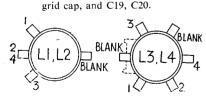
# MODIFICATIONS to CIVILIAN band is not necessary. The signal diode WAR-TIME RECEIVERS

The following notes have been received from manufacturers and indicate ways in which War-time Civilian Receivers of their make differ from the standard designs described on pages iv and v of last month's "Service Engineer."

#### U3 (COSSOR)

#### AC Model

- (1) A 47,000 ohms anti-modulation 2,200 ohm resistors in parallel. hum resistor is fitted across A and E
- (2) Aerial and oscillator coils L1, L2, different positions. oscillator section may sometimes be or equivalent). improved by softening wax securing U4 (HMV), U4A (MARCONIPHONE)
- (3) 1F transformer coupling coil Lx not included.
- (4) IF transformers are adjusted to a frequency of 462.5 kcs. The iron core adjustments are all accessible without removing chassis. The connections are colour coded as follows :-
- 1st.—IF transformer (centre can, No. MC11572):-
- Blue lead to junction of C7, R2, R8, AC Model R7.
- Black lead to grid cap of V2.
- Brown lead to VI anode. Orange lead to HT line.
- 2nd.—IF transformer (end can, No. MC11573):--
  - Orange lead to HT.
  - Brown lead to V2 anode.
  - Black lead to MR1+.
  - Blue lead to R10 Vol. Con. and junction of R11, R12.
- (5) Metallising of V2 and V1 is taken
- to E. sketches below indicate appropriate combination of the two types.
- connections :---Aerial coupling and tuning coils L1, (2) and (4) to C2, R2; (3) to V1



Oscillator tuning and reaction coils L3, L4 (under chassis): (1) to V1, Battery Model V2 screens, and R4, C6; (2) to V1 (1) Coils.—Adjustment of aerial and

- af R3, C5; (4) to V1 grid and C21, C22.
- (7) Resistance R14 is composed of two
- (8) Capacitor C1 is mounted on group board; R1, C2, R3, C5 are in slightly
- L3, L4 are not fitted with dust-iron cores. (9) Mains transformer primary tappings Should C5 be renewed, tracking of the are behind V4 rectifier valve (Cossor 431U

### AC Model

- (1) In majority of production C11 and C12 are returned to "earthy" end of L8 and not to chassis.
- (2) L1, L2, L3 and L4 are dust-cored.

#### U5 (FERGUSON)

trimmers.

# U8, U31, U33, U34, U37, U39

(1) Coils.—Adjustment of aerial and oscillator inductances at the low frequency end of the band is not necessary. They are closely adjusted at the factory and then

In the IF coils, the secondary adjusting core is the top one of the two in each can. The detector is connected to a tap on L8 to reduce damping.

The loudspeaker is mounted with the transformer on right-hand side viewed from back of set.

(2) Condensers.—C16, C17, C18 may (6) Tags of coils are not numbered, but be three wet electrolytics, three dry, or a

When wet types are used: C17 and C18 may be any valve between 8 and 32 mfd. L2 (top of chassis): (1) to C1; 350v; C18 is mounted on the chassis between V3 and the variable condenser; C16 and C17 are on a bracket on top of the mains transformer.

C3, C8 and C9 are each 103 pfd. C4 is 97 pfd.

C15 is under the chassis below V3.

(3) Resistances.—R14 is made up of two 2,200 ohms, 1 watt resistors in parallel; R15 is two 4,700 ohm 1-watt resistors in parallel.

# U8, U14, U31, U33, U34, U37, U39

oscillator anode; (3) to junction oscillator coils at low-frequency end of the

is connected to a tap on L8 to reduce damping.

- (2) Condensers.—C3, C10, C11 are each 103 pfd, C4 is 97 pfd. C17 is mounted under the chassis below V4.
- (3) Lead Colours.—HT negative is vellow: leads to output transformer for both valve anode and HT are green. Lead colours may change, however, as the wire supply position changes.

U8 (PHILIPS).—See above.

#### U9 (PYE)

#### AC and Battery Models

- (1) 1st IF transformer is unscreened. (2) The 1F tuning capacities are of
- (3) Adjustment of 1st IF (which should not be necessary) can be made by slight movement of top winding and bottom section of lower winding. Seal with suitable dope.
- (4) Adjustment of 2nd IF is by adjustable dust cores.
- (5) Adjustment of aerial coil by upper section of winding.
- (6) Adjustment of oscillator coil by IF transformers are air-cored with mica layer turns at side of main winding.
  - (7) Speaker impedance, 3-4 ohms.

#### U14 (FERRANTI) AC Model

- (1) Primary coil L1 of the aerial coil is omitted, but a spare tag connected to the earth end of the coil is provided for the aerial connection.
- (2) IF transformers are variablecapacity tuned.
- (3) In ganging there is no need to adjust the core of the aerial coil which has been semi-permanently set.

Battery Model: - See U8.

### U18 (INVICTA).—See U9.

#### U21 (PHILCO)

- (1) L1 and L2 have adjustable dust cores.
- (2) Metallising of V1 and V2 and mains transformer primary screen are taken to E.
- (3) Mains voltage range is 195-250. (4) Speaker impedance, 4-6 ohms.

#### U28 (FITTON)

Aerial and oscillator coils in both types are air cored.

On the AC model, a 10,000 ohm resistor is used as grid stopper on the output valve.

U30 (PAMPHONIC).—See U9. U31 (MRG).—See U8. U33 (ROBERTS).—See U8. U34 (RGD).—See U8. U37 (GRAVES).—See U8. U39 (NH RADIO).—See U8.

### **KEY to MAKERS' CODE**

For the assistance of retailers and engineers when servicing War-time Civilian Receivers and obtaining replacement valves and components, we here give the key to the code numbers on valves and sets. This information is for trade use only.

CLAIMS for free replacement under Hale Electrical Co, Ltd, Broad guarantee of any valve in the War- Lane, Stamford Road, Totten-Time Civilian Receivers must be made on ham, N.17 the valve manufacturer, whose name car be identified by reference to the fina number of code marking on the valve, as follows :--

1	Cossor
2	Ediswan
3	Ferranti
4	GEC (Osram)
5	Marconiphone
6	Mullard
7	STC (Brimar)

All applications for such replacement must be made in conjunction with property completed BVA replacement

#### MAKERS OF SETS

Name and Address of  Manufacturer Rep	Code
Manufacturer Rej	ference
Ace Radio, Ltd., Central Equip-	i
ment Factory, Wadsworth Road,	
Perivale, Middlesex	U40
Aren Radio and Television, Ltd.,	1
Perivale, Middlesex	. U38
A. J. Balcombe, Ltd., 52, Taber-	
nacle Street, EC42  Burndept, Ltd, West Street, Erith	U11
Burndept, Ltd, West Street, Erith	U12
Bush Radio, Ltd, Power Road,	
Chiswick, W4	UI
Beethoven Electric Equipment Co,	
Ltd, Chase Road, North Acton	U36 .
Central Equipment, Ltd, Wads-	
worth Road, Perivale, Middlesex	
A. C. Cossor, Ltd, Cossor House,	
Highbury Grove, N5	U3
Highbury Grove, N5 Decca Record Co., Ltd, 1-3, Brixton Road, SW9	
Brixton Road, SW9	U26
Dulci Co. Dulci Works, Tower	
Road, Pound Lane, Willesden	U27
E. K. Cole, Ltd, Green Park Hotel,	
Aston Clinton, Bucks	U2
Felgate Radio, Ltd, Felgate House,	
Studland Street, Hammersmith	015
Ferguson Radio Corporation, Ltd,	* * *
105, Judd Street, WC1	
Ferranti, Ltd, Hollinwood, Lancs.	U14
R. N. Fitton, Ltd, Radio Works,	1120
	U28
General Electric Co, Ltd, Magnet	
	U6
Gramophone Co, Ltd, Head Office,	114
	U4
J. G. Graves, Ltd, Hallamsgate	1127
Works, Crooks Road, Sheffield	U3/

n	ham, N.17	U16
ın	ham, N.17 Halcyon Radio, Ltd, Sterling	
al	Works, Dagenham, Essex	U17
as '	Invicta Radio, Ltd, Radio Works,	
	Parkhurst Road, N7	U18
i	Kolster-Brandes, Ltd, Foots Cray,	
	Sideup, Kent	U32
	Sidcup, Kent	002
	Place Holloway N7	U19
	Place, Holloway, N7 McMichael Radio, Ltd, Wexham	017
	Road, Slough, Bucks	U20 -
i	Road, Slough, Bucks	020
	' North Cata Warks Mancheston	
ts	Norton Gate Works, Manchester	1121
a	Road, Bradford	U31
١t		
	Hayes, Middlesex Murphy Radio, Ltd, Welwyn	U4A
	Garden City, Herts	U7
le	N H Radio Products, Ltd, 88, Vyse	
e	Street, Birmingham	U39
į	Pamphonic Radio, Ltd, Radio	
İ	Works, Cambridge	U30
	Philco Radio and Television Cor-	
	poration, Ltd, Donington House,	
ı	Norfolk Street, Strand, WC2	U21
-	Philips Lamps, Ltd, Century House,	
1	Shaftesbury Avenue, WC	U8
	Pilot Radio, Ltd. 31-33, Park Royal	
	Road, NW10	U22
	Plessey Co, Ltd, Vicarage Lane,	•
- [	Illord, Essex	U23
. [	Portadyne Radio, Ltd, Gorst Road,	
ŀ	North Acton, NW10	U29
	Pye, Ltd, Radio Works, Cambridge	U9
ŀ	R M Electric, Ltd, Majestic Works,	
- 1	Second Avenue, Team Valley	
	Estate, Gateshead	U25
-	Estate, Gateshead	
H	Co, Ltd, Pale Meadow Print	
1	Works, Hospital Street, Bridg-	
	north, Salop	U34
	Regentone Products, Ltd, 3-4, The	
-	Broadway, Edmonton, N9	U24
	Dalame Dalla Ca 144 25 27	027
	Creek Road, East Molesey, Surrey	
	Cleek Road, Last Wolcscy,	U33
- 1	R S C Radio, Ltd, 39a, Welbeck	033
-		U35
-	Street, W1	033
	Diameterian Dand American	U41
	Plantation Road, Amersham Ultra Electric, Ltd, Western Avenue, Acton, W3	U41
	Ultra Electric, Ltd, western	THA
	Avenue, Acton, W3	U10
	Vidor, Ltd, West Street, Erith	UIZA
	Whiteley Electrical Radio Co, Ltd,	1142
ļ	Victoria Street, Mansfield, Notts.	U42

U16