

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 ± 300 ppb stability over 0°C to 60°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°C to $+60^{\circ}\text{C}$	
Synchronization accuracy	± 5.00	ppb
Frequency Drift post sync ($25^{\circ}\text{C} \pm 10^{\circ}\text{C}$)	± 25.00	ppb Typical
Frequency Drift post sync ($25^{\circ}\text{C} \pm 20^{\circ}\text{C}$)	± 50.00	ppb Typical
Frequency Accuracy Over the operating Temperature Range	$< \pm 100$ ± 300	ppb Typical; Post Sync ppb Maximum; Post Sync
Load Impedance	50	Ω
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 rms jitter	-30	dBc maximum
	< 0.50 ps	12kHz to 20MHz BW from the carrier

PACKAGE OUTLINE



ABRACON IS
ISO9001:2008
CERTIFIED



**ABRACON
CORPORATION**

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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

ATTENTION: Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

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