NCR

CIRCUIT NEWS

Field Engineering Division

CONFIDENTIAL MATERIAL FOR THE EXCLUSIVE USE OF NCR

F E D USE A CENTURY 200 SYSTEM
TO IMPROVE EFFICIENCY

For some considerable time it has been apparent that the present Addressograph system which is used in the Administration at 1000 NCR to produce Service Sheets, Payment Applications and Maintenance Records has become outdated. The system has served well in the past but for various reasons it can no longer meet the demands made on it in the present day.

To improve the overall efficiency F E D will be entering into a new era during the latter part of this month by commencing Phase One of the Computerisation project. Phase One covers the loading onto the Century of all Maintenance Records with the exception of Press Down equipment. The loaded information will be used to produce invoices, service sheets and rotadex records.

Following upon the successful take up of the Maintenance Records further phases of the computer application will cover cost and income returns on Classes and models, the production of Centre operating accounts and fault reporting, etc.
Undoubtedly, the speed at which records can be processed will enable the information produced to become more purposeful and the change of system answers an urgent need in providing Management at all levels with meaningful statistics and information. The ability to process information will greatly assist the communication between customer, Field Personnel and 1000 N C R. The Administration staff at 1000 N C R have attended courses to ensure that they become familiar with the new system and these courses will naturally be ongoing for a considerable time.

Area Superintendents, Supervisors, and DAD Senior Management recently attended Seminars in London in order that they could implement their own local training to back up the Manuals which have been forwarded direct to centre Managers.

Currently at 1000 there exists two Departments for Maintenance Records i.e. CR and AAM. When the records are loaded onto Computer these two Departments will merge and F E D Administration will meet the new marketing structure of Vocational integration. The merger will also overcome the present problems where both Departments communicate with the same customer due to the mix of equipment which he uses.

One of the great advantages of the Computer System will be ability to maintain our own accounting records, invoices will be issued by Computer and payments will be made not to Credit Accounts, Greenford, but to FED. We believe this change will provide us with information of unpaid accounts more quickly than is being experienced currently. Keeping our own accounts will enable us to update Centre records much more readily and accurately and we believe that the system will enable us to advise Centres of payments made to prevent the situations which are sometimes experienced by Field Engineers who call on users for payment, only to find the account has been settled.

Field Engineering Centres are now receiving new Rotadex drums direct from the Suppliers in readiness for the new style record cards. The present system of one card per machine or peripheral has been superceded by a card which can cater for up to seven machines or peripherals providing they are on the same site.

Service Sheets F442S have been redesigned and again provide for a multi installation of up to five machines/peripherals. When the Service Sheets are received by Centres they will be already sorted into postal codes for easier Centre control.

It is anticipated that loading of records will have been completed by March 1975 but during the intervening period there will naturally be two systems running. As we are all aware a Computer system can be no better than the information which is contained in it. It is therefore essential that if the computer produced information is found to be incorrect 1000 N C R should be advised forthwith.

REGIONAL MANAGEMENT

In the previous issue of Circuit News our leading article introduced you to the new concept of Regional Management teams and one or two questions have since arisen concerning the number of Supervisors assigned to each Region. The Formula will be each area will consist of two supervisors. Unlike the Scottish Region other Regions could consist of two or even three areas, in which case the make up would be two Technical Support, and two Administrative Supervisors, or in the latter instance three and three.

We trust our explanation now clarifies the matter.

Electronic Proof Encoder
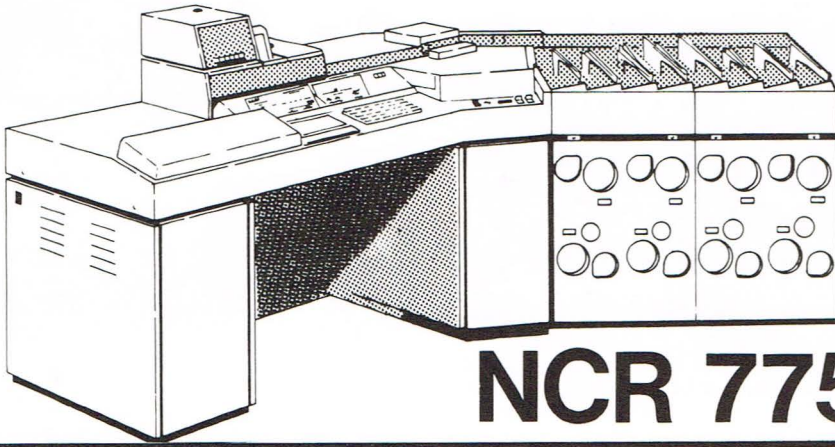
NCR 775

The C-775 is the replacement for the C-481, 482, 450, and 2000 proof encoders. It is an electronic programmable MICR/OCR encoder and proof machine available as a single or multiple pocket unit. Although intended primarily for back office bank proof and encoding, it is versatile enough to be used for certain commercial applications such as Giro. Programmes may be entered from the familiar ten key keyboard or alternatively from a C-761 Cassette Terminal Recorder.

ENCODER

The N.C.R. 775 programmable proof system will encode magnetic ink characters (MICR) or optional characters (OCR) on processed documents. Data for encoding can be entered from the keyboard or obtained from the internally stored data fields. Encoding options include encode only, encode with proof operation, or encode and endorse with proof operation.

ENDORSER

Endorsing is an automatic by-product of the total proof operation. Through programme control, the proof equipment will apply the full endorsement, partial endorsement, or non-endorse the appropriate documents. To provide clear, firm bank endorsements, the endorsement printing may be positioned in one of three spaces in either black, purple, red or green ink.

BASIC SYSTEM COMPONENTS

The N.C.R. 775 Proof Systems are programmable MICR-OCR full-field document encoders and proof equipment. Each unit is freestanding, meeting all the requirements and specifications for all-field encoding, endorsing, and audit control.

TERMINAL CONTROL UNIT

The terminal control unit is a modular, compact processor utilising the advanced generation of Large Scale Integrated (LSI) and Metal Oxide Silicon (MOS) semiconductor circuitry. All control and arithmetic operations are programmed and performed in non-volatile core memory. With the non-volatile memory, operating efficiency is constant through the ability to programme data input and output, initiate MICR print formats, perform computations and other functions. In this operating environment, the proof department never loses control of the system or the accumulating totals through a power surge or failure.

DATA AND FUNCTION KEYBOARD

The data control and function keyboard is conveniently located and provides a high degree of programming and operating versatility. All numeric keyboards utilise electronic input buffers to maintain a system throughput compatible with an operator's sustained operating speed and periodic processing bursts.

SYSTEM CONTROL PANEL

The system control panel displays the operating status of the system through a series of messages. These eye-level messages identify functional operations and inform the operator of the reasons for corrective action or other duties such as replace MICR ribbon or remove documents from a full pocket. The control panel simplifies the proof routines, reduces the need for mental concentration, speeds and expedites a more continuous flow of documents.

DOCUMENT ENTRY STATION AND TRANSPORT

The document entry station is conveniently located, providing the most prompt and easy movement of documents from the media tray through the processing area. The transport is a free and open unit permitting a fast movement of documents to the receiving pockets. With the new entry and transport system, documents are processed faster with increased accuracy through electronically controlled sensors and printing mechanisms.

MASTER JOURNALS AND LISTER PRINTERS

The master journal is a chronological, permanent record of all processed transactions and audit control data. Journal printing is time-shared with the related proof operations and is not a limiting factor in document throughput. Individual tape listers are an optional feature with multiple pocket encoders. A lister provides a conventional chronological listing of all transactions distributed to the receiving pocket. The lister permits transit and clearing items to be despatched to their ultimate destination promptly and with minimum handling.

RECEIVING POCKETS

Documents are transported to a receiving pocket, fully time-shared with related proof operations. The documents are stacked in the order processed, and items can be removed or inserted without disturbing the remaining pocket contents. On multiple pocket units, pockets are added in modules of 2 or 4, from 2 to 20 pockets.

ADDING MACHINE

An adding machine is operator selectable at any time in the proof operation, functioning independent of the proof encoder. It permits instant listing and verification of deposit tickets or other documents without affecting accumulated distribution totals.

PROGRAMMING

C761 CASSETTE TERMINAL RECORDER

The N.C.R. 761 Cassette Terminal Recorder (CTR) is a freestanding device capable of reading or writing on a tape cassette. The cassette terminal recorder performs encoding, encoding error, checking and recording control functions. The 761 can operate as a permanent or portable unit, depending on the type of connector cable used.

C775 TECHNICAL TRAINING

The duration of the basic course is four weeks, and is at present underaaken at the Corporate Technical Education Centre, Dayton. Pre-requesites for the 1000-2000 series are BETA, BCC, 450 and 482.

MODEL UPDATE

With the continued release of new electronic machines and their peripherals, it becomes somewhat of a headache to associate the model numbers with the specific equipment. To enlighten you on this subject we list below the more recent equipment by Class Number:-

CLASS	DESCRIPTION
105	Mag. Tape to Microfische Processor (Quantor)
230	Electronic Cash Register
240	Check Out Terminal
250	Electronic Cash Register
255	Retail Terminal
260	Thermal Printer
270	Financial Terminal
275	Financial Terminal
279	Financial Terminal
280	Retail Terminal
299	Electronic Accounting Machine
314	Ledger Card Reader
349	Line Printer
366	Paper Tape Reader
367	Paper Tape Punch
368	Punch Card Reader
378	Card Punch
399	Electronic Accounting Machine
605	General Purpose Mini Computer
633	Tape Handlers
636	Cascent Unit
640	Line Printer
646	Chain Printer
649	Line Print
655	Disc Unit
656	Disc Unit
657	Disc Unit
662	Console Tape Reader
680	Card Reader (High Speed)
682	Card Reader (Integraded)
686	Card Reader/Punch
710	Coin Dispenser Interface
715	Coin Dispenser Interface
716	Remote Transaction Programmes
717	Paper Tape Reader
723	Data Collector
725	Store Level Controller
726	Controller
734	Cassette to Tape Recorder
747	Colour Coded Tag Printer
748	Colour Coded Credit Card Printer
750	Auxiliary Communication Equipment
751	Digital Concentrator
752	Freestanding V-23 Modem
754	Multiplexor
757	Communication Bridge
761	Remote Cassette Recorder
770	Automatic Teller Terminal
775	Electronic Proof Encoder
785	Colour Bar Code Reader (Light Pen)
790	Remote Display
904	Continuous Forms Feeder

TIME MAINTENANCE CONTEST

Never before have we had a more appropriate theme for a Maintenance Contest than the one we are using in the current October/November event. So little "Time" remains for us to overcome the adverse results we have experienced to date, but the situation is not insurmountable providing everyone, yes everyone, produces that little bit extra to ensure their Centre and the Division achieve its year end targets.

Why is Maintenance so important to us? The answer is simple, it provides the major proportion of the income to the Division out of which is paid our salaries, cost of transportation, training etc. With the payments being received in advance it allows us to plan ahead for the coming year. There is a tendency by a few Engineers to show no interest in obtaining new agreements on the assumption of acquiring commission from a cash repair. I can assure you this path is suicidal because Cash and Charge work follows an unpredictable pattern and positive forecasts are difficult, and is only forthcoming when a machine develops a fault.

Orders for additional equipment will always come from satisfied customers and the only way this can be achieved is to keep their machines fully maintained.

Dayton Management have sponsored some very attractive Gents Wrist Watches as the prize awards for the "Time Contest" winners and it is hoped these incentives, together with the explanation previously made will provide the results we require.

Remember, 'Time waits for no man,'so with no further ado PLAN-APPROACH-SELL TODAY for TOMORROW's future.

Whilst on the subject of Maintenance we would appreciate your assistance to ensure that all Maintenance Agreements show the factory number(s) of machines to which they are relevant, and these, in fact, are stated correctly. Care in this area will avoid delays to the Centre or Engineer in obtaining the credit, especially during a Contest period.
Also where a new Maintenance is taken out on warranty machines it is essential the Agreement is endorsed with the word "Warranty".

Appointments

MR. G. SILLETT, Appointed Manager, F.E.C. SITTINGBOURNE.
Gordon joined NCR in 1947 as a CRD Technician in "C" Dept., which at that time was sited on the 4th floor at Marylebone Road. He later moved to Brent when the Service Building was re-located in 1956, progressing onto R2000 and Postronic machines. In 1965 he transferred to outside service sited at Bristol and was promoted to Centre Manager, Swansea in 1970. Gordon will be based at Canterbury until the new premises are completed.

MR. P. MORGAN, Appointed Manager, F.E.C. SWANSEA.
Pete came to NCR in 1956, as a CRD Technician in "C" Department Brent. He later moved to the ADD machine section before transferring to outside service London in 1962. A further move to Canterbury FEC transpired in 1964 and since then he has progressed through the various grade of equipment including 299-450-482.

We offer our congratulations to both of them in their new appointments.

Well Done

ROMFORD
Following a move of their Accounting machine equipment the Secretary of the London and Essex Building Society, London, wishes to place on record their sincere thanks and appreciation to Earl Logan and his Engineers for their efficiency in ensuring the move was carried out smoothly. They quote it is most refreshing in these days to have arrangements carried out to the letter without any hitches and hold ups, etc.

IPSWICH
Maclaren Handbags Limited express their appreciation to Wally Akers and his 399 Engineers for the speedy and efficient service provided recently when their machine needed attention.

GLASGOW
We have received a letter from the Cash Register Unit of Boots Ltd expressing their appreciation for the splendid assistance given by Field Engineer Alan Hamilton recently at East Kilbride.
They quote:- "Without his co-operation the branch would not have been fully operational in time for the opening".

Biggles Of F·E·D
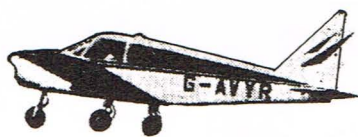
The introduction of Decimal currency undoubtedly gave Engineers the opportunity to improve their savings accounts by carrying out conversion of machines. Some used the additional income to reduce their mortgages, build on extensions or purchase a better car.

Bill Clozier, "D" Dept., LSC, 1000 went off on a different tangent - "UPWARDS". Whilst out for a Sunday morning drive Bill and a friend saw a notice outside Elstree Airport advertising a free trial 30 minute flight and decided to take the opportunity to see the local landscape from the air. It was enough to decide that up, up and away was the hobby for him.

Upon passing a stringent medical test Bill commenced his lessons with an Instructor in a Piper Cherokee P28 4 seater Low Wing mono plane. It has a 150 hp engine and a cruising speed of 115 mph. The lessons continue under instruction until such times as the Instructor feels the student is competent to fly solo. At one stage Bill thought he was getting on well until the Instructor passed comment that he was too dangerous to fly with and he ought to continue on his own. However, after approximately 15 hours flying and achieving pass marks in Navigational and Metrological, Aviation Law,Aircraft Technical examination our "Biggles of the Air" was given the O.k.to commence solo, but still keeping to the required radius of the airfield.

Navigation is obviously one of the key factors and failure to keep within the bounds of Elstree could be very expensive, as to wander into the London Zone without permission imposes a fine of £500.

Further graduation took Bill onto Solo Cross Country Hops and he recently flew a round trip to Ipswich, then over Clacton and Tiptree to Southend and return. At each Airport his documents were endorsed to prove his navigation and competence.

Contact with the ground is always available and he normally uses Luton and Stanstead radar controls for guidance. On one occasion Bill was unable to establish contact with these and became completely lost. Understandably, he broke out in a sweat but kept his presence of mind by turning onto the Heathrow frequency and explained his plight. A very sedate operator answered by telling him it was a lovely morning for flying (dependent, of course,on where you were sitting) and requested he manoeuvred so that they could track his position. Their instructions then continued and after a short while he was asked to dip his port wing where he would find Elstree Airport.

Bill hopes to obtain his full Pilot's Licence in the very near future. We send him our best wishes and look forward to the day when he becomes a fully fledged PILOT!

LOST REVENUE

Again the subject of Repair Sheets raises its ugly head as we learn of an instance where three Class 410 magazines were supplied but no Customers signature obtained on the R/S. With the User now asking us for proof of delivery our changes of redeeming the £120 are limited. We request your assistance to ensure R/S442 bear a Customers signature, or where several sheets are involved make sure the final sheet is headed "charge" and is endorsed with the signature. A little more attention in this area will reduce the drain on the Divisions revenue.

HOLIDAY EXCHANGE

Cervolo A. P. Rodrigues, Field Engineer, NCR Portugal, would like a holiday in London and is interested in exchanging residences for the period with one of our Field Engineers.
Anyone interested should contact him direct at his home address: Rua Carolina Michaellis de Vasconcelos 24, 7°E LISBOA-4.

SHIPMENTS

A considerable amount of unnecessary time is being wasted due to machines arriving for repair in 1000 without any means of identification.
We request your assistance to ensure machines being sent to the Service Building for repair bear a Work Instruction Card (Orange), Form No. 275, showing the Depot of origin, customers' name and address, model and factory numbers, reason for shipment, and whether machine is under Maint./Charge,etc.

Thanks I·E·C

We have been requested by Pete Morgan, Alan Cain, and Tom Mills, to pass on their sincere thanks to Jack Fowler and his Instructors at the IEC Dundee. Apparently whilst they were attending a recent 299 Course, Jack and the lads arranged a guided tour of the Centre and accommodation areas for their wives and children, who were most impressed with the layout.

Hand Of Friendship

One of the finest things about working for FED is "Friendship" for when you need help or assistance, invariably there is a colleague on hand whatever the problem.

At the end of May, John Howell of Croydon F.E.C. had the misfortune to meet with a serious motoring accident whilst in Ireland on a fishing holiday. He was taken to hospital with a compound fracture of the jaw and was unconscious for a week.

Our Cork Centre were alerted and Des O'Callaghan arranged regular visits to the hospital in order to relay John's progress to his parents. During his recovery Des and Tim O'Riordan visited him, which was very welcome, as John knew nobody in Ireland and upon his discharge booked his flight and conveyed him to the airport.

We are pleased to report John is now well on the mend and recently returned to work. He has requested we pass on through Circuit News a special thankyou to the Cork team for all their valuable help and assistance given to him.

Chinese Onions

An interesting article comes from Derek Inns, Luton FEC who has made several visits to an old Chinese lady in the hope of obtaining a Maintenance Agreement for a Class 24,with little success. However, the time came when the machine required attention and the dear old lady promptly posted her cheque and agreement off a day prior to requesting service as follows:

"Would you please come up to have service the money box because the string has broken".

She may not know her English but she certainly knows her onions.

Sorter Info

Birmingham F.E.C. advise us of a considerable saving in the cost of replacing the Fibre Gear which is housed in the Gear box, and drives the Coin Sorter belt.

The Fibre gear apparently wears around the teeth area but the Parts Catalogue shows only the part number of the Motor Assembly (U950/A Motor Assembly 998-0600216) which costs £15.25. Stores Dept. are now able to supply the gear and line separately which can be ordered as "Fibre Gear and Line (Motor) Coin Sorter" at a cost of 0.88p.