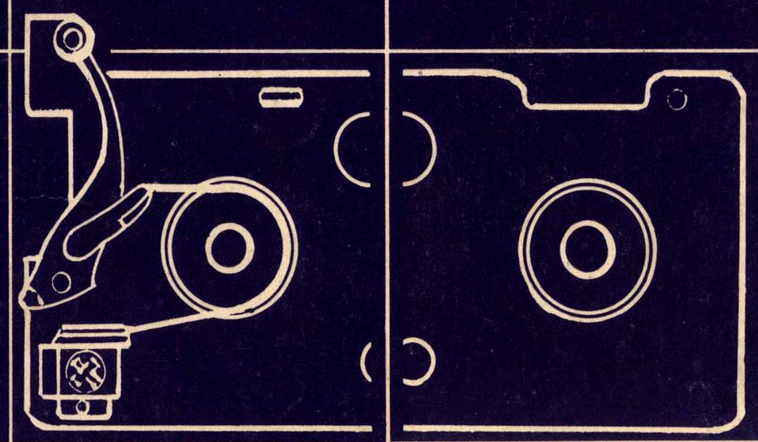
东芝系列 TOSHIBA

家用录像机实用维修资料

本书编写组编



中国广播电视出版社

家用录像机实用维修资料——东芝系列

本书编写组　编

中国广播电视出版社

编 者 的 话

随着我国四化建设的发展和人民生活水平的提高，录像机已广泛地应用于各个领域，并已迅速普及到家庭，为满足广大用户、维修工作人员和声像工程技术人员的需要，我们汇编了目前国内流行的《家用录像机实用维修资料》，东芝系列分册收集了DV－90D/DC、DV－98C、V93D/DC、V－94C、V－800SC SD/SE、VCP－B1D/CZ/DC/HG型六种较新的机型。每种机型都有：方框图、电路原理图、印刷电路板图、配线图以及机械零件分解图等。此外还介绍了典型机的维修调试。是一本实用性较强的维修工具书。

由于编辑水平有限，难免有遗误和不妥之处，请广大读者指正。

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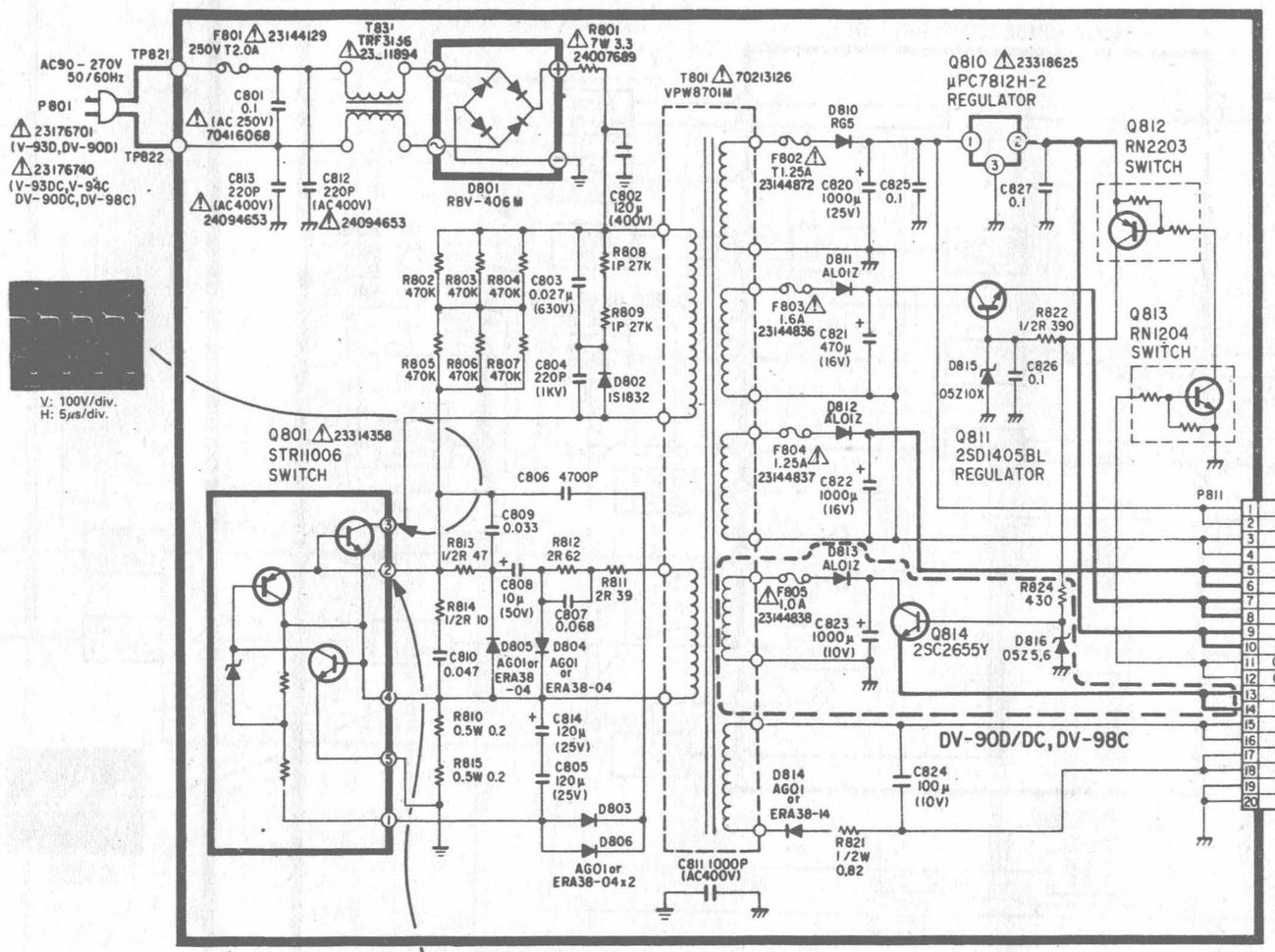
中国广播电视出版社出版
（北京复外广播电影电视部灰楼 邮政编码100866）
新华书店总店北京发行所经销
*
789×1092毫米 8开 16.25印张
1991年8月第1版 1991年8月第1次印刷
印数：1—4800册 定价：10.80元
ISBN 7－5043－0909－5/TN·102

目　　录

东芝DV－90D/DC、DV－98C
V－93D/DC、V－94C型
录像机

Power Supply Circuit 电源供电电路

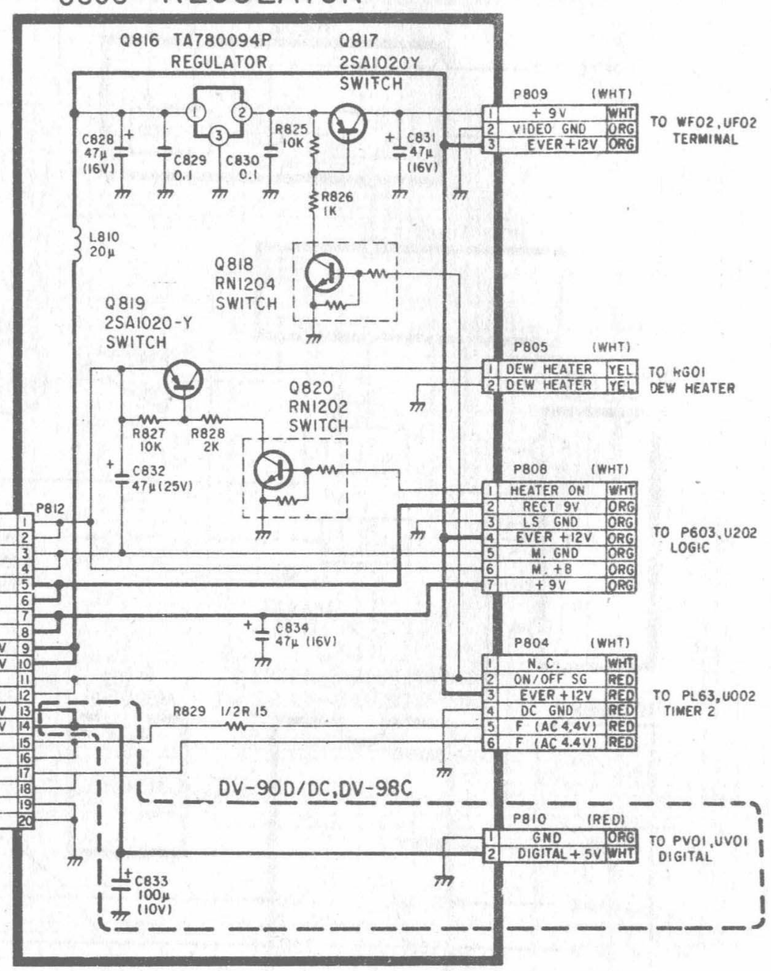
U802 CONVERTER 转换器



V: 100V/div.
H: 5μs/div.

V: 1V/div.
H: 5μs/div.

U803 REGULATOR 调压器

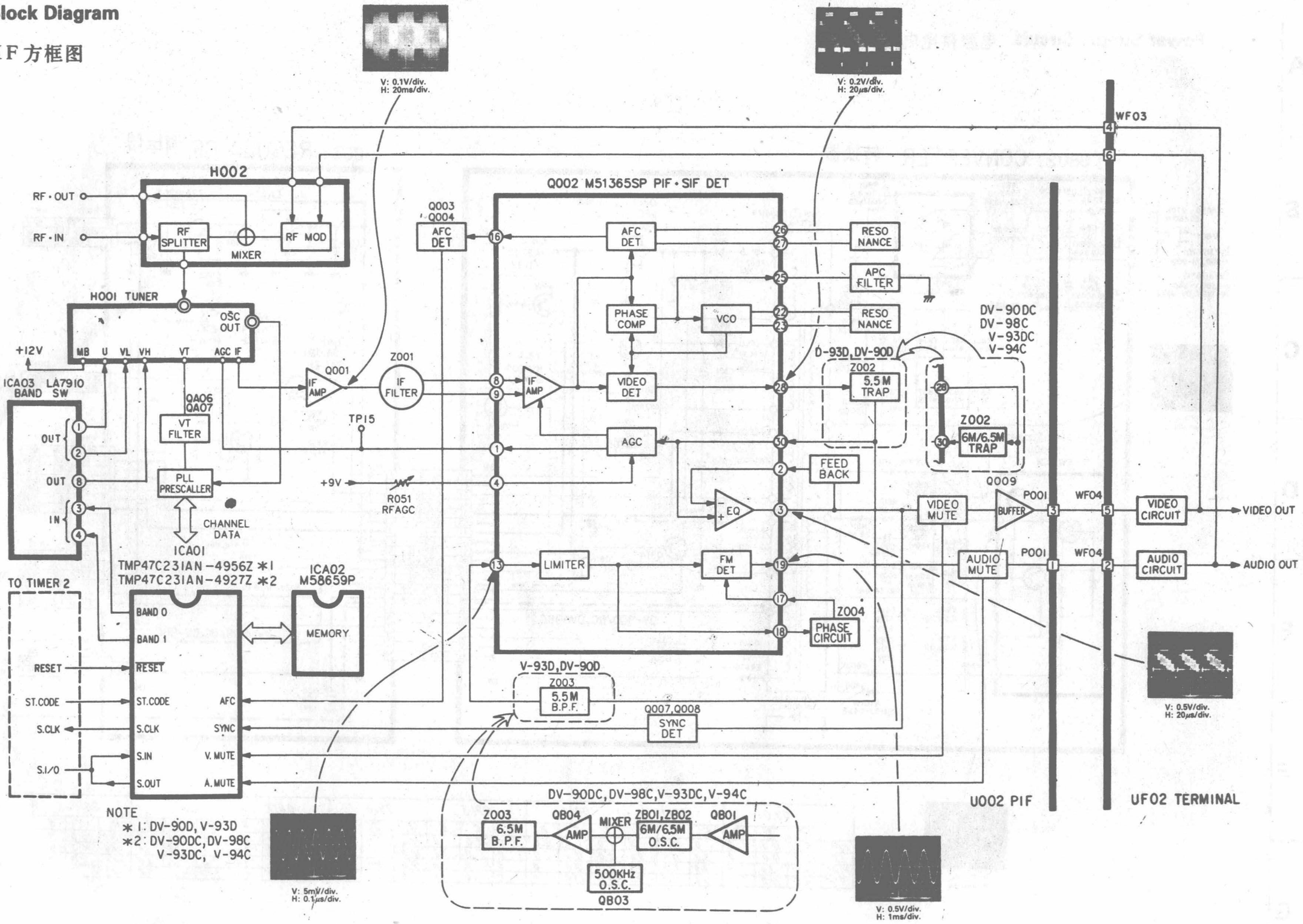


(V)

	Q810			Q811			Q812			Q813			Q816			Q817			Q818			Q819			Q820		
	①	②	③	E	C	B	E	C	B	E	C	B	①	②	③	E	C	B	E	C	B	E	C	B	E	C	B
OFF	15.5	12.0	0	0	12.7	0	12.0	0	12.0	0	12.0	0	12.0	9.0	0	9.0	0	9.0	0	9.0	0	15.5	15.5	14.9	0	0	2.0
EE	15.0	12.0	0	9.0	11.6	9.6	12.0	12.0	0	0	0	3.8	12.0	9.0	0	9.0	9.0	8.4	0	0	3.8	15.0	15.0	14.4	0	0	2.0
PLAY	14.8	12.0	0	9.0	11.5	9.6	12.0	12.0	0	0	0	3.8	12.0	9.0	0	9.0	9.0	8.4	0	0	3.8	14.8	0	14.8	0	14.8	0
REC	14.5	12.0	0	9.0	11.3	9.6	12.0	12.0	0	0	0	3.8	12.0	9.0	0	9.0	9.0	8.4	0	0	3.8	14.5	0	14.5	0	14.5	0

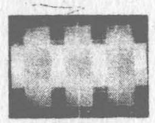
PIF Block Diagram

PIF方框图



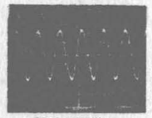
NOTE
*1: DV-90D, V-93D
*2: DV-90DC, DV-98C
V-93DC, V-94C

PIF Circuit (DV-90D, V-93D)　PIF电路



V: 0.1V/div.
H: 20ms/div.

V: 0.5V/div.
H: 20μs/div.



V: 5mV/div.
H: 0.1μs/div.

U002 PIF, SELECTOR

V: REC or EE MODE

H001 EG433F

ICA03 LA7910 BAND SWITCH

ICA04 TD6350P

ICA01 TMP47C231AN

ICA02 M58659P

Q001 2SC388ATM IF AMP

Q002 M51365SP PIF·SIF DET

Q003 2SA1048Y AFC SWITCH

Q004 2SC2458Y SWITCH

Q007 2SA1048Y SYNC SEPARATE

Q008 RN1201 BUFFER

Q009 2SC1815Y BUFFER

Q010 RN1202 VIDEO MUTE SWITCH

Q011 2SC2878A AUDIO MUTE SWITCH

QA06 2SK117GR AMP

QA07 2SC2458Y AMP

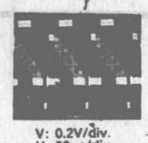
QA08 RN1206 SWITCH

QA11 2SA1297GR SWITCH

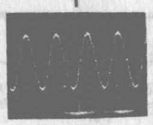
TO TIMER 2

TO WF02, UF02 TERMINAL

TO WF04, UF02 TERMINAL



V: 0.2V/div.
H: 20μs/div.



V: 0.5V/div.
H: 1ms/div.

AFC DETECT (V)

SYMBOL	0003			0004		
TERMINAL / MODE	E	C	B	E	C	B
0002 PIN16 MORE THAN 3.6(V)	3.6	0	4.4	0	5	0
0002 PIN16 LESS THAN 3.6(V)	0.9	0.6	0.4	0	0	0.6

VIDEO AUDIO MUTE (V)

SYMBOL	0010			0011		
TERMINAL / MODE	E	C	B	E	C	B
MUTE OFF	0	2.0	0	0	0	2.7
MUTE ON	0	0.2	0	0	0	1.4

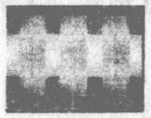
PIF ON/OFF (V)

SYMBOL	QA08			QA11		
TERMINAL / MODE	E	C	B	E	C	B
PIF ON	0	0	2.9	9.0	9.0	8.3
PIF OFF	0	0	0	0	0	0

VIDEO AUDIO MUTE (V)

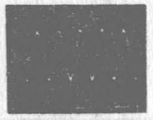
SYMBOL	IGA01	
TERMINAL / MODE	PIN3 (VIDEO MUTE)	PIN 4 (AUDIO MUTE)
MUTE OFF	L(0)	L(0)
MUTE ON	H(2.7)	H(2.2)

8-5. PIF Circuit (DV-90DC, V-93DC) PIF电路

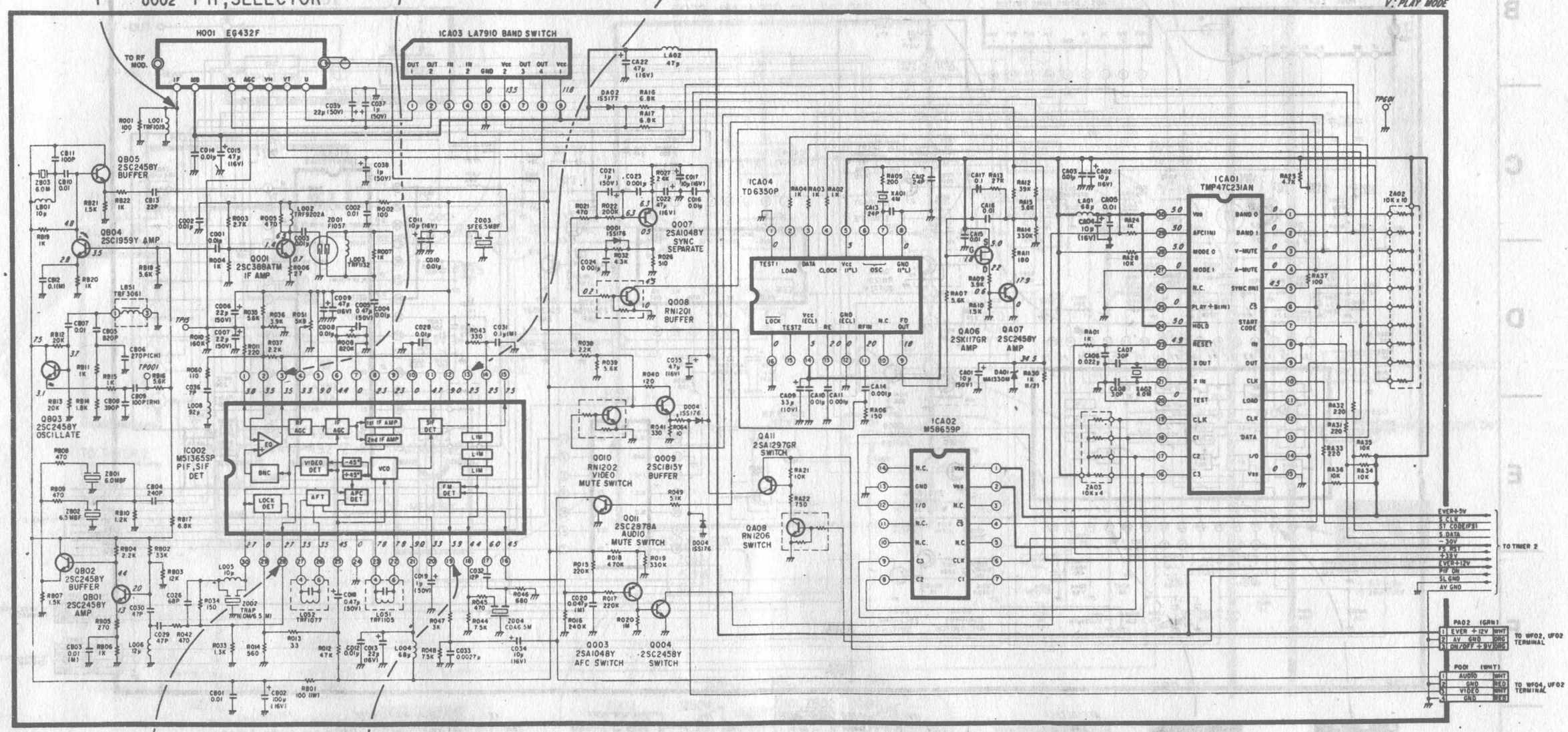


V: 0.1V/div.
H: 20ms/div.

V: 0.5V/div.
H: 20μs/div.



V: 5mV/div.
H: 0.1μs/div.



V: 0.2V/div.
H: 20μs/div.

V: 0.5V/div.
H: 1ms/div.

A/C DETECT (V)

SYMBOL	Q003			Q004		
TERMINAL / MODE	E	C	B	E	C	B
Q003 PIN B MORE THAN 3.6(V)	3.6	0	4.4	0	5	0
Q003 PIN B LESS THAN 3.6(V)	0.9	0.6	0.4	0	0	0.6

VIDEO AUDIO MUTE (V)

SYMBOL	Q010			Q011		
TERMINAL / MODE	E	C	B	E	C	B
MUTE OFF	0	2.0	0	0	0	2.7
MUTE ON	0	0.2	0	0	0	1.4

PIF ON/OFF (V)

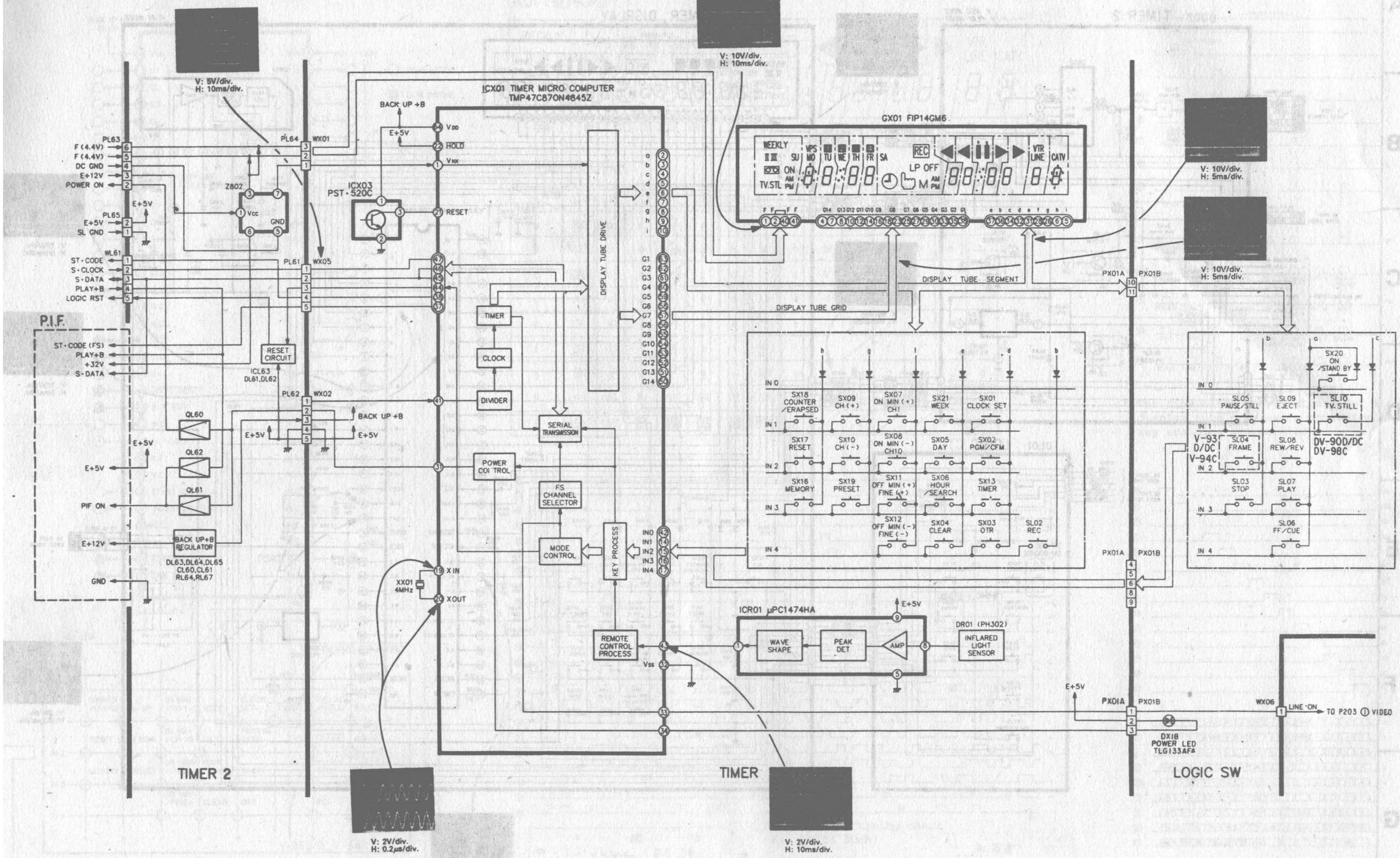
SYMBOL	QA08			QA11		
TERMINAL / MODE	E	C	B	E	C	B
PIF ON	0	0	2.9	9.0	9.0	8.3
PIF OFF	0	0	0	0	0	0

VIDEO AUDIO MUTE (V)

SYMBOL	IC A01	
TERMINAL / MODE	PIN 3 (VIDEO MUTE)	PIN 4 (AUDIO MUTE)
MUTE OFF	L(0)	L(0)
MUTE ON	H(2.7)	H(2.2)

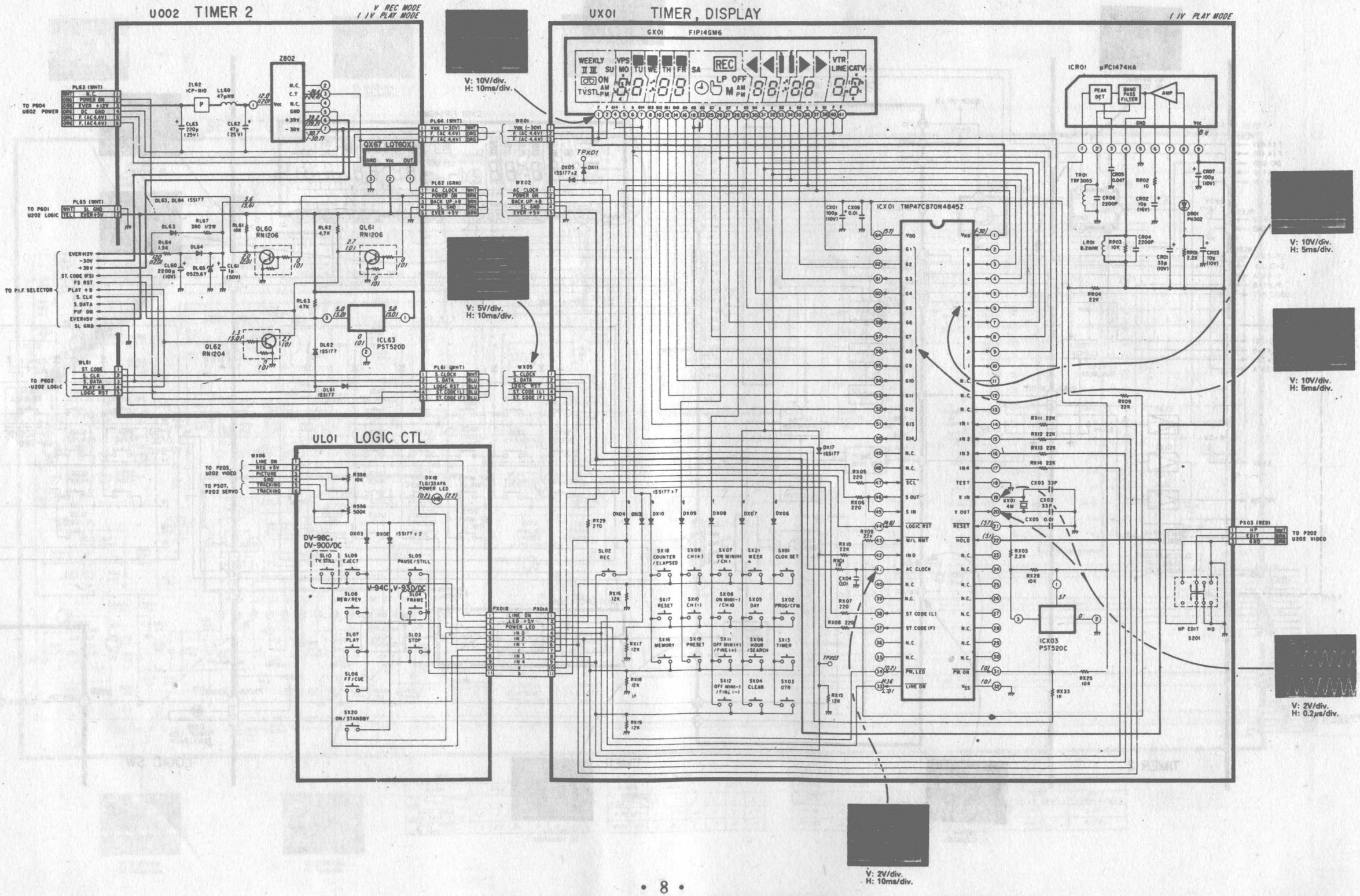
计时器，显示方框图

Timer, Display Block Diagram

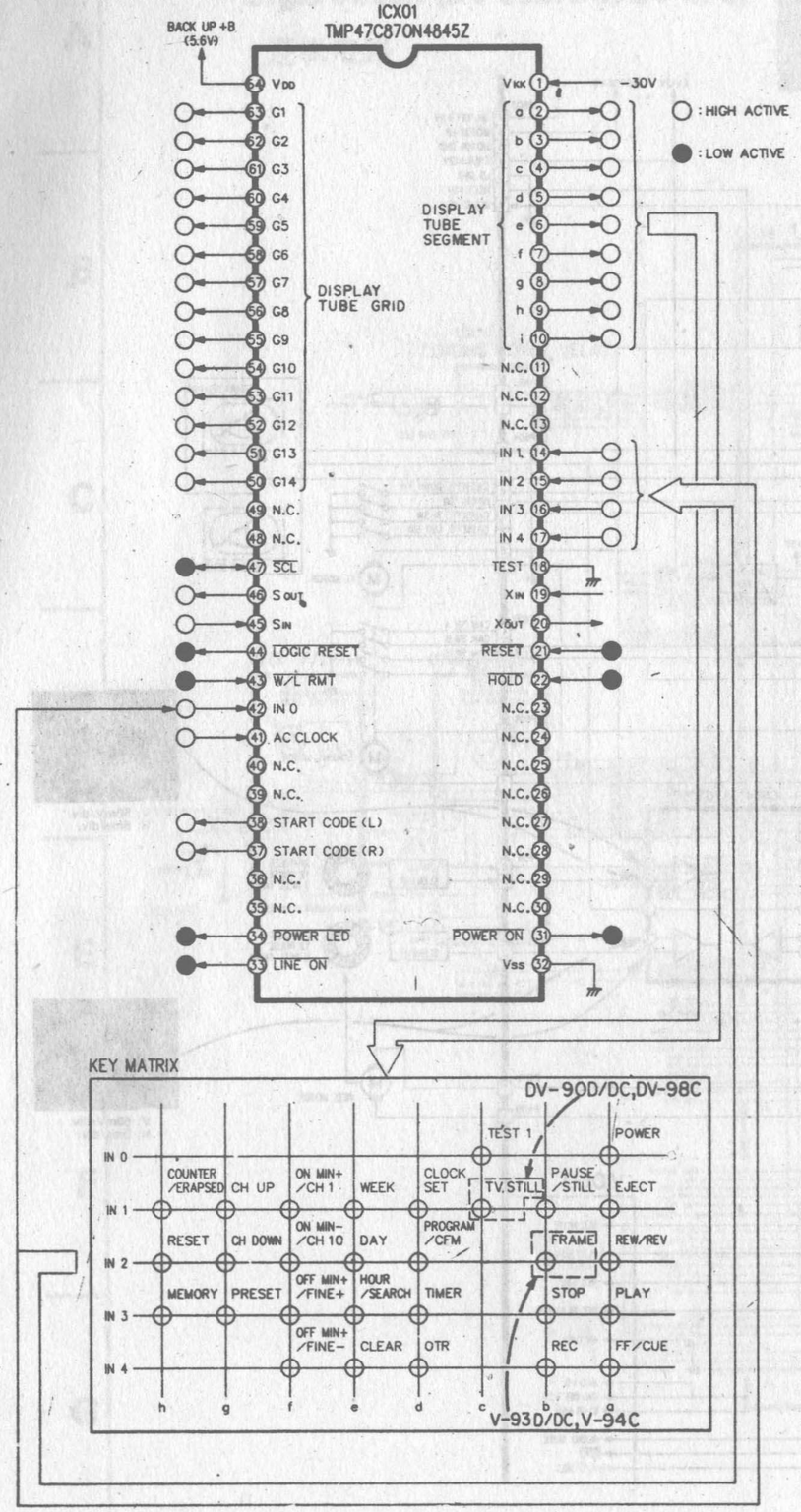


记时器，显示，逻辑控制开关电路

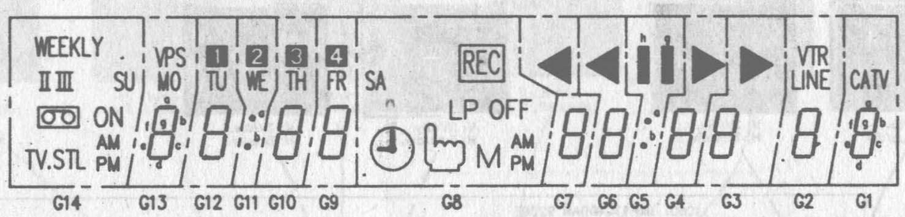
9-3. Timer, Display, Logic Control Switch Circuit



显示元件特性

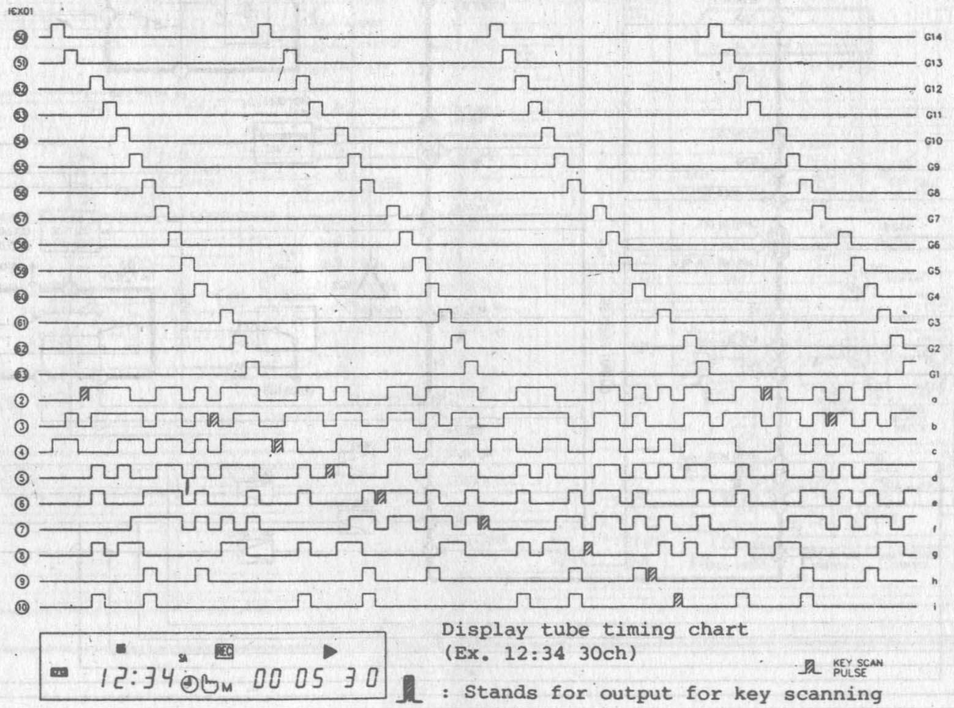


GX01 FIP14GM6



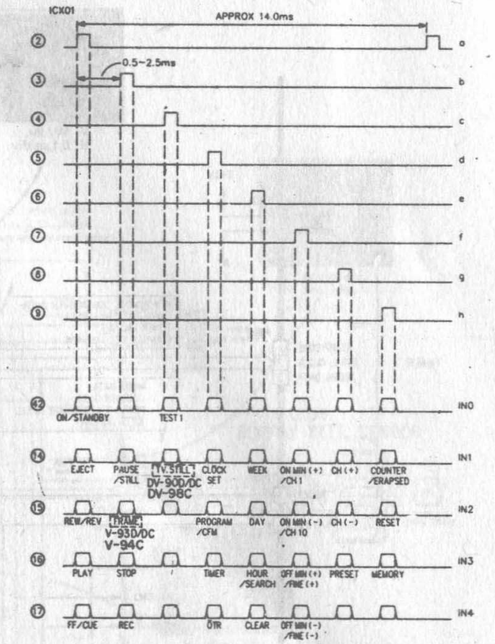
DISPLAY PATTERN

SEGMENT \ GRID	G14	G13	G12	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1
a	PM	a	a	(UP)	a	a	PM	a	a	(UP)	a	a	a	a
b	TV.STL	b	b	(DOWN)	b	b	M	b	b	(DOWN)	b	b	b	b
c	▭	c	c	/	c	c	LP	c	c	/	c	c	c	c
d	AM	d	d	/	d	d	AM	d	d	/	d	d	d	d
e	II	e	e	/	e	e	☜	e	e	/	e	e	e	e
f	III	f	f	/	f	f	🕘	f	f	/	f	f	f	f
g	ON	g	g	/	g	g	OFF	g	g	▮(R)	g	g	g	g
h	SU	MO	TU	WE	TH	FR	SA	◀	◀	▮(II)	▶	▶	LINE	CATV
i	WEEKLY	VPS	1	2	3	4	REC	/	/	/	/	/	VTR	/

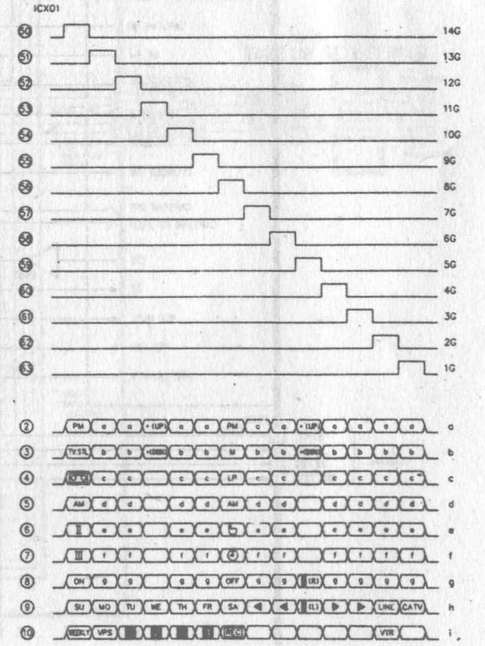


Display tube timing chart
(Ex. 12:34 30ch)

: Stands for output for key scanning and is developed at every two grid outputs.



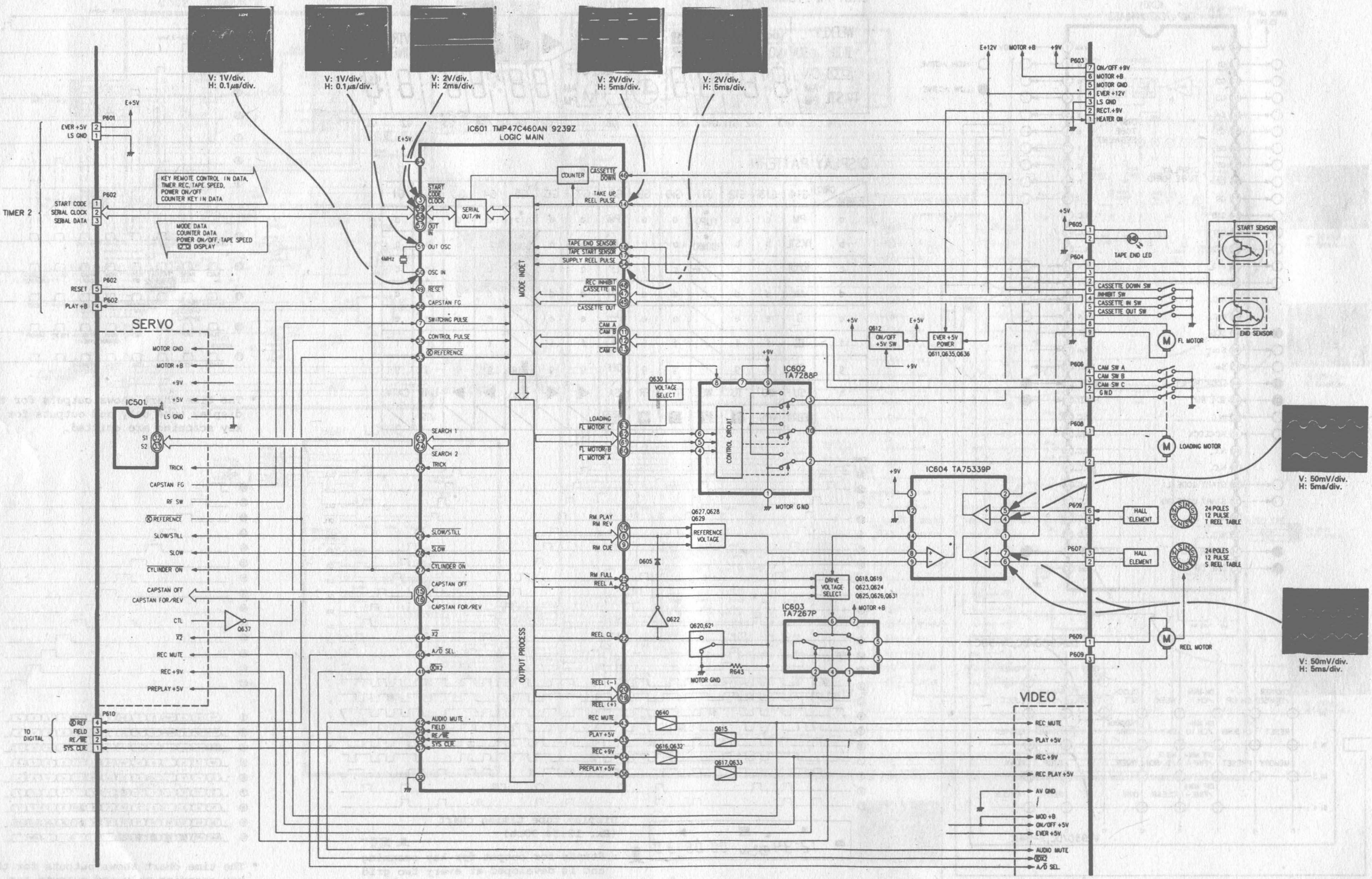
* The time chart shows outputs for the display tube only and outputs for the key scanning are omitted.



* The time chart shows outputs for the key scanning only and outputs for the display tube only are omitted.

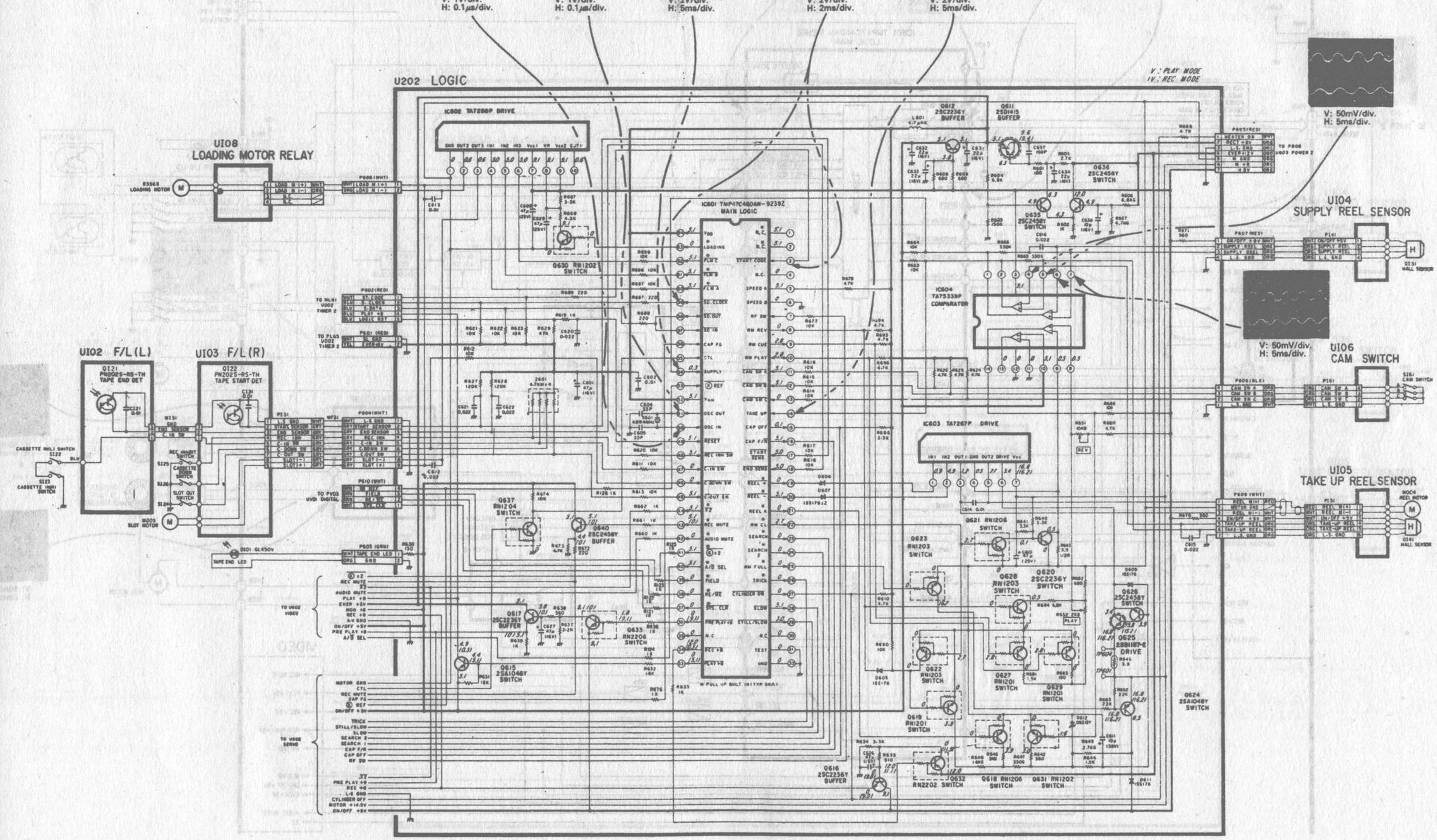
逻辑方框图

10-1. Logic Block Diagram (DV-90D/DC, DV-98C)

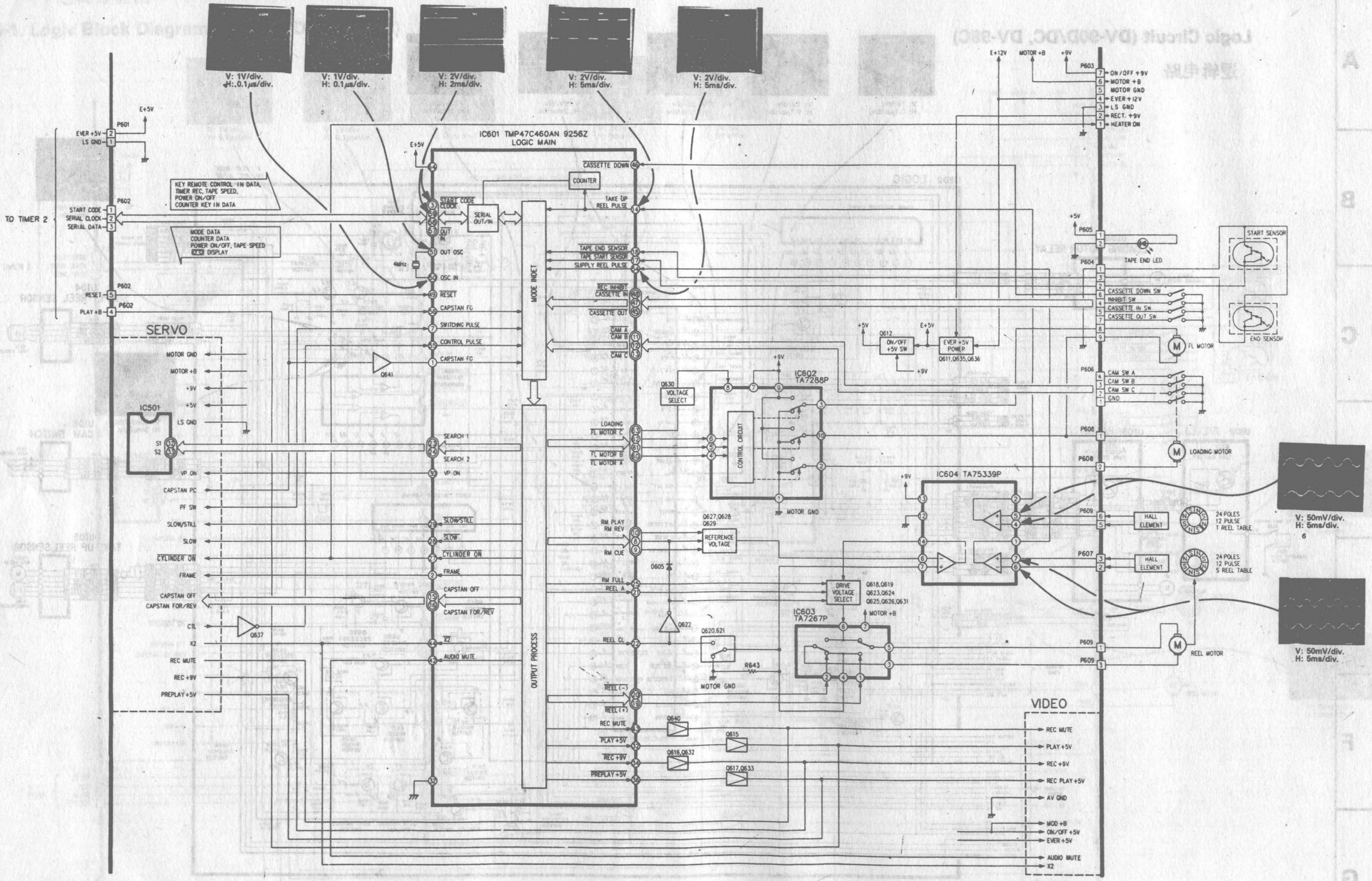


Logic Circuit (DV-90D/DC, DV-98C)

逻辑电路



Logic Block Diagram (V-93D/DC, V-94C)



Logic Circuit (V-93D/DC, V-94C)

逻辑电路