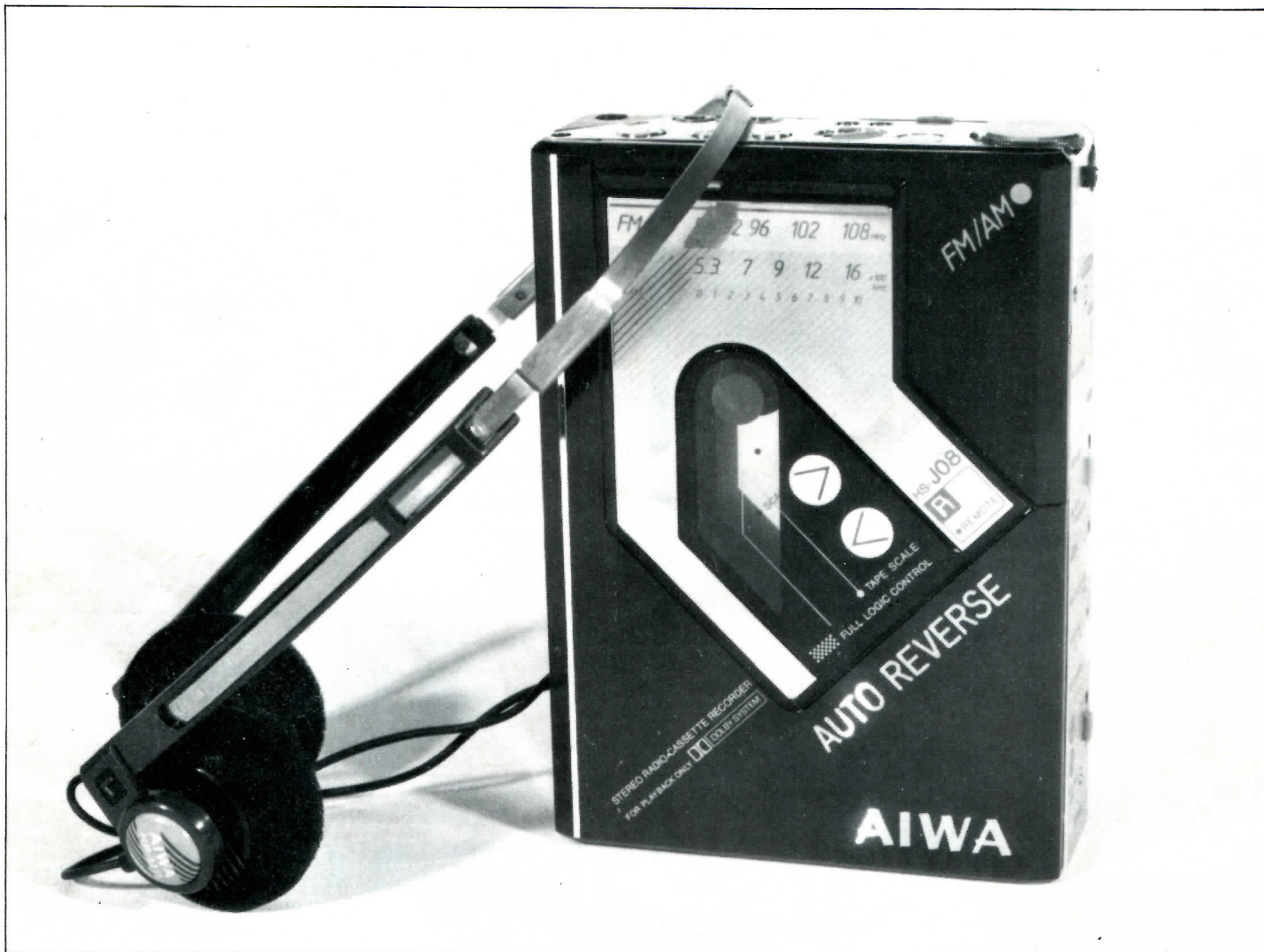


# GETTING PERSONAL

HI-FI ON THE MOVE. A GUIDE TO PERSONAL STEREOS



This section is a brief look at the better personal stereos available, drawn from my experience of testing a wide range of models. There's little point I feel in going through all the peculiar strengths and weaknesses of normal everyday models when they really are not designed for critical use.

## BATTERIES

Batteries are a problem with all personal stereos, since their motors draw a lot of current (around 100mA). Conventional dry batteries are meant for intermittent use and are not recommended for the typical load cycle presented by a personal stereo. Alkaline types, such as Duracell and Ever Ready Gold Seal are suitable, preferably in AA size. Beware of models miniaturised so much that the smaller AAA size is used. The endurance of these is usually in the order of five hours or so, whereas AAs give around 13 hours - more than double. Radio

consumes around 30mA so gives far longer battery life, where it is present. As batteries wear out and the sound starts to distort, or wow appears, switch to radio. It should keep working for a bit. JVC's CX-F5 works on just one battery, which limits maximum volume and causes obvious fading quite early in its life, so beware also of this arrangement. Generally, two AAs seem to offer the best compromise between reasonable life and portability.

## HEADPHONES

The headphones supplied with personal stereos are nearly all of poor quality, sounding overbright and tinny. I recommend they are discarded as soon as possible. I use Sennheiser HD40s, which are light but a bit big. They are also inefficient, in order to provide strong bass. This effectively limits battery life, I notice, because overload starts to occur fairly early as the batteries

fade, causing distortion unless the volume is kept down.

Having invented the personal stereo, calling it the Walkman - a Sony proprietary name - perhaps it is only fitting that this company should specialise not only in high performance models, but also headphones, microphones, mains power units and powered loudspeakers. I was impressed by Sony's MDR-A40 headphones that have a very narrow headband and unobtrusive, lozenge shaped earpieces. A friend who is addicted to Walkman listening, carrying around a small screwdriver to azimuth adjust for every cassette (!) swears by Sony's MDR-E222s. These little things actually fit into the ear. There is also an expensive "digital" version, the MDR E282. Sony have a special catalogue of Walkman accessories that includes eighteen different types of headphone, a range of inexpensive microphones, etc. It is available from Sony, whose address is in our accessories section, or from Sony dealers.



### AIWA HS-J08/G08 £149/£109

The HS-J08 is a complex auto-reverse model with radio, microphone and even a wired, miniature remote control. It weighs in at 276gms, a fairly typical figure, although light if one considers the complexity of this machine. As a yardstick, anything over 300gms net (i.e. without batteries) starts to feel heavy. The J08 does breach this when two alkaline batteries are added. The G08 is a less expensive version without radio, but with a five band graphic equaliser.

A current consumption of 100mA was measured when playing a cassette. The motor flaked out at 1.8V, or 0.9V per cell, which translates to a good 20 hours life from cassette alone, with intermittent use. Continuous use reduces this to around 15 hours. Precise figures are impossible, because the point of unusability of a battery is subjective. The important point is that the J08 utilises its batteries effectively.

Whilst not up to Sony Professional standards by any means, the J08 is well built and satisfying to use. I have carted an HS-J07 around the world and it still soldiers on, giving acceptable sound quality. Wow and flutter of the J08 measured 0.3% (DIN weighted total) and speed was correct within 0.5%. Speed variations can be heard at times, but were not unbearable.

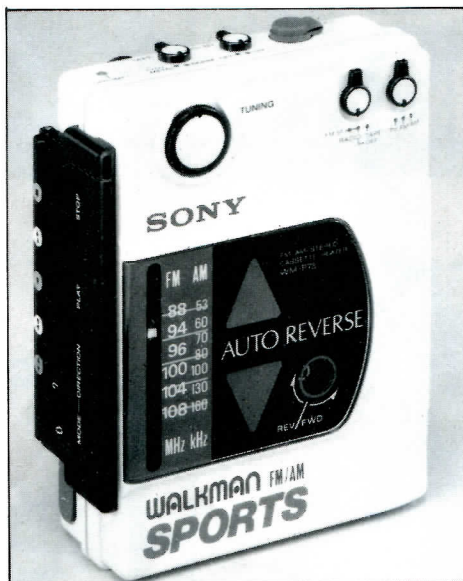
Replay frequency response of the J08 tested measured -3dB at 10kHz, doubtless needing some azimuth adjustment. You have to accept that personal stereos are no more accurate than domestic recorders here and often benefit from azimuth alignment, but Aiwa should attempt to get this model a bit better, considering price. Bass response rolls off below 60Hz, response being flat from 60Hz-10kHz, which is good as personal stereos go.

Although the J08 has an internal microphone for recording, it can accept an external mic. Dolby B is fitted but works only for replay, so recordings are hissy. Auto reverse works only when playing too. The J08 will not record in reverse. The machine will record from its radio though. The J08 is a well equipped and built model, free from weaknesses and sensibly designed. It provides fine entertainment.

### SONY WM-DC2 £150

Weighing 256gms net, the DC2 is heavy for what it is - just a player without radio or any recording ability. Being small, it doesn't seem heavy though, just solidly built. It is very well made and finely finished.

Whereas most players suffer speed instability, this model has a quartz-locked



capstan motor that measurement showed to have a low 0.1 wow and flutter figure - as low as that of domestic recorders. Piano survives close listening on this model, I found.

Replay frequency response was a disappointment at the price, output being -2dB down at 10kHz. Some azimuth fine tuning was probably needed. Cassettes did not sound overly dull though, even with Dolby B switched in, but some sparkle was missing. This model has dolby C too, so as to accept home recordings.

Battery utilisation proved excellent, two AA cells running down to 0.85v each without any affect on speed stability. With a current draw of 110mA, around 20 hours playing is available from alkaline batteries, with intermittent use, or 16 hours with continuous use.

### SONY WM-D6C 250

Commonly known as the Professional Walkman, this large, heavy and expensive model does everything - and well. It is really meant for reporters, broadcasters and the like though. In my view the model is too bulky for convenient use on the move. It might be termed transportable, rather than portable.

Sony use a quartz locked direct drive motor which displays astonishing speed stability, as the analysis shows. Wow measured 0.02%, which is lower than the best direct drive, dual capstan domestic recorders. Speed can be varied too, by switching out the quartz reference. There was only 0.3% error when locked.

This machine has Dolby B and C and

can record with either, onto metal, chrome or ferric tape. Head overload figures were reasonable, but not exceptional. Sony have cranked up bias to get a respectable mid-band figure for metal of +2.5dB, at the expense of treble overload which measured a lowish (for metal) -2dB. With That's MR-X Pro, however, these figures improved by a couple of dB and the machine made excellent recordings.

Low hiss recordings for professional purposes are best made with Dolby C, but hiss would go no lower than -70dB due to a contribution from internal circuits. Around -75dB should be possible.

Replay frequency response should have been more accurate, considering price. Treble output at 10kHz measured -3dB down. Since Sony have only just twigged the importance of getting this right on domestic recorders (compare the older TC-K444ESII to the brand new TC-K700), it is hardly surprising the D6C should be in substantial error here. I wasn't especially impressed by its dull sounding reproduction of pre-recorded tapes, and recordings transferred into, say, a professional studio Nakamichi, would not sound tonally correct as a result of this replay error. Recordings made and played on the machine measured flat with all three tape types and reached a high standard. A microphone input is fitted, but it proved very insensitive.

This machine certainly is an impressive product. For portable recording purposes it is virtually unmatched. Just for playing tapes, the review model proved worse than the DC2 and even the Aiwas. Here it would benefit from closer adherence to the IEC replay standard and/or better factory adjustment.

### SONY WM-38

Disparagingly described as looking like something you'd put your soap in, the WM38 is a neat if slightly peculiar looking lightweight Walkman, having a plastic body with rounded edges and corners. It has Dolby B and a normal/chrome switch to alter playback equalisation. Unlike some very cheap players, this one has both fast wind and rewind. Tests showed it had good speed stability (0.15% W&F) but replay frequency response was poor, output measuring -5dB at 10kHz. It's this sort of thing that makes tapes sound hopelessly muffled if Dolby is used. Although a well enough made unit, the WM-38 exhibits the classic problems of budget personal stereos, illustrating our interest in some admittedly expensive but otherwise more entertaining quality types.