USB echo cancellation results

The VTAS Service was retired in May 2017. This page will no longer be updated.

Results of testing ----- 28th April, 2011

USB-connected echo-cancelling loudspeaker/microphone systems are used in place of a headset/microphone combination in desktop or small room software-based videoconferencing systems. They allow natural hands-free two-way conversations, and are required when more than one attendee at an individual site is taking part in the videoconference.

The following products were evaluated and compared for ease of use, value for money, setup procedures, etc. Note that the list of manufacturers represented here is not exhaustive. The presence of a product indicates only that the product has been evaluated by the VTAS product evaluation team and should not be taken as a recommendation. Similarly, the absence of a popular product should not be seen to reflect negatively on that product.

Products:

ClearOne Chat 50

ClearOne Chat 150

Phoenix Duet

Phoenix Quattro

Phoenix Solo

Polycom C100S

Spreed Speakerphone

US Robotics

Yamaha PJP-10UR

Yamaha PJP-25UR

Testing was carried out using this equipment:

Test platform hardware Dual-core Dell PC

Local Video-conferencing software PolyCom PVX Ver. 8.0.4

Remote Venue Codec Tandberg C90 Ver. TC4.0.0.235115

Summary of the results

- All systems tested were easy to connect to the PC. However one product required Windows drivers.
- All were recognised by the PC as USB Audio Hardware.
- All were recognised by the H323 Video-conference software used for this test.
- Most performed very well at their main task of providing an echo-cancelling Loudspeaker-Microphone combination – but see results.
- However, as with any echo-cancelling system, they were all sensitive to physical movement, and took a second or so to recover / relearn from major physical movement.
- All were aimed at good speech quality, but some were better at reproducing full-range music / PC audio.
- There is no reason to suppose that they would not work well with other software e.g. WebEx, Skype, Adobe Connect etc, but these were not tested in this trial.

The testing team at Glasgow University (Steven Jack, Ronnie Gibb and Stephen Lawrence) have no hesitation in recommending the use of most of these systems for personal or small-room video-conferencing applications – however see the detailed comments for each product.

The larger more costly systems, as designed, will provide a better service for larger numbers of attendees and rooms.

Differences between them reflect their cost, and intended purpose. Also, some have better quality of sound reproduction than others.

Table of Results

System	***ClearOne***		***Phoenix***			***PolyCom***	***Spreed***	***Y***
Model	**Chat 50USB**	**Chat 150USB**	**Duet PCS**	**Quattro VC; MT301**	**Solo USB**	**C100S**	**USB Internet Speakerphone**	**PJP-10UR**
Scores; Very good = 5; Good = 4; Fair = 3; Poor = 2; Very Poor =								
Hardware & facilities	**5**	**5**	**5**	**5**	**3**	**5**	**4**	**5**

Setup procedure	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**5**
Connectivity	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
Ease of Installation	**5**	**5**	**5**	**5**	**5**	**3**	**5**	**5**
Audio tests	**5**	**5**	**4**	**4**	**5**	**4**	**3**	**5**
Echo Cancellation	**5**	**5**	**4**	**5**	**4**	**3**	**3**	**5**
Value for Money	**4**	**5**	**4**	**3**	**3**	**4**	**3**	**5**
Total	**34**	**35**	**32**	**32**	**30**	**28**	**28**	**35**