



AVC2

AUTOMATIC VOLUME CONTROL

USERS MANUAL

GENERAL DETAIL

The "AVC2" is a stereo unit and performs as an intelligent volume control. The operation is very simple. If the average operating level is kept below the internally set threshold the "AVC2" has no effect. If the average programme level exceeds the threshold "AVC2" will reduce its output level. The level is reduced in discreet steps indicated by the L.E.D. bargraph meter on the front panel of the unit. The action of the "AVC2" is to fade between these steps and is almost undetectable in use. The more one tries to increase the volume the more the "AVC2" will decrease it so that the system will barely change in perceived level. If driven to maximum attenuation the output level will be reduced by more than the increase in input level. The mixer or pre-amp feeding the "AVC2" will probably be clipping but the system will actually be at a lower than normal level. A clip indicator is provided to show when the input stage of the "AVC2" is being over driven. Reducing the input level will gently release the attenuation provided by the "AVC2".

The "AVC2" has no external controls for the operator to worry about - just a bargraph meter and some indicator led's to inform the operator of the status of the unit.

An external remote warning indicator may be connected to warn the operator that the operating level is 3dB away from the threshold at which the AVC2 will start to control level.

A mute relay is fitted which can be operated by an external switch to improve system security.

The "AVC2" also has provision to connect an external time switch (not supplied) to switch between two output levels.

.

INSTALLATION

The unit should normally be installed in the signal chain either between the mixer or pre amp and the amplifiers, or in larger systems the mixer/ preamp and the electronic crossover.

The unit should ideally be mounted where the operator can see the indicator leds on the front panel or alternatively remote indicators could be installed (see remote indicators section)

Connections are via 3 X 6 way terminal blocks, 1 for inputs left and right, 1 for outputs left and right, and 1 for auxiliary connections. Terminal blocks have been utilised rather than XLR connectors as this makes the unit less easy to by-pass

The unit features balanced inputs and outputs which are self compensating. Either side may be tied to the screen for unbalanced operation without loss of level or performance. (N.B. for unbalanced operation the negative output should be tied to the screen and not left single ended. An unbalanced connection between positive and screen with no connection to negative will result in a loss of signal level).

When wiring to balanced circuits for stereo operation both left and right channels should be identical to maintain phase.

To avoid ground loop problems, the audio common (cable screens) in this equipment is NOT connected to mains earth within the unit. The mains lead earth connection is only connected to the case and this must always be connected to MAINS EARTH.

As supplied the unit will be detecting the incoming signal to control the output level.

AUXILIARY CONNECTIONS

1 X 6 way terminal blocks is provided for the auxiliary connections. The unit is supplied with a link which is fitted between terminals 1 and 2. This is the security link and these two terminals need to be joined for the unit to operate. Removing the link will mute the unit. Fitting a security switch wired back to these terminals and operated by the amp rack door, back panel or similar may increase system security.

Terminals 3 and 4 are provided to interface to a time switch if required, for switching between two output levels.

With tags 3 and 4 connected together the output is at maximum, i.e. the same level as the input level (assuming no attenuation showing on the meter).

If tags 3 and 4 are not joined together the output level is adjustable via a pot accessible through a small hole between the input and output terminal blocks.

Tags 5 and 6 are provided to allow a warning indicator to be connected to the system an l.e.d indicator may be connected directly to tags 5 and 6 observing polarity to avoid damaging the l.e.d. Alternatively a conventional effects lighting, switching pack may be connected that is compatible with a 10V D.C. input to provide larger warning indication.

This output provides a 10V D.C. signal 3dB before the unit starts to control volume levels.

OPERATION AND SET-UP

As supplied the unit is adjusted to operate at an average nominal programme line level of 0Vu (+4dBu) and in most cases will not need any adjustment.

The output level may be adjusted by the output pot accessible through the small hole between the input and output terminal blocks.

A black plastic snap rivet is provided to blank this hole after the initial set up. If this rivet needs to be removed lift the head by prising with a thin object, finger and thumb nails will usually suffice. Always refit the snap rivet after adjustments are complete.

For different applications the unit may be set to operate at different levels by internal adjustments. See later section INTERNAL ADJUSTMENTS.

The "AVC2" is slow acting to differentiate between dynamic peaks of music and an increase in average level. Bear this in mind when making adjustments.

INTERNAL ADJUSTMENTS

Do not attempt to make any internal adjustments unless you are qualified to do so and you know what you are doing.

ALWAYS DISCONNECT POWER BEFORE REMOVING COVERS.

Access is gained by removing the top cover. Remove 3 screws from either side of the case. Remove 2 screws from the top and lift top cover off.

When the adjustments are completed refit the case top.

FIG 1.A. Shows the position of the range setting jump plug. This sets high and low operating ranges for the unit.

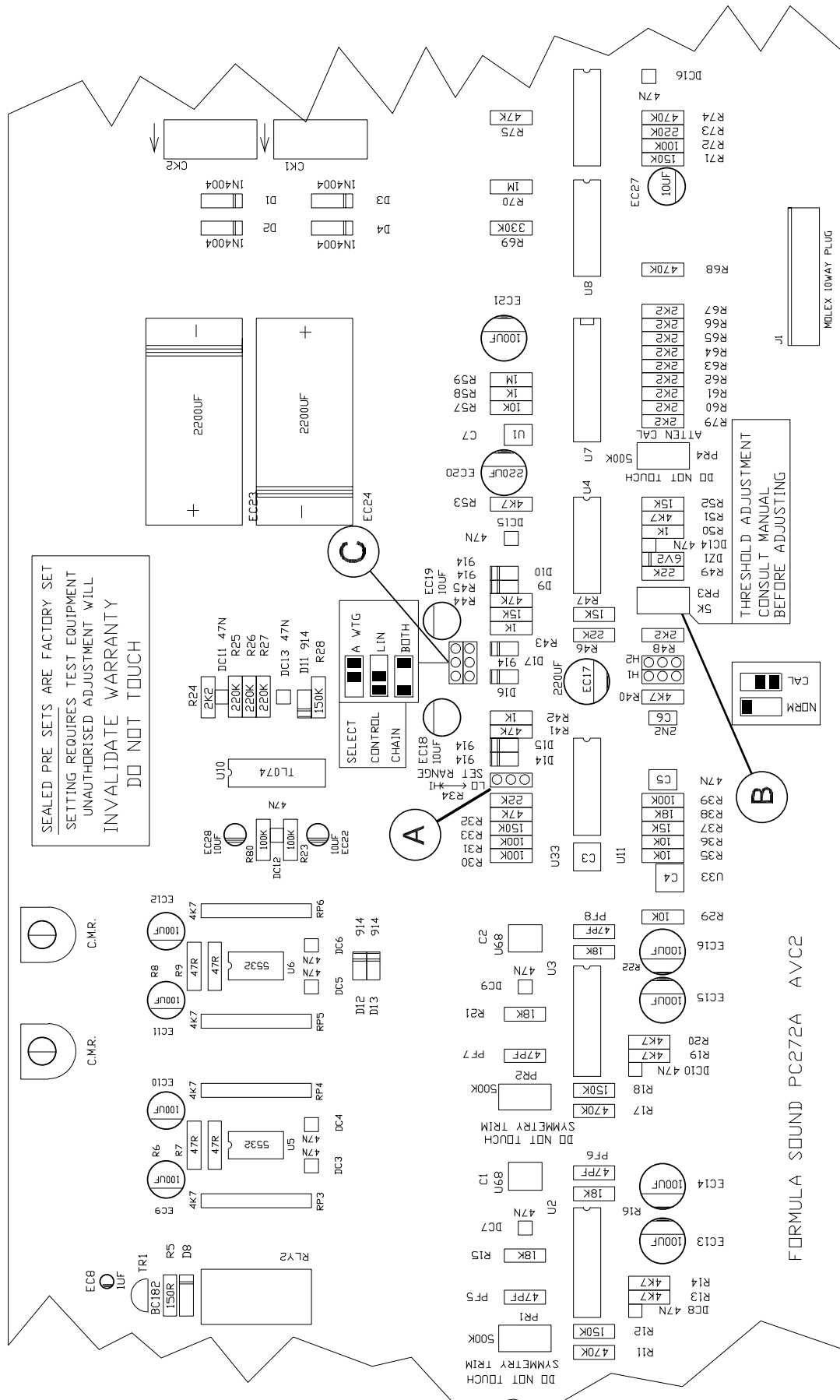
FIG 1.B. Shows the position of the sensitivity adjustment preset. This is a multi-turn preset. Use this if you wish to change the operating threshold of the unit. Use in conjunction with the range setting jump plug to increase or decrease the sensitivity of the unit.

FIG 1.C. Shows the position of 2 jump plugs. These are used to select the type of control chain used to trigger the attenuators. This may be set to linear, 'A' weighted or both. The "AVC2" uses two control chains in parallel, one with a flat response and one 'A' weighted. The output of the highest chain is used to control the unit. In special applications either may be selected by setting the jump plugs as indicated on the P.C.B.

IF YOU ARE NOT SURE OR FOR GENERAL PURPOSE USE LEAVE THESE AS FACTORY SET (BOTH).

ALL OTHER PRESETS AND JUMPERS ARE FOR ALIGNMENT AND TEST PURPOSES AND ARE FACTORY SET. **DO NOT - REPEAT - DO NOT TOUCH!**

INCORRECT SETTING OF ANY INTERNAL ADJUSTMENT WILL INVALIDATE THE WARRANTY.




SEALED PRE SETS ARE FACTORY SET
 SETTING REQUIRES TEST EQUIPMENT
 UNAUTHORISED ADJUSTMENT WILL
 INVALIDATE WARRANTY
 DO NOT TOUCH

THRESHOLD ADJUSTMENT
 CONSULT MANUAL
 BEFORE ADJUSTING

FORMULA SOUND PC272A AVC2

DO NOT ATTEMPT ADJUSTMENTS UNLESS YOU ARE QUALIFIED TO DO SO

		TEL 0161 494 5650 (+44 161 494 5650) FAX 0161 494 5651 (+44 161 494 5651)	
ASHTON ROAD, BREDBURY, STOCKPORT, CHESHIRE, SK6 2SR, UK		AVC2 USERS MANUAL PAGE 4	
FIG 1		DRG No. 719	
DATE 12-06-1995		ISSUE 2	

