

ABBA's mysterious "Abbatars" revealed

Holographic virtual avatars representing Swedish pop group ABBA – dubbed *Abbatars* – are bringing the band's 1970s heyday back to life



Abbatars: 3D computer models look like band members as they were in 1970s. Facial animation captured from modern-day singers

Hologram stage projections appear to float on stage with astonishing depth

Stage lights and sets:
Carefully positioned so as not to interfere with projection

Stage

Projector

Screen:
Hides projector and top reflector

Reflectors

Perceived position of ABBA

Reflecting foil:

Abbatars projected onto angled transparent screen, but appear to be further back

Audience

Smoke and pyrotechnics:

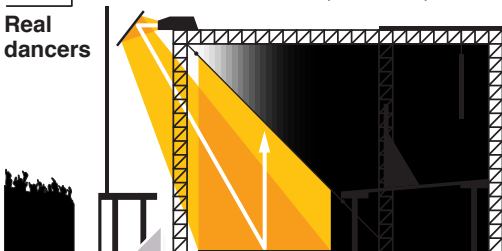
Can be used in front of projection

▼ **Audience view (front)**

▼ **Theatrical illusion (side view)**



Real dancers



2019: *NBC* (U.S.) and *BBC* (UK) producing global TV event – with world tour to follow

Pepper's Ghost: Technique is update of popular UK stage trick of 1880s created by *John Henry Pepper* – used in carnival shows and theatres to create ghostly effects