

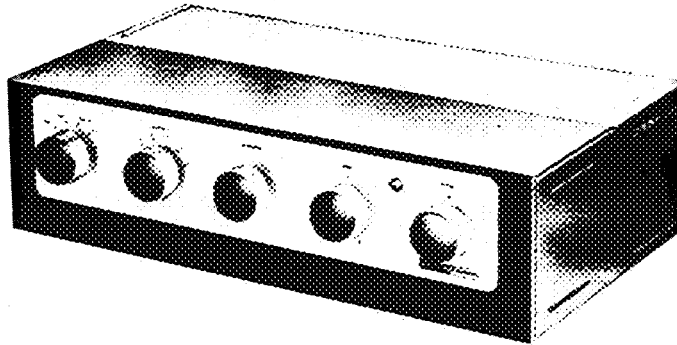
harman kardon

Model-C100

The Melody

—ULTRA LINEAR WILLIAMSON AMPLIFIER AND PREAMPLIFIER—

INSTALLATION—OPERATION AND SERVICE INSTRUCTIONS



UNPACKING

After unpacking the Melody, inspect it carefully for any signs of damage in transit. Your unit was subjected to many inspections and tests, and then carefully packed. If any damage is visible, notify your dealer immediately. If the unit was shipped to you, notify the transportation company at once.

Check the contents of the package carefully. You should find:

- 1-Amplifier, Model C 100
- 1-Instruction booklet
- 1-Warranty card

It is strongly urged that the warranty card be completed and mailed without delay, to protect your rights under the warranty. If you should require repair service or information on the use of the Melody, we will be able to identify your unit immediately, and respond quickly.

VENTILATION

All electrical equipment generates heat which must be allowed to escape. Although the Melody is well ventilated in itself, sufficient space should be allowed

around it to permit free air flow. If it is placed in a bookcase, it should be located well toward the front, to provide as much clearance as possible at the rear.

Do not put books or other objects on top of the Melody. Covering the perforated tube grill will reduce the ventilation and result in sharply reduced component and tube life.

SPEAKER CONNECTIONS

Provision has been made to connect to any of today's fine speaker systems. A three-screw terminal strip marked "SPEAKER" is located on the rear of the chassis. The terminals are identified as "G", "8", and "16". The generous use of inverse feedback in the design of the Melody permits the connection of practically any speaker between either the "G" and "8" terminals or the "G" and "16" terminals with negligible difference in results. For optimum results and maximum damping factor, it is suggested that speaker systems with a rated impedance between 4 and 12 ohms be connected between "G" and "8". Speaker systems with a rated impedance between 12 and 24 ohms should be connected between "G" and "16". Speaker systems with a rated impedance lower than four ohms should be connected between "8" and "16", no connection being made from the speaker to "G" or ground.

It is suggested that fairly heavy wire be used to connect to the speaker, to maintain the high damping factor of the Ultra-Linear Williamson amplifier circuitry. Ordinary 18 gauge lamp cord will suffice if the speaker and receiver are in the same cabinet or are immediately adjacent. If the separation is greater, 16 gauge or 14 gauge wire should be used.

TUNER CONNECTION

A coaxial connector marked "TUNER" will be found on the rear of the Melody. A shielded cable may be connected between this receptacle and the output receptacle of any tuner rated for at least 1/2 volt output.

The tuner output impedance will determine the maximum practical length of this cable. It is suggested that not more than 3 or 4 feet be used if the tuner has a high impedance output. (The Theme, Model A-310 Tuner has cathode follower, low impedance output and therefore may use leads up to 100 feet long without fear of hum pickup or high frequency attenuation.)

PHONOGRAPH CONNECTION

Any type of record player will operate with the Melody. To derive maximum enjoyment it is suggested that a high quality pickup cartridge and a rumble-free turntable be used. Two classes of pickup cartridges are in general use: Magnetic (GE, Pickering, Clarkstan, Fairchild, and Audak) and Crystal (including the newly developed ceramics).

Magnetic cartridges should be plugged into the receptacle marked "PHONO" on the rear of the chassis. (A mating plug is furnished with the Melody, and will be found plugged into the "PHONO" socket.)

Crystal or ceramic cartridges should be plugged into one of the two "AUX" receptacles.

A word of advice: The useful life of a phonograph needle is quite short, ranging from 15 minutes to several hours. In addition to degradation of tone quality as the needle wears, the strong possibility exists that valuable records will be damaged if worn needles are not promptly replaced. The purchase of a diamond, which has much longer life, is therefore a worthwhile investment.

The power cord of the turntable may be plugged into one of the auxiliary outlets on the rear of the Melody chassis. It is sometimes advisable to ground the phonograph chassis to the amplifier, to reduce hum or other unwanted noises. This may be accomplished by the use of any type of wire, one end connected to the "G" terminal of the "SPEAKER" terminal strip, the other end connected to the metal framework of the phonograph.

AUXILIARY INPUTS

Two input receptacles marked "AUX 1" and "AUX 2" are located on the rear of the Melody chassis. Any auxiliary equipment, such as a crystal pickup, tape recorder or television tuner may be connected to either or both receptacles.

TAPE OUTPUT

A receptacle marked "TAPE OUT" is located on the rear of the Melody chassis. This is used to provide output to a tape recorder or other auxiliary equipment. Any program material appearing at the speaker terminals also appears at the "TAPE OUT" receptacle, but unmodified by the volume and tone controls. This makes it possible to record programs with the proper recording equalization (as determined by your tape recorder) while simultaneously listening to the program with the proper tone control, contour and loudness settings.

POWER CONNECTIONS

Plug the power cord into any outlet furnishing 117 volts, 60 cycles house current. The exact voltage is relatively unimportant, and may vary between 105 and 125; be sure, however, that you have a 60 cycle AC power. Two auxiliary AC receptacles are incorporated on the chassis to furnish power to associated devices, such as record changer, tape recorder, etc.

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OPERATING INSTRUCTIONS

A full understanding of the relationship among the Melody's operating controls will assure you realization of the rich potential of this excellent instrument.

The FUNCTION switch has six positions: AM, FM, Auxiliary and three phono equalizations. Its primary use is to select the desired type of program. A secondary purpose is to select a specific record equalization characteristic.

RECORD EQUALIZATION

In order to assure good reproduction of the wide range of frequencies in music and to make necessary adjustments for the limitations of the recording technique, record manufacturers have found it necessary to modify the actual frequency response of the music while it is being recorded. Thus, to avoid overcutting and consequent distortion, a measured and deliberate reduction is effected in low frequency response by selecting a "turnover frequency" and by recording attenuated response below that point. To assure optimum signal-to-noise at the high frequency end when the record is played at home, the highs are deliberately exaggerated

during the recording process. A measured and deliberate boost is effected above a certain frequency. This combination of deliberate exaggeration at the low and high ends of the frequency response can be expressed in a "recording curve". When the record is played a mirror image of that curve should be available so that the ideal "flat" response may be achieved. Since several different recording curves have been used in the past (differing with respect to the turnover points and the degree of emphasis or deemphasis) a choice of playback curves is provided in Harman-Kardon instruments.

The three record equalization positions compensate for the characteristics of over 30 recording labels:

LP: Most American long-playing records made before 1954 and some European LP's. Labels include: Columbia, London, Mercury, Oceanic, Remington, Tempo, Urania, Vanguard-Bach Guild, Vox, Westminster, RCA Victor (older), Atlantic, Decca, Polyphonic, Cetra-Soria, Esoteric, Haydn Society, MGM, Angel.

RIAA: Most American records made after 1954, all records cut to standards of Audio Engineering Society, NAB, new RCA Victor Ortho, and newly standardized RIAA. Labels include RCA Victor (newer), Extended Play 45, Blue Note Jazz, Canyon, Capitol, Good Time Jazz, Mercury, some London, Bartok, Caedman, Capitol-Cetra, Philharmonic, EMS.

EUR: Most European long-playing, some American LP's and most 78 RPM discs.

The **LOUDNESS** control is used to adjust the volume of any program. Its effect is selectively varied by the

DYNAMIC CONTOUR CONTROL

One of the limitations of human hearing is its tendency to lose sensitivity to the very low and very high pitched sounds, as the sound level is reduced. It is this characteristic (known as the Fletcher-Munson effect) which causes one to play music programs at high level in order to experience the fullness of tone available from fine modern recordings and identified with "live" listening. The Harman-Kardon Dynamic Loudness Contour Control compensates for the Fletcher-Munson effect, eliminating high reproduction level as a requisite for full enjoyment of reproduced music. Six positions of compensation are provided to allow the selection of the one most suited to your hearing.

Each position causes the loudness (Volume) control to perform with a different degree of compensation, the amount increasing with each clockwise setting. Position 1 is uncompensated. Position 2 and 3 provide somewhat less compensation than that required to match

the Fletcher-Munson loudness contour curves. Position 4 matches the Fletcher-Munson curves. Position 5 and 6 provide greater amounts of compensation than the curves suggest. Since hearing characteristics vary from person to person (some require more and others less compensation), the great flexibility provided in these controls can be appreciated.

In operation, the proper choice of contour is easily made, by switching through the several loudness contour positions and selecting the one which sounds best to you.

Separate **BASS** and **TREBLE** controls are incorporated in the Melody, to provide the full range of adjustment required for satisfactory high fidelity performance.

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ORGANIZING THE VARIOUS CONTROLS

In general, every control on a well designed, honestly considered high fidelity instrument has a specific useful function, related to each of the other controls. Although this cannot be a full treatise on the subject, an explanatory note on the relationship of the various front panel controls will doubtless prove useful in organizing and clarifying them for the user.

Beginning with the function selector, choose the type of program material you plan to listen to (tuner, phono, etc.). Choose the correct record equalization setting for the particular record you are to play. With Loudness Contour Selector in the uncompensated position, turn the loudness (volume) control to as high a level as you can briefly allow. (This to permit you to make the remaining adjustments while you are listening at your own maximum efficiency.) Now adjust the Bass and Treble Tone Control to correct for the electro-mechanical characteristics of the loudspeaker you are using and for the acoustic characteristics of the room in which you are listening. These adjustments are wisely pragmatic.

Modify each until settings are chosen which in your total system create the proper sense of aural balance and evenness. Now reduce the loudness (volume) control setting to a level somewhat lower than normal listening level in your room. You will note that the full bodied - lifelike quality you experienced at high listening level has disappeared (this because of the Fletcher-Munson effect described in the paragraph on the H/K Dynamic Loudness Contour). With all other controls unchanged, select the best contour setting for you. Do this by switching quickly from the uncompensated position to the most compensated and then backing down one position at a time until you find the one which most nearly duplicates the full-bodied sound you enjoyed

at high level. Now turn the loudness control up to the level at which you wish to listen - (perhaps the maximum level you can permit in your home) - and listen. You'll find that there is automatic compensation of contour wherever you set the loudness control thereafter. In fact, under normal circumstances, you should not find it necessary to readjust the tone controls or the contour selector once having chosen the correct settings for you, your room and your system.

MAINTENANCE AND REPAIR

In some installations, hum may be encountered due to a voltage difference between the amplifier, tuner and record changer chassis. This may be eliminated by reversing one or all of the AC power plugs. Simply reverse one at a time until improvement is experienced.

Due to the conservative design and high quality components of the Melody, no routine maintenance other than yearly tube-testing is required. Should trouble develop, however, only the most qualified serviceman should be employed, as special equipment and training is required to properly service high fidelity equipment.

This instruction booklet contains diagrams and other information needed by your repairman. It should be kept available for his use.

WARRANTY

We warrant each Melody to be free from defects in material and workmanship under normal use and service, and in accordance with the conditions herein below set forth, for a period of 90 days from date of delivery to the original purchaser, and agree to replace or repair any part or parts returned to us within said 90 days with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective. This warranty does not include free labor nor is it applicable to any instrument which shall have been repaired or altered in any way so as in our judgement to affect its stability or reliability nor which has been subject to neglect, misuse, abuse, negligence or accident nor which has had the serial number altered, effaced, or removed. Neither shall this warranty apply to any instrument which has been connected otherwise than in accordance with the instructions furnished by us.

This warranty is expressly in lieu of all other warranties, express or implied, and of all other obligations or liabilities on our part, and we neither assume nor authorize any representative or other person to assume for us any other liability in connection with the sale of the Model C 100 Melody.