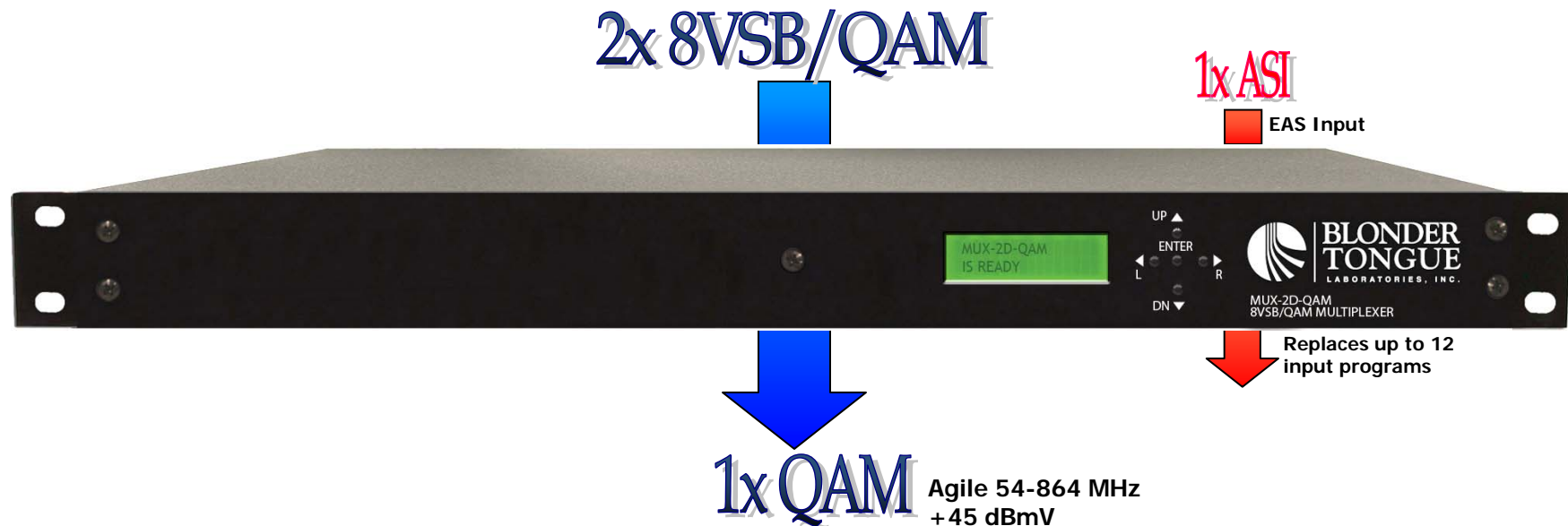




Description

MUX-2D-QAM (Multiplexer - 2xDigitals-to-QAM) accepts up to 2 digital input streams in 8VSB (Digital off-air), and QAM (Digital Cable) formats, and delivers one output in QAM format in the 54-864 MHz range. Any combination of input streams is allowed, i.e. (2x8VSB) or (1xQAM + 1x8VSB).

It also provides Emergency Alert System (EAS) program switching through ASI input and terminal block contacts. The EAS input, in ASI format, replaces up to 12 input programs. It can also be daisy-chained from one unit to another unit without the need for external splitting & amplification.

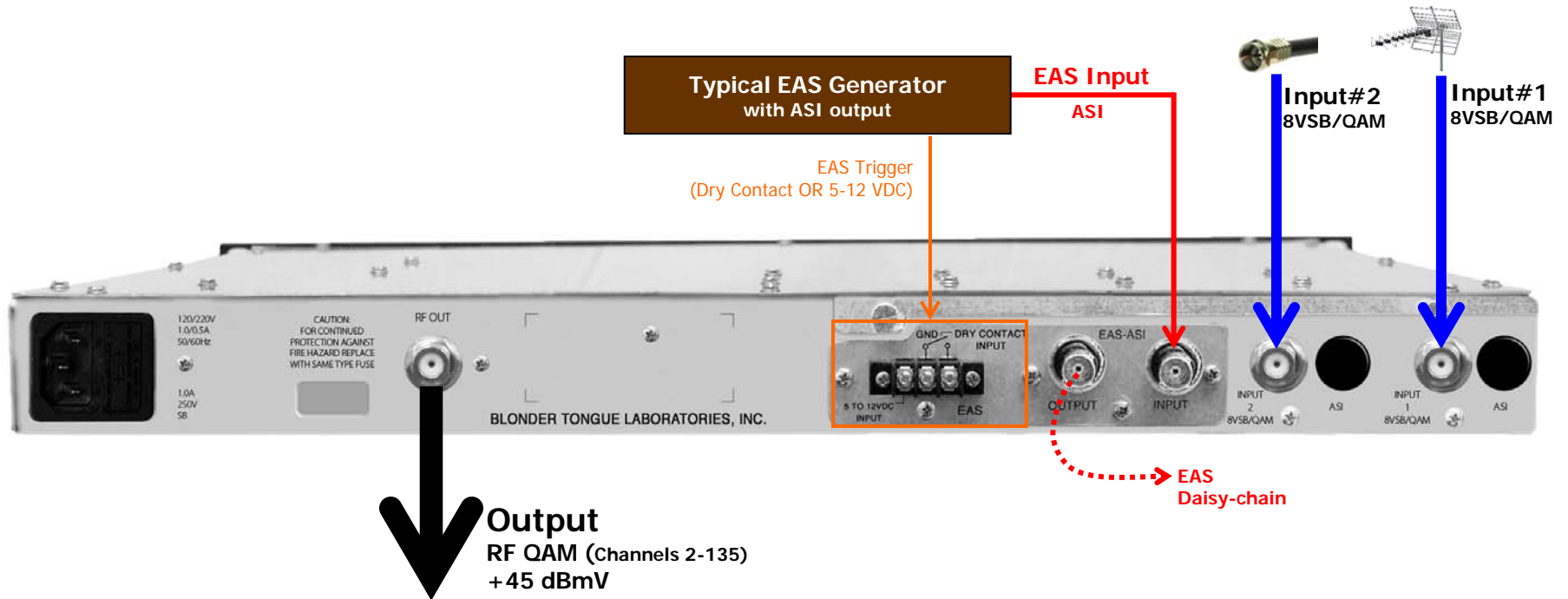




Front & Rear Panels



LCD screen & Navigational Key-pad





Features

Inputs

- Accepts 2 “native” inputs and 1 “EAS” input
- The “native” input can be 8VSB or QAM, containing up to twelve (12) programs.
- The “EAS” input must be in ASI format, containing a single-stream SD program not to exceed 38.8Mbps (typical is ≤ 5.5 Mbps)

Output

- Supports QAM Annex A & B modulation modes (16, 32, 64, 128, 256, 512, and 1024)
- Supports agile tuning (54-864 MHz, CATV NTSC channels 2 to 135)
- Provides output Level of +45 dBmV

EAS (Activation, Over-ride, Daisy-chain)

- Provides 2 activation mechanisms: Dry contact closure or 5-12 VDC across terminal strip
- EAS input will over-ride up to 12 “native” programs on a first-detected-first-replaced basis.
- A buffered ASI output allows daisy-chaining of a single EAS source from one unit to the other without external equipment



Features

Multiplexing Profile

- From a total of 24 input programs groups and multiplexes up to 12 programs onto one QAM output not to exceed 38.8 Mbps.
- CVCT feature: allows user to edit major/minor channel numbers and names, while creating and maintaining the CVCT and MGT automatically.
- TSID feature: allows user to edit the TSID number.
- PSIP feature: allows user to turn on/off processing of input PSIP tables in the multiplexed QAM output – useful if one or more of the input programs carries no PSIP table.
- Automatically generates and updates PSI & PSIP tables when an input program is added/removed or when new table revision is detected.

CVCT: Cable Virtual Channel Table

MGT: Master Guide Table

PSI: Program Specific Information. It includes the following tables:

PAT (Program Association Table)

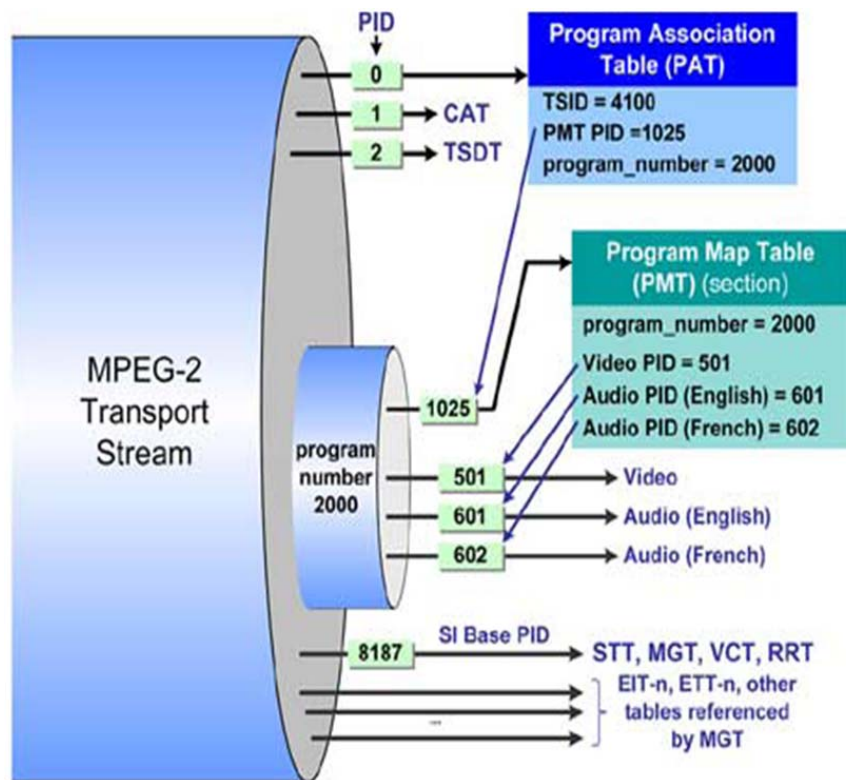
PMT (Program Map Table)

PSIP: Program System & Information Protocol

TSID: Transport Stream Identification



MPEG-2 Mapping



- Supports 2 modes for re-mapping of duplicate PIDs, program numbers, and minor channel numbers:
 - Mode 1: Automatic - increments by 1
 - Mode 2: Fixed user offset with auto-correction
- Maintains the MPEG-2 mapping if the stream is removed and same stream is added later (for example, after a power cycle or facility power outage).
- Maintains mapping with new PAT/PMT/MGT versions and same programming.
- In addition to PAT, PMT, and MGT tables, supports the RRT, STT, and VCT tables.

EIT = Event Information Table
CAT = Conditional Access Table
MGT = Management Table
PAT = Program Association Table
PID = Packet Identifier

PMT = Program Map Table
RRT = Regional Rating Table
STT = System Time Table
TSDT = Transport Stream Description Table
TSID = Transport Stream Identifier
VCT = Virtual Channel Number



Flexible Channel Lineup Management

Example 1:

IF the input stream contains the following PSIP: **WPBS-HD; 13.3**

AND IF MUX-2D-QAM is configured with: **Major-Channel Offset = 15; Minor-Channel Offset = 0; RF Output Channel = 50**

Then the TV set must be **tuned to channel 28.3** and will display **WPBS-HD; 28.3**

Example 2:

IF the input stream contains the following PSIP: **WPBS-HD; 13.3**

AND IF MUX-2D-QAM is configured with: **Major-Channel Offset = -10; Minor-Channel Offset = -2; RF Output Channel = 50**

Then the TV set must be **tuned to channel 3.1** and will display **WPBS-HD; 3.1**

Example 3:

IF the input stream contains the following PSIP: **WPBS-HD; 13.3**

AND IF MUX-2D-QAM's CVTC feature is enable for: **Major Channel = 579; Minor Channel = 0 ; RF Output Channel = 50**

Then the TV set must be **tuned to channel 579** and will display **user-defined channel number/name/description**.

Example 4:

Some TV sets cannot tune to a QAM channel containing a mixture of programs with and without PSIP information.

The **"PSIP OFF"** feature of MUX-2D-QAM allows operator to remove the PSIP information from all input streams – the multiplexed QAM output stream will contain no PSIP information.



Ordering & Contact Information

Model	Stock	Description
MUX-2D-QAM	6504	Multiplexer, 2x8VSB/QAM inputs, Agile 54-864 MHz QAM output, EAS Compatible

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