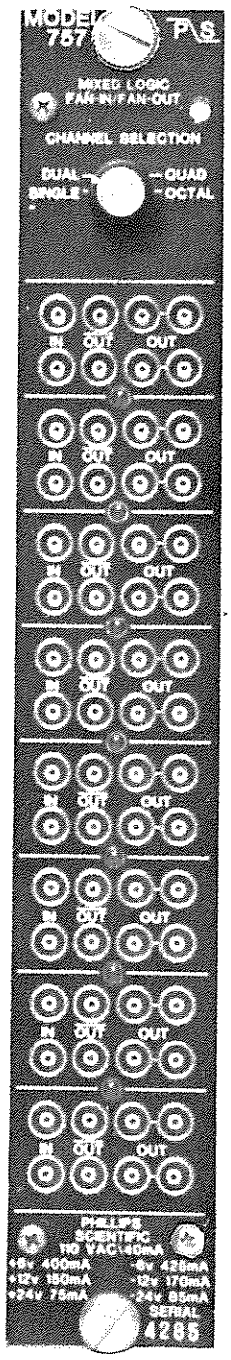
Phillips Scientific

Octal Multifunction Logic Unit

NIM MODEL 757

FEATURES

* Octal, Quad, Dual or Single Logic Sections
* Ideal for NIM Logic Fan-Out
* OR/AND Logic From 2 to 16 Inputs
* Outputs Timed to within 500 pSec
* Converts TTL to NIM Logic
* Available in CAMAC Packaging Model 7157



DESCRIPTION

The model 757 is a general purpose fast logic unit used to perform logic fan-in/logic fan-out, TTL to NIM level conversion, and polarity inversion.

The 757 contains eight channels. Each channel consists of two inputs which accept NIM or TTL signal levels. The inputs form a logical "OR" function and generate four NIM level and two complementary NIM level outputs. Channels are easily paralleled by means of a four position switch allowing the module to be configured as follows:

An Octal - 2 input, 4 NIM OUT and 2 $\overline{\text{NIM}}$ OUT
A Quad - 4 input, 8 NIM OUT, and 4 $\overline{\text{NIM}}$ OUT
A Dual - 8 input, 16 NIM OUT, and 8 $\overline{\text{NIM}}$ OUT
A Single - 16 input, 32 NIM OUT and 16 $\overline{\text{NIM}}$ OUT

The module setup is easily determined by a front panel LED indicating which sections are logically linked.

The outputs are timed to within 500 pSec for any configuration selected, allowing for precise timing without re-adjusting cable lengths.

SPECIFICATIONS

Number of Sections : Eight sections; may be cascaded by means of front-panel switch.

INPUT CHARACTERISTICS

Number of Inputs : Two per section. LEMO style connector; accepts both negative NIM or positive TTL pulses or levels.

Impedance : NIM: 50 ohms, ±10%; -500 mV threshold; input protected to ±8 VDC.

TTL: 500 ohms impedance ±10%; 1.2 Volt threshold; input protected to ±8 VDC

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INPUT CHARACTERISTICS (Continued)

Signal Level Requirements: Standard NIM logical 1 input levels: 12 mA to -36 mA.

Standard TTL logical 1 input levels: +2 V to +5 V.

Signal Width Requirements: 4 nSec or greater.

Coupling : Direct coupled throughout.

OUTPUT CHARACTERISTICS

Number of Outputs : 4 normal (2 bridged pairs); 2 complementary (1 bridged pair).

Output Levels : Normal NIM quiescently 0 mA, more than 32 mA into two 50 ohms during outputs.

Complementary: NIM quiescently, more than 32 mA into two 50 ohm loads; 0 mA during output.

Risetimes and Falltimes : 1.5 nSec maximum.

Duration : Equal to the logical sum of the input durations.

Time Variation Between Outputs : 8 channel operation: less than 100 pSec;
4 channel operation: less than 200 pSec;
2 channel operation: less than 300 pSec;
1 channel operation: less than 500 pSec.

GENERAL CHARACTERISTICS

Rate : Greater than 125 MHz.

Input to Output Delay : Less than 8.0 nSec.

Duty Cycle Limitations : None, direct coupled.

Current Requirements : + 6 V @ 400 mA +12 V @ 150 mA +24 V @ 75 mA
- 6 V @ 425 mA - 12 V @ 170 mA - 24 V @ 85 mA
110 VAC @ 40 mA

Packaging : Single width NIM module; in conformance with TID-20893. LEMO-type connectors.

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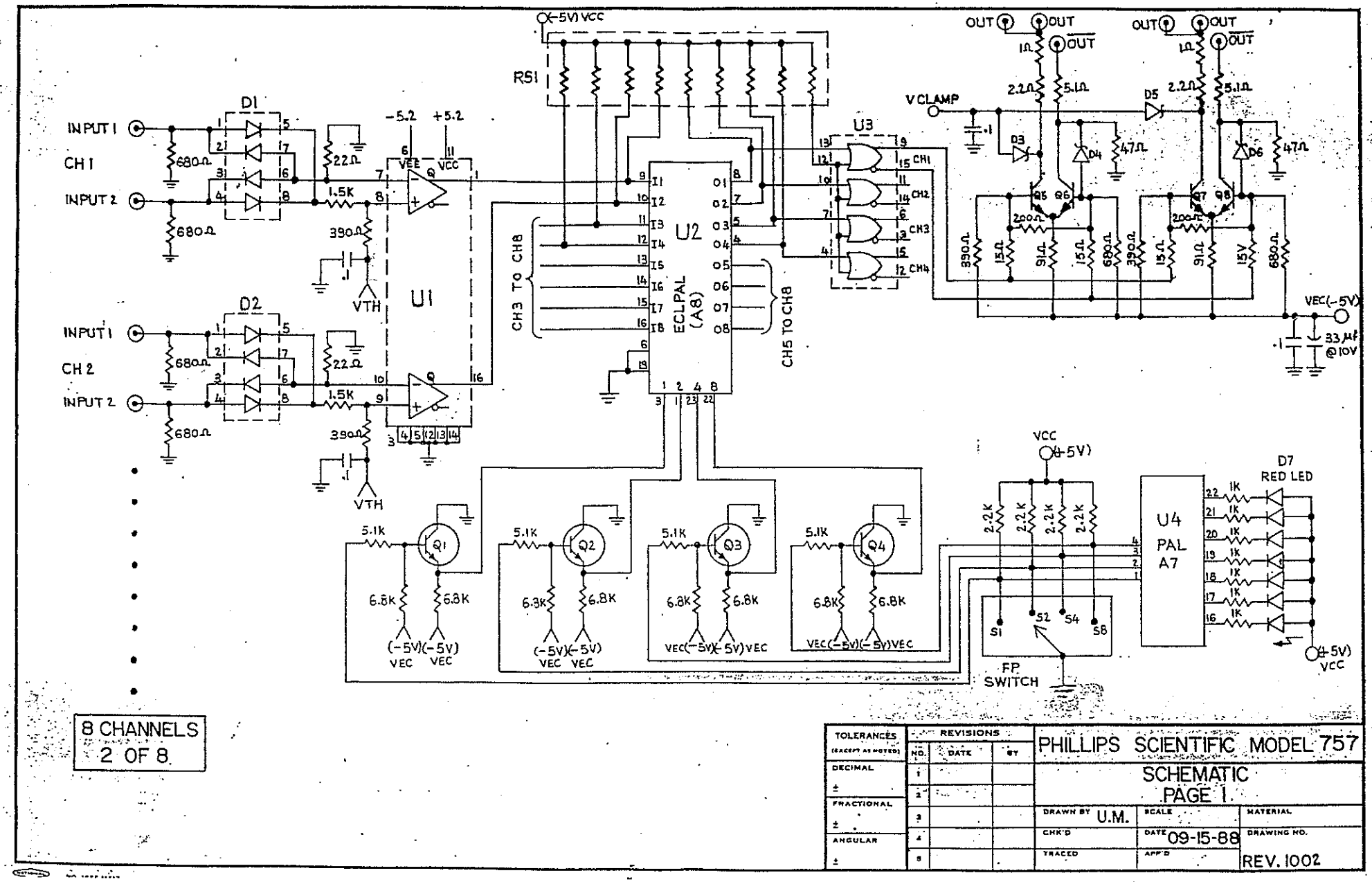

TOLERANCES (EXCEPT AS NOTED)	REVISIONS			PHILLIPS SCIENTIFIC MODEL 757		
DECIMAL ±	NO.	DATE	BY	SCHEMATIC PAGE 1		
FRACTIONAL ±	1			DRAWN BY U.M.	SCALE	MATERIAL
ANGULAR ±	2			CHK'D	DATE 09-15-88	DRAWING NO.
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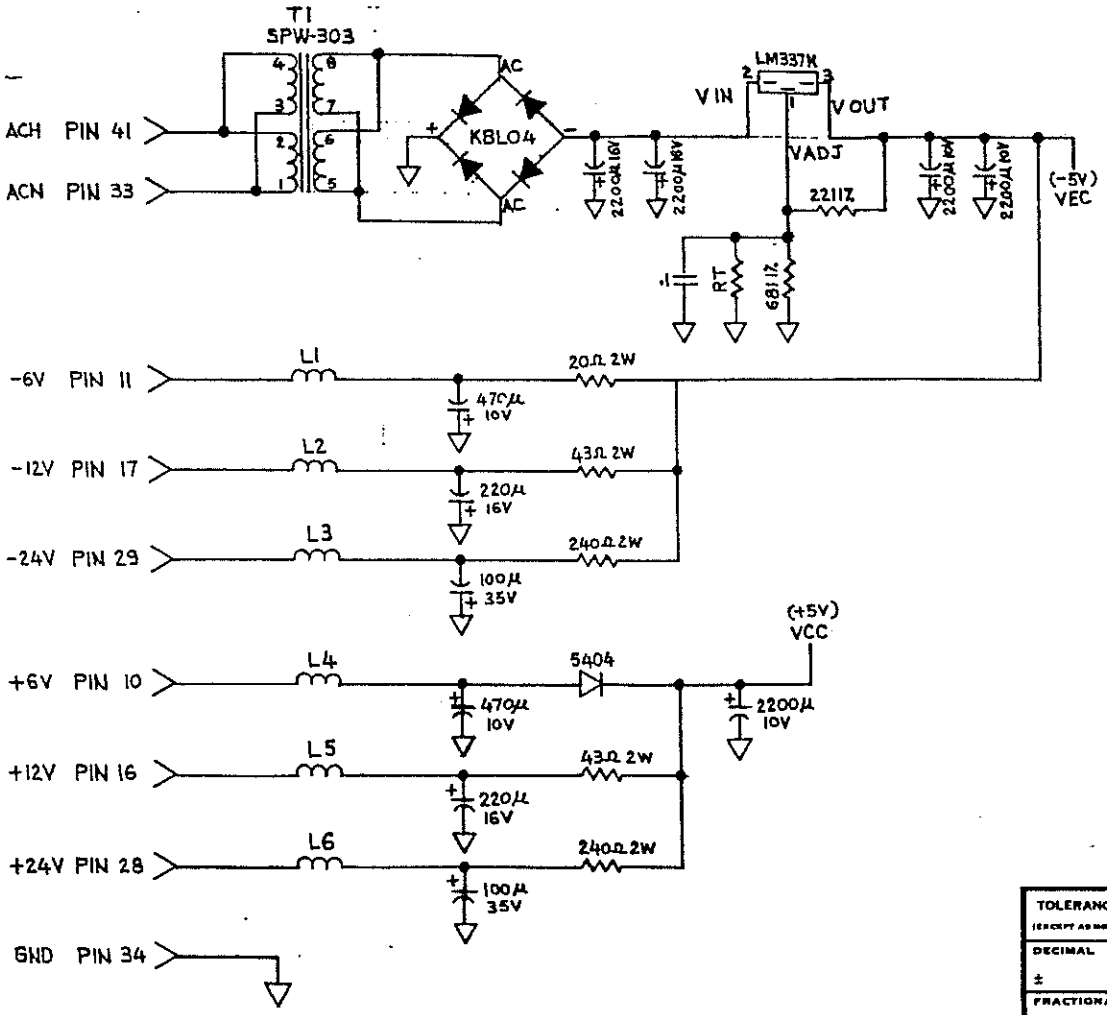

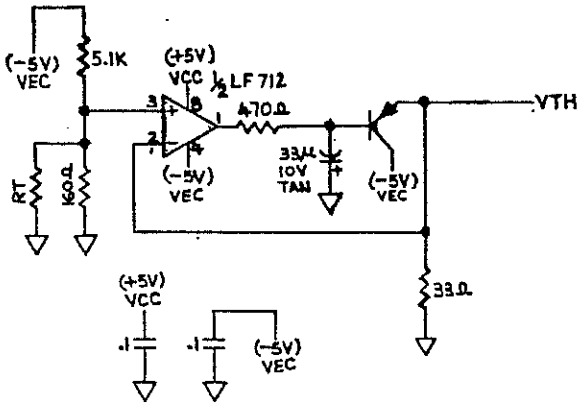

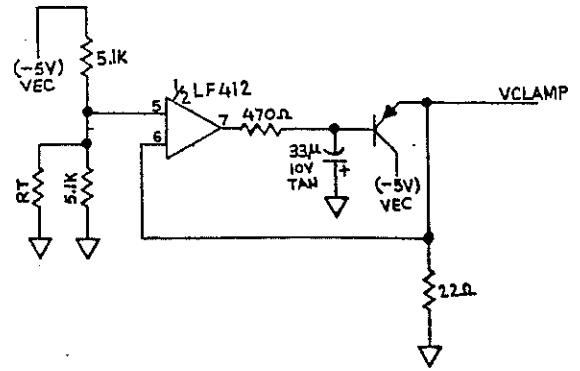

TOLERANCES (EXCEPT AS NOTED)	REVISIONS			PHILLIPS SCIENTIFIC MODEL 757		
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