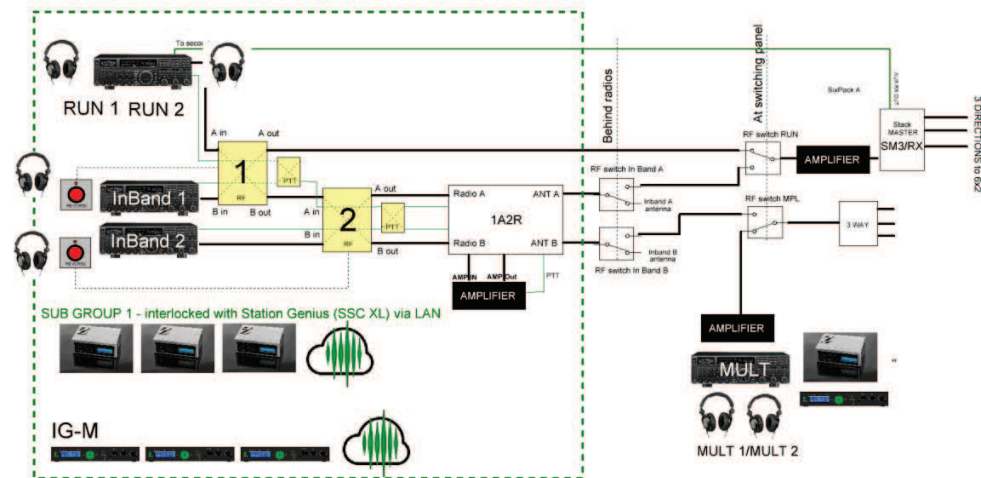


# Multi Single

- \* Multiple operators – One Transmitter
- \* Some contests (CQWW) allow one Transmitter and a second one that can only work Multipliers
- \* Read the rules- they are all different
- \* Take on modern contesting; Transmitter refers to one transmitted signal at any given time

# Multi Single



Rotator Genius controlled via LAN/WAN



SO2R/Multi Single setup with 4 radios-6 OPs  
Basic diagram  
403A Signature

# CN2AA



# CN2AA – a bit of wiring



# Description of CN2AA – why they are so very good

- \* There is a four radios with four operators running the station (RUN).
- \* Two of those operators listening to the same frequency, this allows you to hear two different directions by two different operators and picking up two different call signs at the same time.
- \* Two other stations (S&P) are picking up what is left on the band (in-band) around your main transmitter's frequency.
- \* Switching and interlocking the stations is so sophisticated, that every operator can choose any antenna for the band to transmit and receive by "stealing" any antenna from the multiplier station and vice-versa.
- \* You can transmit and receive into three different directions, if you want, and by clicking just one button choose which one you are using.
- \* S&P station is stealing not only your antenna (giving you his own at the moment, so you didn't left deaf), but also locking you on transmitting anything
- \* This time we also had a four multiplier stations.
- \* While two guys, running in low band multipliers with both stations interlocked - other two guys looking for the multipliers on the high bands and putting stations they could hear quicker with the thinner pile ups etc. to the band map
- \* when two of us on MULT station see, that there is no more "easy" workable multipliers left- we just tell the other two guys start working their band. It is still one signal at the time on one band, but four people getting ready to call the multipliers... later in the contest, when there is not much multipliers left to work - only two guys are hunting them. But for the last five hours all radios at CN2AA was taken.

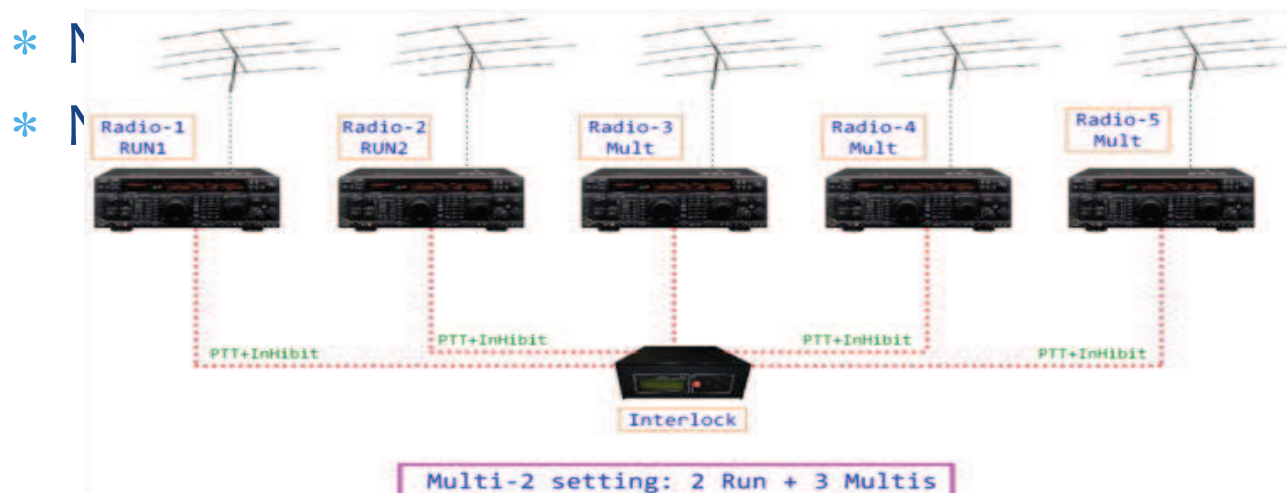
# Antennae CN2AA

- \* **Hill (70m ASL) home for 4 towers:**
- \* Tower 1 (12m): 5el Yagi 10m rotary
- \* Tower 2 (24m): 2el Quad 10m & 15m & 20m rotary (RQ-23)
- \* Tower 3 (36m): 2el Quad 80m fixed NA & Half wave dipole sloping to NA 160m
- \* Tower 4 (24m): 4el Quad 10m, 15m and 3el 20m (RQ-43) 3el Quad 40m fixed NA @ 15m
- \* Between towers: 3el Quad 40m fixed EU @ 21m & 1/4 Vertical 80m
  
- \* **Cliff 30m ASL home for 3 towers:**
- \* Tower 1 (24m): 5el Yagi 20m rotary 2el Quad 40m fixed to South
- \* Tower 2 (24m): 6 over 6el Yagi 15m fixed to NA 6 over 6el Yagi 10m fixed to NA
- \* Tower 3 (24m): 5 over 5 over 5el Yagi 10m fixed to EU (top rotary) 5 over 5el Yagi 15m fixed to EU (top rotary)
  
- \* Hotel rooftop (15m ASL) home for 1 tower
- \* Tower 1 (15m): 5el Yagi 20m rotary
  
- \* **On the beach**
- \* 4 SQ 80m
- \* 4 SQ 40m
  
- \* beverage EU 350m preamp 15db
- \* beverage NA 230m preamp 15db
- \* beverage 220\* 250m preamp 15db
- \* beverage 90\* 200m preamp 15db
- \* beverage 180\* 250m preamp 15db

# The Super Remembrance Day Station

- \* What do the rules allow ?
  - \* The rules are actually flexible; we all need to read them and see what loopholes there are....
- \* SSB,RTTY and CW on the one band ? At the same time?
- \* What ideas can we steal from CN2AA?
- \* How the hell do they transmit on the same band and not blow up the other receivers ?
  - \* Think about it; again Google is your friend

# VK Super Club



\* <http://ea4tx.com/en/ea4tx-interlock/>

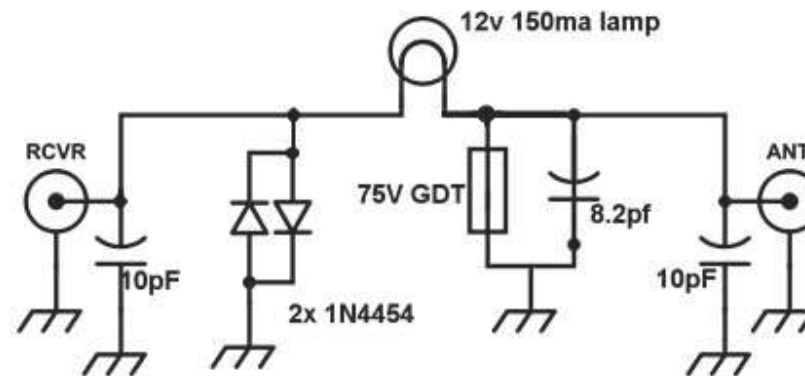


# How do we protect the RX?

\* Simple



\* Roll your own



# Simple Circuits

- \* Back to back diodes 1N4148
- \* GDT – Gas Discharge Tubes
- \* Cap isolation
- \* Clamp over  $S_9+50\text{db}$
- \* Parts are all ex Jaycar
- \* Transformer matching I/O \* Specialised item

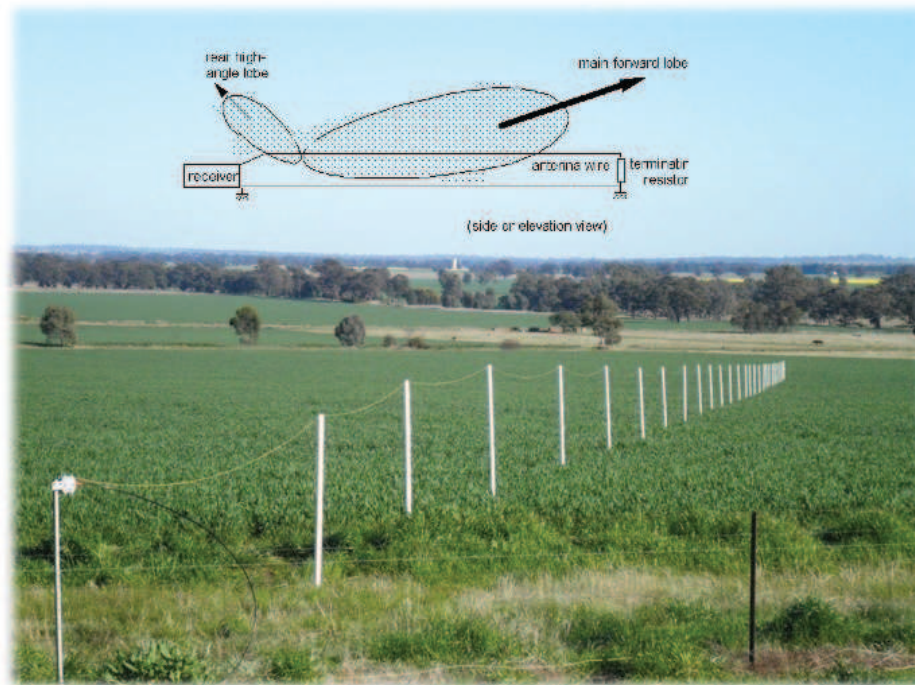
# LF Receiving

- \* 160 80 40M need specialised techniques
- \* Beverages are best if you have room
- \* K9AY and associated Loops are very good
- \* Vertical arrays can solve issues
- \* A lot of googling is needed for best results

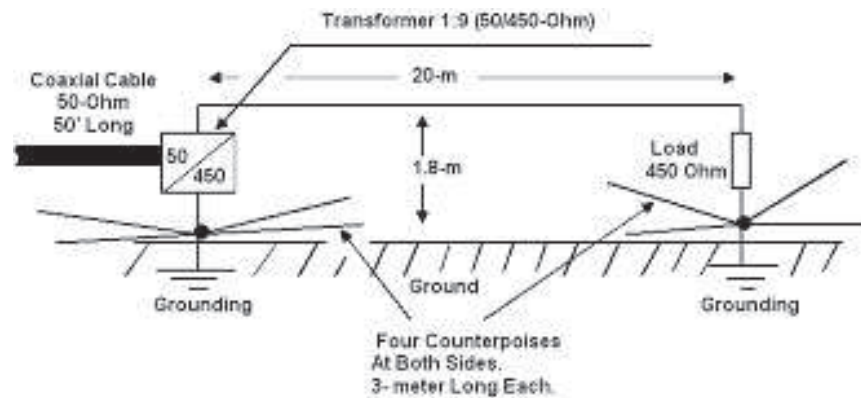
# Beverage

- \* The **Beverage antenna** or "wave antenna" is a long-wire receiving **antenna** mainly used in the low frequency and medium frequency radio bands, invented by Harold H. **Beverage** in 1921. It is used by amateur radio, shortwave listening, and longwave radio DXers and military applications

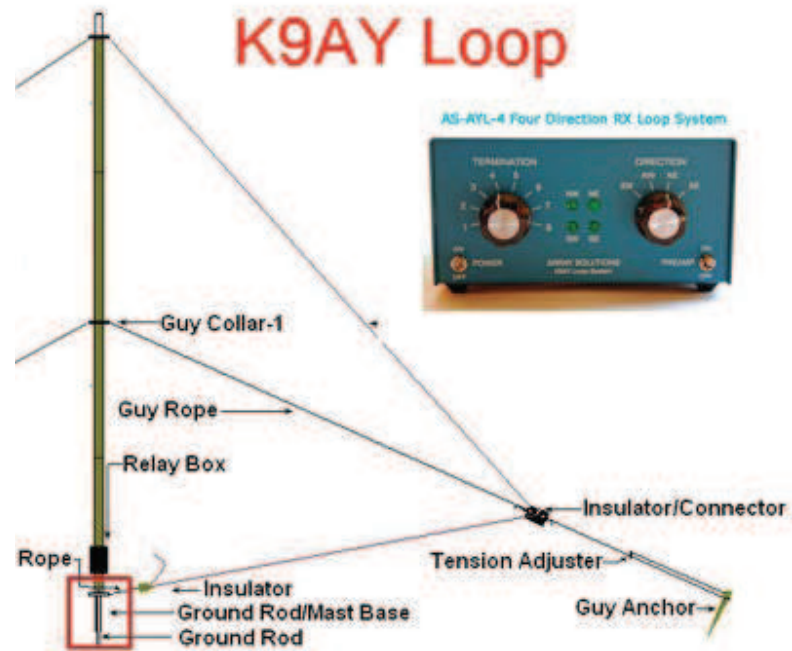
# Beverage Antenna



# More Beverage



# K9AY Loop



# GM3SEK “Clean up your shack”

Take the time to find YouTube RSGB Presentation by GM3SEK called “Clean up your shack”

\*Basically filter your mains and your antennae and you will get rid of 90% of noise





# Thank you

- \* 73
- \* TU VK4TS
- \* VK5? Again? Again?
- \* QRP?
- \* Buy a linear
- \* QRZ ? De VK4TS