

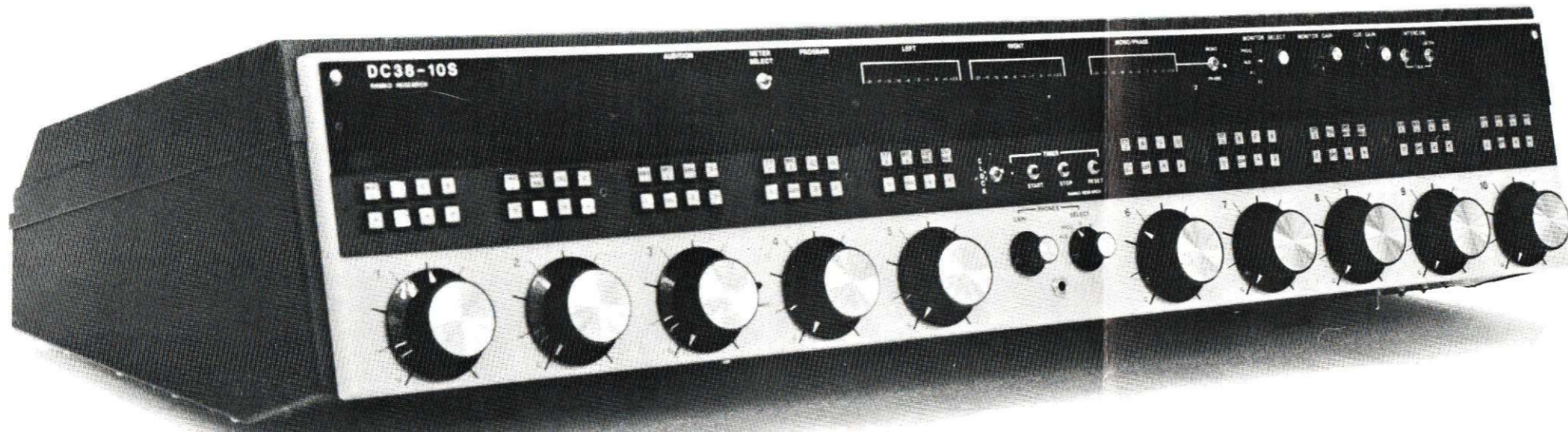
The DC38 Series Broadcast consoles - from RAMKO RESEARCH



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SERIES DC-38 - - - The Most Advanced, Trouble Free Broadcast Consoles In History!



DC38-10S Shown

ADVANCED IS NOT JUST A WORD

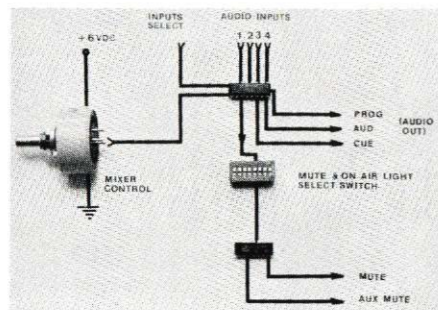
The word "advanced" means many things to different people. To us it means that the product has truly gone past what was considered the best currently available. We believe you will agree that these 6 new DC-38 series consoles are undoubtedly the answer to your quest for the ultimate in table top, rotary mixer, audio consoles.

These new consoles (mono & stereo) embody some of the most significant advances in audio control since the first broadcast console was designed. Significant because they bring you; new flexibility in operations; longer trouble free life; easier maintenance; and a purity of reproduction that few broadcasters have experienced before.

VOLTAGE CONTROLLED AUDIO

Introduced by Ramko in early 1975, DC control of all audio attenuation and switching was considered a revolutionary concept in broadcast consoles. It has since proven itself so superior to conventional methods of audio control that virtually every other manufacturer of consoles is now busy trying to catch up.

The three major advantages to this system are; (1) In a properly installed system the DC controlled console will exhibit far less susceptibility

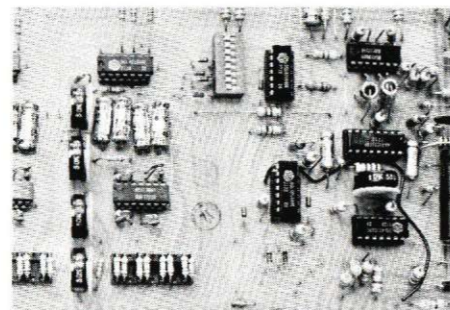


to RF pickup and external interference than conventional consoles that control audio directly. The reason being that the conventional console must route all of its audio from the inputs, to the various controlling elements (mixers, switches, etc.) and then finally to the console output. The DC controlled console on the other hand, eliminates all of this audio wiring thus dramatically reducing possible pickup of outside interference; (2) The DC controlled console is less prone to be affected by mechanical malfunctions or problems such as scratchy pots or noisy switches; (3) Since all audio switching is done via DC control (+6V or -6V) all internal and external functions (mute, on air lights, remote equip. start/stop) are programmed by simply setting the internally located switches. Additionally since all mixing is accomplished via voltage controlled

amplifiers only one pot is needed to control both left & right simultaneously (stereo) thus the elimination of tracking error normally associated with dual ganged pots.

INCREASED FLEXIBILITY

From the moment of initial installation thru your day to day operations, these consoles will continue to impress you with their ability to adapt to whatever situation presents itself. No soldering or internal wiring necessary to set up or change the "ON AIR" light relay, muting, or AUX MUTE relay. UNLIKE other consoles on the market all of these functions are programmable via internally located switches and may be reprogrammed at a moments notice.



The remote equipment start/stop feature is an optional device (LC-2 or LC-4) and simply plugs

into the console for complete control of your cart or reel to reel machines, turntables, etc., right from the console front panel input and output select switches.

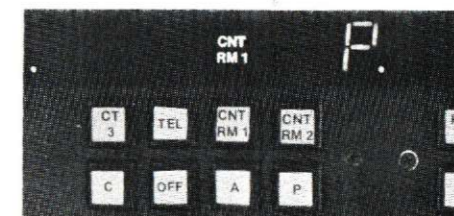
Possibly one of the most significant advancements in flexibility is our exclusive patch panel, input gain select feature. This means that at a moments notice ANY INPUT can be made to accept anything from a mic level thru a line level signal. Not just mic or line level but anywhere in between if desired. In addition, unlike other consoles on the market, when this is done none of the other inputs are affected on that mixer. Thus on our DC-38, 10 mixer model you have a minimum of 4,194,304 combinations of mic and line level inputs that could conceivably be setup. If you include all of the variations in between mic level and line level please write us with the results as our computer will not print out that many significant figures.

Since you by now know that the other consoles you've looked at require OPTIONAL mic or whatever modules to accomplish even a fraction of the above, the next question is probably — HOW MUCH? The answer is — NOTHING! You simply plug in the prescribed value of resistor(s), which are included with your console, and that's it.

EASIER OPERATION

Whether you're the station manager, operations manager, or the personality behind the microphone you will find the DC-38 a pure pleasure to own, to work with, and to operate. From the custom lettered push button select switches and corresponding back lighted status displays to the "HOT MIC" flashing indicator, the two mode cueing system (push button and/or pot down), the large LED output mode indicators and the incomparable solid state "VU" meters.

The labeled, computer type, push buttons and corresponding backlighted displays afford the operator instant recognition of the next happening, which one to push, and what is happening now or has already occurred. Although we automatically send you a form (at time of ordering) that enables you to tell us how you would like your console labeled, your unit comes with a full set of additional labeling so that you may easily change at any time desired.



The large LED output mode display has two separate functions. The lighted decimal point, which lights whenever that mixer is potted down into CUE, is also a blinking warning light whenever this channel has a live microphone activated. The second function of this display tells the operator whether he is in the Program (P), Audition (A), Cue (C) or Off (blank) mode. It is important to note here that the operator has 2 separate means of initiating the Cue mode. One in the normal fashion of potting down and one via the output mode select switch (C). Thus he may go directly to cue by pushing (C) without having to change the mixer setting.

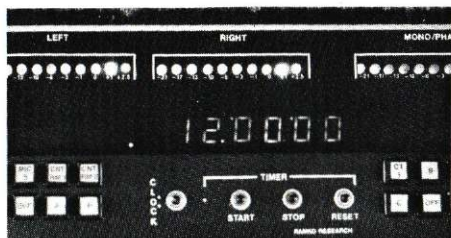
How much easier can it get? Plenty! First of all, the reason we've spent so much effort in this area is simply to make your station sound better. The less time a person has to spend remembering mundane things such as switch and function positions, what was just aired or cued and what hidden surprises the console has in store for him, the fewer mistakes he will make and the smoother your stations sound. This is one reason you will find SUPER QUIET push buttons on our consoles instead of the usual loud clanking, short life, mechanical lever switches still being used on even the most expensive competitive consoles. Thus no more mechanical noise transmitted over a live mic when switching console inputs or outputs. Additionally since these switches activate only solid state logic that actually switch and route the audio it is accomplished very positively with no margin for error and in less than 2 tenths of 1 millionth of one second. No more pops, clicks, or momentary feedback with partially actuated switches.

PURER REPRODUCTION

No conventional, transformer coupled broadcast console has the capability to reproduce audio, as faithfully and clearly as our units with their far advanced solid state balanced inputs and outputs. This fact has been attested to by hundreds of Broadcasters who have taken the time to write, phone or personally tell us what a dramatic difference it has made in the sound of their stations.

The reasons for this are many but simple. FIRST, all inputs and outputs are solid state balanced. Unlike transformers they are quite insensitive to impedance mismatches. In fact the mismatches can be millions of times, and more, than the specified impedance without any noticeable effect on distortion or response. Not so with the average audio transformer as even a couple times mismatch can invalidate the consoles performance. SECOND, our solid state devices exhibit far less distortion and a flatter response than even the finest transformer available today. THIRD, since the solid state devices are purely resistive they are much less susceptible to hum, RF and other external interference. A FOURTH and very large

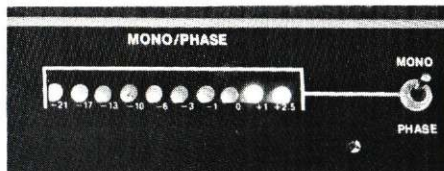
consideration is the solid state, light emitting diode, "VU" meter.



This was pioneered by RAMKO RESEARCH over 4 years ago and designed specifically to overcome the distinct limitations of the well known, mechanical "VU" meter. Recognizing both the limitations and advantages of the "VU" meter and the "Peak" reading meter system we set out to combine the best of both worlds. The result was our now famous solid state "VU" meter, the SSM-1. This improvement in metering has proven itself so superior to the conventional meter that all RAMKO products incorporating meters now utilize this concept.

Here's what it does for your operator and your sound. Since the solid state meter (SSM) has an exceptionally fast response you can actually see over modulation peaks that the mechanical meter can't. Couple this with the electronic circuit that gives the SSM "VU" ballistics on the decay and you end up with a tighter, cleaner sound than ever before. At the same time your normal audio power level is still maintained. In addition the bright red and yellow LED display is so legible (can be read up to 30 feet away) that the operator is always aware of what is going on.

You will also note that we didn't stop at just metering the Prog. & Aud. outputs. Although the mono DC-38's have a meter for each output, we took the stereo versions a step farther. In addition to the left meter and the right meter (switchable, Aud. or Prog.) we included a third to monitor the stereo mix (mono) output.

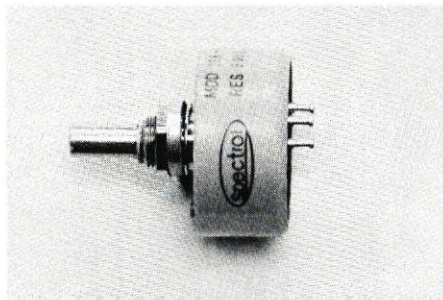


By throwing a switch located next to it, this meter is converted to a phase check meter and may be used to check the stereo phasing of any and all of the console input sources.

LONGER, TROUBLE FREE LIFE

One of the major aims in creating the DC-38 series was to make sure you spent your time operating the console instead of repairing it. All of the LED's and lamps have a life expectancy of over 11 years. The push button select switches

are spec'd by the manufacturer at 20,000,000 operations. This works out to 1 actuation every 30 seconds, 24 hours a day for over 19 years. The mixer pots were custom designed by one of the leaders in the industry and utilize a glass hard, super quiet conductive plastic element.



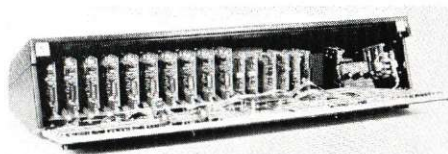
The mechanical construction of these pots is so sturdy that we have been unable to damage them even with a wrench applied to their shafts. Thus you're protected from even the heaviest handed operator.

Without highly reliable electronics the best mechanical construction in the world would go for naught. That is why we utilize only gold plated contact IC sockets and card edge connectors. All of the quad operational amplifiers, used throughout the console, are sent to an outside testing firm for 3 days of burning in, freezing and electrical tests to insure their reliability in the field. Since the power supply is the backbone of your console we made every effort to make this section as reliable as possible. That's why you will find not one, but three separate supplies! One for the main audio, one for the monitor amplifiers, and one for the displays. These supplies are fully protected against shorts and overheating and utilize massive heat sinking rated much above that necessary.

Although the list goes on, we think our warranty sums it up best. A FULL 4 YEARS ON ALL PARTS AND LABOR!

EASIER MAINTENANCE

No console has ever been easier to service. Although every effort has been made to make these consoles as reliable as possible, if something should go wrong you won't have to go thru contortions to repair it. Simply push two buttons and the front panel hinges down for complete accessibility to all components.



If total access is needed simply lift the top cover one half inch and slide forward. Even if the console is completely enclosed by a custom enclosure or has a shelf built over it, total interior

access is obtained in less than 15 seconds. Once inside you will notice an exceptionally clean, straight forward design that lends itself to rapid, efficient trouble shooting. All modules (including the supply), IC's and other crucial components, are plug in. Lighted LED's tell the status of the supply voltages at a glance. Remove 4 front mounted screws and the complete mother board hinges up for easy visual inspection and testing.

To make sure that the console is as easy to maintain as possible these consoles come with a very comprehensive manual that describes everything from physical locations (detailed photos) and circuit descriptions, to how each circuit function works.

2 WEEK TRIAL PERIOD

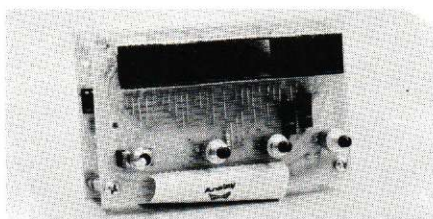
As we have always done with all of our products, the DC-38's are offered on a full 2 week trial basis. Put it thru your tests or on the air. You'll find that indeed we produce what we claim. Write, wire or call COLLECT today. You will be money and performance ahead.

6 DIFFERENT STEREO AND MONO MODELS

- DC38-5M—5 mixer, dual output, mono (20 inputs)
- DC38-5S—5 mixer, dual output, stereo (20 inputs)
- DC38-8M—8 mixer, dual output, mono (32 inputs)
- DC38-8S—8 mixer, dual output, stereo (32 inputs)
- DC38-10M—10 mixer, dual output, mono (40 inputs)
- DC38-10S—10 mixer, dual output, stereo (40 inputs)

Although photos of the DC38-8 & DC38-5 mixer consoles were not available in time for this brochure they may easily be visualized. Simply refer to the DC38-10S pictured herein and remove the first and last mixer sections for the appearance and approximate size of the DC38-8. For the DC38-5 remove the first two and last 3 mixer sections.

CLOCK/TIMER OPTION

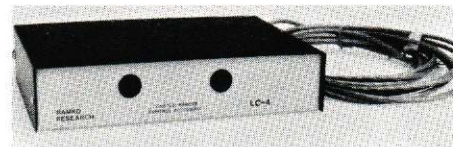


The DC38-CT is a six digit timer/clock option. Invaluable for production and on the air timing functions. Two totally independent functions in one small package. Timer with start, stop & reset front panel and remote controls may be operated even while clock section continues to keep accurate time.

Front panel switch simply switches display back and fourth between the clock and the timer. Readily accessible clock time setting controls. Accuracy is 0.03% standard with an optional Xtal time base available for 0.0005% accuracy. Trimmer adjustable for precise adjustments. This unit is mounted into the console (see pictorial

herein) or may be ordered as a stand alone unit, DC38-CT/C. Separate brochures available.

REMOTE CONTROL OPTION



The LC-2 & LC-4 remote start/stop options allow you to remote control cart machines, reel to reels, turntables, etc., directly from the consoles front panel select switches. Simply plug the LC(s) into the console socket provided & connect your remote equipment to the LC barrier strips. The LC-2 will accommodate 2 mixing channels at 2 inputs each while the LC-4 will accommodate 4 mixing channels at 2 inputs each. Separate brochures available.

SPECIFICATIONS:

INPUTS: 4 per mixer. All inputs balanced and gain selectable from mic thru high level. As shipped, channels 1 & 2 set for mic levels (balanced 150/250 ohms, -55 dBm). All other inputs are set for high level, -10 dBm nominal, balanced bridging.

OUTPUTS: PROGRAM - 600 ohm, differential balanced, +8 dBm nominal, +20 dBm max. AUDITION - same as Program. MONITOR - 5 watts per channel into 8 ohms. CUE - 2.5 watts to internal speaker.

HEADPHONES - 8 ohms thru high impedance. STEREO MIX (mono) - 600 ohms @ +8 dBm. MUTED, UNMUTED & AÜX. MUTED MONITOR, selectable via internal switches.

RESPONSE: PROGRAM & AUDITION - +0, -2 dB 20 Hz to 20 kHz referenced to 1 kHz @ +8 dBm out. MONITOR - +0, -2 dB 50 Hz to 15 kHz referenced to 1 kHz @ 1 watt out.

CROSSTALK: -70 dB @ 1 kHz, -55 dB @ 20 kHz.

DISTORTION: PROGRAM, AUDITION, COMBINED STEREO, MONITOR DRIVER - 0.3% or less.

S/N: PROGRAM, AUDITION AND COMBINED STEREO - -63 dB (unweighted) below +8 dBm referenced to -50 dBm in. -70 dB (unweighted) below +8 dBm on high level channels, referenced to -10 dBm in.

POWER: 117 VAC, 50/60 Hz. 220 VAC optional.

MUTING: One internally switch selectable (CUE & MONITOR MUTE) and one internally selectable relay for remote speaker muting.

ON AIR LIGHT: Programable relay (dry contacts) capable of 1 A @ 240 VAC.

TALK BACK: Internal microphone in conjunction with switched cue system and speaker driver.

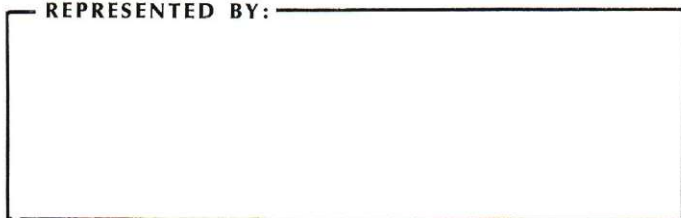
SIZE: DC38-5 29"W X 19"D X 10"H

DC38-8 35"W X 19"D X 10"H

DC38-10 42"W X 19"D X 10"H

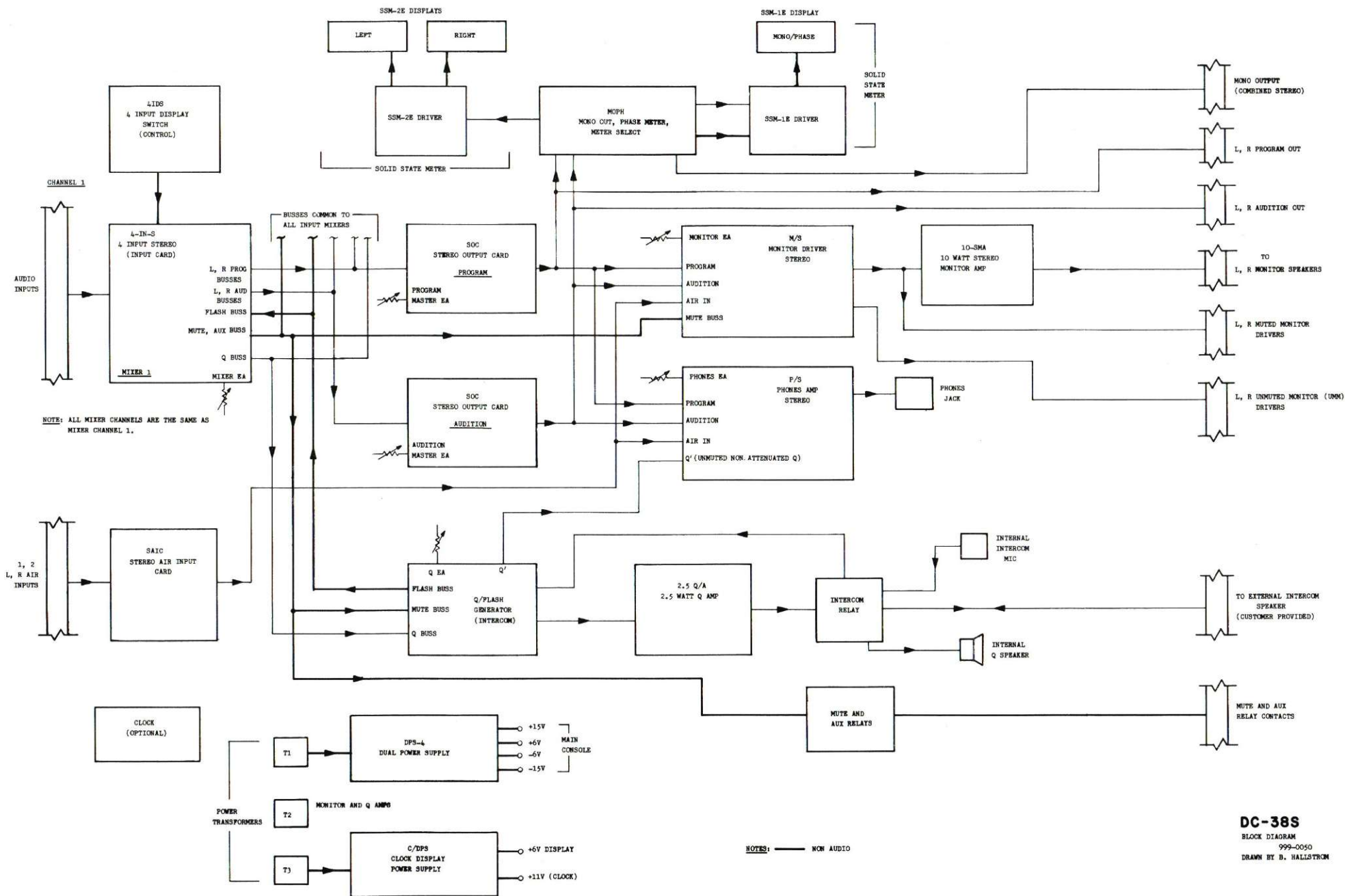
4 YEAR WARRANTY. 2 WEEK TRIAL PERIOD.

REPRESENTED BY:



RAMKO RESEARCH

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DC-38S
 BLOCK DIAGRAM
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