#### **Frequency Range**

108.1 to 111.95MHz (Localizer), 325.15 to 335MHz (Glide Path), 75MHz (Marker Beacon), 108.0 to 118MHz (VOR)

## **RF Level Range**

-90 to 20dBm (Localizer, VOR), -80 to 20dBm (Glide Path, Maker Beacon)

# **Channel Spacing**

50kHz (Localizer, VOR), 150kHz (Glide Path)

#### Display

8.4 inch TFT Color LCD (800x600) Touch Screen

# **User Interface**

USB 2.0, Ethernet, Video







# MEASURED PARAMETERS



# Localizer & Glide Path Mode

- DDM, SDM
- 90Hz, 150Hz Modulation Depth
- Carrier Offset and Frequency of 90 Hz/ 150 Hz
- RF Signal Level
- Frequency, Morse Code and Modulation Depth of ID
- Display of Phase Difference of 90 Hz/ 150 Hz

# 75.00 MHz Frequency 0.005 kHz 5000.005 kHz 69.03 dBm (125.026 pW) Tuned Fr end to PC 1300 Hz 3000 Hz ea Select

Field Test Set

# Marker Beacon Mode

- AM Modulation Depth for 400 Hz/ 1300 Hz/ 3000 Hz
- Carrier Offset and Frequency of 400 Hz/ 9960 Hz Modulation Depth 1300 Hz/ 3000 Hz
- RF Signal Level

## VOR Mode

- Azimuth

Level

179.930 de

29.950 % 29.990 % 480.0 Hz (Beta = 16.0)

- 30 Hz AM Modulation Depth
- FM Deviation
- RF Signal Level
- ID Frequency, Morse Code, Modulation Depth

108.05 MHz

+0.007 kHz 108050.007 kHz -67.98 dBm (159.22 pW)

end to PC

ID Signal ON

Req. Set Area Select

- Carrier Offset, AM/FM 30 Hz, 9960 Hz Frequency

# **FTS** Technical Specifications



274, Gwahae-dong, Gangseo-gu, Seoul, Korea Airports Corporation Tel : +82-2-2660-2591~2599 www.airport.co.kr / www.vorils.co.kr m.vorils.co.kr / cwlee@airport.co.kr pdkie@airport.co.kr

MEASURE-	Impedance	50 Ohm
AENT	Input Connector	N-Type, Female
	Output Connector	USB, Ethernet (RJ45), RS-232 (9 pin D-sub)
RANGE	Frequency Range	108.1 to 111.95MHz (Localizer), 325.15 to
	. , ,	335MHz (Glide Path), 75MHz (Marker Beacon),
		108.0 to 118MHz (VOR)
	Channel Spacing	50kHz (Localizer, VOR), 150kHz (Glide Path)
	RF Level Range	-90 to 20dBm (Localizer, VOR)
	, and the second s	-80 to 20dBm (Glider Path, Marker Beacon)
	DDM Range	0 to 40% (Localizer), 0 to 80% (Glide Path)
	DDM Resolution	0.001% (Localizer, Glide Path)
	SDM Range	0 to 95% (Localizer, VOR)
	SDM Resolution	0.01% (Localizer, VOR)
	AM Depth of Modulation Range	10~50% (VOR),
		0~50% (Localizer, Glide Path), 80~100% (Marker Beacon)
	Bearing Resolution	±0.001°
	Ident Frequency	1020Hz (Localizer, VOR)
	Ident Depth of Modulation	1 to 55% (Localizer, VOR)
MEASURE- MENT ACCURACY	Ident Depth of Modulation Frequency Tolerance DDM Error SDM Error AM Depth of Modulation Error FM Depth of Modulation Error Bearing Error Ident Depth of Modulation Error	1 to 55% (Localizer, VOR) ±0.004% (Localizer, Glide Path, VOR) ±0.05% (Localizer, Glide Path) ±0.2% (Localizer, Glide Path) ±0.1% (VOR), ±0.2% (Localizer, Glide Path, Marker Beacon) ±0.1% (VOR) ±0.05° (VOR) 0.5%
MEASURE- MENT ACCURACY GENERAL	Ident Depth of Modulation Frequency Tolerance DDM Error SDM Error AM Depth of Modulation Error FM Depth of Modulation Error Bearing Error Ident Depth of Modulation Error Operating Temperature Range Storage Temperature Range	1 to 55% (Localizer, VOR) ±0.0004% (Localizer, Glide Path, VOR) ±0.05% (Localizer, Glide Path) ±0.2% (Localizer, Glide Path) ±0.1% (VOR), ±0.2% (Localizer, Glide Path, Marker Beacon) ±0.1% (VOR) ±0.05° (VOR) 0.5% -10 to +40°C -20 to +60°C
MEASURE- MENT ACCURACY GENERAL DATA	Ident Depth of Modulation Frequency Tolerance DDM Error SDM Error AM Depth of Modulation Error FM Depth of Modulation Error Bearing Error Ident Depth of Modulation Error Operating Temperature Range Storage Temperature Range Graphic User Interface	1 to 55% (Localizer, VOR) ±0.0004% (Localizer, Glide Path, VOR) ±0.05% (Localizer, Glide Path) ±0.2% (Localizer, Glide Path) ±0.1% (VOR), ±0.2% (Localizer, Glide Path, Marker Beacon) ±0.1% (VOR) ±0.05° (VOR) 0.5% -10 to +40°C -20 to +60°C 8.4 inch TET Color LCD (800x600) Touch Screen
MEASURE- MENT ACCURACY GENERAL DATA	Ident Depth of Modulation Frequency Tolerance DDM Error SDM Error AM Depth of Modulation Error FM Depth of Modulation Error Bearing Error Ident Depth of Modulation Error Ident Depth of Modulation Error Operating Temperature Range Storage Temperature Range Graphic User Interface External Charger	1 to 55% (Localizer, VOR) ±0.004% (Localizer, Glide Path, VOR) ±0.05% (Localizer, Glide Path) ±0.2% (Localizer, Glide Path) ±0.1% (VOR), ±0.2% (Localizer, Glide Path, Marker Beacon) ±0.1% (VOR) ±0.05° (VOR) 0.5% -10 to +40°C -20 to +60°C 8.4 inch TFT Color LCD (800x600) Touch Screen 115 VAC and 230 VAC Nominal Voltage
MEASURE- MENT ACCURACY GENERAL DATA	Ident Depth of Modulation Frequency Tolerance DDM Error SDM Error AM Depth of Modulation Error FM Depth of Modulation Error Bearing Error Ident Depth of Modulation Error Ident Depth of Modulation Error Operating Temperature Range Storage Temperature Range Graphic User Interface External Charger Battery	1 to 55% (Localizer, VOR) ±0.004% (Localizer, Glide Path, VOR) ±0.05% (Localizer, Glide Path) ±0.2% (Localizer, Glide Path) ±0.1% (VOR), ±0.2% (Localizer, Glide Path, Marker Beacon) ±0.1% (VOR) ±0.05° (VOR) 0.5% -10 to +40°C -20 to +60°C 8.4 inch TFT Color LCD (800x600) Touch Screen 115 VAC and 230 VAC Nominal Voltage Over 4 Hours
MEASURE- MENT ACCURACY GENERAL DATA	Ident Depth of Modulation Frequency Tolerance DDM Error SDM Error AM Depth of Modulation Error FM Depth of Modulation Error Bearing Error Ident Depth of Modulation Error Ident Depth of Modulation Error Operating Temperature Range Storage Temperature Range Graphic User Interface External Charger Battery Dimensions (W x H x D)	1 to 55% (Localizer, VOR) ±0.0004% (Localizer, Glide Path, VOR) ±0.05% (Localizer, Glide Path) ±0.2% (Localizer, Glide Path) ±0.1% (VOR), ±0.2% (Localizer, Glide Path, Marker Beacon) ±0.1% (VOR) ±0.05° (VOR) 0.5% -10 to +40°C -20 to +60°C 8.4 inch TFT Color LCD (800x600) Touch Screen 115 VAC and 230 VAC Nominal Voltage Over 4 Hours 339 x 270 x 179
MEASURE- MENT ACCURACY GENERAL DATA	Ident Depth of Modulation Frequency Tolerance DDM Error SDM Error AM Depth of Modulation Error FM Depth of Modulation Error Bearing Error Ident Depth of Modulation Error Ident Depth of Modulation Error Operating Temperature Range Storage Temperature Range Graphic User Interface External Charger Battery Dimensions (W x H x D) Weight	1 to 55% (Localizer, VOR) ±0.0004% (Localizer, Glide Path, VOR) ±0.05% (Localizer, Glide Path) ±0.2% (Localizer, Glide Path) ±0.1% (VOR), ±0.2% (Localizer, Glide Path, Marker Beacon) ±0.1% (VOR) ±0.1% (VOR) ±0.05° (VOR) 0.5% -10 to +40°C -20 to +60°C 8.4 inch TFT Color LCD (800x600) Touch Screen 115 VAC and 230 VAC Nominal Voltage Over 4 Hours 339 x 270 x 179 7.5kg (without Battery)



User-frienc	ly GUI interface
Display of I	nattery level
Remote co	ntrol of the device through the RS-232 port
Measurem	ent data transfer over the ports (RS-232, USB)
High long-t	erm stability and reproducibility through digital signal processing from the IF position
All measur and may be	ement data of a mode (ILS, VOR, Marker Beacon) is shown simultaneously in the display a stored in the internal data memory
Display of	he harmonic distortion (ILS-Distortion) in ILS mode
Simultaneo through dig	us and separate measurement of the course and clearance signals is possible in ILS mode ital demodulation and filtering in the DSP
Simultaneo	us measurement of the Localizer and Glide Path signals in ILS mode
Measurem	ent of distance (connecting Wheel Encoder)
Measurem	ent of the carrier frequency and the modulation frequencies with the accuracy of the reference oscillator
Automatic	assignment of the Glide Path to the corresponding Localizer frequencies, as under ICAO Annex 10
Data Logge All meas Single a	r: ured values of the modes ILS, VOR, Marker Beacon may be simultaneously stored, even at the highest sampling i id continuous recording of measured values,

- Built-in speaker