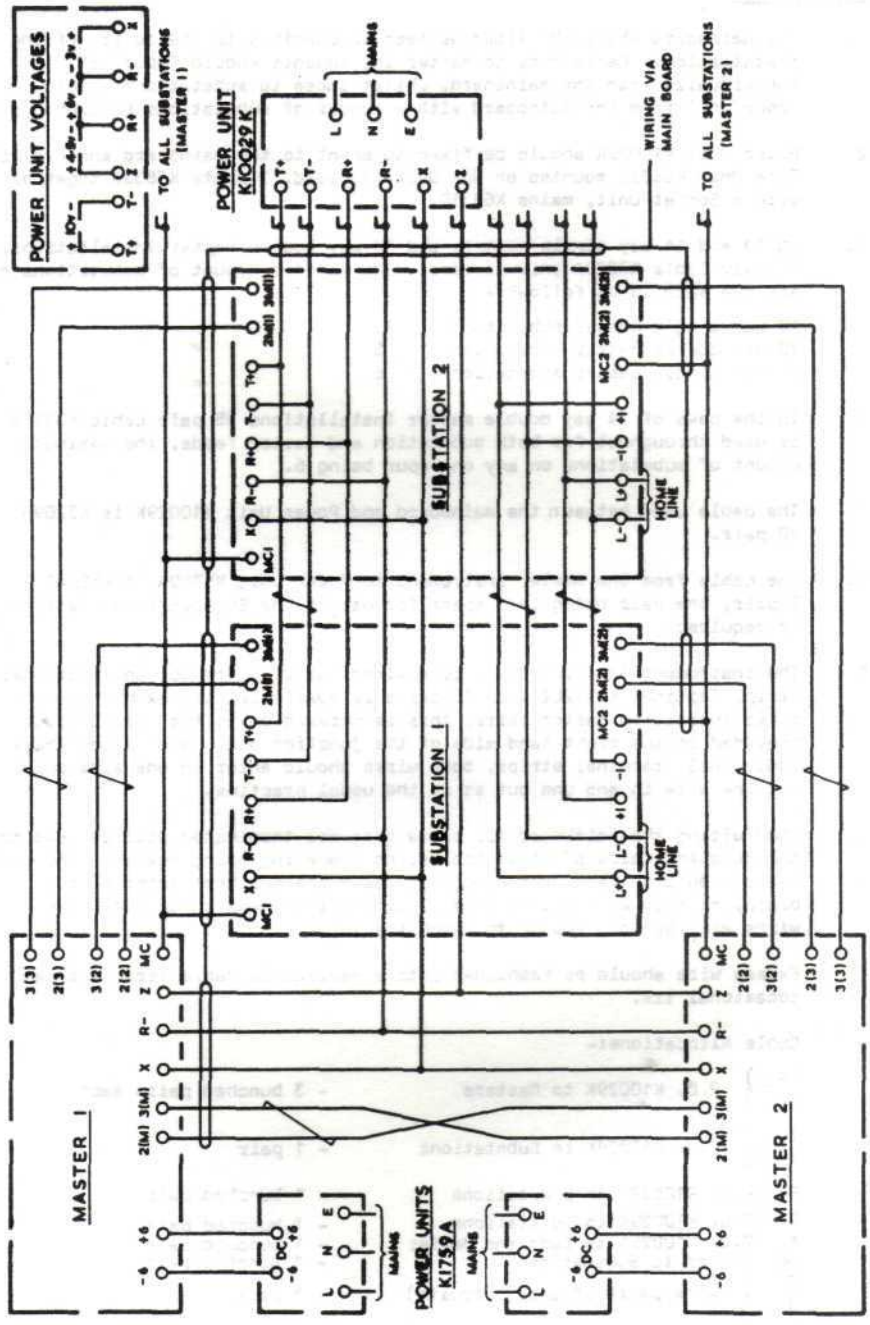
H4


POWER UNIT VOLTAGES
TO ALL SUBSTATIONS (MASTER 1)
POWER UNIT K1002 9K
MAINS
WIRING VIA MAIN BOARD
TO ALL SUBSTATIONS (MASTER 2)
SUBSTATION 2
SUBSTATION 1
HOME LINE
MASTER 1
MASTER 2
POWER UNITS K1759A
MAINS

INSTALLATION

1. The Mainboard should be sited as near as possible to the centre of the installation. Cable runs to master instruments should "spur" off individually from the mainboard, whilst those to substations should "spur" off from the mainboard with a number of substations on each spur.

2. Power Unit K10029K should be fixed adjacent to the mainboard and fed via Fuse Unit K6833L mounted on Box Unit, moulded, 2 plate K6832A together with a Socket Unit, mains K6831D.

3. On 10 and 14 way single master, and 10 way double master installations, 25 pair Cable K3228A only is used. The maximum amount of substations on any one spur is as follows:-

10 way single master substation	10
10 way double master substation	5
14 way single master substation	6

4. In the case of 14 way double master installations 35 pair Cable K3217H is used throughout for both substation and master feeds, the maximum amount of substations on any one spur being 6.

5. The cable used between the mainboard and Power Unit K10029K is K3209H 10 pair.

6. The cable from the master instrument to Power Unit K1759A is K3204G 2 pair, one pair being left spare for use if the Engaged/Enter facility is required.

7. The instrument junction boxes come wired for 20 pairs but an additional Strip, Terminal K1912EZ with 10 pairs is available for teeing through other substation master pairs, this is screwed on to the tapped holes provided on the right-hand side of the junction box. When using these additional terminal strips, both wires should enter on one side only, not one wire in and one out as is the usual practice.

8. When wiring the mainboard all pairs that are terminated will be teed to the relevant pairs of other cables, no jumpering being needed. The cable tails should be left long enough to reach the furthest point of the board, so that at a future date if alterations have to be made, the wires will be long enough to reach any tag.

   Excess wire should be fashioned into a reasonable cable form, with an occasional tie.

9. Cable Allocations:-

R-, Z	P.U. K10029K to Masters	- 3 bunched pairs each
T-, T+	P.U. K10029K to Substations	- 1 pair
R+	P.U. K10029K to Substations	- 1 bunched pair
R-	P.U. K10029K to Substations	- 1 bunched pair
X	P.U. K10029K to Subs and Master	- 1 bunched pair
MC	Master to Substations	- 1 bunched pair
2, 3	Line pairs (Master circuits)	- 1 pair
+, -	Substation lines	- 1 pair
+ 6, - 6	P.U. K1759A to associated Master	- 1 pair.

SUBSTATION CABLES	MASTER CABLES
2 x 13	2 x 13
Pairs 1-13 Home Lines	Pairs 1-13 Substation Lines
" 14-19 Master Lines (1)	" 14-25 Spare
" 20-25 Master Lines (2)	" 26 M1-M2
" 26-29 Spares	" 27-35 Batteries
" 30-35 Batteries	
2 x 9	2 x 9
Pairs 1-9 Home Lines	Pairs 1-9 Substation Lines
" 10-14 Master Lines (1)	" 10-15 Spares
" 15-19 Master Lines (2)	" 16 M1-M2
" 20-25 Batteries	" 17-25 Batteries
1 x 14	1 x 14
Pairs 1-14 Home Lines	Pairs 1-14 Substation Lines
" 15-19 Master Lines	" 15-16 Spares
" 20-25 Batteries	" 17-25 Batteries
1 x 10	1 x 10
Pairs 1-10 Home Lines	Pairs 1-10 Substation Lines
" 11-20 Master Lines	" 11-16 Spares
" 21-25 Batteries	" 17-25 Batteries

NOTE 1

14 The maximum number of Master Lines that can be used on any Substation cable are as indicated above.

NOTE 2

Modular Junction Box Sizes for the respective sizes of installations are as follows:-

2 x 13 = 60 pair,
1 x 14 = 50 pair,
2 x 9 = 40 pair,
1 x 10 = 30 pair.

NOTE 3

The maximum number of Substation cable spurs which can be terminated on the Mainboard is four.

NOTE 4

Layout of a typical Mainboard using a Modular Junction Box is shown overleaf. (Example shown is a 60 pair Box for a 2 x 13 way master installation.)

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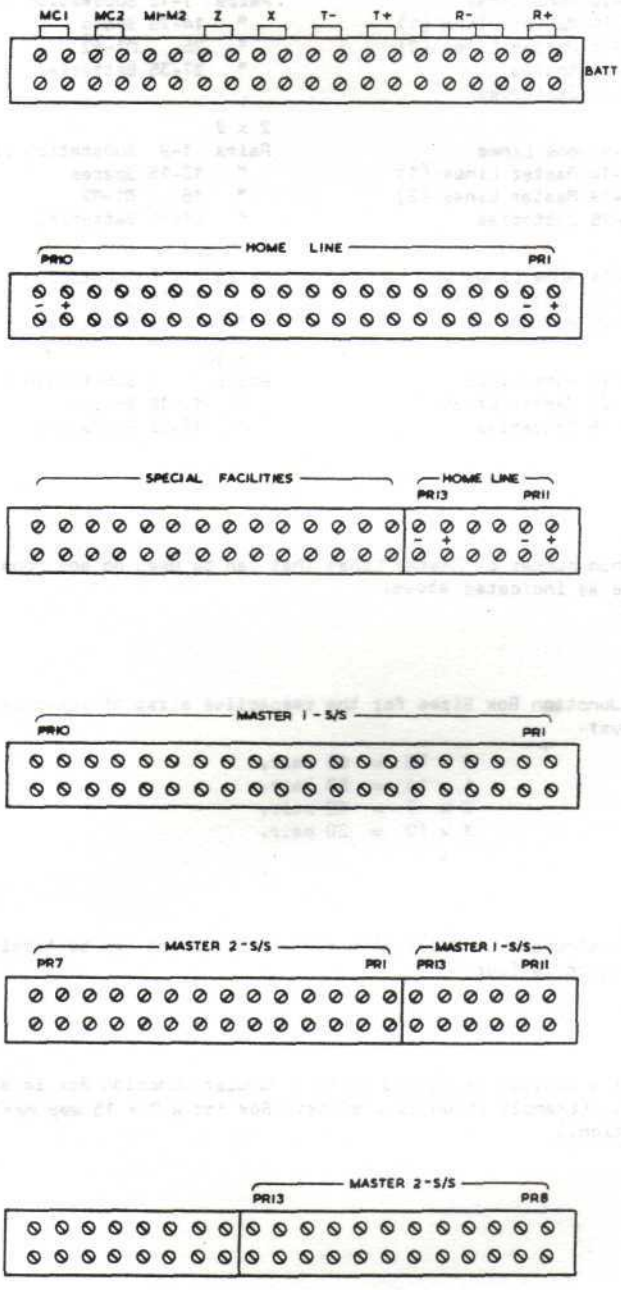
TYPICAL LAYOUT OF MAINBOARD



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" 20-25 Master Lines (2)	" 26 M1-M2
" 26-29 Spares	" 27-35 Batteries
" 30-35 Batteries	
2 x 9	2 x 9
Pairs 1-9 Home Lines	Pairs 1-9 Substation Lines
" 10-14 Master Lines (1)	" 10-15 Spares
" 15-19 Master Lines (2)	" 16 M1-M2
" 20-25 Batteries	" 17-25 Batteries
1 x 14	1 x 14
Pairs 1-14 Home Lines	Pairs 1-14 Substation Lines
" 15-19 Master Lines	" 15-16 Spares
" 20-25 Batteries	" 17-25 Batteries
1 x 10	1 x 10
Pairs 1-10 Home Lines	Pairs 1-10 Substation Lines
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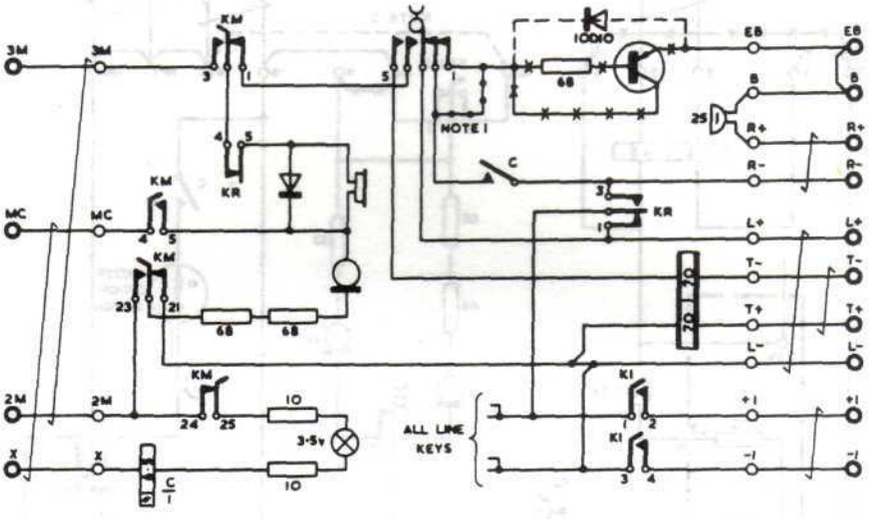
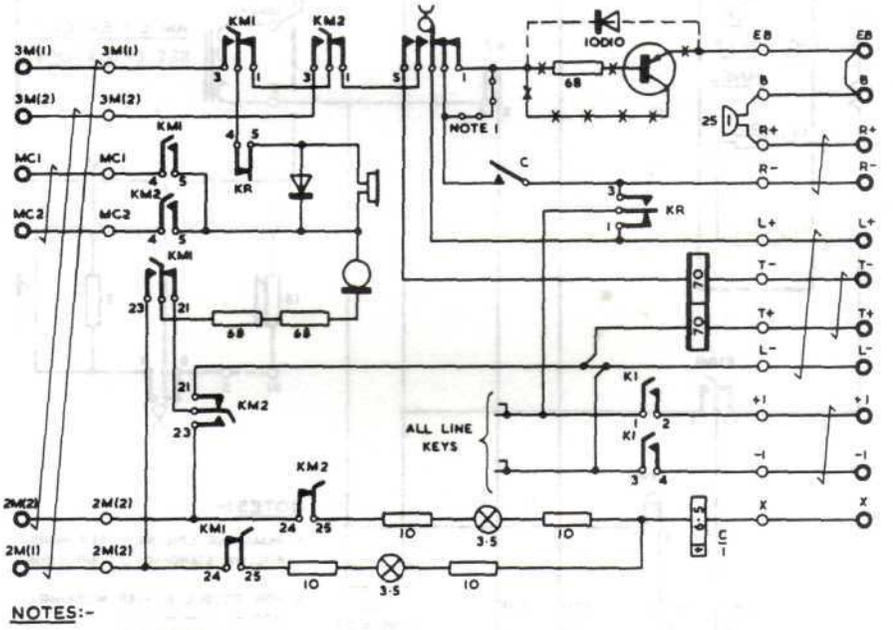
SINGLE MASTER SUBSTATIONS K258E & K260F



DOUBLE MASTER SUBSTATIONS K259B & K261D

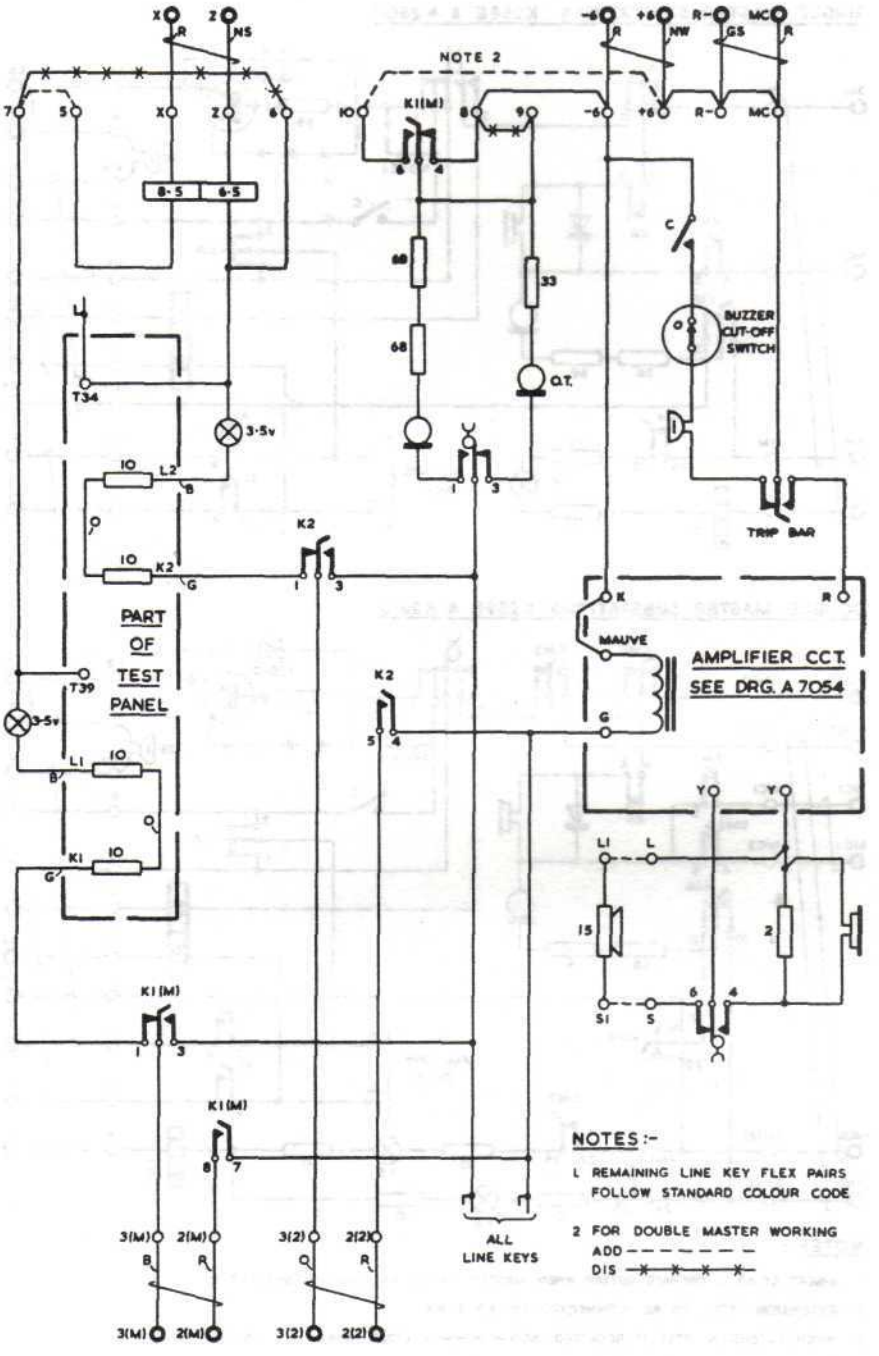
J4



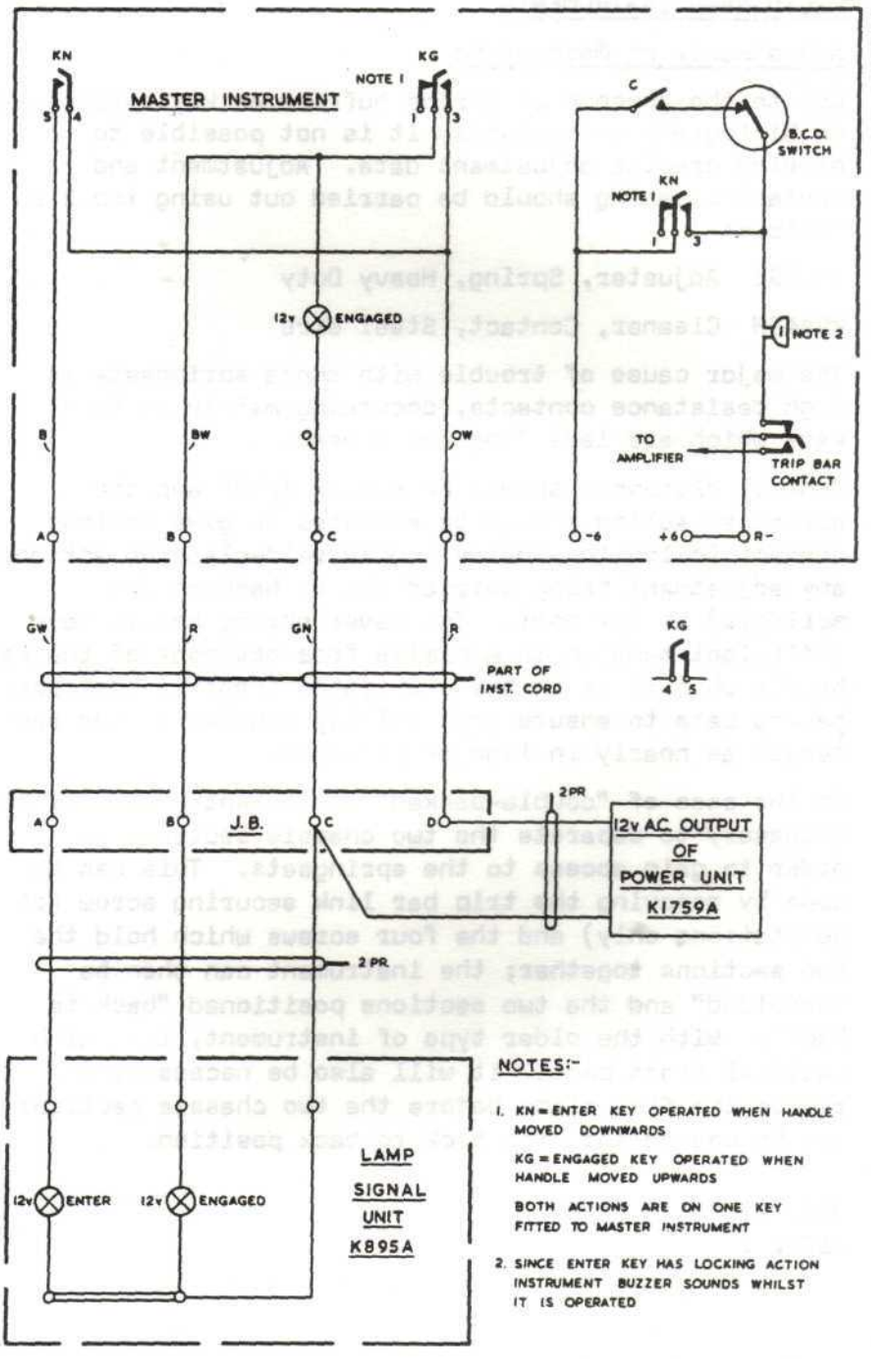
NOTES:-

1. INSERT STRAP TO OPERATE BUZZER WHEN MASTER CALLS AN ENGAGED SUBSTATION
2. EXTENSION BELL TO BE CONNECTED TO EB & R+
3. WHEN EXTENSION BELL IS REQUIRED, ADD — — — — & DIODE 6584 2 J, DIS —×—×—×—

MASTER INSTRUMENTS 10 WAY K256J & 14 WAY K257G



K4



NOTES:-

1. KN = ENTER KEY OPERATED WHEN HANDLE MOVED DOWNWARDS

   KG = ENGAGED KEY OPERATED WHEN HANDLE MOVED UPWARDS

   BOTH ACTIONS ARE ON ONE KEY FITTED TO MASTER INSTRUMENT

2. SINCE ENTER KEY HAS LOCKING ACTION INSTRUMENT BUZZER SOUNDS WHILST IT IS OPERATED

DICTOGRAPH INSTRUMENTS

Adjustments of Mechanisms

Due to the absence of spring buffers on key springsets on Dictograph instruments, it is not possible to provide precise adjustment data. Adjustment and contact cleaning should be carried out using tools as follows:-

K9439E Adjuster, Spring, Heavy Duty

K9440H Cleaner, Contact, Steel Wire

The major cause of trouble with these springsets is high resistance contacts, occurring mainly on those keys which are less frequencly used.

Contact clearance should be approx 1/16" and the springset action should be adjusted to give maximum contact follow to provide a good self-cleaning action, any adjustment being carried out by bending the spring(s) at the root. The lever spring should have sufficient tension to minimise free movement of the key handle when it is in the unoperated (centre) position, taking care to ensure that all key handles in one row remain as nearly in line as possible.

In the case of "double-banked" instruments, it will be necessary to separate the two chassis sections in order to gain access to the springsets. This can be done by removing the trip bar link securing screw (on Substations only) and the four screws which hold the two sections together; the instrument can then be "unfolded" and the two sections positioned "back to back". With the older type of instrument, i.e. with vertical front panel, it will also be necessary to remove the flex clamp before the two chassis sections can be opened into the back to back position.

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ISSUE 2