

**DETAILED INFORMATION ON YOUR  
SYNARE S3X  
PRESET ELECTRONIC DRUM  
SENSITIVITY ADJUSTMENT  
SEQUENCER ADAPTATION  
INTERNAL PRESET ADJUSTMENTS**

Remove the three screws that hold the S3X steel case together. Carefully take the two halves apart and set them on a flat, sturdy surface RUBBER PAD SIDE DOWN.

Now turn this sheet over and look at figure 1. This is a detailed illustration of the S3X circuit board.

NOTE: USE CARE IN HANDLING ADJUSTMENT TRIMPOTS

**SENSITIVITY ADJUSTMENT** (right side of board)

To make the drum more sensitive, turn this control counter-clockwise. If you wish to make the drum less sensitive, turn this control clockwise.

**SEQUENCER ADAPTATION** (white switch near speaker)

If you don't own a SEQUENCER, leave this switch **as is**. Use any mono cord to connect the S3X to the amplifier input.

If you do own a Sequencer, slide the switch to the right (SEE FIGURE 1). Use a stereo cord to connect the S3X to the Sequencer input.

**ADJUSTMENT FOR BOTTOM OF TUNE** (Near center of board)

**DO NOT MOVE THIS CONTROL;** It is set at the factory. Adjusting this control will change **all** of the presets in an undesirable way.

NOTE: IN CASE YOU MOVE THIS CONTROL  
ACCIDENTLY, RETURN IT TO THE FACTORY  
SETTING, INDICATED BY THE COLORED MARK.

**INTERNAL PRESET ADJUSTMENTS**

If desired, you can adjust the sound of each preset position by turning the preset adjustments on the circuit board.

The factory setting is indicated by a colored mark on each adjustment trimpot.

**PRESET 1: DOWNSWEEP**

The sweep depth adjustment is opposite the front panel "filter sweep" control. As you move this control clockwise, you will raise the starting pitch (or top) of the sweep.

**PRESET 2: DOWNSWEEP WITH MODULATION**

The modulation rate adjustment is opposite the front panel "oscillator 2" tune control. Do not confuse this with the preset 5 adjustment (SEE FIGURE 1).

By turning this control clockwise, you can increase the modulation rate.

**PRESET 3: CHIME**

The tune adjustment for the chime preset is opposite the front panel "filter tune" control. If turned clockwise, this control will raise the pitch of the chime sound.

**PRESET 4: WHITE NOISE**

The resonance (or brightness) adjustment for the white noise preset **and** the dual oscillator preset (#5) is opposite the front panel "RES" control. Be careful; if you turn this control too far clockwise, you will add a pitch to your white noise preset.

**PRESET 5: DUAL OSCILLATION**

There are three adjustments for this preset. One adjustment is the RES control described under preset 4. The other two adjustments are for oscillators 1 and 2. These are located opposite the corresponding front panel controls. By turning these controls clockwise, you can raise the pitch of each oscillator.



# FRONT PANEL (EXTERNAL) CONTROLS

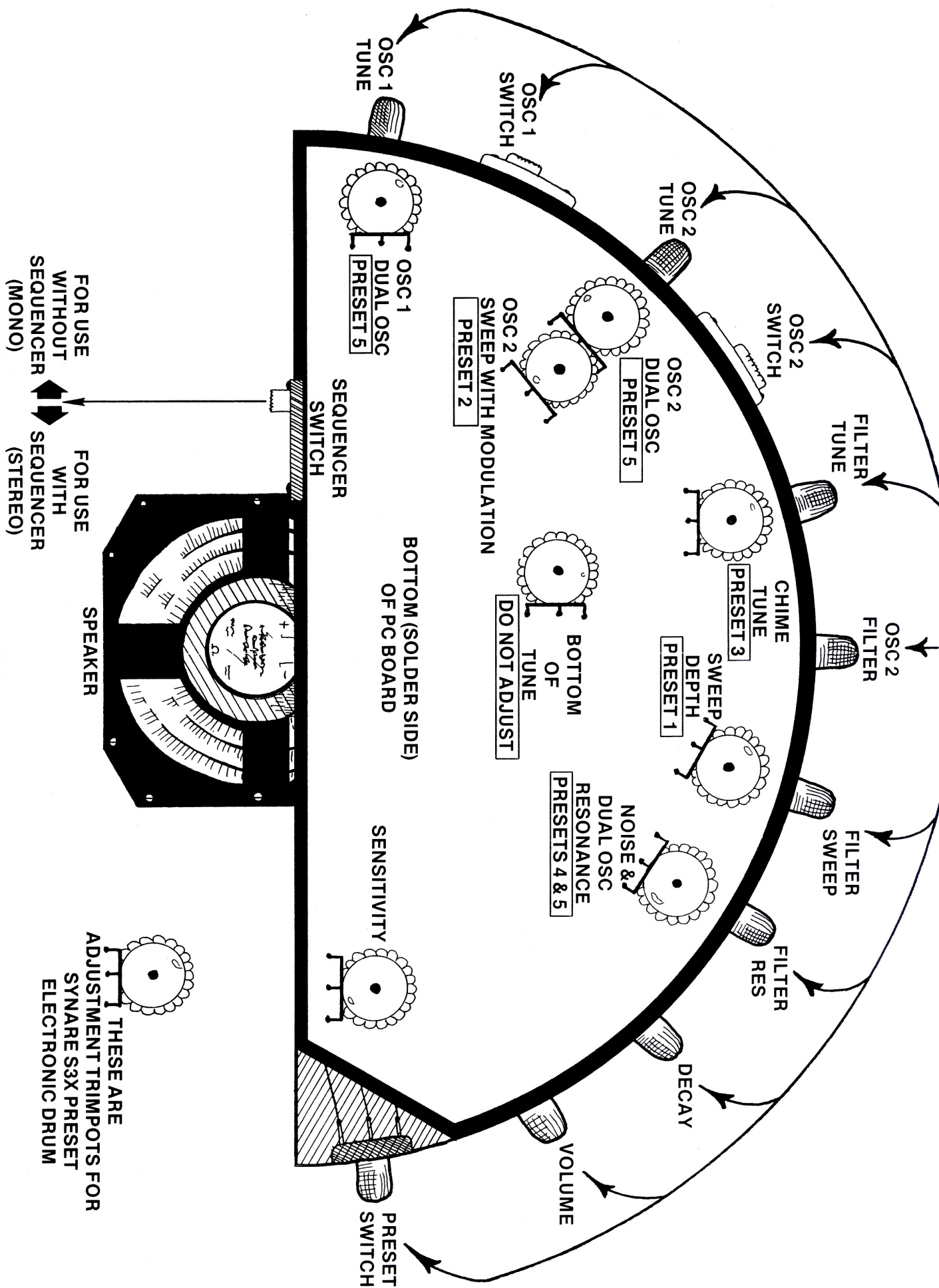


FIGURE 1

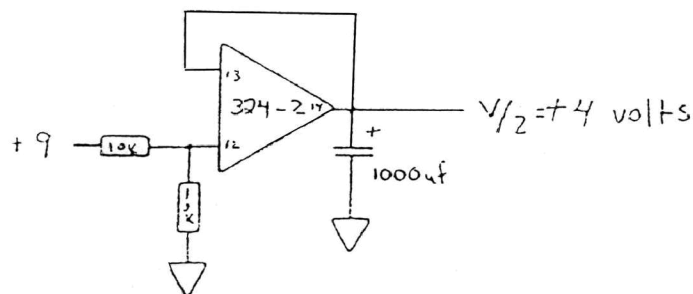
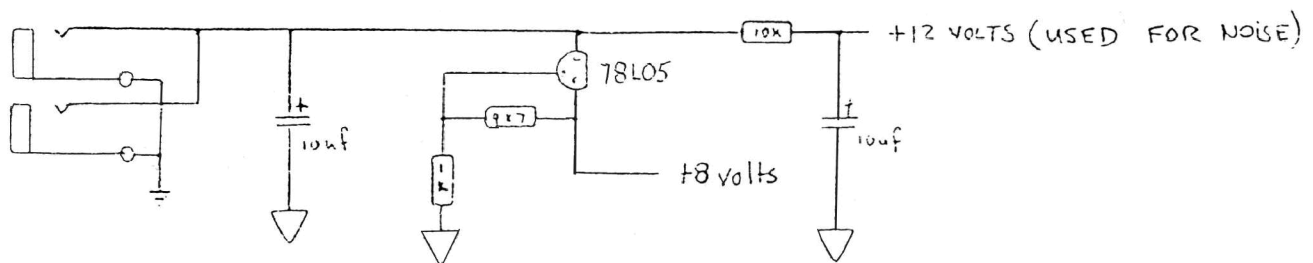
## SYNARE S3X SCHEMATICS

DUE TO THE COMPLEXITY OF THE S3X, PLEASE CONTACT STAR'S ENGINEERING DEPARTMENT IF THESE SCHEMATICS ARE TO BE USED FOR MODIFYING YOUR S3X.

IF YOU ARE ATTEMPTING TO REPAIR A S3X, IT MAY BE EASIER TO ASK FOR A REPAIR BOARD OR TO CALL STAR, DESCRIBE YOUR SPECIFIC PROBLEM, AND RECEIVE A SUGGESTED SOLUTION. STAR 1-800-243-7169. 203. 684-4258

### REGULATOR

THE USES TWO VOLTAGES REFERENCED FROM GROUND. THEY ARE +8 and +4.

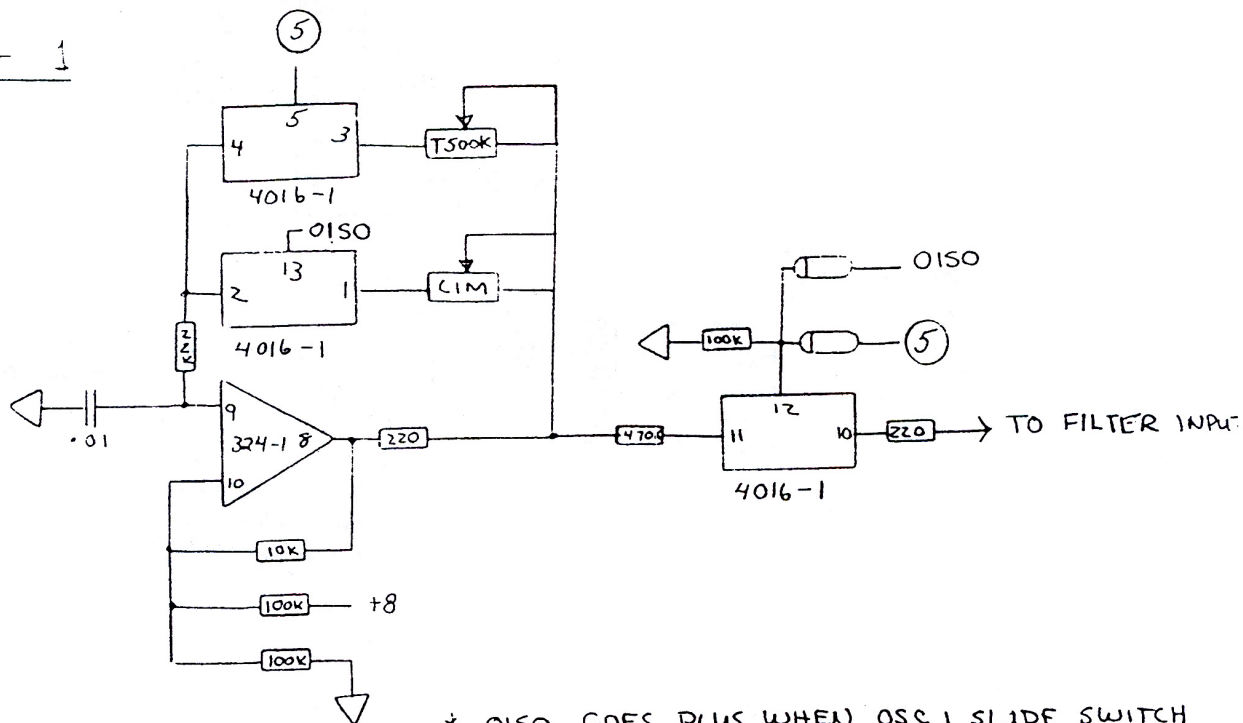


\*

If the 1000uF fails hum and noise can result

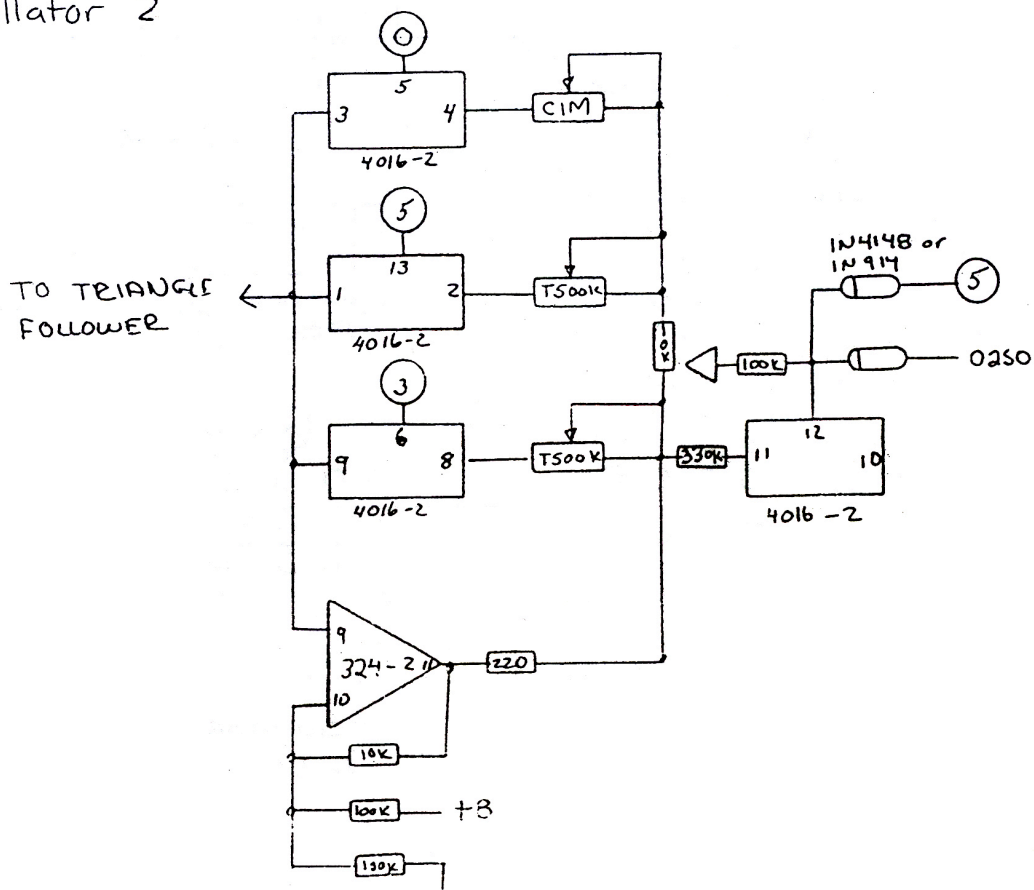


## Oscillator 1

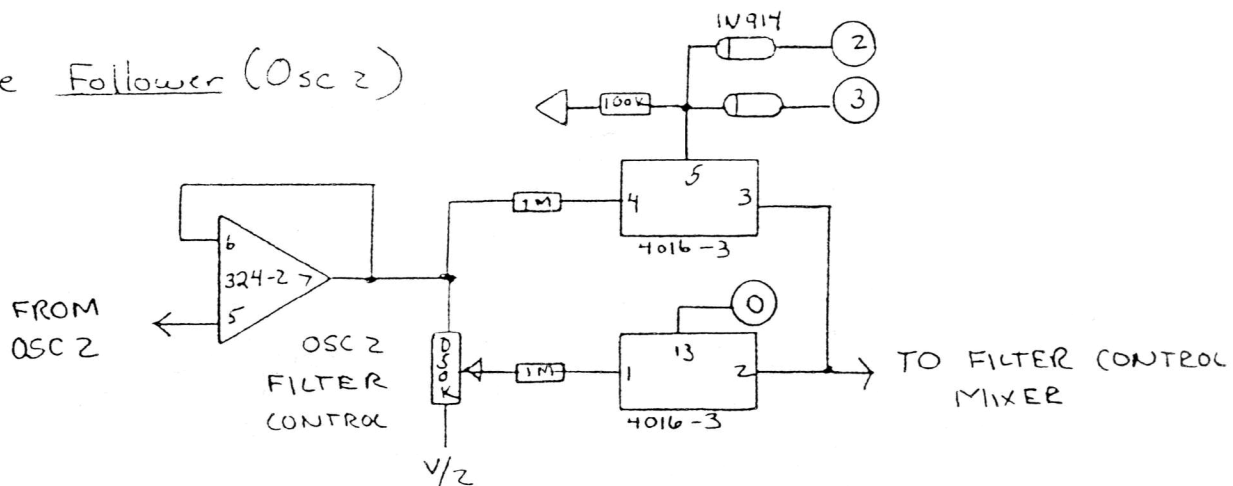


\* OISO GOES PLUS WHEN OSC 1 SLIDE SWITCH ON AND PRESET SWITCH AT 0. THIS SELECTS OSC 1'S TUNE CONTROL AND PASSES OSC 1 TO FILTER INPUT.

## Oscillator 2

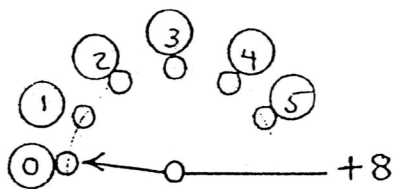
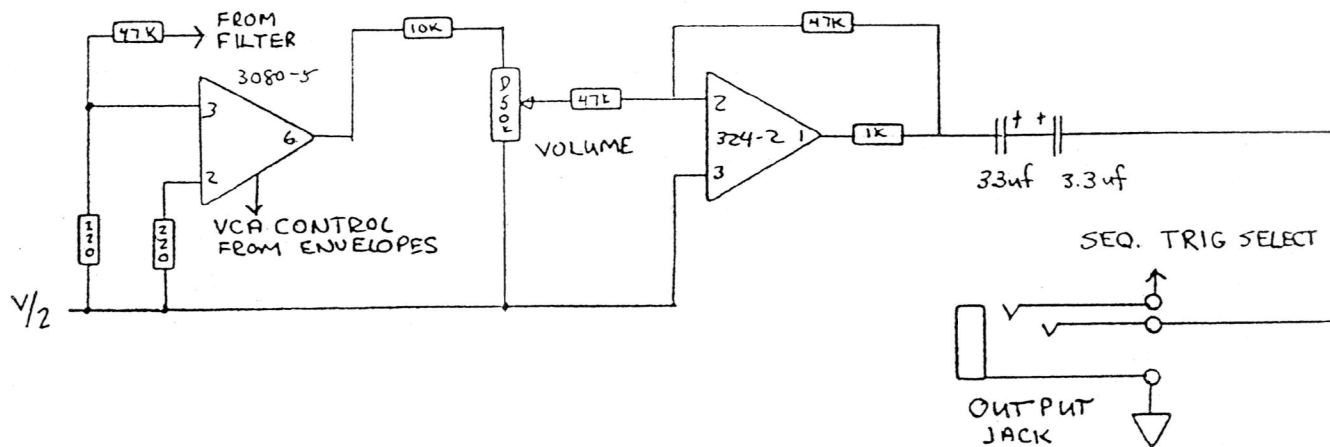

$$53x - 3$$

## Triangle Follower (Osc 2)

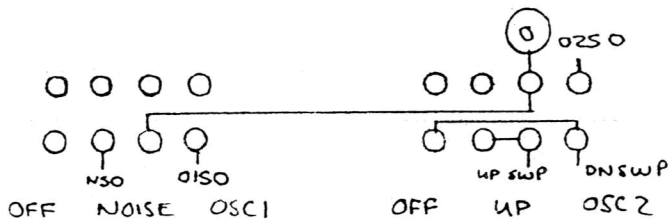


\* This permits the modulation of the filter in PRESET 0 OR PRESETS 2 and 3.

## VOLTAGE CONTROLLED AMPLIFIER



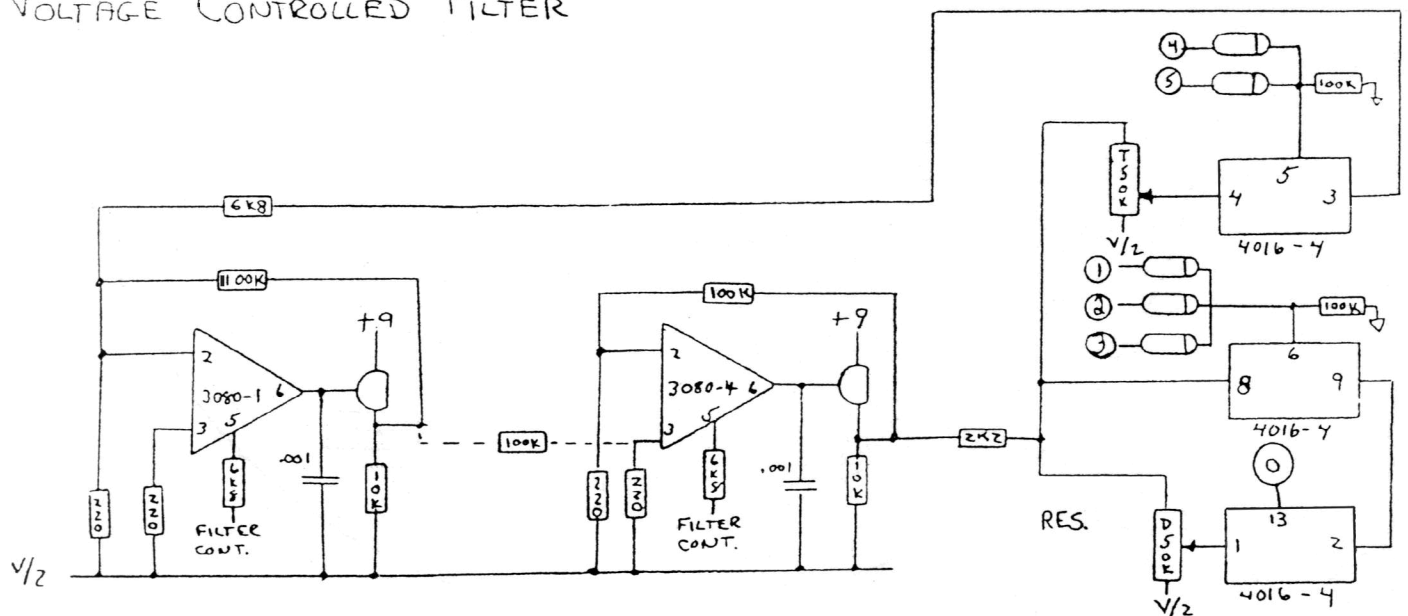
PRESET  
SWITCH



OSCILLATOR 1  
SWITCH

OSCILLATOR 2  
SWITCH

## VOLTAGE CONTROLLED FILTER

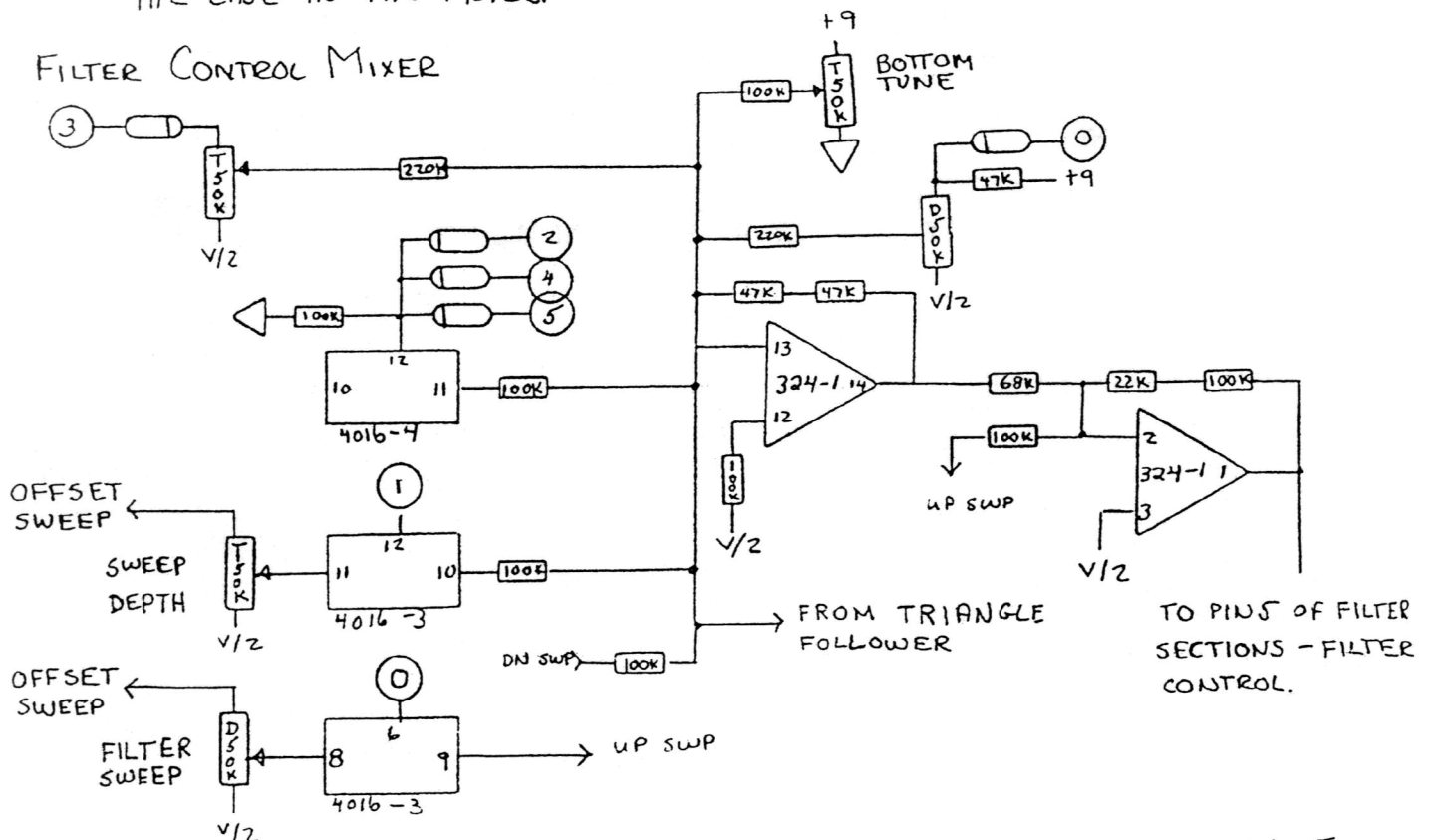


\* ONLY TWO SECTIONS OF FOUR POLE FILTER SHOWN. ALL TRANSISTORS ARE DARLINGTON MPSA14s

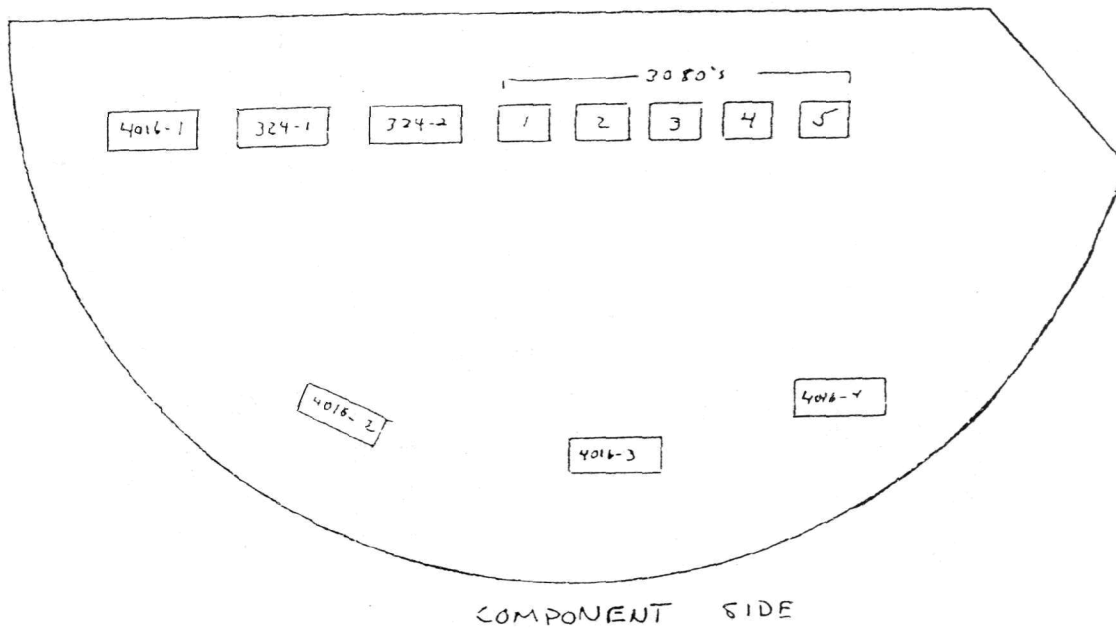
THIS CIRCUIT (AND OTHERS) ARE SIMILAR OR IDENTICAL TO SYNARE 3. HENCE, DO NOT HESITATE TO REFER TO SYNAREJ MANUAL.

220  $\Omega$  RESISTORS OFTEN ARE USED FOR JUMPERS. THIS IS NOT THE CASE IN THE FILTER.

## FILTER CONTROL MIXER



## IC LAYOUT



### IC POWER PINS

324	+8	PIN 4
	GRND	PIN 11
3080	+8	PIN 7
	GRND	PIN 4
4016	+8	PIN 14
	GRND	PIN 7

### POT PLACEMENT

AFTER REPLACING FRONT PANEL CONTROLS AND TIGHTENING BOARD IN HOOD STRESS RELEASE THE POTS BY CAREFULLY TOUCHING EACH LEG WITH A HOT IRON.