volume) show that the output gradually falls from 3.2 volts at 79 cycles to approximately 1.0 volt at 500 cycles, and between here and 2,000 cycles the response is fairly level. Beyond this frequency there is rather a quick decline to .5 volts at 2,500 cycles, followed by a rise to .7 volts at 3,500 cycles, after which the output gradually decreases until at 4,700 cycles the voltage is .05. At the other extreme end of the range the output drops from 3.2 volts at 79 cycles to approximately 2.7 volts at 52 cycles, but below this frequency no measurements were taken as the needle was most uncomfortable in these large amplitude grooves.

The pillar, carrying-arm and the pick-up head casing are all

bakelite mouldings and together form a very neat component. The carrying-arm is offset so that when set up correctly alignment errors are within three degrees at all parts of a record and the flat mounting of the pick-up head allows of easy needle insertion. The standard value of potentiometer volume control fitted is 25,000 ohms, but various values between 2,000 and 50,000 ohms can be supplied fitted to the carrying-arm base to suit individual requirements. Our sample pick-up was shunted by a potentiometer of standard value and this had a smooth, silent action. Moreover, there was no parasitic hum at intermediate settings of the moving arm.

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TRADE WINDS AND IDLE ZEPHYRS

The Connoisseur

Despite the ever-increasing popularity of electrical reproducers and radio-gramophones there are still many folks whose geographical position alone will keep alive for many years the acoustic gramophone. One reader out in the wilds of Africa tells us of the infinite companionship which exists between him and his gramophone and of the extra thrill he got after sending for one of Mr. W. S. Wild's Connoisseur sound-boxes; how, with his beloved fibre needles, some notes which were previously weak and indistinct are now clean and definite, and how the light and shade of a record blend more perfectly. This does not surprise us in the least, for the last time we visited Mr. Wild at his home in Manor Street even we were taken aback by the way in which his Connoisseur sound-box and external horn gramophone discriminated between light and shade, bass and quasi-bass. But it is excellent testimony to Mr. Wild's abilities and methods as a sound-box maker and tuner. It is a marvel to us that his uncanny adjustments were not destroyed by the transit from Clapham to Africa.

Pamphonic-Pamela-Paramphonic

Whether or not the registration authorities looked up the derivation of the word "Pamphonic" and came to the conclusion that the instrument flattered the name, we cannot say, but the fact remains that they have tabooed "Pamphonic." The "Baby," or rather the Standard Pamphonic, otherwise yelept "Pamela," was terribly upset about it all; so much so that she has been entirely redesigned and rechristened the Junior Paramphonic. The surname, by the way, is the only one the registrar would accept as being a fitting name for the whole family (Senior included). Not even Messrs. Keith Prowse, the guardians of the Paramphonics, could move the registrar's hard heart.

We wonder if he has any idea of the derivation of this word. As far as we can make out, it is derived from the Greek and means "Music of Surpassing Beauty." Anyhow, "Meek will meet Greek" shortly when the promised Junior Paramphonic arrives at Soho Square. Then we shall see!

National Radio Service

Isn't that just what we have all been wanting? The radio manufacturer who takes every conceivable precaution to make his wares reliable and fool-proof and yet is at the mercy of any cocksure youngster in the local dealer's shop; the honest dealer who because he takes the trouble to learn all about his wares, and thereby earns a reputation for dependability, is expected to perform a like service for any contraption brought along by a customer; the ordinary listener who has little faith in the dealer at the end of the street and has no Imhof's or Keith Prowse to call on; the technical journalist who is expected by readers to dash off a reply to all sorts of recondite questions, some of which might involve hours of experiment.

The trouble about radio service in the past has been that it was at once both too cheap and too expensive. One serviceman we knew used to be called in regularly by a lady whose wireless would not work only to find that the maid must have knocked off the earth wire when dusting this morning, or "my husband's nephew, who is so very clever at wireless, you know, had a look inside last night," and must have put the valves back in the wrong order. "I am so sorry to have brought you out so late; do have a drink!" But the drink did not pay for the journey. Again, we have heard of unreasonable customers who expect the dealer to cure, free of charge, all the hum or extraneous noises in their receivers even though the cause can be positively shown to be faulty house wiring.

No. Free service is all very nice, but we do not believe that a sound industry can be built up on that basis. We do not expect a music dealer to re-tune our pianos for nothing, still less do we expect a motor-car dealer to overhaul our cars for the price of a drink. On the other hand, how is the ordinary man to know when a charge is reasonable? We have heard of cases where a local dealer of no particular standing has advised a complete change of valves when all that was necessary was the scraping of the pins to ensure good contact. On occasions we have been able to recommend reliable service agents to readers to the mutual advantage of both. What reader is there who would not gladly pay a reasonable service fee if he could be assured of a square deal? But there are occasions when even a competent serviceman is at a disadvantage in the absence of laboratory testing instruments.

For such an occasion, as well as for the ordinary occasion when no reliable local serviceman is available, the bureau of National Radio Service, Ltd., provides the requisite facilities. In their laboratories and workshops any piece of electrical apparatus, from a pair of headphones to a complete radiogramophone, can be tested, overhauled or repaired. An estimate will be given for the job before the work is undertaken, a minimum charge of 5s. being made for the examination, etc. Alternatively, we understand a contract can be made for a periodic overhaul. In either event the apparatus has to be sent to headquarters, and before being returned to the owner is completely cleaned and its cabinet repolished.

We commend these arrangements to all—dealers and their customers alike.

A Gift

There is little we can add to Mr. P. Wilson's enthusiastic review (December 1931 issue, page 295) of the Ferranti book, The True Road to Radio, the third reprint of which has recently been published. It is packed with information of the sort that appeals to either the amateur or the professional, and those who had the good sense to get the previous edition will most surely be intrigued by the new and illuminating matter on Radio Frequency Amplification, and on Automatic Grid Bias—