The noise that offends

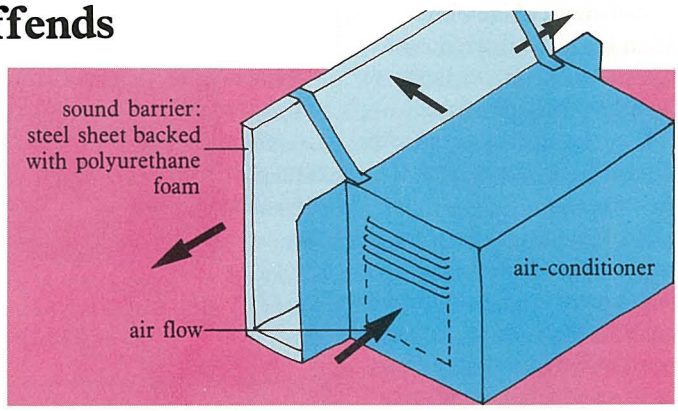
Domestic air-conditioners are now quieter than they used to be, but CSIRO research confirms that they still have ample room for improvement.

Dr Don Gibson of the CSIRO Division of Mechanical Engineering recently tested the noisiness of three Australian-made room air-conditioners on behalf of the West Australian Noise Abatement Advisory Committee. He found that, although not objectionably high, the units' noise can still be troublesome.

This is particularly the case in typical domestic living rooms and bedrooms. On the high fan setting, commonly used to get maximum cooling effect, the air-conditioners would create noise levels equivalent to that of a restrained conversation — about 50–53 dBA.

The occupants may tolerate this constant noise for the sake of the associated cooling comfort. But what about the effect of the exterior noise, always higher than the interior noise, on uncomforted neighbours?

Dr Gibson's measurements showed that if you mount a current-model room air-conditioner on the side of your house, and close to an adjacent house, it is more than likely that its noise will offend your neighbours at night.



A simple clip-on barrier will reduce the external noise of an air-conditioner without impeding air flow.

His finding seems to be confirmed in practice. Council officers have approached the Division expressing concern over the rising frequency of complaints about the external noise of neighbours' air-conditioners.

What can be done to help? In one particular case, the subject of a strong complaint by a neighbour, Mr Ian Shepherd of the Division was able to help by designing a fairly simple gadget. It is a special noise barrier that clips on the outside of an air-conditioner. The barrier absorbs some of the noise and directs other amounts of it sideways and upwards. It doesn't hinder the air flow, but the steel sheet with polyurethane foam backing helps keep the sound from the neighbour.

With the barrier in place on the offending air-conditioner, and by making adjustments to reduce fan noise, Mr Shepherd was able to reduce its apparent noise by 15 dBA, a substantial improvement.

Refrigerated room air conditioner noise. D. C. Gibson. *Australian Refrigeration, Air Conditioning and Heating*, 1976, **30**, 9–13.

Reduction of external noise from a packaged air conditioner. I. C. Shepherd. *Australian Refrigeration, Air Conditioning and Heating*, 1977, **31**, 35–8.