

# SERVICE ENGINEERING BULLETIN File No.

Prepared by Commercial Engineering Division

NATIONAL UNION RADIO CORPORATION

RMA RELEASE NO. 392

TYPE 3C6

Nov. 30, 1944

TWIN TRIODE AMPLIFIER

## PHYSICAL SPECIFICATIONS

|                        |                 |
|------------------------|-----------------|
| CATHODE                | COATED FILAMENT |
| BASE                   | LOKAL 8-PIN     |
| BULB                   | T-9             |
| MAXIMUM DIAMETER       | 1-3/16"         |
| MAXIMUM OVERALL LENGTH | 2-25/32"        |
| MAXIMUM SEATED HEIGHT  | 2-1/4"          |
| RMA BASING NO.         | TBW-L-0         |

### PIN CONNECTIONS:

|                           |                                                    |
|---------------------------|----------------------------------------------------|
| PIN 1 - POSITIVE FILAMENT | PIN 5 - GRID #1                                    |
| 2 - NO CONNECTION         | 6 - PLATE #1 & GETTER FLAG                         |
| 3 - PLATE #2              | 7 - NEGATIVE FILAMENT (PARALLEL),<br>FILAMENT C.T. |
| 4 - GRID #2               | 8 - NEGATIVE FILAMENT (SERIES)                     |

## MOUNTING POSITION

ANY

## DIRECT INTERELECTRODE CAPACITANCES (WITHOUT SHIELD)

|                                              |     |          |
|----------------------------------------------|-----|----------|
| GRID-TO-PLATE (EACH SECTION)                 | 1.7 | UUF      |
| INPUT (GRID-TO-FILAMENT-BASE) (EACH SECTION) | 1.7 | UUF      |
| OUTPUT (PLATE-TO-FILAMENT-BASE) SECTION 1    | 2.3 | UUF      |
| SECTION 2                                    | 1.8 | UUF      |
| PLATE #1 TO PLATE #2                         | 1.0 | MAX. UUF |
| GRID #1 TO GRID #2                           | .20 | MAX. UUF |
| GRID #1 TO PLATE #2                          | .06 | MAX. UUF |
| GRID #2 TO PLATE #1                          | .10 | MAX. UUF |

## RATINGS

MAXIMUM FILAMENT VOLTAGE

DRY BATTERY OPERATION-VOLTAGE

MUST NEVER EXCEED

AC/DC POWER LINE OPERATION-DESIGN CENTER

MAXIMUM PLATE VOLTAGE

SERIES  
FILAMENT

PARALLEL  
FILAMENT

|     |     |       |
|-----|-----|-------|
| 3.2 | 1.6 | VOLTS |
| 2.6 | 1.3 | VOLTS |
| 110 | 110 | VOLTS |

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

|                                   | SERIES<br>FILAMENT* | PARALLEL<br>FILAMENT |        |       |
|-----------------------------------|---------------------|----------------------|--------|-------|
| FILAMENT VOLTAGE                  | 2.8 DC              | 1.4DC                | 1.4DC  | VOLTS |
| FILAMENT CURRENT                  | 0.050               | 0.100                | 0.100  | AMP.  |
| PLATE VOLTAGE (EACH SECTION)      | 90                  | 90                   | 90     | VOLTS |
| GRID VOLTAGE (EACH SECTION)       | 0                   | 0                    | -3     | VOLTS |
| PLATE CURRENT (SECTION #1)        | 4.5                 | 4.5                  | 1.4    | MA    |
| PLATE RESISTANCE (SECTION #1)     | 11,200              | 11,200               | 19,000 | OHMS  |
| TRANSCONDUCTANCE (SECTION #1)     | 1300                | 1300                 | 760    | UMHOS |
| AMPLIFICATION FACTOR (SECTION #1) | 14.5                | 14.5                 | 14.5   |       |
| PLATE CURRENT (SECTION #2)        | 3.2                 | 4.5                  | 1.4    | MA    |
| PLATE RESISTANCE (SECTION #2)     | 12,800              | 11,200               | 19,000 | OHMS  |
| TRANSCONDUCTANCE (SECTION #2)     | 1100                | 1300                 | 760    | UMHOS |
| AMPLIFICATION FACTOR (SECTION #2) | 14.1                | 14.5                 | 14.5   |       |

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\*BOTH GRIDS RETURNED TO F-PIN #8

SECTION #2 IS RECOMMENDED FOR THE OSCILLATOR WITH GRID LEAK RETUNED PROPERLY TO AVOID OSCILLATOR STARTING DIFFICULTIES.

FOR INTERPRETATION OF RATINGS REFER TO RECEIVING TUBE RATING SHEETS.

NOVEMBER 10, 1944