

Bedieningsorganen

Vier buisvoeten, t.w. octal, loktal, noval, 7-pens miniatuur en 8-pens sub-miniatuur.

Knop voor gloeidraadspanning (FILAMENT) met zeven standen:

|            |             |            |
|------------|-------------|------------|
| A 1,4 volt | D 6,3 volt  | G 110 volt |
| B 3 volt   | E 12,6 volt |            |
| C 5 volt   | F 35 volt   |            |

Tien schakelaars FNPk voor aansluiting van de verschillende buiselectroden aan de verschillende meetschakelingen. De nummers 1 t/m 9 corresponderen met de elektroden aan de buisvoet, de laatste schakelaar gemerkt TC met de topaansluiting van de buis.

Verklikkerlampje AC PL geeft aan, dat de buizentester ingeschakeld en aangesloten is.

Indicatielampje Test PL (neon-lampje, dat opgloeit bij interelectrode lek)

Regelknop LOAD: regelbare belastingsweerstand. In te stellen volgens opgave lijst.

Controle op interelectrode lek of kortsluiting

Buizentester aansluiten aan lichtnet. Schakelaar FILAMENT in de voor de buis aangegeven stand van de lijst. De knop POWER indrukken, het lampje AP PL gaat dan branden.

De FNPk schakelaars evoneens in de voor deze buis aangegeven standen F. & N. Alle overige schakelaars in de stand K. (dus niet in stand P)

Buis in de hiervoor bestemde buisvoet steken. Ca. 30 seconden warm laten worden.

Met uitzondering van de schakelaars die reeds in de stand F of N stonden, de overige schakelaars, één tegelijk, in stand P brengen. Tegen de buis tikken, kijken of het neonlampje Test PL oplicht en daarna de schakelaar terug in stand K.

Oplichten van dit lampje betekent sluiting. Bij eindbuizen, zoals EL84, 6L6 etc. kan het lichtje soms zacht gloeien. Dit is normaal.

Opgloeien van het indicatielampje bij inschakelen van een van de electrodes in de lijst aangegeven onder FIL.CONT. duidt niet op sluiting of lek, maar geeft aan dat de gloeidraad niet onderbroken is.

Controle op emissie.

Deze test mag alleen uitgevoerd worden, nadat gebleken is door de voorgaande test, dat er geen sprake van sluiting is. Anders zou u de meter en andere delen van de buizentester kunnen beschadigen.

Buizentester aansluiten aan lichtnet. Netschakelaar aanschakelen. De FNPk schakelaars in de standen F N P brengen, zoals op de lijst is aangegeven. Alle andere schakelaars blijven in de stand K. Regelknop LOAD en schakelknop FILAMENT in de standen als aangegeven op de lijst.

Buis in passende buisvoet steken. Ca. 30 seconden warm laten worden. De knop test indrukken. Op de meter leest u dan het resultaat af.

De BAD ? GOOD schaal geeft een algemene indruk van de kwaliteit.

De meteruitslag in groen geeft aan, dat de buis een voldoende emissie bezit voor een behoorlijke werking - middengedeelte met ? betekent twijfelachtige kwaliteit - terwijl uitslag in het rode gedeelte van de schaal aangeeft dat de buis een emissie heeft, die lager dan normaal is.

Diodes hebben soms een hoge inwendige weerstand, welke resulteert in een lage uitslag. In een dergelijk geval is een lage uitslag van 20 normaal.

Buizen met meer dan één functie zijn in de lijst opgenomen met meer dan één regel.

U test elke functie van zo'n buis door achtereenvolgens de verschillende meetschakelingen toe te passen, als waren het twee of meer verschillende buizen.

Gebruiksaanwijzing

| Type    | Fil Volts | F | N                     | P   | LOAD | Fil CONT. | Type    | Fil Volts | F | N       | P  | LOAD | Fil CONT. |
|---------|-----------|---|-----------------------|-----|------|-----------|---------|-----------|---|---------|----|------|-----------|
| DA90    | A         | 1 | 2,5                   | 6S  | 10   | 1,7       | EB91    | D         | 3 | 6       | 2S | 25   | 3,4       |
| DAF91   | A         | 1 |                       | 3S  | 100  | 1,7       |         | D         | 3 | 6       | 7S | 25   | 3,4       |
|         | A         | 1 |                       | 6   | 60   | 1,7       | EBC33   | D         | 2 |         | TC | 30   | 2,7       |
| DAF92   | A         | 1 |                       | 6   | 60   | 1,7       |         | D         | 2 |         | 4S | 100  | 2,7       |
|         | A         | 1 |                       | 4   | 100  | 1,7x)     |         | D         | 2 |         | 5S | 100  | 2,7       |
| DAF96   | A         | 7 | 2                     | 3S  | 100  | 1,7       | EBC81   | D         | 4 | 9       | 2  | 30   | 4,5       |
|         | A         | 7 | 2                     | 6   | 60   | 1,7       |         | D         | 4 | 9       | 6S | 100  | 4,5       |
| DC70    | A         | 4 | 3                     | 1S  | 60   | 4,5       |         | D         | 4 | 9       | 8S | 100  | 4,5       |
| DC90    | A         | 1 | 2,4,5                 | 6   | 60   | 1,7       | EBC90   | D         | 3 |         | 1  | 30   | 3,4       |
| DC96    | A         | 1 | 2,4,5                 | 6   | 60   | 1,7       |         | D         | 3 |         | 5S | 100  | 3,4       |
| DCC90   | B         | 1 | 4                     | 3   | 60   | 1,7       |         | D         | 3 |         | 6S | 100  | 3,4       |
|         | B         | 1 | 4                     | 5   | 60   | 1,7       | EBC91   | D         | 3 |         | 1  | 30   | 3,4       |
| DF91    | A         | 7 | 5                     | 6   | 60   | 1,7       |         | D         | 3 |         | 5S | 100  | 3,4       |
| DF92    | A         | 7 | 5                     | 6   | 65   | 1,7       |         | D         | 3 |         | 6S | 100  | 3,4       |
| DF96    | A         | 7 | 4,5                   | 6   | 60   | 1,7       | EBF32   | D         | 3 |         | TC | 30   | 2,7       |
| DF97    | A         | 7 | 5                     | 6   | 60   | 1,7       |         | D         | 2 |         | 4S | 100  | 2,7       |
| DF904   | A         | 7 | 5                     | 6   | 60   | 1,7       |         | D         | 2 |         | 5S | 100  | 2,7       |
| DK91    | A         | 7 | 5                     | 4   | 60   | 1,7       | EBF80   | D         | 4 |         | 2  | 30   | 4,5       |
| DK92    | A         | 1 |                       | 4   | 60   | 1,7       |         | D         | 4 |         | 7S | 100  | 4,5       |
| DK96    | A         | 1 |                       | 4   | 60   | 1,7       |         | D         | 4 |         | 8S | 100  | 4,5       |
| DL33    | B         | 2 | 8                     | 5   | 40   | 2,7       | EBF83   | D         | 4 |         | 2  | 30   | 4,5       |
| DL35    | A         | 2 |                       | 5   | 30   | 2,7       |         | D         | 4 |         | 7S | 100  | 4,5       |
| DL36    | A         | 2 |                       | 5   | 30   | 2,7       |         | D         | 4 |         | 8S | 100  | 4,5       |
| DL91    | A         | 1 | 5,6                   | 3   | 40   | 1,7       | EBF89   | D         | 4 |         | 2  | 30   | 4,5       |
| DL92    | B         | 1 | 2,5                   | 3   | 40   | 1,7       |         | D         | 4 |         | 7S | 100  | 4,5       |
| DL93    | B         | 1 | 2,5                   | 4   | 30   | 1,7       |         | D         | 4 |         | 8S | 100  | 4,5       |
| DL94    | B         | 1 | 5                     | 6   | 40   | 1,7       | EC80    | D         | 4 | 1,2,7   | 8  | 35   | 4,5       |
| DL95    | B         | 1 | 2,5                   | 3   | 40   | 1,8       | EC81    | D         | 4 |         | 1  | 35   | 4,5       |
| DL96    | B         | 1 | 5                     | 6   | 30   | 1,7       | EC86    | D         | 4 | 2,6,7,9 | 8  | 35   | 4,5       |
| DL98    | B         | 4 | 2,6                   | 3   | 30   | 4,5       | EC88    | D         | 4 | 3,6,7,9 | 1  | 35   | 4,5       |
| DM70    | A         | 4 | 2                     | 1S  | 100  | 4,5       | EC90    | D         | 3 | 2,5     | 6  | 35   | 3,4       |
| DM71    | A         | 4 | 2                     | 1S  | 100  | 4,5       | EC91    | D         | 3 | 5,6     | 1  | 35   | 3,4       |
| DY80    | A         | 1 | 3,4,5,<br>6,7,8,<br>9 |     |      |           | EC92    | D         | 3 | 2,5     | 6  | 30   | 3,4       |
|         |           |   |                       | TCS | 100  | 1,2       | ECC81   | E         | 4 | 9       | 2  | 35   | 4,5       |
|         |           |   |                       |     |      |           | ECC82   | E         | 4 | 9       | 7  | 35   | 4,5       |
| DY86    |           |   | idem                  |     |      |           | ECC83   | E         | 4 | 9       | 2  | 35   | 4,5       |
| DY87    |           |   | idem                  |     |      |           | ECC84   | E         | 4 | 9       | 7  | 35   | 4,5       |
| E81CC   | E         | 4 | 9                     | 2   | 35   | 4,5       | ECC85   | D         | 4 | 8       | 2  | 35   | 4,5       |
|         | E         | 4 | 9                     | 7   | 35   | 4,5       |         | D         | 4 | 8       | 6  | 35   | 4,5       |
| E82CC   | E         | 4 | 9                     | 2   | 35   | 4,5       | ECC86   | D         | 4 |         | 2  | 30   | 4,5       |
|         | E         | 4 | 9                     | 7   | 35   | 4,5       |         | D         | 4 |         | 7  | 30   | 4,5       |
| E83CC   | E         | 4 | 9                     | 2   | 35   | 4,5       | ECC88   | D         | 4 |         | 2  | 35   | 4,5       |
|         | E         | 4 | 9                     | 7   | 35   | 4,5       |         | D         | 4 |         | 7  | 35   | 4,5       |
| E91AA   | D         | 3 | 6                     | 2S  | 100  | 3,4       | ECC91   | D         | 3 |         | 5  | 30   | 3,4       |
|         | D         | 3 | 6                     | 7S  | 100  | 3,4       |         | D         | 3 |         | 6  | 30   | 3,4       |
| E91H    | D         | 3 |                       | 1   | 30   | 3,4       | ECC186  | E         | 4 | 9       | 2  | 35   | 4,5       |
| E91N    | D         | 3 | 7                     | 1   | 30   | 3,4       |         | E         | 4 | 9       | 7  | 35   | 4,5       |
| E95F    | D         | 3 | 7                     | 1   | 30   | 3,4       | ECC189  | D         | 4 |         | 2  | 35   | 4,5       |
| EAA91   | D         | 3 | 6                     | 2S  | 25   | 3,4       |         | D         | 4 |         | 7  | 35   | 4,5       |
|         | D         | 3 | 6                     | 7S  | 25   | 3,4       | ECC801S | E         | 4 | 9       | 2  | 35   | 4,5       |
| EAA901S | D         | 3 | 6                     | 2S  | 100  | 3,4       |         | E         | 4 | 9       | 7  | 35   | 4,5       |
|         | D         | 3 | 6                     | 7S  | 100  | 3,4       | ECC802S | E         | 4 | 9       | 2  | 35   | 4,5       |
| EABC80  | D         | 4 |                       | 1S  | 100  | 4,5       |         | E         | 4 | 9       | 7  | 35   | 4,5       |
|         | D         | 4 |                       | 2S  | 100  | 4,5       | ECC803S | E         | 4 | 9       | 2  | 35   | 4,5       |
|         | D         | 4 |                       | 6S  | 100  | 4,5       |         | E         | 4 | 9       | 7  | 35   | 4,5       |
|         | D         | 4 |                       | 8   | 30   | 4,5       |         | E         | 4 | 9       | 7  | 35   | 4,5       |

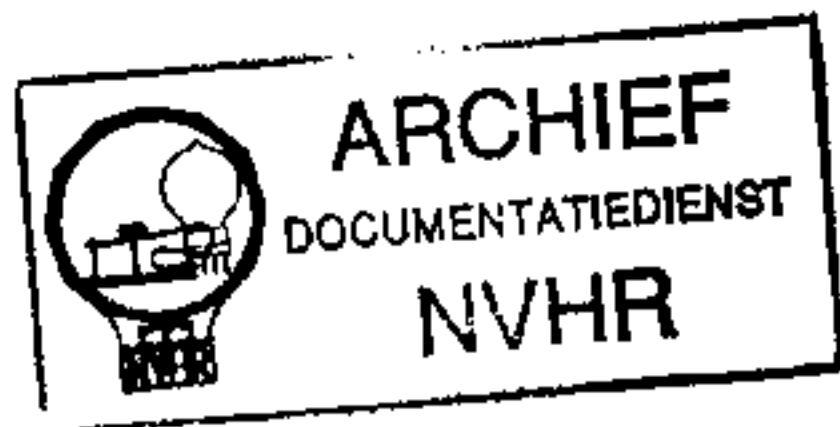
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Gebruiksaanwijzing

| Type  | Fil<br>Volts | F | N     | P  | LOAD | Fil<br>CONT. | Type   | Fil<br>Volts | F | N                 | P   | LOAD | Fil<br>CONT. |
|-------|--------------|---|-------|----|------|--------------|--------|--------------|---|-------------------|-----|------|--------------|
| ECF80 | D            | 4 |       | 2  | 30   | 4,5          | EM81   | D            | 4 | 3,6,8             | 1   | 30   | 4,5          |
|       | D            | 4 |       | 9  | 30   | 4,5          | EM84   | D            | 4 | 2,8               | 1   | 30   | 4,5          |
| ECF82 | D            | 4 |       | 2  | 30   | 4,5          | EM87   | D            | 4 | 2,8               | 1   | 30   | 4,5          |
|       | D            | 4 |       | 9  | 30   | 4,5          | EM93   | D            | 3 |                   | 1   | 30   | 3,4          |
| ECF83 | D            | 4 |       | 2  | 30   | 4,5          | EQ80   | D            | 4 | 8                 | 7   | 30   | 4,5          |
|       | D            | 4 |       | 9  | 30   | 4,5          | EY80   | D            | 4 | 1,2,6,<br>7,8     | 9S  | 35   | 4,5          |
| ECF86 | D            | 4 | 1     | 2  | 40   | 4,5          | EY81   | D            | 4 | 1,2,3,<br>6,7,8   | 9S  | 35   | 4,5          |
|       | D            | 4 | 1     | 6  | 40   | 4,5          | EY82   | D            | 4 | 1,2,6,<br>7,8     | 9S  | 35   | 4,5          |
| ECH35 | D            | 2 |       | TC | 40   | 2,7          | EY86   | D            | 2 | 1,3,4,<br>5,6,7,8 | TCS | 35   | 2,9          |
|       | D            | 2 |       | 5  | 40   | 2,7          | EY87   |              |   | idem              |     |      |              |
| ECH81 | D            | 4 |       | 2  | 30   | 4,5          | EY88   | D            | 4 | 1,2,3,<br>6,7,8   | 9S  | 35   | 4,5          |
|       | D            | 4 |       | 9  | 30   | 4,5          | EY91   | D            | 3 | 5                 | 1S  | 35   | 3,4          |
| ECH83 | D            | 4 |       | 2  | 30   | 4,5          | EZ35   | D            | 2 |                   | 3S  | 35   | 2,7          |
|       | D            | 4 |       | 9  | 30   | 4,5          |        | D            | 2 |                   | 5S  | 35   | 2,7          |
| ECL80 | D            | 4 |       | 2  | 30   | 4,5          | EZ80   | D            | 4 | 2,6,8,9           | 1S  | 35   | 4,5          |
|       | D            | 4 |       | 9  | 30   | 4,5          |        | D            | 4 | 2,6,8,9           | 7S  | 35   | 4,5          |
| ECL82 | D            | 4 |       | 1  | 35   | 4,5          | EZ81   |              |   | idem              |     |      |              |
|       | D            | 4 |       | 3  | 35   | 4,5          | EZ90   | D            | 3 |                   | 1S  | 35   | 3,4          |
| ECL84 | D            | 4 |       | 1  | 35   | 4,5          |        | D            | 3 |                   | 6S  | 35   | 3,4          |
|       | D            | 4 |       | 8  | 35   | 4,5          | GZ32   | C            | 2 |                   | 4   | 35   | 2,8          |
| ECL85 | D            | 4 |       | 2  | 35   | 4,5          |        | C            | 2 |                   | 6   | 35   | 2,8          |
|       | D            | 4 |       | 9  | 35   | 4,5          | GZ34   | C            | 2 | 1                 | 4   | 35   | 2,8          |
| ECL86 | D            | 4 |       | 1  | 35   | 4,5          |        | C            | 2 | 1                 | 6   | 35   | 2,8          |
|       | D            | 4 |       | 8  | 35   | 4,5          | HBC90  | E            | 3 |                   | 1   | 35   | 3,4          |
| EF37A | D            | 2 |       | TC | 30   | 2,7          |        | E            | 3 |                   | 5S  | 100  | 3,4          |
| EF39  | D            | 2 |       | TC | 30   | 2,7          |        | E            | 3 |                   | 6S  | 100  | 3,4          |
| EF80  | D            | 4 | 1     | 2  | 30   | 4,5          |        | E            | 3 |                   | 6S  | 100  | 3,4          |
| EF83  | D            | 4 | 2     | 9  | 35   | 4,5          | HBC91  | E            | 3 |                   | 1   | 35   | 3,4          |
| EF85  | D            | 4 | 1     | 2  | 35   | 4,5          |        | E            | 3 |                   | 5S  | 100  | 3,4          |
| EF86  | D            | 4 | 6     | 9  | 40   | 4,5          |        | E            | 3 |                   | 6S  | 100  | 3,4          |
| EF89  | D            | 4 | 1     | 2  | 35   | 4,5          |        | E            | 3 |                   | 1   | 35   | 3,4          |
| EF91  | D            | 3 |       | 1  | 30   | 3,4          | HCH81  | E            | 4 |                   | 2   | 30   | 4,5          |
| EF92  | D            | 3 |       | 1  | 30   | 3,4          |        | E            | 4 |                   | 9   | 30   | 4,5          |
| EF93  | D            | 3 |       | 1  | 30   | 3,4          | HF94   | E            | 3 |                   | 1   | 35   | 3,4          |
| EF94  | D            | 3 |       | 1  | 30   | 3,4          | HK90   | E            | 3 |                   | 1   | 35   | 3,4          |
| EF95  | D            | 3 | 7     | 1  | 30   | 3,4          | HL92   | G            | 3 | 2                 | 5   | 30   | 3,4          |
| EF97  | D            | 3 |       | 1  | 30   | 3,4          | HY90   | F            | 3 | 6                 | 5S  | 35   | 3,4          |
| EF98  | D            | 3 |       | 1  | 30   | 3,4          | PABC80 | D            | 4 |                   | 1S  | 100  | 4,5          |
| EF183 | D            | 4 |       | 2  | 30   | 4,5          |        | D            | 4 |                   | 2S  | 100  | 4,5          |
| EF184 | D            | 4 |       | 2  | 30   | 4,5          |        | D            | 4 |                   | 6S  | 100  | 4,5          |
| EF731 | D            | 3 | 4,8   | 1  | 30   | 3,6          | PC86   | B            | 4 | 6,7,8,9           | 2   | 35   | 4,5          |
| EF732 | D            | 3 | 4,8   | 1  | 30   | 3,6          | PC88   | B            | 4 | 3,6,7,9           | 1   | 35   | 4,5          |
| EH90  | D            | 3 |       | 1  | 30   | 3,4          | PC92   | B            | 3 | 2,5               | 6   | 30   | 3,4          |
| EK90  | D            | 3 |       | 1  | 30   | 3,4          | PCC84  | D            | 4 | 8                 | 2   | 35   | 4,5          |
| EL33  | D            | 2 |       | 5  | 30   | 2,7          |        | D            | 4 | 8                 | 6   | 35   | 4,5          |
| EL34  | D            | 2 |       | 5  | 30   | 2,7          | PCC85  | D            | 4 |                   | 2   | 35   | 4,5          |
| EL36  | D            | 2 | 1,3   | 5  | 30   | 2,7          |        | D            | 4 |                   | 7   | 35   | 4,5          |
| EL81  | D            | 4 | 1,6,7 | 2  | 30   | 4,5          | PCC88  |              |   | idem              |     |      |              |
| EL82  | D            | 4 | 1,6,8 | 2  | 30   | 4,5          | PCC189 |              |   | idem              |     |      |              |
| EL83  | D            | 4 | 9     | 2  | 30   | 4,3          | PCF80  | D            | 4 |                   | 2   | 40   | 4,5          |
| EL84  | D            | 4 | 1,6,8 | 2  | 30   | 4,5          |        | D            | 4 |                   | 9   | 40   | 4,5          |
| EL86  | D            | 4 | 1,6,8 | 2  | 30   | 4,5          | PCF82  |              |   | idem              |     |      |              |
| EL90  | D            | 3 | 7     | 1  | 30   | 3,4          | PCF86  | D            | 4 | 1                 | 2   | 40   | 4,5          |
| EL91  | D            | 3 |       | 1  | 30   | 3,4          |        | D            | 4 | 1                 | 6   | 40   | 4,5          |
| EL95  | D            | 3 | 7     | 1  | 30   | 3,4          |        |              |   |                   |     |      |              |
| EL360 | D            | 2 | 1,3   | 5  | 30   | 2,7          |        |              |   |                   |     |      |              |
| EL803 | D            | 4 | 9     | 2  | 30   | 4,5          |        |              |   |                   |     |      |              |
| EM34  | D            | 2 |       | 4  | 30   | 2,7          |        |              |   |                   |     |      |              |
| EM80  | D            | 4 | 3,6,8 | 1  | 30   | 4,5          |        |              |   |                   |     |      |              |

**Gebruiksaanwijzing**

| Type   | Fil<br>Volts | F | N               | P   | LOAD | Fil<br>CONT. | Type   | Fil<br>Volts | F | N               | P  | LOAD | Fil<br>CONT. |
|--------|--------------|---|-----------------|-----|------|--------------|--------|--------------|---|-----------------|----|------|--------------|
| PCL82  | E            | 4 |                 | 1   | 30   | 4,5          | XCC189 | C            | 4 | 9               | 2  | 35   | 4,5          |
|        | E            | 4 |                 | 3   | 30   | 4,5          |        | C            | 4 | 9               | 7  | 35   | 4,5          |
| PCL84  | E            | 4 |                 | 1   | 30   | 4,5          | XCF80  | C            | 4 |                 | 2  | 30   | 4,5          |
|        | E            | 4 |                 | 8   | 30   | 4,5          |        | C            | 4 |                 | 9  | 30   | 4,5          |
| PCL85  | E            | 4 |                 | 2   | 30   | 4,5          | XCH81  | B            | 4 |                 | 2  | 30   | 4,5          |
|        | E            | 4 |                 | 9   | 30   | 4,5          |        | B            | 4 |                 | 9  | 30   | 4,5          |
| PCL86  | E            | 4 |                 | 1   | 30   | 4,5          | XCL82  | D            | 4 |                 | 1  | 35   | 4,5          |
|        | E            | 4 |                 | 8   | 30   | 4,5          |        | D            | 4 |                 | 3  | 35   | 4,5          |
| PF86   | B            | 4 | 6               | 9   | 40   | 4,5          | XCL84  | D            | 4 |                 | 1  | 35   | 4,5          |
| PL36   | F            | 2 | 1,3,6           | 5   | 30   | 2,7          |        | D            | 4 |                 | 8  | 35   | 4,5          |
| PL81   | F            | 4 | 1,6,7           | 2   | 30   | 4,5          | XCL85  | D            | 4 |                 | 2  | 35   | 4,5          |
| PL82   | E            | 4 | 1,6,8           | 2   | 30   | 4,5          |        | D            | 4 |                 | 9  | 35   | 4,5          |
| PL83   | E            | 4 | 9               | 2   | 30   | 4,5          | XF80   | B            | 4 | 1               | 2  | 30   | 4,5          |
| PL84   | E            | 4 | 1,6,8           | 2   | 30   | 4,5          | XF85   | B            | 4 | 1               | 2  | 30   | 4,5          |
| PL136  | F            | 2 | 1,5,6           | 4   | 30   | 2,7          | XF86   | B            | 4 | 2               | 9  | 30   | 4,5          |
| PM84   | C            | 4 | 2,8             | 1   | 30   | 4,5          | XF183  | B            | 4 |                 | 2  | 30   | 4,5          |
| PY81   | E            | 4 | 1,2,3,<br>6,7,8 | 9S  | 35   | 4,5          | XF184  | B            | 4 |                 | 2  | 30   | 4,5          |
| PY82   | F            | 4 | 1,2,6,7,8       | 9S  | 35   | 4,5          | XL36   | E            | 2 | 1,3,6           | 5  | 30   | 2,7          |
| PY83   | F            | 4 | 1,2,3,<br>6,7,8 | TCS | 35   | 4,5          | XL84   | D            | 4 | 1,6,8           | 2  | 30   | 4,5          |
| PY88   | F            | 4 | 1,2,3,<br>6,7,8 | 9S  | 35   | 4,5          | XL86   |              |   | idem            |    |      |              |
| UAA91  | E            | 3 | 6               | 7S  | 100  | 3,4          | XY88   | E            | 4 | 1,2,3,<br>6,7,8 | 9S | 35   | 4,5          |
|        | E            | 3 | 6               | 2S  | 100  | 3,4          |        |              |   |                 |    |      |              |
| UABC80 | F            | 4 |                 | 8   | 35   | 4,5          |        |              |   |                 |    |      |              |
|        | F            | 4 |                 | 1S  | 100  | 4,5          |        |              |   |                 |    |      |              |
|        | F            | 4 |                 | 2S  | 100  | 4,5          |        |              |   |                 |    |      |              |
|        | F            | 4 |                 | 6S  | 100  | 4,5          |        |              |   |                 |    |      |              |
| UBC81  | E            | 4 | 3,9             | 2   | 35   | 4,5          |        |              |   |                 |    |      |              |
|        | E            | 4 | 3,9             | 6S  | 100  | 4,5          |        |              |   |                 |    |      |              |
|        | E            | 4 | 3,9             | 8S  | 100  | 4,5          |        |              |   |                 |    |      |              |
| UBF80  | E            | 4 |                 | 2   | 30   | 4,5          |        |              |   |                 |    |      |              |
|        | E            | 4 |                 | 7S  | 100  | 4,5          |        |              |   |                 |    |      |              |
|        | E            | 4 |                 | 8S  | 100  | 4,5          |        |              |   |                 |    |      |              |
| UBF89  | F            | 4 |                 | 2   | 30   | 4,5          |        |              |   |                 |    |      |              |
|        | F            | 4 |                 | 7S  | 100  | 4,5          |        |              |   |                 |    |      |              |
|        | F            | 4 |                 | 8S  | 100  | 4,5          |        |              |   |                 |    |      |              |
| UC92   | D            | 3 | 2,5             | 6   | 30   | 3,4          |        |              |   |                 |    |      |              |
| UCC85  | F            | 4 |                 | 2   | 30   | 4,5          |        |              |   |                 |    |      |              |
|        | F            | 4 |                 | 7   | 30   | 4,5          |        |              |   |                 |    |      |              |
| UCH81  | F            | 4 |                 | 2   | 30   | 4,5          |        |              |   |                 |    |      |              |
|        | F            | 4 |                 | 9   | 30   | 4,5          |        |              |   |                 |    |      |              |
| UCL81  | G            | 4 | 8               | 1   | 35   | 4,5          |        |              |   |                 |    |      |              |
|        | G            | 4 | 8               | 9   | 35   | 4,5          |        |              |   |                 |    |      |              |
| UCL82  | G            | 4 |                 | 1   | 35   | 4,5          |        |              |   |                 |    |      |              |
|        | G            | 4 |                 | 3   | 35   | 4,5          |        |              |   |                 |    |      |              |
| UF80   | F            | 4 | 1               | 2   | 30   | 4,5          |        |              |   |                 |    |      |              |
| UF85   | F            | 4 | 1               | 2   | 35   | 4,5          |        |              |   |                 |    |      |              |
| UF89   | E            | 4 | 1               | 2   | 35   | 4,5          |        |              |   |                 |    |      |              |
| UL84   | G            | 4 | 1,6,8           | 2   | 30   | 4,5          |        |              |   |                 |    |      |              |
| UM80   | F            | 4 | 3,6,8           | 1   | 30   | 4,5          |        |              |   |                 |    |      |              |
| UM84   | E            | 4 | 2,8             | 1   | 30   | 4,5          |        |              |   |                 |    |      |              |
| UY82   | G            | 4 | 1,2,6,7,8       | 9S  | 35   | 4,5          |        |              |   |                 |    |      |              |
| UY85   |              |   | idem            |     |      |              |        |              |   |                 |    |      |              |
| UY89   | F            | 4 | 1,2,6,7,8       | 9S  | 35   | 4,5          |        |              |   |                 |    |      |              |
| UY92   | F            | 3 | 1,2,6           | 5   | 35   | 3,4          |        |              |   |                 |    |      |              |
| XCC82  | B            | 4 | 9               | 2   | 35   | 4,5          |        |              |   |                 |    |      |              |
|        | B            | 4 | 9               | 7   | 35   | 4,5          |        |              |   |                 |    |      |              |



# Instructions For Tube Tester

## OPERATING INSTRUCTIONS

**CAUTION: TO PREVENT SERIOUS DAMAGE TO THE METER, ALWAYS MAKE A "SHORT" TEST FIRST AND THEN MAKE THE "VALUE" TEST.**

- Set all selector slide switches to the "K" position.
- Plug line cord in power outlet, and AC Pilot will glow.
- Set FILAMENT voltage switch to the lettered position as indicated in the column "Fil." on the Tube Chart for the tube to be tested.  
**DO NOT TURN THIS SWITCH AFTER A TUBE IS INSERTED INTO ANY OF THE TUBE SOCKETS.**
- Insert tube to be tested into the proper tube socket. Connect top cap lead to top cap (if any) of tube to be tested.

### "FILAMENT CONTINUITY" TEST

- Set the particular selector slide switch specified in column "F" in the "F" position.
- Set the particular selector slide switches specified in column "N" to the "N" position.
- Set the particular selector slide switch specified in column "C" to the "P" position.
- If the indicator light glows, there is continuity in the filament of the tube under test.
- Return the particular selector slide switch specified in column "C" to the "K" position.

### "SHORT" TEST

- With the exception of the selector slide switch specified in Column "C" and the selector slide switches already set to a "F" or "N" position, move all other selector slide switches, one at a time, to the "P" position and then back to the "K" position. A steady glow of the indicator light when an individual selector slide switch is in the "P" position, indicates a short between tube elements.

**NOTE:** When testing tubes such as the 6V6 and 35L6, a slight glow of the indicator light may be disregarded due to the high inherent leakage of these tubes.

### "VALUE" TEST

- Set the LOAD control to the number specified in the column "Load" on the Tube Chart.
- Set the particular selector slide switch as indicated in column "E" to the "P" position.
- Let tube warm up for 30 seconds.
- Push the SHORT-VALUE TEST switch to the "VALUE" position. If the meter pointer is in the GREEN section of the scale, the tube is GOOD. If pointer is in the RED section of the scale, the tube is BAD.

**NOTE:** When checking diodes or rectifiers read "DIODES OK" scale of meter.

- Return all selector slide switches to the "K" position.
- Set the POWER switch in the OFF position.

| Tube | Fil. | F | N           | C | E  | Load | Tube  | Fil. | F | N   | C | E | Load |
|------|------|---|-------------|---|----|------|-------|------|---|-----|---|---|------|
| 1A3  | A    | 1 | 2,5         | 7 | 6  | 100  | 3Q5   | B    | 2 | 8   | 7 | 5 | 40   |
| 1A5  | A    | 2 | —           | 7 | 5  | 30   | 3S4   | B    | 1 | 2,5 | 7 | 5 | 40   |
| 1AX2 | A    | 1 | 4,5,6,8,9   | 2 | TC | 100  | 3V4   | B    | 1 | 5   | 7 | 6 | 40   |
| 1B3  | A    | 2 | 1,3,5,8     | 7 | TC | 100  |       |      |   |     |   |   |      |
| 1E8  | A    | 4 | —           | 5 | 2  | 65   |       |      |   |     |   |   |      |
| 1F5  | B    | 2 | —           | 7 | 5  | 30   | *4A6  | B    | 2 | 8   | 7 | 4 | 40   |
| 1G4  | A    | 2 | —           | 7 | 5  | 30   | *4BC8 | B    | 4 | —   | 7 | 5 | 40   |
| 1G6  | A    | 2 | —           | 7 | 5  | 30   | *4BQ7 | B    | 4 | —   | 7 | 5 | 40   |
|      |      |   |             |   |    |      | 4BS8  | B    | 4 | —   | 7 | 5 | 40   |
| 1H5  | A    | 2 | —           | 7 | 5  | 100  | 4BUB  | C    | 4 | —   | 7 | 5 | 40   |
|      |      |   |             |   |    |      | 4BZ6  | C    | 3 | —   | 4 | — | 40   |
| 1L4  | A    | 2 | 5           | 7 | TC | 40   | *4BZ7 | B    | 4 | —   | 7 | 5 | 40   |
| 1L6  | A    | 1 | —           | 7 | 4  | 65   | 4BZ8  | C    | 4 | —   | 7 | 5 | 40   |
| 1LA6 | A    | 1 | —           | 8 | 4  | 60   | 4CX7  | C    | 4 | 9   | — | 7 | 40   |
| 1LB4 | A    | 1 | —           | 8 | 5  | 60   | 4CY5  | C    | 3 | —   | 4 | — | 40   |
| 1LB6 | A    | 1 | —           | 8 | 6  | 60   | 4DT6  | C    | 3 | —   | 4 | — | 40   |
| 1LC5 | A    | 1 | 5           | 8 | 6  | 60   |       |      |   |     |   |   |      |
| 1LC6 | A    | 1 | —           | 8 | 4  | 60   | 5A6   | C    | 4 | 3,9 | — | 7 | 30   |
| 1LD5 | A    | 1 | —           | 8 | 4  | 100  | 5AM8  | C    | 4 | —   | — | — | 30   |
|      |      |   |             |   |    |      | 5AN8  | C    | 4 | —   | — | — | 30   |
| 1LG5 | A    | 1 | 5           | 8 | 6  | 60   | 5AQ5  | C    | 3 | —   | 7 | — | 30   |
| 1LH4 | A    | 1 | —           | 8 | 4  | 100  | 5AS4  | C    | 4 | —   | — | — | 40   |
|      |      |   |             |   |    |      | 5AT8  | C    | 4 | —   | — | 9 | 30   |
| 1LN5 | A    | 1 | 5           | 8 | 6  | 60   | *5AU4 | C    | 2 | —   | — | 4 | 20   |
| 1NS  | A    | 2 | 5           | 7 | TC | 60   | 5AV8  | C    | 4 | —   | — | 6 | 20   |
| 1R5  | A    | 7 | 5           | 7 | 4  | 60   | *5AW4 | C    | 2 | —   | — | 4 | 30   |
| 1S4  | A    | 1 | 5,6         | 7 | 3  | 60   | *5AZ4 | C    | 2 | —   | — | 4 | 30   |
| 1S5  | A    | 1 | —           | 7 | 3  | 100  | 5B8   | C    | 4 | —   | — | 6 | 30   |
|      |      |   |             |   |    |      | 5BE8  | C    | 4 | —   | — | — | 30   |
| 1T4  | A    | 1 | 5           | 7 | 6  | 60   | 5BK7  | C    | 4 | —   | — | 9 | 30   |
| 1T5  | A    | 2 | —           | 7 | 5  | 60   | 5BR8  | C    | 4 | —   | — | — | 30   |
| 1U4  | A    | 7 | 5           | 7 | 6  | 60   | 5BT8  | C    | 4 | —   | — | 9 | 100  |
| 1U5  | A    | 1 | —           | 7 | 6  | 60   | 5CG8  | C    | 4 | 8   | — | 9 | 100  |
| 1U6  | A    | 1 | —           | 7 | 4  | 100  |       |      |   |     |   |   |      |
| 1V2  | A    | 4 | 1,2,3,6,7,8 | 5 | 9  | 100  | 5J6   | C    | 3 | —   | — | 5 | 30   |
| 1X2  | A    | 1 | 4,5,6,8,9   | 2 | TC | 100  | 5R4   | C    | 2 | —   | — | 4 | 30   |
|      |      |   |             |   |    |      | 5T4   | C    | 2 | —   | — | 4 | 30   |
| 2AF4 | B    | 3 | 6,7         | 4 | 2  | 30   | 5TB   | C    | 4 | —   | — | — | 100  |
| 2B3  | A    | 2 | 1,8         | 7 | TC | 100  |       |      |   |     |   |   |      |
| 2BN4 | B    | 3 | 6,7         | 4 | 2  | 30   |       |      |   |     |   |   |      |
| 2V2  | B    | 2 | 4,5,6,8     | 7 | TC | 100  |       |      |   |     |   |   |      |
|      |      |   |             |   |    |      |       |      |   |     |   |   |      |
| 3A3  | B    | 2 | 1,3,5,8     | 7 | TC | 100  |       |      |   |     |   |   |      |
| 3A4  | B    | 1 | 2,5         | 7 | 4  | 30   |       |      |   |     |   |   |      |
| 3A5  | B    | 1 | 4           | 7 | 3  | 60   |       |      |   |     |   |   |      |
| 3AL5 | B    | 3 | —           | 4 | 2  | 40   |       |      |   |     |   |   |      |
| 3AU6 | B    | 3 | —           | 4 | 7  | 40   |       |      |   |     |   |   |      |
| 3AV6 | B    | 3 | —           | 4 | 1  | 35   |       |      |   |     |   |   |      |
|      |      |   |             |   |    |      |       |      |   |     |   |   |      |
| 3B2  | B    | 2 | 1,3,5,6,8   | 7 | TC | 100  |       |      |   |     |   |   |      |
| 3BC5 | B    | 3 | —           | 4 | 1  | 30   |       |      |   |     |   |   |      |
| 3BE6 | B    | 3 | —           | 4 | 1  | 30   |       |      |   |     |   |   |      |
| 3BN4 | B    | 3 | 6,7         | 4 | 2  | 30   |       |      |   |     |   |   |      |
| 3BN6 | B    | 3 | —           | 4 | 2  | 30   |       |      |   |     |   |   |      |
| 3BU8 | B    | 4 | —           | 4 | 5  | 100  |       |      |   |     |   |   |      |
| 3BY6 | B    | 3 | —           | 4 | 7  | 30   |       |      |   |     |   |   |      |
| 3BZ6 | B    | 3 | —           | 4 | 1  | 35   |       |      |   |     |   |   |      |
| 3CB6 | B    | 3 | —           | 4 | 1  | 30   |       |      |   |     |   |   |      |
|      |      |   |             |   |    |      |       |      |   |     |   |   |      |
| 3CF6 | B    | 3 | —           | 4 | 1  | 30   |       |      |   |     |   |   |      |
| 3CS6 | B    | 3 | —           | 4 | 1  | 30   | *5U4  | C    | 2 | —   | — | 4 | 20   |
| 3DT6 | B    | 3 | —           | 4 | 1  | 60   | 5U8   | C    | 4 | —   | — | 6 | 20   |
| 3E5  | B    | 1 | 5           | 7 | 6  | 60   | *5V3  | C    | 2 | —   | — | 4 | 20   |
| 3E6  | B    | 1 | 5           | 7 | 6  | 60   |       |      |   |     |   |   |      |
| 3LF4 | B    | 1 | 7           | 8 | 6  | 40   |       |      |   |     |   |   |      |
| 3Q4  | B    | 1 | 2,5         | 7 | 3  | 35   |       |      |   |     |   |   |      |

| Tube                             | Fil. | F | N       | C | E | Load |
|----------------------------------|------|---|---------|---|---|------|
| 5V4                              | C    | 2 | —       | 8 | 4 | 30   |
| 5V6                              | C    | 2 | —       | 7 | 4 | 30   |
| 5W4                              | C    | 2 | —       | 8 | 4 | 30   |
| 5X4                              | C    | 2 | —       | 8 | 4 | 30   |
| 5X8                              | C    | 4 | —       | 8 | 3 | 20   |
| 5Y3                              | C    | 4 | —       | 8 | 3 | 20   |
| 5Y4                              | C    | 4 | —       | 5 | 2 | 35   |
| 5Z4                              | C    | 4 | —       | 5 | 2 | 35   |
| 6A8                              | D    | 2 | —       | 7 | 5 | 30   |
| 6AB4                             | D    | 2 | —       | 4 | 6 | 30   |
| 6AB7                             | D    | 2 | —       | 7 | 4 | 30   |
| 6AB8                             | D    | 4 | —       | 5 | 2 | 30   |
| 6AC5                             | D    | 4 | —       | 5 | 9 | 30   |
| 6AC7                             | D    | 2 | —       | 7 | 4 | 35   |
| 6AD7                             | D    | 2 | —       | 7 | 4 | 30   |
| 6AF4                             | D    | 3 | 1,2     | 7 | 5 | 30   |
| 6AF6                             | D    | 2 | —       | 7 | 5 | —    |
| (Shadow Opens, Disregard Meter)  |      |   |         |   |   |      |
|                                  | D    | 2 | —       | 7 | 8 | —    |
| (Shadow Closes, Disregard Meter) |      |   |         |   |   |      |
| 6AG5                             | D    | 3 | 2       | 4 | 1 | 30   |
| 6AG6                             | D    | 7 | —       | 8 | 5 | 30   |
| 6AG7                             | D    | 2 | —       | 7 | 4 | 30   |
| 6AH4                             | D    | 2 | —       | 7 | 1 | 30   |
| 6AH6                             | D    | 7 | —       | 8 | 1 | 30   |
| 6AH7                             | D    | 7 | —       | 8 | 5 | 30   |
| 6AJ4                             | D    | 7 | 3,4,6,9 | 8 | 1 | 30   |
| 6AJ5                             | D    | 3 | 7       | 4 | 1 | 30   |
| 6AJ8                             | D    | 4 | —       | 5 | 2 | 30   |
| 6AK5                             | D    | 4 | —       | 5 | 9 | 30   |
| 6AK6                             | D    | 3 | 7       | 4 | 1 | 30   |
| 6AK8                             | D    | 3 | —       | 4 | 1 | 30   |
| 6AL5                             | D    | 4 | —       | 5 | 8 | 35   |
| 6AL7                             | D    | 4 | —       | 5 | 2 | 100  |
| 6AM4                             | D    | 3 | —       | 4 | 7 | 40   |
| 6AM8                             | D    | 2 | —       | 4 | 1 | 40   |
| 6AN4                             | D    | 7 | 3,4,6,9 | 8 | 1 | 100  |
| 6AN8                             | D    | 4 | —       | 5 | 2 | 30   |
| 6AN5                             | D    | 4 | —       | 5 | 8 | 100  |
| 6AN8                             | D    | 3 | 1,2     | 4 | 6 | 30   |
| 6AQ5                             | D    | 3 | —       | 4 | 1 | 30   |
| 6AQ6                             | D    | 3 | —       | 4 | 1 | 30   |
| 6AQ7                             | D    | 3 | —       | 4 | 5 | 30   |
| 6AR5                             | D    | 3 | —       | 4 | 6 | 100  |
| 6AR6                             | D    | 7 | —       | 8 | 1 | 100  |
| 6AR8                             | D    | 7 | —       | 8 | 3 | 100  |
| 6AS5                             | D    | 7 | —       | 8 | 4 | 30   |
| 6AS6                             | D    | 3 | —       | 4 | 1 | 60   |

| Tube | Fil. | F | N       | C | E | Load |
|------|------|---|---------|---|---|------|
| 6AS7 | D    | 7 | —       | 8 | 1 | 30   |
| 6AS8 | D    | 4 | —       | 5 | 2 | 30   |
| 6AT6 | D    | 4 | —       | 5 | 6 | 30   |
| 6AT8 | D    | 3 | —       | 4 | 1 | 30   |
| 6AU4 | D    | 3 | —       | 4 | 5 | 100  |
| 6AU5 | D    | 3 | —       | 4 | 6 | 100  |
| 6AU6 | D    | 4 | —       | 5 | 1 | 30   |
| 6AU7 | D    | 4 | —       | 5 | 2 | 30   |
| 6AU8 | D    | 4 | —       | 5 | 2 | 30   |
| 6AV5 | D    | 4 | —       | 5 | 7 | 30   |
| 6AV6 | D    | 3 | —       | 4 | 1 | 30   |
| 6AW8 | D    | 4 | —       | 5 | 6 | 100  |
| 6AX4 | D    | 4 | —       | 5 | 2 | 30   |
| 6AX5 | D    | 7 | —       | 8 | 5 | 30   |
| 6AX7 | D    | 2 | —       | 7 | 5 | 30   |
| 6AX8 | D    | 4 | —       | 5 | 2 | 30   |
| 6AZ8 | D    | 4 | —       | 5 | 9 | 30   |
| 6B4  | D    | 2 | —       | 7 | 5 | 30   |
| 6B6  | D    | 2 | —       | 7 | 4 | 30   |
| 6B7  | D    | 2 | —       | 7 | 5 | 100  |
| 6B8  | D    | 2 | —       | 7 | 4 | 100  |
| 6BA6 | D    | 3 | —       | 4 | 5 | 100  |
| 6BA7 | D    | 4 | —       | 5 | 4 | 30   |
| 6BA8 | D    | 4 | —       | 5 | 4 | 30   |
| 6BC4 | D    | 4 | —       | 5 | 3 | 30   |
| 6BC5 | D    | 4 | 3,7,8,9 | 5 | 2 | 30   |
| 6BC7 | D    | 4 | —       | 5 | 2 | 100  |
| 6BC8 | D    | 4 | —       | 5 | 8 | 100  |
| 6BD4 | D    | 4 | —       | 5 | 5 | 100  |
| 6BD5 | D    | 2 | —       | 7 | 1 | 30   |
| 6BD6 | D    | 3 | —       | 4 | 1 | 30   |
| 6BD7 | D    | 4 | —       | 5 | 2 | 30   |
| 6BE6 | D    | 4 | —       | 5 | 8 | 100  |
| 6BE7 | D    | 4 | —       | 5 | 7 | 30   |
| 6BE8 | D    | 4 | —       | 5 | 1 | 30   |
| 6BF5 | D    | 4 | —       | 5 | 9 | 30   |
| 6BF6 | D    | 3 | —       | 4 | 1 | 30   |
| 6BG6 | D    | 3 | —       | 4 | 5 | 30   |
| 6BH6 | D    | 4 | —       | 5 | 1 | 100  |
| 6BH8 | D    | 4 | —       | 5 | 2 | 30   |
| 6BJ6 | D    | 3 | —       | 4 | 1 | 30   |



| Tube | Fil. | F | N | C | E | Load | Tube | Fil. | F | N | C | E  | Load |
|------|------|---|---|---|---|------|------|------|---|---|---|----|------|
| 6BJ7 | D    | 4 |   | 5 | 2 | 100  | 6CH7 | D    | 4 |   | 5 | 2  | 30   |
|      | D    | 4 |   | 5 | 6 | 100  |      | D    | 4 |   | 5 | 7  | 30   |
|      | D    | 4 |   | 5 | 8 | 100  | 6CH8 | D    | 4 |   | 4 | 7  | 30   |
| 6BJ8 | D    | 4 |   | 5 | 8 | 35   |      | D    | 4 |   | 4 | 8  | 30   |
|      | D    | 4 |   | 5 | 1 | 100  | 6CJ6 | D    | 4 |   | 5 | 2  | 30   |
|      | D    | 4 |   | 5 | 6 | 100  | 6CL5 | D    | 4 |   | 7 | 5  | 30   |
| 6BK5 | D    | 4 |   | 5 | 3 | 30   | 6CL6 | D    | 4 |   | 5 | 2  | 30   |
| 6BK6 | D    | 3 |   | 4 | 1 | 30   | 6CM6 | D    | 4 |   | 5 | 7  | 30   |
|      | D    | 3 |   | 4 | 5 | 100  | 6CM7 | D    | 4 |   | 5 | 8  | 30   |
|      | D    | 3 |   | 4 | 6 | 100  |      | D    | 4 |   | 5 | 7  | 30   |
| 6BK7 | D    | 4 |   | 5 | 2 | 30   | 6CN7 | D    | 4 |   | 5 | 7  | 35   |
|      | D    | 4 |   | 5 | 7 | 30   |      | D    | 4 |   | 5 | 1  | 100  |
| 6BL7 | D    | 7 |   | 8 | 1 | 30   | 6CQ8 | D    | 4 |   | 5 | 2  | 100  |
|      | D    | 7 |   | 8 | 4 | 30   |      | D    | 4 |   | 5 | 9  | 30   |
| 6BN4 | D    | 3 |   | 4 | 2 | 30   | 6CR5 | D    | 4 |   | 4 | 2  | 100  |
| 6BN6 | D    | 3 |   | 4 | 5 | 100  |      | D    | 4 |   | 4 | 7  | 35   |
| 6BN8 | D    | 4 |   | 5 | 1 | 100  | 6CS6 | D    | 4 |   | 4 | 1  | 30   |
|      | D    | 4 |   | 5 | 6 | 100  | 6CS7 | D    | 4 |   | 5 | 7  | 30   |
|      | D    | 4 |   | 5 | 8 | 30   |      | D    | 4 |   | 5 | 7  | 30   |
| 6BQ5 | D    | 4 |   | 3 | 2 | 30   | 6CU5 | D    | 4 |   | 4 | 2  | 30   |
|      | D    | 4 |   | 3 | 2 | 30   | 6CU6 | D    | 4 |   | 7 | 5  | 30   |
| 6BQ6 | D    | 2 |   | 7 | 5 | 30   | 6CU8 | D    | 4 |   | 5 | 7  | 30   |
| 6BQ7 | D    | 4 |   | 5 | 2 | 30   |      | D    | 4 |   | 5 | 7  | 30   |
|      | D    | 4 |   | 5 | 7 | 30   | 6CX7 | D    | 4 |   | 5 | 8  | 30   |
| 6BR7 | D    | 4 |   | 5 | 2 | 30   |      | D    | 4 |   | 5 | 2  | 30   |
| 6BR8 | D    | 4 |   | 5 | 1 | 60   | 6CY5 | D    | 4 |   | 4 | 1  | 30   |
|      | D    | 4 |   | 5 | 9 | 30   | 6CZ5 | D    | 4 |   | 5 | 3  | 30   |
| 6BS8 | D    | 4 |   | 5 | 2 | 30   |      | D    | 4 |   | 5 | 7  | 40   |
|      | D    | 4 |   | 5 | 7 | 30   | 6D4  | D    | 4 |   | 4 | 1  | 30   |
| 6BT6 | D    | 3 |   | 4 | 1 | 30   | 6D8  | D    | 4 |   | 7 | 5  | 30   |
|      | D    | 3 |   | 4 | 5 | 100  | 6DB6 | D    | 4 |   | 4 | 1  | 30   |
| 6BT8 | D    | 4 |   | 5 | 1 | 100  | 6DC6 | D    | 4 |   | 4 | 1  | 30   |
|      | D    | 4 |   | 5 | 2 | 100  | 6DE6 | D    | 4 |   | 4 | 1  | 30   |
|      | D    | 4 |   | 5 | 8 | 30   | 6DG6 | D    | 4 |   | 7 | 5  | 30   |
| 6BU5 | D    | 7 |   | 8 | 4 | 30   | 6DK6 | D    | 4 |   | 4 | 1  | 30   |
| 6BU6 | D    | 3 |   | 4 | 1 | 30   | 6DQ5 | D    | 4 |   | 7 | 1  | 35   |
|      | D    | 3 |   | 4 | 5 | 100  | 6DQ6 | D    | 4 |   | 7 | 5  | 30   |
|      | D    | 3 |   | 4 | 6 | 100  | 6DS5 | D    | 4 |   | 4 | 1  | 30   |
| 6BU8 | D    | 4 |   | 5 | 7 | 30   | 6DT6 | D    | 4 |   | 4 | 1  | 30   |
| 6BW4 | D    | 4 |   | 5 | 1 | 30   | 6F5  | D    | 4 |   | 7 | TC | 35   |
|      | D    | 4 |   | 5 | 7 | 30   | 6F6  | D    | 4 |   | 7 | 5  | 30   |
| 6BX6 | D    | 4 |   | 5 | 2 | 30   | 6F8  | D    | 4 |   | 7 | 5  | 30   |
| 6BX7 | D    | 7 |   | 8 | 1 | 30   |      | D    | 4 |   | 7 | TC | 30   |
|      | D    | 7 |   | 8 | 4 | 30   | 6G6  | D    | 4 |   | 7 | 5  | 30   |
| 6BY5 | D    | 2 |   | 7 | 4 | 30   | 6G7  | D    | 4 |   | 7 | TC | 30   |
|      | D    | 2 |   | 7 | 5 | 30   | 6H6  | D    | 4 |   | 7 | 5  | 30   |
| 6BY6 | D    | 3 |   | 4 | 1 | 35   |      | D    | 4 |   | 7 | 5  | 30   |
| 6BZ6 | D    | 3 |   | 4 | 1 | 30   | 6H7  | D    | 4 |   | 7 | 5  | 60   |
|      | D    | 3 |   | 4 | 1 | 30   |      | D    | 4 |   | 7 | TC | 35   |
| 6BZ7 | D    | 4 |   | 5 | 2 | 35   | 6J4  | D    | 4 |   | 4 | 1  | 35   |
|      | D    | 4 |   | 5 | 7 | 35   | 6J5  | D    | 4 |   | 7 | 5  | 30   |
| 6BZ8 | D    | 4 |   | 5 | 2 | 40   | 6J6  | D    | 4 |   | 4 | 5  | 35   |
|      | D    | 4 |   | 5 | 7 | 40   |      | D    | 4 |   | 4 | 6  | 35   |
| 6C4  | D    | 2 |   | 4 | 6 | 35   | 6J7  | D    | 4 |   | 7 | TC | 30   |
| 6C5  | D    | 2 |   | 4 | 5 | 35   | 6J8  | D    | 4 |   | 7 | TC | 65   |
| 6C8  | D    | 2 |   | 4 | 5 | 30   |      | D    | 4 |   | 7 | TC | 40   |
|      | D    | 2 |   | 4 | 5 | 30   | 6K6  | D    | 4 |   | 7 | 5  | 30   |
| 6CA4 | D    | 4 |   | 5 | 1 | 30   | 6K7  | D    | 4 |   | 7 | TC | 30   |
|      | D    | 4 |   | 5 | 7 | 30   | 6K8  | D    | 4 |   | 7 | 5  | 35   |
| 6CA5 | D    | 2 |   | 4 | 2 | 30   | 6L5  | D    | 4 |   | 7 | 5  | 35   |
| 6CA7 | D    | 2 |   | 4 | 5 | 30   | 6L6  | D    | 4 |   | 7 | 5  | 30   |
| 6CB5 | D    | 2 |   | 4 | 4 | 30   | 6L7  | D    | 4 |   | 7 | TC | 35   |
| 6CB6 | D    | 3 |   | 4 | 1 | 30   | 6M8  | D    | 4 |   | 7 | 5  | 100  |
| 6CD6 | D    | 2 |   | 4 | 5 | 30   |      | D    | 4 |   | 7 | 8  | 35   |
| 6CE5 | D    | 3 |   | 4 | 1 | 30   | 6N4  | D    | 4 |   | 4 | 1  | 30   |
| 6CF6 | D    | 3 |   | 4 | 1 | 30   | 6N7  | D    | 4 |   | 7 | 5  | 30   |
| 6CG6 | D    | 4 |   | 5 | 1 | 30   |      | D    | 4 |   | 7 | 2  | 30   |
| 6CG7 | D    | 4 |   | 5 | 2 | 30   | 6N8  | D    | 4 |   | 5 | 8  | 100  |
|      | D    | 4 |   | 5 | 7 | 30   |      | D    | 4 |   | 5 | 7  | 100  |
| 6CG8 | D    | 4 |   | 5 | 1 | 30   |      | D    | 4 |   | 5 | 7  | 100  |
|      | D    | 4 |   | 5 | 9 | 30   |      | D    | 4 |   | 5 | 8  | 100  |

| Tube  | Fil. | F | N       | C | E  | Load | Tube  | Fil. | F | N     | C | E | Load |
|-------|------|---|---------|---|----|------|-------|------|---|-------|---|---|------|
| 6P5   | D    | 2 | —       | 7 | 5  | 35   | 6ZY5  | D    | 2 | —     | 7 | 3 | 30   |
| 6Q7   | D    | 2 | —       | 7 | 4  | 100  |       | D    | 2 | —     | 7 | 5 | 30   |
|       | D    | 2 | —       | 7 | 5  | 100  |       |      |   |       |   |   |      |
|       | D    | 2 | —       | 7 | TC | 35   | 7A4   | D    | 1 | —     | 8 | 5 | 35   |
| 6R8   | D    | 4 | —       | 5 | 1  | 65   | 7A6   | D    | 1 | —     | 8 | 3 | 35   |
|       | D    | 4 | —       | 5 | 2  | 65   |       | D    | 1 | —     | 8 | 6 | 35   |
|       | D    | 4 | —       | 5 | 6  | 65   | 7A7   | D    | 1 | —     | 8 | 6 | 35   |
|       | D    | 4 | —       | 5 | 8  | 35   | 7A8   | D    | 1 | —     | 8 | 4 | 35   |
| 6S4   | D    | 4 | 1,3,7,8 | 5 | 6  | 30   | 7AD7  | D    | 1 | —     | 8 | 6 | 30   |
| 6S6   | D    | 2 | —       | 7 | TC | 35   | 7AF7  | D    | 1 | —     | 8 | 4 | 30   |
| 6S7   | D    | 2 | —       | 7 | TC | 35   |       | D    | 1 | 5     | 8 | 5 | 30   |
| 6S8   | D    | 7 | —       | 8 | 1  | 100  | 7AG7  | D    | 1 | —     | 8 | 6 | 30   |
|       | D    | 7 | —       | 8 | 3  | 100  | 7AH7  | D    | 1 | —     | 8 | 6 | 35   |
|       | D    | 7 | —       | 8 | 4  | 100  |       |      |   |       |   |   |      |
|       | D    | 7 | —       | 8 | TC | 35   | 7AK7  | D    | 1 | —     | 8 | 6 | 35   |
| 6SA7  | D    | 2 | —       | 7 | 5  | 35   | 7AU7  | D    | 4 | —     | 5 | 7 | 30   |
| 6SB7Y | D    | 2 | —       | 7 | 5  | 35   |       | D    | 4 | —     | 5 | 7 | 30   |
| 6SC7  | D    | 7 | —       | 8 | 3  | 40   | 7B4   | D    | 1 | —     | 8 | 6 | 35   |
|       | D    | 7 | —       | 8 | 4  | 40   | 7B5   | D    | 1 | —     | 8 | 6 | 30   |
| 6SD7  | D    | 2 | —       | 7 | 4  | 30   | 7B6   | D    | 1 | —     | 8 | 5 | 35   |
|       |      |   |         |   |    |      |       | D    | 1 | —     | 8 | 5 | 100  |
| 6SF5  | D    | 7 | —       | 8 | 3  | 35   |       | D    | 1 | —     | 8 | 6 | 100  |
| 6SF7  | D    | 7 | —       | 8 | 2  | 30   | 7B7   | D    | 1 | —     | 8 | 6 | 35   |
|       | D    | 7 | —       | 8 | 5  | 100  | 7B8   | D    | 1 | —     | 8 | 4 | 35   |
| 6SG7  | D    | 2 | —       | 7 | 4  | 30   |       |      |   |       |   |   |      |
| 6SJ7  | D    | 2 | —       | 7 | 4  | 30   | 7C5   | D    | 1 | —     | 8 | 6 | 30   |
| 6SK7  | D    | 2 | —       | 7 | 4  | 30   | 7C6   | D    | 1 | 4     | 8 | 3 | 35   |
| 6SL7  | D    | 7 | —       | 8 | 1  | 30   |       | D    | 1 | 4     | 8 | 5 | 100  |
|       | D    | 7 | —       | 8 | 4  | 30   |       | D    | 1 | 4     | 8 | 6 | 100  |
| 6SN7  | D    | 7 | —       | 8 | 1  | 30   | 7C7   | D    | 1 | —     | 8 | 6 | 35   |
|       | D    | 7 | —       | 8 | 4  | 30   | 7E5   | D    | 2 | 3,4,5 | 8 | 1 | 30   |
|       |      |   |         |   |    |      | 7E6   | D    | 1 | —     | 8 | 3 | 35   |
| 6SQ7  | D    | 7 | —       | 8 | 2  | 30   |       | D    | 1 | —     | 8 | 5 | 100  |
|       | D    | 7 | —       | 8 | 4  | 100  |       | D    | 1 | —     | 8 | 6 | 100  |
|       | D    | 7 | —       | 8 | 5  | 100  | 7E7   | D    | 1 | —     | 8 | 3 | 100  |
| 6SR7  | D    | 7 | —       | 8 | 2  | 30   |       | D    | 1 | —     | 8 | 4 | 100  |
|       | D    | 7 | —       | 8 | 4  | 100  |       | D    | 1 | —     | 8 | 4 | 35   |
|       | D    | 7 | —       | 8 | 5  | 100  | 7F7   | D    | 1 | —     | 8 | 4 | 30   |
| 6SS7  | D    | 2 | —       | 7 | 4  | 30   |       | D    | 1 | —     | 8 | 4 | 30   |
| 6ST7  | D    | 7 | —       | 8 | 2  | 30   | 7F8   | D    | 2 | —     | 7 | 5 | 35   |
|       | D    | 7 | —       | 8 | 4  | 100  |       | D    | 2 | —     | 7 | 8 | 35   |
|       | D    | 7 | —       | 8 | 5  | 100  | 7G7   | D    | 1 | —     | 8 | 6 | 30   |
| 6SU7  | D    | 7 | —       | 8 | 1  | 30   | 7H7   | D    | 1 | —     | 8 | 6 | 35   |
|       | D    | 7 | —       | 8 | 4  | 30   |       |      |   |       |   |   |      |
| 6SV7  | D    | 7 | —       | 8 | 2  | 30   | 7J7   | D    | 1 | —     | 8 | 4 | 35   |
|       | D    | 7 | —       | 8 | 5  | 100  |       | D    | 1 | —     | 8 | 6 | 35   |
| 6T4   | D    | 3 | 6,7     | 4 | 2  | 35   | 7K7   | D    | 1 | —     | 8 | 4 | 35   |
| 6T6   | D    | 2 | —       | 7 | TC | 35   |       | D    | 1 | —     | 8 | 5 | 100  |
| 6T8   | D    | 4 | —       | 5 | 1  | 100  |       | D    | 1 | —     | 8 | 6 | 100  |
|       | D    | 4 | —       | 5 | 2  | 100  | 7L7   | D    | 1 | —     | 8 | 6 | 35   |
|       | D    | 4 | —       | 5 | 6  | 100  | 7N7   | D    | 1 | —     | 8 | 4 | 30   |
|       | D    | 4 | —       | 5 | 8  | 30   |       | D    | 1 | —     | 8 | 5 | 30   |
| 6U4   | D    | 7 | —       | 8 | 5  | 30   | 7Q7   | D    | 1 | —     | 8 | 4 | 35   |
| 6U6   | D    | 2 | —       | 7 | 5  | 30   |       | D    | 1 | —     | 8 | 3 | 100  |
| 6U7   | D    | 2 | —       | 7 | TC | 30   | 7R7   | D    | 1 | —     | 8 | 4 | 100  |
| 6U8   | D    | 4 | —       | 5 | 2  | 30   |       | D    | 1 | —     | 8 | 6 | 35   |
|       | D    | 4 | —       | 5 | 9  | 30   | 7S7   | D    | 1 | —     | 8 | 4 | 35   |
| 6V3   | D    | 4 | 7,9     | 5 | 2  | 30   |       | D    | 1 | —     | 8 | 6 | 35   |
| 6V6   | D    | 2 | —       | 7 | 5  | 30   | 7V7   | D    | 1 | —     | 8 | 6 | 35   |
| 6V8   | D    | 4 | —       | 5 | 2  | 100  | 7W7   | D    | 1 | 7     | 8 | 6 | 35   |
|       | D    | 4 | —       | 5 | 6  | 35   | 7X6   | D    | 1 | —     | 8 | 3 | 30   |
|       | D    | 4 | —       | 5 | 7  | 100  |       | D    | 1 | —     | 8 | 6 | 30   |
|       |      |   |         |   |    |      | 7X7   | D    | 1 | —     | 8 | 3 | 35   |
|       |      |   |         |   |    |      |       | D    | 1 | —     | 8 | 5 | 100  |
| 6W4   | D    | 7 | —       | 8 | 5  | 30   |       | D    | 1 | —     | 8 | 6 | 100  |
| 6W6   | D    | 2 | —       | 7 | 5  | 30   | 7Y4   | D    | 1 | —     | 8 | 3 | 30   |
| 6X4   | D    | 3 | —       | 4 | 1  | 30   |       | D    | 1 | —     | 8 | 6 | 30   |
|       | D    | 3 | —       | 4 | 6  | 30   | 7Z4   | D    | 1 | —     | 8 | 6 | 45   |
| 6X5   | D    | 2 | —       | 7 | 3  | 30   |       | D    | 1 | —     | 8 | 6 | 45   |
|       | D    | 2 | —       | 7 | 5  | 30   |       |      |   |       |   |   |      |
| 6X6   | D    | 2 | —       | 7 | 4  | 30   |       |      |   |       |   |   |      |
| 6X8   | D    | 4 | —       | 5 | 2  | 35   | 12A4  | E    | 4 | 3,7   | 5 | 2 | 35   |
|       | D    | 4 | —       | 5 | 7  | 35   | 12A8  | E    | 2 | —     | 5 | 5 | 35   |
| 6Y6   | D    | 2 | —       | 7 | 5  | 30   | 12AB5 | E    | 4 | 1,3   | 5 | 6 | 30   |

| Tube  | Fil. | F | N | C | E | Load | Tube  | Fil. | F | N | C | E | Load |
|-------|------|---|---|---|---|------|-------|------|---|---|---|---|------|
| 12AD7 | F    | 4 | 9 | 5 | 2 | 30   | 12CX6 | F    | 3 | 1 | 4 | 1 | 30   |
| 12AF6 | F    | 3 | 1 | 4 | 1 | 30   | 12D4  | F    | 2 | 1 | 8 | 5 | 30   |
| 12AH7 | F    | 7 | 1 | 8 | 1 | 35   | 12DQ6 | F    | 2 | 1 | 7 | 5 | 30   |
| 12AL5 | F    | 3 | 1 | 4 | 2 | 35   | 12EM6 | F    | 4 | 1 | 5 | 1 | 100  |
| 12AQ5 | F    | 3 | 7 | 4 | 7 | 40   | 12EN6 | F    | 2 | 1 | 7 | 5 | 30   |
| 12AT6 | F    | 3 | 1 | 4 | 1 | 30   | 12G4  | F    | 3 | 2 | 4 | 6 | 35   |
|       | F    | 3 | 1 | 4 | 5 | 35   | 12H4  | F    | 2 | 2 | 4 | 6 | 35   |
|       | F    | 3 | 1 | 4 | 5 | 100  | 12H6  | F    | 2 | 1 | 7 | 5 | 35   |
|       | F    | 3 | 1 | 4 | 5 | 100  |       |      |   |   |   |   |      |
| 12AT7 | F    | 4 | 9 | 5 | 2 | 35   | 12J5  | F    | 2 | 1 | 7 | 5 | 35   |
| 12AU6 | F    | 4 | 9 | 5 | 7 | 35   | 12J7  | F    | 2 | 1 | 7 | 5 | 35   |
| 12AU7 | F    | 4 | 9 | 5 | 2 | 35   | 12K5  | F    | 3 | 5 | 4 | 6 | 30   |
| 12AV5 | F    | 2 | 1 | 7 | 7 | 35   | 12K7  | F    | 2 | 1 | 7 | 5 | 35   |
| 12AV6 | F    | 3 | 1 | 4 | 1 | 30   | 12K8  | F    | 2 | 1 | 7 | 5 | 35   |
|       | F    | 3 | 1 | 4 | 1 | 35   | 12L6  | F    | 2 | 1 | 7 | 5 | 100  |
|       | F    | 3 | 1 | 4 | 5 | 100  | 12Q7  | F    | 2 | 1 | 7 | 4 | 100  |
|       | F    | 3 | 1 | 4 | 6 | 100  |       |      |   |   | 7 | 5 | 35   |
| 12AV7 | F    | 4 | 9 | 5 | 2 | 35   | 12S8  | F    | 7 | 1 | 8 | 3 | 100  |
| 12AW6 | F    | 4 | 9 | 5 | 7 | 35   |       |      |   |   | 8 | 4 | 100  |
| 12AX4 | F    | 3 | 1 | 4 | 1 | 35   | 12SA7 | F    | 7 | 1 | 8 | 5 | 100  |
| 12AX7 | F    | 7 | 1 | 8 | 5 | 35   | 12SC7 | F    | 7 | 1 | 8 | 5 | 35   |
| 12AY7 | F    | 4 | 9 | 5 | 2 | 35   | 12SF5 | F    | 7 | 1 | 8 | 3 | 35   |
| 12AZ7 | F    | 4 | 9 | 5 | 7 | 35   | 12SF7 | F    | 7 | 1 | 8 | 2 | 35   |
|       | F    | 4 | 9 | 5 | 7 | 35   |       |      |   |   | 8 | 5 | 100  |
|       | F    | 4 | 9 | 5 | 7 | 35   |       |      |   |   |   |   |      |
| 12B4  | F    | 4 | 3 | 5 | 2 | 35   | 12SG7 | F    | 2 | 3 | 7 | 4 | 35   |
| 12B7  | F    | 1 | 1 | 8 | 6 | 35   | 12SH7 | F    | 2 | 1 | 7 | 4 | 35   |
| 12BA6 | F    | 3 | 1 | 4 | 1 | 35   | 12SJ7 | F    | 2 | 1 | 7 | 4 | 35   |
| 12BA7 | F    | 4 | 1 | 5 | 2 | 35   | 12SK7 | F    | 2 | 1 | 7 | 4 | 35   |
| 12BD6 | F    | 3 | 1 | 4 | 1 | 35   | 12SL7 | F    | 7 | 1 | 8 | 1 | 30   |
| 12BE6 | F    | 3 | 1 | 4 | 1 | 35   | 12SN7 | F    | 7 | 1 | 8 | 1 | 30   |
| 12BF6 | F    | 3 | 1 | 4 | 1 | 60   | 12SQ7 | F    | 7 | 1 | 8 | 1 | 30   |
|       | F    | 3 | 1 | 4 | 5 | 100  |       |      |   |   | 8 | 4 | 35   |
|       | F    | 3 | 1 | 4 | 5 | 100  |       |      |   |   | 8 | 5 | 100  |
| 12BH7 | F    | 4 | 9 | 5 | 2 | 30   | 12SR7 | F    | 7 | 1 | 8 | 2 | 35   |
| 12BK5 | F    | 4 | 9 | 5 | 7 | 30   |       |      |   |   | 8 | 4 | 100  |
| 12BK6 | F    | 3 | 1 | 4 | 3 | 30   |       |      |   |   | 8 | 5 | 100  |
|       | F    | 3 | 1 | 4 | 5 | 35   | 12V6  | F    | 7 | 1 | 8 | 5 | 30   |
|       | F    | 3 | 1 | 4 | 5 | 100  | 12W6  | F    | 2 | 1 | 7 | 5 | 30   |
|       | F    | 3 | 1 | 4 | 5 | 100  | 12X4  | F    | 2 | 1 | 7 | 5 | 30   |
| 12BN6 | F    | 3 | 1 | 4 | 5 | 100  |       |      |   |   | 4 | 1 | 30   |
| 12BQ6 | F    | 2 | 1 | 7 | 5 | 30   |       |      |   |   |   |   |      |
| 12BR7 | F    | 4 | 9 | 5 | 7 | 30   | 14A7  | F    | 1 | 1 | 8 | 6 | 30   |
|       | F    | 4 | 9 | 5 | 7 | 100  | 14AF7 | F    | 1 | 1 | 8 | 4 | 35   |
|       | F    | 4 | 9 | 5 | 7 | 100  | 14F8  | F    | 1 | 1 | 8 | 5 | 35   |
| 12BT6 | F    | 3 | 1 | 4 | 1 | 35   | 14H7  | F    | 2 | 1 | 7 | 8 | 35   |
|       | F    | 3 | 1 | 4 | 5 | 100  | 14Q7  | F    | 1 | 1 | 8 | 6 | 35   |
|       | F    | 3 | 1 | 4 | 5 | 100  |       |      |   |   |   |   |      |
| 12BU6 | F    | 3 | 1 | 4 | 5 | 35   |       |      |   |   |   |   |      |
|       | F    | 3 | 1 | 4 | 5 | 100  | 15A8  | F    | 2 | 1 | 7 | 3 | 30   |
|       | F    | 3 | 1 | 4 | 5 | 100  |       |      |   |   | 7 | 4 | 30   |
|       | F    | 3 | 1 | 4 | 5 | 100  |       |      |   |   |   |   |      |
| 12BV7 | F    | 4 | 3 | 5 | 2 | 30   | 19AU4 | F    | 7 | 1 | 8 | 5 | 30   |
| 12BY7 | F    | 4 | 3 | 5 | 2 | 30   | 19BG6 | F    | 2 | 1 | 7 | 5 | 30   |
| 12BZ7 | F    | 4 | 3 | 5 | 2 | 30   | 19CB  | F    | 4 | 1 | 5 | 1 | 100  |
|       | F    | 4 | 3 | 5 | 2 | 30   |       |      |   |   | 5 | 2 | 100  |
| 12C5  | F    | 3 | 2 | 4 | 5 | 35   |       |      |   |   | 5 | 6 | 100  |
| 12C8  | F    | 2 | 1 | 7 | 4 | 100  | 19J6  | F    | 3 | 1 | 4 | 3 | 35   |
|       | F    | 2 | 1 | 7 | 5 | 100  |       |      |   |   | 4 | 5 | 35   |
|       | F    | 2 | 1 | 7 | 5 | 35   | 19T8  | F    | 4 | 1 | 5 | 2 | 100  |
| 12CA5 | F    | 2 | 1 | 7 | 4 | 30   |       |      |   |   | 5 | 6 | 100  |
| 12CM6 | F    | 4 | 1 | 5 | 2 | 30   |       |      |   |   | 5 | 8 | 35   |
| 12CN5 | F    | 3 | 1 | 4 | 2 | 30   |       |      |   |   |   |   |      |
| 12CR6 | F    | 3 | 1 | 4 | 2 | 40   |       |      |   |   |   |   |      |
|       | F    | 3 | 1 | 4 | 2 | 100  |       |      |   |   |   |   |      |
| 12CS6 | F    | 3 | 1 | 4 | 2 | 60   |       |      |   |   |   |   |      |
| 12CU5 | F    | 2 | 1 | 7 | 2 | 30   |       |      |   |   |   |   |      |
| 12CU6 | F    | 2 | 1 | 7 | 5 | 25   |       |      |   |   |   |   |      |

| Tube  | Fil. | F | N       | C | E | Load |
|-------|------|---|---------|---|---|------|
| 19V8  | F    | 4 | —       | 5 | 2 | 100  |
|       | F    | 4 | —       | 5 | 6 | 35   |
|       | F    | 4 | —       | 5 | 7 | 100  |
|       | F    | 4 | —       | 5 | 9 | 100  |
| 19X8  | F    | 4 | —       | 5 | 2 | 35   |
|       | F    | 4 | —       | 5 | 7 | 35   |
| 25AC5 | F    | 2 | —       | 7 | 5 | 30   |
| 25AV5 | F    | 2 | —       | 7 | 1 | 30   |
| 25AX4 | F    | 7 | —       | 8 | 5 | 30   |
| 25BK5 | F    | 4 | 7       | 5 | 3 | 30   |
| 25BQ6 | F    | 2 | —       | 7 | 5 | 30   |
| 25C5  | F    | 3 | 2       | 4 | 5 | 30   |
| 25C6  | F    | 2 | —       | 7 | 5 | 30   |
| 25CA5 | F    | 3 | 5       | 4 | 2 | 30   |
| 25CD6 | F    | 2 | —       | 7 | 5 | 30   |
| 25CU6 | F    | 2 | —       | 7 | 5 | 30   |
| 25L6  | F    | 2 | —       | 7 | 5 | 30   |
| 25W4  | F    | 7 | —       | 8 | 5 | 30   |
| 25W6  | F    | 2 | —       | 7 | 5 | 30   |
| EL34  | D    | 2 | —       | 7 | 5 | 30   |
| GZ34  | C    | 2 | —       | 8 | 4 | 30   |
|       | C    | 2 | —       | 8 | 6 | 30   |
| *35A5 | F    | 1 | —       | 8 | 6 | 35   |
| *35B5 | F    | 3 | 7       | 4 | 1 | 35   |
| *35C5 | F    | 3 | 2       | 4 | 5 | 35   |
| *35L6 | F    | 2 | —       | 7 | 5 | 30   |
| *35W4 | F    | 3 | 6       | 4 | 5 | 35   |
| *35Y4 | F    | 1 | 4       | 8 | 2 | 35   |
| *35Z3 | F    | 1 | 4       | 8 | 2 | 35   |
| *35Z4 | F    | 2 | —       | 7 | 5 | 30   |
| *35Z5 | F    | 2 | 3       | 7 | 5 | 30   |
| EL37  | D    | 2 | —       | 7 | 5 | 30   |
| *50A5 | F    | 1 | —       | 8 | 6 | 40   |
| *50B5 | F    | 3 | 7       | 4 | 1 | 50   |
| *50C5 | F    | 3 | 2       | 4 | 5 | 50   |
| *50C6 | F    | 2 | —       | 7 | 5 | 50   |
| *50L6 | F    | 2 | —       | 7 | 5 | 40   |
| *50X5 | F    | 1 | —       | 8 | 6 | 50   |
|       | F    | 1 | —       | 8 | 6 | 50   |
| *50Y6 | F    | 2 | —       | 7 | 5 | 50   |
|       | F    | 2 | —       | 7 | 5 | 50   |
| *50Y7 | F    | 2 | 6       | 7 | 5 | 50   |
|       | F    | 2 | 6       | 7 | 5 | 50   |
| *50Z6 | F    | 2 | —       | 7 | 5 | 50   |
|       | F    | 2 | —       | 7 | 5 | 50   |
| EZ80  | D    | 4 | —       | 5 | 1 | 35   |
| ECC81 | D    | 4 | 9       | 5 | 2 | 35   |
|       | E    | 4 | 9       | 5 | 2 | 35   |
| EZ81  | D    | 4 | —       | 5 | 1 | 30   |
| ECC82 | D    | 4 | 9       | 5 | 2 | 30   |
|       | E    | 4 | 9       | 5 | 2 | 35   |
| ECC83 | E    | 4 | 9       | 5 | 2 | 35   |
|       | E    | 4 | 9       | 5 | 2 | 35   |
| EL84  | D    | 4 | 1, 5, 8 | 5 | 2 | 30   |
| EF86  | D    | 4 | 1, 5, 8 | 5 | 9 | 35   |
| 117L7 | G    | 2 | —       | 7 | 4 | 30   |
|       | G    | 2 | —       | 7 | 6 | 30   |
| 117M7 | G    | 2 | —       | 7 | 4 | 30   |
|       | G    | 2 | —       | 7 | 6 | 30   |
| 117N7 | G    | 2 | —       | 7 | 4 | 30   |
|       | G    | 2 | —       | 7 | 8 | 30   |

Meter Reverses

| Tube           | Fil. | F | N | C | E | Load |
|----------------|------|---|---|---|---|------|
| 117P7          | G    | 2 | — | 7 | 4 | 30   |
|                | G    | 2 | — | 7 | 8 | 30   |
| Meter Reverses |      |   |   |   |   |      |
| 117Z3          | G    | 3 | 1 | 4 | 5 | 30   |
| 117Z4          | G    | 2 | — | 7 | 5 | 30   |
| 117Z6          | G    | 2 | — | 7 | 5 | 30   |
|                | G    | 2 | — | 7 | 5 | 30   |
| 2729           | D    | 4 | — | 5 | 9 | 35   |
| 884            | D    | 2 | — | 7 | 5 | 30   |
| 1614           | D    | 2 | 4 | 7 | 5 | 35   |
| 1851           | D    | 2 | — | 7 | 5 | 30   |
| 5881           | D    | 2 | — | 7 | 5 | 35   |
| 6973           | D    | 4 | 6 | 5 | 3 | 40   |

Made and Printed in Japan

| Tube  | Fil. | F | N            | C | E   | Load |
|-------|------|---|--------------|---|-----|------|
| 1S2   | A    | 1 | 4.5.6<br>8.9 | 2 | TC  | 100  |
| 6AM5  | D    | 3 | —            | 4 | 1   | 60   |
| 6AM6  | D    | 3 | —            | 4 | 1   | 35   |
| 6BL8  | D    | 4 | —            | 5 | 2   | 30   |
|       | D    | 4 | —            | 5 | 9   | 30   |
| 6BM8  | D    | 4 | —            | 5 | 3   | 30   |
|       | D    | 4 | —            | 5 | 1   | 30   |
| 6BW6  | D    | 4 | —            | 5 | 1   | 30   |
| 69W7  | D    | 4 | —            | 5 | 2   | 30   |
| 6BY7  | D    | 4 | —            | 5 | 2   | 30   |
| 6CK6  | D    | 3 | —            | 4 | 2   | 30   |
| 6CM5  | D    | 2 | —            | 7 | 5   | 30   |
| 6CW5  | D    | 4 | —            | 5 | 2   | 30   |
| 6CW7  | D    | 4 | —            | 5 | 2   | 30   |
|       | D    | 4 | —            | 5 | 6   | 30   |
| 6DA6  | D    | 4 | —            | 5 | 2   | 35   |
|       | D    | 4 | —            | 5 | 2   | 30   |
| 6DC8  | D    | 4 | —            | 5 | 7   | 100  |
|       | D    | 4 | —            | 5 | 8   | 100  |
| 6EH7  | D    | 4 | —            | 5 | 2   | 30   |
| 6EJ7  | D    | 4 | —            | 5 | 2   | 30   |
| 6R3   | D    | 4 | —            | 5 | 2.9 | 30   |
| 6U4   | D    | 7 | —            | 8 | 5   | 30   |
| 7AN7  | D    | 4 | —            | 5 | 2   | 30   |
|       | D    | 4 | —            | 5 | 6   | 30   |
| 9A8   | D    | 4 | —            | 5 | 2   | 30   |
|       | D    | 4 | —            | 5 | 9   | 30   |
| 9AK8  | D    | 4 | —            | 5 | 8   | 35   |
|       | D    | 4 | —            | 5 | 2   | 100  |
|       | D    | 4 | —            | 5 | 6   | 100  |
| 15A6  | E    | 4 | —            | 5 | 2   | 30   |
| 15CW5 | E    | 4 | —            | 5 | 2   | 30   |
| 15DQ8 | E    | 4 | —            | 5 | 1   | 30   |
|       | E    | 4 | —            | 5 | 8   | 30   |
| 16A5  | E    | 4 | —            | 5 | 2   | 30   |
| 16A8  | E    | 4 | —            | 5 | 3   | 30   |
|       | E    | 4 | —            | 5 | 1   | 30   |
| 1723  | E    | 4 | —            | 5 | 2.9 | 30   |
| 21A6  | F    | 4 | —            | 5 | 2   | 30   |
| 25E5  | F    | 2 | —            | 7 | 5   | 30   |

| Tube | Fil. | F | N | C | E | Load |
|------|------|---|---|---|---|------|
| 19Y3 | F    | 4 | — | 5 | 9 | 30   |
| 7DJ8 | D    | 4 | — | 5 | 2 | 30   |
|      | D    | 4 | — | 5 | 7 | 30   |
| 30A5 | F    | 3 | — | 4 | 2 | 35   |

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