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RC855 Configuration Guide

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Keywords:

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Abstract:

This manual gives some outlines in the configuration possibilities of the RC855 Terminal System.

(22 printed pages)

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- from Digital Research: CP/M
- from MicroPro : WordStar, DataStar
- from Micro Focus : CIS COBOL.

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1. INTRODUCTION 1.

The RC855 is a member of the RC850 family of Display Terminals and Work Stations. All members of the family have a number of common features, whereas other features are specific to the type of Terminal or Work Station in question.

Figure 1: RC855 Display Unit and Keyboard Unit.

Applied ergonomics in design has added substantial qualities to the terminals. The user will find it possible to arrange his working place to suit his individual needs. Terminal impact on the environment has, moreover, been reduced to a minimum.

The RC855 Work Station is designed for the construction of distributed systems in which each Work Station may be used interchangeably for communication with a host computer and as a local microcomputer system.

The RC855 is available as a 'soft-programmed' Work Station, which can alternately be used as:

- an Interactive Terminal (IBM 3270 BSC emulation)
- a Batch Terminal (IBM 3780 BSC emulation)
- a General-Purpose Microcomputer (running the CP/M operating system).

The RC855 is also available as a 'hard-programmed', dedicated Terminal for IBM 3270 BSC emulation.

A system may consist of a single RC855 or of a cluster of RC855 Terminals and/or Work Stations.

A system may start as a single Work Station or Terminal. When additional Work Stations or Terminals are required locally, the system can be directly expanded into a clustered configuration. A stand-alone RC855 is designed from the start to serve as a cluster controller for other Work Stations and Terminals. The RC-CIRCUIT is used for interconnection in the cluster configuration.

The RC855 reflects an ambitious conception of system design and holds new possibilities for the design of distributed systems. It fully recognizes the principles of functional flexibility, distributed system architecture, and true modularity as the basis of economical, advanced solutions to the data processing requirements.

2. RC855 SYSTEM COMPONENTS 2.

Below follows a list of the products which can be used in the configuration of the RC855 Systems. A few brief notes are included.

General information about the components can be obtained from the Data Sheet for the individual products. Detailed descriptions of the products should be obtained from the technical documentation for the products. The installation of the hardware equipment is covered by ref. [1].

2.1 Hardware 2.1

RC855,01xx	WORK STATION Multifunction Work Station supporting one or two flexible disc drives. (xx determined by national language character set).
RC855,11xx	CU/DISPLAY STATION, 3270 Dedicated Terminal for IBM 3270 BSC emulation. Partly functioning as stand-alone Terminal, partly as control unit for other Terminals. (xx determined by national language character set).
RC855,21xx	DISPLAY STATION, 3270 Dedicated Terminal for IBM 3270 BSC emulation. Interconnected by the RC-CIRCUIT to an RC855,11 or RC855,01. (xx determined by national language character set).
TF663L	RC855 MODEM CABLE, 25 m
TF663M	RC855 MODEM CABLE, 12 m
TF663S	RC855 MODEM CABLE, 5 m

TF664	RC-CIRCUIT WALL-RECEPTACLE, WITH SURFACE BOX
TF665	RC-CIRCUIT WALL-RECEPTACLE, WITH FLUSH BOX
TF661	RC-CIRCUIT CABLE, 5 m, TERMINAL END
RC762-1	8" FLEXIBLE DISC DRIVE, FIRST UNIT
RC762-2	8" FLEXIBLE DISC DRIVE, SECOND UNIT
RC862	SERIAL PRINTER, 120 CPS, 80 COL.
RC867	SERIAL PRINTER, 120 CPS, 136 COL.
RC868	DAISY-WHEEL PRINTER, 55 CPS

2.2 Software

SW1804 — IBM 3270 BSC EMULATOR

Emulation software package.

SW1803 — IBM 3780 BSC EMULATOR

Emulation software package.

SW1811 — CP/M

Control Program/Microcomputers (operating system).

SW1812 — WORDSTAR

Word processing package.

SW1813 — DATASTAR

Data entry, retrieval, and updating program package.

SW1814 — CIS COBOL

Compact Interactive Standard COBOL (compiler and run-time system).

3. RC855 CONFIGURATION POSSIBILITIES 3.

3.1 Stand-Alone Systems 3.1

Stand-alone systems can be based on either the dedicated RC855 Terminal or the RC855 Work Station. The choice should be reviewed in terms of the functions which the system is required to perform.

3.1.1 Terminals 3.1.1

If only IBM 3270 BSC emulation is required, the RC855,11 CU/DISPLAY STATION should be chosen.

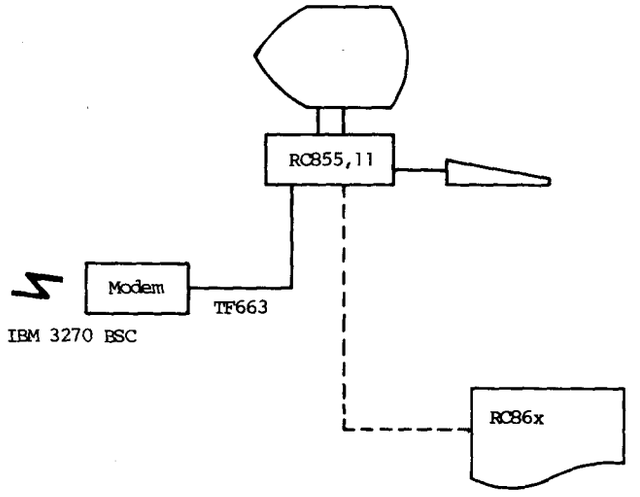

Figure 2: RC855,11 CU/DISPLAY STATION; configuration outline.

Minimum configuration:

- RC855,11 CU/DISPLAY STATION
- TF663 RC855 MODEM CABLE

Option:

- one printer (see chapter 2).

If other functions than the IBM 3270 BSC emulation are required, the RC855,01 WORK STATION should be chosen.

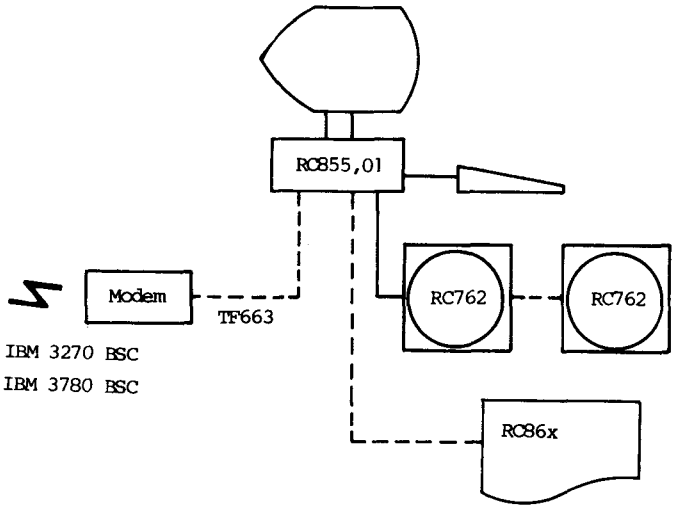

Figure 3: RC855,01 WORK STATION; configuration outline.

Minimum configuration:

- RC855,01 WORK STATION
- RC762-1 8" FLEXIBLE DISC DRIVE, FIRST UNIT
- SW1811 CP/M

Options:

- one printer (see chapter 2)
- RC762-2 8" FLEXIBLE DISC DRIVE, SECOND UNIT
- TF663 RC855 MODEM CABLE (if communication is required)
- SW18xx various software packages as described below.

The RC855,01 is a versatile Work Station, which can alternately be loaded with a number of software packages:

SW1804 IBM 3270 BSC EMULATOR

Makes the stand-alone RC855,01 act as an RC855,11 CU/DISPLAY STATION.

SW1803 IBM 3780 BSC EMULATOR

Enables the RC855,01 to operate as an RJE station, submitting files from disc to a host computer and receiving data for disc storage or printout.

SW1812 WORDSTAR

Enables the RC855,01 to operate as a word processing system.

SW1813 DATASTAR

Enables the RC855,01 to operate as a local filing system, allowing users to enter data for later retrieval, local processing, or submission to a host computer.

SW1814 CIS COBOL

Enables the RC855,01 to be used for local development of applications for processing locally on the RC855,01 WORK STATION (or another computer).

Furthermore the user has the possiblity of installing and running most of the CP/M based software packages available on the market.

3.2 Clustered Configurations 3.2

The cluster concept of the RC855 has much to offer in terms of functional flexibility and provides a number of configuration possibilities.

Up to eight RC855 Terminals/Work Stations may be grouped as a cluster for connection to a single BSC communication line. The Terminals and Work Stations in a cluster are interconnected by means of the RC-CIRCUIT, a simple, twisted wire pair.

Components:

1 RC-CIRCUIT
each: 2-8 TF664 (or TF665) RC-CIRCUIT WALL-RECEPTACLEs

The choice of Terminals and/or Work Stations for cluster configuration should also be reviewed in terms of the functions which are required within the cluster.

3.2.1 Terminals

3.2.1

If only IBM 3270 BSC emulation is required, the cluster should be configured using dedicated RC855 Terminals.

Cluster configuration:

1 RC855,11 CU/DISPLAY STATION
each: 1 TF663 RC855 MODEM CABLE
1 TF661 RC-CIRCUIT CABLE, TERMINAL END

1-7 RC855,21 DISPLAY STATION
each: 1 TF661 RC-CIRCUIT CABLE, TERMINAL END

Option:

- one printer (see chapter 2) each RC855,11 and RC855,21
  An attached printer is available as a common resource within the cluster, i.e. the printer can be accessed by other Terminals than the one to which it is physically connected.

Each of the RC855 Terminals performs the following functions: editing of data on the display, processing of commands from the host, and print controlling on the attached printer.

The RC855,11 CU/DISPLAY STATION additionally performs the following functions: remote BSC communication with the host, status reporting, queue administration for all printers in the cluster,

and routing of the communication within the cluster. (The Terminal which controls the cluster communication is often referred to as circuit master or primary terminal of the cluster).

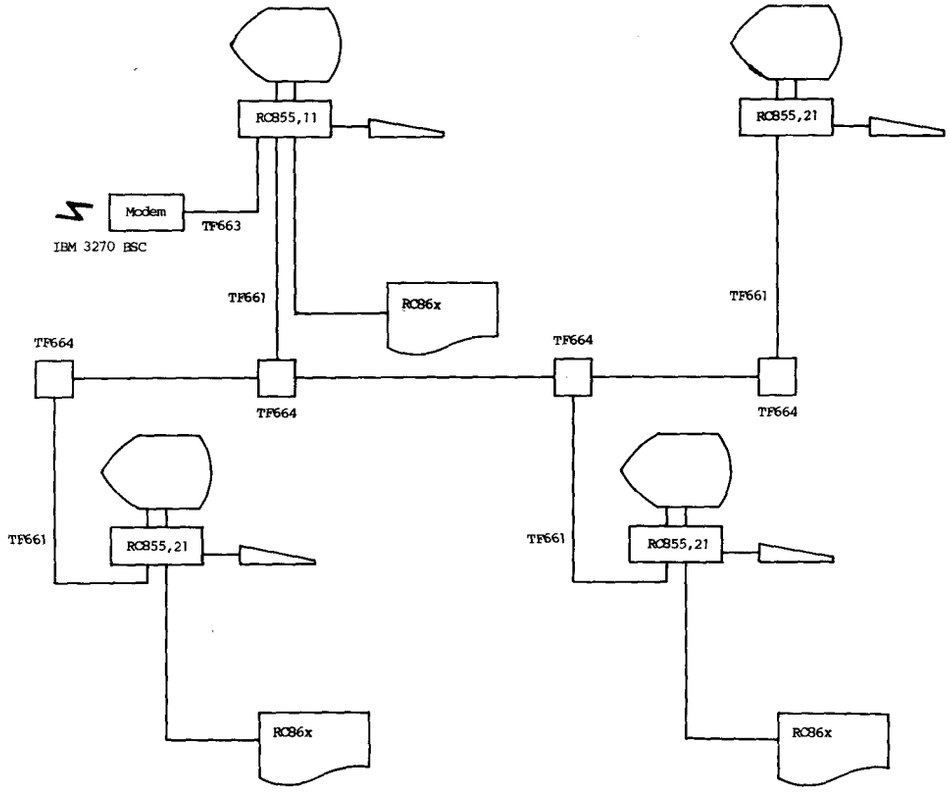

Figure 4: RC855,11 CU/DISPLAY STATION AND RC855,21 DISPLAY STATIONs; cluster configuration outline; example.

Expanded to its maximum, the cluster comprises sixteen devices.

3.2.2 Terminals and Work Stations 3.2.2

Also the RC855,01 WORK STATION can be incorporated a cluster configuration; any combination of up to eight Terminals and/or Work Stations is possible.

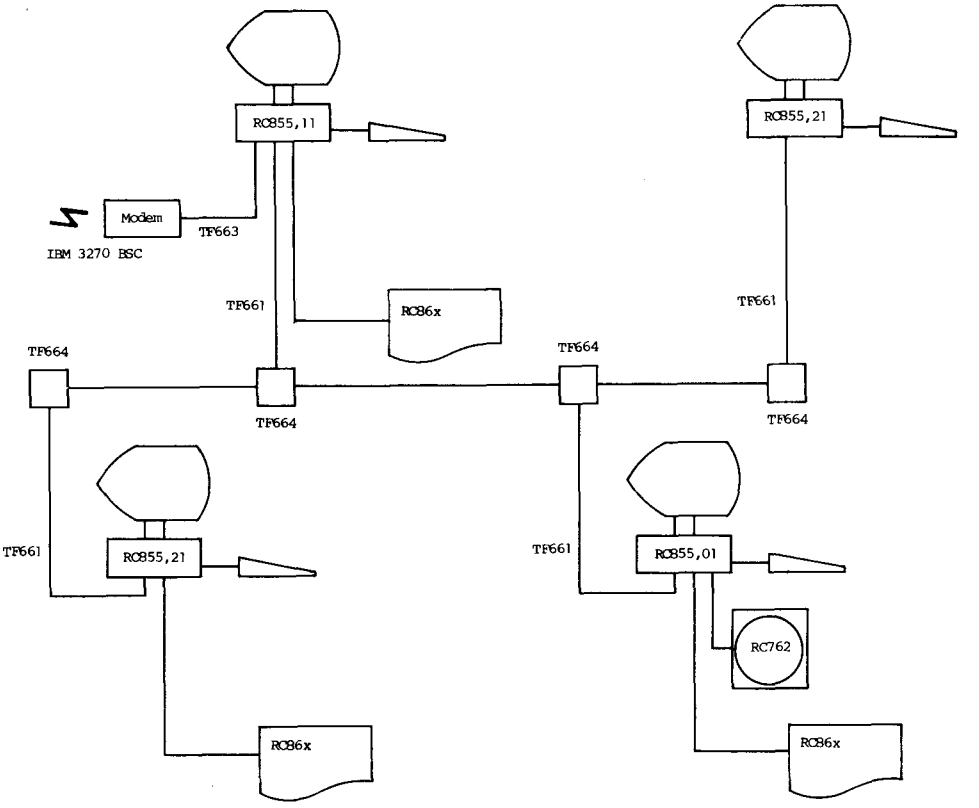

Figure 5: RC855 Terminals and RC855 Work Station; cluster configuration outline; example 1.

The RC855 Work Stations in the cluster will operate according to the software package loaded, i.e.:

SW1804	IBM 3270 BSC EMULATOR
	The Work Station will form part of the cluster acting as an RC855,21 DISPLAY STATION.
SW181x	various software packages
	The Work Station will operate in local mode running DataStar, WordStar, etc.

The RC855 Work Station can also be equipped with its own line for host communication, which adds the following capabilities according to which software package is loaded:

SW1804 IBM 3270 BSC EMULATOR

The Work Station is given the capability to operate as a stand-alone Terminal, i.e. as an RC855,11 CU/DISPLAY STATION.

SW1805 IBM 3780 BSC EMULATOR

The Work Station is given the capability to operate as an RJE station.

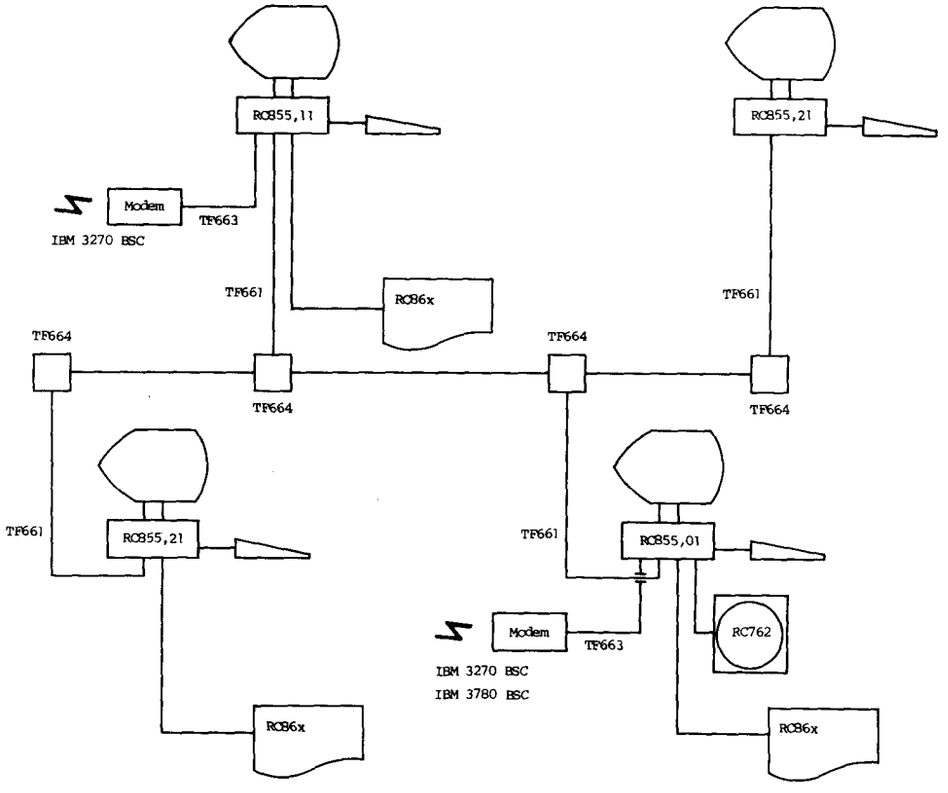

Figure 6: RC855 Terminals and RC855 Work Station; cluster configuration outline; example 2.

3.2.3. Work Stations 3.2.3

A cluster may constist entirely of RC855,01 WORK STATIONs.

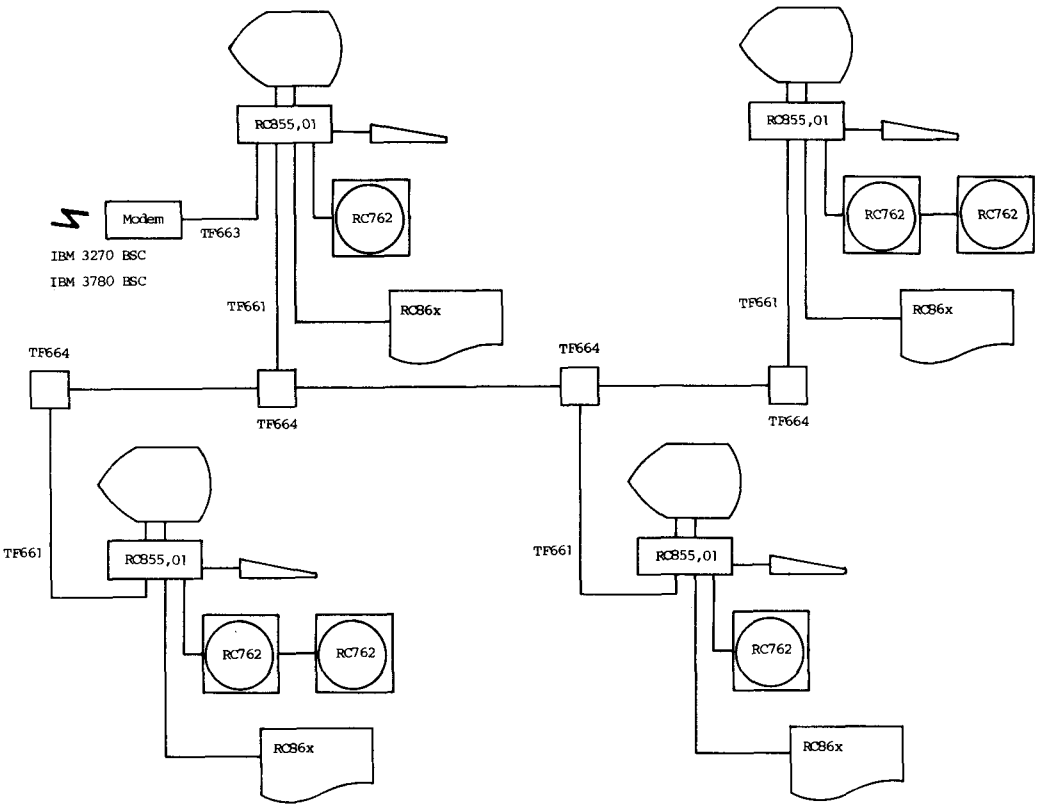

Figure 7: RC855,01 WORK STATIONs; cluster configuration outline; example.

In a cluster of RC855 Work Stations, also the IBM 3780 BSC Emulator may utilize the RC-CIRCUIT, thereby allowing a number of Work Stations to access a host via a single BSC communication line. Only the Work Station attending the host communication will receive data/messages for display, printing, or diskette storage from the host. (That particular Work Station is often referred to as the circuit master). The facilities offered on the Work Stations other than the circuit master allow for job/data submission only.

3.2.4 Guidelines for Clustered Configurations 3.2.4

When configuring clustered RC855 Systems, the configuration should always be reviewed in terms of the following guidelines:

- a cluster may at most comprise eight Terminals and/or Work Stations (to each of which a printer may be connected).

- a Work Station operating in local mode (i.e. running local applications, such as DataStar or WordStar) is logically disconnected from the cluster.

- within a group of Terminals and/or Work Stations interconnected by means of the RC-CIRCUIT, only one circuit master can be active at a time, i.e. only one logical cluster is allowed to exist at a time.

- an RC855,11 CU/DISPLAY STATION being part of the cluster must necessarily be the circuit master.

- in a cluster of Terminals and/or Work Stations running the IBM 3270 BSC Emulator, the printers are available as a common resource in that cluster. Otherwise printers are dedicated resources of the Terminals/Work Stations to which they are connected.

- flexible disc drives are always dedicated resources of the Work Station to which they are connected.

A. REFERENCES A.

[1] RCSL No 42-i1685:
RC855 Terminal System, Installation Guide
Henning Christensen, January 1982
Abstract: This manual describes the installation of the hardware equipment of the RC855 terminal system. It contains: notes on planning, specifications of the RC-CIRCUIT and the cable connections, and a survey of the equipment.

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