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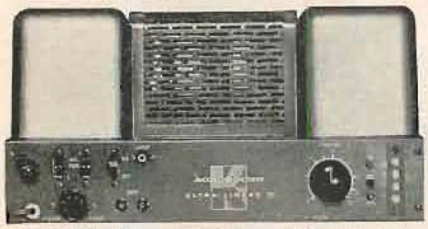
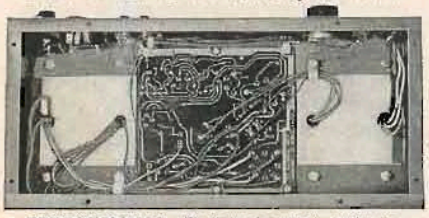
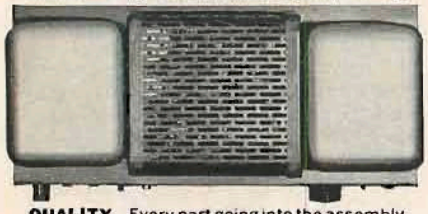
ULTRA-LINEAR II
60 watt amplifier



DESIGN The combination of patented ULTRA-LINEAR circuitry—plus new HYBRID FEEDBACK principle—VARIABLE DAMPING control, and ULTRA STABILITY, represents a new high in the art of amplifier design . . . an example of ACROSOUND'S latest achievement in AMERICAN Know-How. This superiority of design now enables anyone with or without any previous knowledge of electronics to assemble for himself or herself . . . (yes! it's that easy!) . . . the finest of amplifiers and at a most reasonable cost, in only two hours!



PERFORMANCE By listening test, or by instruments . . . second to none in clarity and frequency response. Normal level distortion is virtually unmeasurable—IM 1% or less at 60 watts, 120 watts peak. Completely stable . . . unaffected by loads, perfect square waves.



QUALITY Every part going into the assembly of critical and even non-critical circuitry is tested and checked to allow no more than ±½% variation from ACROSOUND'S standards. Specialized test equipment unavailable commercially was designed in ACROSOUND'S laboratories to achieve this result. Every printed circuit board is placed in trial operation on a laboratory amplifier. Output tubes are matched by trial and double checked.

COMPONENTS ACRO'S newest TO-600 output transformer with special hybrid winding—separates functions of output circuit and feedback circuit. Heavy duty, completely assembled, and thoroughly tested, printed circuit board assures uniformity of performance. Low distortion EL34 output tubes are operated well within their ratings ensuring long tube life and optimum performance.

PRICE In preassembled kit form so that you may save money, learn while doing, and have the proud satisfaction you built the best for only **$79.50** net . . . or if you feel you would prefer it laboratory assembled it still represents a bargain at **$109.50** net.

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ABOUT MUSIC

HAROLD LAWRENCE*

Musical Values in Stereo

IT IS EASY to predict that stereo will rule the sound waves at the audio shows this fall. The corridors will reverberate with the crash of glass, the roar of thunder, and the whiz of racing cars—all reproduced stereophonically. As their heads turn from one loudspeaker to its stereo partner, visitors to the shows will resemble nothing less than the audience at a tennis match following the progress of the ball across the net.

Among the new dimensions of stereophonic recording, direction is the most readily apparent to the novice. It is little wonder, therefore, that it plays such a prominent role in demonstrating stereo sound. To successfully launch their products, manufacturers of stereo tape and disc recordings and playback equipment employ the shock techniques of directionality mentioned above in the same way that movie exhibitors introduce their wide-screen technique by contrasting it dramatically with one of normal size. The announcer's voice on a stereo demonstration tape or disc is usually heard emanating first from one loudspeaker, then from the other. To underline this effect, one record company had the voice bouncing back and forth like a ping-pong ball on each word!

Musical illustrations, too, are selected for maximum directional effect in stereo demonstrations. In popular music, which can be tailormade for stereo, "isolation" is utilized for vocalists and instrumental sections. This applies especially to small groups, but larger bands can also be recorded with powerful directional impact merely by concentrating, for example, the rhythm section on one channel, and the brass on the other. This aural division, however, can be overdone. In its extreme form, it could result in a "hole in the middle" large enough to accommodate a steam locomotive.

Direction in symphonic music is a somewhat more subtle matter. Here, it is not, or should not become, the sole outstanding difference between monophonic and stereophonic reproduction. Not that you are unaware of it. On the contrary, the ringing brass chords in the opening of Tchaikovsky's Fourth Symphony come distinctly from the right of the orchestra, and the rataplan of drums in Bizet's *Patrie* Overture from the left. (These positions may vary, of course, with each orchestra's normal seating arrangement.) Equally essential to successful stereo symphonics, however, are the dimensions of depth, spaciousness, and "spread" of sound.

Since the advent of stereo tapes and discs, spatial relationships, both in depth and spread, have become all-important factors. It is not unusual these days to listen to a stereo recording and suddenly discover that the flute you heard a few moments ago smack in the center of the orchestra has wandered over to the left. This effect is even more apparent in a concerto, where the unfortunate solo instrument sometimes seems attached to a balloon and is floating across our aural field of vision between the two loudspeakers. This curious lack of stability is brought about by 1) engineering procedures at the recording session, and 2) faulty processing. The flute can probably blame the engineer at the mixing panel for its disembodied state, since balance and level adjustments which might pass in a single-channel multimicrophone recording will sometimes show up all too plainly as phase distortion in stereo. The soloist's predicament in the second case could have been caused either by "mixing," or, as in the stereo tape form, by a malfunctioning duplicator.

Because the soloist in a stereo recording so often resembles an electron hovering between two positively charged atoms, some recording engineers have taken the easy way out by confining him to one of the outer channels. Stability is thereby achieved, and the instrument isn't stretched out like a rubber band between the loudspeakers. In terms of concert-hall realism, however, this is not a satisfactory solution to the problem, since no one expects the soloist to perform his part from somewhere among the fourth-desk violins on the left, or the fourth-desk cellos on the right. The musical effect is lopsided. There is no arguing the point that true balance and perspective should dictate instrumental placement at a recording session.

In a certain sense, recording solo instruments or chamber groups in stereo is perhaps even more challenging than capturing the sound of an orchestra. One of the principal differences between monophonic and stereophonic reproduction is the fact that the latter introduces the element of "separation" into orchestral recording. Countless details that were obscured in single-channel recording, subtle contrasts between string textures that often could be only guessed at monophonically, can now emerge with astonishing clarity. But it is precisely this factor of separation that can have adverse effects upon the stereo recording of a piano, violin, string quartet, or voice. One of the major pitfalls of this type of recording is the tendency to blow up the sound into larger-than-life proportions, or to otherwise distort the aural picture. Solo instruments in stereo often suffer from split personalities due to inept microphone placement and differing characteristics of the microphones themselves. Stereo may also pull apart the natural homogeneity of

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rigidly spaced on either side, he might have been mistaken for a gangster flanked by bodyguards. Back at the studio, acoustic, early electric, and microgroove recordings are contrasted to the impact of stereo. Five excerpts from initial releases, ranging from refined dixieland to the modern sounds of the Curtis Counce quintet, indicate that this company can produce an excellent stereo disc. It is sealed in a surprise box, with a cover that does not require an undraped female to attract, and pressed in multicolored plastic.

The Spirit of Charlie Parker
World Wide MGS20003

A close parallel exists between the popularity of the flute in modern jazz and the history and growth of the LP record. So when the word went out to prepare for stereo, several arrangers and leaders hit upon the idea that the instrument would create a unique mixture in the new medium. The lone flutist may again become an oddity in jazz, but only because his services are augmented by one or more of his fellows. Another sign of the times is the musician who can double on woodwinds and here flutist Bobby Jasper records his first solos on clarinet, as tenor saxist Sheldon Powell makes his debut on flute. They are marshalled into an unusual trio with the stellar Frank Wess, from Count Basie's band, who leads them through a fresh treatment of Charlie Parker themes.

Arranger Billy Ver Planck aims at creating the effect of the mood albums Parker made with strings, giving a vivid tonal coloration to the ensembles on a slow *Parker's Mood*, and *Marmaduke*. It is difficult not to feel a moment of regret that Parker often struggled to overcome syrupy backgrounds and never enjoyed such a superior setting. Pianist Eddie Costa alternates on vibraphone and Frank Rehak plays thoughtful muted trombone parts. George Duvivier and Bobby Donaldson, on bass and drums, lift *Now's The Time* and *Ah-Leu-Cha* with a spirited beat. The stereo spread is designed to give definition and clarity, but not at the expense of the tonal blend of the instruments.

AE