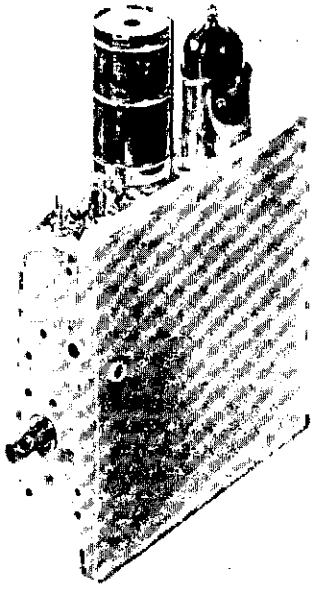
U.H.F. TELEVISION TUNER

AT6360/02

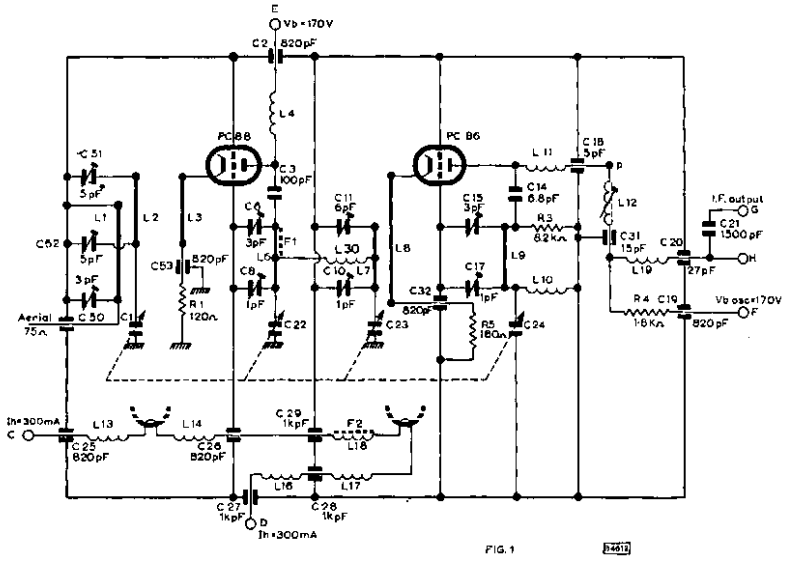
QUICK REFERENCE DATA		
For use in domestic television receivers		
Frequency range (continuously tunable)	470 to 890	Mc/s
Intermediate frequencies		
picture	39.5	Mc/s
sound	33.5	Mc/s



GENERAL

The tuning range from 470 to 890Mc/s of this tuner covers the television bands IV and V. Tuning is by means of a variable capacitor through a geared spindle having a rotation angle of approximately 967 degrees.

A PC88 in a grounded-grid circuit is used as an r.f. amplifier, and a PC86 operates as a self-oscillating mixer.



Circuit diagram of tuner AT6360/02

TECHNICAL DATA

VALVES

R.F. amplifier	PC88	
Self-oscillating mixer	PC86	

TYPICAL OPERATING DATA

Oscillator supply	170	V
Preamplifier supply voltage	170	V
Total supply current (approx.)	25	mA
Valve heater current	300	mA
Valve heater voltage (each valve)	3.8	V

The position of the oscillator valve in the heater chain should be such that the r.m.s. heater-to-cathode voltage is less than 50V.

FREQUENCY RANGE	470 to 890	Mc/s
Spindle rotation angle (approx.)	967	deg

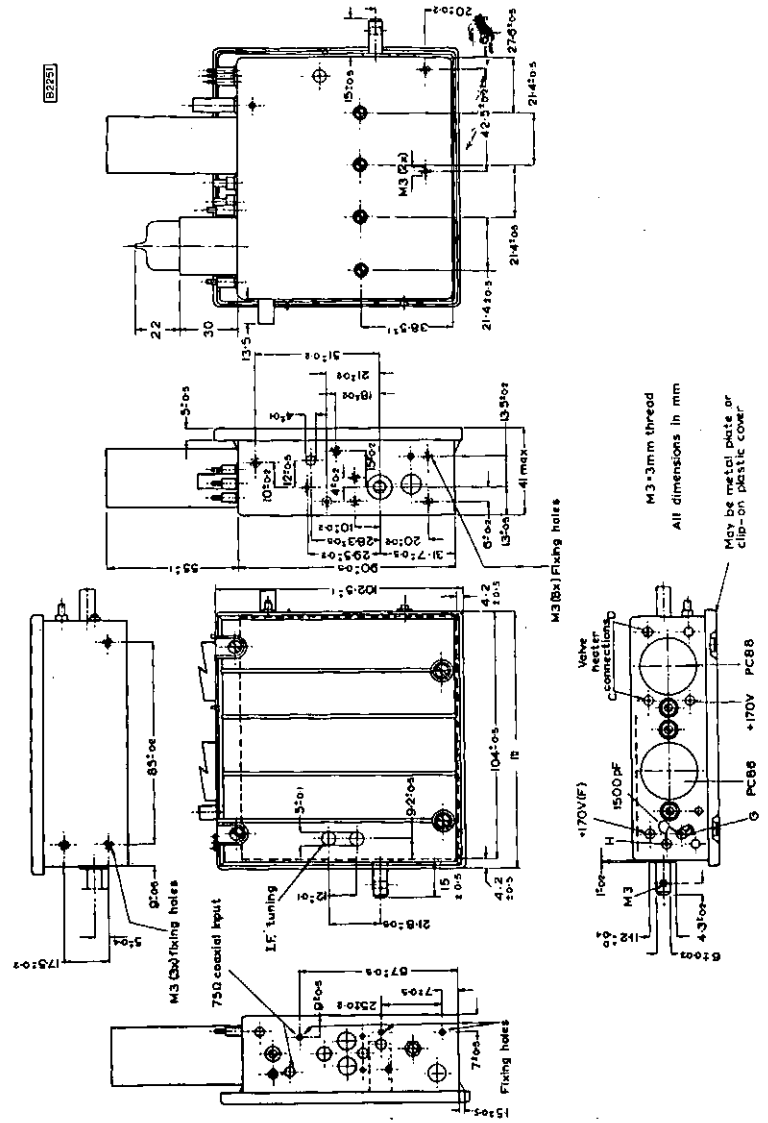
The frequency dependency is approximately linear. (See page C2).

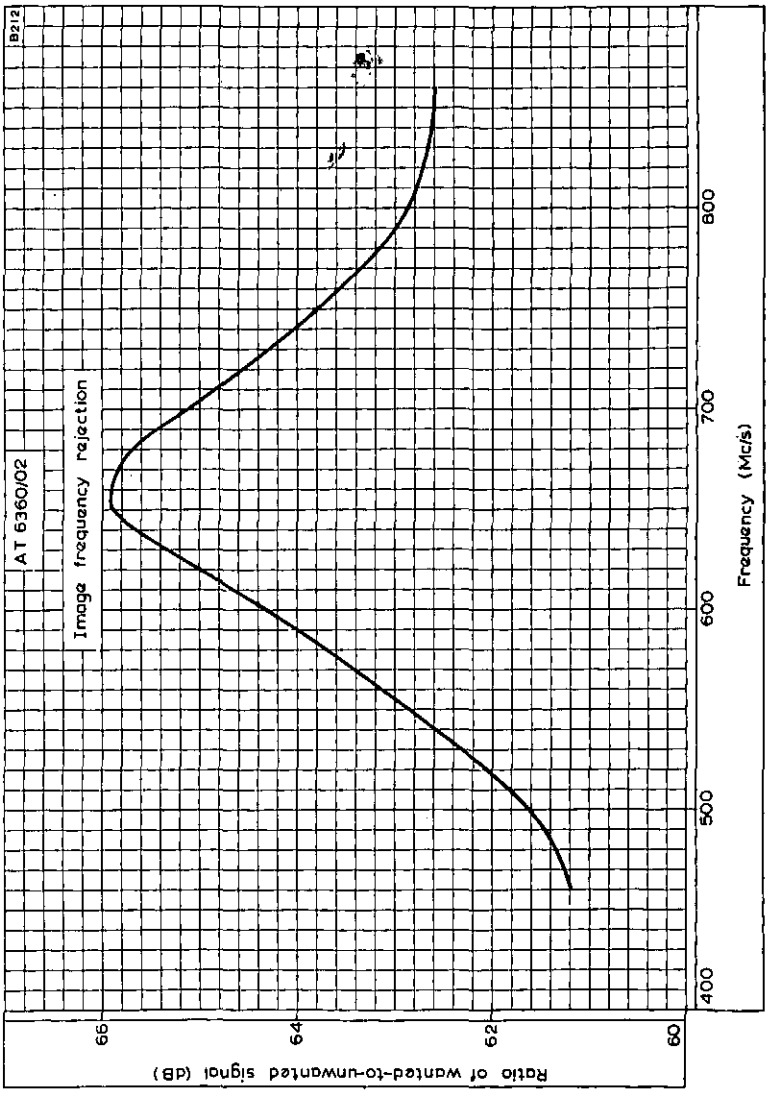
GEARS

Ratio	1:5.4	
Maximum permissible axial torque on tuner spindle	7.0	kg cm

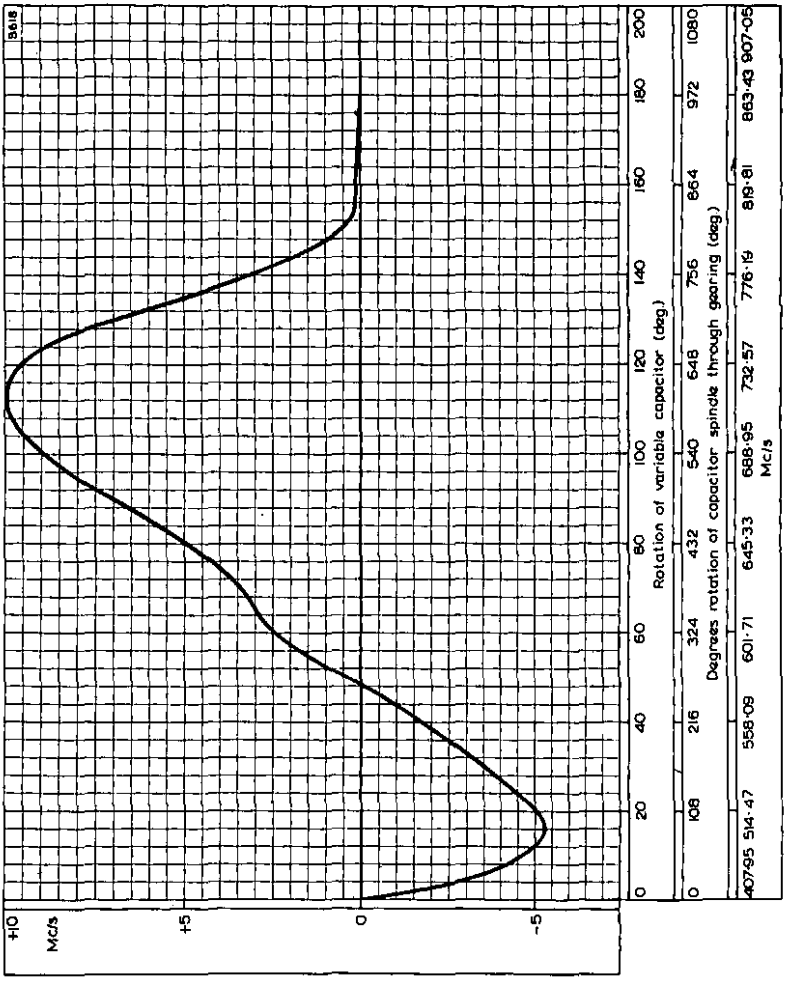
INTERMEDIATE FREQUENCIES		
Picture i.f.	39.5	Mc/s
Sound i.f.	33.5	Mc/s
The oscillator frequency is higher than the signal frequency.		
The i.f. filter is adjusted to approximately 36.5 Mc/s.		
AERIAL IMPEDANCE	75	Ω
STANDING WAVE RATIO	1:2	
R.F. BANDWIDTH at 3dB	10 to 18	Mc/s
GAIN		
For an i.f. bandwidth of 6Mc/s at 3dB		
AT 470Mc/s	>25	dB
860Mc/s	>20	dB
NOISE FIGURES		
AT 470Mc/s	<11	dB
650Mc/s	<13	dB
860Mc/s	<14	dB
IMAGE FREQUENCY REJECTION	See page C1	
Throughout bands IV and V	>58	dB
I.F. REJECTION	>60	dB
OSCILLATOR STABILITY		
At mains voltage variations of ±10%	±150	kc/s
Between 2 minutes and 2 hours after switching-on and including the effect of an additional rise of ambient temperature of 35°C.	<500	kc/s
I.F. OUTPUT	Bottom capacitive coupling	
†Total output capacitance including the coaxial connecting cable (approx.)	60	pF
RADIATION (before mounting)		
Total radiation at a distance of 10m	<450	μV/m
Chassis radiation at a distance of 10m	<50	μV/m
Oscillator voltage at i.f. output terminals	<1	mV

†This figure is dependent upon the bandwidth required.


B2251
M3 (2x)
M3 (3x) fixing holes
750 coaxial input
I.F. tuning
Fixing holes
M3 (8x) Fixing holes
M3 × 3mm thread
All dimensions in mm
May be metal plate or clip-on plastic cover
Valve heater connections
1500pF
+170V(F)
+170V
PCC88
PCC86
G
H
K
M3



TYPICAL IMAGE FREQUENCY REJECTION



TYPICAL TRACKING CURVE

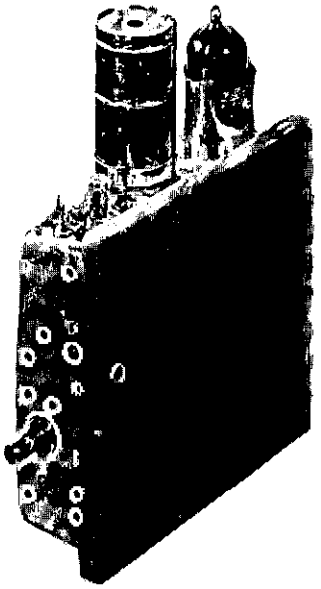
U.H.F. TELEVISION TUNER WITH A.F.C.

AT6361/02

QUICK REFERENCE DATA

For use in domestic television receivers

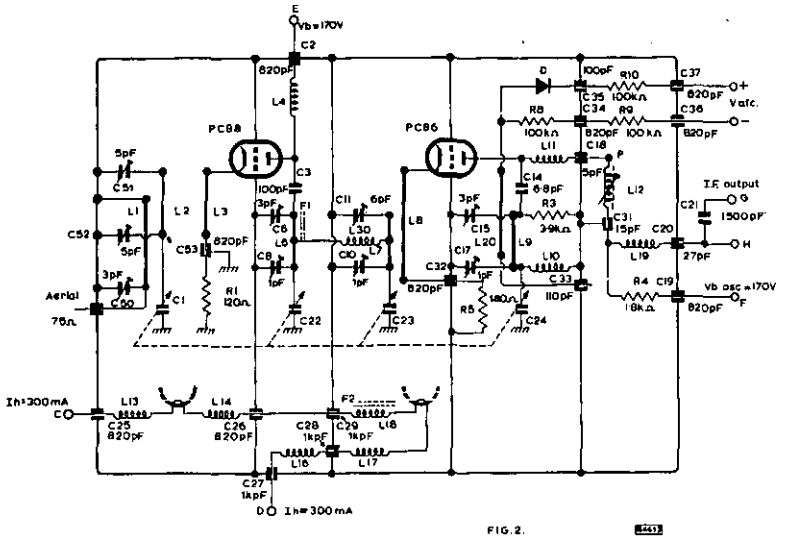
This tuner is the same as the AT6360/02 with the addition of a.f.c.



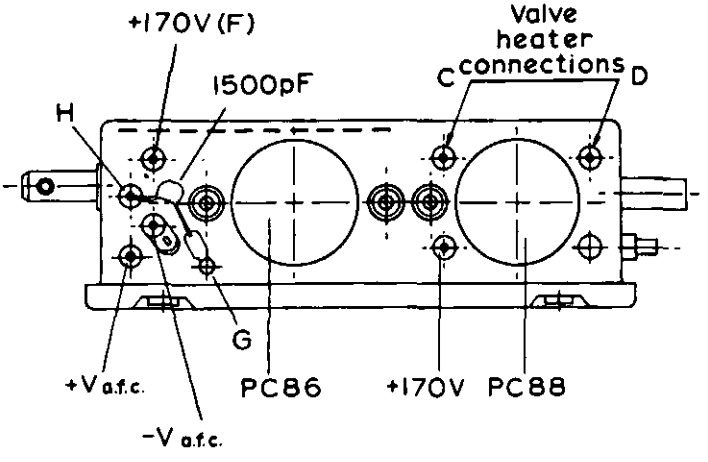
GENERAL

The tuning range from 470 to 890Mc/s of this tuner covers the television bands IV and V. Tuning is by means of a variable capacitor through a geared spindle having a rotation angle of approximately 967 degrees.

A PC88 in a grounded-grid circuit is used as an r.f. amplifier, and a PC86 operates as a self-oscillating mixer.



Circuit diagram of tuner AT6361/02



CONNECTIONS

A.F.C. TUNING

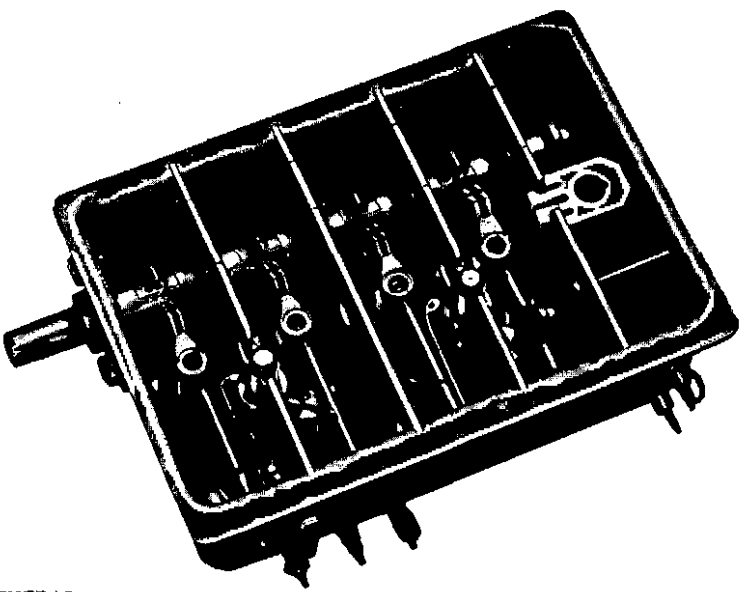
Control voltage	0 to -20	V
Normal setting	-7.0	V
Frequency deviation	≥1.7	Mc/s

For all other data see data sheet AT6360/02

U.H.F. TELEVISION TUNER

AT6380/02

QUICK REFERENCE DATA		
A transistorised television tuner for reception of television signals in the u.h.f. bands IV and V		
Frequency coverage (continuously tunable)	470 to 890	MHz
Intermediate frequencies		
picture	39.5	MHz
sound	33.5	MHz

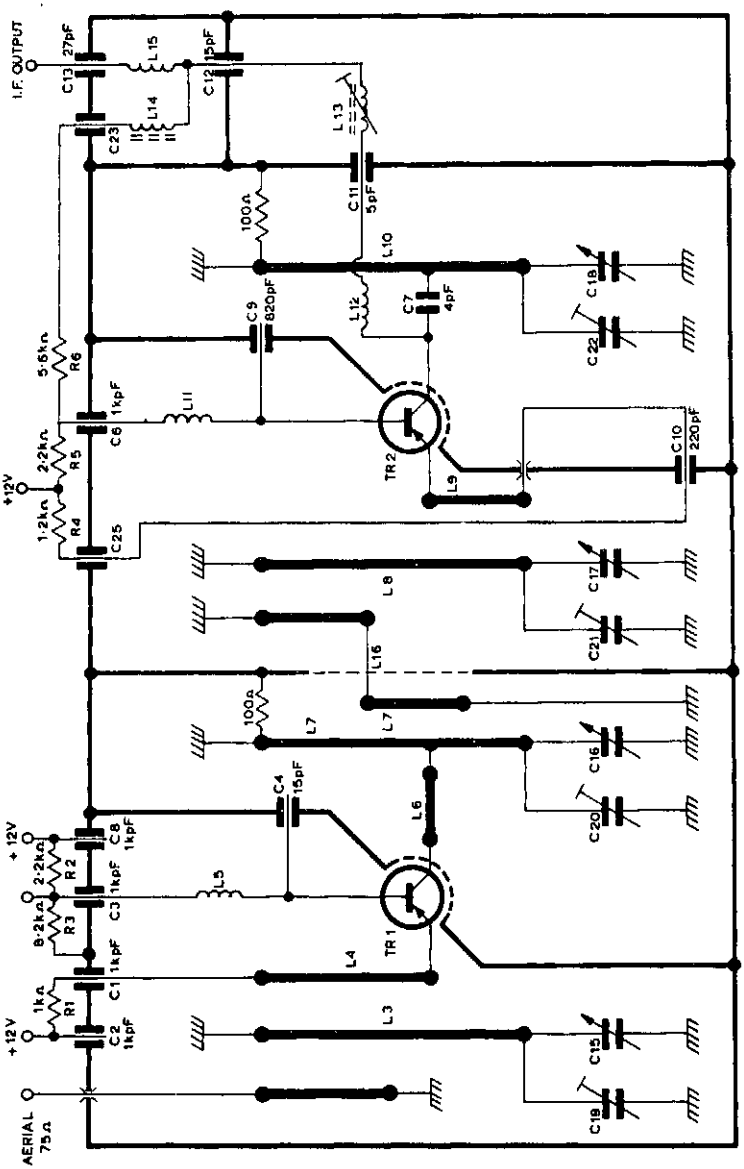


GENERAL

This continuously variable tuner has a tuning range from 470 to 890MHz which covers television signals in the u.h.f. bands IV and V.

It uses AF186 transistors both in the r.f. amplifier and mixer/oscillator stages. The use of transistors and 1/4 wave Lecher wires has made possible a considerable overall reduction in size of the tuner compared with valve tuners.

Tuning is achieved by a four gang variable capacitor, the spindle of which is brought out directly through the tuner case. The angle of rotation of the spindle is approximately 180° permitting the use of either a push drive unit or a reduction gear drive.


I.F. OUTPUT
C13 27pF
L15
C12 15pF
C23
L14
L13
C11 5pF
100Ω
L10
C9 820pF
L12
C7 4pF
C18
C22
5·6kΩ R6
C6 1kpF
L11
TR2
L9
C10 220pF
+12V
2·2kΩ R5
1·2kΩ R4
C25
L8
C17
C21
L16
100Ω
L7
L7
C16
C20
C4 15pF
L6
+12V
C8 1kpF
2·2kΩ R2
C3 1kpF
L5
8·2kΩ R3
TR1
C1 1kpF
L4
1kΩ R1
+12V
C2 1kpF
L3
C15
C19
AERIAL 75Ω

TECHNICAL

Transistors		
R.F. amplifier		AF186
Oscillator/mixer		AF186
Transistor supply		
V_{supply} both stages (normal)	12	V
min.	9.5	V
I_{tot} (approx. without a.g.c.)	8.5	mA
Frequency range	470 to 890	MHz
Spindle rotation (approx.)	180	deg

C max. in clockwise direction, max. axial torque 5kg cm

Intermediate frequencies		
picture i.f.	39.5	MHz
sound i.f.	33.5	MHz
Aerial impedance	75	Ω
Standing wave ratio	< 1:2	
Power gain - average throughout the band	15	dB
Power gain - minimum at 470MHz	11	dB
Gain reduction (forward a.g.c.)	> 20	dB
Noise figures		
at 470MHz (8.5dB average)	< 10	dB
650MHz	< 10	dB
800MHz (10dB average)	< 11.5	dB
Image frequency rejection	> 53	dB
I.F. rejection	> 60	dB

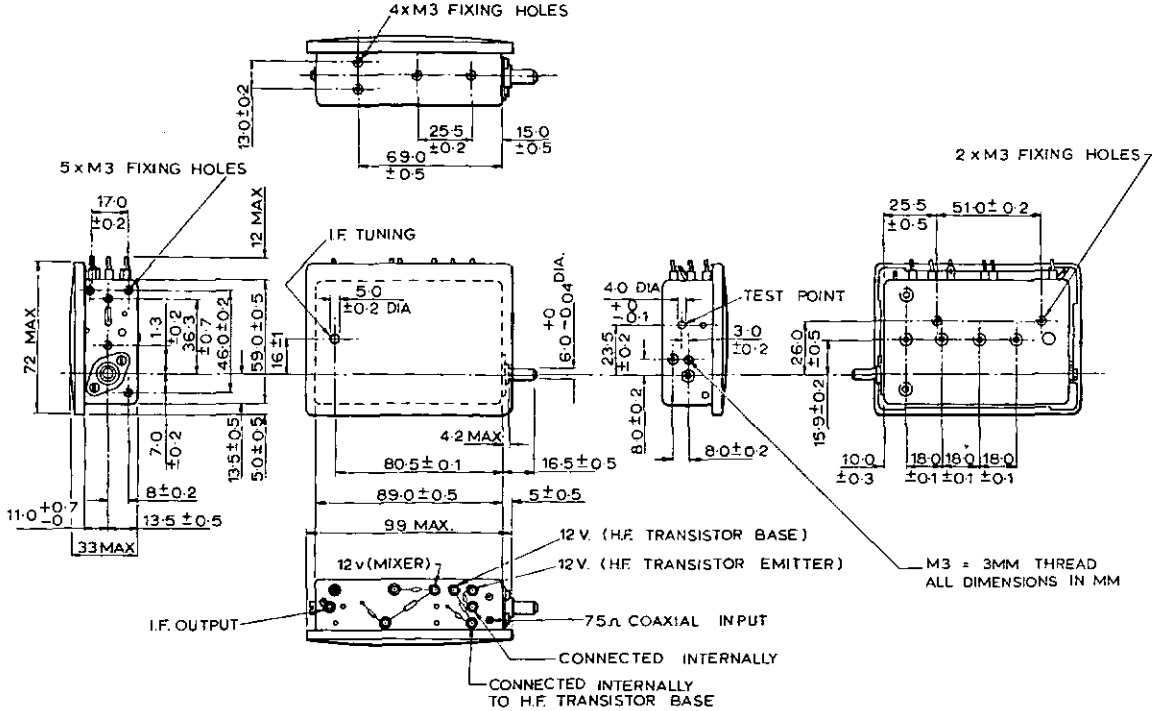
I.F. output bottom capacitive coupling 60pF (approx.)

Total output capacitance including co-axial connecting cable, and dependent upon the coupling.

Oscillator stability		
Voltage dependency: 470 to 800MHz	< 200	kHz/volt
800 to 890MHz	< 350	kHz/volt
Temperature dependency: between 2 and 60 minutes after switch on and including a rise in ambient temperature of 15 degrees centigrade	< 500	kHz

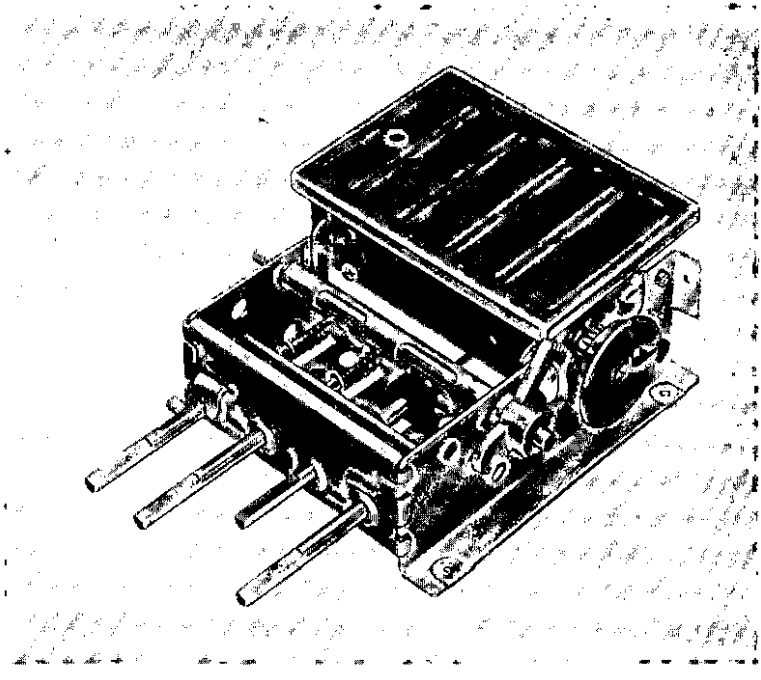
Radiation

The tuner meets the requirements of B.S. 805 1959


4xM3 FIXING HOLES
13·0±0·2
25·5 ±0·2
69·0 ±0·5
15·0 ±0·5
5xM3 FIXING HOLES
17·0 ±0·2
12 MAX
I.F. TUNING
72 MAX
5·0 ±0·2 DIA
16·0 +0 −0·04 DIA
4·0 DIA +0 −0·1
TEST POINT
3·0 ±0·2
23·5 ±0·2
8·0±0·2
8·0±0·2
2xM3 FIXING HOLES
25·5 ±0·5
51·0±0·2
26·0 ±0·5
15·9±0·2
10·0 ±0·3
18·0 ±0·1
18·0 ±0·1
18·0 ±0·1
1·3 ±0·2
36·3 ±0·7
46·0±0·2
59·0±0·5
16±1
7·0 ±0·2
13·5±0·5
5·0±0·5
4·2 MAX
80·5±0·1
16·5±0·5
89·0±0·5
5±0·5
99 MAX.
11·0 +0·7 −0·1
8±0·2
13·5 ±0·5
33 MAX
12 V. (H.F. TRANSISTOR BASE)
12 V. (H.F. TRANSISTOR EMITTER)
12 v (MIXER)
I.F. OUTPUT
75Ω COAXIAL INPUT
CONNECTED INTERNALLY
CONNECTED INTERNALLY
TO H.F. TRANSISTOR BASE
M3 = 3MM THREAD
ALL DIMENSIONS IN MM

U.H.F. TELEVISION TUNER

AT6380/02PB



This tuner is an AT6380/02 tuner with a four button push-button unit coupled in for preset tuning.
The data sheet on AT6380/02 should be consulted for all electrical data.

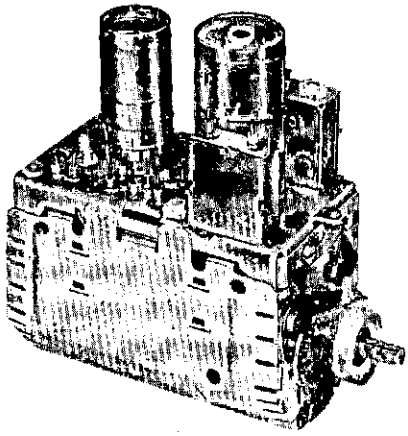
V.H.F. TELEVISION TURRET TUNER

AT7650/21

QUICK REFERENCE DATA

A 13 position tuner for reception of television signals in bands I and III.

Frequency coverage		
Band I	41.5 to 68	Mc/s
Band III	174 to 223	Mc/s
Intermediate frequencies		
Picture	34.65	Mc/s
Sound	38.15	Mc/s



GENERAL

This tuner is designed for reception of television signals in bands I and III. It utilises printed coil strips, which are loaded into the 13 positions in a non-sequential manner, such that quick programme selection may be made in most areas.

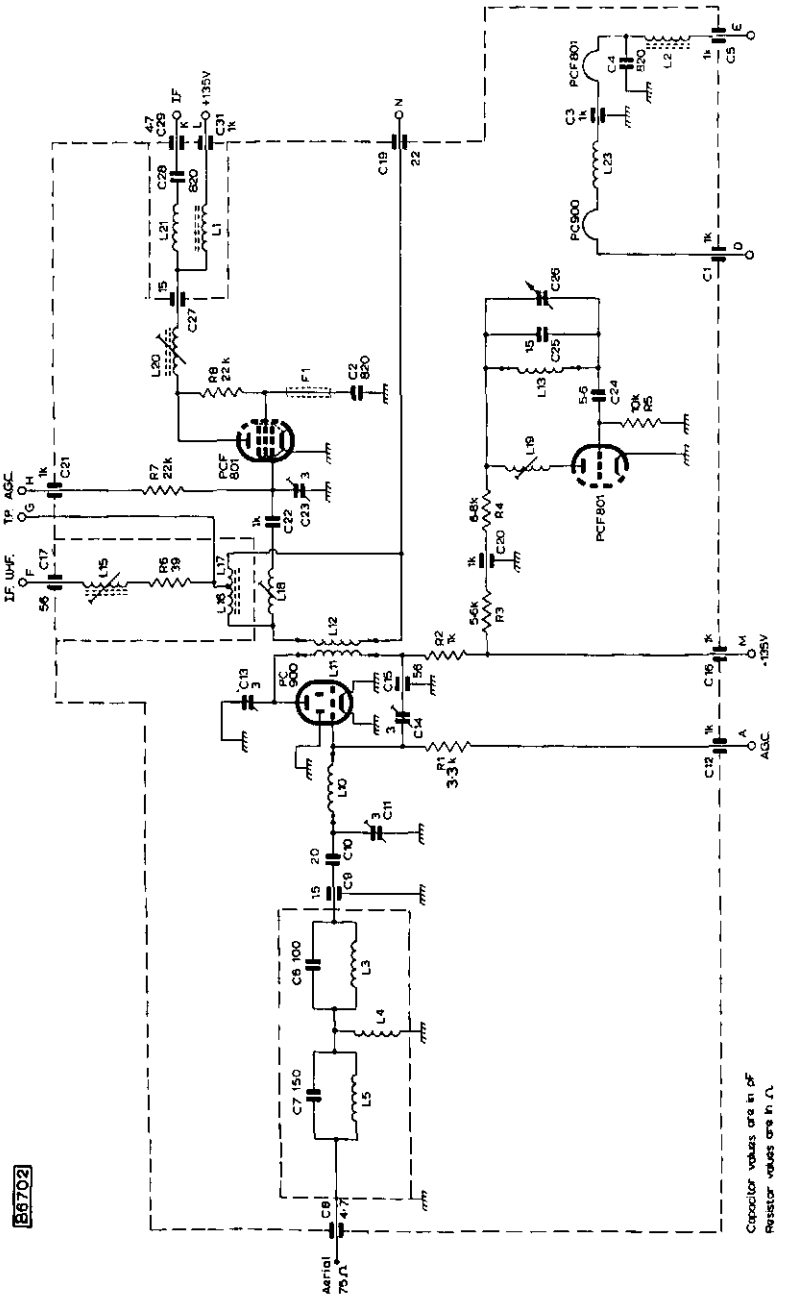
Fine tuning is capacitive and needs only to be set in initially. Subsequently it is brought in automatically when the channel is re-selected.

A PC900 is used as an r.f. amplifier followed by a PCF801 as an oscillator/mixer, the pentode section of which has a remote cut-off characteristic.

The pentode section of the PCF801 can be used as an i.f. amplifier in conjunction with a U.H.F. tuner. In this case ample gain reduction can be obtained when an a.g.c. voltage is applied to the control grid via the transformer coupling circuit. The supply voltage to the mixer stage is separate from that of the r.f. and oscillator stages, in order that U.H.F./V.H.F. reception can be effected by means of a simple d.c. supply switch.

Alternative coil strips for reception of 625 line wired distribution signals are available for insertion into certain positions of the tuner.

CIRCUIT DIAGRAM



TECHNICAL DATA

Valves

R.F. amplifier	PC900
Oscillator/mixer	PCF801

Typical operating data

PC900 and oscillator stage of PCF801

V_b	135	V
I max. (measured at point A via a 1.0MΩ to earth)	25	mA

Mixer stage of PCF801

V_b	135	V
I max.	11	mA
V_f (each valve)	12	V
I_f nom. (total)	300	mA

Channel frequency

	Channel	Carrier frequency (Mc/s) picture	sound
Band I	1	45.0	41.5
	2	51.75	48.25
	3	56.75	53.25
	4	61.75	58.25
	5	66.75	63.25
Band III	6	179.75	176.25
	7	184.75	181.25
	8	189.75	186.25
	9	194.75	191.25
	10	199.75	196.25
	11	204.75	201.25
	12	209.75	206.25
	13	214.75	211.25

Channel loading sequence

1, 9, 2, 10, 3, 11, 5, 8, 4, 12, 13, 7, 6

Fine tuning range	Δf min.		1.8	Mc/s
	Δf max.		8.0	Mc/s
R.F. bandwidth	Band I	at 3dB points	5 to 10	Mc/s
	Band III		5 to 15	Mc/s

Measured at point H, with 220kΩ connected to earth, with the oscillator working and with $V_{agc} = -1.4V$.

I.F. frequencies	picture carrier	34.65	Mc/s
	sound carrier	38.15	Mc/s

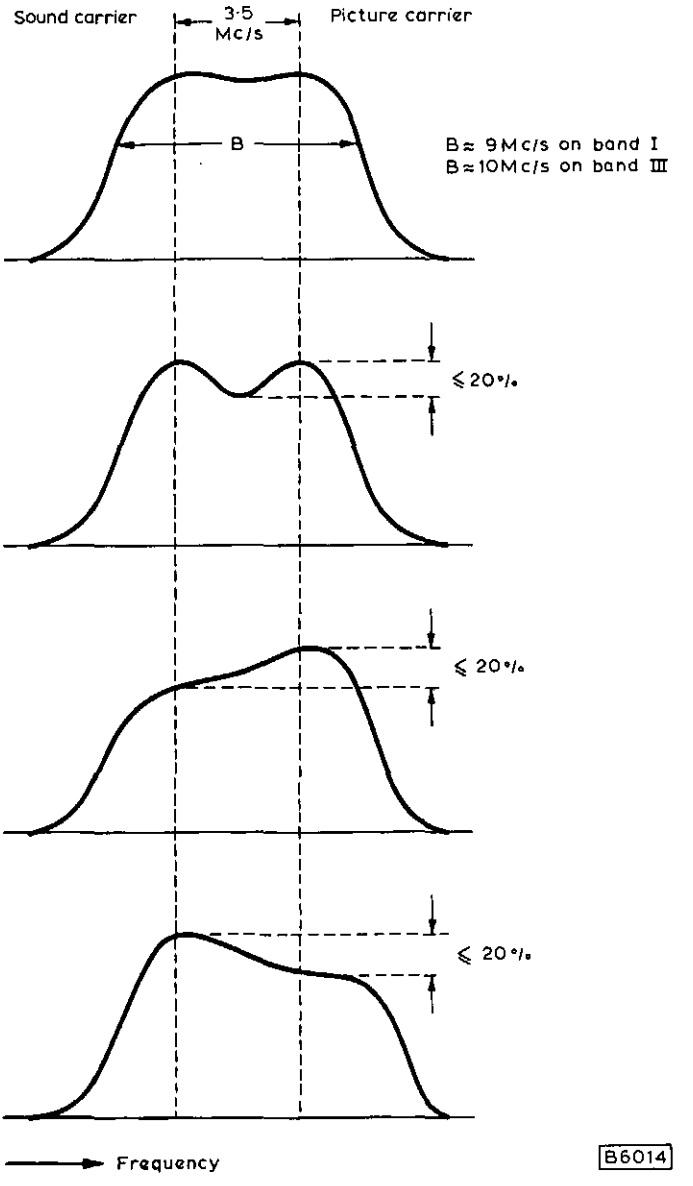
The oscillator frequency is higher than the receiving frequency. The i.f. primary coil is adjusted to 36.4Mc/s.

Aerial input impedance (unbalanced)		75	Ω
Reflections (at maximum gain)		≤40	%
Gain (from the aerial to the grid of the first i.f. for an i.f. bandwidth of 7.0Mc/s at 6dB points and flat within 5%)		>43	dB
Gain of the pentode part of PCF801 as an i.f. amplifier		20	dB
Noise	Band I	≤5.5	dB
	Band III	≤7.8	dB
Image frequency suppression	Band I	>60	dB
	Band III	>54	dB
I.F. suppression	Band I Both picture	>40	dB
	Band III and sound*	>60	dB
Reset accuracy when switching from one channel to another and back again		Δf_{osc} <100	kc/s
Oscillator frequency stability			
For change in supply voltage of ±10%		Δf_{osc} ±150	kc/s
Temperature drift		Δf_{osc} <250	kc/s

Measured between 2 and 60 minutes after switching on, together with gradual rise in temperature from 20 to 55°C.

*Except channel I sound >36dB

Ideal bandpass curves



RADIATION

The radiation from the tuner complies with B.S. 905 and the amendments in respect of radiation in the U.H.F. bands given in BREMA technical bulletin No. 284.

EXTERNAL CONNECTIONS

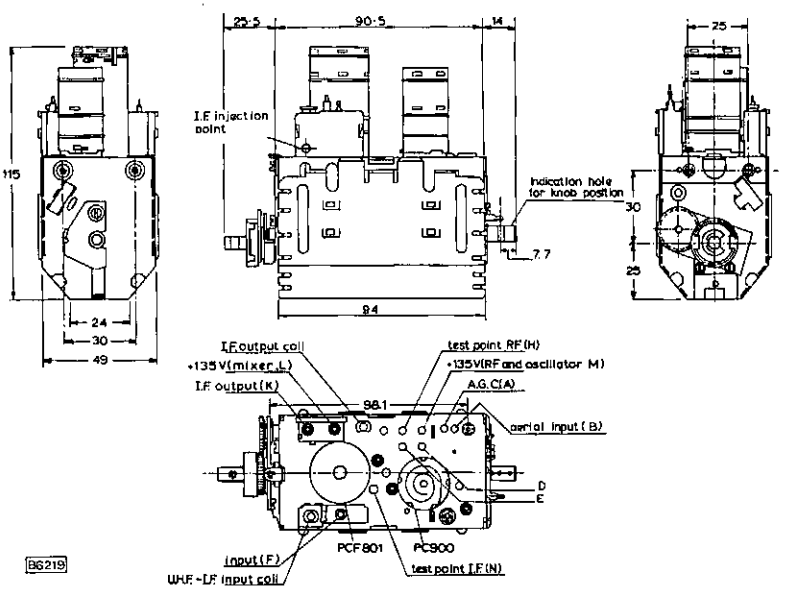
For normal operation point A must be connected to earth via 1.0MΩ (to prevent overload of the PC900), point H must be connected to earth via 220kΩ and the a.g.c. voltage must be connected to point A.

When used as an i.f. amplifier for U.H.F. the 220kΩ must be removed and the a.g.c. connected to point H.

TESTING THE I.F. BANDPASS CURVES

Point N should be used for testing. The supply should be removed from point M (oscillator not operating), point F should be connected to earth and the tuner set to a channel in band III.

OUTLINE AND DIMENSIONS



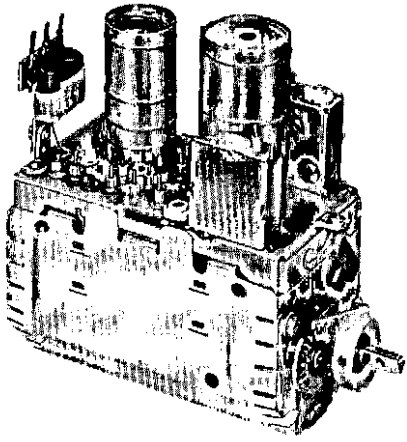
V.H.F. TELEVISION TURRET TUNER (C.C.I.R.)

AT7650/90

QUICK REFERENCE DATA

A 13 position tuner for reception of television signals of C.C.I.R. channels in bands I and III

Frequency coverage		
Band I	47 to 68	Mc/s
Band III	174 to 223	Mc/s
Intermediate frequencies		
Picture	38.9	Mc/s
Sound	33.4	Mc/s



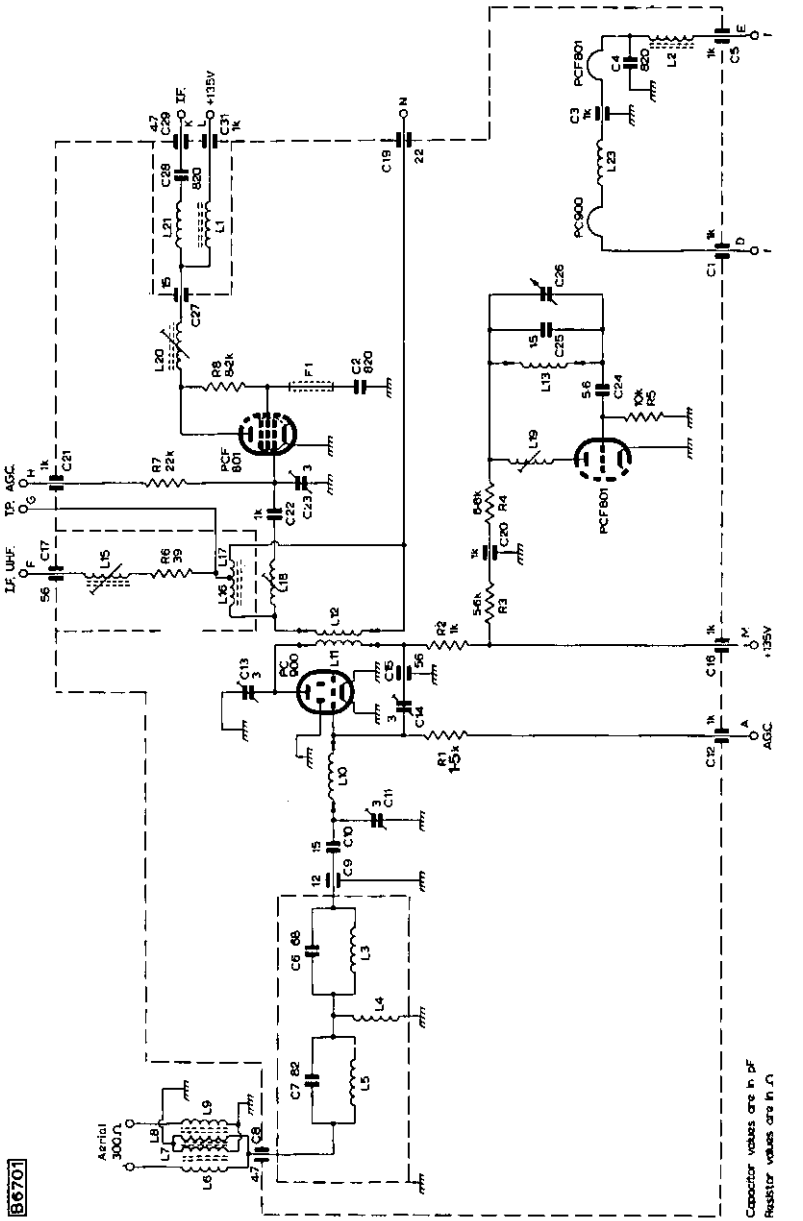
GENERAL

This tuner is designed for reception of C.C.I.R. television channels in bands I and III. It covers the normal European channels 2 to 11, but coil strips for reception of transmission other than the standard are available. These can be loaded into spare positions.

Fine tuning is capacitive and needs only to be set in initially. Subsequently it is brought in automatically when the channel is re-selected.

A PC900 is used as an r.f. amplifier followed by a PC801 as an oscillator/mixer, the pentode section of which has a remote cut-off characteristic.

The pentode section of the PCF801 can be used as an i.f. amplifier in conjunction with a U.H.F. tuner. In this case ample gain reduction can be obtained when an a.g.c. voltage is applied to the control grid via the transformer coupling circuit. The supply voltage to the mixer stage is separate from that of the r.f. and oscillator stages, in order that U.H.F./V.H.F. reception can be effected by means of a simple d.c. supply switch.


B6701
Aerial 300Ω
L6
L7
L8
L9
C8 47
C7 82
L5
C6 68
L3
L4
C9 12
C10 15
C11 3
L10
R1 15k
C12 1k
C16 1k
+135V
M
C14 3
C15 56
L11
PC 900
C13 3
R2 1k
L12
L16
L17
L18
C17 56
L15
R6 39
IF. UHF.
F
TP. AGC.
H
G
C21 1k
R7 22k
C22 1k
C23 3
PCF 801
R8 82k
L20
C27 15
L21
C28 820
L1
C29 47
K
IF.
L
+135V
C31 1k
C19 22
N
F1
C2 820
L19
C20 1k
R4 68k
R3 56k
C24 5.6
R5 10k
C25 15
L13
C26
PCF801
C3 1k
C4 820
L2
L23
PC900
C1 1k
C5 1k
E
D
A
AGC
Capacitor values are in pF
Resistor values are in Ω

V.H.F. TELEVISION TURRET TUNER (C.C.I.R.)

AT7650/90

TECHNICAL DATA

Valves

R.F. amplifier	PC900
Oscillator/mixer	PCF801

Typical operating data

PC900 and oscillator stage of PCF801

V_b	135	V
I max. (measured at point A via 1.0MΩ to earth)	25	mA

Mixer stage of PCF801

V_b	135	V
I max.	11	mA
V_f (each valve)	12	V
I_f nom. (total)	300	mA

Channel frequency

	Channel	Carrier frequency (Mc/s) picture	sound
Band I	2	48.25	53.75
	3	55.25	60.75
	4	62.25	67.75
Band III	5	175.25	180.75
	6	182.25	187.75
	7	189.25	194.75
	8	196.25	201.75
	9	203.25	208.75
	10	210.25	215.75
	11	217.25	222.75

Channel loading is sequential

Fine tuning range	Δf min.	1.8	Mc/s
	Δf max.	8.0	Mc/s
R.F. bandwidth	Band I at the 3dB points	5 to 10	Mc/s
	Band III at the 3dB points	5 to 15	Mc/s

Measured at point H with 220kΩ connected to earth, with the oscillator working and with $V_{agc} = -1.4V$.

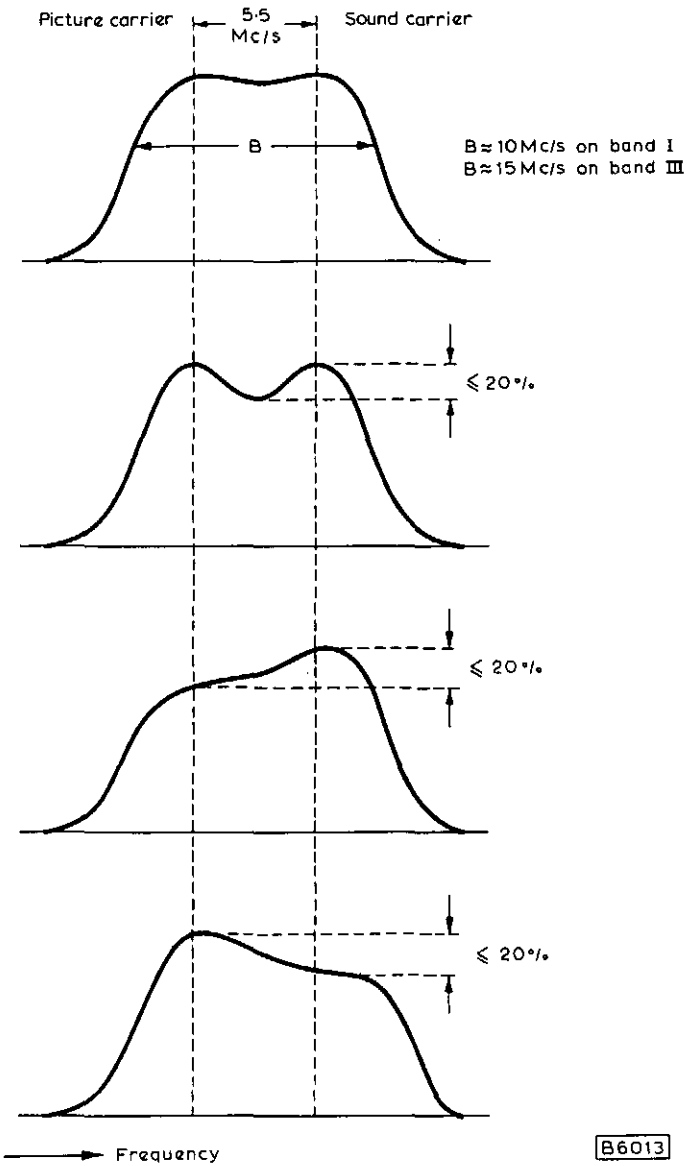
I.F. frequencies	picture carrier		38.9	Mc/s
	sound carrier		33.4	Mc/s

The oscillator frequency is higher than the receiving frequency. The i.f. primary coil adjusted to 36.5Mc/s.

Aerial input impedance (balanced)			300	Ω
Reflections (at maximum gain)			≤40	%
Gain (from the aerial to the grid of the first i.f. for an i.f. bandwidth of 6.5Mc/s at the 3dB points and flat within 5%)			>35	dB
Gain of the pentode part of the PCF801 as an i.f. amplifier			20	dB
Noise	Band I		≤5.5	dB
	Band III		≤7.8	dB
Image frequency suppression	Band I		>60	dB
	Band III		>54	dB
I.F. suppression	Band I	both picture	>40	dB
	Band III	and sound	>60	
Reset accuracy when switching from one channel to another and back again		Δf_{osc}	<100	kc/s
Oscillator frequency stability				
For change in supply voltage of ±10%		Δf_{osc}	±150	kc/s
Temperature drift		Δf_{osc}	<250	kc/s

Measured between 2 and 60 minutes after switching on, together with gradual rise in temperature from 20 to 55°C.

Ideal bandpass curves



RADIATION

The radiation from the tuner complies with the requirements specified by the German Post Office.

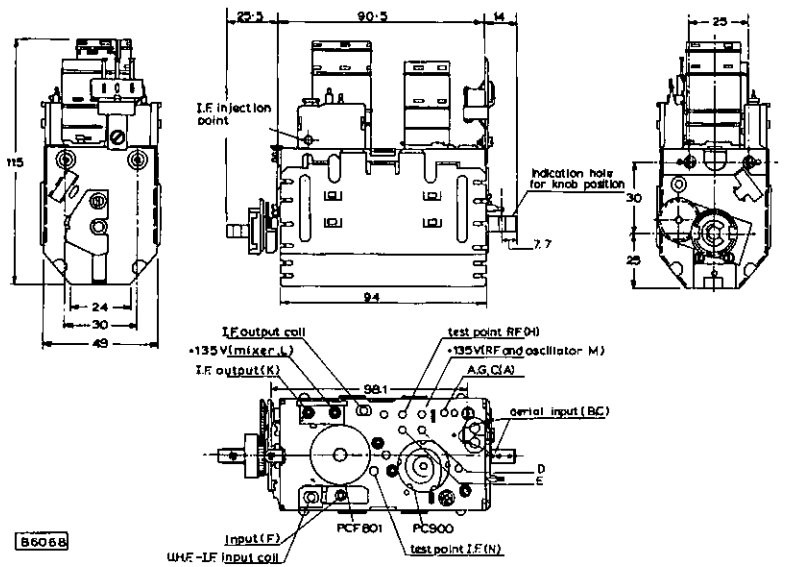
EXTERNAL CONNECTIONS

For normal operation point A must be connected to earth via 1.0MΩ (to prevent overload of the PC900), point H must be connected to earth via 220kΩ and the a.g.c. voltage must be connected to point A.
When used as an i.f. amplifier for U.H.F. the 220kΩ must be removed and the a.g.c. connected to point H.

TESTING THE I.F. BANDPASS CURVES

Point N should be used for testing. The supply should be removed from point M (oscillator not operating), point F should be connected to earth and the tuner set to a channel in band III.

OUTLINE AND DIMENSIONS



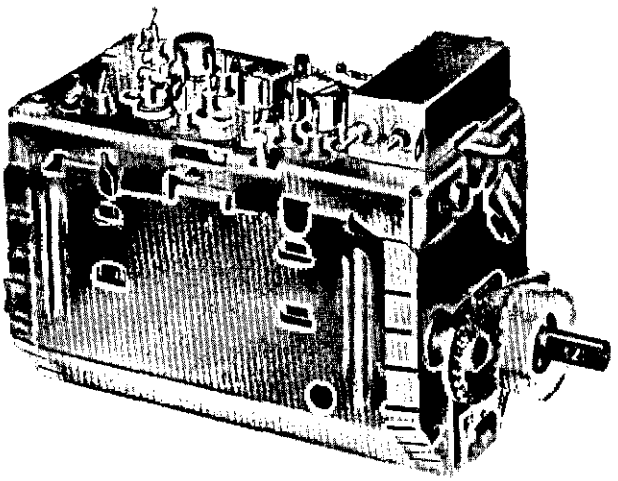
V.H.F. TELEVISION TURRET TUNER

AT7652/21T

QUICK REFERENCE DATA

This is a transistorised 13 position tuner for reception of television channels in bands I and III.

Frequency coverage		
Band I	41 to 68	MHz
Band III	174 to 223	MHz
Intermediate frequencies		
Picture	34.65	MHz
Sound	38.15	MHz

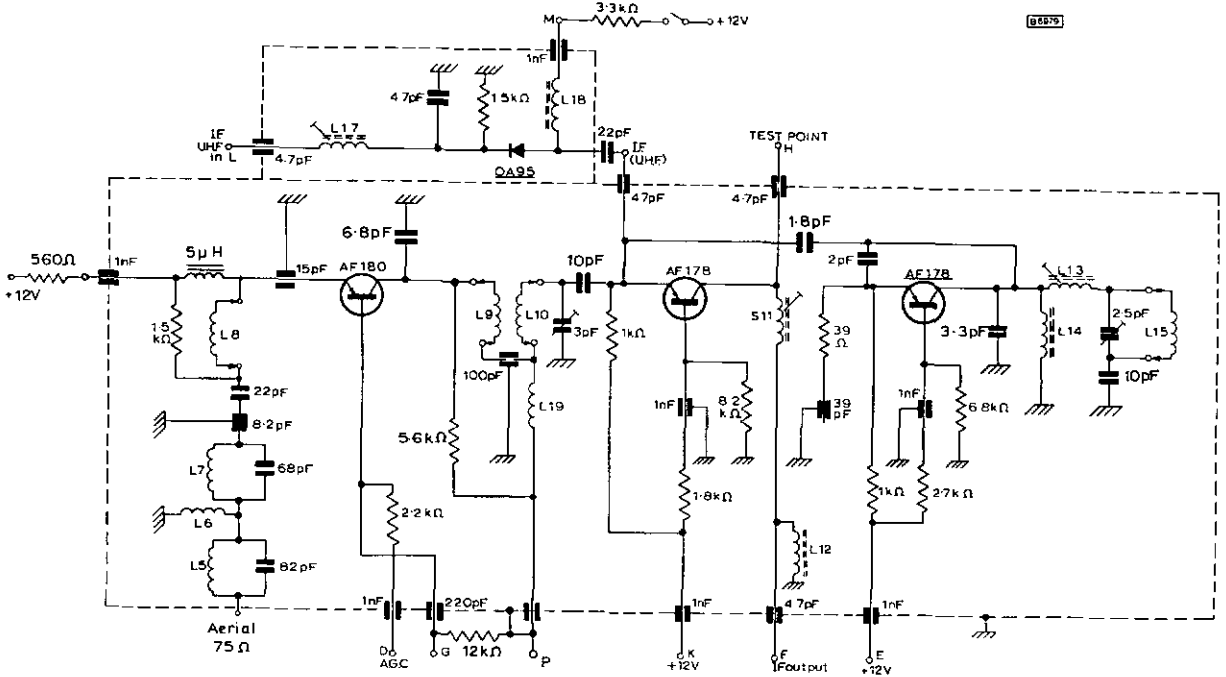


GENERAL

This transistorised tuner is designed for reception of television signals in bands I and III. The 13 positions are loaded in a non-sequential manner, such that quick programme selection may be made in most areas.

Fine tuning is capacitive and needs only to be set in initially. Subsequently it is brought in automatically when the channel is re-selected.

An AF180 is used in the r.f. stage, followed by two AF178's as mixer and oscillator. Gain reduction of up to 40dB can be obtained when forward a.g.c. is applied to the r.f. stage.


3·3kΩ
M
+12V
B8879
1nF
47pF
1·5kΩ
L18
IF UHF in L
L17
4·7pF
OA95
22pF
IF (UHF)
TEST POINT H
47pF
4·7pF
1·8pF
560Ω
1nF
+12V
5μH
15pF
AF180
6·8pF
10pF
AF178
2pF
AF178
L13
1·5 kΩ
L8
L9
L10
3pF
1kΩ
S11
39 Ω
3·3pF
L14
2·5pF
L15
22pF
8·2pF
100pF
L19
5·6kΩ
1nF
8·2 kΩ
39 pF
6·8kΩ
10pF
L7
68pF
L6
L5
82pF
2·2kΩ
1·8kΩ
1kΩ
2·7kΩ
L12
Aerial 75Ω
1nF
220pF
4·7pF
1nF
D AGC
G
12kΩ
P
K +12V
F Foutput
E +12V

TECHNICAL DATA

Transistors

R.F. amplifier	AF180
Oscillator	AF178
Mixer	AF178

Typical operating data

R.F. amplifier

I_B (approx.)	50	μA
I_E (nom.)	2.5	mA
$V_{a.g.c.}$	12	V

Oscillator stage

I_B (approx.)	920	μA
I_E (approx.)	1.85	mA
V_B	12	V

Mixer stage

I_B (approx.)	1.15	mA
I_E (approx.)	1.9	mA
V_B	12	V

Channel loading

1,6,7,13,12,4,8,5,11,3,10,2,9

This loading cannot be altered without seriously affecting the overall performance of the tuner.

Fine tuning range	Band I	2.5 to 5.0	MHz
	Band III	2.5 to 8.0	MHz
R.F. bandwidth	Band I	≤14	MHz
	Band III	≤12	MHz

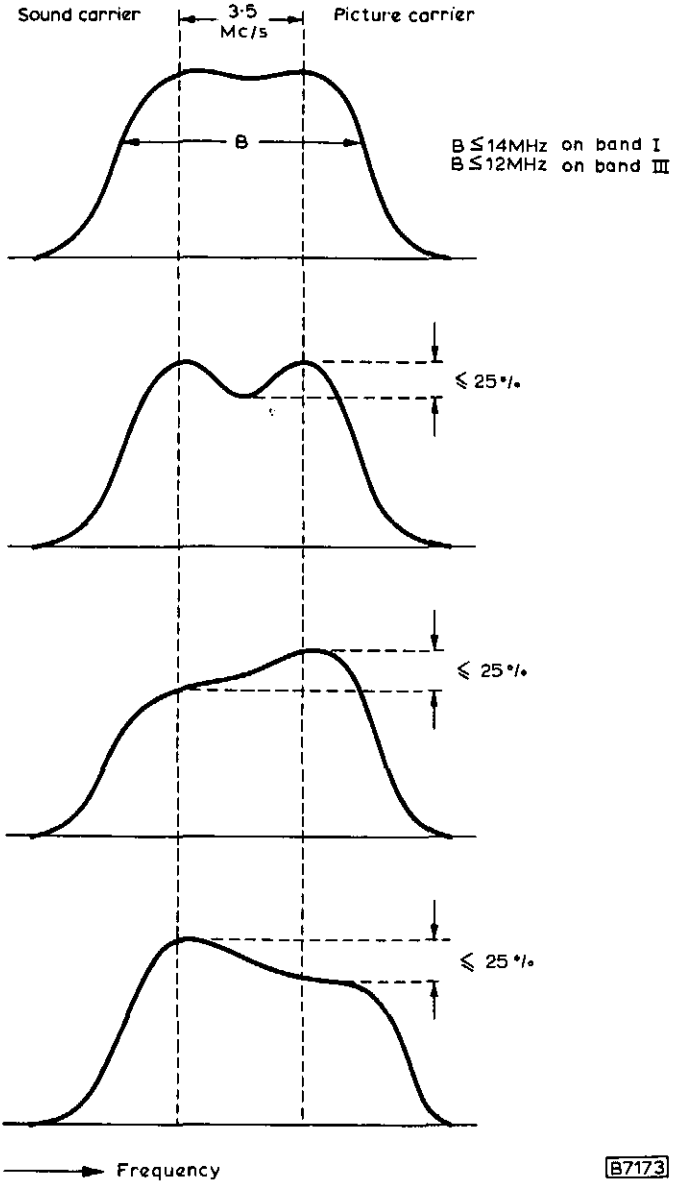
Measured at the 3dB points (the r.f. bandpass curves are adjusted at $I_E = 2.5$mA)

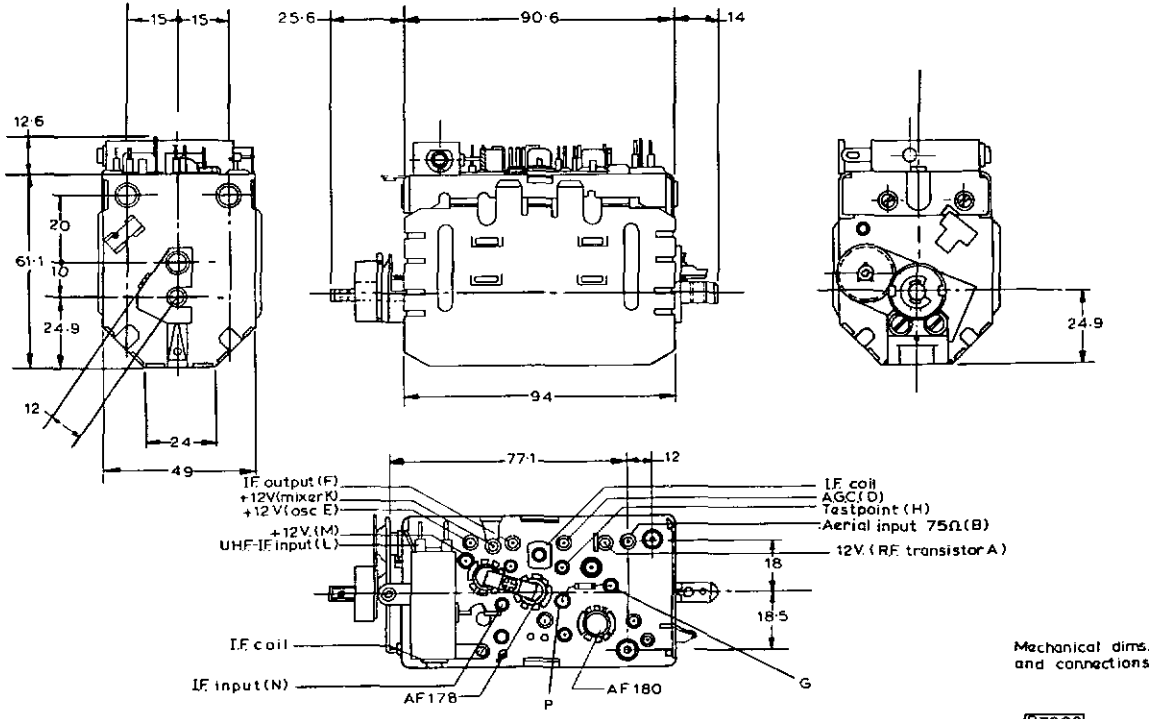
I.F. frequency	Picture carrier	34.65	MHz
	Sound carrier	38.15	MHz

The i.f. frequency of the tuner is adjusted to 36.4MHz (approx.).

Aerial input impedance (unbalanced)		75	Ω
Reflections (at maximum gain and $I_E = 2.5mA$)		≤40	%
Gain (measured from the aerial to the first i.f. amplifier, for an i.f. bandwidth of 6.5MHz at the 3dB points and flat within 5%)		≥32	dB
Noise	Band I	< 7.0	dB
	Band III	< 8.0	dB
Image frequency suppression	Band I	> 54	dB
	Band III	> 35	dB
At $V_{a.g.c.}$ = 12V for both sound and vision			
I.F. suppression	Band I	> 40	dB
	Band III	> 54	dB
At $V_{a.g.c.}$ = 12V and signal input ≤100μV			
Reset accuracy (when switching from one channel to another, and back again)	Δf_{osc}	< 100	kHz
Oscillator frequency stability			
For V_{supply} = 12V nom.			
Band I for	$\Delta V_{supply} = -2.0V \Delta f_{osc}$	≤-150	kHz
	$\Delta V_{supply} = +2.0V \Delta f_{osc}$	≤+120	kHz
Band III for	$\Delta V_{supply} = -2.0V \Delta f_{osc}$	≤-500	kHz
	$\Delta V_{supply} = +2.0V \Delta f_{osc}$	≤+400	kHz
Temperature drift (measured between 0 and 30 minutes after switch-on, together with a gradual rise in temperature from 25 to 55°C)		< 400	kHz

IDEAL R.F. BANDPASS CURVES



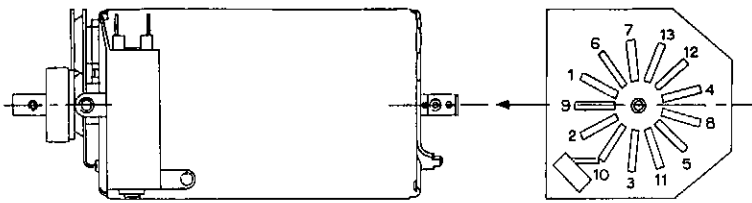


Mechanical dims. and connections

B7002

V.H.F. TELEVISION TURRET TUNER

AT7652/21T



Position of coil strips with respect to indent on spindle with channel 10 connected to stator

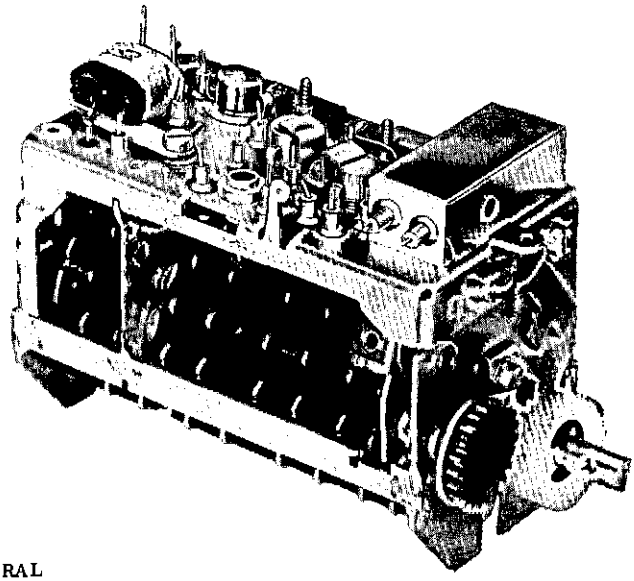
V.H.F. TELEVISION TURRET TUNER (C.C.I.R.)

AT7652/80T

QUICK REFERENCE DATA

This is a transistorised 13 position tuner for reception of television signals of C.C.I.R. channels in bands I and III.

Frequency coverage		
Band I	47 to 68	MHz
Band III	174 to 223	MHz
Intermediate frequencies		
Picture	38.9	MHz
Sound	33.4	MHz

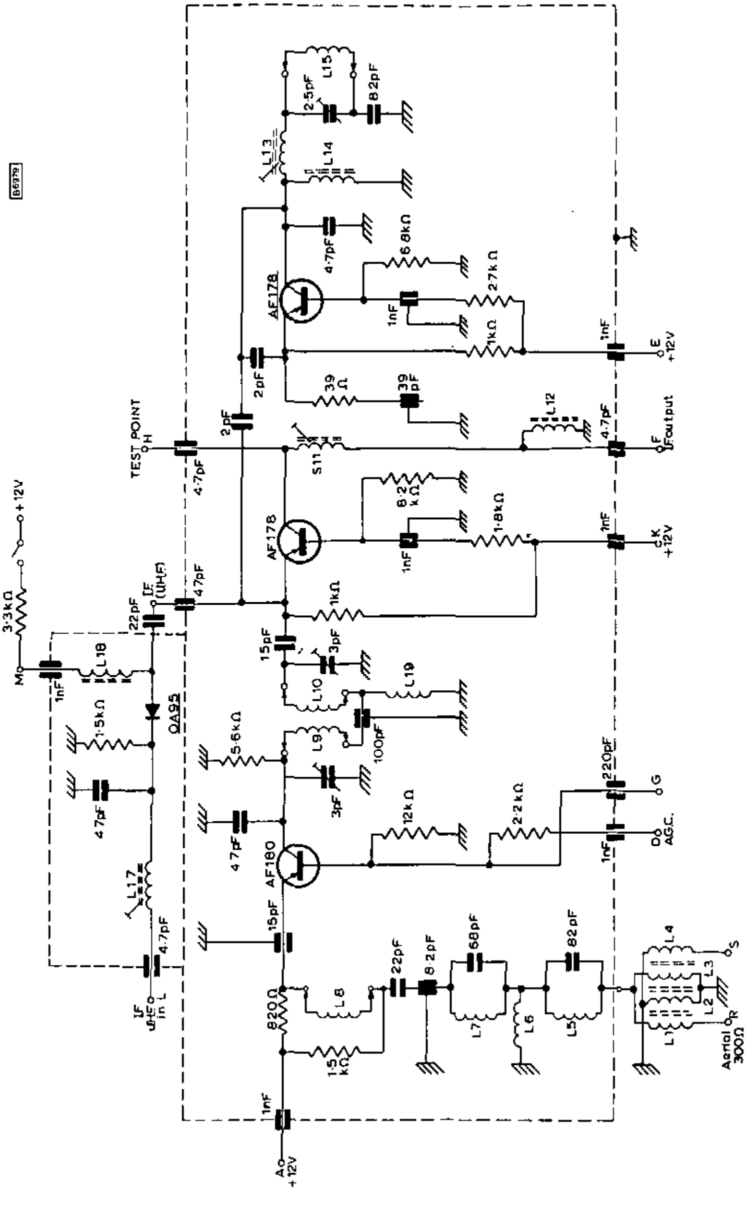


GENERAL

This transistorised tuner is designed for reception of C.C.I.R. television channels in bands I and III. It covers the normal European channels 2 to 11 and has 13 switched positions.

Fine tuning is capacitive and needs only to be set in initially. Subsequently it is brought in automatically when the cannel is re-selected.

An AF180 is used in the r.f. stage, followed by two AF178's as mixer and oscillator. Gain reduction of up to 40dB can be obtained when forward a.g.c. is applied to the r.f. stage.


B6979
TEST POINT H
AF178
AF178
AF180
OA95
L13
L14
L15
L12
S11
L10
L19
L9
L18
L17
L8
L7
L6
L5
L4
L3
L2
L1
E +12V
F IF output
K +12V
G
D A.G.C.
A +12V
M
+12V
IF (UHF)
IF UHF in L
Aerial 300Ω
R
S

V.H.F. TELEVISION TURRET TUNER (C.C.I.R.)

AT7652/80T

TECHNICAL DATA

Transistors

R.F. amplifier	AF180
Oscillator	AF178
Mixer	AF178

Typical operating data

R.F. amplifier

I_B (approx.)	50	μA
I_E (nom.)	2.5	mA
$V_{a.g.c.}$	12	V

Oscillator stage

I_B (approx.)	920	μA
I_E (approx.)	1.85	mA
V_B	12	V

Mixer stage

I_B (approx.)	1.15	mA
I_E (approx.)	1.9	mA
V_B	12	V

Channel loading is sequential and cannot be altered without seriously affecting the overall performance of the tuner.

Fine tuning range

Band I	Δ f min.	2.5	MHz
	Δ f max.	5.0	MHz
Band III	Δ f min.	2.5	MHz
	Δ f max.	8.0	MHz
R.F. bandwidth	Band I	≤14	MHz
	Band III	≤12	MHz

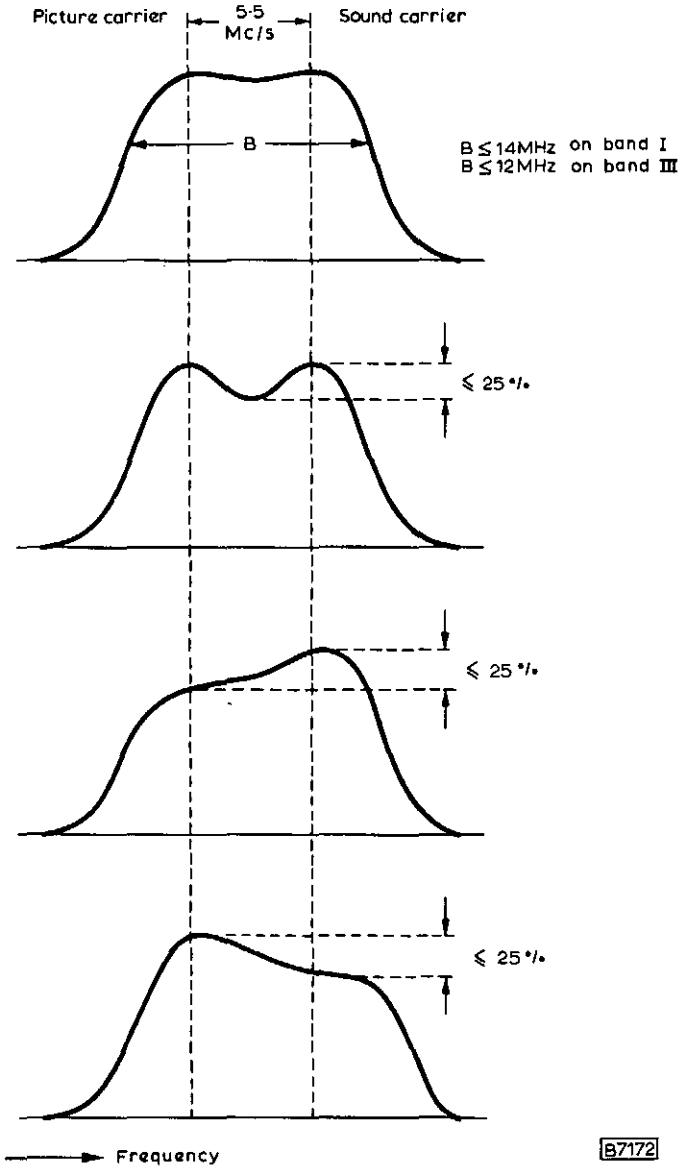
Measured at the 3dB points (the r.f. bandpass curves are adjusted at $I_E = 2.5mA$)

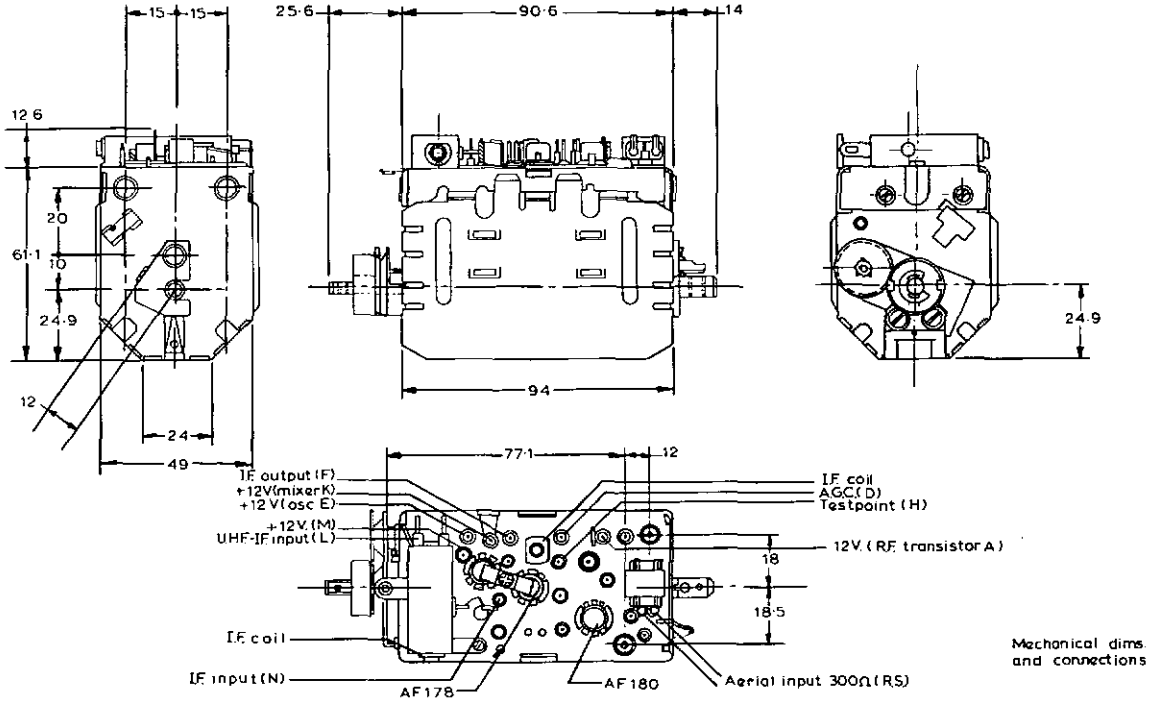
I.F. frequency	Picture carrier	38.9	MHz
	Sound carrier	33.4	MHz

The i.f. frequency of the tuner is adjusted to 36.5MHz (approx.).

Aerial input impedance (balanced)		300	Ω
Reflections (at maximum gain and $I_E = 2.5mA$)		≤40	%
Gain (measured from the aerial to the first i.f. amplifier, for an i.f. bandwidth of 6.5MHz at the 3dB points and flat within 5%)		≥26	dB
Noise	Band I	<7.0	dB
	Band III	<9.5	dB
Image frequency suppression	Band I	>32	dB
	Band III	>46	dB
At $V_{a.g.c.}$ = 12V for both sound and vision			
I.F. suppression	Band I	>40	dB
	Band III	>60	dB
At $V_{a.g.c.}$ = 12V and signal input ≤100μV			
Reset accuracy (when switching from one channel to another, and back again) Δf_{osc}		<100	kHz
Oscillator frequency stability			
For V_{supply} varying from 10 to 14V			
	Band I Δf_{osc}	≤-150 to +120	kHz
	Band III Δf_{osc}	≤-500 to +400	kHz
Temperature drift (measured between 0 and 30 minutes after switch-on, together with a gradual rise in temperature from 25 to 55°C)		<400	kHz

IDEAL R.F. BANDPASS CURVES



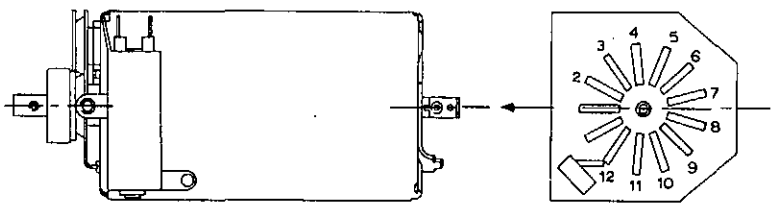


Mechanical dims. and connections

B7002

V.H.F. TELEVISION TURRET TUNER (C.C.I.R.)

AT7652/80T



Position of coil strips with respect to indent on spindle with channel 12 connected to stator