# Never seen, never before technology Intelligent Radiated & Conducted Immunity test system, RS /CS 2016

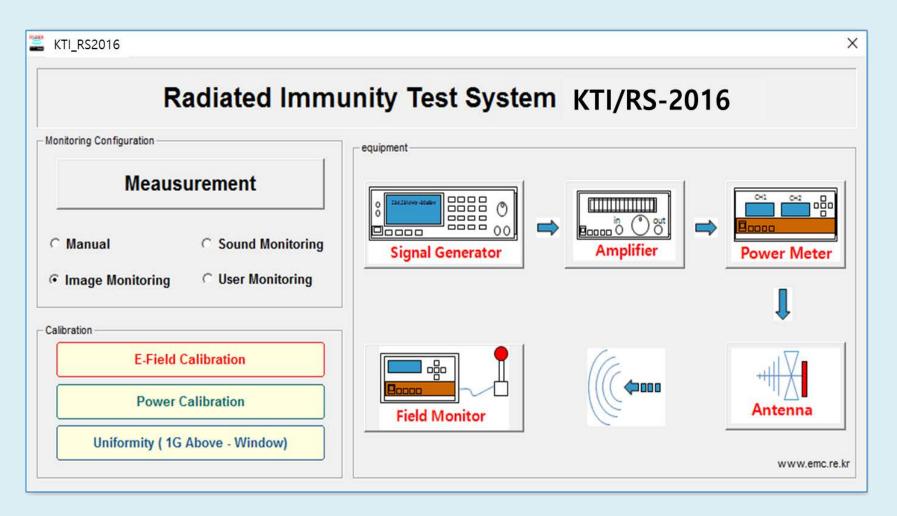
- Optical automatic monitoring under the RS,CS test Image, various electric parameter, RPM, BER,FER, audio spectr um and SPL
- Full automatic control 26MHz-40GHz, 1-200V/m
- Excellent expandable configurations with GPIB and RF switch
- Lowest uncertainty
- Automatic multi function monitoring without visually manual monitoring. Fully comply with IEC 60118-13, ETSI 301 mobile test
- Automatic reporting functions of the failed frequencies, level and image
- Adjustable the field strength and level on failed frequencies
- Debugging function in order to find the failed field strength
- BER, FER and Sound Pressure Level (SPL) measurements for mobile phone , telephone set under the Radiated / Conducted immunity test

#### EMC engineering, ISO 17025 test lab. RF, EMC, Safety and Calibration since 1987



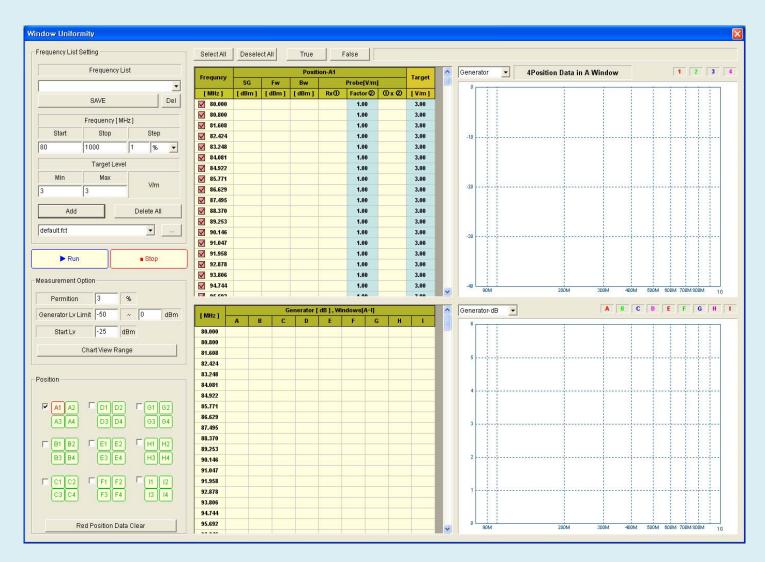
#### 1. Intelligent Radiated & Conducted Immunity test system, RS&CS 2016

#### - Main menu





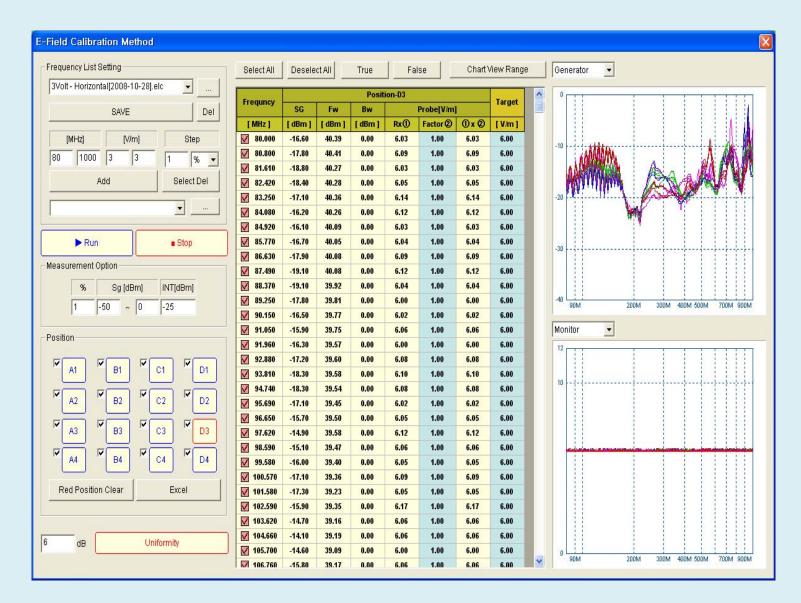
# 2. Uniformity measuring functions in accordance with 2016.2 new regulations for the 10 GHz higher band



Uniformity measuring functions in according to the new regulation, 2016.02



### Examples of the uniformity test report and data





# 3. Debug Mode

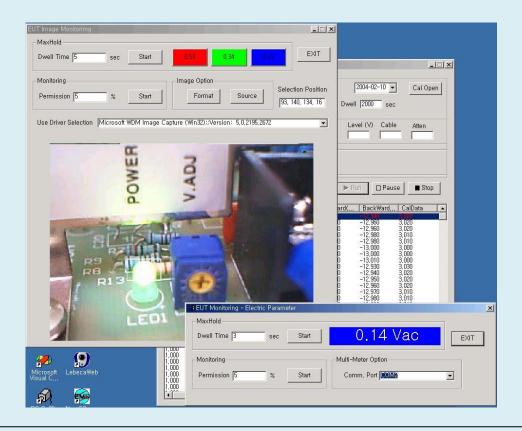
This function provided the end user convenience to find the failed electromagnetic field strength and frequencies after radiated or conducted immunity test.

Debug Measureme	nt			
Frequency Option	MHz 🛓	Sg Lv 0.1dBm -28.20	Modulat     AM INT 1 kH	
E.	F On		RF Off	
108.906	SG [dBm]	Fw [ dBm ]	Bw [ dBm ]	Monitor
Calibration	-28.20	-24.10	43.87	3.03
Debug	-28.20	-50.60	-63.02	
Monitoring		Not Mo	nitoring	



#### 4. Multi monitoring, image and electric parameters on the screen

- Image degradation and various electric parameter of the EUT could be automatically monitored by KTI RS2016 S/W itself under the test.
- Each monitoring methods could be done at once and each frequencies..
- These automatic monitoring methods for RS and CS test are proposed by KTI at first in the world.
- These functions are very important to the immunity test in order to reduce the uncertainty.
- Image zone selection functions in order to reduce the uncertainty
- Statistical image treatment using an optimum color analyzing technology by KTI' unique techniques.





# 5. Power[dB<sub>m</sub>] comparison, sound[dB<sub>spl</sub>] level, and image monitoring[%] under the RS and CS test

- Examples of the IEC 60318-13 test report and data

	otion														
3Volt - Horizontal[2008-10-28].elc 🔹 Max 💌								•	F Power	-33	dBm	0.00			
-50 ~ [0	) dB	m 🔽 🗚	M INT 1 kHz	80% _	2000	ms 3	%								
Selection											Sound	93	dBspl	PASS 88.308[dBspl]	10Hz~2(
	Decelo		and R Port	3	Acaba	T.		True	False Dana	.1	100	1.1	111111	1 1 1 1 1	
Select	Deseled	a la	rget (V/m)	1,	Apply			True	False Range	e	90				
	Prot	e Measure	ment			102		-			80			<b>n</b>	· · · · · · · · · · · · · · · · · · ·
Excel	Children I.	and Ci				► R	un	Stop	Debu	g	70				
	- es run	nini . Mari									60		4.4.444		
											50				
										-	40		nr		
Freq[MHz]	Generat		Forwar	NEW YORK	and the second se	rd[dBm]	E-Field		Pass/Fail	1	30		40	- Trit	Tim-
2 80.000	Cal	Mea	Cal	Mea	Cal	Mea	Cal	Mea	0.0000000000		L				
80.000	-33.80		-30.54		-33.70 -33.66		3.06				20	TTT	TTTT		
81.608	-34.10		-30.01		-33.49		3.07				10 100H	200H 300H	- Andrew Andr	2K 3K 4K 5K6K 1	K10K 20K
82.424	-34.70		-29.49		-33.24		3.09	_							
83.248	-35,80		-29.32		-33.34		3.05				Startin	a 75	%	Checkin	ig [0.00%]
84.081	-36.20		-28.84		-33.12		3.05						100		Sec. 1
			-28.55		-33.01		3.02								
	-35.90														
84.922	-35.90		-28.14		-32.65		3.02						Sec. 14	11111111111111	
84.922 85.771			-28.14		-32.65 -31.99		3.02						Trans.		
84.922 85.771 86.629	-34.70												-		
84.922 85.771 86.629 87.495	-34.70 -33.10		-27.54		-31.99		3.07								
84.922         85.771         86.629         87.495         88.370	-34.70 -33.10 -31.90		-27.54 -27.18		-31.99 -31.47		3.07 3.03								
84.922         85.771         86.629         87.495         88.370         89.253	-34.70 -33.10 -31.90 -31.20		-27.54 -27.18 -26.92		-31.99 -31.47 -31.03		3.07 3.03 3.08								
<ul> <li>84.922</li> <li>85.771</li> <li>86.629</li> <li>87.495</li> <li>88.370</li> <li>89.253</li> <li>90.146</li> </ul>	-34.70 -33.10 -31.90 -31.20 -31.30		-27.54 -27.18 -26.92 -26.90		-31.99 -31.47 -31.03 -30.92		3.07 3.03 3.08 3.04								
84.922       85.771       86.629       87.495       88.370       89.253       90.146       91.047	-34.70 -33.10 -31.90 -31.20 -31.30 -32.10		-27.54 -27.18 -26.92 -26.90 -26.97		-31.99 -31.47 -31.03 -30.92 -31.04		3.07 3.03 3.08 3.04 3.04								
84.922       85.771       85.771       85.771       85.771       85.771       85.771       85.771       85.771       87.495       88.370       89.253       90.146       91.047       91.958	-34.70 -33.10 -31.90 -31.20 -31.30 -32.10 -33.60		-27.54 -27.18 -26.92 -26.90 -26.97 -27.36		-31.99 -31.47 -31.03 -30.92 -31.04 -31.66		3.07 3.03 3.08 3.04 3.04 3.04								
2     84.922       2     85.771       2     85.771       2     85.771       2     86.29       2     87.495       2     88.370       2     90.146       2     91.047       2     91.558       2     92.878	-34.70 -33.10 -31.90 -31.20 -31.30 -32.10 -33.60 -34.30		-27.54 -27.18 -26.92 -26.90 -26.97 -27.36 -27.23		-31.99 -31.47 -31.03 -30.92 -31.04 -31.66 -32.01		3.07 3.03 3.08 3.04 3.04 3.04 3.04 3.04				Ç				
2     84.922       2     85.771       2     85.771       2     85.771       2     86.29       2     87.495       2     88.370       2     90.146       2     91.047       2     91.558       2     92.878	-34.70 -33.10 -31.90 -31.20 -31.30 -32.10 -33.60 -34.30 -34.40		-27.54 -27.18 -26.92 -26.90 -26.97 -27.36 -27.23 -27.55		-31.99 -31.47 -31.03 -30.92 -31.04 -31.66 -32.01 -32.98		3.07 3.03 3.08 3.04 3.04 3.04 3.04 3.09 3.09								
X     84.922       X     85.771       X     85.629       X     87.495       X     83.263       X     89.253       X     90.146       X     91.047       X     91.958       X     92.878       Y     93.806	-34.70 -33.10 -31.90 -31.20 -31.30 -32.10 -33.60 -34.30 -34.30 -34.40 -34.20		-27.54 -27.18 -26.92 -26.90 -26.97 -27.36 -27.23 -27.55 -28.15		-31.99 -31.47 -31.03 -30.92 -31.04 -31.66 -32.01 -32.98 -34.41		3.07 3.03 3.08 3.04 3.04 3.04 3.09 3.09 3.09								



### 5-1. Radiated, Conducted immunity test system



# 5-2. Radiated, Conducted immunity test system(IEC 60318-13)

- Fully meet the IEC 60118-13 hearing aids RS immunity test functions
- Input related interference level(IRIL) measuring function
- Overall input related interference level (OIRIL) measuring function
- Automatic audio processing function
- Audio calibrations.





## 6. Optical Image monitoring

#### Full optical system

- 200V/m up to 40GHz ,100 times zoom,
- Image, Pan/Tilt and auto focus.

#### 1 pair optic cable

- Continuous image monitoring by the Analog density modulation.
- EMC engineer designed.
- Proven 200V/m radiated immunity by the Hyundai Motor.
- On screen display.







## 7. Mobile phone simulator control under the RS test

- Audio monitoring under the RS test
- BER, FER measurement under the RS test between mobile phone and call simulator.
- Fully compliance with IEC 61000-4-13 Amendment " Mobile phone RS test"
- Fully compliance with ETSI 301-489 series, RS test for mobile phone.
- Fixed tone and Pink tone measurement functions
- Radiated immunity test for GSM, DCS1800 and CDMA



The others all products of EUT monitoring under the RS test are available on the user demand.

