PULSE Reflex Telephone Test
Test Suite for CMCC Type 8772-X07

Uses

- Voice testing of mobile phones based on China Mobile Communications Corporation (CMCC) requirements
- Measurement of the full transmit and receive signal path using a proper network simulator
- Research and development of mobile phones with focus on voice testing using advanced test signals and real speech
- Quality assurance and sample testing of mobile phones
- Inspection and validation of mobile phones

Features

- Pre-programmed test suites based on CMCC requirements for supporting testing of handsets in narrow-band
- Minimum interaction required when running complete test suites, or individual test cases
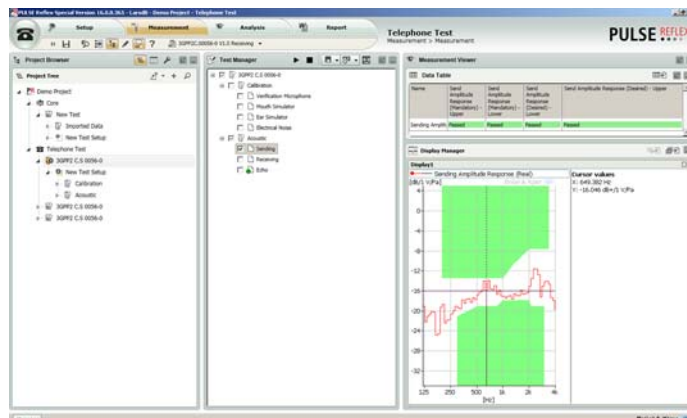- Supports the use of Type 1, Type 3.2 and Type 3.3 (HATS) ear simulators

Introduction

Type 8772-X07[*] software provides a standardized approach to voice testing of handset mobile phones based on China Mobile Communications Corporation (CMCC) requirements.

By using real speech, the codec can be included in the measurement path. This means that the antenna is used as the access point. Accordingly, the full transmit and receive signal paths are measured, giving realistic measurements of phone performance.

Type 8772-X07 utilizes PULSE Reflex™ Telephone Test Software Type 8770 and Voice Testing System for Telephones Type 6712 for testing mobile phones based on CMCC requirements

---

* X = license model either N for node-locked or F for floating

Testing of Handset Mobile Phones

Table 1 shows which test cases are supported by Type 8772-X07 with respect to CMCC as of 2011. The numbers in the table refer to the sections in the standard. N/M (Non-mandatory) means that although the test case is not required by the standard, it is still supported in the software.

For specific information on software licenses, please see the ordering information. For specific information on hardware configurations, please see the Product Data for PULSE Reflex Telephone Test Software Type 8770 (BP 2428).

Brüel & Kjær

Table 1 *Test cases supported and references*

Test Case Title	CMCC (Narrow-band)
Sending Frequency Response	1.2.2.1
SLR – Send Loudness Rating	1.2.1.1
Sending Delay	1.2.7.1
Sending Distortion	1.2.4.1
Sending Noise	1.2.5.1
Sending Activation	1.2.10.1
Sending Attenuation Range	1.2.10.1
Sending Attenuation Range, Double Talk	1.2.11.1
Receiving Frequency Response	1.2.2.2
RLR	1.2.1.2
Receiving Delay	1.2.4.2
Receiving Distortion	1.2.7.2
Receiving Noise	1.2.5.2
Receiving Activation	1.2.10.2
Receiving Attenuation Range	1.2.10.2
Receiving Attenuation Range, Double Talk	1.2.11.2
Sidetone Frequency Response	1.2.3
STMR	1.2.3
Sidetone Delay	N/M
TCLw	1.2.6
Stability Loss	1.2.6
Echo Delay	N/M
Echo Attenuation versus time	1.2.9.1
Spectral Echo Attenuation	1.2.9.2
PESQ Sending	1.2.8.1[*]
PESQ Receiving	1.2.8.2[*]

[*] Additional software Type 8771-X01 is required

Ordering Information

PULSE REFLEX TELEPHONE TEST
Type 8770-X[*]   PULSE Reflex Telephone Test
Type 8770-A-XS[*]   PULSE Reflex Telephone Test Pack (Optional)

The following optional software packages are available for PULSE Reflex Telephone Test:
Type 8771-X01[*][†] PULSE Reflex Telephone Test, ITU-T P.862 PESQ
Type 8771-X02[*][†] PULSE Reflex Telephone Test, ITU-T P.863 POLQA

For testing based on China Mobile Communications Corporation (CMCC) requirements the following software packages are available for PULSE Reflex Telephone Test:

Type 8772-X07[*][†] PULSE Reflex Telephone Test, 3GPP2 C.S0056

---

[*] X = license model either N for node-locked or F for floating

[†] Type 8770-X is required for this software package.

REQUIRED STANDARD SYSTEM CONFIGURATIONS
In order to conduct testing on telephones, the hardware included in one of the following systems must be available[‡]:
• System for Testing using Test Head, Type 6712-A-S01
• System for Testing using HATS, Type 6712-A-S02

An appropriate network simulator must also be available

SOFTWARE MAINTENANCE AND SUPPORT AGREEMENTS
M1-8770-X[*]   Software Maintenance and Support Agreement for PULSE Reflex Telephone Test
M1-8771-X01[*] Software Maintenance and Support Agreement for PULSE Reflex Telephone Test, ITU-T P.862 PESQ
M1-8771-X02[*] Software Maintenance and Support Agreement for PULSE Reflex Telephone Test, ITU-T P.863 POLQA
M1-8772-X07[*] Software Maintenance and Support Agreement for PULSE Reflex Telephone Test, CMCC Handset

---

[‡] For details see the Product Data for Type 6712 (BP 1683)

Brüel & Kjær