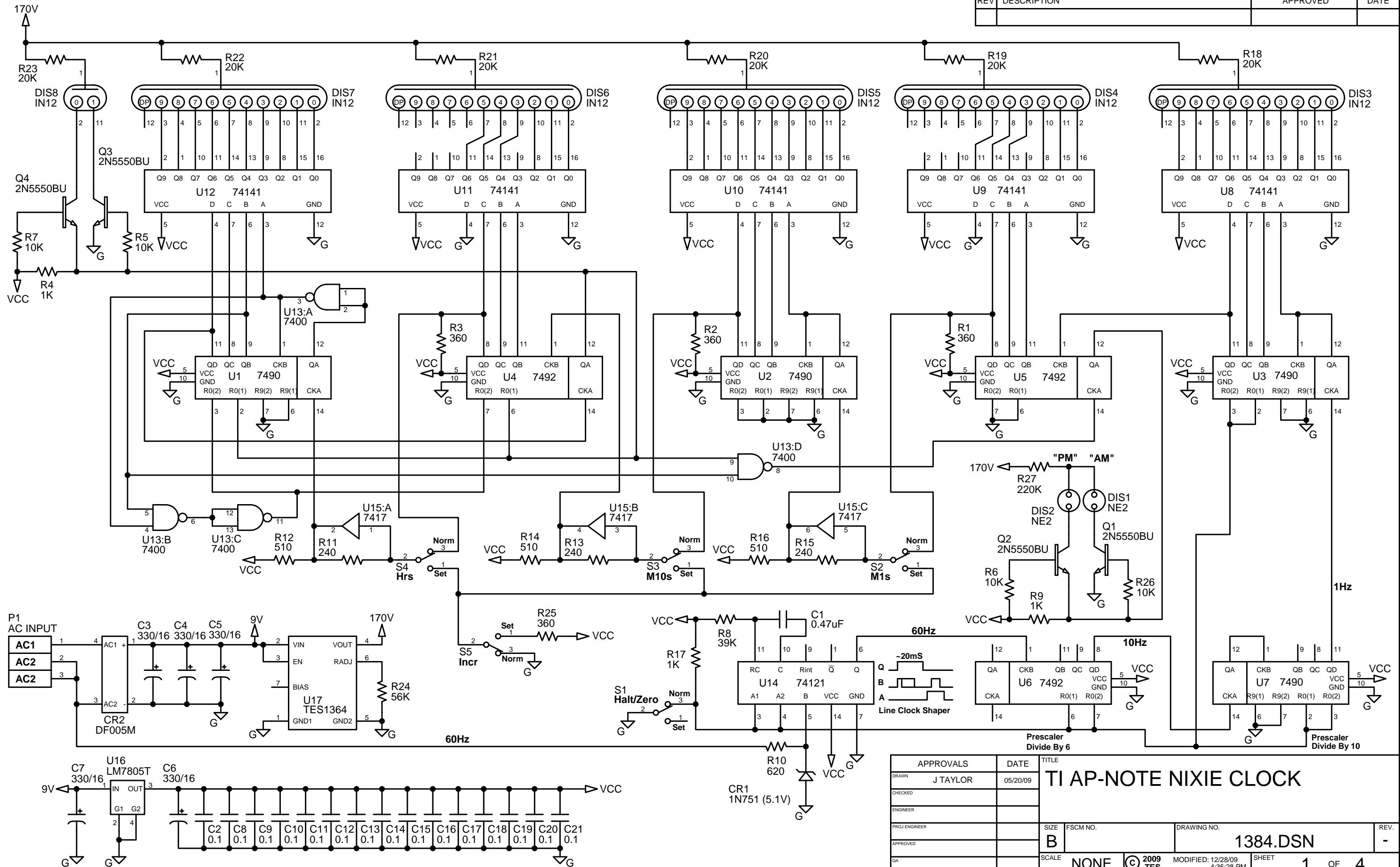


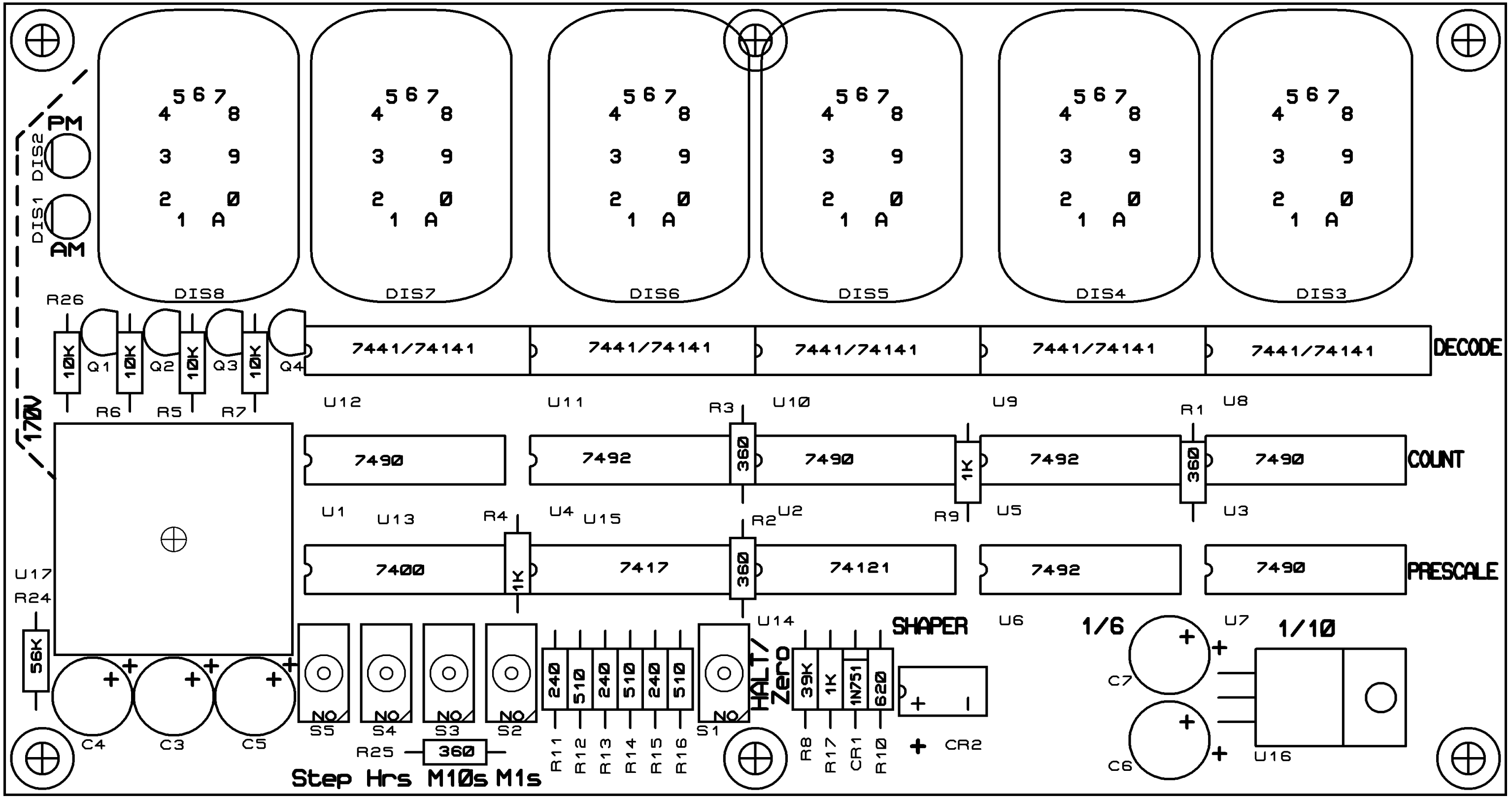
NOTES: UNLESS OTHERWISE SPECIFIED

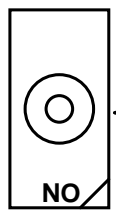
REVISION HISTORY			
REV	DESCRIPTION	APPROVED	DATE



APPROVALS		DATE	TITLE
DRAWN	J TAYLOR	05/20/09	TI AP-NOTE NIXIE CLOCK
CHECKED			
ENGINEER			
PROJ ENGINEER			
APPROVED			
QA			
SIZE	FSCM NO.	DRAWING NO.	REV.
B		1384.DSN	-
SCALE	NONE	© 2009 TES	MODIFIED: 12/28/09 4:35:28 PM
SHEET	1	OF	4

REVISION HISTORY			
REV	DESCRIPTION	APPROVED	DATE

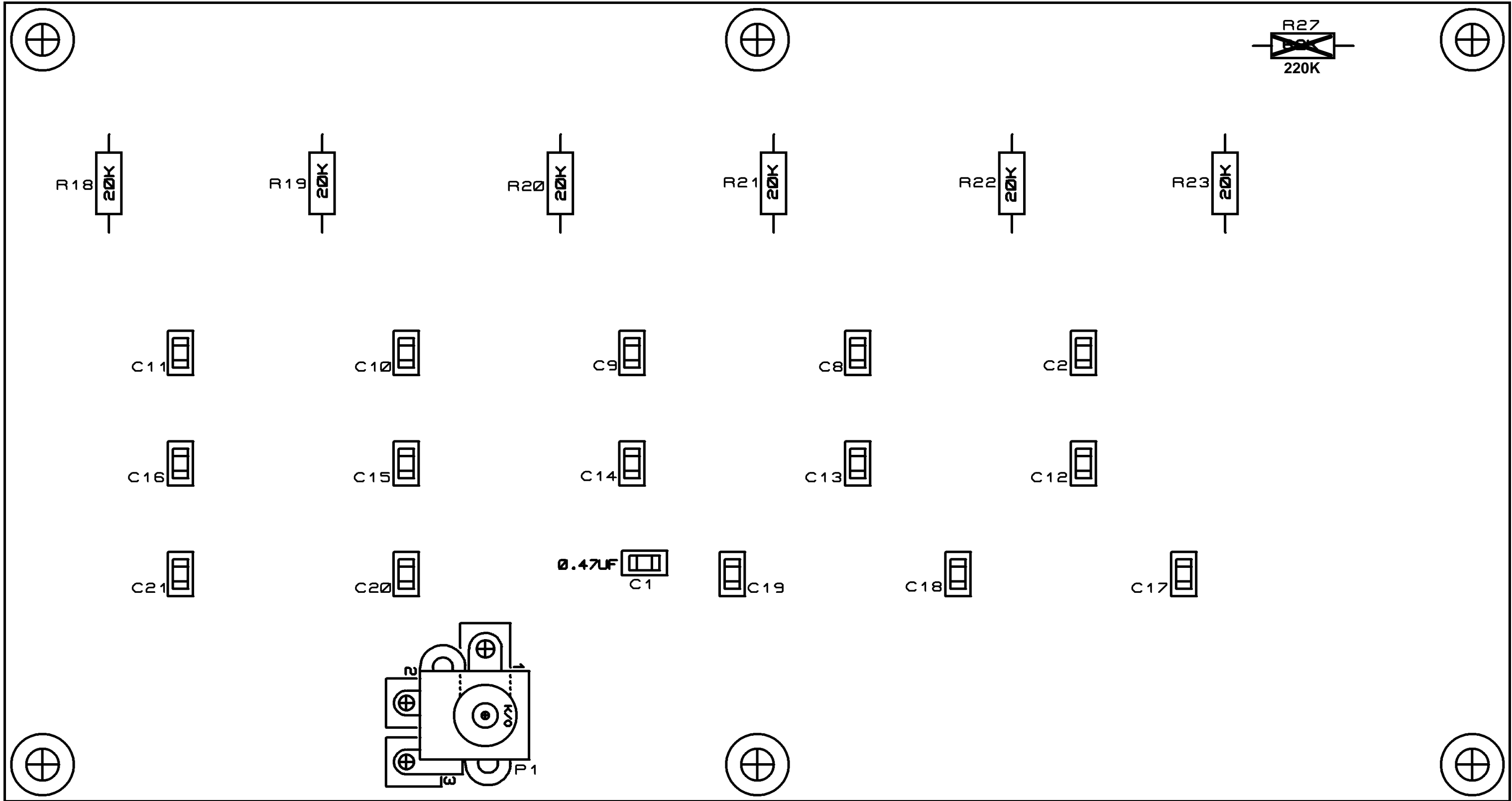



 The Copal push buttons are inserted with the text side on this face.

APPROVALS		DATE	TITLE	
DRAWN	J TAYLOR	05/20/09	TI AP-NOTE NIXIE CLOCK	
CHECKED				
ENGINEER				
PROJ ENGINEER			SIZE	FSCM NO.
APPROVED			B	DRAWING NO. 1384.DSN
QA			SCALE	NONE

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REVISION HISTORY		
REV	DESCRIPTION	APPROVED



APPROVALS		DATE	TITLE		
DRAWN	J TAYLOR	05/20/09	TI AP-NOTE NIXIE CLOCK		
CHECKED					
ENGINEER					
PROJ ENGINEER			SIZE	FSCM NO.	DRAWING NO.
APPROVED			B		1384.DSN
QA			SCALE	NONE	REV: -
			© 2009 TES	MODIFIED: 12/28/09 4:35:28 PM	SHEET 3 OF 4

REVISION HISTORY			
REV	DESCRIPTION	APPROVED	DATE

Changes to original TI schematic shown at right

1. Seconds 10's decoder to nixie connections changed to match minutes 10's: Upper 3 bits of 7492 count 0,1,2,4,5,6 and not 0,1,2,3,4,5.
2. Changed AM/PM driver to NE2 from incandescent for aesthetics.
3. Connected HALT switch to seconds and prescaler reset to zero them to allow easier exact second alignment on release (S1).
4. Changed high voltage from transformer output to boost module.
5. Changed 5V supply from zener shunt to LM7805 to improve performance and eliminate power resistor.
6. Selected Q output on one 74121 one-shot.
7. Minutes 1's 7490 counter shows R0(1)/R0(2) twice, second set should be R9(1)/R9(2).
8. Increment resistor changed to 360 ohms from 330 (S5).
9. Anode resistors changed to 20K for IN12's running at 170V.

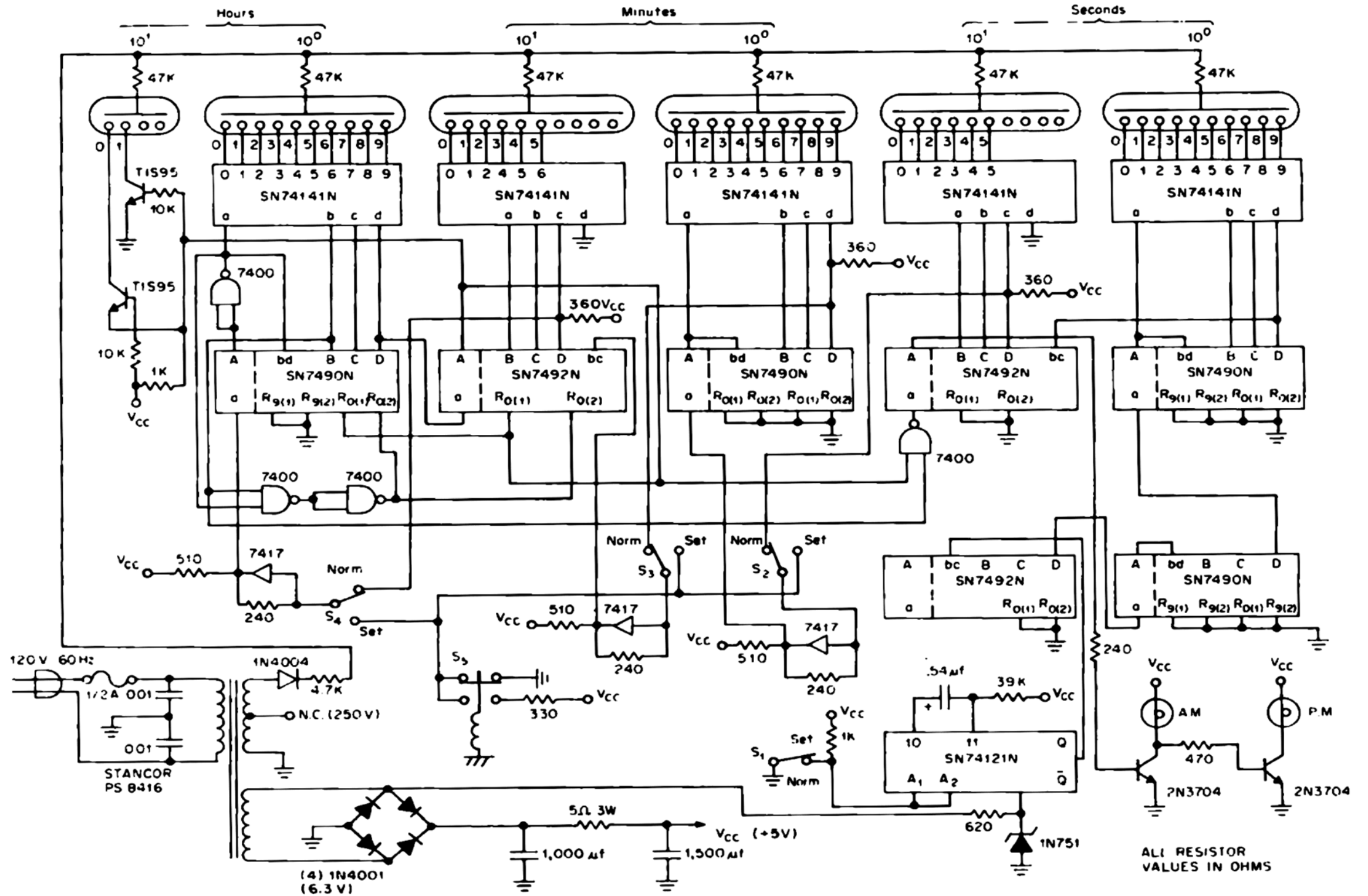


Fig. 12.4. 12-hour digital clock.

APPROVALS		DATE	TITLE		
DRAWN	J TAYLOR	05/20/09	TI AP-NOTE NIXIE CLOCK		
CHECKED					
ENGINEER					
PROJ ENGINEER			SIZE	FSCM NO.	DRAWING NO.
APPROVED			B		1384.DSN
QA			SCALE	NONE	REV. -
			© 2009 TES	MODIFIED: 12/28/09 4:35:28 PM	SHEET 4 OF 4