London Director Exchanges – Transfer to All-figure Numbers (AFNs)

See Appendix for description of the Director System and Glossary for technical terms.

Columns layout:

Name with LETter code – letter equivalent (where different from AFN) – New AFN

NAMe	Was	AFN	NAMe	Was	AFN	NAMe	Was	AFN
ABBey		222	COVent Garden	208	240	FOUntain	308	677
ACOrn	220	992	CREscent	273	550	FOX Lane	309	882
ADDiscombe	233	654	CROydon	270	688	FRAnklin *	372	669
ADVance	238	980	CRYstal Palace	279	659	FREmantle		373
[formerly BEThnal			CUNningham	286	286	FRObisher		370
Green ALBert Dock	252	476	DANson Park	326	304	FULham		385
ALPerton	257	998	DERwent		337	GALleon	425	330
AMBassador	231	262	DICkens	342	359	GEOrgian	430	579
AMHerst	264	985	DILigence	345	903	GERrard		437
APPlewood ‡	277	679	DIRectory enquiry *	347	192	GIBbon	442	789
ARChway	211	272	DOLlis Hill	305	450	GIPsy Hill	447	670
ARNold	276	904	DOMinion	306	592	GLAdstone		452
ATLas	285	568	DREadnought †		373	GLObe ‡	450	675
AVEnue	200	283	DRUmmond	378	908	GOOdmayes	400	599
BALham ►	225	672	DRYden	379	204	GRAngewood		472
BARnet	227	449	DUChess	382	N/A	GREenwich	473	858
BATtersea ►	221	228	DUKe †		385	GRImsdyke	474	954
BAYswater		229	DUNcan	386	690	GROsvenor	470	499
BECkenham ►	232	650	EALing	325	567	GULliver		485
BELgravia ►	202	235	EASt	327	987	HADley Green	423	440
BERmondsey		237	EDGware ►	334	952	HAInault	424	500
BEXleyheath	239	303	EDMonton ►	336	807	HAMpstead	426	435
BIShopsgate	200	247	EDWard ‡	339	549	HARrow		427
BLUebell	258	656	ELGar	354	965	HATch End		428
BOWes Park	209	888	ELMbridge	356	399	HAYes ►	429	573
BRIxton	_00	274	ELStree	357	953	HEAdquarters		432
BRUnswick		278	ELTham	358	850	HENdon	436	202
BUCkhurst	282	504	EMBerbrook	362	398	HIGhgate Wood		444
BUShey Heath	287	950	EMPress	367	603	HILIside		445
BYRon	297	422	ENField		363	HITher Green ►	448	698
BYWood	299	668	ENGineers	364	151	HOGarth	404	749
CANonbury		226	ENTerprise		368	HOLborn		405
CENtral ▶		236	EUSton		387	HOP		407
CHAncery		242	EWEII		393	HOUnslow	408	570
CHErrywood	243	540	FAIrlands ►	324	644	HOWard	409	804
CHIswick	244	994	FELtham ►	335	890	HUDson	483	572
CITy ►		248	FIEld End	343	868	HUNter		486
CLErkenwell		253	FINchley		346	HURstway	487	462
CLIssold		254	FITzroy		348	HYDe Park		493
CLOcktower	250	552	FLAxman		352	ILFord	453	478
COLindale ►		205	FLEet Street ►		353	IMPerial	467	467
CONcord	206	864	FLOral	350	878	INF (Enquiries) *	463	191
COOmbe End	200	949	FOOTs Cray		300	ISLeworth	475	560
COPpermill	207	520	FORest Hill	307	699	ISMay	476	640
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NAMe	Was	AFN	NAMe	Was	AFN	NAMe	Was	AFN
IVAnhoe	482	505	MUSeum	687	636	TABard		822
IVYdale	489	394	NATional		628	TATe Gallery		828
JUBilee ►	582	960	NEW Cross ►		639	TCY		829
JUNiper		586	NOBle		602	TEDdington Lock	833	977
KEAts	532	366	NORth		607	TELegrams	835	190
KELvin	535	673	NUFfield	683	848	TEMple Bar		836
KENsington	536	589	PADdington		723	TERminus		837
KILburn	545	328	PALmers Green	725	886	THOrnton Heath ▶	840	684
KINgston-upon		546	PARk		727	TIDeway	843	692
Thames			PECkham Rye		732	TIMe (Speaking	846	123
KIPling ►	547	857	PERivale	737	997	clock) *		
KNIghtsbridge	564	584	PINner	746	866	TOTtenham		808
LABurnum ►	522	360	PLUmstead	757	855	TOWnley	809	693
LADbroke	523	969	POLlards ►	705	764	TRAfalgar	872	839
LAGoon ‡	524	390	POPesgrove ►	707	892	TREvelyan ►	873	553
LAKeside	525	947	PRImrose	775	722	TROjan		870
LANgham	526	580	PROspect	770	876	TST	878	290
LARkswood		527	PUTney		788	TSW		879
LATimer	528	802	RAGlan	724	556	TUDor		883
LEE Green	533	852	RAVensbourne	728	460	TULse Hill ▶	885	674
LEYtonstone ▶		539	REDpost	0	733	TURnham Green	887	995
LIBerty		542	REGent		734	TWIckenham		894
LIVingstone ►	548	653	RELiance		735	Green		
LOCkwood ►	502	446	RENown		736	UMP (Cricket	867	160
LONdon Wall	506	588	RIChmond (Surrey)	742	940	score) *		
LORds	507	289	RIPpleway	747	594	UNDerhill		863
LOUghton		508	RIVerside	, ,,	748	UPLands	875	660
LOWer Hook	509	397	RODney		703	UPPer Clapton	877	806
LPR	577	432	ROYal ►		709	VALentine	825	554
LTR		587	SANderstead *	726	657	VANdyke	826	874
LUDgate Circus ▶		583	SCOtt	720	720	VICtoria	842	834
MACaulay		622	SEVen Kings	738	590	VIGilant	844	642
MAlda Vale		624	SHEpherds Bush	730	743	VIKing		845
MALden	625	942	SHOreditch	740	739	VIRginia	847	349
MANsion House		626	SILverthorn	745	529	VIVian	848	263
MARyland	627	534	SKYport	743	759	WALlington	925	647
MAYfair		629	SLOane	750	739	(Surrey) *	000	000
MEAdway	632	458	SNAresbrook	762	530	WANstead	926	989
MELville	635	643	SOUthall	702	574	WARing Park	927	302
MERedith		637	SPArtan	700 772	249	WATerloo	000	928
METropolitan ►		638	SPEedwell	773	455	WAXIow	929	578
MILI Hill	645	959		113	455 777	WELbeck	000	935
MINcing Lane	646	623	SPRingpark	700		WEMbley	936	902
MITcham	0.0	648	STAmford Hill	782	800	WEStern ►	0.1.1	937
MOLesey	605	979	STEpney Green	783	790 058	WHItehall	944	930
MONarch	200	606	STOnegrove	780 707	958	WIDmore	943	464
MOOrgate ►		600	STReatham	787	769 700	WILlesden	945	459
MOUntview	608	340	SULlivan	785 700	799	WIMbledon	00-	946
MULberry	685	889	SUNnyhill	786	203	WOOlwich	900	854
MUNicipal	000	686	SWIss Cottage	700	794 770	WORdsworth ►		907
Μοινιοιραί		000	SYDenham	793	778			

Table sources: Letter codes from London 1965 Dialling Information Booklet (DIB). All-figure Number (AFN) codes from London 1973 DIB.

Addenda

Some oddments of codes not appearing in either of the published lists above:

LTK (585) Direct dialling in to Kingsway Trunk Exchange PABX.

TMO (860) Telephone Manager's Office

TOL* (805) Toll calls

TRU * (878) Trunk calls - replaced by 100 *

All the codes 196, 296, 396 etc were used by automatic test equipment for routine tests on the directors.

Key to Symbols

N/A Exchanges were not shown in the 1973 AFN list, and may have been planned for expansion but never used.

- * signifies dial code only and wait. The exchanges Elmbridge, Franklin, Sanderstead and Wallington, were manual but later converted to automatic working.
- ▶ Some customers were transferred from these exchanges and given new telephone numbers. Callers were advised to consult the current directory for the new number.
- ‡ The Letter code for this exchange disappeared from dialling information booklets, but the AFN translation has been deduced from other evidence.
- † DUKe and DREadnought were used for temporary lines serving exhibitors at Olympia and Earls Court respectively. They were effectively synonym exchanges for FULham and FREmantle having the same numerical equivalent of 385 and 373. DREadnought changed by 1976 to use code 371, making it a true hypothetical (see Glossary).

Background Information

The use of all-figure telephone numbers was announced as a national policy in 1965 and was introduced progressively starting with the major cities using the director system, London, Birmingham, Edinburgh, Glasgow, Liverpool and Manchester. The change was complete by 1969.

Telephone penetration in London was growing particularly rapidly in the 1960s and the Post Office was rapidly running out of meaningful letter combinations for its exchange names. Post Office research had shown that strings of numbers were no more difficult to remember than random strings of letters. Removing the constraint of letter combinations with some meaning would allow all 800 combinations of exchange codes from 200 to 999 to be used. Even codes containing the digit 1 could now be used, whereas previously the lack of a letter on the dial for 1 prevented it. However, using codes of X1X and XX1 led to other problems outlined below.

If you examine the table above you will see that the new all-figure codes are frequently *not* the direct equivalent of the letters. And here's the reason why.

A benefit of the major code changes was to enable exchanges to be grouped geographically into sectors. In the past the director system allowed a total separation of the telephone exchange code from its geographical routing. Inside the director area traffic could be concentrated to a geographical area using tandem exchanges. So sectorisation was not a great benefit for calls within the director area. Sectorisation was of principal benefit to incoming and outgoing trunk traffic. Seven Sector

Switching Centres (SSCs) were set up around the periphery of the London Director Area allowing remote exchanges to separate their London-bound traffic by examining the first two digits and to spread the traffic load between the SSCs.

To achieve this, selected exchanges were given new codes different from the equivalent of their letters. Such a sweeping change could not be effected overnight and so it was necessary to keep both the old and new codes working simultaneously for a period of years until all directories had been reprinted and subscribers had got used to the new numbers.

The process was a knotty problem for those in the Post Office planning the number changes. It was compounded by some exchanges reaching capacity so that blocks of numbers were transferred to neighbouring exchanges which still had spare numbers. This explains the exchanges marked with a triangle in the table. See Paul Eblings recollections below.

To read the debate in Parliament in 1967 (<u>Hansard</u>) one would have thought, from the outpourings of the MP for North Antrim, that the world would end. In the end we all changed over to all-figure numbers without too much fuss.

Paul Ebling has shared some of his memories from the period.

Problems with Pre-2000 Directors

I think the problem was that AFN was originally planned on the basis that B & C digits could take any value in the range 1-9 and 0. It was then discovered that almost all pre-2000 Directors were not wired out to the translation fields for B and C digits of 1. In UPLands there was a frantic job to replace all the Directors with second hand 2000 type – *said* to be because you got twice as many per rack, but really I suspect it was to allow digit 1 to be used as soon as possible. Some later pre-2000 directors were probably modified, but very old kit would not have survived such an operation and so had to be replaced.

The revised planning meant that all units actually open at AFN day had to avoid digit 1 as a B or C digit.

To achieve this a number of things had to happen. One was that DOLlis Hill (GLAdstone second unit), was given 01-450. So GLObe (q.v.) necessarily was never given to the public for 01-675. The TULse Hill Beta Unit 01-671 did not open until the official AFN launch, and TULse Hill 8XXX numbers were re-used in LETter form as necessary to avoid publishing 01-671 before everyone could dial it successfully.

I suspect that APPlewood, ISMay, MERedith, VIVian, LOCkwood etc were also "Pulled" and numbers not issued in letter form, being published and used as AFNs once the new translations had been added across London – new lines were given AFNs in advance of the official switch over date, which was when old codes began to be withdrawn. 637 was used for a new unit at PO Tower alongside LANgham and MUSeum. I think it was originally called "UNIversity", although that does not appear in my 1966 chart.

Exchanges marked ▶

BALham became 672, but 1500 or so lines were moved to 673 8XXX or 0XXX (an area correction transfer as BALham was exhausted but capacity existed a mile up the road at KELvin)

BECkenham 6XXX became 658 and the rest 650 - in preparation for a Beta Unit

FAIrlands 2XXX became 641 and the rest 644 - in preparation for a Beta Unit, later realised as a TXK3

LIVingstone 9XXX became 771 and the rest 653 - in preparation for a Beta Unit, but the pre-2000 kit existing was VERY old and throwing any extra traffic through the incoming N first numerical selectors would have been asking for trouble. Maybe the whole site was turned round to 2000 type before expansion happened?

FLEet / LUDgate / CITy / CENtral were four units based in Faraday with 3-wire junctions to Fleet Building where there were Satellite Exchanges to use the levels not in use in Faraday and where no more accommodation was available. At AFN, there seems to have been a redistribution / rebalancing of levels on the 4 units so some FLEet numbers did not stay as 353, but took one of the other three codes and so on.

MOO / MON / MET / MIN were in two buildings off London Wall, and a similar shuffling seems to have happened there, but not involving all four units.

NEW Cross probably had lines transferred to PECkham Rye, the second unit

POLlards 2XXX became 679 (APPlewood) and the rest 764

ROYal spawned three Hypotheticals on codes 48X I believe. Something to do with preparing for an early TXE4 installation? Later ROYal was regarded as hypothetical on one of its offspring.

THOrnton Heath had a second unit on 689 whilst most lines went to 684. I suspect it was a Beta Unit, but I am unsure of which level it was on.

TULse Hill 8XXX became 671 and the rest 674 - in preparation for a Beta Unit.

Paul wonders if anyone else knows the rest of this story - or can clarify any of his doubts?

Glossary

2000 type The type of exchange switching equipment standardised by the Post

Office in the 1930s. Older exchanges with pre-2000 equipment remained

as part of the telephone network.

A, B, and C digits The three digits of a Director exchange code in order. E.g. for MAYfair

the A digit is 6, the B digit is 2 and the C digit is 9.

Beta Unit: A Second Unit (see below) in a Director exchange sharing the

connections to and from the existing unit, and sharing common services. The existing unit retained 4 digit numbers. However, for engineering purposes the Beta Unit had FIVE digit numbers, only the last four being printed in the Directory and on the customers' dial labels. The Beta unit was given a separate Identity i.e. AFN code, and when callers used that code the Director's Translation provided necessary routing followed by

the prefix digit to make up the 5-digit number.

Hypothetical unit A group of numbers on a Director exchange which were allocated a

separate exchange code – usually in preparation for them to be fully

separated later as a Second Unit

Second Unit Another exchange housed in the same building as the primary one.

Tandem An exchange without subscribers that serves to switch calls between

other exchanges.

TXE An electronic cross-point exchange

TXK A Crossbar exchange

Appendix: The Director System

In Britain the majority of the telephone network used direct correspondence between the digits dialled by the caller and the routing taken by the call through the network. However in London and five major cities Birmingham, Edinburgh, Glasgow, Liverpool and Manchester, a scheme of translation was employed to cope with the large number of telephone exchanges in a small area. This was called the Director System.

Telephone numbers consisted of a three figure exchange code in letter format, eg ABB (or 222) for the exchange Abbey, followed by a four figure number. The digits dialled by the caller were stored. The exchange code was translated into routing digits by a piece of equipment called a Director which sent them to the network to connect to the required exchange. Only then were the final four digits sent to the network to connect to the required number.