

TEST REPORT

Electronic Ear Protection "WS Lite-Com™ " and "Lite-ComPlus™ "



Owner of test certificate:

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KWF- Utility value Approval:
February 2015
Validity period: 5 years
(extension possible)

Test no. 6226

Test results and evaluation

Forest application:

- For communication between chain saw operators,
- as well as machine operators and chain saw operators for all forest operations.

Detailed test results:

Test item	Test result	Evaluation		
Handling/ operation	Ready for use in a few seconds, choose between speech-triggered transmission and transmission per button. Buttons are easy to operate with gloves.	+		
Wearing comfort	The ear defenders are comfortable, pleasant contact pressure.	+		
Menu navigation	Acceptable menu navigation using three buttons and English announcements, German announcements would be a preferable. Gradual adjustment of: Volume, Channel, VOX (speech-triggered transmission), Squelch (noise suppression), Subchannel.	O +		
Power consumption	Power consumption is low. Fully charged, the device will operate for 2 to 3 days. Automatic battery status announcement when powered up.	+		
Speech quality	Very clear, the noise cancelling microphone ensures good mutual speech reception even when ambient noise levels are high. The external microphones function perfectly.	+		
Cleaning	Removable hygienic pads make device easy to clean.	+		
Range	The device attained the required range of approx. 300 to 400 m without any problems in the forest. Range was rated "good" for the usual transmission distances.	+		
Practical application	Comfortable to wear even for long periods (6-8 hours/day). System completely unaffected by rain and solar radiation. Weight was rated low to moderate Maintenance effort is low to moderate System internal announcements are very clear Ambient noise filtration is moderate.	+	+	+/O + +/++ O
Comparative evaluation	The modified systems LiteCom and LiteCom Plus are a notable improvement on the previous versions LiteCom Basic and LiteCom Pro. The new systems are much tougher and service life has been improved considerably. The overall rating is positive.	++		

++ = excellent; + = good; o = satisfactory; - = acceptable; - - = inadequate

Data:

Dimensions, weights and power supply	
Cup inner radius min - max [mm]	37 – 62
Cup outer radius min - max [mm]	82 - 107
Weight incl. batteries and hygienic pads [g] (WS LiteCom)	430
Power supply with 2 commercially available 1.5 V AA batteries or with rechargeable batteries (NiMH), LiteCom Plus with Li-Ion rechargeable batteries, 3.7V	2 x 1.5 V AA

Description:

Helmet mounted 2-way radio system with ear-enclosing, replaceable foam pads (hygiene kit) with programmable 2-way radio functionality for communicating between other Lite-Com-Headsets and radio units transmitting on the same frequency over short distances. 8 available channels and 38 sub-channels in the frequency range 446/433 MHz. (LiteCom Plus: 69 channels, additional level-dependent outside microphones enable the wearer to hear ambient sound, such as conversation, machine sounds and warning signals. Immediate suppression of sudden dangerous noise impulses. A spoken announcement verifies each adjustment step. Bluetooth interface for connecting to mobile telephones etc.).

Attenuation of midrange frequencies (M=) 29 dB(A) [WS LiteCom] and 30 dB(A) [LiteCom Plus]; suitable for chainsaw operations with an equivalent noise power level at the ear of the operator of approx. 112/113 dB(A), incl. 55% sound breaks according to DIN EN ISO 22868.

Test

All features were tested that are of particular significance for outdoor use in forest conditions. The tests were carried out in accordance with the relevant DIN-EN-standards, especially:

- reliability at temperatures between -15°C and 50°C
- Storage stability at -25°C and 70°C
- Reliability during “heavy downpours” and shock (free fall from 1 m onto concrete)
- Handling

The test did not include a technical evaluation of the maximum range.

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