

# Sync'n Go® -- Portable Precision Frequency Reference



**SYNC-10.00MHz.**



**RoHS  
Compliant**

## FEATURES:

- Stand Alone 10.00MHz Portable Precision Frequency Reference
- [World Wide Capability](#)
- Built-in Stratum-III stability, 10.00MHz Signal tuned into 50Ω's • Synchronization circuitry providing dynamic sync capability, enabling Calibration to a known source such as; a GPS Tracked 10.00MHz reference/10.00MHz Rubidium Source/10.00MHz OCXO based reference
- Integrated re-chargeable batteries to provide true stand-alone capability in the field
- Once sync'd; guaranteed  $\pm 300$  ppb stability over  $0^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
- Pocket Size - 3.50" \* 1.50" \* 1.00"; machined aluminum durable enclosure
- Accompanied with a Universal AC-DC Charger
- Continuously operable at full charge for 10-hours

## APPLICATIONS:

- Ideally suited as an in-field Calibrated Precision 10.00MHz reference for trouble shooting or tuning hardware and Base Station related equipment
- Reference source for lab use
- Reference source to drive frequency counters and other timing related hardware or instruments
- Precision Portable reference for inspection of in-field wireless transmitters

## STANDARD SPECIFICATIONS:

Parameter	Description	Value / Units
Input Reference Frequency for Sync	10.00	MHz
Output Reference Frequency	10.00	MHz
Operable Operating Range	$0^{\circ}\text{C}$ to $+60^{\circ}\text{C}$	
Synchronization accuracy	$\pm 5.00$	ppb
Frequency Drift post sync ( $25^{\circ}\text{C} \pm 10^{\circ}\text{C}$ )	$\pm 25.00$	ppb Typical
Frequency Drift post sync ( $25^{\circ}\text{C} \pm 20^{\circ}\text{C}$ )	$\pm 50.00$	ppb Typical
Frequency Accuracy Over the operating Temperature Range	$< \pm 100$ $\pm 300$	ppb Typical; Post Sync ppb Maximum; Post Sync
Load Impedance	50	$\Omega$
Charging Time	4.00	Hours maximum
Stand Alone operational time with full charge	10.00	Hours minimum
Phase Noise @ 10.00MHz Carrier		
100 Hz offset	-120	dBc/Hz typical
1,000 Hz offset	-140	dBc/Hz typical
10,000 Hz offset	-150	dBc/Hz typical
100,000 Hz offset	-155	dBc/Hz typical
1,000,000 Hz offset	-155	dBc/Hz typical
Output amplitude	6.0	dBm minimum
ALL Harmonics	-30	dBc maximum
rms jitter	$< 0.50$ ps	12kHz to 20MHz BW from the carrier

## PACKAGE OUTLINE



ABRACON IS  
ISO9001:2008  
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## OPERATIONAL MANUAL

### Charge:

- 1) Plug 5V charger (or PC or any other USB power source) into a mini-USB port
- 2) "Bat" LED may turn yellow for a moment to signal that an internal battery is evaluated
- 3) "Bat" LED will flash green to signal that the battery is being charged
- 4) "Bat" LED will display solid green when the battery is fully charged

### Synchronization:

- 1) Connect a 10MHz standard to the "Ref In" input
- 2) Press "Synchronize"
- 3) "Lock" LED will turn-on yellow to signal that "Sync N Go" is evaluating the standard
- 4) If the reference is stable, the "Lock" LED will turn green to signal that the signal is locked and that the reference information is stored
- 5) If the reference is not found or it is outside a frequency range or it is not stable, the "Lock" LED will flash red
- 6) If that occurs, the "Lock" LED turns-off and the "Sync N Go" goes into a sleep mode

### Output ON (if battery charged):

- 1) Press "Power"
- 2) "ON" LED will turn green
- 3) "Sync N Go" will output a continuous RF signal on the "Out" connector

### Output ON (if battery low):

- 1) Press "Power"
- 2) "ON" LED will turn green.
- 3) "Sync N Go" will output a continuous RF signal on the "Out" connector. At the same time, "Bat" LED will slowly flash red.

### Output ON (if battery is discharged):

- 1) Press "Power"
- 2) "Bat" LED will rapidly flash red for few seconds and "Sync N Go" will immediately go back to sleep

### Output OFF:

- 1) Press "Power"
- 2) "ON" LED turns off and the "Sync N Go" goes into a sleep mode

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