



5.27

**RAD1 Function User's
Guide**



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5.27 RAD Update (RAD1): Function User's Guide

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1 Objectives of This Chapter

The objectives of this chapter are to:

- Give an overview of RAD1 INPUT functions
- Illustrate the formats of required records

2 RAD1 Function OVERVIEW

Function RAD1 is used for MDH & MQ transmissions. The functionality does not change between input media.

A RAD approval/cancel (RAD1) is a transaction received by the Depository Trust & Clearing Corporation requesting immediate approval or cancellation of a transaction previously sent to Receiver Authorized Delivery System (RAD). The "delivering" participant may cancel the transaction, while an eligible, "receiving" participant may approve or cancel.

A User may use the RAD1 function to transmit RAD instruction to DTC starting at 3:00 a.m. and continuing throughout the business day based on the Cut-Off Time Schedule.

2.1 RAD1 Transmissions

When using the RAD1 functions, the User transmits RAD approval/cancel transactions to DTC and receives responses indicating any errors that have been detected in the transmitted transactions.

If the transactions transmitted to DTC via RAD1 are considered critical, the User should prepare procedures to be invoked in the event the transmission media is unavailable.



2.2 Cutoff Time Schedule for RAD1 Transmissions

NOTE: Valued transactions are those with a dollar amount greater than zero. Free transactions are those with a dollar amount equal to zero. RAD (Receiver Authorized Deliveries) may be approved or cancelled through PTS or MDH until the following times:

PROCESSING PERIOD	RAD1 TRANSACTION TYPE	FROM	TO
P1	Valued Transaction	3:00 a.m.	3:30 p.m.
P2	Valued Settling Bank Transactions	3:00 a.m.	5:00 p.m.
P3	Free Transactions	3:00 a.m.	6:30 p.m.

NOTE: The times listed above describe the cutoff times for input. The position update at DTCC will usually be between 5-15 minutes later than the input time.

Valued Original and Non-matched Reclaims transactions will be accepted:

- between 3:00 a.m. and 2:45 p.m., and are subject to normal RAD (Receiver Authorized Deliveries) Rules as described in the SDFS manual.
- between 2:45 p.m. and 3:05 p.m., all transactions are forced to RAD.

Valued Matched Reclaim transactions will be accepted between the hours of 3:00 a.m. and 3:05 p.m.

Valued Original and Non-matched Reclaim transactions between a deliverer and its Settling Bank will be accepted between 3:00 a.m. and 4:45 p.m.

NOTE: After 2:45 p.m., these transactions will be forced to RAD.

Free MMI New Issuances and Turnaround DO transactions will be accepted between the hours of 3:00 a.m. and 4:45 p.m.

Free Non-MMI transactions will be accepted between the hours of 3:00 a.m. and 6:00 p.m.

Free MMI existing CUSIP transactions will be accepted between the hours of 3:00 a.m. and 6:00 p.m. These transactions will always be processed through the RAD system.



RAD1 test transmissions (where the Production Test Indicator = T) will be accepted during PTS operating hours. In no event will deliver order transactions be accepted after the cutoff times specified above.

Any RAD1 transmission initiated prior to cutoff will be allowed to continue to completion.



3 RAD Approvals/Cancel Input Record Format

The RAD1 input record is defined in the following subsections. This record, consisting of a transaction header and application detail data, has a record length of 96.

3.1 Standard Transaction Header (Input)

Position	Length	Format	Field Name	Field Description
1-1	1	Character	Feedback Indicator	Blank on input. On output, used to indicate if any errors were encountered during processing
2-2	1	Character	Production/Test Indicator	P = Production T = Test
3-8	6	Character	Record Type	RADUPD
9-10	2	Numeric	Record Suffix	Indicator of the Record Number on single and multiple data records within a transaction
11-12	2	Numeric	Version Number	Indicator of which version the data is in; for example: latest or previous format
13-18	6	Character	User Reference Number	Optional unique transmitter-defined transaction identifier
19-26	8	Character	Addressee	The entity on behalf of whom the transaction is being processed. Right justified, zero filled for numeric addressee or 'Mnnnnnnn' for non-numeric addressee.



3.2 RAD Input Record

Position	Length	Format	Field Name	Field Description
27-34	8	Numeric	Deliverer	Delivering Participant number (right-justified with leading zeroes).
35-42	8	Numeric	Receiver	Receiving Participant number (right-justified with leading zeroes).
43-50	8	Character	RAD Sequence Number	This the number, generated by DTC which uniquely identifies the RAD transaction.
51-54	4	Character	RAD Input Source	Input Source of the original RAD transaction.
55	1	Character	RAD Request Code	The request codes have the following values: 'A' – approved by Receiver 'C' – cancelled by Receiver 'D' – cancelled by Deliverer
56-68	13	Character	Cancel Reason Line 1	Supplied by Participant on cancellation only. Otherwise must be spaces.
69-81	13	Character	Cancel Reason Line 2	Supplied by Participant on cancellation only. Otherwise must be spaces.
82-86	5	Numeric	Auth. Date	The date of the authorization notice in Julian format – YYDDD
87	1	Character	Auth Record Type	Type of RAD processing: 'R' – Regular RAD 'M' – MMI Indexed to Principal RAD
88-89	2	Character	Processing Period	Possible Values: 'P1' – Valued DO (non-Settling Bank) 'P2' – Valued DO (Settling Bank) 'P3' – Free Do
90-96	7	Character	Filler	Reserved for future use



4 RAD1 Error Codes

The machine-readable input error codes are a combination of the field in error (a 4-byte field code) and the error type (a 4-byte reason code). The resultant 8-byte error codes identify the specific fields and the types of errors that prevented an input message from being processed. Inputs containing one or more errors are returned to the submitter for correction. The following error code table is sorted alphabetically by field code (column one) and then by reason code (column two).

RAD 1 Error Codes		
Field Code	Error Code	Explanation
AZZZ	9AAL	Transaction past cutoff time
AZZZ	9ACO	Transaction not found in database
AZZZ	9AA7	Transaction rejected. The RAD item has been processed already.
BABU	9AAA	Auth Date is invalid
BACX	9AAA	Processing Period is invalid
CAAL	9AAA	Receiving Participant is invalid
CAAL	9ACK	Receiving Participant is locked
CAAL	9ACN	Receiving Participant is chilled for this type of transaction
CAAL	IACB	System error happened on Receiving Participant Verification
CAAM	9AAA	Delivering Participant is invalid
CAAM	9ACK	Delivering Participant is locked
CAAM	9ACN	Delivering Participant is chilled for this type of transaction
CAAM	IACB	System error happened on Delivering Participant Verification
EAGC	9AAA	RAD Input Source is invalid
GAHQ	9AA5	RAD Sequence Number is blank
HADD	9AAA	Auth Record Type is invalid
JCCD	9AAA	Cancel Reason Lines are invalid
KAAE	9AAA	RAD Request Code is invalid