

Fig. 1. Beolab 5000 amplifier frequency response, tone control range and effects of rumble and scratch filters

Channel separation was 42 dB at 10 kHz and 56 dB at 1 kHz, with a signal/noise ratio of 56 dB for 50 mW and 86 dB for 60 Watts.

The rumble and scratch filter curves are superimposed on the frequency response in Fig. 1. Perhaps for transcription quality turntables the rumble filter starts too high along the response curve. Similarly the scratch filter, whilst effective for older 78 rpm records, is too steep for use with LP records, but it will be useful if one feeds a medium or long wave tuner to the amplifier.

The correction curve for magnetic cartridges accurately follows the RIAA specification. Measurement was also made of the available power output with different load values. Maximum power is generated with a load of 3.5 Ohms and reaches just over 80 Watts when only one channel is driven. As the load is increased, the power output falls and is 45 Watts at 8 Ohms and 25 Watts at 15 Ohms. The square wave response at 1 kHz is truly rectangular with the bass and treble controls set centrally. At 10 kHz there is a slight rounding of the leading edge, indicating that the amplifier is capable of extending to at least 50 kHz.

The amplifier has been in use for several months with complete satisfaction and many visitors to my home have been considerably impressed with its overall performance and the styling.

As all the signal input sockets are angled downwards and recessed some 3 inches away from the back, all the inter-connecting cabling can be neatly hidden but, if the tuner mains plug is put in the amplifier socket, the amplifier will not fit snugly against the wall. Possibly this is done purposely so that maximum heat radiation is achieved.

With no signal input, background noise is practically inaudible even with full-range loudspeakers. But I was fooled when I first listened to a stereo radio programme. For several days I had enjoyed excellent mono radio with no background noise and then a BBC stereo transmission automatically switched in the stereo decoder. (I was using an external FM antenna which caused the signal strength meter to read 95 on the 100 unit scale.) The programme suddenly had a gentle background hiss which should not have been there. It was not until the music ended and a live studio announcer gave details of the next item that I realized that the background had fallen to nothing and that the hiss was background noise on the stereo tape.

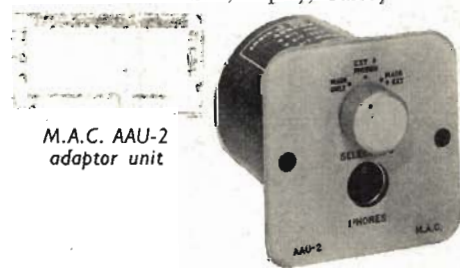
On gramophone reproduction perhaps one misses the top filters and slope control fitted to most British high quality amplifiers. With ideal gramophone records or tapes, of course, such modification of the frequency response should

not be necessary and, as recording techniques improve, filter circuits will be less necessary.

Summing up, the Beolab 5000 series is a superb example of the best of continental designs, with many technically interesting features and a refreshing approach to styling. It is expensive but, with silicon transistors, components operating well within their rated capacity, and superb metalwork, it can be regarded as an investment which will give years of service and pleasure.

JOHN GILBERT.

M.A.C. Audio Adaptor Units. Prices: AAU-1 £3 12s. 6d., AAU-2 £3 19s. 6d., AAU-3 £4 2s. 6d., AAU-4 £4 7s. 6d. Manufactured by MAC Electronic Company, Portsmouth Road, Ripley, Surrey.



M.A.C. AAU-2 adaptor unit

There are some audio products, just a few, which are so well thought out and so splendidly presented that they make an immediate appeal to the latent engineer in us all. The SME pickup arm is one such, the Quad amplifier is another and I suggest that this new range of Audio Adaptor Units is another.

In blunt terms, all that the MAC Electronic Company are offering us is an assortment of switch units designed to bring order into the chaos which so often surrounds the connections between gramophone and tape recording equipment. In the event, the Company have gone to great lengths to produce luxury units that will grace any installation.

Each Audio Adaptor Unit comes in a moulded polystyrene pack which is proof against damage and is exactly shaped to hold the unit, with a post round which the captive cables are coiled and holes to carry the plugs, wood screws and hexagon key—all of which are provided. The fascia panels are finished in satin chrome with legends engraved and filled in black. The knobs are turned from solid brass and finished in matching chrome.

To mount a unit on a panel or motor-board, you simply cut a 2½ inch diameter round hole through which the rear tubular housing can be pushed. In fact this housing is removable and can be used as a template for marking out the hole. It carries a shrink-on PVC sleeve on which

is printed all the connecting data. You then fix the unit to the board with four wood screws which are covered when the fascia panel is in position. In practice I found it necessary to enlarge the hole slightly at each side to accommodate the nuts on the securing bolts. This produced a neat, flush fitting, well within the capabilities of any amateur handyman. If it is preferred to have the adaptor unit free-standing, perhaps with shelf mounting equipment, a teak case is available, price £1 2s. 6d.

Removing the tubular housing reveals the clever arrangement whereby the switch tags and front and rear sockets are all terminated on a centre sub-panel via special link pins. These links can be cut very easily for the insertion of resistors, etc., if it is required to build in matching or attenuator networks, leaving the original wiring undisturbed.

I was sent the first four adaptor types for review and brief descriptions follow. I understand that further models are planned. Switch diagrams were not supplied, but I have sketched simple drawings to help my descriptions.

AAU-1: provides accessible record/replay connections from a cabinet mounted hi-fi system to an external stereo tape recorder (or two mono recorders). The four phono plugs (see Fig. 1) are connected to the rear of the unit via 24-inch long screened audio leads and wired to pins 1 and 3 of the two DIN sockets on the fascia panel. This allows separate connection of two mono recorders or the Left and Right channels of a stereo recorder. Alternatively, since pins 1 and 3 of the 3-pin

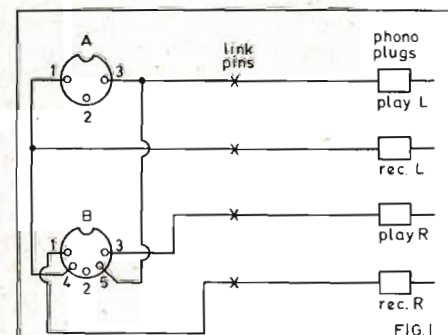


FIG. 1

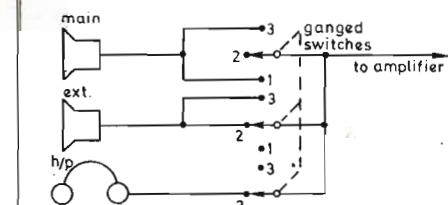


FIG. 2

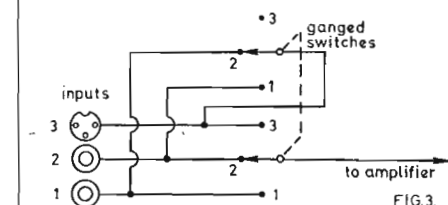


FIG. 3

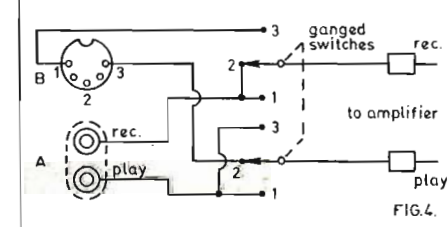


FIG. 4