



# Taking Control of Your Station

## Being a diligent control operator!

### Learning Net

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# Modern Rig Settings

- Take control of your rig's configuration
  - Timers
    - Time-Out-Timer (TOT)
    - Automatic Power Off Timer (APO)
  - Battery Saving Options
    - Timers (TOT & APO)
    - Receiver Duty Cycle
      - Use with caution when running Digital modes
    - Transmit Power



# Time-Out-Timer (TOT)

- It is sometimes necessary or desirable to restrict a single transmission to a specific maximum time.
  - Prevent repeater time-outs
  - Protect against stuck PTT
  - Conserve power
  - Reduce probability of over-heating
- When TOT times out, the transceiver generates beeps and automatically returns to receive mode. To resume transmitting, release and then press the PTT (Press-to-talk) again.



# TOT Settings (Icom / Kenwood)

- ICOM IC-91AD & IC-92AD
  - [Menu] > [Set Mode] > [TOT] {Off, 1, 3, 5, 10} min.
- ICOM ID-800H
  - [SET-LOCK] or [S.MW MW] TOT-- {OF, 3, 5, 15, 30} min
- Kenwood TM-D700A
  - Access Menu 1-9-4 values {3, 5, 10} min.
- Kenwood TM-D710A
  - Access Menu 109 (TX/RX) {3, 5, 10} min.
- Kenwood TS-2000
  - Access Menu 24 {Off, 3, 5, 10, 20 ,30} min.



# TOT Settings (Yaesu)

- VX-6R
  - [F/W] > [0(Set)] > [Dial] "67 TOT" > [0(Set)] > [Dial] {Off, 2.5, 5, 10} Min > [PTT]
- VX-7R
  - [MonF] > [Set/0] > [Dial] "Save Modes: 4" TOT > [Main] or [Sub] {Off, 1, 2.5, 5, 10} min. > [PTT]
- VX-8R
  - [Menu]1s > [Dial] "102 TOT" > [Menu] > [Dial] {OFF, 0.5 – 10.0 (0.5 steps)} min. > [PTT]
- VX-110
  - [F] > [M/V(Set)] > [Dial] "20: TOT" > [F] > [Dial] {Off, 1, 2.5, 5, 10} min. > [PTT]



# TOT Settings (Yaesu)

- VX-120
  - [F] > [Low(LOCK)SET] > [Dial] "47 TOT" > [F] > [Dial] {Off, 1 – 30 (1-min steps)} > [PTT]
- VX-127 / VX-177
  - [SET(\*\*)EMG] > [Dial] "47: TOT" > [F] > [Dial] {Off, 1 – 30 (1-min steps)} > [PTT]
- VX-150
  - [F] > [0(SET)] > [Dial] "22 TOT" > [F] > [Dial] {Off, 1, 2.5, 5, 10} min > [PTT]
- VX-170
  - [F] > [0(Set)] > [Dial] "47: TOT" > [F] > [Dial] {Off, 1 – 30 (1-min steps)} > [PTT]



# Automatic Power Off (APO)

- APO is a background function that monitors whether or not any operations have been performed (keys pressed, Tuning control turned, PTT activated, etc.), and turns the transceiver power OFF if it has not been in use.
  - Conserves battery life
    - May prevent draining your automobile battery
    - Reduces likelihood of being awakened unexpectedly
- When APO is about to time out, the transceiver generates warning beeps, if no operations are performed to reset the timer, it will automatically Turn-Off the rig when the full time-out period is reached.



# Receiver Duty Cycle

- Receiver Duty Cycle (a.k.a., Battery Saver) is an option typically found in Handheld Transceivers. In telecommunications, the duty cycle is the function of time that a system is in an “active” state. When referring to Receiver Duty Cycle the “active state” exists when the radio’s receiver is energized and capable of receiving information.
  - During the “inactive state” the receiver will not detect any signals.
  - Use cautiously when operating in digital modes
    - Key information may be lost during the “inactive state”



# Transmitter Power

- Proper selection of Transmitter Power is critical to communications, battery-life, and compliance with FCC Rules and Regulations.
  - Higher power will
    - Cause the battery to discharge faster
    - May in some cases improve signal intelligibility
    - Try a different location or antenna to improve effective radiated power and improve link-closure while allowing you to reduce the power level of your transmitter.
  - In all cases it is best to use the minimum power necessary to achieve good communications.
    - Having some power in reserve may allow you to regain a lost communications link when stations have changed locations.