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**AMERICAN NATIONAL STANDARD**

**ANSI/SCTE 94-1 2009**

**HMS Common Inside Plant  
Management Information Base(MIB)  
SCTE-HMS-HE-RF-AMP-MIB**

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140 Philips Road  
Exton, PA 19341

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## **SCOPE**

This document provides MIB definitions for HMS RF amplifier equipment present in the headend (or indoor) and is supported by a SNMP agent.

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## **NORMATIVE REFERENCE**

IETF RFC 1907 SNMPv2-MIB  
IETF RFC 2578 SNMPv2-SMI  
IETF RFC 2579 SNMPv2-TC  
IETF RFC 2580 SNMPv2-CONF  
IETF RFC 2737 ENTITY-MIB  
SCTE 36 SCTE-ROOT  
SCTE 37 SCTE-HMS-ROOTS  
SCTE 38-11 SCTE-HMS-HEADENDIDENT-MIB  
SCTE 83-4 SCTE-HMS-HE-RF-MIB  
SCTE 38-1 SCTE-HMS-HE-PROPERTY-MIB  
SCTE 84-1 SCTE-HMS-HE-COMMON-MIB

## **INFORMATIVE REFERENCE**

None

## **TERMS AND DEFINITIONS**

This document defines the following terms:

**Management Information Base (MIB)** – the specification of information in a manner that allows standard access through a network management protocol.

## **REQUIREMENTS**

This section defines the mandatory syntax of the SCTE-HMS-HE-RF-AMP-MIB. It follows the IETF Simple Network Management Protocol (SNMP) for defining managed objects.

The syntax is given below.

SCTE-HMS-HE-RF-AMP-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-COMPLIANCE, OBJECT-GROUP  
FROM SNMPv2-CONF  
OBJECT-TYPE, MODULE-IDENTITY, Unsigned32  
FROM SNMPv2-SMI  
DisplayString  
FROM SNMPv2-TC  
entPhysicalIndex  
FROM ENTITY-MIB  
HeTenthdB, HeTenthdBmV  
FROM SCTE-HMS-HEADENDIDENT-MIB  
heRFAmplifierGroup  
FROM SCTE-HMS-HE-RF-MIB;

heRFampMIB MODULE-IDENTITY

LAST-UPDATED "200310090000Z" -- Oct 9, 2003  
ORGANIZATION "SCTE HMS Working Group"  
CONTACT-INFO  
"SCTE HMS Subcommittee, Chairman  
mailto: standards@SCTE.org"

DESCRIPTION

"The MIB module for the HMS HE RF Amp module  
entities.

This MIB module is for representing RF  
Amp equipment present in the headend (or indoor)  
and is supported by a SNMP agent.

This MIB is intended to describe an indoor  
headend amplifier with one input port and one  
or more output ports.

Refer to the associated notes for information on what  
SNMP responses should be returned for unsupported  
enumerations."

::= { heRFAmplifierGroup 1 }

heRFampMIBObjects OBJECT IDENTIFIER ::= { heRFampMIB 1 }

-- Every RF Amp described above is modeled by the tables presented  
-- in this MIB module. These tables extend the entPhysicalTable  
-- according to RFC 2737. The extension index entPhysicalIndex uniquely  
-- identifies the RF Amp.

-- Every RF Amp is also modeled by the following tables:  
-- entPhysicalEntry - 1 row; (defined in document: RFC2737)  
-- heCommonEntry - 1 row. (defined in document: HMS111)

-- Every RF Amp module will have its alarms modeled by the table:  
-- propertyEntry - x rows; (defined in document: HMS026)

```

--          (where x is the nos. of alarmable analog properties supported
-- by the RF Amp)

--          discretePropertyEntry - y rows; (defined in document: HMS026)
--          (where y is the nos. of alarmable digital properties supported by
-- the RF Amp)

-- Every RF Amp module will have a list of currently active
-- alarms modeled by the table:
--          currentAlarmEntry - z rows; (defined in document: HMS026)
--          (where z is the nos. of current active alarms in the RF
-- Amp)

-- Thus, a RF Amp with one input and two outputs
-- will be represented by one row in entPhysicalTable, one row in
-- heCommonTable, one row in heRFampUnitTable, and two rows
-- in heRFampOutputTable.

```

```

-- the RF Amp Unit Table
heRFampUnitTable OBJECT-TYPE
    SYNTAX SEQUENCE OF HeRFampUnitEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "A table containing information about RF Amp used
        in an indoor environment."
    ::= { heRFampMIBObjects 1 }

```

```

heRFampUnitEntry OBJECT-TYPE
    SYNTAX HeRFampUnitEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "List of information about each RF Amp."
    INDEX { entPhysicalIndex }
    ::= { heRFampUnitTable 1 }

```

```

HeRFampUnitEntry ::= SEQUENCE
{
    heRFampGainControlMode          INTEGER,
    heRFampAttenuatorControl        HeTenthdB,
    heRFampSlopeControl             HeTenthdB
}

```

```

heRFampGainControlMode OBJECT-TYPE
    SYNTAX INTEGER {
        none(1),
        alc(2),
        asc(3),
        agc(4),
        als(5)
    }
    MAX-ACCESS read-write

```

STATUS current  
 DESCRIPTION  
 "This controls and/or reports the amplifier control mode.  
 none - no automatic control provided  
 alc - automatic level control  
 asc - automatic slope control  
 agc - automatic gain control  
 alscl - automatic level slope control  
 "

::= { heRFampUnitEntry 1 }

heRFampAttenuatorControl OBJECT-TYPE

SYNTAX HeTenthdB  
 MAX-ACCESS read-write  
 STATUS current  
 DESCRIPTION  
 "This controls and reports the setting of an attenuator in the amplifier RF chain.  
 "

::= { heRFampUnitEntry 2 }

heRFampSlopeControl OBJECT-TYPE

SYNTAX HeTenthdB  
 MAX-ACCESS read-write  
 STATUS current  
 DESCRIPTION  
 "This controls and reports the slope setting of the amplifier.  
 "

::= { heRFampUnitEntry 3 }

-- the RF Amp Output Table

heRFampOutputTable OBJECT-TYPE

SYNTAX SEQUENCE OF HeRFampOutputEntry  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION  
 "A table containing information about each RF Amp output used in an indoor environment."  
 "

::= { heRFampMIBObjects 2 }

heRFampOutputEntry OBJECT-TYPE

SYNTAX HeRFampOutputEntry  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION  
 "List of information about each RF Amp output."  
 INDEX { entPhysicalIndex, heRFampOutputIndex }  
 ::= { heRFampOutputTable 1 }

HeRFampOutputEntry ::= SEQUENCE

```
{
    heRFampOutputIndex          Unsigned32,
```

```

    heRFampOutputDescription    DisplayString,
        heRFampOutputLevel      HeTenthdBmV,
        heRFampOutputAttenuatorControl  HeTenthdB
}

heRFampOutputIndex OBJECT-TYPE
    SYNTAX    Unsigned32
    MAX-ACCESS not-accessible
    STATUS    current
    DESCRIPTION
        "Index number corresponding to the RF Output."
    ::= { heRFampOutputEntry 1 }

heRFampOutputDescription OBJECT-TYPE
    SYNTAX    DisplayString (SIZE (0..32))
    MAX-ACCESS read-only
    STATUS    current
    DESCRIPTION
        "A description of the Amp output. The description text is
        to be determined by the equipment manufacturer. For example,
        Output A or Secondary Output."
    ::= { heRFampOutputEntry 2 }

heRFampOutputLevel OBJECT-TYPE
    SYNTAX    HeTenthdBmV
    MAX-ACCESS read-only
    STATUS    current
    DESCRIPTION
        "The output level of the RF amplifier output."
    ::= { heRFampOutputEntry 3 }

heRFampOutputAttenuatorControl OBJECT-TYPE
    SYNTAX    HeTenthdB
    MAX-ACCESS read-write
    STATUS    current
    DESCRIPTION
        "This controls and reports the setting of an attenuator
        in the amplifier RF chain.
        "
    ::= { heRFampOutputEntry 4 }

-- conformance information
heRFampMIBConformance OBJECT IDENTIFIER ::= { heRFampMIB 2 }

heRFampMIBCompliances OBJECT IDENTIFIER ::= { heRFampMIBConformance 1 }

heRFampMIBGroups    OBJECT IDENTIFIER ::= { heRFampMIBConformance 2 }

heRFampBasicCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The compliance statement for SNMP HMS Headend RF
        Amp entities which implement the SNMP
        heRFampMIB."
    MODULE -- this module

```

```
MANDATORY-GROUPS { heRFampOutputMandatoryGroup
}
 ::= { heRFampMIBCompliances 1 }
```

```
heRFampOutputMandatoryGroup OBJECT-GROUP
OBJECTS {
    heRFampOutputDescription
}
STATUS current
DESCRIPTION
    "The main group defines heRFampOutputTable objects which
    are mandatory to all indoor RF Amp modules."
 ::= { heRFampMIBGroups 1 }
```

```
heRFampUnitGroup OBJECT-GROUP
OBJECTS {
    heRFampGainControlMode,
    heRFampAttenuatorControl,
    heRFampSlopeControl
}
STATUS current
DESCRIPTION
    "The collection of heRFampUnitTable objects which are used to
    represent the indoor RF Amp module."
 ::= { heRFampMIBGroups 2 }
```

```
heRFampOutputGroup OBJECT-GROUP
OBJECTS {
    heRFampOutputLevel,
    heRFampOutputAttenuatorControl
}
STATUS current
DESCRIPTION
    "The collection of heRFampOutputTable objects which are used to
    represent the indoor RF Amp module."
 ::= { heRFampMIBGroups 3 }
```

END