

Alphabet Soup – SDRLB1S2VZRN2!



Are you confused by all those letters? Well so are a lot of people so here is an easy way to get the right letters in the right places in the nav/com section of your flight notification. This is going to differ from person to person and aircraft to aircraft so there is no quick fix to this. Different people in the same aircraft will have different requirements as will the same person in different aircraft. The only easy shortcut is to have a bit of understanding of what the letters mean and how they apply. Using blind faith in some letters you have been told to use by someone else will often result in errors.

There are many documents out there and various bits of legislation that are needed for a thorough understanding of this, but I will try to keep it simple and mainly refer to the AIP flight planning section – ENR 1.10. Appendix 1 to this section has copies of a flight notification form and a flight plan for reference. Immediately behind that is Appendix 2 where all the good bits hide!

Here we are just going to concentrate on Item 10 – Equipment and Capabilities. One of the more important things to note is at the beginning of this section. The letters you use are to indicate the “presence of serviceable equipment that the pilot is qualified to use” (and has approvals for where applicable). This can make a subtle difference where, for example, “S” is used “because its standard equipment” for everyone. “S” although “standard” includes VHF, VOR and ILS so may not be standard for VFR pilots nor may it even be standard for IFR pilots who have chosen to not be certified or current with ILS.

The other thing we are just going to concentrate on is non-airline flying such as GA private, aerial work, instruction, charter etc. That means, for the scope of this article we can ignore things such as GBAS, LORAN, ACARS, CPDLC, MLS, SATVOICE, etc.

This is going to leave you with a string of possible letters that may be appropriate for you:

SDFGHLORVZ

These are the most common and pertinent to our sort of operation. Now let's start breaking that down a little further. Firstly, S is just a shortcut for V (VHF comms), O (VOR), and L (ILS) so it should be easy to figure out whether you may be an S or maybe a VO instead. A few of other easy ones are D (DME), H (HF coms) and F (ADF) which you either have and are certified to use or are not. So, if we take those letters out from the above, we are left with:

GRZ

Pretty simple huh!?! Well, this is where a lot of confusion starts.

A couple of other things to take note of are that "Z" is the same as in other places in aviation where it loosely means 'look elsewhere'. If "Z" is used as an ATIS designator the tower is closed so you will need to look elsewhere for weather information and traffic. If "ZZZZ" is used in the flight notification as ADEP or ADES, then the system will look elsewhere for details of that little farm strip you are going to (i.e. DEST/2730S15327E). If we use it here, then the system is going to look elsewhere for some comment – in this case "NAV/.....".

A second note pertains to use of the letter "R". Not only does it indicate you are PBN capable, but it directs the system to look for what that capability is under "PBN/....". Like Z, R needs this other detail in the system so if it not provided then the system will error.

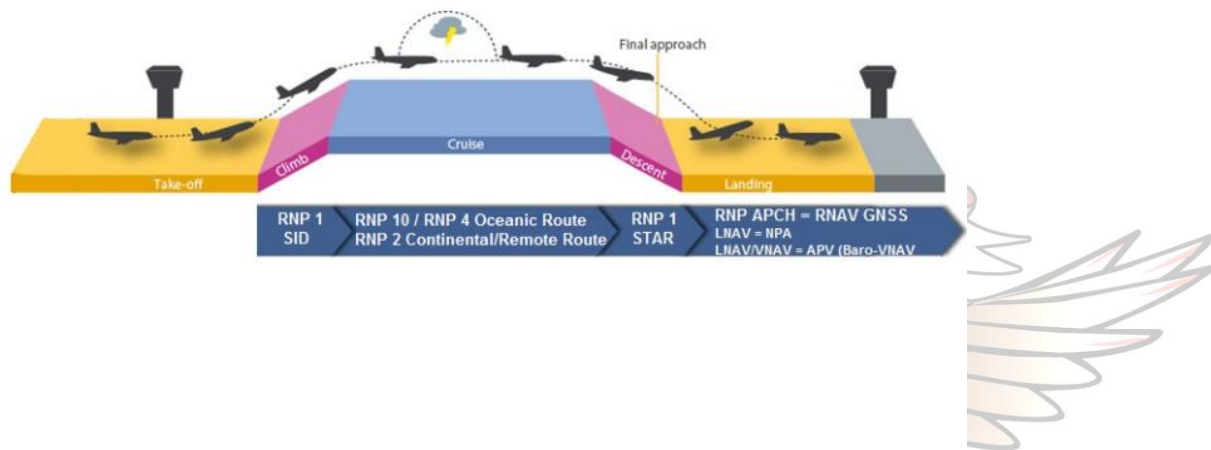
Finally, there is this note:

Enter 'G' (GNSS) and 'R' (PBN capability) in Item 10 for aircraft equipped with a GNSS enabled area navigation system with additional entries as appropriate. The correlation between Item 10 and Item 18 entries for common PBN approvals is summarised below:

	PBN Capability	Item 10	Item 18
Oceanic	RNAV10 (RNP10)	GR and I (if appropriate)	PBN/A1
	RNP4	GR	PBN/L1
Continental	RNP2	GZ	NAV/RNP2
Terminal	RNP1, all permitted sensors	GRDI	PBN/O1
	RNP1, GNSS	GR	PBN/O2
Approach	RNP APCH	GR	PBN/S1
	RNP APCH with Baro-VNAV	GR	PBN/S2
	RNP AR APCH with RF	GRI	PBN/T1 OPR/ (name)
Precision Approach	GLS	AGZ	NAV/GLS

You should ignore the majority of this! Let's put it into our context. The note itself is easy – if you have (for example) a TSO145/146 GPS and you plan to navigate by it then G and R should be in your flight notification. From the table, we won't be doing Oceanic flying nor will we be doing GLS approaches so that only leaves three sections. Of these there is some debate around Terminal operations (i.e. PBN/O1 or O2) as the aircraft and pilot needs to be qualified for RNP SIDs and STARs which are RNP1 procedures and yet to make a big impact in Australia so for the majority of GA flight it is not appropriate. That only leaves us with Continental and Approach. Continental can be used for VFR or IFR operations (as discussed in a separate article "Can I Use My GPS") but Approaches are IFR procedures.

RNP 2



CASA Aviationworx

When it talks about "Item 10" or "Item 18" these are simply the little areas where the data is stored. You will see these little section numbers on the flight notification form example in Appendix 1 or you can just remember that "Item 10" is your nav/com equipment codes and "Item 18" is where all the other junk and notes go like NAV/, PBN/, RMK/, REG/, DLE/ etc. To put it together into some jargon, if you note R in Item 10 then the system will automatically look for PBN/ in Item 18.

Now that we have some definitions, let's look at building up some letters.

Use S if it is suitable for you or you could just as easily use VO instead or even just V.

If you are using a properly installed and TSO'd GPS then you can use G and R but now we know R triggers the system to look for our PBN specification in Item 18. So what PBN are we? With those GPS receivers you will most likely be RNP2 (but you need to confirm that with your particular aircraft). But there is no code for that I hear you cry! AIP cries the same thing....

Note: RNP2 has not yet been allocated a PBN code. Enter RNP2 in NAV/ with G, R and Z in Field 10.

You can use the old RNAV5 specification of B2 from the table in AIP and then clarify this a little further with a NAV/RNP2 comment if you wish. In theory the system should be happy with just GRZ with NAV/RNP2 but, as you have noted R, the system may look for a PBN/ so using the old specification of RNAV5 (PBN/B2) will keep it happy.

Descriptor	RNAV SPECIFICATION
A1	RNAV 10 (or RNP 10)
B1	RNAV 5 all permitted sensors
B2	RNAV 5 GNSS
B3	RNAV 5 DME/DME
B4	RNAV 5 VOR/DME
B5	RNAV 5 INS or IRS
B6	RNAV 5 LORANC
C1	RNAV 2 all permitted sensors

That's about all you need as a VFR pilot using GPS to navigate – VGRZ with PBN/B2 and NAV/RNP2.

As a pilot with an IR (Instrument Rating) you could ramp that up to SGRZ with PBN/B2 and NAV/RNP2. If you were able to do RNP2D approaches then you could add S1 to your PBN/ as well.

S1	RNP APCH
S2	RNP APCH with BARO-VNAV

As a pilot with a PIR (Private Instrument Rating) you now need to make a few more notations to clarify what you can and can't do so a controller doesn't expect you to do something you can't. For example, as a PIR pilot you can use "O" (VOR) in Item 10 but only be able to track using the VOR, not do VOR approaches. As far as a controller can see you are an IFR flight that has nominated O so are capable of VOR approaches so we need to clarify this for them. To do that we just stick a few general remarks in Item 18 for them to read by simply using the RMK/. Examples are given in the table but are quite individual so you will need to make up your own combination depending on the FPAs you have.

FPA	Abbreviation		Example/Notes
	Prefix	Suffix	
Navigation Only	NAV		Enter equipment as per item 10 and RMK/PIFR NAV in item 18.
Night Flying	NGT		RMK/PIFR NGT
Instrument Departures	IDEP	SID	RMK/PIFR IDEP RMK/PIFR IDEP SID
Instrument Approaches (Single or Multi-engine as applicable to the aircraft being flown)	IAL	NDB, VOR, DME, DMEGNSS, RNAVGNSS, ILS, LOC	RMK/PIFR IAL NDB RMK/PIFR IAL DMEGNSS RMK/PIFR IAL RNAVGNSS RMK/PIFR IAL VOR, ILS
Visual circling approach	VSA		RMK/PIFR VSA Not required where other IAL FPA are also listed.
STAR	STAR	NDB, VOR, GNSS, DME	RMK/PIFR STAR GNSS
Holding	HLDG	NDB, VOR, GNSS, DME	RMK/PIFR HLDG VOR
Multiple FPA			RMK/PIFR NAV IAL RNAVGNSS HLDG VOR GNSS

So, there you have it. Its just a slightly different language but once you learn how to read it you can get quite creative and informative. That is all it is in the end – an abbreviated and standardised way of sending a note to the controllers so they can see what you want, and what you are capable of doing, in order to help you out as much as they can.