Taylor CUSTOM BUILT Tubes

T-20

GENERAL PURPOSE TRIODE

20 WATTS PLATE DISSIPATION

$2.25

GENERAL CHARACTERISTICS

Filament Volts	7.5
Filament Current, amps.	1.75
Amplification Factor	20
Plate Dissipation, watts.	20

Interelectrode Capacities

Grid-plate, mmf	5.05
Grid-filament, mmf	4.85
Plate-filament, mmf.	0.65

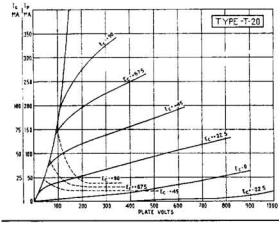
Overall Dimensions

Maximum length, inches	6
Maximum diameter, inches	2¾

UX 4-prong Alsimag Base

The T20 is recommended as an extremely fine amplifier tube on all frequencies up to 60 MC. Nearly 30,000 T20's and TZ20's combined have been bought by Amateurs throughout the world and daily we receive enthusiastic reports of long life and highly efficient performance. T20's and TZ20's require a minimum amount of excitation and their ratings are conservative. While the rated plate dissipation is 20 watts, no color shows on the plate until the dissipation amounts to approximately 32 watts and it takes about 45 watts to cause a cherry red spot in the center of the plate.

CAUTION: Taylor T20's and TZ20's have nickel plates and due to the much lower temperature at which this material will melt, they do not have the same high standard of SAFETY FACTOR that is a feature of Taylor Tubes using carbon anodes. The **Safety Factor** of T20's and TZ20's is approximately 80 watts. This does not mean that they will be any less efficient but it does mean they will not stand as much abuse. The plate voltage should be reduced while making adjustments to prevent excessive heating. Properly handled, the efficiency of these tubes will be as great as though they had carbon anodes and their life will be equally as long.



CLASS C TELEGRAPHY
Maximum Ratings

D. C. Plate Volts	750
D. C. Plate Current, ma.	85
D. C. Grid Current, ma.	25
D. C. Grid Volts	-200
Plate Dissipation, watts.	20

Typical Operating Conditions

D. C. Plate Volts	750
D. C. Plate Current, ma.	85
D. C. Grid Current, ma.	18
D. C. Grid Bias Volts.	-85
From grid leak of, ohms.	4722
Or { Fixed supply of, volts. / From { Plus grid leak of, ohms.	-40 / 2500
Plate Dissipation, watts.	20
Power Output, watts.	44
Driving Power, watts.	3.6

CLASS C TELEPHONY
Maximum Ratings

D. C. Plate Volts	750
D. C. Plate Current, ma.	75
D. C. Grid Current, ma.	25
D. C. Grid Volts	-200
Plate Dissipation, watts.	15

Typical Operating Conditions

D. C. Plate Volts	750
D. C. Plate Current, ma.	70
D. C. Grid Current, ma.	15
D. C. Grid Bias Volts.	-135
From grid leak of, ohms.	9000
Or { Fixed supply of, volts. / From { Plus grid leak of, ohms.	-40 / 4357
Plate Dissipation, watts.	15
Power Output, watts.	38
Driving Power, watts.	3.6

Taylor CUSTOM BUILT Tubes

TZ-20

ZERO BIAS TRIODE

20 WATTS PLATE DISSIPATION

$2.25

GENERAL CHARACTERISTICS

Filament Volts	7.5
Filament Current, amps.	1.75
Amplification Factor	62
Plate Dissipation, watts.	20

Interelectrode Capacities

Grid-plate, mmf	4.95
Grid-filament, mmf	5.25
Plate Filament, mmf.	1.0

Overall Dimensions

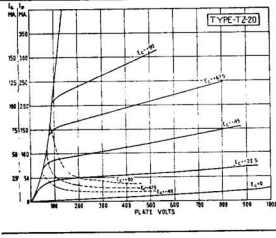
Maximum length, inches	6
Maximum diameter, inches	2¾

UX 4-Prong Alsimag Base

The TZ20 is primarily designed for zero bias Class B audio operation and no bias is required for such operation at voltages up to 800. It is the Ideal Class B audio tube for outputs up to 80 watts and 4 of them push pull parallel will form a most economical 160 watt modulator. For pushpull parallel operation the reflected load impedance will be half and the output twice that for two tubes. The Class B operating conditions for the T20 and TZ20 are identical but the TZ20 avoid the necessity for a source of grid bias with good voltage regulation. At 800 volts the no-signal plate current to a pair of TZ20's will be approximately 25 to 30MA.

The chart below gives proper Class B Audio operating conditions for various outputs at different plate voltages. The most important value is the reflected load impedance which is given for the entire primary or plate to plate. The current value is the maximum average value as would be indicated on the plate current meter with sine wave input. For the same peak output with voice input the maximum average plate current will be approximately 50% to 60% of this value. The TZ20 requires no bias voltage.

D.C. Plate Voltage ↓	40	50	60	70	←Audio Watts Output
800	78MA 21,000	98MA 17,000	117MA 14,000	137MA 12,000	←Max. Av. Ip. ←Plate to plate Load
700	92MA 15,000	115MA 12,000	140MA 10,000	←Max. Av. Ip. ←Plate to plate load	
600	113MA 10,200	140MA 8,100	←Max. Av. Ip. ←Plate to plate load		



CLASS C TELEGRAPHY
Maximum Ratings

D. C. Plate Volts	750
D. C. Plate Current, ma.	85
D. C. Grid Current, ma.	30
D. C. Grid Volts	-200
Plate Dissipation, watts.	20

Typical Operating Conditions

D. C. Plate Volts	750
D. C. Plate Current, ma.	85
D. C. Grid Current, ma.	28
D. C. Grid Bias Volts.	-40
From grid leak of, ohms.	1500
Plate Dissipation, watts.	20
Power Output, watts.	44
Driving Power, watts.	3.75

CLASS C TELEPHONY
Maximum Ratings

D. C. Plate Volts	750
D. C. Plate current, ma.	75
D. C. Grid current, ma.	30
D. C. Grid Volts	-200
Plate Dissipation, watts.	15

Typical Operating Conditions

D. C. Plate Volts	750
D. C. Plate current, ma.	70
D. C. Grid current, ma.	23
D. C. Grid Bias Volts.	-100
From grid leak of, ohms.	4500
Plate Dissipation, watts.	15
Power Output, watts.	38
Driving Power, watts.	4.8

CLASS B AUDIO
Typical Operating Conditions (for two tubes)

D. C. Plate Volts	750
D. C. Plate Current, ma.	170
D. C. Grid Bias Volts.	0
Power Output, watts.	80
Driving Power, watts.	2.6
Plate to Plate load, ohms.	9000
Peak A.F. Grid to Grid Volts.	195