

Lector & Scriptor Product Family



boosting wireless efficiency

# Easily managing complex measurements

Willtek's 7310 Lector software is a well-established and economic test solution for service centres and repair shops testing returned mobile phones with the 3100 Mobile Fault Finder or the 4400 Mobile Phone Tester Series.

Willtek's family of test automation programs is now expanded with new members for enhanced ease of use. The family provides a scalable test solution for different applications around wireless device testing. It fits the needs of test operators and administrators in large service centres as well as in small repair shops. The software provides an easy-to-use interface to the 3100 Mobile Fault Finder and the 4400 Mobile Phone Tester Series.

## 7311 Lector Basic

Carry out automated measurements with simple pass/fail indication and more detailed test reports! This product is free of charge, comes with generic test scripts for GSM, GPRS and WCDMA, and can use test scripts created with 7315 Scriptor.

## 7312 Lector Enhanced

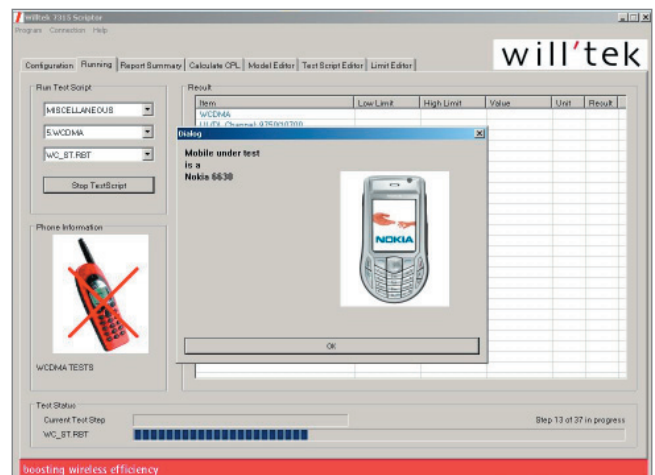
Analyze test reports in more detail! Lector Enhanced provides additional output functions and supports the 7360 Coupling Factor Update License.

## 7315 Scriptor

Edit and define test scripts and limits; add new mobile phone models with coupling factors! Scriptor comes with all the Lector functionality and all the administrator needs to define the tests.

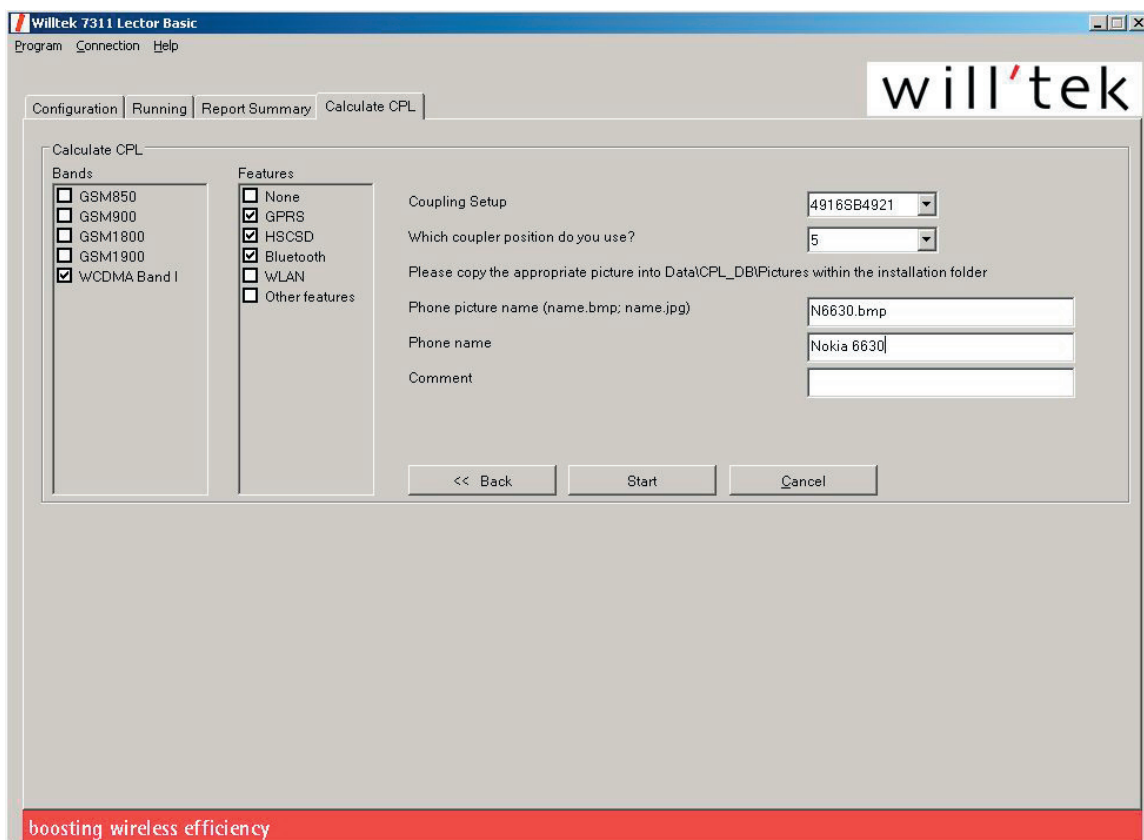
## 7360 Coupling Factor Update License

Update your database of coupling factors for new mobile phone models over the Internet! This 1-year license is an option to 7312 Lector Enhanced and 7315 Scriptor, and allows you to update your database of mobile phones with latest information.



# Automated test solution for any wireless application

Application	Recommended test solution
Service centres use test equipment to decide if a phone needs repair or is fault-free. An administrator takes care of new phone models with appropriate coupling factors and test scripts.	7311 Lector Basic (test stations) 7315 Scriptor (administrator)
Large service centres have test systems operated by several users. Tests result in pass/fail indication and decision on further processing. Different operators are working on the same test system, potentially leading to increased failure rates. To check the performance of each test system, individual user statistics are needed. – An administrator measures coupling factors and distributes them along with appropriate test scripts.	7312 Lector Enhanced (test stations) 7315 Scriptor (administrator)
Service centres without an administrator and knowledge how to measure coupling factors manually, need a simple solution to update test systems with coupling factors for the latest phones. The standard test scripts delivered with Lector are sufficient.	7312 Lector Enhanced with 7360 Coupling Factor Update License
Individual technicians in repair shops with good knowledge of test scripts and limits, perform tests and also configure them. They achieve accurate measurements even with latest phone models with the Coupling Factor Update License.	7315 Scriptor with 7360 Coupling Factor Update License



# Lector

## 7311 Lector Basic

Testing the functionality of a wireless device in the repair shop or at the point of return does not require highly qualified test engineers: Standard test sequences are easily run, and result in a simple Pass/Fail statement. A test protocol for more detailed results can be viewed or printed on request, e.g. to forward it to a repair technician. Test protocols can be saved automatically or on request, on the local PC or any connected server. 7311 Lector Basic supports comprehensive functional tests by shop personnel!

Lector Basic can be used in conjunction with Willtek's 4400 Mobile Phone Tester Series or the 3100 Mobile Fault Finder, the 4916 Antenna Coupler and the 4921 RF Shield. A PC running Microsoft Windows and Willtek's Lector controls the respective tester.

The software takes the power attenuation between the antenna coupler and the tester into account in the measurement results: For initial setup, 7311 Lector Basic comes with a free built-in database containing coupling factors for popular phones. This eases the test system setup and saves a lot of time compared to manually adding coupling factors for all phone models.

7311 Lector Basic is free and can be downloaded from the Willtek website! This variant is also delivered with each 3100 Mobile Fault Finder.

The built-in test sequences support leading cellular technologies: WCDMA, GSM and EDGE. Predefined parameters such as the channels to test and the coupling factors allow the operator to start testing immediately, but can be customised from within Lector.

Item	Low Limit	High Limit	Value	Unit	Result
WCDMA					
ULCL Channel 9750(10700)					
OLPC (br = -50dBm)	-12	12	-5.23	dB	PASS
UL Power MAX	17	24	18.88	dBm	PASS
EVM RMS	0	17.5	3.84	%	PASS
EVM Peak	0	50	10.473	%	PASS
Mag. Err. RMS	0	17.5	1.925	%	PASS
Mag. Err. Peak	0	50	6.338	%	PASS
Phase Err. RMS	0	10	1.903	deg	PASS
Phase Err. Peak	0	45	5.78	deg	PASS
Frequency Error	-180	180	-3.597	Hz	PASS
Rfcs	0.844	1.0	0.899		PASS
VQ Offset	-100	-15	-42.281	dB	PASS
VQ Imbalance	-100	-25	-43.626	dB	PASS
BER at -106.7dBm	0	0.1	0.0	%	PASS
Test finished					

## 7312 Lector Enhanced

7312 Lector Enhanced provides all the possibilities of 7311 Lector Basic and offers additional features for performing further analyses of test reports, for recording the test operator and for the possibility to use the Willtek coupling factor update service (the coupling factor update service requires the 7360 Coupling Factor Update License and is available from Dec. 2006).

# 7315 Scriptor

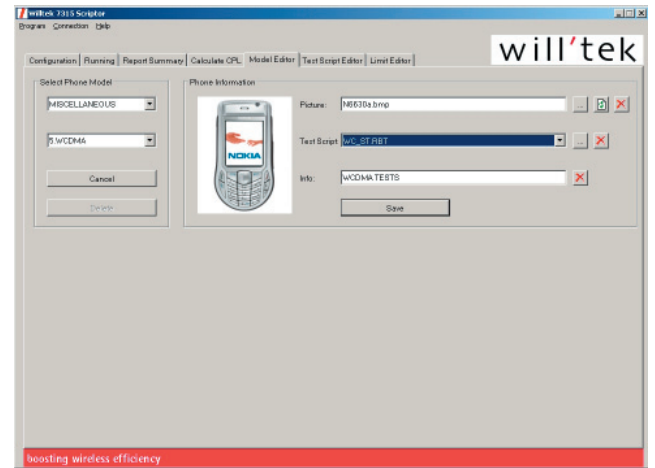
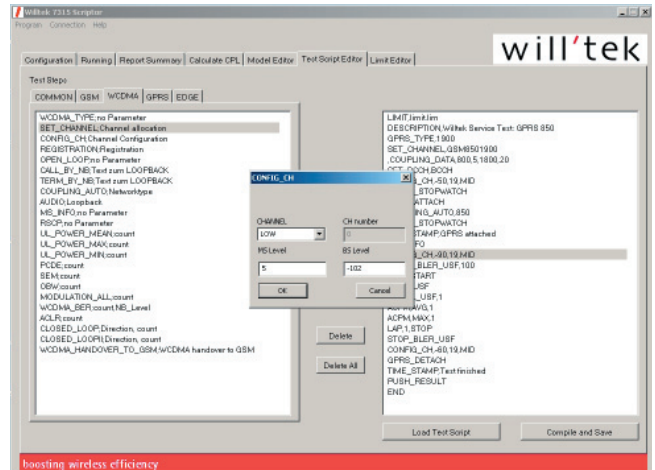
7315 Scriptor features all of Lector Enhanced and adds functionality for easily modifying and adding tests and mobile phone profiles. These tests can then be transferred to and used by 7311 Lector Basic and 7312 Lector Enhanced installations.

The Model Editor within Scriptor is used by administrators to create model lists for Scriptor, Lector Basic and Lector Enhanced. This tool allows you to conveniently change or add entries for mobile phone models. Pictures, test scripts, comments, user instructions can be entered and linked to a phone; the test operator will then see these when starting a test for this type of phone.

The Test Editor component provides an easy for editing test scripts or creating a new test. Figure xyz shows how easily it is done: On the left hand side, separate lists for each technology allow you to conveniently choose a test step; it is copied to the new test script on the right hand side. A double-click on a test step opens an appropriate input box that allows you to change the parameters for this test step.

The Test Editor makes modifications of existing and creation of new test scripts an easy task!

The Limits Editor offers a good overview of the limits, sorted by technologies. The limits can easily be edited by the administrator and stored under the same or another file name. Each test script can be linked to a different limit file; this way, tests scripts and limit sets can be combined individually.



# 7360 Coupling Factor Update License

With tests over the antenna, good power and receiver measurement accuracy is only achieved with the exact knowledge of the antenna coupling factor, which depends on the phone model and the coupling device. A list of coupling factors for a number of phone models is already delivered with Lector and Scriptor, but does not cover all the phone models available on the market. Willtek offers an update service of the coupling factors for the latest models. These coupling factors are valid for the antenna connection between the phone and the Willtek 4916 Antenna Coupler installed in a 4921 RF Shield.

The 7360 Coupling Factor Update License is available as an option to 7312 Lector Enhanced and 7315 Scriptor. The option enables both applications to download actual coupling factors from the Internet. The update service is available for one year and can be renewed. The Coupling Factor Update License is offered from December 2006.

## Willtek software licenses

The Lector and Scriptor products provide a scalable solution for running automated tests in the service environment. Willtek makes software updates available on the Internet. The software licenses are protected by a USB stick. This way, you can easily update and upgrade the software, and transfer the license from one PC to another, e.g. if one computer is defective. Just one USB stick suffices for all the Willtek software products because it can carry multiple licenses and can be upgraded on site.

## Home at any repair shop

With Lector and Scriptor, Willtek builds on many years of experience in the design of easy-to-use instruments and PC control software. Lector and related products from Willtek reduce the complexities of testing modern cellular technologies to a simple Pass/Fail, with a clear indication of the potential source of a problem if any. ISO 9000-certified service centres can trace the test conditions and equipment used for measurements with Lector and Scriptor.

## Supported connections:

- TCP/IP
- GPIB
- USB
- RS-232

## System requirements:

- Windows NT, 2000 or XP
- 60 MB free hard disk space
- CD-ROM drive
- RS-232 or USB connection

# Summary of features

Feature	Product	7311 Lector Basic	7312 Lector Enhanced	7315 Scriptor
WCDMA, GSM, GPRS, EDGE tests		✓	✓	✓
Bluetooth test support		✓	✓	✓
TAC2TEST <sup>1</sup>		✓	✓	✓
Easy-to-use GUI		✓	✓	✓
Password-protected configuration area for print, storage, channel and general settings		✓	✓	✓
USB dongle protection			✓	✓
Real-time display of measurements results		✓	✓	✓
Test report summary		✓	✓	✓
Automatic coupling factor calculation		✓	✓	✓
Support of 7360 Coupling Factor Update License			✓	✓
Mobile Editor				✓
Script Editor				✓
Limit Editor				✓
Assignment of unknown type approval codes to known mobile phones		✓	✓	✓

<sup>1</sup> The type approval code (TAC) can be entered using a barcode reader; the TAC, i.e. the types of test depend on the mobile phone model

## Ordering details

7312 Lector Enhanced (includes USB dongle)	M 897 310
7315 Scriptor (includes USB dongle)	M 897 311
7360 Coupling Factor Update License	M 897 312
Scriptor Upgrade 7312 to 7315	M 897 314



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