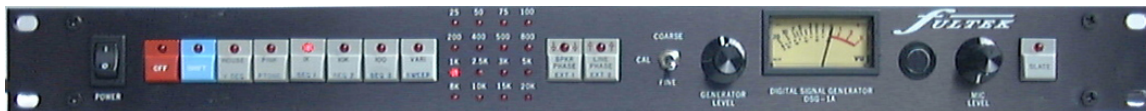




4373 Beck Ave.
Studio City, CA
818-505-8836

Digital Signal Generator DSG-1B





(818) 505-8836

DIGITAL SIGNAL GENERATOR MODEL NUMBER DSG-1B

THE DIGITAL SIGNAL GENERATOR IS A COMPLETELY DIGITALLY GENERATED SIGNAL DEVICE WITH REAL (NOT SYNTHESIZED) VOICE CHANNEL SLATING CAPABILITIES PLUS PINK NOISE, PINK TONE (31 ISO FREQUENCIES ALL AT THE SAME TIME), A SPEAKER PHASE (5 MILLISECOND SQUARE WAVE BURST) AND A SPECIAL 500 HZ. LINE PHASE SIGNAL FOR TESTING LINES THAT GO THROUGH TRANSFORMERS, ETC. THAT A SQUARE WAVE DOESN'T GO THRU VERY WELL. SPECIAL SIGNALS CAN BE GENERATED SUCH AS A 35MM XMOD SIGNAL OR A 16MM XMOD SIGNAL. CUSTOM SIGNALS CAN ALSO BE GENERATED ON REQUEST AT A NOMINAL ADDITIONAL FEE. THERE IS ALSO AN ON BOARD SLATING MIC THAT OVERRIDES ALL FEATURES. ALL FEATURES EXCEPT LEVEL CONTROLS MAY BE REMOTE CONTROLLED OR TRIGGERED FROM ANY SWITCH CLOSURE (OR OPEN COLLECTOR OUTPUT) SUCH AS A TIME CODE OR MIDI CONTROL SIGNAL.

IN ADDITION, SEQUENCES CAN BE PROGRAMMED IN. FOR EXAMPLE, 10 SECONDS OF PINK NOISE, 1K HZ, 10 K HZ, AND 50 HZ OR WHATEVER SEQUENCE IS DESIRED. THE SO CALLED NBC STANDARD OF VOICE SLATING LEFT AND RIGHT CHANNELS PLUS THE SEQUENCE OF TONES (20 SEC OF 1K HZ, 10 SEC OF 50 HZ, 5K HZ, 10K HZ, 15K HZ) ARE AVAILABLE AS WELL.

THE DSG-1A COMES STANDARD WITH 5 FULLY BUFFERED BALANCED OUTPUTS WITH 2 CHANNEL LOOP THROUGH (ON OUTPUTS 1 AND 2) WHICH ALLOWS YOU TO LEAVE A 2 CHANNEL MACHINE OR BUS PATCHED THROUGH THE UNIT AND IT IS HARD WIRE BYPASSED WHEN THE POWER IS OFF OR THE GENERATOR IS NOT ON. UP TO 8 CHANNEL LOOP THROUGH IS AVAILABLE AT AN ADDITIONAL CHARGE AND WOULD BE AVAILABLE VIA AN ELCO TYPE CONNECTOR.

THERE IS AN OPEN COLLECTOR OUTPUT FOR DIM (OR MUTE) WHICH CAN BE JUMPED TO OPERATE WHEN IN OSC MODE, SLATE MODE OR BOTH. THERE ARE ALSO TWO OPEN COLLECTOR OUTPUTS WHICH CAN BE ASSIGNED TO ANY OF THE SWITCHES. THESE COULD BE USED TO PUT A MACHINE IN RECORD OR TO TRIGGER ANY OUTSIDE DEVICE.

SPECIFICATIONS:

1.75 INCH (1 UNIT HEIGHT) RACK MOUNTED CHASSIS
INPUT IMPEDANCE 20K OHMS (REMOTE SLATE INPUT)
OUTPUT IMPEDANCE 100 OHMS
HEADROOM BALANCED, +28 DBM

FRONT PANEL CONTROLS

SWITCH 0; OFF: THIS SWITCH TURNS THE SIGNAL GENERATOR OFF. IT HARD WIRE BYPASSES CHANNEL ONE AND CHANNEL TWO (OR ONE THRU EIGHT IF THE ELCO OPTION HAS BEEN CHOSEN) AND KILLS THE SYSTEM CLOCK.

SWITCH ONE; SHIFT: WHEN THE LED IS OFF, THIS SWITCH ENABLES THE TOP ENGRAVED FUNCTIONS ON SWITCHES TWO THRU NINE. WHEN THE LED IS ON (SHIFT MODE) THE BOTTOM ENGRAVED FUNCTIONS OCCUR. TOGGLING BETWEEN SHIFT AND NORMAL MODE PUTS THE SYSTEM IN THE OFF MODE UNTIL ANOTHER FUNCTION IS SELECTED.

SWITCH TWO; HOUSE/VC SEQ: IN THE "NORMAL" MODE WHEN THIS SWITCH IS PRESSED IT OUTPUTS THE "HOUSE" STANDARD, WHICH CAN BE ANY AVAILABLE SEQUENCE. IN THE "SHIFT" MODE WHEN THIS SWITCH IS PRESSED IT VOICE SLATES CHANNEL ONE "LEFT" AND CHANNEL TWO "RIGHT" PLUS THE NBC SEQUENCE OF TONES WHICH IS 20 SECONDS OF 1K HZ., 10 SECONDS OF 50 HZ., 10 SECONDS OF 5K HZ., 10 SECONDS OF 10K HZ., 10 SECONDS OF 15K HZ., AND THEN OFF.

SWITCH THREE; PINK/PTONE: IN THE NORMAL MODE THIS SELECTS PINK NOISE. IN THE SHIFT MODE THIS SELECTS PINK TONE (31 ISO FREQUENCIES).

SWITCH FOUR; 1K/SEQ 1: IN THE NORMAL MODE THIS SELECTS 1K HZ. IN THE SHIFT MODE THIS SELECTS CUSTOM SEQUENCE #1.

SWITCH FIVE; 10K/SEQ 2: IN THE NORMAL MODE THIS SELECTS 10K HZ. IN THE SHIFT MODE THIS SELECTS CUSTOM SEQUENCE #2.

SWITCH SIX; 100/SEQ 3: IN THE NORMAL MODE THIS SELECTS 100 HZ. IN THE SHIFT MODE THIS SELECTS CUSTOM SEQUENCE #3.

SWITCH SEVEN; VARI/SWEEP: IN THE NORMAL MODE THIS SELECTS THE VARIABLE FREQUENCY MODE. THE FREQUENCIES ARE THEN SELECTED BY SWITCHES EIGHT AND NINE. IN THE SHIFT MODE THIS SELECTS THE "SWEEP" MODE (STEPS THRU ALL THE FREQUENCIES CONTINUALLY).

SWITCH EIGHT; SPEAKER PHASE: IN THE NORMAL MODE THIS SELECTS SPEAKER PHASE WHICH IS A 5 MILLISECOND PULSE APPROXIMATELY EVERY HALF SECOND. IN THE SHIFT MODE THIS CONTROLS EXTERNAL OUTPUT #1 WHICH IS AN OPEN COLLECTOR OUTPUT. WHEN IN THE VARIABLE FREQUENCY MODE THIS IS THE (DOWN) SWITCH.

SWITCH NINE; LINE PHASE: IN THE NORMAL MODE THIS SELECTS LINE PHASE WHICH IS A COMBINATION OF FREQUENCIES WHOSE BASE FREQUENCY IS 500 HZ. THIS LOOKS LIKE A FINGER POINTING UP WHEN IN PHASE AND DOWN WHEN OUT OF PHASE. IN THE SHIFT MODE THIS CONTROLS EXTERNAL OUTPUT #2 WHICH IS AN OPEN COLLECTOR OUTPUT. WHEN IN THE VARIABLE FREQUENCY MODE THIS IS THE (UP) SWITCH.

FRONT PANEL CONTROLS CONT .

COARSE, CAL, FINE SWITCH: IN THE COARSE POSITION THE OUTPUT IS ADJUSTED VIA THE LEVEL CONTROL BETWEEN 0 AND APPROXIMATELY 27 DBM. IN THE CALIBRATE POSITION THE OUTPUT IS A FIXED +4 DBM ADJUSTED VIA A TRIM POT MARKED "CAL" ON THE MAIN BOARD. IN THE FINE POSITION THE OUTPUT IS ADJUSTED APPROXIMATELY +/- 2 DB AROUND +4 DBM VIA THE LEVEL CONTROL.

SLATE MIC LEVEL: THIS CONTROLS THE SLATE MIC LEVEL.

SLATE SWITCH: THIS PUTS THE UNIT INTO THE SLATE MODE NO MATTER WHAT MODE THE UNIT IS IN AND ALSO TURNS ON 25 HZ. AS A SLATE TONE. THE SLATE TONE LEVEL IS CONTROLLED BY A POT ON THE MAIN BOARD CALLED "SLATE TONE LEVEL".

MAIN BOARD ADJUSTMENTS

P1: THIS IS SILKSCREENED PINK LEVEL BUT USE THIS TO ADJUST DOLBY SR LEVEL INSTEAD.

P2: USE THIS TO ADJUST VOICE LEVEL.

P3: USE THIS TO ADJUST SLATE TONE LEVEL.

P4: USE THIS TO SET VU METER TO 0 WHEN YOU HAVE +4 DBM AT THE OUTPUTS WITH THEIR LOADS.

P5: THIS IS SILKSCREENED SR BUT USE THIS TO ADJUST PINK NOISE AFTER SETTING SR LEVEL.

P6: USE THIS TO ADJUST PINK TONE LEVEL IF THAT OPTION HAS BEEN PURCHASED.

P7: THIS IS A FACTORY ADJUSTMENT. THERE SHOULD BE NO NEED TO ADJUST THIS.

P8: USE THIS TO SET FOR +4 DBM ONCE YOU HAVE YOUR LOADS CONNECTED.

WIRING CONSIDERATIONS

CHANNEL 3, 4, COMPOSITE ARE WIRED AS FOLLOWS:

PIN 1 WIRED TO COMMON
PIN 3 HIGH
PIN 2 LOW

YOU MAY WIRE SHIELDS ANY WAY YOU WANT, HOWEVER, PLEASE NOTE THE DIFFERENCE WITH THE 2 LOOP THROUGH CHANNELS (CHANNEL 1 & 2). DIFFERENCES OR PERTAIN TO SHIELDS.

CHANNEL 1 & 2 ARE WIRED AS FOLLOWS:

FEMALE PIN 1 WIRED THRU TO MALE PIN 1
PIN 3 HIGH
PIN 2 LOW

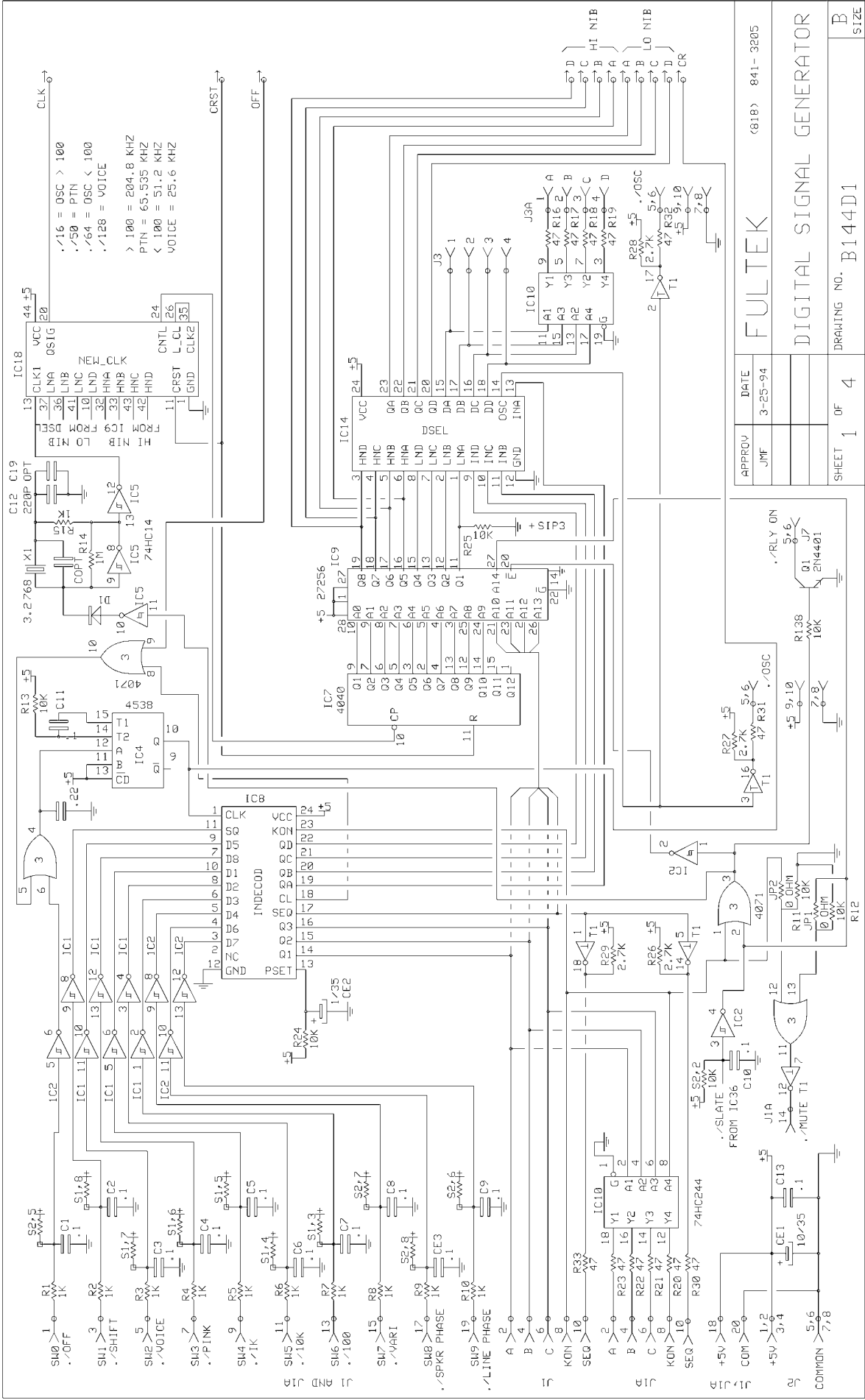
YOU NEED TO EITHER DROP SHIELDS AT DIGITAL SIGNAL GENERATOR END (ON CHANNEL 1 & 2) OR WIRE BOTH SHIELDS AT DIGITAL SIGNAL GENERATOR END AND DROP SHIELD AT ONE END OF THE INPUT OR OUTPUT CABLES BUT NOT BOTH. THE SAFEST WAY IS DROP BOTH SHIELDS AT THE DIGITAL SIGNAL GENERATOR AND TAKE CARE OF THE SHIELDS AT THE OTHER END.

AN EXCEPTION IS IF THE ELCO OPTION IS INSTALLED CHANNEL 1 IS THE SAME AS CHANNEL 3, AND CHANNEL 2 IS THE SAME AS CHANNEL 4.

UNITS WITH 56 PIN ELCO (EDAC) CONNECTORS:

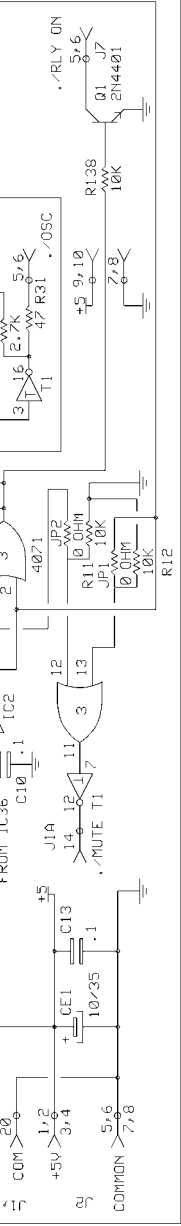
SEE THE PINOUT AT THE END OF WIRING LAYOUTS

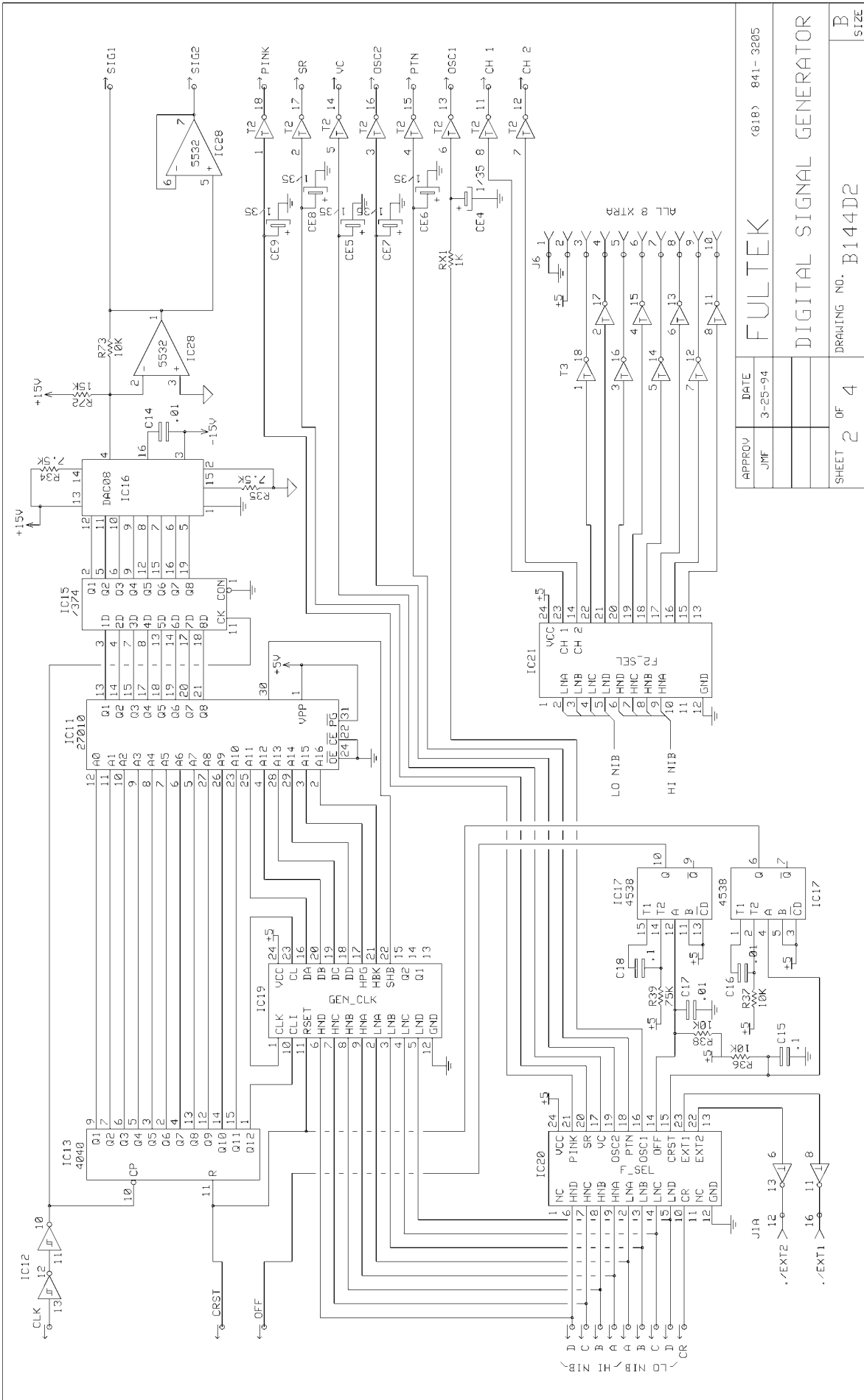
THE SHIELDS TIE THRU AT THE ELCO CONNECTOR SO TREAT THE TWO CABLES AS IF THEY WERE ONE. IN OTHER WORDS TIE BOTH SHIELDS AT THE SIGNAL GENERATOR END TIE YOUR SHIELD AT ONE OF THE ENDS, BUT NOT BOTH. THE SIGNAL GENERATOR SUPPLIES **NO** SHIELDS AT ALL ON FEED THRU CHANNELS, BUT DOES USE YOUR SHIELD FOR THE INTERNAL SHIELDING ON THE ELCO VERSION ONLY.



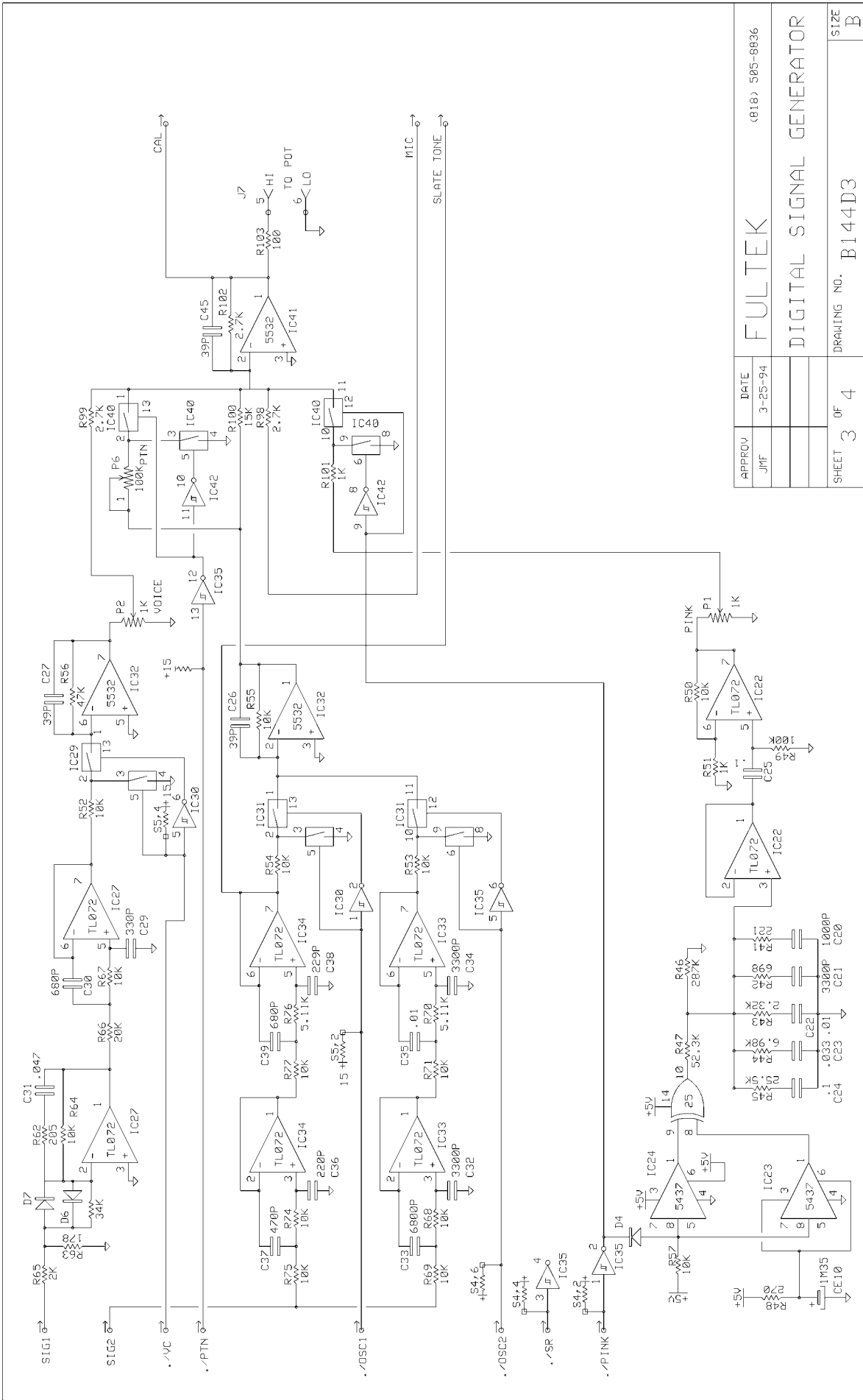
.15 = OSC > 100
 .50 = PTN
 .64 = OSC < 100
 .128 = VOICE
 > 100 = 204.8 KHZ
 PTN = 65.535 KHZ
 < 100 = 51.2 KHZ
 VOICE = 25.6 KHZ

APPROV	DATE	(818)	841-3205
JMF	3-25-94		
FULTEK			
DIGITAL SIGNAL GENERATOR			
SHEET 1	OF 4	DRAWING NO. B144D1	
		B	SIZE

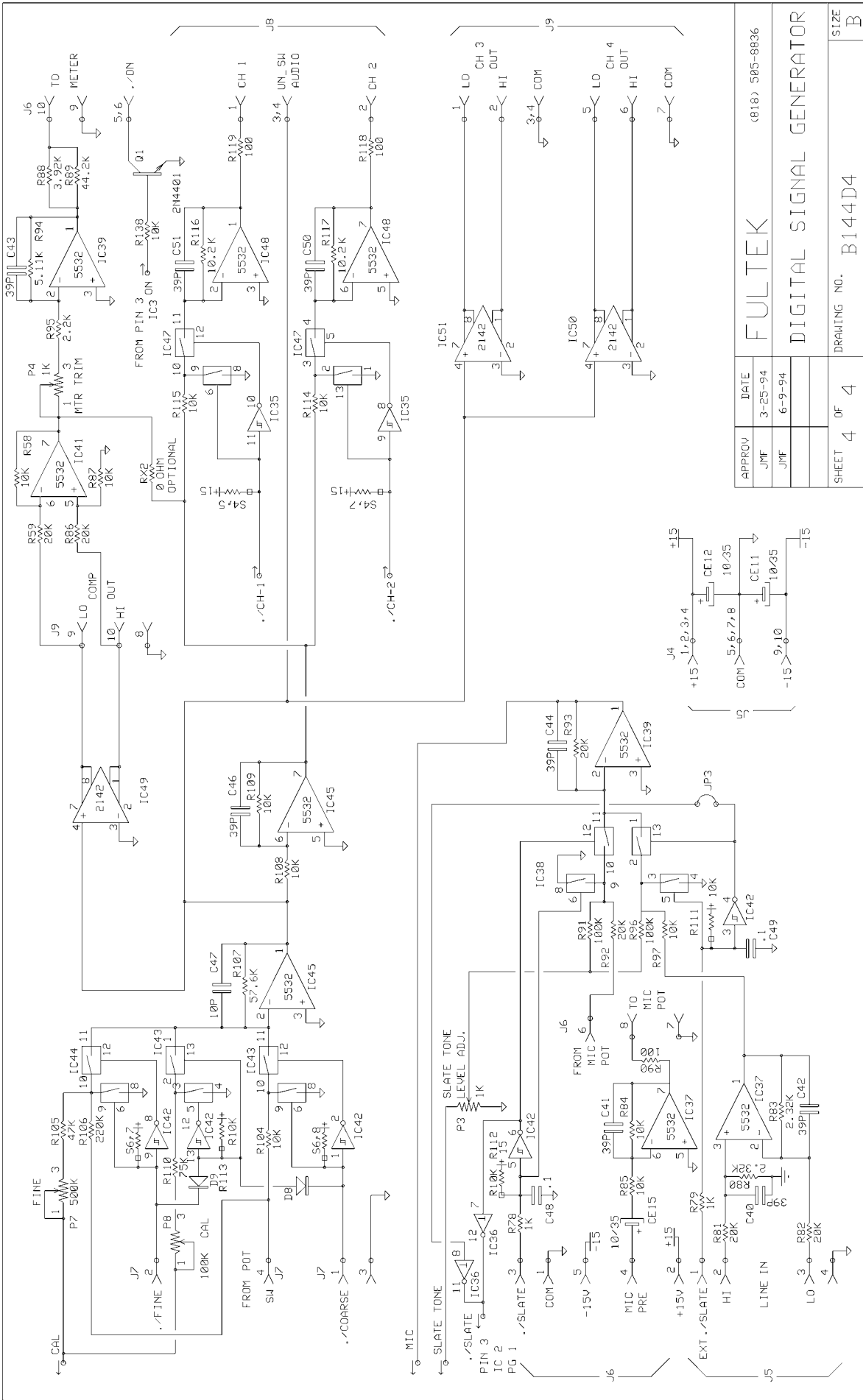




APPROV	DATE	(818)	841-3205
JMF	3-25-94		
FULTEK			
DIGITAL SIGNAL GENERATOR			
SHEET 2	OF 4	DRAWING NO. B144D2	B SIZE

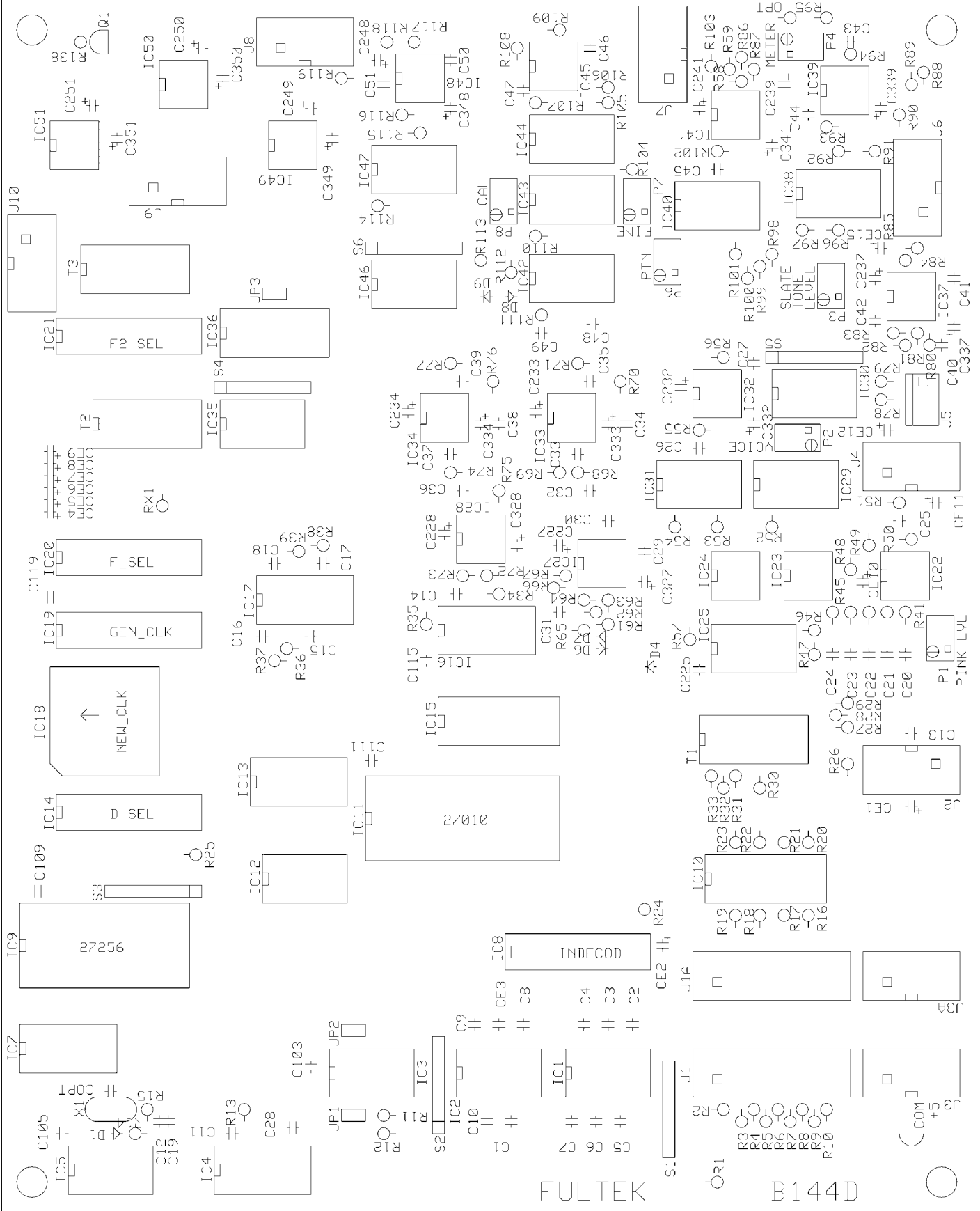


APPROV	DATE	FULTEK	(818) 505-8836
JMF	3-25-94		
SHEET 3 OF 4		DRAWING NO. B144D3	
		DIGITAL SIGNAL GENERATOR	
		SIZE B	



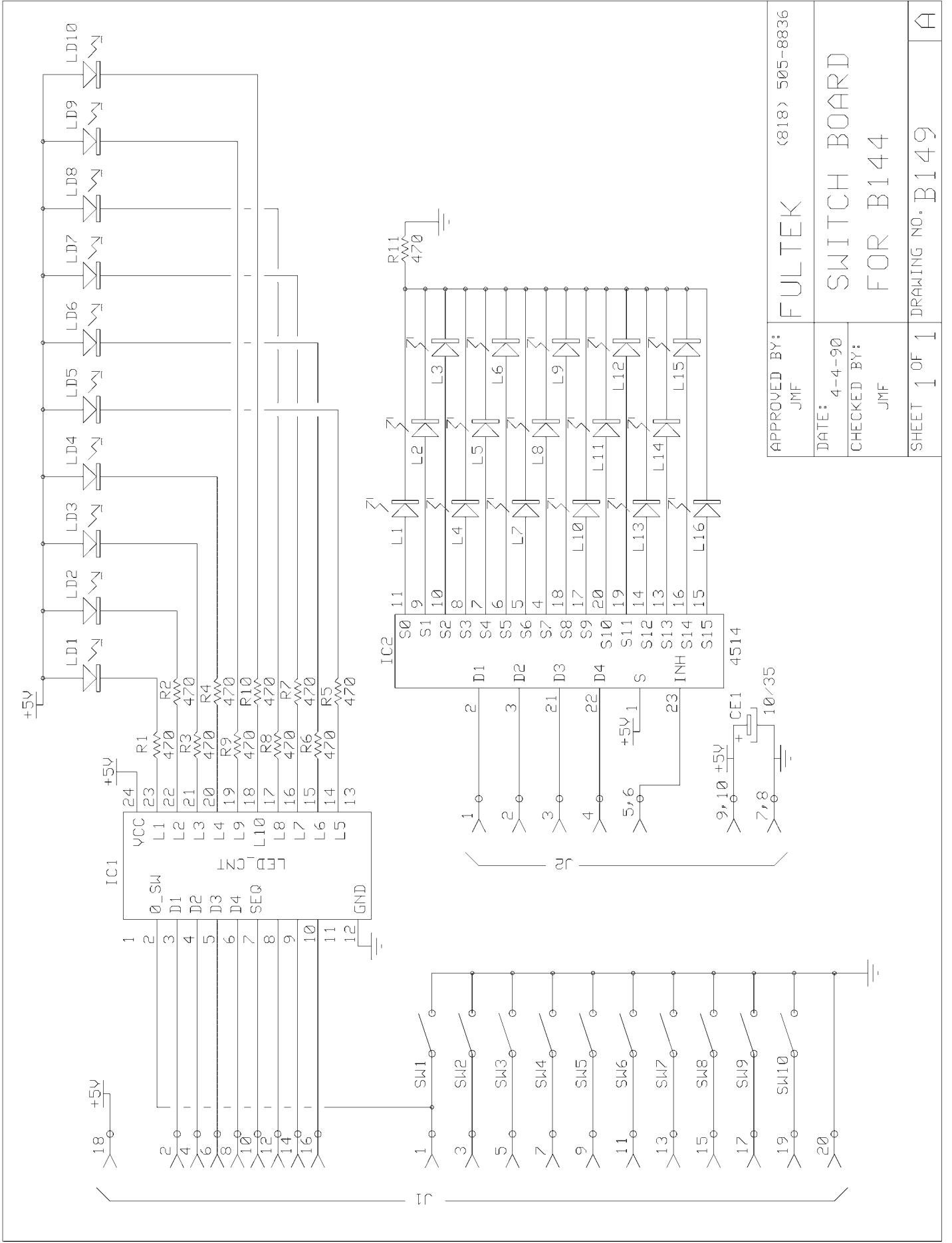
FULTEK #B144D SILK SCREEN

BOARD DIM.:
X = 10.000"
Y = 8.000"

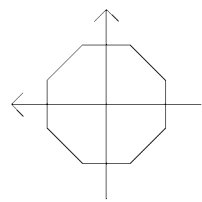


FULTEK

B144D

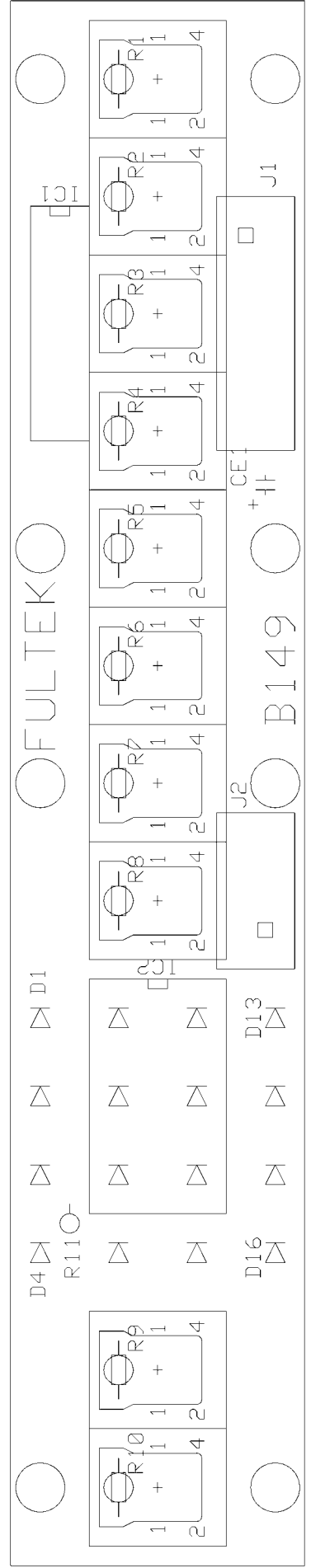
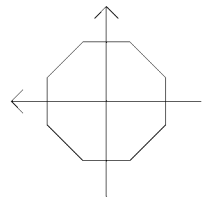


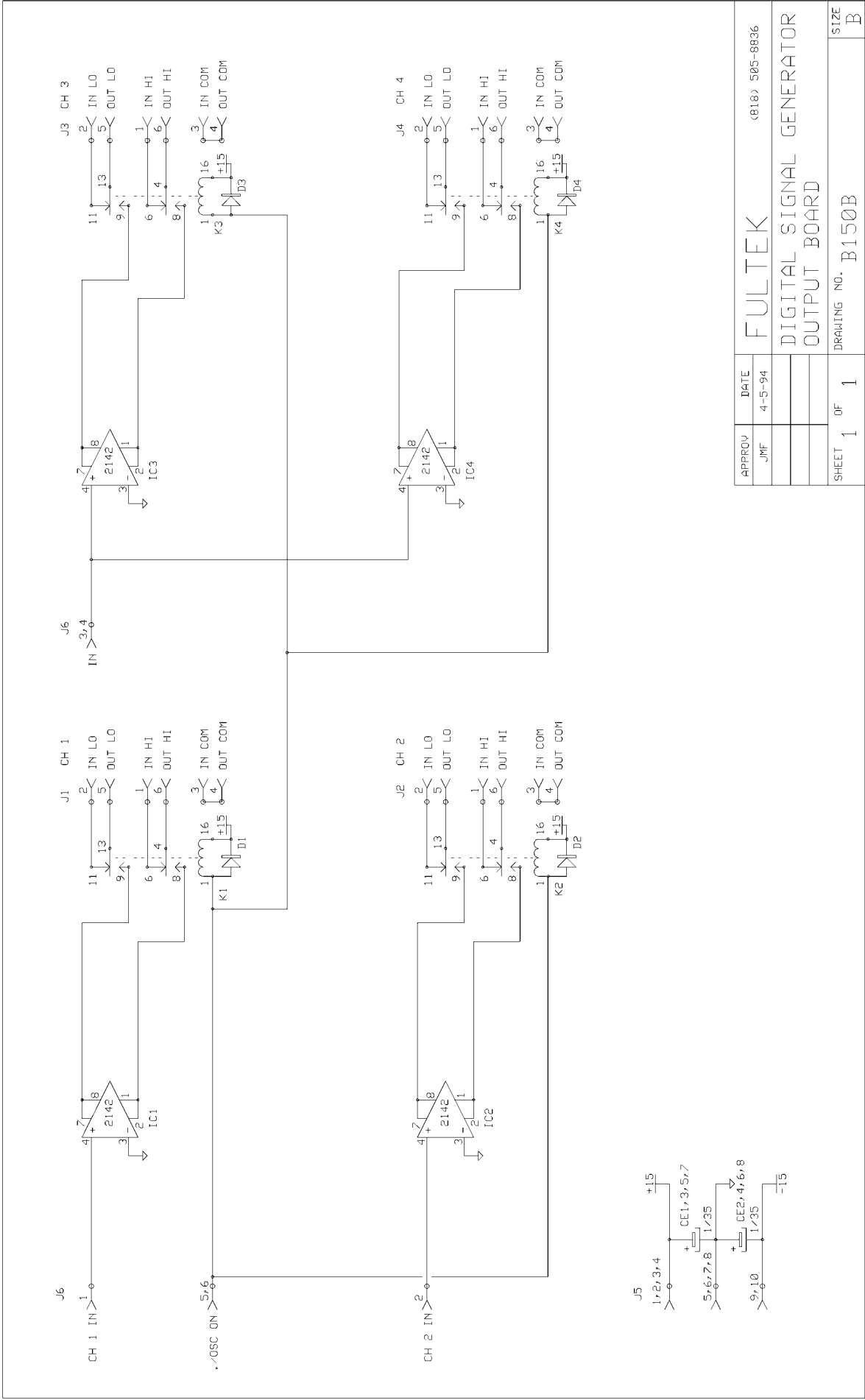
APPROVED BY: JMF	FULTEK	(818) 505-8836
DATE: 4-4-90	SWITCH BOARD	
CHECKED BY: JMF	FOR B144	
SHEET 1 OF 1	DRAWING NO. B149	A



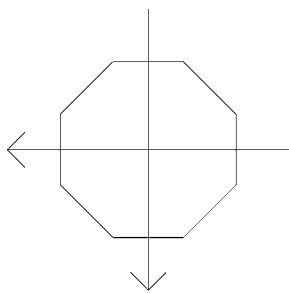
FULTEK
BOARD # B149

SILK SCREEN
REDUCE TO 8.000"





APPROV	DATE	FULTEK DIGITAL SIGNAL GENERATOR OUTPUT BOARD	(818) 505-8836
JMF	4-5-94		
SHEET 1 OF 1		DRAWING NO. B150B	SIZE B



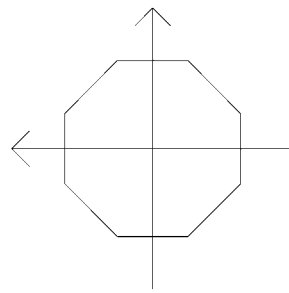
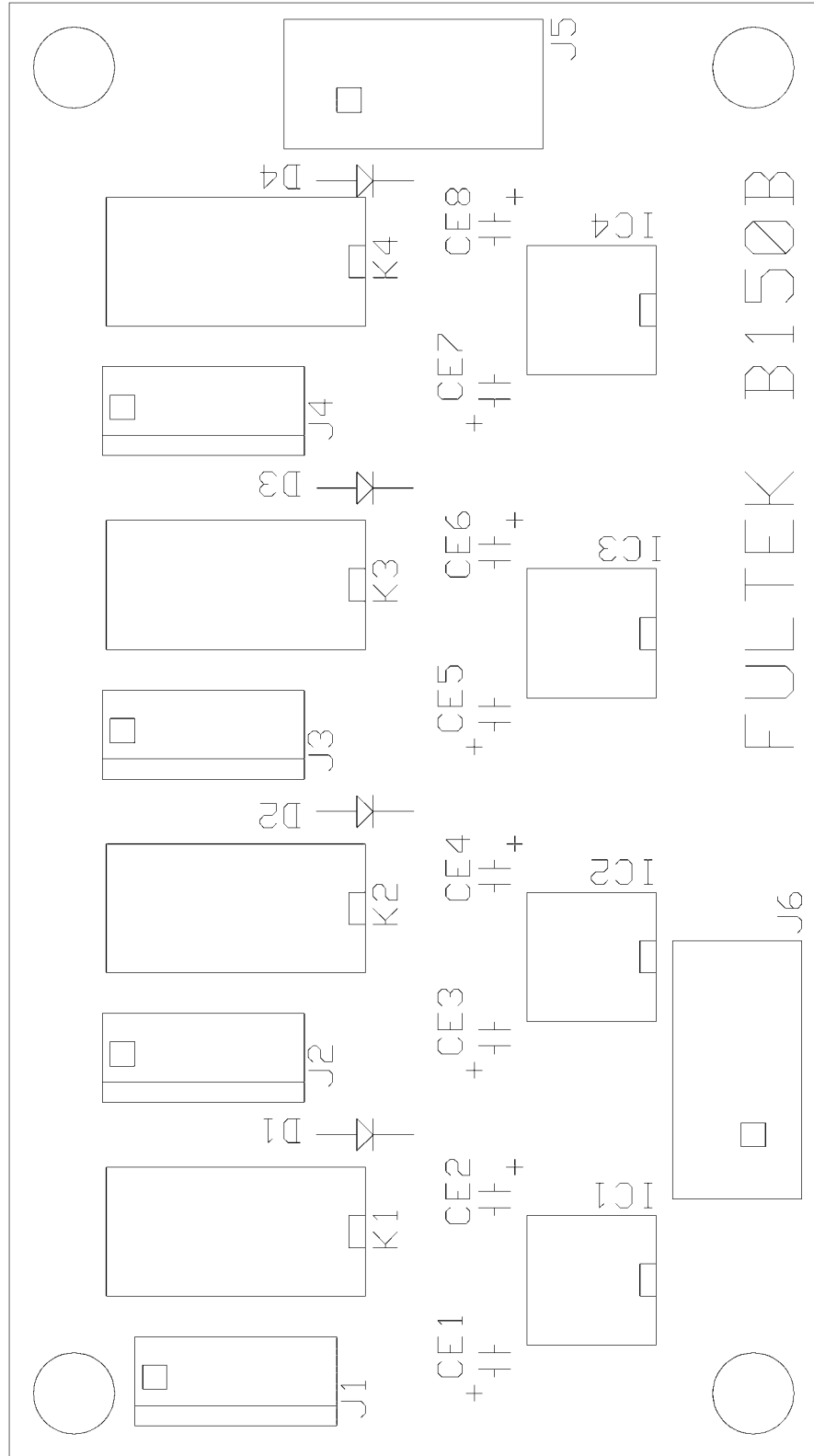
SILK SCREEN

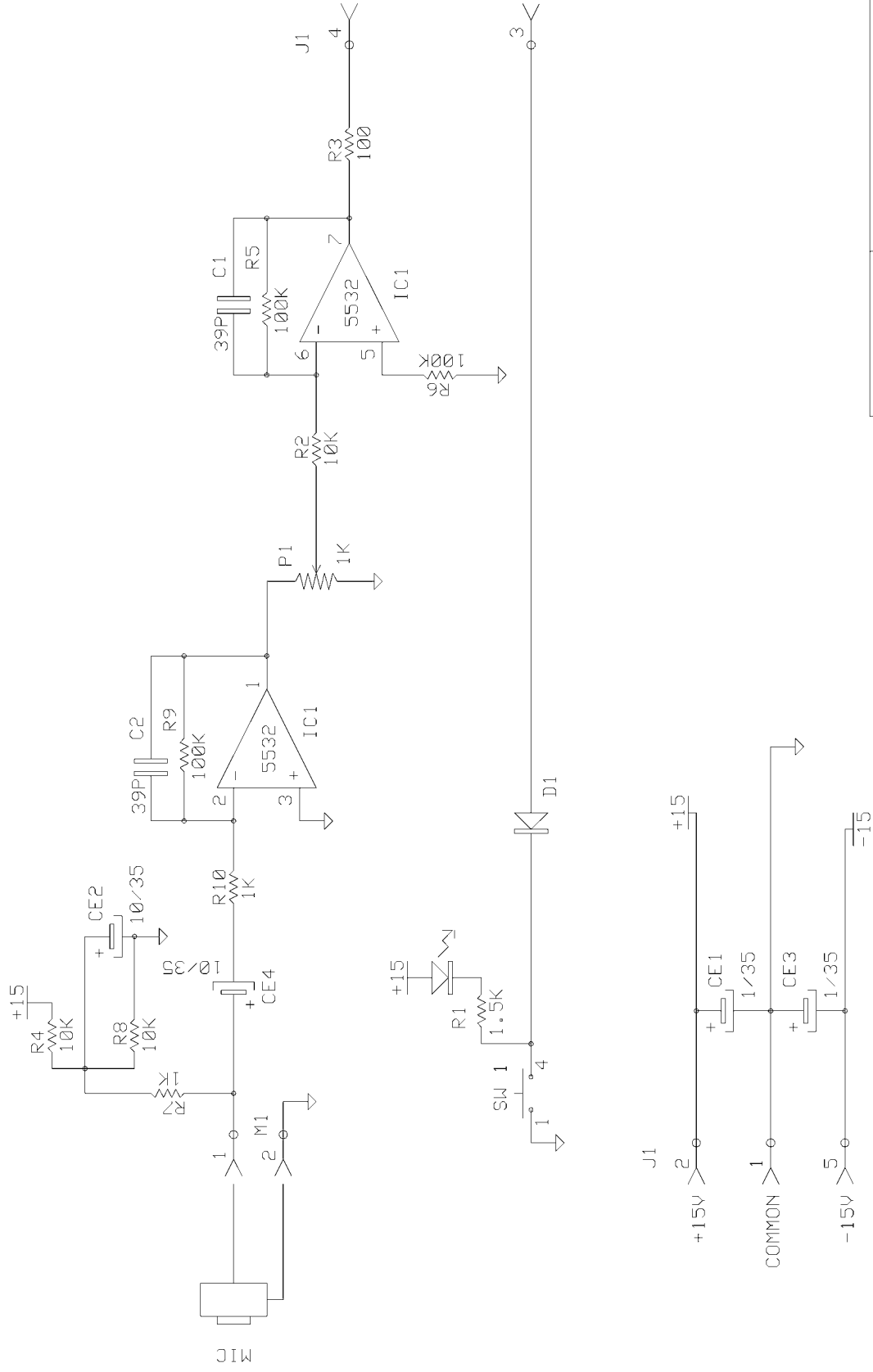
FULTEK #B150B

BOARD DIM:

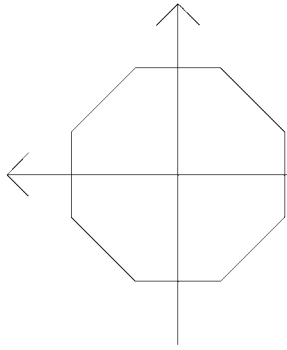
X = 4.50"

Y = 2.50"





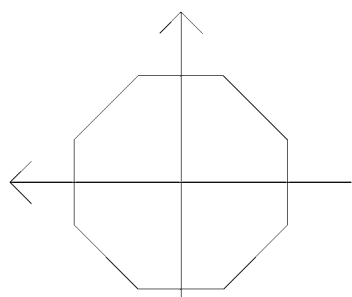
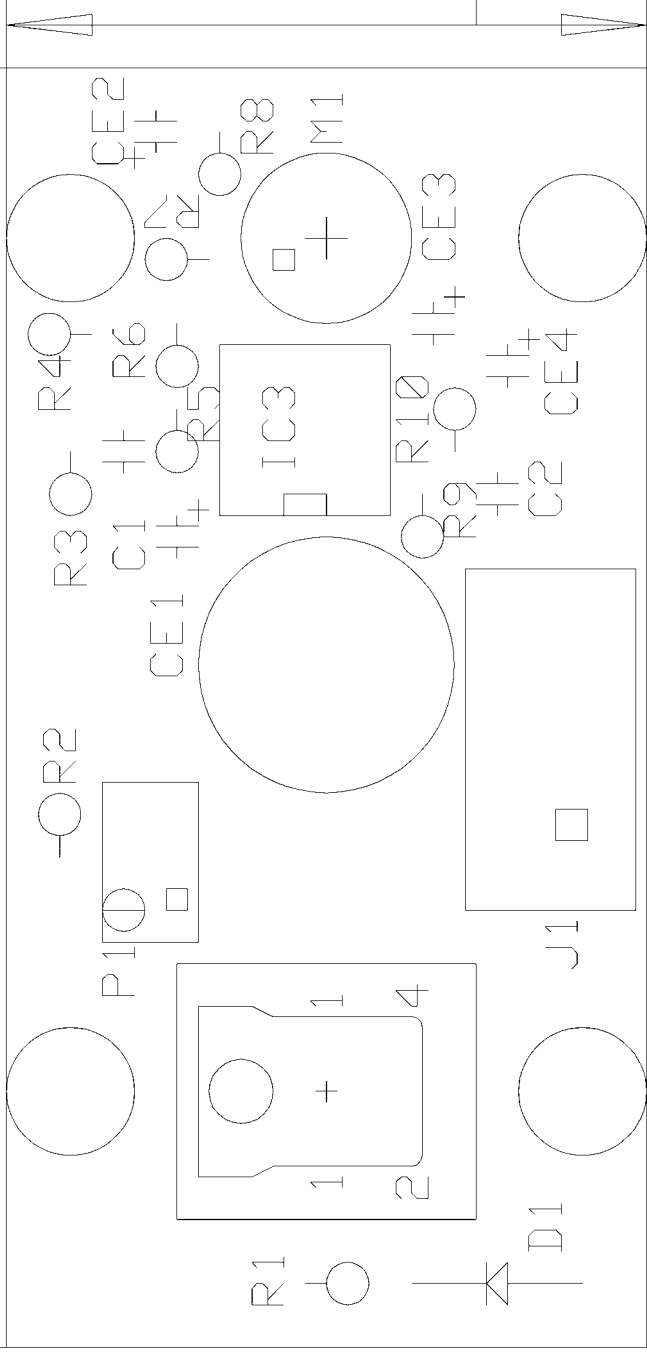
APPROVED BY:	FULTEK	(818) 505-8836
JMF		
DATE:	12-4-91	
CHECKED BY:	SINGLE	
	MIC PRE-AMP	
SHEET 1 OF 1	DRAWING NO. B161	A



FULTEK #B161
SILK SCREEN

3"

1.500"

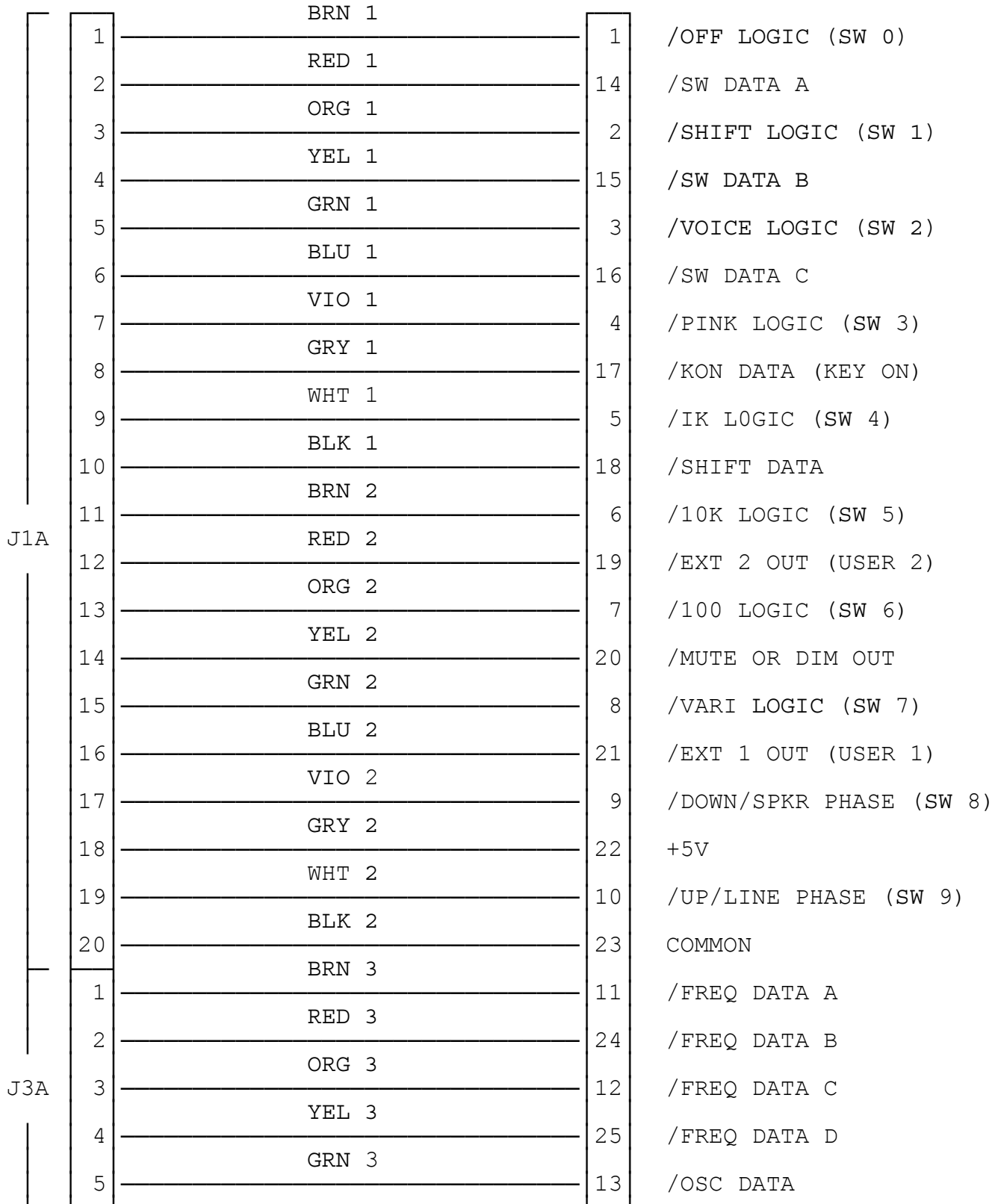


SK1

DIGITAL SIGNAL GENERATOR WIRING #1

REMOTE CONNECTORS
ON MAIN BOARD

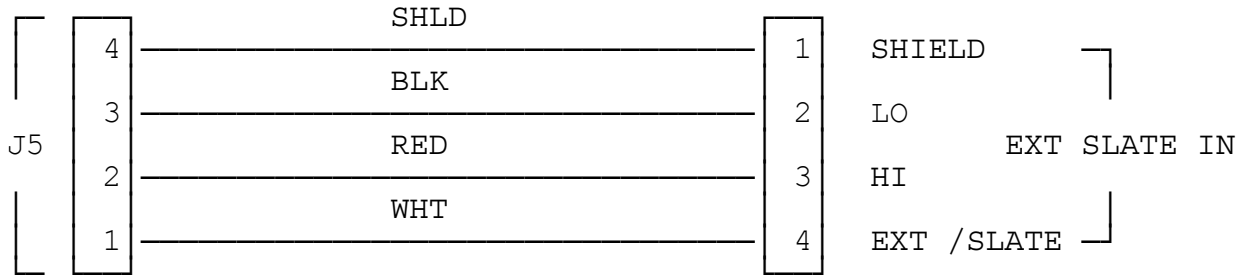
REMOTE CONNECTOR
DB-25



DIGITAL SIGNAL GENERATOR WIRING #2

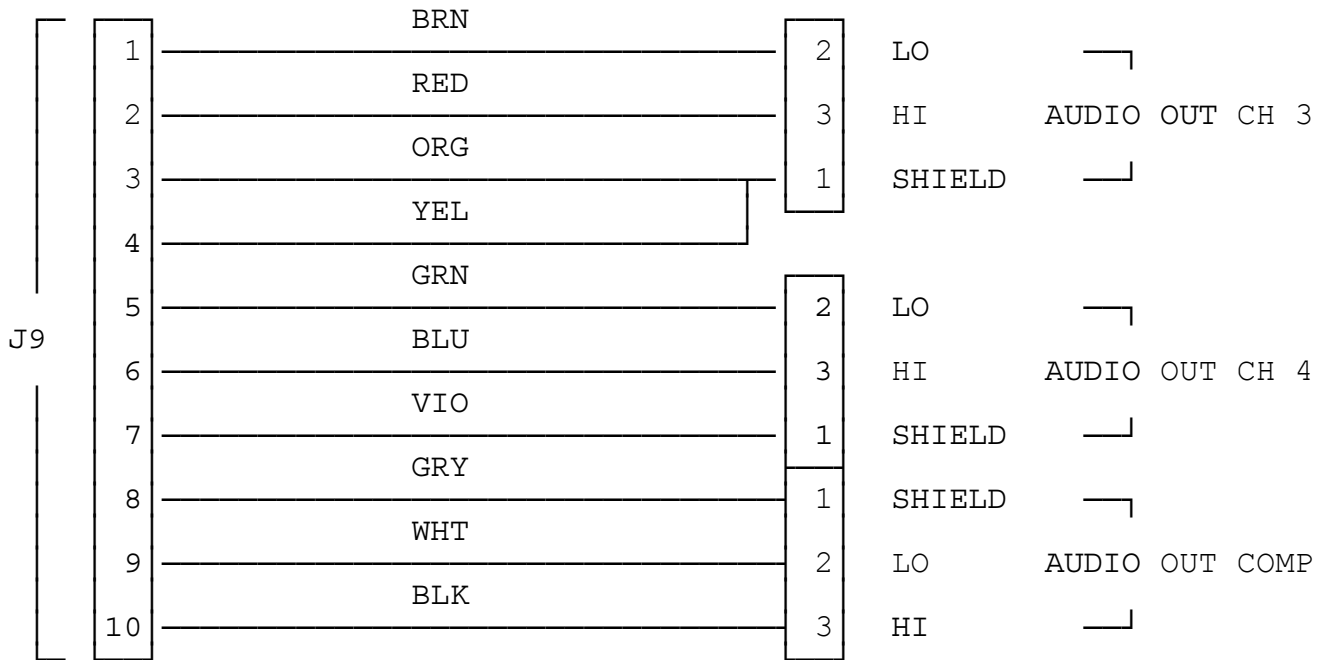
REMOTE CONNECTORS
ON MAIN BOARD

REMOTE INPUT
XLR - 4 PIN FEMALE



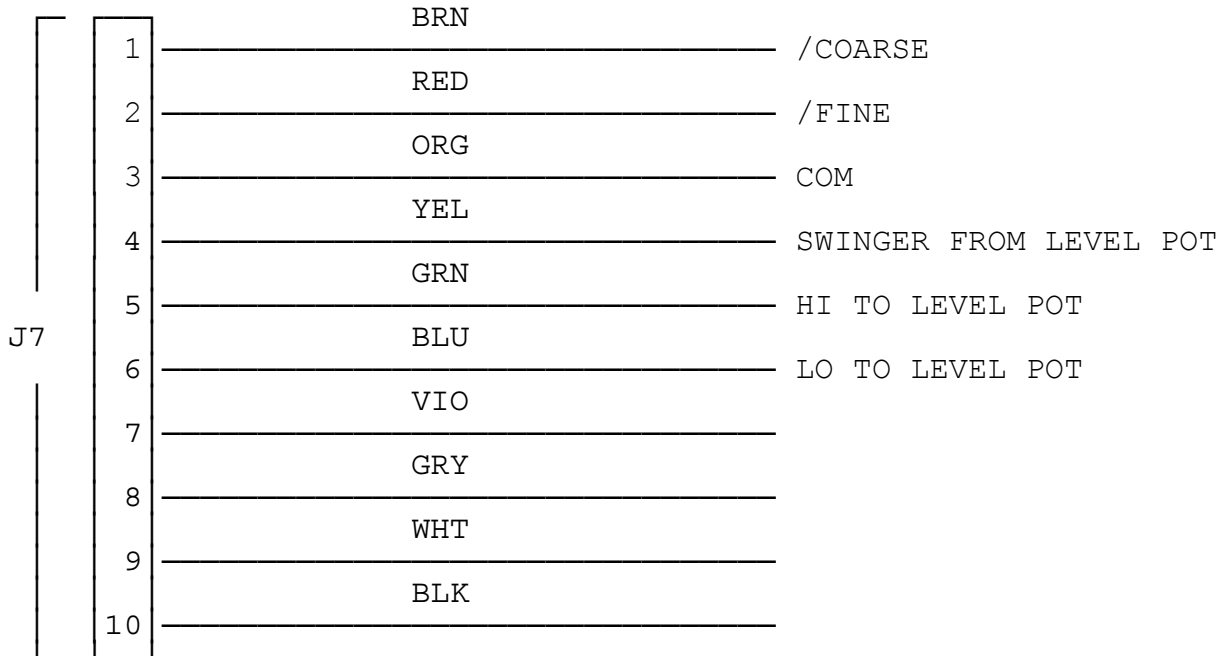
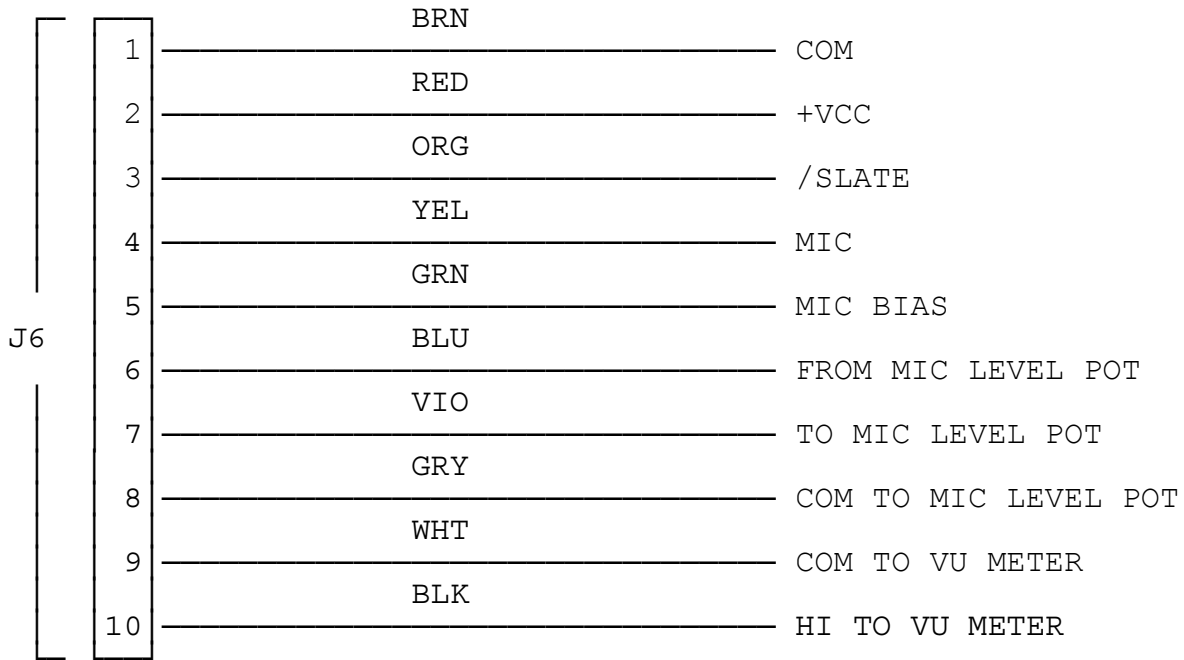
10 PIN BOX CONN

MALE XLR 3 PIN



DIGITAL SIGNAL GENERATOR WIRING #2 CONT.

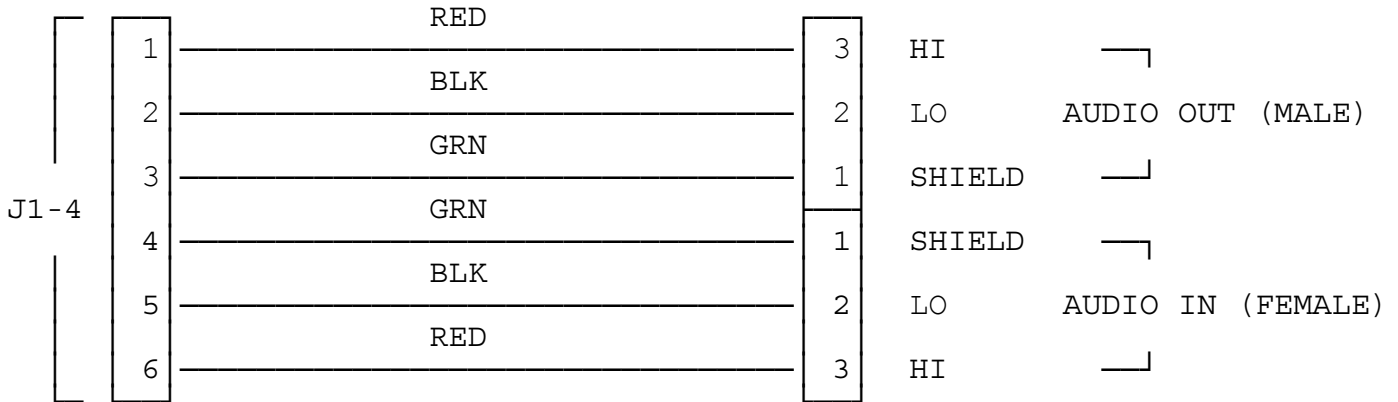
10 PIN BOX CONN



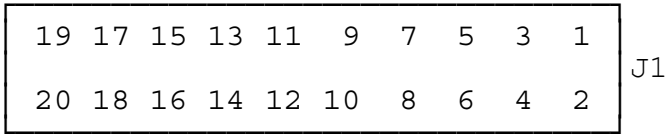
DIGITAL SIGNAL GENERATOR WIRING #2 CONT.

B150 6 PIN GC

XLR 3 PIN



B149 20 AND 10 PIN CONNECTOR PINOUT LIST



VIEW FROM SILK SCREEN SIDE!!

1 = SW 1	BRN 1	2 = D1	RED 1	1 = +VCC	BRN (BLK 3)
3 = SW 2	ORG 1	4 = D2	YEL 1	2 = +VCC	RED (WHT 3)
5 = SW 3	GRN 1	6 = D3	BLU 1	3 = COM	ORG (GRY 3)
7 = SW 4	VIO 1	8 = D4	GRY 1	4 = COM	YEL (VIO 3)
9 = SW 5	WHT 1	10 = SEQ	BLK 1	5 = INH	GRN (BLU 3)
11 = SW 6	BRN 2	12 = USER 1	RED 2	6 = INH	BLU (GRN 3)
13 = SW 7	ORG 2	14 = DIM	YEL 2	7 = D4	VIO (YEL 3)
15 = SW 8	GRN 2	16 = USER 2	BLU 2	8 = D3	GRY (ORG 3)
17 = SW 9	VIO 2	18 = COM	GRY 2	9 = D2	WHT (RED 3)
19 = SW 10	WHT 2	20 = COM	BLK 2	10 = D1	BLK (BRN 3)