

# FT 817 instead of FT100



It is proposed that we substitute the YAESU FT 817 in place of the FT100 as the ISS HF radio

# Problems with the FT 100



- The biggest problem with the FT 100 is getting it through the safety review.
- We had no way to assure that the radio wouldn't malfunction and transmit at the full power rating (100w).

# FT 817 is very similar to FT100



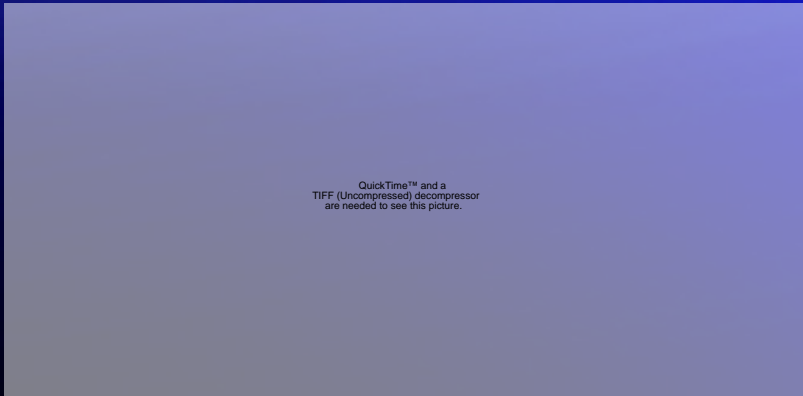
- Receive capabilities cover all the ham bands up to and including the 70 CM band.
- Transmit capabilities cover all the ham bands up to and including the 70 CM band.



# FT 100 vs FT 817



- YAESU FT100



- YAESU FT 817

# FT 100 vs FT817



## FT 100

- Receive frequencies
  - 100kHz to 70 CM
- Transmit frequencies
  - 160 to 2M ham bands
  - 2M and 70 CM ham bands
- Transmission Modes
  - A1 (CW)
  - A3 (AM)
  - A3J (LSB/USB)
  - F3 (FM)
  - F1 (9600 bps Packet)
  - F2 (1200 bps Packet)

## FT 817

- Receive frequencies
  - 100kHz to 70 CM
- Transmit frequencies
  - 160 to 2M ham bands
  - 2M and 70 CM ham bands
- Transmission Modes
  - A1 (CW)
  - A3 (AM)
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  - F3 (FM)
  - F1 (9600 bps Packet)
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# FT 100 vs FT817



## FT 100

- Power
  - 13.8 v +- 10%
- Current
  - Squelched 1.2A (16.6w)
  - Receive (Max audio)
    - 1.6A (22w)
  - Transmit 22A (304w) (100w transmit power)

## FT 817

- Power
  - 13.8v +- 15%
  - Operating 8 to 16v
  - Can operate from 8 AA batteries
- Current
  - Squelched .25A (3.5w)
  - Receive (Max audio)
    - .45A (6.2w)
  - Transmit 2A (27.6w) (5w transmit power)

# FT100 vs FT 817



## FT100

- Transmitter
  - 160 - 6M 100w max
    - Can be set 0->100%
  - 2M 50w max
    - Can be set 0->100%
  - 70CM 20w max
    - Can be set 0->100%

## FT817

- Transmitter
  - 5w all bands 1.5w AM mode
  - Can be set to 5, 2.5, 1 or .5w
  - Can be set to different values for each band
  - Automatically drops to 2.5w on batteries.



# FT100 vs FT 817

## FT100

- 6.3 " X 2.2" X 8.0"
- Weight
  - 6.6 lb (3kg)

## FT817

- 5.31" X 1.5" X 6.5"
- Weight
  - 2.5 lb with Batteries(1.17kg)



# FT100 vs FT 817



## FT 100

- Receiver Sensitivity
- Spurious emissions
- Carrier suppression
- Image rejection
- IF Rejection
  - Same for both Radios

## FT 817

- Receiver Sensitivity
- Spurious emissions
- Carrier suppression
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  - Same for both Radios

# FT100 vs FT 817



## FT 100

- Memory Operations
  - Memories store
    - Frequency
    - Mode
    - Filter BW
    - IPO ( Intercept Point Operation)Status
    - ATT status
    - Repeater Shift
    - CTS tone or DCS info.
  - 300 Standard channels
    - 6 groups of 50
  - 5 QMB channels
  - 20 Split frequency channels
  - 4 Home channels
  - 20 Programmable Memory Scan channels

## FT 817

- Memory Operations
  - Memories store
    - Frequency
    - ?
  - 200 Standard channels
    - 10 groups of 20
  - 4 Home Channels
  - 1 QMB (Quick Memory
  - Alphanumeric labels

# FT100 vs FT 817



## FT 100

- All memories have to be programmed manually via the front panel controls.

## FT 817

- All memories and parameters can be uploaded from a computer using the clone feature.

# FT100 vs FT 817 Other considerations



- FT 100 has a detachable front panel.
- We have an adequate quantity on hand.
- FT 100 has passed outgass testing.
- FT 100 can dangerously overload the power supply.
- Thermal concerns.
- Front panel not removable
- We have none on hand
  - Two will be donated by Chip Margelli and his wife.
  - At least 4 more will be needed (\$ 550 each).
- FT 817 will need a new safety data package and will need to undergo outgass testing.
- FT 817 uses much less power.
- No power supply problems.
- No thermal problems.

# Recommendations



- Change to the FT 817
  - Will pass safety requirements where the FT100 will not
  - Easier to program
  - Provides essentially the same functions as the FT100.
- Funding TBD.