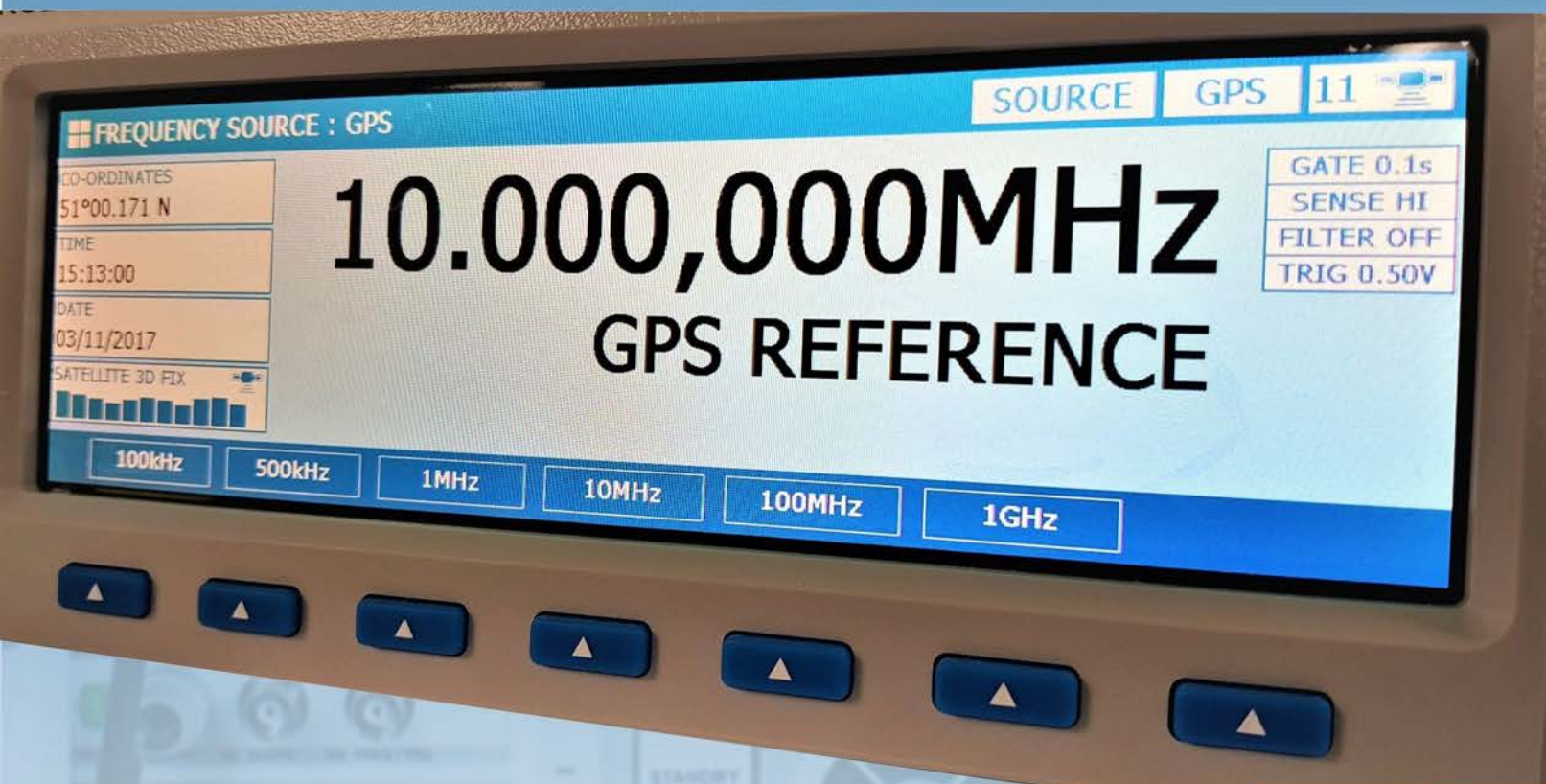
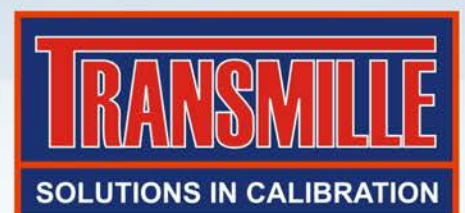


ADVANCED GPS FREQUENCY STANDARD



8700 SERIES

FREQUENCY SOURCE / MEASURE
GPS STANDARD



8700 SERIES FREQUENCY SOURCE / MEASURE GPS STANDARD

TRANSMILLE
SOLUTIONS IN CALIBRATION

FULL COLOUR
7.2" LCD
TECHNOLOGY

10,000,000MHz
GPS REFERENCE

INTELLIGENT
DATA
DISPLAY

MULTI
INTERFACE
SUPPORT

MULTI
INTERFACE

FOR
FLEXIBLE
SYSTEMS
INTEGRATION

INTEGRATED
GPS
REFERENCE
TECHNOLOGY

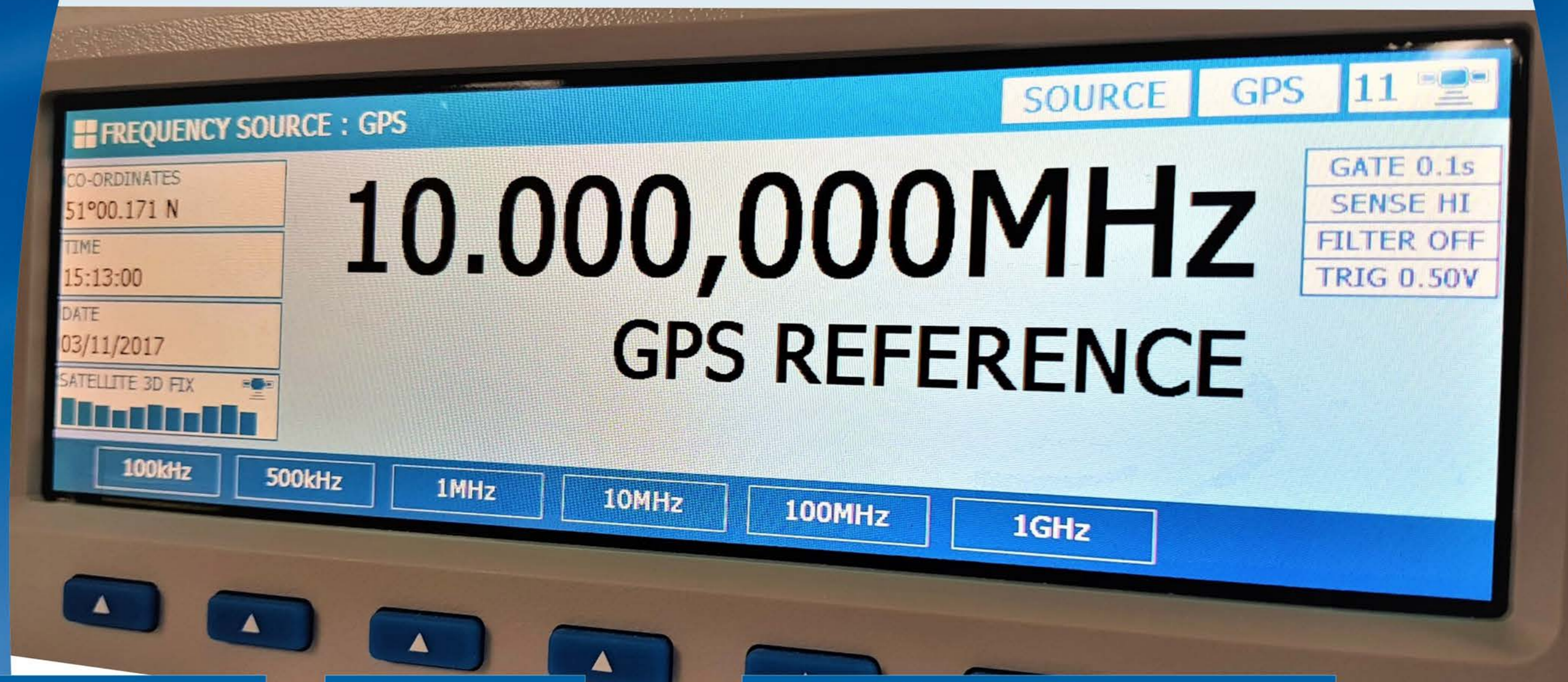
GPS
INTEGRATED
REFERENCE

FOR
ULTRA
PRECISION

MULTI
PROCESSOR
TECHNOLOGY

PRECISION
PERFORMANCE

FOR
ADVANCED
FUNCTIONALITY



FUNCTIONS AT A GLANCE

FREQ SOURCE SOURCE TO 1GHz

FREQ MEASURE MEASUREMENT TO 1GHz

GPS INTEGRATED GPS REFERENCE

PHASE TIME USER CONFIGURABLE PHASE / TIME DELAY

O/P x3 3 SOURCE MODE OUTPUTS

I/P x2 2 MEASURE MODE INPUTS

7.2" LCD FULL COLOUR 7.2 INCH LCD DISPLAY

OVERVIEW

The innovative 8700 Frequency Source / Measure GPS Standard features a high accuracy precision GPS referenced frequency output of up to 1GHz.

In addition, the 8700 offers high accuracy measurement functionality up to 1GHz.

Utilising the latest in GPS reference technology the 8700 combines both frequency source and measurement capabilities into one integrated standard.

A full colour 7.2 Inch LCD display provides the user with dedicated source/measure readouts and detailed configuration and satellite lock / signal information.

ADVANCED FREQUENCY STANDARD

The 8700 has been designed to be able to calibrate a wide variety of handheld and bench frequency counters and phase meters, with a fully variable output.

Source mode offers three dedicated terminal sets (A • B • HF), and measurement via two terminal sets (LF • HF)

LF OUTPUT A

A variable GPS referenced output of up to 10MHz, with variable output level up to 5V pk-pk.

LF OUTPUT B

User configurable phase / time delay with variable GPS referenced output of up to 5kHz

HF OUTPUT

High frequency output offering a dedicated fully variable frequency output from 10MHz up to 1GHz allowing a full range of meters to be calibrated.

10MHz REFERENCE

Level : 12dbm +/- 2dbm into 50ohms
 Harmonics : <-50dbc
 Accuracy : 1×10^{-12} Long term

Short Term Stability

tau	Allan Variance (typ)
1s	2×10^{-12}
10s	$< 4 \times 10^{-13}$
100s	$< 5 \times 10^{-12}$
1000s	$< 2 \times 10^{-12}$

Phase noise (typ)

1Hz	-110dbc
10Hz	-136dbc
100Hz	-145dbc
1kHz	-155dbc
10kHz	-157dbc

Frequency Divider Outputs

1Hz • 2Hz • 5Hz • 10Hz • 20Hz • 50Hz • 100Hz
 200Hz • 500Hz • 1kHz • 2kHz • 10kHz • 20kHz • 50kHz
 100kHz • 200kHz • 500kHz • 1MHz • 2MHz • 5MHz

Level into 1Mohm : 1V pk-pk \pm 50mV Square wave
 Level into 50ohms : 500mV pk-pk \pm 30mV Square wave

Accuracy : 1×10^{-12} Long term

LF MEASURE

Range : 1Hz to 10MHz
 Accuracy : 1×10^{-12} +/- 1 count
 Resolution : 0.01ppm or 1uHz, which ever is greater
 Min input level High Sensitivity : 0.3V
 Low Sensitivity : 200mV
 Gate times : 0.1s, 1s or 10s
 Trigger level : 0 to 2V in 10mV steps
 Period measurement
 HF Filter

HF MEASURE

Accuracy : 1×10^{-12} +/- 1 count
 Resoultion : 10Hz

Min input level : 10MHz to 30MHz (700mV pk to pk)
 30MHz to 100MHz (300mV pk to pk)
 100MHz to 1000MHz (200mV pk to pk)

ORDERING INFORMATION

MODEL 8700 SOURCE / MEASURE GPS FREQUENCY STANDARD (BASE)
 UKAS 8700 UKAS CERTIFICATION

INTERNAL OPTIONS OPTION GPS GPS REFERENCE MODULE

VARIABLE FREQUENCY AND LEVEL OUTPUT**Sinewave**

Frequency : 10Hz to 2MHz (1Hz steps)
 Accuracy : 0.8ppm

Level into 1MOhm

High range Level : 250mV to 5V RMS (10mV steps)
 Accuracy : 2%.

Low range Level : 0mV to 250mV RMS (1mV steps)
 Accuracy : 2% \pm 100uV.

Level into 50Ohms

High range Level : 125mV to 2.50V RMS (5mV steps)
 Accuracy : 2%

Low range Level : 0mV to 125mV RMS (0.5mV steps)
 Accuracy : 2% \pm 100uV.

Square Wave

Frequency : 10Hz to 2MHz (1Hz steps)
 Accuracy : 0.8ppm
 Level : 5V pk-pk \pm 0.5V

HF Output

5MHz to 1.05GHz (100kHz steps)
 Level : 600mV \pm 150mV pk-pk. into 50 Ohms
 Accuracy : 1×10^{-12} Long term

A-B Outputs**Frequency points**

1Hz, 2Hz, 5Hz, 10Hz, 20Hz, 50Hz, 100Hz, 200Hz,
 500Hz, 1000Hz, 2000Hz, 5000Hz

Level into 1 MOhm : 1V pk-pk \pm 50mV Square wave

Level into 50 Ohms : 500mV pk-pk \pm 30mV Square wave

Phase range 0 to 359° (1° steps)

Phase accuracy : $0.0000072^\circ \times$ Frequency (in Hz)