeater (transmitter and receiver)
 - Kenwood TKR-750
 - 50 watt transmitter
 - External controller
- Controller
 - Arcom RC-210
 - Controller interfaces audio between receiver and transmitter
 - Adds timing and control to system



Controller

- Arcom RC210
 - Audio delay for kerchunk killing
 - No auto patch
 - Multiple repeater inputs



Building a Repeater

- Utah VHF Society asks if you were dropped on your head?
- Nothing ever easy
- No short visits to the repeater site.
- Requires money, time and thanks.

Questions

The background of the slide is a light blue and white grid pattern. In the center, there is a large, semi-transparent globe showing the continents of North and South America. To the left and right of this central globe are smaller, semi-transparent globes. A network of white lines, resembling a globe's latitude and longitude but also suggesting a data network, is overlaid on the scene. On the far right, there is a solid yellow vertical bar. The word "Questions" is written in a large, black, sans-serif font at the top center.