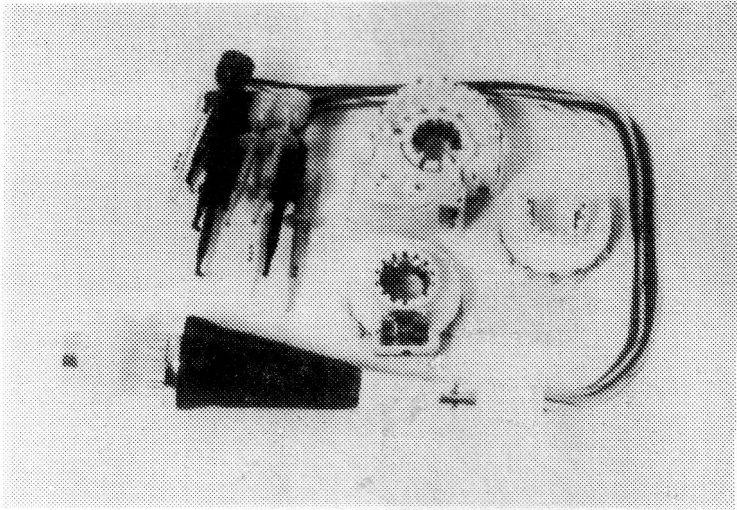


# **DANDY-DAPTER™**

UNIVERSAL PICTURE TUBE ADAPTER

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CA-28  
INSTRUCTION MANUAL  
& SET-UP CHART



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## INTRODUCTION

I

Now that you have the new CA-28 Universal Adapter, let's introduce you to its operation. The CA-28 Adapter is sheer simplicity once you get the hang of using it.

**STEP 1:** Connect the CA-28 Adapter Plug to the Standard 12 Pin Adapter used to test the 25AP/XP22 (which came with your CRT Tester.)

**STEP 2:** Look up the number of the CRT being tested as listed in the CRT Reference Charts. Note that directly to the right of the CRT number is a chart use number.

(SONY TUBES ARE LISTED ON A SEPARATE PAGE.)

**STEP 3:** Refer to the pin connection chart (Appendix 1) using the chart number indicated for the CRT you are testing, you will connect the leads to the corresponding pins on the CRT.

(Note that the CA-28 Adapter has 11 leads labeled: H, H, G1R, G1B, G1G, G2R, G2B, G2G, KR, KB, KG.)

If the tester you are using does not have a G-2 setting, you will not need to use the G2 leads.

### EXAMPLE:

You are going to test a 13VAHP22. You would look up this number in Appendix II.

Tube Type	Chart #
12VADP22	6
13VAHP22	10

Note that the chart number is 10. Now refer to the pin connection chart (Appendix I), and connect the 11 leads from the CA-28 Adapter to the corresponding pins as listed.\*

Chart #	H	H	G1R	G1B	G1G	G2R	G2B	G2G	KR	KB	KG
10	1	14	6	13	3	5	12	2	4	11	7

**STEP 4:** Use your CRT Tester/Rejuvenator/Restorer as you normally would.

- \* NOTE: Sockets have been provided for use with the pinless CRT's so you will not have to pry the pins away from the neck of the CRT in order to connect the adapter.

Now that you understand how to use the CA-28 Adapter, let's show you how to determine proper hook-up in the event you come across a CRT not listed, as it is virtually impossible to have a fully updated list of CRT's with new ones coming out all the time.

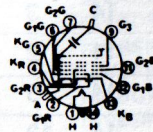
Let's assume you wish to test a 17ENP22, and you do not find it listed. You would simply look up the basing diagram for this CRT and connect the CA-28 Adapter leads to the corresponding pins as labeled.

EXAMPLE:

CRT

BASING DIAGRAM

17ENP22



14AU

You will note that all pins on the CRT are used. You would connect the CA-28 Adapter as follows: H-1, H-14, G1R-2, G1B-12, G1G-6, G2R-3, G2B-11, G2G-7, KR-4, KB-13, KG-5.

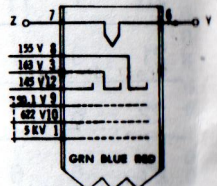
Basing Diagrams are normally found in the back of Tube Substitution Manuals.

You may obtain Basing Information from the manufacturers Schematic or H.W. Sams Photofact.

EXAMPLE:

CRT

19VDKTCO 2



PINS 6&7

PIN 8 (to red)

PIN 3 (to blue)

PIN 12 (to green)

PIN 9

PIN 10

Heaters

KR

KB

KG

G1s

G2s

19VDKTCO2

**CA-28**  
**APPENDIX I**  
**Set-Up Chart**

Chart #	H	H	G1R	G1B	G1G	G2R	G2B	G2G	KR	KB	KG	*Notes
1	6	7	9	4	13	10	5	11	8	3	12	
2	6	7	9	9	9	10	10	10	8	3	12	
3	7	8	9	9	9	11	11	11	12	13	10	
4	9	10	5	5	5	7	7	7	8	11	6	
5	1	14	2	12	6	3	11	7	4	13	5	
6	1	14	3	12	7	4	13	5	2	11	6	
7	4	11	2	14	7	3	13	1	6	6	6	
8	1	14	3	6	13	2	5	12	7	4	11	
9	1	14	13	6	3	12	5	2	11	4	7	
10	1	14	6	13	3	5	12	2	4	11	7	
11	1	6	12	3	14	11	5	7	13	4	2	
12	1	20	3	18	8	4	17	9	2	19	7	
13	7	9	12	4	10	13	3	6	11	5	8	
14	7	8	9	9	9	11	11	11	12	13	10	
15	1	14	7	11	3	5	13	2	6	12	4	
16	6	7	13	3	9	11	5	8	12	4	10	
17	1	14	3	3	3	4	13	5	2	11	6	
18	1	14	3	3	3	5	12	2	4	11	7	
19	4	5	6	6	6	8	8	8	7	3	9	
20	1	11	10	10	10	5	5	5	9	3	4	
21	3	4	5	5	5	8	8	8	1	6	7	
22	6	7	8	8	8	4	4	4	5	10	9	
23	5	6	10	10	10	8	8	8	7	4	9	
24	5	6	7	7	7	9	9	9	10	11	8	

\* On charts showing same pin numbers for G1s or G2s; Hook-Up all three G1s or G2s to the same pin. (These are inline tubes).

# AMERICAN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
9VACP22	13	14VAEP22	6	16CYP22	6
9VBAP22	2	14VAFP22	6	16DAP22	6
10VABP22	9	14VAGP22	6	16VABP22	6
10VADP22	9	14VAHP22	6	16VACP22	6
10VAHP22	10	14VAJP22	6	16VADP22	6
10VLYP22	2	14VAKP22	6	16VAEP22	6
12DCP22	6	14VALP22	6	16VAFP22	6
12VADP22	6	14VAMP22	6	16VAHP22	6
12VAHP22	6	14VANP22	6	16VAKP22	6
12VAJP22	6	14VAQP22	6	16VAMP22	6
12VALP22	6	15AAETCO2	2	16VANP22	6
12VARP22	6	15ABP22	6	16VASP22	6
12VASP22	6	15ACP22	6	16VATP22	6
12VATP22	6	15AEP22	6	16VAUP22	6
13AHP22	10	15AFP22	6	16VAWP22	8
13GP22	6	15AGP22	6	16VAXP22	6
13JP22	6	15AHP22	6	16VBDP22	8
13LP22	6	15AJP22	6	16VBEP22	6
13MP22	6	15GP22	12	16VBFP22	6
13VAEP22	6	15HP22	12	16VBGP22	6
13VAFP22	10	15KP22	6	16VBHP22	6
13VAGP22	10	15LP22	6	16VBMP22	8
13VAHP22	10	15MP22	8	16VBSP22	8
13VAKP22	2	15NP22	6	16VEMP22	8
13VAKTCO2	2	15AP22	6	16VEP22	6
13VAMP22	2	15QP22	6	17EJP22	5
13VAP22	2	15RP22	6	17ENP22	5
13VATP22	2	15SP22	6	17ETP22	6
13VAUP22	2	15TP22	6	17EVP22	6
13VAVP22	10	15UP22	6	17EXP22	8
13VAWP22	10	15VACP22	6	17EZP22	6
13VAYP22	4	15VADP22	2	17FAP22	6
13VBAP22	3	15VADTCO1	2	17FBP22	6
13VBEP22	2	15VADTCO2	2	17FEP22	6
13VBFP22	2	15VAECO2	2	17FGP22	6
13VBGP22	18	15VAGTCO1	2	17FHP22	6
13VBHP22	2	15VAGTCO2	2	17FJP22	8
13VBJP22	4	15VALP22	2	17FKP22	6
13VBLP22	4	15VAMP22	2	17FVP22	6
13VBMP22	3	15VAEP22	2	17JP22	8
13VBRP22	2	15VAFP22	2	17VABP22	6
13VBSP22	4	15VAGP22	18	17VACP22	6
13VBT P22	10	15VAHP22	10	17VADP22	6
13VBUP22	2	15VARP22	2	17VAEP22	6
13VBWP22	3	15VASP22	18	17VAFP22	6
13VBZP22	3	15VATP22	4	17VAGP22	6
13VCAP22	2	15VAWP22	2	17VAHP22	1
13VCBP22	2	15VAYP22	4	17VAKP22	6
14AQP22	6	15VAZP22	2	17VAMPCO1	2
14BOAP22	6	15WP22	6	17VANP22	2
14BCP22	5	15XP22	6	17VANTCO1	2
14BEP22	6	15YP22	8	17VANTCO2	2
14BFP22	6	15 ZP22	6	17VAQP22	10
14VABP22	6	16CBP22	5	17VARP22	6
14VACP22	6	16CDP22	6	17VASP22	6
14VADP22	6	16CSP22	6	17VATP22	2
				17VAUP22	6
				17VAWP22	2

# AMERICAN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
17VAXP22	10	18VBHP22	6	19JVP22	1
17VAYP22	2	18VBJP22	6	19JWP22	6
17VAZP22	2	18VBKP22	6	19JXP22	1
17VBAP22	10	18VBMP22	6	19JYP22	6
17VBACO1	2	18VBNP22	6	19JZP22	6
17VBJP22	2	18VBSP22	6	19KAP22	6
17VAQP22	10	18VBTP22	6	19KBP22	6
17VATCO2	2	18VBUP22	6	19KCP22	6
17VAYTCO1	2	18VBWP22	6	19KDP22	6
17VAYTCO2	2	18VBXP22	6	19KEP22	6
17VAZTCO2	2	19CHP22	6	19KFP22	6
17VBCP22	10	19CJP22	6	19KGP22	6
17VBDP22	2	19EXP22	6	19KHP22	6
17VBGP22	10	19EYP22	6	19KJP22	6
17VBHP22	10	19FMP22	6	19KLP22	6
17VBJP22	2	19FXP22	6	19LXP22	4
17VBJCO1	2	19GDP22	6	19SENP22	10
17VBLP22	2	19GLP22	6	19TP22	12
17VBMP22	4	19GSP22	6	19VP22	5
17VBNP22	3	19GVP22	6	19VABQP22	6
17VBQP22	18	19GWP22	6	19VABP22	5
17VBRP22	18	19GXP22	6	19VACP22	5
17VBSP22	18	19GYP22	6	19VADP22	1
17VBTP22	4	19GZP22	6	19VAFP22	6
17VBUP22	10	19HBP22	6	19VAGP22	6
17VBWP22	18	19HCP22	6	19VAKP22	6
17VBXP22	18	19HDP22	6	19VAMP22	6
17VBYP22	4	19HFP22	6	19VANP22	6
17VBZP22	4	19HJP22	6	19VAQP22	6
17VBCP22	10	19HKP22	6	19VATP22	6
17VBDP22	2	19HLP22	6	19VAUP22	6
17VCBP22	3	19HMP22	6	19VAWP22	6
17VCDP22	10	19HNP22	6	19VAXP22	6
17VDBP22	2	19HQP22	6	19VAYP22	6
17VGBP22	10	19HRP22	6	19VAZP22	6
18VABP22	6	19HSP22	6	19VBAP22	6
18VACP22	6	19HTP22	6	19VBCP22	6
18VADP22	6	19HVP22	6	19VBDP22	6
18VAEP22	6	19HWP22	6	19VBFP22	6
18VAFP22	6	19HYP22	6	19VBGP22	6
18VAGP22	6	19HXP22	6	19VBHP22	6
18VAHP22	6	19JAP22	6	19VBJP22	6
18VAJP22	6	19JBP22	6	19VBKP22	6
18VAKP22	6	19JCP22	6	19VBLP22	1
18VALP22	6	19JDP22	6	19VBQP22	6
18VAMP22	6	19JEP22	6	19VBRP22	6
18VANP22	1	19JFP22	6	19VBSP22	6
18VAQP22	6	19JGP22	6	19VBUP22	6
18VARP22	6	19JHP22	6	19VBWP22	6
18VASP22	6	19JKP22	6	19VCAP22	6
18VATP22	6	19JLP22	6	19VCBP22	6
18VAWP22	6	19JMP22	6	19VCDP22	10
18VAXP22	6	19JNP22	6	19VCFP22	6
18VAZP22	6	19JOP22	6	19VCNP22	6
18VBAP22	6	19JQP22	6	19VCQP22	6
18VBCP22	6	19JRP22	6	19VCRP22	6
18VBDP22	6	19JSP22	6		
18VBEP22	6	19JVP22	3		
18VBFP22	6				
18VBGP22	6				

# AMERICAN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
19VCSP22	6	19VFXP22	10	19VKMP22	4
19VCTP22	6	19VGBP22	2	19VKNP22	6
19VCWP22	1	19VGJP22	6	19VKRP22	6
19VCXP22	6	19VGKP22	2	19VKSP22	4
19VCYP22	6	19VGKTCO2	2	19VKTP22	6
19VDBP22	1	19VGLP22	10	<b>19VKUP22</b>	4
19VDCP22	10	19VGMP22	2	19VKVP22	6
19VDFP22	6	19VGNP22	10	19VKWP22	2
19VDKP22	2	19VGQP22	2	19VKXP22	24
19VDKTCO1	2	19VGQTCO1	2	19VKYP22	24
19VDKTCO2	2	19VGRP22	10	19VKZP22	18
19VDLP22	2	19VGTP22	10	19VLAP22	6
19VDLTCO1	2	19VGWP22	2	19VLBP22	2
19VDRTC02	2	19VGZP22	3	19VLC P22	2
19VDMP22	6	19VHFTCO5	2	19VLEP22	2
19VDNP22	6	19VHBP22	6	19VLGP22	4
19VDQP22	6	19VHCP22	10	19VLHP22	2
19VDRP22	2	19VHDP22	2	19VLJP22	4
19VDSP22	6	19VHFP22	2	19VLKP22	24
19VDTP22	6	19VHJP22	6	19VLM P22	24
19VDUP22	6	19VHKP22	2	19VLNP22	4
19VDWP22	6	19VHNP22	10	19VLQP22	3
19VDXP22	6	19VHSP22	3	19VLRP22	24
19VDYP22	6	19VHTP22	3	19V LSP22	2
19VDZP22	6	19VHWP22	2	19VLTP22	4
19VEAP22	6	19VHXP22	10	19VLUP22	4
19VEBP22	10	19VHYP22	4	19VLWP22	4
19VECP22	6	19VHZP22	2	19VLYP22	2
19VEDP22	6	19VHZTCO1	2	19VLZP22	4
19VEFP22	6	19VJBP22	2	19VMAP22	4
19VEGP22	6	19VJCP22	2	19VMBP22	4
19VEHP22	6	19VJDP22	24	19VMCP22	4
19VEJP22	2	19VJFP22	4	19VMDP22	4
19VEJTCO2	2	19VJGP22	4	19VMEP22	3
19VEJTCO5	2	19VJJP22	4	19VMFP22	4
19VEKP22	6	19VJLP22	4	19VMGP22	4
19VELP22	6	19VJMP22	4	19VMHP22	4
19VEQP22	2	19VJNP22	3	19VMJP22	4
19VEQTCO2	2	19VJQP22	2	19VMKP22	4
19VESP22	6	19VJRP22	3	19VMLP22	4
19VETP22	6	19VJSP22	6	19VMNP22	4
19VEUP22	6	19VJTP22	4	19VM P22	24
19VEWP22	6	19VJUP22	4	19VMRP22	4
19VEXP22	6	19VJWP22	4	19VMSP22	4
19VEZJTO2	2	19VJXP22	2	19VMTP22	2
19VEZP22	6	19VJYP22	2	19VMUP22	3
19VFAP22	6	19VKDP22	4	19VMWP22	4
19VFBP22	10	19VKEP22	4	19VMYP22	4
19VFJP22	10	19VKFP22	4	19VMZP22	4
19VFKP22	6	19VKGP22	4	19VNAP22	4
19VFLP22	2	19VKHP22	10	19VNBP22	4
19VFMP22	2	19VKJP22	10	19VNCP22	4
19VFQP22	6	19VKLP22	10	19VNDP22	4
19VFRP22	2			19VNEP22	4
19VFSP22	6			19VNFP22	3

# AMERICAN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
19VNGP22	4	21VAWP22	6	23VABP22	6
19VNHP22	4	21VAXP22	6	23VACP22	6
19VNJP22	4	21VAYP22	6	23VADP22	6
19VSP22	6	21VAZP22	6	23VAEP22	6
20VABP22	6	21VBAP22	6	23VAHP22	6
20VACP22	6	21VBCP22	6	23VAJP22	6
20VACUP22	6	21VBDP22	6	23VALP22	6
20VADP22	6	21VBEP22	6	23VAMP22	6
20VAEP22	6	21VBFP22	6	23VANP22	6
20VAFP22	6	21VBGP22	6	23VAQP22	6
20VAGP22	6	21VBHP22	6	23VARP22	6
20VAHP22	6	21VBJP22	6	23VASP22	6
20VAJP22	6	21VBKP22	6	23VATP22	6
20VAKP22	6	21VBLP22	10	23VAUP22	6
20VALP22	6	21VBMP22	18	23VAUP22	6
20VAMP22	6	21VBNP22	3	23VAWP22	6
20VANP22	6	21VBQP22	3	23VAXP22	6
20VARP22	6	21VMWP22	18	23VAYP22	6
20VASP22	6	22ABP22	6	23VAZP22	6
21AXP22	5	22ACP22	6	23VBAP22	6
21AXP22A	5	22ADP22	6	23VBCP22	6
21BHP22	6	22AEP22	6	23VBDP22	6
21BP22	5	22AGP22	6	23VBEP22	6
21CYP22	5	22AHP22	6	23VBFP22	6
21CYP22A	5	22ALP22	6	23VBGP22	6
21EP22	5	22AMP22	6	23VBHP22	6
21FBP22	5	22ANP22	6	23VBJP22	6
21FBP22A	5	22AQP22	6	23VBKP22	6
21FJP22	5	22ARP22	6	23VBLP22	6
21FJP22A	5	22ASP22	6	23VBMP22	6
21FKP22	5	22ATP22	6	23VBNP22	6
21FNP22	6	22AVP22	6	23VBRP22	6
21FQP22	6	22AWP22	6	23VBSP22	6
21GFP22	6	22AXP22	6	23VBTP22	6
21GLP22	6	22AYP22	6	23VBUP22	6
21GNP22	6	22BCP22	6	23VBWP22	6
21GRP22	6	22EFP22	6	23VBXP22	6
21GUP22	5	22EJP22	6	23VBYP22	6
21GVP22	5	22EP22	5	23VCAP22	6
21GWP22	6	22GP22	6	23VCDP22	6
21GXP22	5	22JP22	6	23VCEP22	6
21GYP22	5	22KP22	6	23VCFP22	6
21GZP22	5	22LP22	6	23VCGP22	6
21HAP22	5	22QP22	6	23VCHP22	6
21HBP22	6	22RP22	6	23VCJP22	6
21VABP22	6	22SP22	6	23VCKP22	6
21VACP22	6	22UP22	6	23VCMP22	6
21VADP22	6	22VP22	6	23VCRP22	3
21VAEP22	6	22VAGP22	6	23VRP22	6
21VAFP22	6	22WP22	6	23VTP22	6
21VAJP22	6	22XP22	6	23YDFP22	6
21VAKP22	6	22YP22	6	24VABP22	11
21VALP22	6	23BP22	6	25AP22	6
21VAMP22	6	23BALP22	6	25AP22A	6
21VAQP22	6	23CBP22	6	25ABP22	6
21VARP22	6	23EGP22	6	25ACP22	6
21VAUP22	6	23EGP22A	6	25ADP22	6



TUBE CHART  
TYPE #

25AEP22 6  
 25AFP22 6  
 25AGP22 6  
 25AHP22 6  
 25AJP22 6  
 25AKP22 6  
 25ALP22 6  
 25ALP22A 6  
 25AMP22 6  
 25ANP22 6  
 25AQP22 6  
 25ARP22 6  
 25ASP22 6  
 25ATP22 6  
 25AUP22 6  
 25AVP22 6  
 25AWP22 6  
 25AXP22 6  
 25AYP22 6  
 25AZP22 6  
 25BP22 6  
 25BP22A 6  
 25BAP22 6  
 25BCP22 6  
 25BDP22 6  
 25BFP22 6  
 25BGP22 6  
 25BHP22 6  
 25BJP22 6  
 25BKP22 6  
 25BLP22 6  
 25BMP22 6  
 25BNP22 6  
 25BRP22 6  
 25BSP22 6  
 25BTP22 6  
 25BVP22 6  
 25BWP22 6  
 25BXP22 6  
 25BYP22 6  
 25BZP22 6  
 25CAP22 6  
 25CBP22 6  
 25CP22 6  
 25CZP22 6  
 25DMP22 6  
 25FP22 6  
 25FP22A 6  
 25GP22A 6  
 25LP22 6  
 25RP22 6  
 25SP22 6  
 25UP22 6  
 25VP22 6  
 25VABP22 6  
 25VACP22 6  
 25VADP22 6

AMERICAN  
TUBE CHART  
TYPE #

25VAEP22 6  
 25VAFP22 6  
 25VAGP22 6  
 25VAHP22 6  
 25VAJP22 6  
 25VAKP22 6  
 25VALP22 6  
 25VAMP22 6  
 25VANP22 6  
 25VAQP22 6  
 25VARP22 6  
 25VASP22 6  
 25VATP22 6  
 25VAUP22 6  
 25VAWP22 6  
 25VAXP22 6  
 25VAYP22 6  
 25VAZP22 6  
 25VBAP22 6  
 25VBGP22 6  
 25VBHP22 6  
 25VBJP22 6  
 25VBKP22 6  
 25VBLP22 6  
 25VBMP22 6  
 25VBNP22 6  
 25VBQP22 6  
 25VBRP22 6  
 25VBSP22 6  
 25VBTP22 6  
 25VBUP22 6  
 25VBWP22 6  
 25VBXP22 6  
 25VBYP22 6  
 25VBZP22 6  
 25VCAP22 6  
 25VCBP22 6  
 25VCCP22 6  
 25VCDP22 6  
 25VCEP22 6  
 25VCFP22 6  
 25VCGP22 6  
 25VCHP22 6  
 25VCJP22 6  
 25VCKP22 6  
 25VCLP22 6  
 25VCMP22 6  
 25VCNP22 6  
 25VCRP22 6  
 25VCS2P22 6  
 25VCTP22 6  
 25VCUP22 6  
 25VCWP22 6  
 25VCXP22 6

TUBE CHART  
TYPE #

25VCYP22 6  
 25VCZP22 6  
 25VDAP22 6  
 25VDBP22 6  
 25VDCP22 6  
 25VDEP22 6  
 25VDFP22 6  
 25VDGP22 6  
 25VDHP22 6  
 25VDJP22 6  
 25VDKP22 6  
 25VDMP22 6  
 25VDNP22 6  
 25VDRP22 6  
 25VDSP22 6  
 25VDTP22 6  
 25VDUP22 6  
 25VDWP22 6  
 25VDXP22 6  
 25VDZP22 2  
 25VEBP22 6  
 25VECP22 6  
 25VEDP22 6  
 25VEFP22 6  
 25VEGP22 6  
 25VEHP22 6  
 25VEJP22 6  
 25VEKP22 10  
 25VEMP22 3  
 25VEPP22 3  
 25VEQP22 3  
 25VERP22 6  
 25VESP22 3  
 25VETP22 3  
 25VEUP22 3  
 25VEWP22 3  
 25VEXP22 6  
 25VEYP22 4  
 25VEZP22 6  
 25VFAP22 6  
 25VFBP22 3  
 25VFCP22 3  
 25VFE2P22 4  
 25VFGP22 6  
 25VFHP22 3  
 25VFJP22 4  
 25VFKP22 3  
 25VFLP22 6  
 25VFM2P22 3  
 25VFNP22 4  
 25VFQP22 4  
 25VFRP22 24  
 25VFS2P22 4  
 25VF3P22 3  
 25VF4P22 3  
 25VF5P22 24  
 25VF6P22 3  
 25VF7P22 3  
 25VF8P22 3

# AMERICAN

**TUBE**      **CHART**  
**TYPE**      **#**

**TUBE**      **CHART**  
**TYPE**      **#**

**TUBE**      **CHART**  
**TYPE**      **#**

25VFZP22      4  
25VGAP22      4  
25VGBP22      6  
25VGDP22      4  
25VGEP22      3  
25VGHP22      3  
25VGJP22      3  
25VGKP22      3  
25VGLP22      3  
25VGMP22      3  
25VGNP22      3  
25VGQP22      3  
25VGRP22      4  
25VGSP22      3  
25VGTP22      4  
25VGUP22      4  
25VGWP22      4

25VGXP22      4  
25VGYP22      4  
25VGZP22      3  
25VHAP22      3  
25VHB P22      3  
25VHCP22      3  
25VHDP22      4  
25VHEP22      3  
25VHGP22      3  
25VHK P22      4  
25VHL P22      3  
25VHMP22      3  
25VHNP22      3  
25VHQ P22      3  
25VHR P22      3  
25VHS P22      4  
25VHT P22      3

25VHU P22      4  
25VZFP22      6  
25WP22      6  
25XP22      6  
25YP22      6  
25ZP22      6  
26AP22      6  
26DP22      6  
26EP22      6  
26FP22      6  
26GP22      6  
26HP22      6  
26KP22      6  
26VABP22      11  
26VEZP22      17  
27VAFP22      14  
32WB22      6

## FOREIGN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
150AYB22	19	320NB22	6	370DGB22	13
150EUB22	15	320RB22	6	370DHB22	2
160DB227CU2	20	320VB22	6	370DJB22	2
170KB22Q	13	320WB22A	6	370DKB22P	2
200KGB22	6	320JB22	6	370DLB22P	13
200LB22	6	320LB22	6	370DMB22P	13
220NB22	2	320MB22	6	370DRB22	2
250AFB22	2	330GB22	3	370DRB22TCO1	2
250AGB22	2	350CB22	6	370DYB22	6
250AMB22	19	350DB22	6	370EB22	6
250MB22	6	360CB22	6	370ECB22	2
250RB22	6	370AB22	6	370ECB22TCO1	2
250RB22A	6	370AB22	6	370EHB22TCO1	2
250TB22	6	370AB22	6	370EFB22	2
250TB22A	6	370AEB22	6	370EGB22	2
270AEB22	19	370AFB22	6	370EJB22	2
270EB22	6	370AGB22	6	370EKB22S	13
270JB22	13	370AKB22	6	370ELB22	2
270KB22	13	370ALB22	6	370EMB22	2
270KCB22	6	370ANB22A	13	370ERB22	2
270LB22	13	370ARB22A	13	370ESB22	2
270LB22Q	13	370AUB22	13	370ETB22	13
270MB22	2	370AUB22Q	13	370FB22	6
270NB22	13	370AUB22A	13	370FCB22	2
270RB22	13	370AUB22P	13	370FHB22	2
270SB22	13	370AVB22	13	370FLB22	2
270TB22	13	370AVB22A	13	370FTB22	2
270UB22	13	370AWB22	6	370FVB22	2
270VB22	2	370AXB22	6	370GCB22	4
270VB22TLO	2	370AYB22	6	370GHB22	2
290HB22	2	370BCB22	6	370GJB22	2
290KB22	21	370BDB22A	13	370GKB22	4
310DGB22	2	370BDB22P	13	370GUB22	4
310FGB22A	6	370BEB22A	13	370HKB22	2
320ACB22	6	370BEB22P	13	370HRB22	2
320ADB22	6	370BGB22	6	370HUB22	2
320AEB22	6	370HBB22	2	370JB22	6
320AGB22	6	370HKB22	2	370JFB22TCO1	2
320AHB22	6	370HKB22S	2	370KB22	6
320AJB22	6	370HKB22A	2	370KLB22	22
320AKB22	6	370HKB22	2	370KSB22	19
320ARB22	2	370HKB22	2	370LB22	6
320AWB22	2	370HKB22	2	370LGB22	19
320AXB22	2	370HKB22	2	370LSB22	19
320AYB22	13	370HKB22	2	370MB22	6
320BG22	6	370HKB22	2	370NB22	6
320BJB22	2	370HKB22	2	370NB22A	6
320BKB22	2	370HKB22	2	370RB22	6
320BNB22	2	370HKB22	2	370SB22	6
320CB22	6	370HKB22	2	370TB22	6
320CB22A	6	370HKB22	2	370UB22	6
320DB22	6	370HKB22	2	370UNB22	6
320DNB22	2	370HKB22	2	370VB22	13
320EB22	6	370HKB22	2	370VB22 A	13
320GB22	6	370HKB22	2	370VB22P	13
320HB22A	6	370HKB22	2	370VB22S	13
320HIB22	6	370HKB22	2	370WB22	13
320JB22	6	370HKB22	2	370WB22A	13
320KB22	6	370HKB22	2	370WB22P	13
320LB22	6	370HKB22	2	370WB22Q	13
320MB22	6	370HKB22	2	370ZB22	6
		370DEB22	2		

## FOREIGN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
400ACB22	6	420BZB22	2	470FB22	6
400BDB22	6	420CB22	6	470GB22	6
400BJB22	6	420CAB22	2	470HB22	6
400BLB22	6	420CDB22TCO	2	470IB22	6
400BMB22	6	420CGB22	2	470JB22	6
400BNB22	6	420CHB22P	13	470KCB22	6
400BRB22	6	420CSB22	2	470LB22	6
400CLB22	6	420CTB22	13	470MB22	6
400CNB22	6	420CYB22TCO	2	470NB22	6
400CUB22	6	420CZB22A	2	470ORB22	6
400CUB22A	6	420CZB22B	2	470SB22	6
400CVB22	6	420DB22	6	470TB22	6
400CVB22A	6	420DGB22	4	470UB22	6
400DAB22	6	420DKB22	2	470VB22	6
400DFB22	6	420DRB22	4	470WB22	6
400DKB22	6	420DVB22	4	470XB22	6
400DMB22A	6	420EB22	6	470YB22	6
400EB22	6	420ESB22	2	470ZB22	6
400JB22	6	420ETB22	2	470CAB22	6
400KB22	5	420EXB22	13	470CDB22	6
400MB22	6	420FB22	6	470CEB22	6
410AYB22A	6	420FTB22	19	470CFB22	6
410BRB22P	2	420FYB22	2	470CJB22	6
420AB22	6	420GB22	6	470CKB22	6
420ACB22	6	420HB22	6	470CLB22	6
420ADB22	13	420IB22	2	470CNB22	1
420ADB221	13	420JB22	6	470CTB22	6
420AFB22	2	420KB22	6	470CVB22	6
420AGB22	2	420LB22	6	470CWB22	6
420AHB22	6	420MB22	6	470CYB22	6
420AJB22	6	420NB22	6	470CZB22	1
420AKB22	13	420RB22	6	470DEB22	1
420AKB22Q	13	420SB22	6	470DFB22	6
420ALB22	13	420UB22	1	470DHB22	6
420ASB22	2	420WB22	6	470DKB22	6
420ASB22AS1	2	420XB22	1	470DMB22	6
420ATB22	2	420YB22	6	470DTB22	6
420AUB22	2	430CB22	5	470DUB22	6
420AVB22TCO1	2	430DB22	6	470DVB22	6
420AWB22	2	430FB22	5	470DXB22	1
420AZB22	2	440AJB22	6	470DZB22	6
420BAB22	2	440AKB22	6	470EAB22	15
420BCB22	2	440AKB22A	6	470ECB22	1
420BCB22TCO1	2	440ALB22	6	470EDB22	15
420BEB22	2	440ALB22A	6	470EFB22	15
420FB22	13	440ASB22	6	470EHB22	1
420HBB22	13	440ASB22A	6	470EJB22	6
420HBB22TCO	13	440AXB22	6	470ELB22P	15
420JB22	13	440AZB22	6	470EMB22	6
420KCB22	2	440AZB22A	6	470ERB22P	15
420LB22	2	440BCB22	6	470ESB22	2
420BMB22P	13	440BDB22	6	470ETB22P	15
420BNB22P	13	440BEB22	6	470EVB22	2
420BRB22P	2	440FB22	6	470EXB22	1
420BSB22TCO	2	440HBB22	6	470EZB22	2
420BTB22	2	440KB22	6	470FAB22	15
420VB22	2	440LB22	6	470FCB22	13
420WB22	2	440NB22	6	470FCB22Q	13
		440CLB22	6		
		470AFB22	15		

# FOREIGN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
470FDB22	2	480AB22	6	490CEB22	6
470FEB22	2	490AB22	6	490CFB22	6
470FGB22	2	490ACB22	6	490CGB22	6
470FJB22	2	490ADB22	6	490CHB22	6
470FRB22	2	490AEB22	6	490CJB22	6
470FTB22P	13	490AFB22	6	490CJHP22	6
470FXB22	13	490AGB22	6	490CKB22	6
470FZB22P	13	490AHB22	6	490CLB22	6
470GAB22P	13	490AHB22B	6	490CMB22	6
470GCB22P	13	490AJB22	6	490CNB22	6
470GEB22	2	490AKB22	6	490CRB22	6
470GEB22TCO5	2	490AKB22A	6	490CSB22	6
470GHB22	2	490ALB22	6	490CTB22	6
470GLB22P	15	490AMB22	6	490CUB22	6
470GMB22	2	490AMB22A	6	490CVB22	6
470GNB22	2	490ANB22	6	490CWB22	6
470GVB22	2	490ARB22	6	490CXB22	6
470GYB22	2	490ASB22	6	490CYB22	6
470GZB22B	13	490ATB22	6	490CZB22	6
470HAB22	2	490AUB22	6	490DB22	6
470HCB22	13	490AVB22	6	490DB22A	6
470HDB22	13	490AWB22	6	490DAB22	6
470HEB22	13	490AXB22	6	490DAB22A	6
470HFB22	2	490AYB22	6	490DCB22	6
470HJB22P	13	490AYB22A	6	490DCB22A	6
470HLB22	13	490AZB22	6	490DEB22	6
470HRB22	2	490BAB22	6	490DFB22	6
470HSB22	2	490BCB22	6	490DGB22	6
470HTB22	2	490BCB22A	6	490DHB22	6
470HUB22	2	490BCB22B	6	490DHB22A	6
470HXB22	13	490BDB22	6	490DJB22	6
470JAB22	2	490BDB22A	6	490DKB22	6
470JHB22	2	490BDB22B	6	490DLB22	6
470JNB22	2	490BDB22C	6	490DMB22	6
470JUB22	15	490BEB22	6	490DNB22	6
470JVB22	2	490BFB22	6	490DVB22	2
470JWB22TCO	2	490BFB22A	6	490EB22	6
470JZB22TCO	2	490BGB22	6	490EB22A	6
470KAB22	2	490BHB22	6	490FB22	6
470KCB22	2	490JB22	6	490GB22	6
470KDB22	2	490KKB22	6	490HB22	6
470KJB22	2	490KKB22A	6	490JB22	6
470KRB22TCO	2	490LB22	6	490JB22A	6
470KUB22	2	490MB22	6	490KB22	6
470KUB22TCO	2	490NB22	6	490KB22A	6
470KVB22	2	490BRB22	6	490LB22	6
470LAB22	2	490BRB22	6	490MB22	6
470LRB22	4	490BSB22	6	490NB22	6
470LXB22	2	490TB22	6	490RB22	6
470LZB22	4	490UB22	6	490SB22	6
470MCB22	2	490VB22	6	490SB22A	6
470MDB22	2	490WB22	6	490TB22	6
470MGB22	4	490XB22	6	490UB22	6
470MJB22	2	490YB22	6	490VB22	6
470NAB22	2	490ZB22	6	490WB22	6
470NKB22	4	490CB22	6	490XB22	6
470ORB22	4	490CAB22	6	490YB22	6
470REB22	4	490CDB22	6	490ZB22	6
				490ZB22A	6

# FOREIGN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
510AB22	6	510CKB22	6	510GSB22TCO1	2
510ACB22	6	510CLB22	6	510GTB22P	2
510ADB22	6	510CMB22	6	510GXB22	6
510AEB22	6	510CNB22	6	510HB22	6
510AFB22	6	510CRB22	6	510HB22A	6
510AGB22	6	510CSB22	6	510HB22B	6
510AHB22	6	510CTB22	6	510HCB22	6
510AJB22	6	510CUB22	6	510HFB22	2
510AKB22	6	510CVB22	6	510HFB22TCO5	2
510ALB22	6	510CWB22	6	510HGB22	2
510AMB22	6	510CXB22	6	510HJB22	13
510ANB22	6	510CYB22	6	510HJB22O	13
510ARB22	6	510CZB22	6	510HKB22	6
510ASB22	6	510DB22	6	510HMB22TCO1	2
510ATB22	6	510DAB22	6	510HNB22	2
510AUB22	6	510DCB22	6	510HRB22	2
510AVB22	6	510DEB22	6	510HSB22	2
510AWB22	6	510DFB22	6	510HWB22	2
510AWB22A	6	510DJB22	6	510HYB22	6
510AXB22	6	510DKB22	6	510HZB22	2
510AXB22A	6	510DLB22	6	510JB22	6
510AYB22	6	510DMB22	15	510JB22A	6
510AYB22A	6	510DNB22	6	510JDB22P	15
510AZB22	6	510DNB22	6	510JEB22	13
510AZB22A	6	510DRB22	6	150JFB22	13
510BAB22	6	510DTB22	1	510JGB22	2
510BAB22A	6	510DVB22	6	510JHB22P	2
510BCB22	6	510DXB22	1	510JHB22TCO	2
510BCB22A	6	510DZB22	6	510KJB22	13
510bdb22	6	510EB22	6	510JLB22	13
510bdb22A	6	510EAB22	6	510JVB22	2
510BEB22	6	510ECB22	6	510JVB22SA1	2
510BEB22A	6	510EFB22	1	510JVB22SA2	2
510BFB22	6	510ELB22	6	510JYB22	2
510BGB22	6	510EMB22	1	510JZB22	2
510BHB22	6	510ENB22	6	510JZB22TCO1	2
510BJB22	6	510ERB22	6	510KB22	6
510BLB22	1	510ETB22	6	510KB22A	6
510BMB22	6	510EUB22	15	510KAB22	2
510BNB22	6	510FB22	6	510KCB22	15
510BRB22	6	510FAB22	1	510KDB22	2
510BSB22	6	510FCB22	15	510KEB22	2
510BTB22	6	510FDB22	15	510KFB22	15
510BUB22	6	510FLB22	6	510KGB22	2
510BVB22	6	510FTB22	15	510KHB22	2
510BWB22	6	510FUB22	2	510KLB22	13
510BxB22	6	510FV22	2	510KYB22	13
510BYB22	6	510FVB22	2	510KZB22	13
510BZB22	6	510FWB22	2	510KZB22B	13
510CB22	6	520FXB22	2	510LB22	6
510CAB22	6	510FYB22	2	510LB22A	6
510CDB22	6	510FZB22	1	510LB22B	6
510CEB22	6	510GB22	6	510LAB22	13
510CFB22	1	510GCB22	2	510LCB22	2
510CGB22	6	510GEB22	15	510LDB22P	13
510CHB22	1	510GJB22	2	510LEB22P	13
510CJB22	1	510GLB22	6	510LFB22	13
		510GSB22	2		

# FOREIGN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
510LGB22	2	510SKB22	2	560KB22	2
510LKB22	15	510SLB22	2	560LB22	2
510LNB22	2	510SWB22	2	560MB22	15
510LNB22A	2	510TB22	6	560RB22	2
510LNB22TCO1	2	510TB22A	6	560SB22	2
510LRB22TCO1	2	510TLB22	3	560TB22	2
510MCB22TCO1	2	510TMB22	2	560UB22TCO	2
510MWB22	2	510TRB22	2	560VB22	2
510NJB22TCO4	2	510TSB22	4	560WB22	2
510NVB22	6	510UB22	6	560XB22P	16
510NXB22	2	510UB22A	6	560YB22P	13
510LRB22	2	510UBT22	4	560ZB22	2
510LSB22P	15	510UCB22	4	560CAB22P	16
510LTB22P	2	510UCB22	2	560CDB22	16
510LUB22	2	510UEB22	2	560CGB22	2
510LXB22	2	510UJB22	2	560CLB22TCO	2
510LYB22	2	510UKB22	2	560CMB22	2
510LZB22P	13	510UXB22	2	560CSB22	2
510MB22	6	510VB22	6	560CXB22	11
510MB22A	6	510VB22A	6	560CZB22	2
510MAB22	2	510VJB22	4	560DB22	6
510MCB22	2	51OVTB22	4	560DAB22	2
510MDB22TCO	2	510WB22	6	560DCB22	2
510MHB22	2	510WB22A	6	560DEB22	4
510MJB22	13	510WHB22	4	560DHB22	16
510MKB22	2	510WJB22	4	560DJB22	4
510MTB22	2	510XB22	6	560DSB22	4
510MVB22	13	510XB22A	6	560EB22	1
510NB22	6	510YB22	6	560FUB22	2
510NB22A	6	510YB22A	6	560HB22P	15
510NAB22	2	510ZB22	6	560JB22P	15
510NDB22	2	520EB22	6	560KB22	6
510NFB22	2	550AB22	6	560LB22	1
510NHB22	2	550CB22	6	560MB22	15
510NJB22	2	550EB22	6	560NB22	6
510NLB22	2	550FB22	6	560RB22	1
510NTB22P	15	550GB22	6	560SB22	15
510NUB22	2	560AB22	1	560TB22	15
510NYB22	13	560ACB22	16	560UB22	15
510RB22	6	560ADB22	16	560VB22	15
510RB22A	6	560AEB22	16	560XB22	6
510RCB22	2	560AGB22	2	560XCB22	11
510RDB22	2	560AKB22P	15	560ZB22	16
510REB22	2	560ALB22	2	660AB22	11
510RFB22	2	560AMB22	2	670AB22	1
510RJB22P	2	560ANB22	16	670ADB22	15
510RKB22	2	560ARB22	16	670AFB22A	15
510RMB22	2	560ATB22	2	670AFB22A	15
510RVB22	2	560AUB22	2	670AGB22	16
510RWB22	2	560AVB22	2	670AKB22	2
510RWB22TCO1	2	560AWB22	13	670ALB22	2
510RZB22TCO	2	560AYB22	2	670ALB22TCO	2
510SB22	6	560AYB22TCO	2	670AMB22TCO	16
510SB22A	6	560BEB22	16	670ANB22P	16
510SFB22	2	560BFB22	16	670ARB22	16
510SGB22	2	560BGB22P	16	670ASB22P	16
		560BHB22P	16	670ATB22	2
		560JB22	13		

# FOREIGN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
670AVB22	2	A47500X	11	A5611X	6
670AWB22	2	A47550X	2	A56120X	6
670AXB22	2	A47552X	2	A56121X	6
670AYB22	2	A48AAJ00X	4	A56123X	6
670BCB22TCO	2	A4910X	6	A56130X	6
670BDB22	2	A4911X	6	A56140X	6
670BDB22TCO	2	A4912X	6	A56150X	1
670BEB22P	16	A4914X	6	A56160X	1
670BFB22P	16	A4915X	6	A56410X	6
670BGB22P	16	A4916X	6	A56421X	4
670BGB22TCO	15	A4917X	6	A56422X	4
670BJB22	16	A4918X	6	A56423X	4
670BKB22	2	A4911X	6	A56424X	4
670BLB22	2	A49120X	6	A56425X	4
670BMB22	2	A4915X	6	A56426X	4
670BNB22	2	A4918X	6	A56500X	11
670BSB22	2	A49190X	6	A56501X	11
670BTB22	4	A49191X	6	A56704X	4
670BXB22	16	A49192X	6	A56705X	4
670BYB22	4	A49193X	6	A56706X	4
670CB22	15	A49200X	6	A56707X	4
670DB22	15	A49220X	6	A56708X	4
670DEB22	4	A51110X	6	A56709X	4
670EB22	15	A51111X	6	A56710X	4
670FB22	15	A51112X	6	A56711X	4
670GB22	15	A51150X	1	A56712X	4
670HB22	15	A51152X	1	A56575X	2
670JB22	15	A51161X	2	A56610X	2
670KB22	16	A51162X	2	A56614X	2
670LB22	16	A51163X	2	A56615X	2
670MB22	16	A51168X	2	A56700X	4
670NB22	16	A51170X	11	A56701X	4
670RB22	15	A51210X	2	A63100X	6
670SB22	16	A51211X	2	A6311X	6
670TB22	16	A51213	13	A63120X	6
670UB22	16	A51220X	6	A6316X	6
670VB22	16	A51263X	2	A6317X	6
670WB22	15	A51268X	2	A63200X	6
670XB22	15	A51400X	11	A63210X	6
670YB22	15	A51420X	4	A63220X	6
670ZB22	15	A51421X	4	A65120X	6
A37420X	4	A51422X	4	A66120X	6
A37550X	2	A51424X	4	A66140X	6
A37552X	2	A51425X	4	A66410X	6
A37554X	2	A51426X	4	A66500X	11
A42100X	2	A51427X	4	A66501X	11
A42161X	2	A51500X	11	A66510X	11
A42163X	2	A5514X	6	A66540X	11
A42168X	2	A5515X	6	A67100X	6
A42263X	2	A5516X	6	A67110X	6
A42420X	4	A5517X	6	A67120X	6
A44270X	6	A5518X	6	A67121X	6
A44271X	6	A5519X	6	A67125X	6
A44272X	6	A5520X	6	A67127X	6
A447341X	6	A5521X	6	A67128X	6
A47342X	6	A55120X	6	A67130X	6
A47343X	6	A55141X	6		



## FOREIGN

TUBE TYPE	CHART #	TUBE TYPE	CHART #	TUBE TYPE	CHART #
A67140X	6	E2501	13	E2549	2
A67150X	1	E2501F	13	E2550	2
A67151X	1	E2502	16	E2551	2
A67152X	1	E2503	16	E2552	2
A67155X	1	E2504	13	E2553	13
A67200X	6	E2505	6	E2554	13
A67410X	6	E2506	13	E2555	2
A67420X	6	E2507	2	E2556	2
A67410X	1	E2508	13	E2557	2
A67560X	11	E2509	13	E2560	2
A67610X	2	E2509A	13	E2561	13
A67611X	2	E2510	13	E2565	2
A67614X	2	E2510A	13	E2572	2
A67615X	2	E2511	13	E2574	13
A67700X	4	E2511A	13	E2576	13
A67701X	4	E2512	13	E-2577	13
A67702X	4	E2513	13	E-2578	2
A67703X	4	E2514	13	E-2579	2
A67704X	4	E2515	13	E-2588	2
A67705X	4	E2516	13	E-2590	6
A67706X	4	E2517	13	E-2593	2
A67707X	4	E2518	13		
A67708X	4	E2519	16		
A67709X	4	E2520	13		
A67710X	4	E2521	13	<b>1819P22</b>	5
A67711X	4	E2522	13	<b>1829P22</b>	6
A67712X	4	E2523	13	<b>1833P22</b>	6
CTA 1950	6	E2524	16	<b>1834P22</b>	6
CTA 1951	6	E2525	16	<b>1835P22</b>	6
CTA 2550	6	E2526	16	<b>1836P22</b>	6
E2336	6	E2526A	16	<b>1837P22</b>	5
E2369	6	E2527	16	<b>1838P22</b>	6
E2422	6	E2528	16	<b>1839P22</b>	6
E2434	13	E2529	16	<b>1841P22</b>	6
E2436	13	E2530	16	<b>1842P22</b>	6
E2447	13	E2530A	16	<b>1843P22</b>	6
E2462	13	E2531	16	<b>1845P22</b>	6
E2468	13	E2532	6	<b>1859P22</b>	6
E2481	2	E2533	16	<b>1877P22</b>	6
E2482	13	E2534	13	<b>1879P22</b>	6
E2483	13	E2534F	13	<b>1891P22</b>	6
E2484	13	E2534H	13	<b>1906P22</b>	6
E2485	2	E2534J	13	<b>1913P22</b>	6
E2486	2	E2535	13	<b>19301P22</b>	6
E2487	2	E2536	13		
E2488	2	E2537	13		
E2493	15	E2538	2		
E2494	15	E2539	13		
E2495	13	E2540	2		
E2496	16	E2541	2		
E2497	15	E2542	13		
E2498	13	E2543	16		
E2499	13	E2544	16		
E2499D	13	E2545	13		
E2500	13	E2546	13		
E2500C	13	E2547	13		
E2500D	13	E2548	6		

# SONY

CRT	CHART #	CRT	CHART #
23OBWB22	27	47OBEB22	29
25OACB22	26	47ODLB22	25
25OAKB22	25	47OFWB22	25
25ONB22	25	47OKXB22	25
		47OKZB22	25
33OAB22	25		
33OADB22	33	52OHB22	28
33OGB22	32	52OKB22	25
33OLB22	32	52ORB22	30
33OSB22	32	52OSB22	30
		52OXB22	30
40ODNB22	25		
40ODYB22	25	57ODB22	25
40OEDB22	25	71OAB22	31
40OEFB22	25		

## SET-UP CHART

Chart #	H	H	G1R	G1B	G1G	G2R	G2B	G2G	KR	KB	KG	* Notes
25	1	8	7	7	7	5	5	5	6	3	4	
26	4	8	7	7	7	5	5	5	6	3	4	
27	4	5	8	8	8	6	6	6	3	9	7	
28	6	7	4	4	4	5	5	5	12	8	10	
29	1	14	12	3	7	13	13	13	11	2	6	
30	5	6	1	1	1	12	12	12	10	8	9	
31	5	6	11	11	11	12	12	12	10	8	9	
32	1	8	2	2	2	5	5	5	6	3	4	
33	8	9	7	7	7	4	4	4	5	10	6	

\* On charts showing same pin numbers for G1s or G2s; Hook-Up all three G1s or G2s to the same pin. (These are inline tubes)

DANDY MFG. CO. 1983, 1984

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## CRT TESTING PROBLEMS

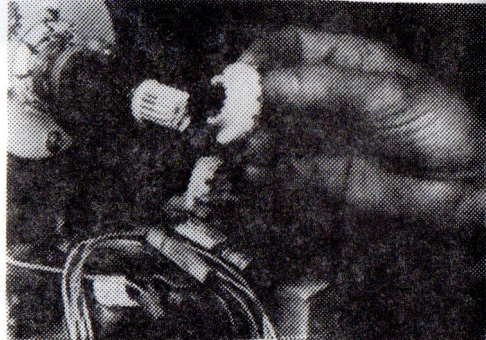
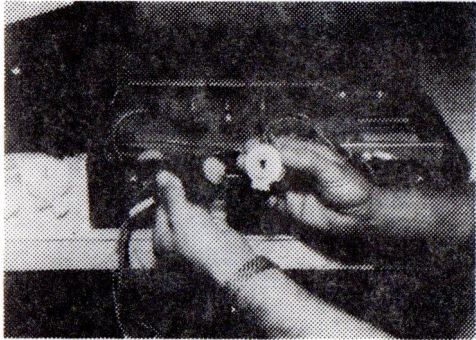
### ERRATIC METER READINGS:

Erratic Meter Readings on any one or all meters may be due to a defect in any one of the Red, Blue or Green guns; a shorted element, gassy CRT, heater to-cathode short or foreign matter between elements. Usually cleaning each gun will correct the erratic meter problem. The CRT should Clean or Restore with erratic meter readings.

### CLEANING/RESTORING:

Some CRT's will Clean and Restore more satisfactory using the method to clean or restore each gun individually --- to do this, simply hook-up each gun separately ie; KR, G1R, G2R (Red Gun), KB, G1B, G2B (Blue Gun), KG G1G, G2G (Green Gun). USING THIS METHOD, YOU MAY CLEAN OR RESTORE ONLY THE WEAK OR SHORTED GUN WITHOUT INTERFERING WITH OTHER GUNS WHICH MAY BE GOOD.

## TEST EQUIPMENT HOOKUP



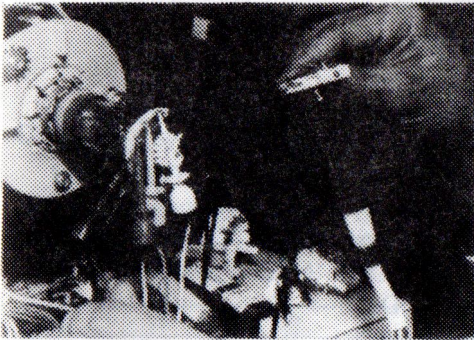
1. ATTACH THE CA28 TO THE 12 PIN FEMALE SOCKET FROM YOUR CRT TESTER. (This is the socket which you use to test the 25AP/XP22 or the 25VDMP22, the standard 90 degree delta CRT.)

THIS IS THE ONLY CONNECTION MADE TO YOUR TESTER.

AS YOU CAN SEE, THE CA28 WILL FIT ANY BRAND OR MODEL OF COLOR CRT TESTER/RESTORER/REJUVENATOR.

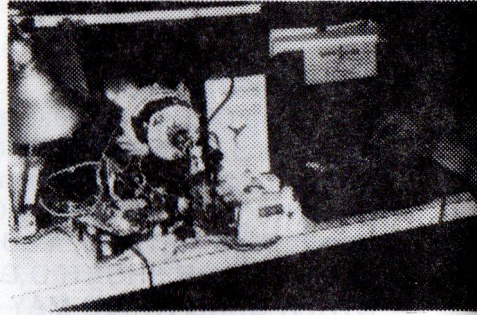
2. INSTALL THE PROPER TEST SOCKET FROM THE CA28 KIT.

SOCKETS ARE PROVIDED TO FIT ALL THE PINLESS TYPE CATHODE RAY TUBES.



3. ATTACH THE LABELED E-Z HOOK'S TO THE CA28 TEST SOCKET IN ACCORDANCE WITH THE PIN HOOK-UP DATA AS LISTED IN THE CRT MANUAL.

ON CRT'S USING STANDARD PINS, JUST ATTACH THE E-Z HOOK'S DIRECTLY TO THE PINS--NO SOCKET NEEDED!!!



4. USE YOUR TESTER/RESTORER/REJUVENATOR AS YOU NORMALLY WOULD TO TEST THE 25AP/XP22 or 25VDMP22 TYPE CRT'S. USE ALL THE FUNCTIONS OF YOUR PRESENT EQUIPMENT ON EVERY COLOR CRT TYPE.